

Countering the Social Ignorance of ‘Social’ Network Analysis and Data Mining with Ethnography

A Case Study of the Singapore Blogosphere

Steven Eunan McDermott

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The candidate confirms that the work submitted is his own and that appropriate credit has been given where reference has been made to the work of others.

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Abstract

This thesis questions on one level the assertion that the Internet is a force for democratisation in authoritarian regimes (Habermas, 2006), and at the same time another means for disseminating propaganda, fear and intimidation (Rodan, 1998). It overcomes the limitations of using automated data collection and analysis of blogs by supplementing these techniques with a prolonged period of participant observation and a detailed reading of the textual extracts in order to allow for meaning to emerge. It analyses the discourses and styles of discourse of the Singapore political blogosphere. Hurst (2006) and Lin and Sundaram et al., (2007) described the same blogosphere as isolated from the global blogosphere and clearly demarcated with no central topic. Countering the social ignorance of such automated data collection and analysis techniques, this study assigns meaning to data gathered from January 2009 to February 2010. This case study will help highlight the analytic framework, benefits and limitations of using social network analysis and an anthropological approach to networks. It has targeted blogs using hyperlink network analysis and measured 'importance' with 'betweenness centrality' (de Nooy & Mrvar et al., 2005) in order to demarcate the boundaries of the sample of blogs that are archived for semantic and discourse analysis. Beyond a brief introduction to betweenness centrality, and the merits or otherwise, of combining various ranking of blogs such as Google's PageRank, Hits and Blogrank algorithms it avoids the *algorithm fetishism* within hyperlink data collection and linguistic analysis of corpus collected from blogs; allowing for culture, identity and agency. It assesses which of White's (2009) three disciplines and relative valuation orders the Singapore blogosphere adheres. The contention raised here is that social network analysis, or rather those elements within it that are focused exclusively on algorithms, are in danger of co-option by states and multinational corporations (Wolfe, 2010:3) unless they acknowledge sociocultural forces. The tools of social network analysis and data mining are moved beyond mere description, while avoiding prescription – and at the same time advancing its contribution to substantive theoretical questions (Scott, 2010). Ensuring space for agency in a field dominated by sociograms, statistics and algorithms with theory that places persons lacking recognition at its centre is important to this thesis. Focusing only on the relational aspects of the interaction and in the individual persons linked (Wolfe, 2010: 3) creates a limited representation of the wider phenomena under study and a narrow awareness of the context in which these networks exist. A people

governed by one political party since 1963 (The People's Action Party) with the government of Singapore is the focus of this case study. This paper also highlights the use of various software technology; blogs, *IssueCrawler*, *HTTrack*, *NetDraw*, and *Leximancer* while using an ethnographic approach to counter the social ignorance of automated electronic software. The analysis of the Singaporean blogosphere from 2009 to 2010 provides a descriptive analysis of the argument that the non-democratic nature of Singapore society shapes the development of online public spheres.

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To Sophie and Imelda

Chapter 1 Introduction

What follows is an appraisal of network theory using the Singapore blogosphere as a case study. It is about Singapore and the network. For analytic purposes, Singapore and the network are two separate interdependent entities but ontologically they are the same thing. The approach taken here is relational, that the network and Singapore are the one entity. In order to understand this we need to focus on the relations.

We will use *connected graphs* as a way to harness the spatial reasoning ability of brains to think in a new way about political relationships. These graphs are easy to visualize. First take some nails (“conspirators”) and hammer them into a board at random. Then take twine (“communication”) and loop it from nail to nail without breaking. Call the twine connecting two nails a *link*. Unbroken twine means it is possible to travel from any nail to any other nail via twine and intermediary nails. Mathematicians say this type of graph is *connected* (Assange, 2006:2).

The quote above illustrates a concern regarding the ubiquity of the use of the term ‘network’. The mathematical approach to network analysis has provided online researchers with a “hammer” and my concern is that suddenly all phenomena has been reduced to the category of a “nail” and communication between phenomenon or “twine” unravelled by certain approaches. The presentation of nodes in all networks as if they exist in social and cultural vacuums is a concern. The vacuums created by the mathematical approach to the study of social networks reduce those within those networks to mere driftwood in a sea of external forces.

My contention is that the use of the term ‘social’ is redundant in computer science, physics and mathematical approaches to ‘social’ network analysis. Political relations online and across geographic space need researchers to focus more on people in a manner that intends to reveal the phenomenon rather than control and engineer it.

The expansion of social media and the technologies that facilitate them accompanied by research interest in the patterns of those connections and the uses of those technologies has grown. While the technologies of social media continue to evolve, the phenomenon of blogs and the blogosphere has attracted tools for crawling, tracking and capturing the content of blogs. The data from the sites are then analysed and visualised using different software (Bruns et al., 2008).

What is presented here is one method of specifying subsets of information, tracking the trends within the data and at the same time a discussion on the merits or

otherwise of some approaches to analysing and visualising that data. It also has at its centre the ethical concerns of conducting such surveillance and the ethical position of placing people and not mathematical algorithms at the heart of the approach. Singapore is the case study as it may “illuminate the strategies that other authoritarian and semi-authoritarian regimes will adopt in the future” (Kalathil & Boas, 2003:73).

What I envisage is not a throwing out of the tools created by the mathematical approach to network analysis but rather the application of those tools in an appropriate manner supplemented and accorded the same importance as other tools of studying the social. The major break, presented here, with approaches to studying online political networks is the combination of computer-assisted data gathering and analysis techniques with participant observation of a large-scale network. Rather than simply harvesting massive amounts of corpora and applying my own normative account of the context to that data, the intention is that the authors of that corpus define and set the meanings of their behaviour.

Chapter 2 is an overview of the theoretical context of social network analysis and the wider debate on the Internet and its relationship with authoritarian and non-authoritarian regimes. It begins with a focus on how the debates of Dutton (2010) and Habermas (2006) relate to Singapore, followed by a brief account of the evolution of network tools and ‘network society’. It then introduces the work of Hallin and Mancini’s (and others) discussion of political and media systems and the impact of the Internet on these two systems. These debates re-addressed in chapter 8. This systematic review asserts the proviso that it is not possible to make a direct connection between the processes documented here and the political election results of the People’s Action Party. Section 2.5 onwards presents a systematic literature review of the development of social network analysis including the historical development of anthropological and sociological approaches as well as the applications of social network analysis to the virtual or online environment and justification for the measures used here. The theoretical position taken here is similar to that of Donati (2012). The work conducted here is within the ethnographic approach developed by Hine (2008).

Chapter 3 outlines the approach to ethnography and network analysis. It acknowledges that social structure exists both in the behaviour of people and in the talk of those under observation. Using network analysis to uncover the social

structures that go unmentioned and that would not appear in an analysis of the content of the corpora. Chapter 3 draws on the work of Harrison C. White (2008) and develops the logical relations between disciplines and whether they form a system and what exactly it is that makes a discipline a discipline. The empirical application of White's three genres of disciplines are in chapter 7 as well as the issue of levels of institutionalisation. The matter of whether the groupings are institutions is a dated question to understanding the groups that are occurring in contemporary society.

It is my contention here that White's (2009) three genres of discipline; *interface*, *council* and *arena* aid in bridging the micro and macro aspects that occur in an environment by allowing for meaning and identity and most importantly values to shape the explication of the behaviour. Disciplines are status systems where evaluative judgements create a network pattern.

Interface discipline includes the flow of production that ensues when something physical is being made, but also the conduct of lectures in a university or the production of toys. It requires a level of commitment from the actor, whether that is people or other groups and the valuation order is that of quality. This can be quality in a publication, fame, number of citations, number of graduate students or finished product. *Council* discipline is applicable to university councils or committees that have dominance over a particular resource. The process that takes place is that of mediation in order to regulate the flow of people. The valuation order is that of prestige in particular linked to the influence of corporate action requiring 'soundness' of character. *Arena* discipline is the formation of order that surrounds groups such as country clubs, the American university fraternity house, or the Rotary Club, with a distinct focus on selection via boundaries of inclusion and exclusion in order to uphold a sense of 'purity' within the perceived group, passed on via marriage or eligibility for marriage as an example. Each of these disciplines is a status system where evaluative judgements create a network pattern. The judgments that people within these disciplines make create task flows that generate network patterns.

This notion that White's work will somehow enable us to move social network analysis forward is also taken up by Scott (2010) who states that "[t]he most important recent theoretical arguments have been those that have taken up the work of White [...] on issues of culture, identity, and agency". It is an aspect of these arguments that I want to engage in when I ask 'which of White's (2009) three genres of disciplines and relative valuation orders the Singapore political blogosphere adheres to?'

overcome the social structure focus of White and Johansen (2005) and to add an analysis of the discourse used by those under observation.

Chapter 4 outlines the analytic framework, the social network theory, method of social network analysis. It follows with a description of the software employed in this research; *IssueCrawler* and the settings used; *NetDraw* (Borgatti, 2002) for the social network analysis uncovers which blogs 'control' the flow of information. Then a site scraper called *HTTrack* (Roche et al., 2007) harvests the content of the sites. The data is then analysed using *Leximancer* (Smith & Humphreys, 2006). It analyses the textual data and extracts two types of data, semantic and relational; it is a semi-automated content analysis process. Harvesting of blog content downloaded 12 megabytes on average each month over the 14-month period from January 2009 to February 2010. I estimate this to be the equivalent of 4,000 A4 pages of textual data each occasion. This methodology chapter then turns to the suitability of applying the ethnographic approach to the study of the Singapore blogosphere. My major concerns with research conducted on online networks and the Singapore blogosphere are that they lead to technological and/or organisational determinism. Social network analysis traces the flow of information that passes through a network of relations. Social structure and culture are part of the complexities of discursive practices of those who populate the disciplines. I consider issues around the notion of 'being in context' and time or presence and absence, ethical considerations, network ethnography and online versus offline approaches to ethnography. This chapter explicates the utility of White's (2008) concepts, as they are not hard and fast descriptions but heuristic guides to observation. Having hard and fast descriptions and forcing observations into them would merely be a continuation of the engineering tendency of mathematical approaches to network analyses. Chapter 4 provides a systematic analysis of the Singapore hyperlink network and why specific measures and analytic techniques rather than others. It looks at how others have investigated cohesive subgroups and other structural features of networks. It explains the measures that are included and provides evaluations of their utility in this instance. An extensive analysis of the data is conducted in order to present the various subgroups, and cliques; always asking if the resulting groups enhance our understanding of the Singapore blogosphere or the various software platforms that are being used and presented in Chapter 5. Measurements of centrality and the variance between months indicates that there is a shift in the genre of websites that are prominent within the network over time. The

variations in centrality scores are indicative of a phenomenon highlighted by Lessig - corporate enclosure.

The final chapters (5, 6 and 7) of the thesis emphasis throughout all three of them the significance and primacy given to the ethnographic and qualitative data over and above the structural maps and measurements of cohesion, subgroupings and scores of centrality. The three chapters that present the empirical data are focused on undermining the utility of presenting the algorithm generated findings as limited representations of nodes and edges whereas the approach here emphasises people, meaning and understanding. The concluding chapters emphasise the presentation of meaning that has been uncovered in analysing the content of the communication that takes place within the Singapore blogosphere. Rather than viewing the connections or links as representing relations between the nodes in the network it emphasises the shared meanings, values and thereby social relations that are constructed and reconstructed over time. The context in which the thesis is presented is one in which others place greater importance on the search for imposing subgroup structures onto the network being observed rather than allowing for the groupings themselves to emerge. Chapters 5 to 8 allow for the possibility that new grouping rather than the preformatted notions of network, clique, community or institutions are taking place.

Chapter 5 presents the results for the social network analysis of the Singapore blogosphere from January 2009 to February 2010. This chapter answers the question of 'power' within the Singapore blogosphere. The two main tools and concerns raised about their applicability to human behaviour are touched on. The issue of blog service providers, corporate social network sites, and online hosting services sites controlling the flow of information is touched on. This chapter also presents a faction analysis of the Singapore blogosphere tracking a subset of the Singapore blogosphere demarcated from the larger set of bloggers.

Chapter 6 presents the findings from the analysis of the textual data gathered over 14 months. Beginning with the definitions of the various terms used followed by an explanation of the software and how to read the results. This chapter provides detailed examples in order to illustrate the analysis carried out. It starts by looking at the dominant themes, the associated concepts and values. The chapter makes explicit the cognitive structure that Singapore bloggers are operating within and (re)producing. This chapter answers two questions, 'is the Internet creating a public sphere?' and 'is the discourse persuasive or manipulative?' The reason for measuring

the levels of manipulation in the corpora is that “[M]anipulation is illegitimate in a democratic society, because it (re)produces, or may reproduce, inequality: it is in the best interests of powerful groups and speakers, and hurts the interests of less powerful groups and speakers” (van Dijk 2006: 363-364, italics in original). What is most interesting is where and when manipulative discourse present in the corpora and the themes in which they appear.

The final chapters (7 and 8) of the thesis refer to the erosion of support for the People’s Action Party in the 2011 Singapore elections as part of a systematic review of Internet and democracy theorists who have linked observed changes to political change. After presenting the contribution that the participant observation role has added to the debates taking place online it returns to the work of Castells, Habermas, and Coleman, highlighted in earlier chapters, referring to empirically grounded research of D’Alessio (1997), Bimber and Davis (2003), Gibson and McAllister (2006, 2011); and Sudulich and Wall (2010), Aday, (2010), Norris and Curtis, (2008); Vissers, (2009), Wright (2011), Farrell (2012) and Gurevitch, Coleman and Blumler (2009). This study does not conduct an experiment to determine the causal impact of exposure to various types of media and therefore cannot make claims of direct causation. Rather what is occurring is that online campaigning is a resource that activates those already committed to political action to spread the word.

Chapter 7 presents the network ethnographic details, the role of network ethnographer in the Singapore political blogosphere. I apply the same tools that I have been applying to others to my own content. In a nation state where mass media outlets are tightly controlled this observed section of the public is engaging in discourse that the Singapore elite does not recognise. as it is useful in capturing and categorizing community symbols and keywords and their usage demarcates social boundaries and roles (Howard, 2002: 257); delineates the context of the Singapore blogosphere. The concern with anonymity amongst Singaporean bloggers is important. It also found that the Singapore blogosphere is creating an oppositional space. The space allows for talk that is counter to the social and cultural expectations of the Singapore state. The offline world does not define the reputations and relationships formed within the Singapore blogosphere; the Singapore blogosphere defines them. The most important political and social issues faced by the Singapore public, as defined by the ‘public’ and not mediated by a state controlled press, nor this researcher, will continue to find

space and expression in the Singapore blogosphere, retaining the potential to engender democracy.

Chapter 8 provides a systematic review of theoretical and substantive studies of the literature on political and media systems and how they are changed referred to in sections 2.1 to 2.3.2. Material from section 2.2 is returned to in order to shift the focus to how changes affecting Singapore highlight not only that which is taking place within the geographic boundaries of Singapore but also the implications that the potentiality of the Internet possess in altering the dynamics of political and media institutions globally. The final section of Chapter 8 assesses Scott's (2010:21) "need for interdisciplinary cooperation if significant work is to ensue" and how this paper adds to that exchange. Central to my position is that White's three genres of discipline separate the various forces at work in this case study. The social structure is evident in the analysis conducted using the mathematical tools of network analysis and shows how through linking behaviour the un-uttered shapes the boundaries of the group. The analysis of the textual data gathered for this research highlights the acceptable talk about discrimination that happens in the offline environment of Singapore. It also highlights the values that many have brought from their offline jobs, work or background and allowed to shape the online texts. Rather than merely present snapshots of the talk in word maps the use of ethnography allows the people's discourse a wider time-filled environment. It shows that when events occur it is the result of the actions by people. Those events are the stories and narratives of their own identities as people and the Singapore blogosphere repeatedly shapes and confirms their interpretation of unfolding events.

Using the cognitive, structural and thematic analyses together gets to the content and meaning of the communication that is taking place between the people who make up the Singapore blogosphere. Taking the links and connections between the nodes as all that is occurring is taking the relation between the two nodes to be the hyperlink and nothing more. The relation between the two nodes if such a limited undertaking here would limit it to that of either directed or undirected, positive or negative in sentiment. Such an approach if undertaken here would have had the effect of limiting the understanding of peoples communication to measurements of happiness rather than opening it out into myriad measurements of meaning. In this instance, the meanings are whether the writer of the blog post views the topic they are debating as one *that is* or *ought to be*. Rather than limit the measurement of communications to

that of happy or sad it introduces a cognitive approach that not only allows for greater application of analytic linguistic tools but also in this instance epistemic orientation to the theme or agenda debated by the person and others. The themes under debate are set by the people who are writing the blogs and website posts not limited by a schematic approach. Such a schematic approach would have begun with a list of potential topics or genres of discourse that the people may or may not have engaged in and measured whether the blogger was for or against; positive or negative in regards to that topic. Limiting the analysis to imposing the structural features of various algorithmic subgrouping tools would have resulted in conclusions that supported formal or informal, network or community, or levels of institutionalisation taking place for the people in those groups. Imposing such conclusions on the relations taking place in the Singapore blogosphere would have not allowed for new formations and subgroupings to appear and restricted the new formations to paradigms more suited to the less connected age of modernity. The thematic analysis informs us of what the people are talking about; the structural analysis presents relational forms that hide even from those who form the relations and the cognitive analysis allows us to target specific linguistic devices that people use to make sense of their experiences when relating with others. The approach emancipates the actions and utterances of the people from the preordained and limited schema imposed by methodological approaches that fold into themselves the aberrations and cracks that are the social. Rather than shutting down the potentiality of communication between people that the Internet facilitates, it allows for the opening up and the potential of new groupings to form. Such relations are beyond sociological analysis that were better suited to the era of modernity.

Chapter 2 The Internet, Media and Politics

Chapter 2 includes a literature review of nine topics that are returned to later in Chapter 8 in order to assess the contribution to the various debates that it has made. The first ideas to be unpacked are media and political systems and the prominence of politics over media. A prominence that has waned. The next section is an outlining of the literature to date on the nature of communications under authoritative regimes. The material presented will place this thesis within the debate regarding the nature of Singapore and the control of the communications infra-structure and how that interacts with the people of Singapore and their ability to generate discourse beyond the control of the People's Action Party. This will then lead into a discussion of the Internet as a 'cause' of polarisation; helping the spread of democracy; or mobiliser of voters. The central argument is that the literature to date is western centric and focused on institutions that it is argued here no longer control political discourse. The literature review then shifts focus to the nature of networks and the theoretical development of social network analysis and the distinction between algorithms focused approaches with people focused approaches. This distinction highlights the critical realist position taken here and its focus on the people and previous attempts to use social network analysis of hyperlinks that collapse into two categories both of which generate descriptions of events that are unable to explain events. The literature review sections conclude with how virtual ethnography has developed and how linguistic analysis of the texts occurs.

2.1 Media Systems and Political Systems

In the twenty-first century, a new institution is emerging with some characteristics similar to the Fourth Estate, but with sufficiently distinctive and important features to warrant its recognition as a new Fifth Estate. This is being built on the growing use of the Internet and related information and communication technologies (ICTs) in ways that are enabling 'networked individuals' to reconfigure access to alternative sources of information, people and other resources. Such 'networks of networks' enable the networked individuals to move across, undermine and go beyond the boundaries of existing institutions, thereby opening new ways of increasing the accountability of politicians, press, experts and other loci of power and influence. These are neither personal nor institutional networks, but networked individuals (Dutton, 2009:2).

The Fourth Estate was the title assigned to the one-to-many mass media and Dutton argues that the Fifth Estate both challenges and complements this. The notion of estates of the realm first emerged in feudal times and the original three estates are

the legislature, executive and judicial sections of the government. Dutton contends that the Fifth Estate is enhancing the communicative power of individuals rather than institutions. This enables individuals to hold the other estates or institutions of governance to account while not necessarily empowering the users of the Internet. *What is empowered is communication.* Dutton argues that the main constraints on this power of communication of networked individuals are modern parallels of the traditional estate.

- Public intellectuals, who see the Internet as a “space for amateurs without the knowledge and analytic rigour of experts”
- Economic elites who can centralise information and commercialise the Fifth Estate spaces
- Governments, through the use of censorship, regulation and other controls “constrain and block Internet access”
- The mass media that undermine the communicative power of networked individuals through imitation and competing with the Fifth Estate
- Finally, the Mob or “citizens, audiences, consumers, spammers and hackers who through malicious and accidental uses [...] undermine trust and confidence in the Internet” (Dutton, 2010:2).

This list of constraints of the communicative power of networked individuals leaves very little room for the networked individuals to operate. Assigning a name to this group of networked individuals is not important but rather it is the uses that the Internet is put to that are being constrained rather than an actual categorised group of individuals. It is how the Internet is used rather than who uses it that is central to Dutton’s position. The communicative power of networked individuals lies in the utility of the Internet. The public intellectual bemoans the lack of scientific rigour, thereby questioning the genre of communication taking place. The economist bemoans the lack of a proper business model and not being able to monetise the communication. The government complains about the lack of social order and law capable of constraining the function of the communication. The mass media treats it as a threat and competitor to be beaten or usurped via mimicry. While the public abuse or are unaware of the potential democratic utility of the communication, according to Dutton.

These attempts at curtailing the power of communication do not just happen at the national level. Not all states possess power within and beyond nation states equally. Economic elites and governments are able to centralise resources - be it money or the spaces, censor and regulate where the Fifth Estate is on a supranational level. Yet, the spaces of networked individuals do exist and continue to out run the attempts at control of these supranational systems, namely the government and transnational corporations that are the loci of power. The spaces that continue to exist do so because of the actions of individuals who are willing and able to out manoeuvre the supranational systems. Facilitated by the Internet as a technology they are one-step ahead of political, economic and cultural institutions. The political, economic and cultural institutions are the governments and mass media.

As Hafez (2010) argues, not only have governments been unable to get a grip on events but also academics writing on the matter have focused on theoretical models developed during the Cold War. These models are out of date. The question that remains unanswered today is “what exactly [is] the role of the Internet in democracies other than to reinforce existing systems’ functions?” According to Hafez, “we are witnessing a communicative turn in the sense that developments in the media sector and in the public sphere hurry ahead of changes in political systems” (2010:2).

Up until now, media systems were presented as being interdependent and yet a sub-set of political systems. Presenting media systems in such a way, according to Engesser and Frenetic (2011) is unproblematic. Unravelling the interplay of a particular media system and political system is useful. It is a preferred option to comparing one media system to another. One major concern is whether a comparative approach is essential to understanding any media system. Comparing one media-political system to another may merely reproduce certain western centric traits of previous scholars. The comparative approach throws up its own concerns. Post-Cold War theories at work in the area of media systems and political systems have been measuring the levels of democracy present in specific nation states, usually with the United States held up as the liberal ideal type to which all others are measured. At times and in particular during the run up to the Iraq War the US media system was “highly illiberal” (Hafez, 2010). Media typologies such as those presented by Hallin and Mancini (2004) are too static and lack a nuanced approach that might be able to capture the various levels of manipulation that occur in the content of actual

communications - rather than referring to a long-term held belief that western media systems are the ideal type for democracy that others should aspire to.

Taking one nation state and focusing primarily on the uses and functions of the Internet will zero in on the content of the communications - the texts - that people are writing and reading. However, certain aspects of the act of writing and reading such content need to be in the context in which this action takes place.

Focusing on the Internet will highlight how the shift in influence and the dominance of the media system came into play. In addition, it aids in highlighting levels of legitimacy, justice and voice of a particular nation state within the wider supranational system. Technology-led changes to media systems now enable political systems to 'get a grip' on the communication, that is taking place beyond the confines of their own political elite. The number of people, who take part in deliberation, has expanded. If the political elite do not listen to them – my contention is that there will be a crisis of legitimacy. The technology exists to listen to and consider the wider deliberations that are taking place on the Internet. However, as Blumler and Gurevitch argue (2001), the willingness to do so is fragile and requires concrete attempts at harnessing that potential rather than relying on optimism and the goodwill of politicians, journalists or the Mob.

Relying on the political institutions is not an option as they continue to attempt to control through regulation and censorship something that they perceive primarily as a threat. However, a 'political system' is more than its institutions and more than its formal process of government. It also includes the dynamic interplay of people's ideas and interests, the process of demand and response (Engesser & Franzetti, 2011). Until now, the Internet played a subsidiary role in theories of the public sphere and the interplay of people's ideas and interests that it facilitates. Habermas (2006) made only a passing remark about the Internet in an endnote to a paper that looked at "The Impact of Normative Theory on Empirical Research" on "Political Communication in Media Society". Stating that it – the Internet - can undermine censorship in authoritarian regimes and that its impact on western societies would be minimal because they have a free press and a diversity of opinion in the media system.

Habermas' statement highlights the western centricity of so many theorists and the static view of western media and political systems as the gold standard. The statement is also remarkable in assessing the significance of normative theory on

empirical research but not mentioning that the Internet as a place to collect and analyse dynamic data. Hafez (2010) accuses Castells (and Rheingold also) of not managing to explain the function of the Internet for democracy. He refers to Castells' (1996) *Network Society* however, since then Castells' (2007, 2009) has clearly addressed the role and direct link between politics and the media and central to that role is "the rise of a new form of communication, mass self-communication, over the Internet and wireless communication networks" (Castells, 2007:1). Because of this transformative counter power, social movements are able to interfere more decisively than afforded them in the past. Castells' writings have advanced the debate but advanced it into a position of conflicted institutions – dominant political groups versus "counter power" movements. What Blumler and Gurevitch (2001) call for is not conflict, regulation and censorship but rather an institution that can reconcile the sides and harness the communicative power that the Internet facilitates between the myriad groups jockeying for control.

Seeing the political and media institutions as more than the sum of their parts and allowing for the exchange of values and ideas that are embedded in the institutions and regulatory frameworks to be recognised as not only central to the existence of these institutions but the very thing that communicative power is debating.

So in agreement with Hafez (2010) – the Internet does need to be brought into the centre of the discussion regarding the shift taking place within and between political and media systems, but by seeing it not only as being technology-led but an expansion of communicative power. Castells (citing Williams & Delli Carpina, 2004), states that the transformation that has occurred is facilitated by the "expansion of politically relevant media"; a lack of a distinction between news and entertainment; a move to 24-hour rolling news and the air time needing to be filled by a myriad of voices and sources; and, the opening up of possible interpretations of the political. New media provides the public with sources of political information, it removes the gatekeeper's role that the mass media used to fulfil, and undermines the control that political elites used to have over the information that circulates in the public domain. Rather than looking only at the information produced by the mass media and politicians – it is how that information is interpreted and re-interpreted that is important to allow for the voice of the public. However, looking at the increase in information available to people needs to go beyond discussions of the genre and quantity, and look at the content of the messages that the public is producing.

The gatekeeper role of mass information dissemination is no longer in the hands of political and media elites. The role of disseminating and re-interpreting information – to communicate with the many – also lies in the hands of the public's. With politicians as the gatekeepers of meaning, they were concerned with mediating and interpreting information. All events fit into their politico-ideological positions. Unforeseen events like social unrest are 'folded into' the meanings contained within the rhetoric of each political party. Politicians are incapable of admitting that the gatekeeper's role is no longer within nation states but global and local actors, agencies, corporate media conglomerates and international organisations. The mass media of nation states does play a dominating role in the meaning making functions by selecting information to present from the Internet. The ability to switch from the realm of the political system to the media system is afforded to political leaders, but such a move in the Fifth Estate is not possible. On the Internet, the voice of the politician is one among the many. To censor or regulate the Internet would be to undermine the politician or media speaker in the eyes of the public and thereby position the nation level ruling elite in opposition to that public; the public that they rely on for legitimacy. The communicative power that the Internet presents is the function of undermining singular narratives or the dominate framing of events and therefore the meaning of events. The Internet with the communicative power it facilitates is at the centre of the debate regarding power and control over political and media systems and ultimately over meaning. The communicative power of the Internet undermines attempts at presenting every possible event as in accordance with a pre-written political or ideological position, with all Four Estates fulfilling their roles and functioning to maintain meaning.

The concept of the media system in academic understanding has been a sub-set of the political system (Hafez, 2010). Such assertions that the media system is only visible in the context of wider social systems, and according to Engesser and Franzetti (2011) the political system in particular - has remained unproblematic until now. Hafez argues that the:

Classical transformation theory has never granted the media a prominent place. Media were thought to follow rather than to lead democracy (McConnell/Becker 2002), and it is still true that changes in the media sector alone cannot transform political systems. However, we might still live in an era of a "communicative turn" of historical dimensions: Arab media and, with them, Arab political culture are developing faster today than any of the Arab political systems (Hafez, 2010:1).

All three are asserting that the “media system is not definable by itself. Moreover, it is mostly seen in a context of or even dependence on other social systems, especially the political system (Engesser & Franzetti, 2011:277)”. This dependence seems to imply that as a system it is at the mercy of wider more powerful systems. In that, it has not had multiple attempts at a definition *media systems* are sub-sets of wider political systems peculiar to each nation state.

It is the dependence of the media system on the political system that is in doubt. Nation states are now no longer able to control and determine the flow of people’s ideas and interests. This Fifth Estate is enhancing the communicative power of individuals rather than institutions formed in the Cold War and presented with Cold War narratives that place the nation state as the dominant player. The Fifth Estate is not merely shaking the foundations of authoritarian regimes as Habermas states but also the foundations of supposedly democratic nations such as the United States. Claims made by the political elite are under greater scrutiny by access to much more information than the mass media presents.

The western political experience has dominated the theoretical basis of discussion on political and media systems. Whether or not models that are the results of an analysis are applicable to non-western states is still a relevant question especially when certain states are – such as Singapore – are still in the process of nation building (Hafez, 2010). To paraphrase Hafez, Hallin and Mancini’s model, which I am about to turn to, needs to be adapted to the...

political and social realities of the respective countries, meaning that categories like state intervention, political parallelism, markets or professionalism must be supplemented by more criteria that characterise the relationship between the media, politics and society in [Singapore] (Hafez, 2010:10).

Hallin and Mancini (2004) have four criteria with which they identify and categorise western media systems - State interventionism, political parallelism, media industries and professionalisation. They have also stated that these models need to be adapted because,

One cannot understand the news media without understanding the nature of the state, the system of political parties, the patterns of relations between economic and political interests and development of civil society, among other elements of social structure (Hallin & Mancini, 2004:8).

Both adaptations are necessary yet leave out three crucial factors, firstly the Internet and the communicative power that it facilitates, secondly how nation states respond to this perceived threat and, thirdly the social agents, whether they are

individual actors, groups of people or other resources that utilise the communicative space proved by the Internet. Theorists and empirical researchers alike need to understand all forces at work for a more holistic account to emerge.

State interventionism is the level of influence governments have in the running of the media. Political parallelism is the extent to which political parties and media outlets such as newspapers evolved together. Is there a clear party line adhered to in the allegiance of newspapers for example? The criteria of media industries and the relationship with the markets refer to the level of state versus private capital invested in broadcast media in the nation state. Finally, professionalisation refers to the level of training provided for journalists that Hallin and Mancini (2004) argue results in greater levels of autonomy of the media. These criteria are then categorised into three ideal types, the polarised pluralist model, democratic corporatist model and liberal model.

As outlined above, comparative systems analysis that has determined the systems theory approach in this area has given too much primacy to the nation state. In an age of globalisation or supranational communicative power, this is myopic. So engaging in the merits or otherwise of the ontological veracity of nation state phenomenon by starting at the national level of media institutions is redundant. However, the interplay of media systems and political systems are in the grip of communicative power taking place on a global scale; and nation states are acting and reacting to this. This is the position at which to gain a vast enough perspective on the dynamic interplay of people's ideas and interests. Analysis needs to transcend the level of the nation-state and focus on the communication of ideas and interests at the global level. This is not to argue that nation states now have no power or influence but rather to place them in a more subsidiary role regarding the flow of information and the meaning making that is occurring in the Fifth Estate.

How a nation state grapples with this dominant means of communication by having an understanding of the institutions and formal processes of governance is theoretically desirable. However, this in no way places prominence on those institutions and processes. Systems theory generates and explains functional relationships between institutions and between higher order systems but does not allow for dysfunction. Current institutions and the wider systems that they operate within are now larger than the limited reach of nation states. The flow of ideas and

‘network of networks’ resides outside the boundaries of nation states and operates at a supranational level.

How are various states as categorised by Hallin and Mancini’s (2004) polarised pluralist model, democratic corporatist model and liberal model managing to manoeuvre the shifting forces of the Internet? When the interplay of forces facilitates a shift in control – a move away from nation state political systems and nation level media systems to supranational political and media systems then the interaction at the national level may appear to be dysfunctional. The institutions and processes that were once dominant are left playing catch up, trying to ‘get a grip’ on the communication of ideas that the agents are exchanging. A functional approach to systems theory, whether it has been comparative or focused on covariance or comparative analogies, has ignored the people and individuals that reside within institutions. Unfortunately, models of media systems and political systems have yet to incorporate fully the implications of the Internet on the utility value for empirical research of Hallin and Mancini’s three models. The three models are clearly dependent on western states with the polarized pluralist model referring to France, Greece, Italy, Portugal, Spain; the democratic corporatist model: Austria, Belgium, Finland, Germany, Netherlands, Norway, Sweden, Switzerland; and the liberal model: Britain, United States, Canada, Ireland¹. The three models approach has abandoned the political undertones of democratic versus authoritarian to assign the western media systems as the three ideal types. A return to critically evaluating nation state styles of governance allows for the possibility that France, Greece, Italy, Portugal, Spain, Austria, Belgium, Finland, Germany, Netherlands, Norway, Sweden, Switzerland, Britain, United States, Canada, and Ireland can be included in the category of authoritarian actors.

While the models contain the problems as mentioned above, the criteria of levels of state interventionism, political parallelism, media industries (and the market) and professionalisation are not as beset by western centric empirical findings. They also may allow for a revamping of the work of Siebert, Theodore and Schramm (1963). What is proposed is whether a nation state or group of nation states are facilitating the

¹ As highlighted by Ichiro Motozawa in a report of a talk by Mancini at the Reuters Institute of Journalism in 2009 – Available here <http://reutersinstitute.politics.ox.ac.uk/about/news/item/article/comparing-media-systems.html>

communicative power of their publics to exist; resorting to censorship and control of the space of communication; and, engaging in deliberation with the public or merely propagating manipulative discourse - during a specific event or series of events. This allows for the malleable and changing interpretation over time of whether a nation state is acting democratically or is autocratically dependent on the actions of lawmakers, regulators, governments and media owners. Rather than theoretically ascribing static labels of *democratic* or *authoritarian* to the complex interplay of events, it is about observing how specific nation states act and re-act to unfolding events located in a geographically definable space and online over time.

This would get past the simplistic idea that only non-western states are autocratic and remove the notion that non-western states are progressing towards one of the three ideal types of Hallin and Mancini's. When Hafez (2010:3) claims that the three ideal type model allows states to be "transitional" or "emerging" or "mixed" it is still placing the western models as something to become. Hafez (2010:9) does comment on Hallin and Mancini's models as being western centric and mentions in passing that the US press was "illiberal" in the run up to the Iraq War. Yet the full implications of allowing for western states to be perceived as to be *acting in* an authoritarian or illiberal manner as a starting position and then conducting research is a less western centric position than assuming otherwise.

The criteria of state interventionism, political parallelism, media industries (and the market) and professionalisation (Hallin & Mancini, 2004) also need to be applied and adapted within the context of the given nation state and adapted according to a socio-cultural understanding of the events under analysis. While remembering that the individual's ideas and interests *are not wholly shaped* by the values of the institutions – the agents reworking the values and norms shape the institutions. Individuals are immersed into the values of institutions but not reducible to them. It is when the agents within institutions attempt to rework values that the nation-state institutions are unmasked to be dysfunctional in the context of supranational ideas and interests.

2.2 Studies of Communications under Authoritative Regimes

Singapore is cited by Kalathil and Boas (2003) as meriting special examination as it has managed the "impossible"; "extensive ICT development with a negligible

erosion of political control” (Kalathil & Boas, 2003:73). They claim that the veracity of this assertion is evident in the “fact” that other repressive regimes are learning from Singapore and that by examining Singapore the future strategies of other regimes can be foreseen. My contention is that Singapore is useful as a case study as far as the techniques used in the data collection and analysis highlighted here show the level of control since Kalathil and Boas’ (2003) study. Singaporeans may be utilising the communicative power of the Internet to undermine the dominance of the ruling regime.

Assessing the levels of state interventionism in authoritarian or repressive states seems like an easy task as it is widely regarded as high. However, all state intervention is not detrimental to democratic values or aspiration. State intervention by the Singapore government facilitated the extensive Information Communication and Technological (ICT) advances within Singapore. While other states have reacted differently – such as Cuba – and ensured that the diffusion of ICT within national boundaries has been tightly controlled and regulated to such an extent that they have created an Intranet as opposed to access to the wider Internet (Kalathil & Boas, 2003). An Intranet is a portal to a confined number of sites linked using hyperlinks but all limited to particular servers.

The communicative space created by the Internet can be used to engage with citizens in deliberation or used for the dissemination of manipulative discourse or propaganda. Such propaganda can impact on the internal image of the regime or express a particular reading of events to the external states and other actors. The use of the Internet to provide e-government services is a positive attribute to Internet facilitation within states as it has the potential to provide services to citizens in a manner that enables the leaders to claim they are easy to access. E-government initiatives can also led to greater transparency that might aid in removing corrupt practices and thereby add to the legitimacy claims of those in power.

A comparative analysis of China, Cuba, Singapore, Vietnam, Burma, United Arab Emirates, Saudi Arabia and Egypt by Kalathil and Boas (2003) concluded that what was required when assessing the democratic potential of the Internet was not simply blind optimism. Kalathil and Boas (2003) used narratives that statically labelled authoritarian or semi-authoritarian states, which in their argument ought to be progressing towards the golden state of western nation states. Aside from this

criticism, they conclude that the state in most of the countries still “calls the shots” (Kalathil and Boas, 2003:137) and that governments are able to control the use of ICT because in many cases they instigated the building of the Internet infrastructure upon which the world wide web and other software operate. They argue that, with the exception of Egypt, the states could pull the plug at times of unrest and shut down the Internet. Events in Egypt during the ‘*Arab Spring*’ of January 25th 2011 support this claim to a limited extent. The Egyptian government tried to shut down the Internet but it was not a complete blackout; and besides the revolution had taken to the offline environment by then with face-to-face communication over-riding the online efforts of the Muhammad Hosni Sayyid Mubarak government.

National ICT plans in all the countries listed have shaped the environment for Internet use with Cuba utilising the Internet for education and health care strategies while China anticipates the modernisation of the country through use of the Internet, according to Kalathil and Boas (2003). All states are also keen to learn from each other – particularly Singapore being the pathfinder for the others. State intervention matters in the implementation of building the infrastructure of the Internet in authoritarian regimes just as it does in “democratic” states. The authoritarian states are using the Internet to appear efficient, effective, responsive, legitimate, and beneficial for their citizens and they are successful in this endeavour (Kalathil & Boas, 2003).

Again focusing on the state’s use of the Internet, the control of politically threatening use of the Internet is via filtering of access to particular sites, blocking access to specific sites or removing material that the state finds threatening. Other methods include censorship, access restrictions as well as self-censorship. This control extends to controlling the environment in which Internet activity takes place rather than at the individual level.

Notably they conclude that in the vast majority of the regimes they studied either opposition parties did not exist or if they did exist then only in the offline environment. The two exceptions were Egypt and Singapore with use of this communication space minimal in 2003. They asserted that in Singapore, “regulation and legislation ensure that its critics cannot use the Internet for political communication (Kalathil & Boas, 2003:142)”. They conclude by asserting pessimistically that what would be needed to

precipitate political change would be an economic crisis and that the Internet would not be likely to play a role in that change.

Kalathil and Boas' (2003) study of the Internet in authoritarian regimes places prominence in the nation state, with the Internet relegated to a position of dependency on the state for its creation. Their focus remains on how the state controls and dominates the communicative space that the Internet facilitates and by hoping to understand the future implications of the situation look to and give the loci of power and control to the nation state. Particular nation states and not the service providers of websites and servers define whether something is legal or illegal. In 2003, access to the Internet was only for elites within these authoritarian states and their use of it was largely risk averse. Few were prepared to test the bounds of legality regarding access to particular sites or circumventing the restrictions in place. They claim that after years of listening to state sponsored propaganda the people of these regimes were sceptical of all forms of media, although they provide little evidence to support this. Therefore, they describe the impact of the Internet to be marginal at best.

Political parallelism refers to the degree to which the media reflects political division within the nation state (Hallin & Mancini, 2004). With access to the Internet largely confined to the elite in authoritarian states the criteria of political parallelism may help in re-assessing this criteria and applying it to new media systems with the Internet firmly recognised as being a major *actor* in that system. The criteria of political parallelism, according to Hafez (2010:5) refers to the level of "co-evolution" of political parties and media outlets being affiliated or loyal to that political party or actor. Again, the US holds the position on the continuum for others to aspire to in terms of mainstream media without special attention placed on looking at the Internet in terms of these criteria.

Citing Burma, they argue that access is very restricted and only those with a stake in maintaining the status quo have Internet access such as business and political elites. Cuba has limitations on who can access the Internet with the same pattern of elite access appearing in Saudi Arabia and Egypt. Those who do have access tend to follow the user patterns of users in non-authoritarian countries; shopping and communication with family and friends with few people trying to retrieve political information. As well as contact with tourists there are other forms of communication up to people, such as mobile phones, radio and satellite television. These enable

people to receive information from beyond the nation states control. Kalathil and Boas argue that when there are a few dissidents within a state their impact is rather limited even when they have access to the Internet as others may be unwilling to interact with them in case they are said to be guilty by association and that communicating with other dissidents is limited because so few have Internet access.

So in certain authoritarian states the possibility of using the political parallelism criteria is slightly complicated by the acknowledgment that multiple political parties may currently not be in existence. When they do exist as fledgling opposition groups or dissidents the legal situation and de-politicised environment is a major inhibitor. The Internet is accessible but using it for political means is not necessarily going to happen. Civil Society Organisations (CSO) within such states tend to be conformist and are not opposed to the ruling regime (Kalathil & Boas, 2003:144). When such CSO's do have access, they tend not to want to jeopardise it. Citing Singapore, they recall that CSO's do have access to the Internet however organisations that have tried to set up sites that question government policies have been intimidated by threats of legal prosecution and the government alters regulations in order to make certain actions illegal. This resulted in sites such as *Sintercom* and the *Think Centre* shutting down (Kalathil & Boas, 2003:144)². However as this takes place on the Internet the closing down of a site may remove direct access to it but the very act of doing so also draws attention to the censorious nature of the state. The site or a similar one then appears elsewhere.

In Egypt the criteria of political parallelism has been applied by Hafez (2010) noting that the political party press was more successful than the political parties that they were affiliated with and that the newspapers were developing qualities that are more associated with the press in the US. With multiple political parties and movements existing, even single person parties, with a free flow of views expressed in newspapers and other outlets of communication. Hafez was sceptical about the impact of the Internet and argued that "social and political networks on the Internet might outnumber party websites and party print media but especially the case of Iran shows the weakness of purely Web based '2.0' revolution." What Hafez argues is that the Internet alone could not facilitate the move towards either the US or European

² Although true in 2003, the two sites named were in 2011 back online and accessible within Singapore under slightly different arrangements.

model of press and political relationships. However rather than a move towards one of these models the people of Egypt facilitated by the Internet and mobile technology have removed Muhammad Hosni Sayyid Mubarak, who ruled Egypt from 1981 to 2011 as a dictator. With the power of hindsight, the events in Egypt in 2011 undermine Hafez's argument that the Internet could not facilitate a plurality of voices that would reverberate on to the political parties and party print media. It achieved more than shifting the country to a US or European model.

While not wishing to draw parallels between the situation in Egypt with the Singaporean context it is necessary to point out one major difference between the two in relation to CSO's and political parties. The legal, social and economic conditions as well as the political system in which they operate curtail the actions of CSO's and political parties in Singapore; more so than in Egypt. As Tang (2009:5), while comparing Singapore with Malaysia puts it;

While the networked electorate does wield some power by reason of its interconnectedness, this power of the networks is extremely fragile. It is susceptible to destruction by stringent government regulations or private law action such as defamation.

Political parties and CSO's in Singapore have to register and publically declare themselves as such. The situation in Egypt with multiple political parties and even single person political parties differs then from Singapore. Laws and the use of defamation law regulate and control digital speech. The laws and regulations that are in place in Singapore to paraphrase Tang (2009:11-12) are;

- (i) The Sedition Act – which makes it an offence to say or publish words that have a seditious tendency and this means the use of words designed to bring hatred, contempt, or exciting disaffection against the government. Words exciting the alteration other than by lawful means of any matter by law established. Bringing hatred or contempt or excite disaffection against the administration of justice, raise discontent or disaffection among residents or citizens or promote feelings of ill will and hostility between races or classes.
- (ii) The Defamation Act – which as well as covering the slander of women can be used to protect official, professional and business reputations that can take the form of “‘words’ including pictures, visual images, gestures

and other methods of signifying meaning.”³ Singapore’s politicians “have never been reserved in using defamation laws against their political opponents” (Tang, 2009:11).

- (iii) Contempt of court and contempt of parliament – there are stringent laws against speech that can be construed as contempt of court and/or contempt of parliament (See, section 7 of the Supreme Court of Judicature Act, c. 322 (1999 Rev. Edn.)(Sing.). See also, Attorney General v. Lingle (1995) 1 S.L.R 696 (Sing. C.A.); See, e.g. JB Jeyaretnam v. Attorney General (1989) 1 M.L.J. 137 (Sing. C.A.)).
- (iv) The Internal Security Act – allows the government to detain a person without trial.
- (v) The Official Secrets Act – that states that the communication of material that falls under the remit of the official secrets is punishable by fine or imprisonment.
- (vi) The Public Entertainments and Meetings Act - that includes any lecture, talk, address, debate or discussion can take place in an approved area so long as it adheres to the licence granted by a licensing officer.
- (vii) The Penal Code - which covers the Internet, prohibits the sale of obscene books, uttering words with the deliberate intent to wound the religious feelings of anyone, defamation, or statements conducing public mischief.
- (viii) The Maintenance of Religious Harmony Act – whereby the government can grant restraining orders against persons who are inciting or instigating any religious group or institution to cause feelings of enmity, hatred, ill will or hostility between religious groups, carry out activities to promote a political cause, “or a cause of any political party while, or under the guise of, propagating or practising any religious belief, carry out subversive activities under the guise of propagating or practising any religious belief, or excite disaffection against the President or the Government while, or under the guise of, propagating or practising any religious belief.”
(*ibid.*)

As well as the Acts above, there is the Parliamentary Election Act, the Broadcasting Act and the Films Act, which all potentially affect activity on the Internet. Such Acts

³http://statutes.agc.gov.sg/non_version/cgi-bin/cgi_retrieve.pl?actno=REVED-75&doctitle=DEFAMATION%20ACT%0A&date=latest&method=part&sl=1

are a part of the framework that regulates speech on the Internet in Singapore. In the run up to governmental elections, these Acts enable a government minister to regulate election advertising. This does not relate merely to political parties, but also the candidates, agents and relevant persons. A 'relevant person' is anyone who "provides any programme", (Tang, 2009:13) on the Internet who is required to obtain a licence from the Media Development Authority of Singapore (MDA). The license is for anyone engaging in broadcasting services. It covers the "propagation, promotion or discussion of political issues relating to Singapore" and with the term "broadcasting services" defined so vaguely, it includes all material published on the Internet.

This overlapping list of laws and Acts creates confusion around what is lawful and what is not. The effect according to authors such as Tang (2009) is to prevent opposition politicians and their supporters from using the Internet effectively. Political parties and their affiliated publications in Egypt were not as regulated and controlled; Egyptians knew what they could and could not do. In Singapore, this myriad of legislation and regulation manufactures doubt in the minds of the people. With such uncertainty, most Internet users in Singapore err on the side of caution.

Returning to Hallin and Mancini's model - the next criteria is that of the media industries and the market. In Singapore, this is less problematic as there is a "symbiotic relationship between the media and the state" (Ang, 2007:23). The print media market in Singapore has been a monopoly since 1984 "when the government merged The Straits Times group with the SNPL (Singapore News and Publications Ltd) to form Singapore Press Holdings (SPH)." Combined with government control over the only television production and broadcasting organisation the Media Corporation of Singapore (MediaCorp). Radio and television broadcasting is all controlled and owned by MediaCorp with the BBC World Service the only foreign radio station in Singapore. A merger further curtailed any competition between the two in 2004 when they announced an agreement to limit incursions into each other's area of specification. Therefore, the media in Singapore is a monopoly. This media monopoly ensures that they both develop symbiotically resulting in the narrative of nation building with the media taking a pro-government and pro-establishment stance. Journalists out of conviction and necessity align themselves with the People's Action Party (Ang, 2007), the ruling political party in Singapore.

Non-Singaporean broadcasters of satellite television operate under a blanket ban on satellite dishes, except for a few of the larger hotel chains. StarHub is the sole cable distributor of transnational stations. So while Egyptians have access to western-based satellite television as does much of the Middle East, in Singapore government-affiliated companies control access to foreign shows. In 1992 Singapore CableVision launched cable television in Singapore with the main shareholders being SPH with 20 percent, government linked Singapore Technologies Ventures with 24 percent, Singapore International Media with 31 percent and Continental Cablevision-USA with 25 percent (Ang, 2007). The Infocomm Development Authority of Singapore (IDA) approved⁴ in 2002 the consolidation of StarHub Pte Ltd and Singapore Cable Vision Ltd to form StarHub. Therefore, the utility value of the indicator - political parallelism – when assessed in relation to the level of People’s Action Party monopoly of the ownership of all media outlets in Singapore is rather confusing rather than aiding in clarification. The rhetoric of *nation building* and the journalists aligning themselves with that core value has allowed the silencing of opposition parties voices by laws and other regulations. In Singapore, there had been multiple political parties and movements with multiple newspaper and broadcasting organisations but the laws and regulations have removed these alternate voices.

The indicators of professionalisation are an advanced state of journalistic ethics, ethical self-regulations, with the use of press councils and a tradition of training and education in journalism. In order to understand fully the media system in Singapore the concept of “calibrated coercion” (George, 2005) or strategic self-constraint of the use of state powers will help in understanding why professional journalists and other media players remain engaged with the rhetoric of nation building.

Like all authoritarian governments facing minimal legislative and judicial checks, Singapore’s executive branch has seized sweeping powers to deal decisively with challengers. Catch-all laws give wide latitude to ministers, and the Constitution provides little protection to civil rights. These features of the Singapore system are nothing unusual. What is more unusual is that, even as it maintains and updates its arsenal of coercive powers, the Singapore government appears to have committed itself to the principle of strategic self-restraint, calibrating its coercion to get the job done with as little force as necessary (George, 2005: 20).

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http://www.ida.gov.sg/doc/Policies%20and%20Regulation/Policies_and_Regulation_Level2/proposed_consolidation_starhub_SGcable/IDA_Explanatory_Memo_-_StarHub-SCV.pdf

My concern with the use of the indicator of professionalisation is that it appears rather dated and naive (Hafez, 2010) in terms of continuing to associate the journalists in the UK and USA as being paragons of objectivity and fact while those in non-western countries are mere purveyors of propaganda and lies used to maintain hegemonic dominance of authoritarian rulers. Calibrated coercion is a much more nuanced term and applies specifically to Singapore but has the potential for use as an indicator of the shifting level of government manipulation elsewhere. Singapore journalists do have ethics, they do self-regulate and there are press councils with a tradition of training and education in journalism. This in no way means that they are “professionals” in the naive sense of striving for the truth or objectivity. The journalists and organisations that they work in are controlled by the laws and regulations designed to minimise criticism of the PAP’s nation building discourse. However, the leaders of the PAP recognise that the press need credibility in the eyes of the audience in order to not *be seen* as government mouthpieces. Therefore, there is a level of press freedom while also periodic episodes of reminding journalists that there is a boss in control and that they are publishing because the government is not strictly enforcing all the laws and regulations.

Journalists motivated by profit margins rather than political ideology or civic responsibility exist in democratic and non-democratic situations. This is the same in Singapore but merely coupled with the fear of government interference. As Rodan (2004) states and George (2005) concurs, the ability to control information is compatible with market forces. That in order to maintain a stake in a newspaper market, journalists are willing to self-censor in order to not upset the ruling elite or jeopardise their profit making activities whether that ruling elite is authoritarian or not. The profit motive shapes news reporting and the flow of information in mainstream media outlets.

The government in Singapore rarely uses force because of the laws and regulation, the profit margin being the driving force, the threat of removal from the market and the national loyalty that the journalists feel towards Singapore shaping the news they print and broadcast ensuring compliance. Journalists in Singapore are professionals as much as US journalists embedded with troops during the Iraq War were professionals. “Professionalisation” of journalism in Singapore would be a problem with the focus being profitability. Examples are made of journalists who fall from grace because of lapses in nationalistic virtue, of the calamity that would befall

them if the ruling elite took offence at something they wrote or broadcast. Professional journalism exists in all countries because its master allows it to exist.

In sharp contrast to these journalistic values, in Arab nations the picture is rather different according to Hafez (2010:8). The values held by Arab journalists are (i) a support for the Arab community and loyalty to readers/viewers, (ii) the promotion of democracy (which included a critique of government policies) and (iii) loyalty to governments, in that order of preference.

2.3 Studies of the Internet in Comparative Contexts – Authoritative versus Democratic

In the context of liberal regimes, the rise of millions of fragmented chat rooms across the world tend instead to lead to the fragmentation of large but politically focused mass audiences into a huge number of isolated issue publics. Within established national public spheres, the online debates of web users only promote political communication, when news groups crystallize around the focal points of the quality press, for example, national newspapers and political magazines (Habermas, 2006:423).

Chat rooms that appear fragmented do so only because of limitations in the application of empirical data collection methods at work within political communication research limiting it to focus groups, experiments and questionnaires. The deliberation is taking place but the position of asking the deliberation to take place during your focus group or on your website is problematic.

Habermas (2006), states that public spheres are only able to exist because of the involvement of certain actors such as journalist, politicians who both co-author and address public opinion. He distinguishes five more types of elite actors that mediate political communication – lobbyists or corporate interest groups, advocates who represent underrepresented groups, experts with accredited scientific expertise, moral entrepreneurs and intellectuals. This list bears a striking resemblance to the various actors that Dutton (2010:2) highlights as being constraints on the power of communication facilitated by the Internet; public intellectuals, economic elites, governments, the mass media, and the mob who undermine confidence in the communicative power of the Internet via hacking, spamming and other undesirable activity. While Habermas presents these actors as gatekeepers to deliberation, Dutton (2010) presents them as blocks to the Internet being utilised to facilitate democracy. The one group that does not make the comparison is that of the citizens, audiences, consumers, spammers and hackers who through malicious and accidental uses, in

Dutton's terms, undermine the potentiality of the Internet. The malicious and accidental use of the Internet embodies its communicative power in liberal societies. It is where the potential to undermine the elites' control of the flow of information in nation states resides. The elite are those actors defined by Habermas as facilitators who are suppressing the citizens' use of the Internet and labelling them pejoratively as the mob, audiences, consumers, spammers and hackers. The public opinion that cultural intermediaries, such as journalists and politicians, are said to mediate is the content of the communicative action that the Internet is facilitating. The journalist and politician face a mass of public opinion that they are unable to or unwilling to listen to and comprehend. They are no longer functioning properly in their role as mediators of information, replaced with algorithms, and search engines on the Internet.

The amount of communication that is taking place beyond their sphere of influence and control has overwhelmed journalists and politicians. The space in which they operate, the space of national laws and regulations, that is there to enable the continued dominance of the profit motive and nationalistic fervour at the expense of the "social" is opposition to the voices of public opinion. Therefore, journalists and politicians ignore public opinion. They continue to prescribe paternalism, "as if immature citizens need [...] due political instruction from on high" (Padovani cited Habermas, 2006:423). Citizens give voice to social problems and engage with elite discourse. Yet the national elites are not listening. Habermas goes so far as to argue that the public sphere has been colonised by market forces and that this leads to a freezing of civil society. It is not so much a freezing of civil society but civil society excluded from the discourse of elite maintained journalistic and political practices.

The only way out of this crisis of legitimation according to Habermas is to meet two criteria that allow for mediated political communication that will "facilitate deliberative legitimation processes". Firstly, a self-regulating media system that is independent of the social environment and secondly if "anonymous audiences grant a feedback between an informed elite discourse and a responsive civil society". Habermas states that the Internet can undermine censorship in regimes that try to control and repress public opinion. It is my contention here that liberal and non-liberal regimes engage in the control and repression of public opinion and that the Internet circumvents such attempts of controlling the communicative power of the mob. Habermas' proviso that the Internet can claim "unequivocal democratic merits only for a special context" is western-centric as highlighted by Hafez (2010). Habermas

admits that the media systems of liberal regimes are in danger of being colonised by market forces and cites the Iraq War and the close relationship with the mainstream media of the US government while lamenting the lack of a counter narrative or framing. Yet the over archiving narrative of western media being free, democratic and open while all other media systems and political systems are confined, undemocratic and closed, leads him to dismiss the deliberative democratic potential of the Internet in so-called “liberal” regimes.

Dutton’s (2010) stance is that of the optimist with the proviso that the mob or public are a hindrance to the Internet’s *success* while Habermas (2006) takes the *pessimistic* stance that the only positive outcomes for democracy will be apparent in non-democratic states. The elite are both facilitator and blockers to the democratic potential of the Internet. With the public demoted to either wreckers - when not informed of *proper* conduct when they act in liberal regimes - or those that need liberating from non-liberal regimes. In each case, they *the people* are without agency to affect wider political and social change. The potentiality of the Internet is something that is different from the utility of the public. Neither Dutton (2010) nor Habermas (2006) argues that the separation of the potentiality of the Internet from the utility of the public is a move for the purposes of scholarly endeavour while all the time maintaining an understanding that they are inseparable but doing so is an analytic move to enable a better understanding of how they intertwine.

This pulling apart may advance the somewhat polemical debate regarding the effect of the Internet as “a threat to autocratic regimes, and arguments over whether the Internet is leading to increased polarisation in the US (and elsewhere)” (Farrell, 2011:7). The Internet has consequences for politics in “liberal” regimes such as the US as well as Tunisia, Egypt and Singapore. How the Internet would affect the US political situation has centred on whether it would exacerbate polarisation and in turn undermine or not result in deliberation between oppositional factions. The debate regarding non-liberal regimes is, whether or not it would “spread democracy”. Both positions have the Internet doing or causing something to happen. Whether in a unitary one directional relationship of cause and effect or the more nuanced multiple causation or emergent properties resulting in the Internet doing something to the political system. The Internet is a mechanical interlocking of electronic pipes, servers and routers that span geographic space. The Internet facilitates the action of agents. Action that otherwise would not take place. However, the Internet is in no way the

primary mover nor the spark that ignites the myriad of necessary properties that are necessary for democratic deliberation to emerge.

The Internet needs a systematic study grounded in empirical data and an adherence with general academic rigour in order to bring together macro level analysis with user behaviour. Thus far, the sociological approach has been to focus on the institutional and political economic factors that are shaping the Internet (DiMaggio et al., 2001) with the uses placed as secondary. Research on the Internet tends towards four broad approaches; inequality or the digital divide, community and social capital, political participation and voter turnout being the focus, organisations and other institutions, and levels of cultural participation and cultural diversity (DiMaggio et al., 2001). DiMaggio et al's main concern is that these four main approaches see the Internet shaped by these forces, which leads to wild extrapolations and unverified claims, either utopian or dystopian. What research needs to produce is an understanding of the Internet as an ever-changing phenomenon. In relation to the US, research that does attempt to move beyond the limited technological and institutional understanding of the Internet produces two claims regarding the transformations of the Internet's effect on politics. One narrative is that the Internet will "erode the influence of organised groups and political elites" the other "the Internet will cause a restructuring of the nature of community and the foundations of social order" (Bimber, 1998:133). To counter these improbable possibilities Bimber cites a third potentiality for the Internet – the fragmentation of the current system, yet again a dystopian conclusion reached due in part to a lack of empirical rigour. Since 1998 such grand extrapolations are still made based on studies of the narratives of Internet research – Bennett and Iyengar (2008) anticipate "the fragmentation of the national audience" resulting in the continued reinforcing of "prior predispositions" (2008:724) only a few such as the already politically active but on the whole it veers towards political polarisation. According to Bennett and Iyengar in order to gain further insight, they need to build more theory.

While most approaches to the impact or not of the Internet on political communication have largely been descriptive, anecdotal or unsubstantiated hyperbole passed off as theory some such as Gibson and Ward (2000) have been calling for more systematic and quantitative approaches to the field. They coded political party activities to answer two questions – 'what are the purposes of a particular website?' and 'is it effectively delivering the content?' They addressed what they saw as a

shortfall in cross-national longitudinal research into political websites. They focused on a quantitative approach with their focus on political parties in the United Kingdom and Australia. Again, however the focus is on how an institution or rather in this case a political party is performing on the Internet ensuring that the notion of studying the activities of the public are reduced to that of an audience.

With a similar focus on the behaviour of institutions on the Internet Skocpol (2004) assessed the ways that government policies and institutions affected civic groups and participation in elections and voluntary groups in the US. The Internet is referred to as an “innovation” that holds the potential of enhancing civic engagement with the concern that it might result in too much engagement. Also with the focus on how can the Internet led to offline participation in politics from voting in elections, contributing to candidates and various other political activities in the US, Schlozman, Verba, and Brady (2010) concluded that levels of online and offline participation are determined by socioeconomic factors. That younger individuals although more likely to use these “electronic technologies” were less likely to engage in political activity offline and online with any change in future levels of participation being placed squarely at the feet of “political capacities of the Web” (2010:487). Although they do move the argument forward by referring to the Web rather than the Internet, they still separate the potentiality of the Internet from the uses that people put the Internet to.

This focus on organisations and institutions shaping how the Internet affects the levels of political engagement of US citizens is apparent in interpretations of the international arena. It is always institutions, governors, organisations, and lobby groups, non-governmental organisations *ensuring* that these groups enable those who wish to emulate the ideals of deliberative democracy or civic engagement. My contention is that these groups may also be a hindrance or rather they take on a position that they have a role to play where none exists. Just like nation states, agencies are playing catch up and trying to get a grip of what is going on. They are playing catch up while they attempt to pigeon hole the activities and actions of those on the Internet into their presubscribed meta-narratives whether they are utopian or dystopian. Some such as Shirk (2011) see a leading role for the US to ensure that the Internet is a tool of statecraft after the events in Egypt in 2011. Shirk calls on the US to secure “the freedom of personal and social communication among a state's population should be the highest priority, closely followed by securing individual citizens' ability to speak in public” over there - outside the US. The concern is that if

the US government will not ensure certain freedoms then how can corporations upon which the information is dependent, be expected to adhere to such ideals. The notion that the US government is responsible for ensuring the free actions of people beyond its borders again highlights arguments denying people's agency. Thereby masking the real cause of the uprising in Egypt.

2.3.1 The Internet as the 'Cause' of the Polarisation of Political Opinion

Empirical research that places the activities of the people who are creating the content at the centre of the research as opposed to associating the success or agency on an organisation or other facilitator has been done by Drezner and Farrell (2008). They studied "the rise of millions of fragmented chat rooms" as Habermas (2006:423) called it, in the US context. Although not looking at chat rooms they looked at the influence of blogs and the blogosphere to uncover the power that they have in shaping US politics. They were keen to emphasise that the fragmented or as they put it "collection of decentralised, non-profit, contrarian, and discordant websites" could affect political and policy outputs. They empirically show how under certain circumstances the focus of blogs on neglected issues can "construct an agenda or interpretative frame" that can shape political debate. They did so by conducting a network analysis of blogs and a survey of media professionals in the US. Rather than making grand unsubstantiated statements they used software tools and methods of analysis that were unfamiliar to them and tested theoretical issues by collecting data, analysing it then making statements about the phenomenon in question.

In a study conducted in 2010, Lawrence, Sides, and Farrell assessed the relationship of polarisation, participation, deliberation and blog readers. An online survey measured the participation and deliberation of citizens with different ideological position. Their total sample size was 36,501 Americans. They found that blog readers do group around blogs that agree with their political beliefs and few read cross-ideologically. They found that blog readers are more polarised than non-blog readers and television news audiences. However, blog readers were no more nor less polarised than US senators. They were more likely to participate in politics than non-blog readers were.

Rather than argue that the Internet was causing polarisation of political opinion in the US, Drezner and Farrell (2008) conclude that certain opinion makers within

mainstream media in the US read blogs and the information contained within them affects them. Benkler and Shaw (2010) addressed two theoretical debates, namely that the US political blogosphere with its nuanced patterns of uptake, produced in terms of left and right, adopting different software did result in “distinct effects on democracy and the public sphere” (2010:2). They also raise the concern that the link analysis conducted by previous researchers exaggerated the polarisation of ideological adherences with each group. These previous approaches, they argue, obscured the diversity of “participatory affordances online” as well as the mechanisms with which this online “networked public sphere” affects democratic participation when compared to the mainstream “mass mediated public sphere”. What they found was cross-ideological variations in the groups or rather that the groups were not as ideological homogenous as previously asserted and therefore the US political blogosphere was not as polarised as claimed. This delivers a blow to the theory that the Internet was causing polarisation and undermining deliberation in US politics.

Hargittai, Gallo, and Kane (2008) question the position that people will only read material online that reinforces their already preconceived ideological position. They tested this empirically by analysing hyperlinks between conservative and liberal bloggers in the US. What they found was that political bloggers are more inclined to link to bloggers who share in their ideology. However, there has been no increase over time, that many of the hyperlinks are to support weak interpretations of the opposing ideology, and that the hyperlinks bridge across the ideological divide to engage in agreement and disagreement. Fiorina and Abrams, (2008) after an extensive survey of empirical data available over 30 years have also concluded that mass polarisation as presented in the research suffers from issues of inferences made but that it is unsubstantiated in the evidence available. They state, “There is no conclusive evidence that elite polarization has stimulated voters to polarize, on the one hand, or withdraw from politics, on the other (Fiorina & Abrams, 2008:563).

In answer to the question of when does this cross-ideological deliberation occur, Wojcieszak and Mutz (2009) studied a representative sample of 1,000 people in the US who reported participating in chat rooms and message boards. What they found was that the cross-ideological discussions were more likely to take place in settings that were not outwardly political. Rather the exchanges happened where political debates arise in an unpremeditated fashion and not when political debate was the central focus of the discussion space.

Gentzkow and Shapiro (2010) studied how the Internet is changing the ideological segregation of the US electorate focusing on online news consumption, offline news consumption and face-to-face social interaction. Their definition and interpretation of segregation was not just political ideology but also racial segregation. Their findings support the position that the Internet is not becoming more segregated overtime rather the levels of segregation online is lower than that of face-to-face interaction, higher than offline news consumption and low in absolute terms. However they make no claims to account for the content of the online and offline news they are reading and nor do they make any substantiated claims about how the content affects the beliefs or opinion of the readers. Their findings again undermine the concerns that the Internet is leading to increased polarisation and undermining democracy in the US.

The Internet then does not lead to increased polarisation in the US and is not undermining the deliberation that takes place between oppositional factions as was feared. These empirical studies used data gathered and assessed rather than the jousting of various political theorists' opinion. I now turn to the second grand narrative - that the Internet has an effect on autocratic regimes encouraging the spread of democracy.

2.3.2 The Internet 'Helping' the Spread of Democracy

The Internet is said to help spread democracy because 'it' regards censorship and the removal of websites as an attack and like all complex organisms with robust underlying 'networks' local features failing rarely lead to the loss of the organism as a whole (Albert, Jeong, & Barabási, 2000). They argue that the robustness of the Internet as well as the World-Wide Web and social networks ensures that random attacks or removal of sites causes a surprisingly small amount of interference in the transmission of information. However, if a knowledgeable agent, (rather than a random attack) were able to ascertain central or important hubs then the damage is disproportionate. Such high levels of error tolerance (the random removal of sites) and targeted attack vulnerability are they claim a property of communications networks. Therefore, with filtering and censorship of content and online surveillance said to be increasingly more targeted or sophisticated how is the Internet helping the spread of 'democracy'?

According to Palfrey (2010), there are four phases of Internet regulation. They are the “open Internet” from its inception in the 1960’s to about 2000; “access denied” to 2005; “access controlled” to 2010; and the current “access contested” phase. What was as an open net with debates centred on whether or not the Internet should be regulated - to the argument today that regulation, which must be conducted, be done effectively. Nation states also acknowledge that what is of concern is not just the actions of individuals but other states. The regulation of individuals activity on the Internet is now a given and the debate has moved on to regulating private companies. They seek to restrain what companies can do and ensure that the companies limit the activities of individuals while limiting what companies in their jurisdiction do in other nation states. They also attempt to affect the activities of other nation states on the Internet. This lead to a complicated mix of regulation and Palfrey (2010) argues that online activities are subject to greater control than offline.

What was once known as “cyberspace” is now an environment in which debates fly, activism flourishes and fails, and political and military contests play out between states. The Internet has always been a network that could be regulated. It has also always been a network that could support an expansion of the freedom of expression and association, especially for those living in regimes where the public media environment has been historically constrained (Palfrey, 2010:19).

Political groups within these nation states want to regulate these debates. While the Internet has spread, its diffusion is largely at the behest of political groups and Milner (2006) believes it is the regime type that matters most in this regards. Controlling for economic, technological, political and sociological factors Milner analysed approximately 190 countries from 1991 to 2001. Her argument is that democratic governments encourage the diffusion of the Internet more so than autocratic ones. So rather than the Internet spreading democracy Milner reverses the relationship – democracy spreads the Internet. Regardless of the relationship, whether one causes the other, the Internet is a very threatening development to some members of political institutions. Autocrats can block technological advances that undermine their position. The uses of the technology rather than the technology itself are the threat. Collective social action is what they fear, not the Internet.

This threat became real in a number of North African and Middle Eastern countries when collective social action took to the streets and over threw a number of autocratic leaders in 2010. Young technologically aware activists led uprisings in a number of countries across North Africa and the Middle East (Hussain & Howard,

2011). Autocratic leaders were off guard and it was not just the Internet but also other forms of digital media facilitated it. “Digital media helped to turn individualised, localized, and community-specific dissent into structured movements with a collective consciousness about both shared grievances and opportunities for action” (Hussain & Howard, 2011:41). The mix of causations differed from country to country but they stress that one constant was the use of digital media.

Therefore, despite the heavy regulation, the laws, the surveillance, the censorship, and the threats, the Internet with other digital media enables people to express opinions and organise themselves. The Internet documents these communications – it does not create them.

States in response have been trying to undermine the ability of people to organise and express opinions by controlling the technology – the Internet and by applying socio-political tactics (Morozov, 2011). These tactics include distributed denial-of-service attacks, which is the flooding of a site with so many requests to access it that it is unable to cope with the traffic and so no one is able to access it. The next tactic is deliberate erosion of online communities’ trust in a particular site, which is “trolling or dispatching new members to create artificial splits within the community as well as intentionally provoking community administrators to take harsh and unpopular measures” (Morozov, 2011:67). The “nationalisation” of the Internet is taking place with governments launching their own search engines and email providers in order to be able to regulate communication and search results. Governments are also outsourcing the control and regulatory function to Internet service providers and making them ensure that users comply with regulations.

Innovations that are happening within privately funded research, such as face recognition software pose the potential of helping states in surveillance matters. The rise in online “publicness” – the sharing of personal information including geographic location is already being used for advertising purposes and it is merely a matter of time until governments start using the software too (Morozov, 2011).

Similarly, the software used for analysing and “mining” data is becoming more powerful as businesses and intelligence agencies demand it. Whether the use of such software could be limited only to democratic states and business contexts remains to be seen; in the worst-case scenario, such tools may end up strengthening the surveillance apparatus of authoritarian states (Morozov, 2011:73).

The software Morozov (2011) is referring to is the automated network analysis and data mining techniques referred to in the title of this thesis “Countering the Social Ignorance of ‘Social’ Network Analysis and Data Mining with Ethnography”. Any attempt to ensure “Internet Freedom” (Morozov, 2011:74) may not only require a typology of tactics being used by governments but needs to rely on methodological approaches that see the Internet as a reflector of human agency (Farrell, 2011).

If, as Lynch (2011) argues, that after the uprisings of 2011 what has emerged is a new kind of public sphere then scholars who wish to rigorously test hypotheses about the impact or not of the Internet and digital media need new kinds of data analysis.

2.3.3. Mobilisation and effects of online campaigning on voters

This section asserts that there is an erosion of support for the People’s Action Party. However, this in no way lends support to claims that the network structure of the Singapore blogosphere is in any way directly linked to such electoral decline. It is only possible to claim an indirect link to the undermining of the hegemonic discourse of the People’s Action Party because of the communication that is taking place within the network of relations amongst other factors.

There is a crisis of legitimacy for the Singapore state because of the communicative power of the Internet by the people of Singapore. The continued use of the doctrine of *calibrated coercion* (strategic self-constraint of the use of state powers) has seen the People’s Action Party’s dominance of local elections being undermined. Since the PAP won 86.7% of votes in 1968, it has dropped to a low of 60.1% in 2011. Since 2007, the PAP set up two committees that oversee the ‘counter-insurgency’ to undermine anti-PAP discourse after a drop in votes to 66.6% in 2006. It has not managed to reverse the decline in votes. The counter-insurgency can call on the views and ideas of the political elite but from 2009 to 2010 the Internet in Singapore was dominated by non-elites and dissenting voices. The nature of the link between anti-PAP discourse and the drop in votes for the PAP in general elections is not direct nor the result of specific actions or events but a ground swell of alternative collective discourse.

Taking a naive approach we may ask - Is there a voter effect as a result of the processes that have been documented here and the general elections (in 2011) that

have taken place in Singapore or are these events disconnected? The voter effects of web campaign sites has been linked to higher electoral support when a website is used in conjunction with other resources such as political party support and exposure in the mainstream press during an election campaign. A study (D'Alessio, 1997) concluded that those who campaigned online during the US Congressional elections had "significantly higher vote total". During the US presidential and state elections, Bimber and Davis (2003) concluded that there was "strong evidence of mobilisation effects" because of the use of websites. Follow up studies by Gibson and McAllister (2006, 2011); and Sudulich and Wall (2010) both concluded that there is a strong association between website presence and higher vote share. What is at issue here is slightly different in that the data is not one electoral campaign website and its effect on voter support – but rather – does the existence of multiple opposition websites and blogs decrease the voter share for the People's Action Party? Expecting one campaign website to influence the mobilisation of voters for or against a candidate is simplistic at best. The number of people who actually visit a specific political campaign websites is low (Gibson, 2012) when compared with mainstream media viewers. Approximately one in five Internet users accessed the election sites of the candidates running in the French presidential race in 2007 (Vacari, 2008; Vedel & Michalska, 2007). Elections in Australia and the UK have had smaller numbers of visitors to campaign websites (approximately 3%) (Gibson & McAllister, 2011; Lusoli & Ward, 2005). Studies that look at wider online participation rather than online campaign websites are sceptical about claims that online participation is having direct effects on political outcomes such as voter share during elections campaigns (Anduiza et al., 2008; Bimber, 2001; Bimber & Davis, 2003; Davis, 1999; De Zuniga, Puig-I-Abril & Rojas, 2009; Gibson, Lusoli & Ward, 2005; Jensen, Danziger & Venkatesh, 2006; Krueger, 2002; Lupia & Philpot, 2005; Mossberger, Tolbert & McNeil, 2007; Moy et al., 2005; Norris, 2001; 2003; Quintelier & Vissers, 2008; Stanley & Weare, 2004). The search for a direct effect on vote shares betrays a limited understanding of potential political outcomes.

The effect of blogs and other forms of online media is better understood at five levels of analysis: individual transformation, intergroup relations, collective action, regime policy and external attention (Aday, 2010:3). At the level of individual transformation it would be measured through instruments that assess attitudes, expectations and beliefs, using experiments, survey research, focus groups and

structured interviews (Aday, 2010:10). Intergroup relations can be assessed by link analysis as they contact within and across boundaries; survey research, to ask whether people consume articles produced by people in their own groups or other groups; and finally experimental research to determine the causal impact of exposure to various types of media. The ability for people to organise and protest in the form of collective action can be measured in the form of a case study to assess the changes produced by proposed mechanisms. An assessment of a regimes policies and how they are being implemented and changed, because of the perceived effects of protest groups. The build-up of external attention can be assessed by the increase in linkages with diaspora and other outside groups (Aday, 2010). The approach conducted here assesses the attitudes, expectations and beliefs by conducting a content analysis of the material published in the Singapore blogosphere but rather not at an individual level but at a collective level. A collective assessment of deontic and epistemic statements and how they collectively view what is and what ought to be. The intergroup relations are assessed by a hyperlink analysis that determined the major boundary within the blogosphere to be race. This case study of the Singapore blogosphere assesses the changes produced by the interactions taking place online in the Singapore blogosphere. It assesses the levels of linkages with non-Singaporean entities be they people or corporations such as Facebook, Twitter or Photobucket. And, finally the Singapore governments response to the interactions that are taking place online are presented in the discussion on the legislative situation and how those laws are being implemented. This study does not conduct an experiment to determine the causal impact of exposure to various types of media and therefore cannot make claims of direct causation.

However, indirectly there is the possibility that there is a two-step mobilisation effect whereby online sites activate the activists who then mobilise others in their online and offline networks (Norris & Curtis, 2008; Vissers, 2009). It is the idea that online campaigning is a resource that activates those already committed to the political action to further spread the word as opposed to a direct linkage with the electorate, or to put in more succinctly “preaching through the converted” (Vissors, 2009:1).

The crisis of legitimacy for the Singapore state is because of the communicative power of the Internet when used by the people of Singapore. The Singapore

blogosphere is able to intervene and shape the communicative space in a manner that was not possible with the mainstream media.

Critics of the Singapore government are using the Internet for political communication and the use of the Internet is central to demands for political change. Such demands are made by the Singapore blogosphere. As has been seen in other authoritarian regimes in 2010, notably, Tunisia and Egypt, the Internet facilitated the toppling of autocratic leaders by the people. Previous studies have placed greater prominence on nation states and their governments with the Internet pushed to the periphery because the nation state created it. This focus on the Internet as a technology misses the crucial uses that technology is put to by the people within and beyond the borders of specific nation states. The Singapore state is able to voice its opposition to and apply laws to offences that take place on the Internet but they do not control the communication that is taking place, they react to it but do not shape it. The Singapore government may be involved in using the Internet to spread manipulative discourse but the level of persuasive discourse outweighs this. The people receive an alternative interpretation of events that may adhere to their own interpretations. This undermines the state monopoly on defining events and meaning creation that older media systems ensured. The impact of the Internet, or rather the use of the Internet by the people of Singapore is undermining the control of the People's Action Party. It is not a demand for individual freedoms or greater consumer choice but an active, collective that questions the government. Contrary to what the government would have them believe the people of Singapore have a political voice and they are interested in human rights.

“All works of architecture imply a worldview, which means that all architecture is in some deeper sense political” (Johnson, 1997).

According to Wright (2011), the impact of the Internet or rather the use of the Internet by the people and its impact on politics is framed between two polarising schools of thought. On the one hand it is said to have a revolutionary affect and on the other it normalises. This polarisation has resulted in a distortion of empirical analyses of online political debates. It either results in overly technologically deterministic interpretations of revolutionary behaviour or results in interpretation that is heavily influenced by frameworks and definitions that “disproportionately analyse existing political institutions and practices, often using narrow definitions of politics and normative underpinnings that simply may not be relevant in the context of new media” (Wright, 2011:244). The narrow definition of politics and political institutions has

lead empirical research to go in search of political speech in the usual spaces, political blog, websites of candidates etc. However according to Wright (2011) a third place or space of politics needs to be considered; websites, chat rooms and blogs that are not written with a primary focus on politics but do on occasion discuss political issues. Political analysis therefore should not limit itself to obviously political variables and processes (Wright, 2011:249). So this study has data collected from political blogs and websites but the data archiving and analysis is not limited to self-declared political blogs nor limiting itself to a specific election event or rally.

There is no simple relationship between new media, technologies or software and political outcomes and those who do make such assertions are making a grave error (Wright, 2011). However, individuals with something in common do form groupings with each other – groupings based on a commonly held position in a debate or in opposition to a policy or enactment of a policy. Finally, Wright argues that even a mildly authoritarian regime will remain relatively secure so long as they are able to control “public expression” (Wright, 2011) as people may be inclined to conceal their true preferences in order to avoid punishment. However in the context of the Singapore blogosphere and the high level of anonymous blogging – “preference falsification” (Kuran, 1987) is less likely – not because the discourse takes place on the Internet but because it takes place anonymously. It is when people blog using their real names that they are making themselves vulnerable to punishment. So a public that is expressing opposition to a mildly authoritarian regime while individuals remain anonymous is a more authentic public in this instance.

According to Farrell (2012) political scientists are still at the beginning of coming to terms with the importance of the Internet for politics. Rather than presenting a simplistic causal relationship between the new media, technology or software and political outcomes Farrell argues that a disentangling of transaction costs, homophilous sorting and preference falsification will present researchers with a more nuanced multiple causation argument to help in our understanding of the relationship. The two empirical examples that Farrell assesses in order to support his argument are the polarisations of politics in the USA and the Arab Spring uprisings of 2011. The polarisation of USA politics along political party lines and the overthrow of one party state controlled regimes fits nicely with trying to apply the effects of a new estate on old institutions. The effects of the Internet on these institutions can only be measured and acknowledged if they result in a fundamental shift on its axis of the

institution of the political party or the state. Political change does take place beyond the boundaries of parties and states – it may result in such institutions being reconfigured and augmented but to see change as being possible only within this remit starts from a somewhat *institutionalist* position. That what is at the core of society are inter-generational institutions with formalised rules and protected resources to be utilised by those assigned by the proper authority to do so. To only accept that a change of politics has happened because it is evidenced at the institutional level is too measure only the affect and not present the stimulus. For Farrell the “underlying casual” mechanisms are transaction costs, homophilous sorting, and preference falsification which are further abstractions to help measure the integrity of institutions after they have been affected by the Internet. Turning to abstractions in order to measure or quantify the effects on an institution be it, the political party or the state – is an error.

It is this continued narrow definition of politics that links it only to institutions as well as the introduction of abstractions that are the result of viewing the issue of the relationship between politics and the Internet as the interplay only of institutions.

There is clearly no simplistic causal relationship between online political debate and offline political implications – an example of a mistaken connection would be – 20% of a population visit a political website that supports the opposition party and the ruling party lost 6% of its vote in subsequent elections; therefore the “visiting an opposition website” caused a “drop of 6% in votes for the ruling party”. Such a simple relationship between two variables can never explain the interplay of a more complex relationship of multiple variables. Even if it were possible to carefully unravel the multiple variables (Farrell, 2012) we would still not be left with an adequate explanation. The purpose here is not explaining or predicting but *to describe* the use of the Internet by the people of Singapore.

The use of the Internet by the people of Singapore is undermining the control of the People’s Action Party. This is not politics as usual but a...

“normalized revolution: it is a fundamental change to existing practice. The key factor with a normalized revolution is, thus, that significant power still rests with elected representatives, but that new technology can help to create stronger representative democracy. It revolutionizes the operation of existing institutions and practices.” (Wright, 2012; 253)

There is an element of homophilous sorting taking place within the Singapore blogosphere and the formation of clusters has taken place. Chapter 5 has addresses

this issue and describes the most prominent factions. However these groupings are not fixed but have an amount of churn taking place with blogs and websites entering and leaving the overall network and also contain a flow of blogs and websites between groupings overtime. The concern presented here is that the various algorithms that can be used to demarcate the groupings provide varied outputs. Using Clauset-Newman-Moore's (2004) clustering algorithm (for very large networks) returns between 5 and 9 clusters each month. According to Wakita and Tsurumi (2007) the CNM clustering algorithm which is best suited for networks that contain more than 500,000 nodes and applied to the network data for February 2010 returns 20 clusters. Another clustering algorithm applied is the Girvan-Newman (2004) clustering algorithm which is best for small graphs and returned 523 clusters in Jan 2009 and 200 clusters in Feb 2010. As Girvan-Newman's clustering algorithm is best suited to small networks it has been used here to highlight the clusters with the larger number of members. Homophilous sorting has taken place, and the sorting continues from month to month with no hard and fast groupings membership being arrived at. What is taking place is the fluid formation and dissolution of groups with members flowing between them and a churn of members exiting and entering the Singapore blogosphere.

The formation and dissolution of groupings can only be partially described with reference to clusters, there are also other formations happening across types of web presence. Blogs are linking to websites, Twitter streams and Facebook pages. This holds with Gurevitch, Coleman and Blumler's (2009) assertion that the impact of the Internet on political communication cannot be studied by looking at one type of platform in isolation from the other – but rather the media ecology as a whole must be taken into consideration (Wright, 2012:254).

The Internet and therefore researching it is an exercise of studying the interconnections within the media ecology and the politics that emerges from these interconnections (Wright, 2012). Studying the Internet from the political scientist perspective must be seen to move within in an ecology that is not limited to institutions. If previous researchers of the Internet were limiting their approach by looking at only one type of media - as Wright (2012) asserts - then those approaching the relationship of the Internet and politics from the political spectrum have so far looked only at it as interplay of institutions; the state, corporations and political parties. Political research cannot continue to limit itself to defining all groupings as institutions or trying to measure the level of institutionalisations of such political

movements. There are other groupings of people involved in politics that cannot be so easily categorised as political parties or movements. An opening up of the possible categories of groupings is required. When applying the techniques available in network analysis it needs to move beyond the node and the cluster; the media researcher beyond the blog, website, Twitter or latest software innovation; and the political scientist beyond the political party and social movement. One attempt to do has been the sociological approach of looking at what is happening with the Internet as the “culture of the internet” (Castells, 1996). However, this approach is already flawed with a belief in technological progress, the free flow of information, virtual communities and entrepreneurialism. It fails to escape technological determinism, ideology, the false dichotomy of offline versus online, and the corporate centric bias.

Wright argues that the “*normalized revolution*” is leading to a new “*representative democracy*” and that “*it revolutionizes the operation of existing institutions and practices*” (Wright, 2012; 253). Again this is the application of research to reinforce the preordained order of research be they political scientist, sociologist or network analyst - *institutions* and *practices*.

If the Internet is the study of its interconnections (Wright, 2012) then it is the study of interconnections that occur within hypertext mark-up language (html); the code of the WWW are hyperlinks. These interconnections are not being written on a level playing field. Institutions still yield unequal access to resources. There is no free flow of ideas, there never was. Classifying the fleeting grouping of nodes as *communities* is stretching the definition. Classifying the entrepreneur as the main active agent is ideological at best. The interconnections are made at the behest of algorithms – socially constructed mathematical formulas. All the interconnections between the media-ecologies, political ecologies, people, institutions and corporations are not on an equal basis but the result of the manipulation of the Internet.

The effect of the Internet on wider society – be it politics, culture, economics or social will not be discovered in the careful outlining of moving between simplistic assertions that – an increase in visitors to a particular website during an election resulted in a ruling party losing x% of its vote on Election Day. Moving from this narrow limited cause and effect or stimulus and response search for explanation to the less narrow multiple causation still see the effect of the Internet as a zero sum relationship – all or nothing. The Internet is changing the political, cultural, economic

and social. For some the change is subtle and for others it can be dramatic – the Arab Spring being a case in point. The arena in which the changes are taking place is the Internet – the WWW and the other applications and platforms that operate on it. As with the Arab Spring – sometimes the true lack of distinction between offline and online is more apparent. For researchers to carry over language and concepts constructed during the height of the industrial revolution is to already demarcate the boundaries of what is possible. It is to shut down a space that is opening up – to reinsure the continuation of preconceived notions and ideas without allowing for new forms of people gathering – grouping and interacting.

2.4 The Uses and Limitations of ‘Network’ Ethnography

The rise of the language of the ‘network’ and the ‘network society’ most notably championed by Castells (2000) has taken the actions of people and removed the human agency component of explanations of events. The actions shaping and countering the effects of social structure has been replaced by a narrative of networks and flows that shape media systems, political systems, economic systems, and cultural systems. Castells provides a variation of a standard argument, that “place-based social structures give way to networks and flows that give rise to new economy, new kinds of social and power relations and new cultural experiences, together providing new frames for political action” (Ampuja, 2011:6). Castells argues that networks are the new shape of contemporary societies and that they transcend the specific interests of all social groups. These networks are uncontrolled. Castells is trying to argue that nation states and multinational corporations have the same level of influence and ability to influence perspectives and interpretations of events, as does any individual with an Internet connection. The build up to the invasion of Iraq and the acquiescent media is again relevant here. There are sources of structural power that the narrative of the out of control network of flows is masking. An online flow of ideas cannot ameliorate the drive to make profits and the unequal access to resources.

The media system and patterns of communication are central to Castells position. The influence of mainstream media and potential of the Internet are engaged in a battle. Castells (2007: 238) later acknowledges, “The fundamental battle being fought in the society is the battle over the minds of the people”, largely taking place in the “processes of communication”. Ampuja (2011:10) argues that this implies that an analysis of these sites of battle is required as they are the places of ideological

domination and the causes of “symbolic forms that are manifested”. This however would have required Castells to engage in a critical analysis of the symbolic forms that the media system and patterns of communication create. Ampuja (2011:11) posits that Castells has his reasons for doing so, “the end of grand totalitarianisms of the industrial society: one-way communication to anonymous masses, statist forms of governance and increasing political indifference among the populace.” I do not intend to contest the first two of these but I will contest the third assumption – that the people are politically indifferent.

The symbols are no less tainted in the field of academics than any other and the symbolic forms manifest themselves in our use of language and our evolving choice of how to describe and explain our society. Often we lapse into the use of metaphors as a device to aid in getting others to understand. The problem arises when we mistake the metaphor for the actual. When Castells writes that the logic of networks has placed a social force beyond the social structure and out of the influence of social agents, he has accepted the outcomes of human agency – the interactions and processes devised and altered by institutions and agents to be the generators of social interaction. The metaphor of the ‘network society’ is a mental image to aid us in understanding unintended consequences and why no one appears to be able to shape politics, societies and cultures to their whims. When convoluted and seemingly tautological statements are presented as insight, such as “the power of flows takes precedence over the flows of power” (Castells, 2000:18–26) the difficult task of unpacking the interplay of structure, practice and agency has been abandoned and a screen erected to mask the work of power, domination and unequal allocation of resources.

‘Network’ as a metaphor has its origins in the 1550s. The term first appears in reference to “net-like arrangements of threads, wires...”⁵ in 1839; it refers to the interlocking of rivers, canals and railways. However, in reference to broadcasting and multiple transmitters it appeared in 1914, an interconnected group of people is from 1947, computers in 1972.

However, the term ‘network’ first appears in print in Exodus 27:4 and the description of how it is an altar to sacrifice burnt offerings.

⁵ <http://www.etymonline.com/index.php?term=network>

There is also an appearance in print of the term ‘network’ in a poem by Edmund Spenser 1590 *Muiopotmos, or the Fate of the Butterflie* ⁶.

This cursed Creature, mindful of that old
Enfestred Grudge, the which his Mother felt,
So soon as Clarion he did behold,
His Heart with vengeful Malice inly swelt;
And weaving straight a Net with many a Fold
About the Cave, in which he lurking dwelt,
With fine small Cords about it stretched wide,
So finely spun, that scarce they could be spide.

Not any Damsel, which her vaunteth most
In skilful knitting of soft silken Twine;
Nor any Weaver, which his Work doth boast,
In Diaper, in Damask, or in Lyne;
Nor any skill'd in Workmanship emboss'd;
Nor any skill'd in Loups of Fingring fine;
Might in their diverse Cunning ever dare
With this so curious Net-work to compare.

Here the term refers to the construction of a net. The bringing together of the terms net and work are done so to reinforce the combining of the two terms. The human agency is contained within the term ‘work’. The ‘term’ network is part of the construction of a trap to ensnare a clarion.

The uses of ethnographic ‘social network analysis’ has recently been taken up most enthusiastically by state and governments engaged in control and surveillance, and businesses, in advertisers and marketing gurus.

The use of ‘network’ appears in various social sciences and has gone by many names (Bott, 2003), ‘kindred’ (Rivers cited Bott, 2003), ‘web of kinship’ (Fortes cited Bott, 2003), and ‘grouping’ (Armstrong cited Bott, 2003). However, Bott stresses that these authors were more concerned with the fact that someone has relationships with multiple people rather than the pattern of the relations.

Society, according to Barnes (1954), is a series of networks but limits the application to that of small-scale interaction. Barnes’ network study was loosely based on Radcliffe-Brown’s metaphorical use (Bott, 2003:59) of the term ‘network’ that all of immediate social activity is “a set of points some of which are joined by lines” to create a “total network”. In Radcliffe-Brown’s original use network is a metaphor for the actual thing, society. The application of network studies to small-scale social life,

⁶ <http://spenserians.cath.vt.edu/textrecord.php?action=GET&textsid=118>

was conducted by Mitchell (1969) who looked at who people interacted with in dynamic and fluid ways. Mitchell was concerned with the formation of group norms, identity, control, conflict and crisis. According to White and Johansen (2005), the Manchester approach was limited in that during the 1960s and 1970s they did not consider interactions between multiple networks, across domains or at different scales (2005:4).

After the 1960's, network analysis has been applied to community studies collecting data with surveys (Laumann, 1973). However, the survey method does not incorporate the longitudinal dimension. The longitudinal aspect is a factor in the works of Brudner and White (1997), Schweizer (1997), Schweizer and White (1998), and Kemper and Royce (2002) when looking at the dynamics of social networks.

White and Johansen (2005), to see what it adds to our understanding of social settings in general, applied network methods and ethnography to a nomadic clan. They account for the use of network analysis to help overcome certain limitations of ethnographic description when researching long-term interaction. To account for dynamic processes that ethnography was unable to address. They also provide justification for using network analysis to add statistics to the rich amount of data that an ethnographer gathers in their detailed recordings.

The difference now is that what began as an anthropological metaphor has mutated into the search for power laws with the logic of algorithms to find such laws. Network tools and ethnography in 'network ethnography' is the quest for hidden laws of the metaphor, not the social. A social stripped of social agency in which the multiple interactions on multiple and hierarchical levels over time create and re-create power laws of social interaction –August Comte's laws of social physics. White and Johansen (2005:6), state that by seeking out "emergent processes" that their findings are "predictive, explanatory, and robust". This new paradigm of "scientific thinking" in which power laws of social interaction are catalogued in the explanations of the behaviour of those under analysis trump the meaning and values that the agents themselves ascribe to their actions. Mitchell (1969) limited the application of network analysis tools to the formation of group norms, identity, control, conflict and crisis because to do otherwise is a political act.

This call to apathy with Castells "network society" where no one is in control and the type of network theory in which power laws are shaping interaction, only one

conclusion can be reached - that social agency is a redundant concept, that in the long run change does not occur and that no one can really affect change. Castells' argument that place no longer matters but networks of flows beyond the immediate experience when seen next to the form of network theory advocated by White and Johansen have focused on interaction and relations. My focus is on flows of ideas that take place on the Internet which are not beyond the influence of ideologically dominant groups, there are narratives and counter-narratives, and there is persuasion and manipulation. I analyse the content people are placing on the Internet.

2.5 The development of Social Network Analysis from anthropological to sociological approaches

The notion of social network analysis was made possible as a result of the work of Tönnies and Durkheim in the 1800's. Tönnies posited that social groups exist as personal and direct ties that link individuals who have shared beliefs or values. Such links can be formal, social links. Durkheim's assertion that social phenomena are the result of the interactions of individuals and is not reducible to the individuals but the interaction. Simmel also referred to networks and in particular the interaction taking place on loosely connected networks. According to Scott (2007) there are three strands of thought that led from these earlier ideas regarding the interactions between individuals to the development of social network analysis methods; they are the sociometric analysts; the Harvard researchers of the 1930's; and the anthropologists based in Manchester. These three divergent strands were combined in the 1960's and 70's in Harvard. There is a recurrent theme of focusing on the relation structure of the interactions or the cognitive or attitudinal aspects of those comprising the groups. This tension between relational and cognitive structure runs throughout the historical development of social network analysis methods with wider environmental social structures such as class and gender playing bit parts.

In the 1930's a group of immigrants to the USA began working on cognitive and social psychology heavily influenced by *gestalt theory*. That psychotherapy is most useful in focusing on the experiential present moment and that individuals are only able to know themselves by perceiving themselves being in a web of relationships with others. They had possibly been influenced by the second of the two central tenets of gestalt theory rather than the first. The notion individuals being caught up in webs of relationships resulted in research into the problems of group

dynamics. At Harvard during the same time period, sociologists were working on ideas that work within factories and communities relied heavily on informal and interpersonal relationships. In Manchester the work focused on the importance of conflict and contradiction and applied them to African tribal societies, British rural areas and small towns. In the 1960's Harrison C. White began to investigate the mathematical basis for social structure and his work as well as that of his students generated a framework of social network analysis.

2.5.1. The Sociometric Analysts

From the gestalt tradition within psychology comes the idea that thoughts and perceptions are the result of organised patterns. These patterns are regarded as systems or wholes that are separate entities from the parts of which they are comprised. The whole is not only greater than the sum of its parts; the whole determines the parts. Phenomena are perceived by the mind in certain ways because they are shaped by the complex and pre-conditioned cognitive structure of the collective mind (culture?). So individual perceptions are shaped by the complex cognitive structures that are influenced by social groupings and the social environment. The cognitive structures or schemas are created by social interaction and the social environment; and do not reside within the individual mind but rather the collective, shared mind or *collective consciousness* of the whole.

Moreno's (1934) work on the relationship between small scale interaction and groupings and how they sustained the wider meta-scale institutions such as the economic and political structures. Moreno's main innovation, according to Scott (2007:9) was the 'sociogram' as a way of drawing the links between people. People were points and the social relations between people were lines. People and their connections with others are represented by the diagrams. The focus on diagrams illustrates the dropping of the first tenet of gestalt theory that focused on the experiential present moment of the person. According to Scott (2007:11) the perceived environment was returned to with the work of Lewin (1936) who states that the perceived environment is the definition of the situation. Rather than the experiential present situation of the individual the focus here is on the definition of the environment by the group. The structural properties of this group space could be analysed with the mathematical tools of topology and set theory. Topology draws the social field as a set of points with points between them. The points can represent individuals, goals or actions and the paths between them can represent causal

sequences or interactions. The pattern of the paths represent boundaries on the possible movement of the point. Points that represent individuals with paths running between them demarcate the potential social world that the individual is able to manoeuvre within. When paths are limited then the individuals potential for social mobility are limited. These forces determine the potentiality of the individuals and groups within them. The approach of Heider (1946) focused on the notion of how an individual's views and attitudes were brought into a state of balance and any psychological tension is diminished. Having ideas and beliefs that are in balance means that there are no internal contradictions or rather the individual is unaware of the contradictions. Heider was concerned with the individual's perception of the situation rather than the actual relationship between the ideas or beliefs.

The mathematical tools of topology first developed by Lewin were developed by Cartwright and Harary and applied to group behaviour (Cartwright & Zander, 1953 and Harary & Norman, 1953). The major shift or breakthrough according to Scott (2007) was the move away from applying graph theory to *cognitive balance* to *interpersonal balance* of groups. It relies on the assumption that graphs of relationships between people can be assigned a positive or a negative relationship. This involved adding a + or – to the line between two nodes or an arrow showing the direction of the link. This, states Scott (2007:13), is a major move in a *sociological* direction. That by shifting the focus away from cognition to that of inter-personal balance at the group level the focus of graph theory has moved from the perspective of the individual to that of the group or rather each member of the group at the same time. The overall conceptual focus of this move has shifted the assigning of positive and negative attitudes to the interaction between individuals and dropped the cognitive aspects of the interaction and assigned a symbol instead. The desired outcome is still a balanced network that can always be divided into two subgroups. The lines within a subgroup will be positive and the lines between subgroups will be negative. So a balanced network of relations, such as solidarity, will have two subgroups between which conflict exists. The justification for the use of the phrase *sociological* direction by Scott seems to be in graph theories ability to be able to account, without evoking calls of contradiction, for cohesion and conflict at the same time within society. A conflict replicated by mathematical formula rather than the attitudes, beliefs, attitudes and ideas that separate the groupings. A perceived state of social order is achieved by mathematically replicating natural phenomena of

interpersonal relations at the micro level. This notion of a balanced state or social order can be derived at by mathematicians from looking at the relations between individuals irrespective of the cognitive processes or structure.

What had begun with a focus on the two main principles of gestalt therapy and the *experiential present moment* of individuals and that individuals are only able to know themselves by perceiving themselves being in a web of relationships with others shifts from the individuals perception of the web of connections. Phenomena such as attitudes and ideas perceived by the mind in certain was as a result of the complex and pre-conditioned cognitive structure of the collective mind or culture are side lined. This shift may have been the result of seeking sociological structures at the micro and macro level but it heralds a move away from the person's experiential present moment. The stories and narratives of the people under examination are diminished and replaced by mathematical graphical representations of relations. Attitudes, beliefs, concepts whether shared or not are secondary order phenomenon; epiphenomenon. According to forces determine the potentiality of the individuals and groups within them. Applying the mathematical tools of topology and only those, moved away from the approach of Heider (1946) and focused on how an individual's views and attitudes were brought into a state of balance – just what those views might be are redundant.

Mayo (cited Scott, 2007) saw that a managerial elite that understood the influence of group dynamics on individuals could successfully control workers. It was while working with Warner that they embarked on the research into the Hawthorne electrical factory in Chicago. This methodologically flawed and famous study began as the team from the Harvard Business School began an anthropological of work group behaviour and they used sociograms to record informal relations within the group. The Hawthorne studies⁷ (Roethlisberger & Dickson, 1939) were the first to describe the relationships in an actual situation with the use of sociograms in an attempt to increase the productivity of workers.

Warner (Warner & Lunt, 1941) held that the social configuration is made up of various types of groupings such as the family, the church, classes and association; as

⁷ To listen to an account of the limitations of the studies go to
http://www.bbc.co.uk/iplayer/episode/b00lv0wx/Mind_Changers_The_Hawthorne_Effect/

well as cliques or informal groupings of people who share a degree of intimacy and certain group norms of behaviour. These informal cliques are as socially significant as the family, the church and other social groupings. Individuals can be members of different cliques at the same time and so there is an overlapping of cliques that spread out to cover entire communities and societies. Following on from Warner, Davies et al (1941) argued that cliques could be seen as having three different layers or levels, the core; a primary circle and a secondary circle within a social space defined by class and age. They argued that peripheral and lower class members of a clique are able to contact higher class members of another clique only through approaching the higher class members of their own clique (Scott, 2007:22).

Homans in the 1940's again working at Harvard tried to synthesis various and diffuse small group research. His synthesis of social psychological, sociological and anthropological centred on the idea that people interact with each other and that these interactions vary in frequency, duration and direction and that out of these interactions sentiments are formed. Homans then returned to the work carried out previously by Davies et al. (1941) the Hawthorne studies. Homans constructed a theoretical framework to explain the behaviour in which the group is a system within a wider environment (Scott, 2007:25). There are internal systems within groups that expresses the sentiment that emerges from the interaction of the members of that group and there is an external system through which attempts at adaptation to the wider environment are expressed. This environment is shaped within wider social structures. However, Homans was primarily concerned with the internal systems and his work was not taken up by many. In the 1950's and 60's those who had worked on the notion of balance returned to more psychological approaches and while purely mathematical approaches to understanding cliques and clusters did continue to develop they had little impact during these decades.

2.5.2. The Manchester Approach of the 1960s

The Manchester anthropologists; Gluckman, Barnes, Mitchell and Bott had been heavily influenced by Radcliffe-Brown but unlike the Harvard approach of the 1930s and 40s that emphasised cohesion they developed the ideas of conflict, change and power (Scott, 2007:26). This critical approach was seen in direct contrast to the structural functionalist approach of Talcott Parsons which emphasised the expressions of internalised shared values. The Manchester approach focused on the relational aspects of the networks while largely ignoring shared norms and institutions of a

society and focused on the groupings that emerged out of the exercise of power and conflict.

Theoretical notions of kinship based societies and other tried and tested groupings of people were unable to accommodate the exercising of power and conflict and so the Manchester school of anthropology sought more rigorous application of the metaphor of social networks. Barnes and Bott shifted to looking at how to apply sociograms in a rigorous and analytic way. It was Mitchell (1969) who took up the task of using mathematical graph theory to create a distinct sociological framework that could be used to represent the structural qualities of social organisations. Mitchell returned to the tasks first outlined by Warner, Davies and Homans.

Barnes claimed that the whole of social life could be viewed as a set of points – some of which are joined by lines in order to form a network of relations and that informal relations make up one part of the overall total network. Bott was happy to refer to her own work as being concerned with ‘networks’ in 1954 after reading Barnes work. A key legitimating actor for the approach of Barnes and Bott was Nadel and Fortes (1957) who argued that structure was the starting point of the arrangement of elements to form a whole. As forms of relations can be separated from their content then the general features of the structure can be studied separately by applying mathematical formal models. Social structure is “an overall system, network or pattern” of relations (1957:12). He signposted the idea that algebraic and matrix methods could be applied to role analysis. Mitchell took up the signposts that Nadel had laid down and argued that there are two types of ideal action; communication, the transfer of information between people, norms and a degree of consensus, and; instrumental, the transfer of goods or services between people. Action is the combination of the two ideal types and so social networks will consist of a flow of information and a transfer of resources and services (Scott, 2007:30).

The total network of interactions that are outside the confines of organisations and communities according to Mitchell can only ever be partially studied. In order for such a study to be undertaken there are two possible justifications for making such an abstraction (Scott, 2007:30). The first abstraction is justified on the basis that an individual is at the centre of the network of social relations thereby resulting in an ego-network and the second is that of the global features related to certain activities such as politics, kinship, friendships or work colleagues. The ego-centric network

approach was the main concern for those working from the Manchester approach, including Mitchell. The second type of networks, that global abstractions are defined by the content or meaning of the relationship and breaking it down into its constituent parts is a redundant move. It is the meaning or content of the relationship not the individual within the network that is important. Akin to the distinction drafted by Weber to describe the two ideal types of roles – achieved and ascribed. The Manchester approach was more concerned with the achieved nature of the relations rather than the ascribed as discerned by the content of the interaction.

For Mitchell and the Manchester approach the institutionalised roles be it from organisations, kinship relations, or any formalised position are the environment in which the interpersonal networks reside. The institutionalised roles as result of the interpersonal networks (Scott, 2007:32). For Mitchell, network analysis is only concerned with the network of interpersonal relations once the structures of institutions have been removed. To conduct network analysis the relations need to be separated from the formal political and economic roles that have been assigned to the actors within the sphere of research. Conducting an analysis of interactions within an anonymised space of online activity and assessing the nature of the relationship according to the content of that interaction fits well within the area of community studies in this instance.

2.5.2. Harrison C. White and Associates

While the focus on community orientated networks was said to result in the stagnation of the development of social network analysis from the Manchester approach in the United States of America the work of Harrison C White and his students launched a new phase of development and advances in the methods (Scott, 2007:33). The two key elements to that advance were the development of using algebraic models to map kinship relations and the development of multidimensional scaling; in order to translate relationships in to distances on a social space. These elements were combined with an interest in the interlocking of corporate board members. Two pieces of work stand out in particular; Granovetter's '*Getting a Job*' (1974) and Lee's '*The Search for an Abortinist*' (1969). Both pieces of work relied heavily on simple frequency tabulations and only made passing qualitative comments on the structure of the network relations. Concerning himself with the nature of the information being passed on Granovetter argued that gaining information was dependent upon the motivation of those who already possessed the information to pass

it on and the strategic location of a person's contacts in the total flow of the information (Granovetter, 1974:52). For Lee's study (1969) on searching for an abortionist it involved, as did Granovetter's, the use of questionnaires and interviews. She concluded that women were more likely to approach females in the same age bracket and less likely to approach authority figures.

The underlying motive for using algebraic models and mathematical theorems is the belief that formal mathematics "reveals real world implications of the model that might otherwise have not been noticed or utilized by designers of the model (Barnes & Harary, 1983:239). Rather than adhere to a descriptive limitation the hope is that it can move from the application of formal concepts to formal theory. Such formal theories would clearly and accurately describe, explain and even predict how people act, think and feel. The linking of a formal account of human behaviour and social network analysis result in some desiring sociological theories akin to game theory (Emerson, 1962, 1964; Cook & Whitmeyer, 1992) and rational choice theory (Lin, 1982). Others such as Crossley (2010) and Emirbayer (1997; Emirbayer and Goodwin, 1994) put forward the idea for a network analysis that replaces approaches focused on culture and meaning but without lapsing into game theory or rational choice theory.

2.5.3. Mische's Historical Account of the Development of Social Network Analysis

The New York School of relational analysis in the 1990s were centred around White and Tilly and was concerned with bridging certain perceived structural holes between formal mathematical network analysis and cultural sociology; the development of software packages and the professionalisation of social network analysts (Mische, 2011: 3). The articles and publication tended to be highly mathematically and therefore excluded researchers who were not mathematically minded but may have agreed with the core ideas. Those from a cultural background argued that that cultural richness was being reduced to binary code, thereby removing meaning and interpretation from interaction. It was at the interception of language that Harrison C White began to merge these two divergent approaches to network analysis. For Tilly it was a re-examination of the role of identities, narratives and discourse theories that consolidated a perspective that began to link network relations with discourse, identities and social interaction (Mische, 2011:4).

With a focus on the “types of ties” as a basic measurement within the mathematical approach to network analysis Harrison C. White took a “linguistic turn” in *Identity and Control* (1992). As ties are numerous, changing and narratively constructed the focus for network analysis should be on the temporality, language and social relations. The linguistic turn was the result of reading the work of Halliday (1976, and others) or rather what was to later be called systemic functional linguistics or critical discourse analysis. White focused on the grammatical references to time, space and relations and linked this with language, networks and “social times” (Mische, 2011:4). It was the use of speech genres or types of speech that White saw as being linked to multiple and changing relations. Subsequent work resulted in the notion of “network-domains” or netdoms as specialised sets of stories and ties that are kept up to date over time through reflection, reporting and updating. In a complex social life, people have to switch constantly from one netdom to another mediated or buffered by space of the “publics” (Mische, 2011:5).

“The social network of the public is perceived as fully connected, because other network-domains and their particular histories are suppressed. Essential to its mechanism is a decoupling of times, whereby time in public is always a continuing present time, an historic present” (White, 1995:1054).

In 1997 Emirbayer published the *Manifesto for a Relational Sociology*, in which he called for a transactional approach that focuses on the dynamics of “supra-personal” relations that are above the individual actors rather than a substantialist approach. Emirbayer places sociological investigation at the time at a cross roads. The two choices open to them were either viewing social reality as consisting of static things or dynamic entities. The world of the substantialist was one of rational choice, norm based analysis and statistical analysis. While his manifesto presented a world of dynamic entities in processes of unfolding relations. This relational analysis was focused on boundaries and entities, network dynamics, causality and normative implications.

Tilly was moving from the position of structuralism to one that engaged with cultural processes of identity formation, narratives and the construction of boundaries in dynamic and relational terms (Mische, 2011:6). The emphasis was on how to explain how the construction of the social actually works and how it produces its effects. Relational realism, as he termed it, is focused on the doctrine that the social is made up of transactions, interactions, social ties and conversations.

What White, Tilly and Emirbayer (and other relational realists) were focused on was the interplay between networks and discourse, the communicative nature of social ties and multiple relations in social action in an attempt to mediate the distinction between structure and agency. This dynamic of interplay between networks and culture still permeates approaches to network analysis – what is key is that the formal network analysis techniques can provide insight into the patterning of the relationships while at the same time there are meaning patterns exchanged via communicative interplay. Both approaches yield valuable insight – yet we need to explain how the construction of the social actually works and how it produces its effects at a given time and space.

Theoretically this thesis is situated within the debate on network versus culture while arguing that the distinction between the two is merely one of ontic distinction rather than ontological. By that I mean that we can separate out the network from the culture for analytic purposes in order to ascertain which *is seen to be* in ascendance at a particular juncture but ontologically they are one and the same. The two varying interpretations of the same relations are the culmination of substantive and transactional genres of language. One formal and mathematical in approach and the other informal and searching for meaning. Attempts to bridge the divide have been as follows;

2.5.3.1. Networks as conduits for Culture

This approach views networks as the pipelines of social influence transmitted via attitudes and ideas. These approaches are founded on the principle that cultural elements, be they attitudes, ideas or practices are external to networks. The networks are pre-defined and unproblematic and so are the cultural resources that are moved between the nodes. The two elements are independent entities that are constituted of separate elements yet interact without affecting each other. So networks and cultures are reified; abstract concepts of network and culture are concretised without asking how they interact or which attributes facilitate the transmission.

2.5.3.2. Networks as shaping Culture

This approach focuses on the search for a causal relationship between the two entities – how the network shapes the culture. It places greater emphasis on the culturally generative mechanisms of network structures. They can see network clusters as incubators of culture, network position as creating categorical identities

and network bridges as conduits for transference of cultural resources and creativity. The incubator approach views the intense commitments and solidarities created by close physical proximity. Network positions create identities in situations where an awareness of the structural equivalence in networks creates identities. So that an actor's position in relation to groups is important in shaping the identities and discourse of that actor. Network bridges as conduits for transference of resources considers the idea that inter-organisational bridging can contribute to coalitions and the transference of good ideas borrowed from other networks. Examples of such is work on internet communications that focus on weak ties that generate culture through relational intersections.

2.5.3.3 Culture as shaping Networks

The argument that cultural forces like taste and moral frameworks create relational affinities that shape network structure is founded on the idea that deep seated moral frameworks (unconscious) provide for the emotional empathy or lack of it that leads to the selection of friends as well as the amount of effort put into the continuation or decay of that friendship over time. Cultural tastes or values shape network structures.

2.5.3.4. Networks of Cultural Forms

This perspective views culture as organised into networks of cultural forms. This includes concepts categories, practices, and narrative events in conceptual networks of relational principles and conceptual assumptions (Somers, 1995 cited Mische, 2011). These networks constrain processes of interpretation and concept formation as the meaning of one concept can only be known in relation to the other concepts in its web of meaning. There are two main strands of this approach. The first focuses on techniques of cognitive and discourse mapping and the second analyses narrative or sequential relations (Mische, 2011:11).

Techniques of cognitive and discourse mapping state that the meaning of a concept for an individual is embedded in the relationship to other concepts and that this map or mental model is a representation of the individuals cognitive structure that can then be analysed using network analysis techniques such as density, consensus and conductivity (Carley, 1993).

The analyses of narrative or sequential relations show how dense clusters of narrative elements that are made up of autobiographical stories can create historical accounts of events that are robust and free of possible re-interpretation. This approach and cognitive mapping focus on the interaction of social and cultural structures embedded in the time of the events as well as the social location.

2.5.3.4. Networks as Culture via Interaction

The fifth approach moves away from the idea that cultural forms and network structures are autonomous entities that transmit or incubate or transform one another. Rather it sees networks as being composed of cultural process of communication (Mische, 2011:13). The approach is indebted to Goffman's work and looks at communication, setting, performance and interaction and how they are constitutive of and permeated by network relations (Mische, 2011:13). Mische (2003, 2007) showed how activists involved in various institutions suppressed, segmented and combined aspects of their multiple identities in order to create new civic and political intervention. Gibson (2003, 2005) focused on the changing relations between speaker, target and unaddressed within small group interactions. He concludes that conversational dynamics are shaped by formal institutional hierarchies and network ties such as friendship. McFarland in his study (2004) on classrooms describes how students switch between social frames and personal frames in settings that disrupt the institutional relations.

The ontological and epistemological differences are a positive outcome rather than negative – they point the way to a synthesised theory that does reduce the social to mathematics but enables the two approaches to engage in fruitful conversation while keeping the debate open rather than closing it down. For Mische throughout the development of the network paradigm there has been a thread of pragmatic thinking. This is claimed to embrace the tension between ontology and epistemology, realism and constructivism and structure and agency and that something is considered real if it produces action. Such actions (Mische, 2011:16) are grounded in the interpretations of relations which evokes Pierce's notion of sign, object and "interpretant" that results in new interpretations. This transcends the realist-constructionist divide and adds weight to Tilly's term of relational realism. So the network paradigm views relations, interpretations and actions as generative and yet subject to resistance from objects in the world. The formal outcomes of network analytic techniques are useful in uncovering the complex patterns of relationships

[B]ut these representations need to be complemented by historical, ethnographic and interview research that examines the communicative interplay, strategic manoeuvring, and reflective problem solving carried out by actors in response to these relational tensions and dilemmas (Mische, 2011; 17).

2.6. Relational Realism or Relational Critical Realism?

“In the beginning is the relation.”

(Donati, 2011)

While Mische (2011) states that the current situation with relational realism is one that overcomes the false binaries of ontology and epistemology, realism and constructivism and structure and agency; and 20 years since the publication of Emirbayer’s manifesto there is a need to clarify the fundamental principles and concepts of relational sociology. In 2010 two sociologists attempted to further clarify relational sociology; Crossley’s (2010) *Towards Relational Sociology* and Donati’s (2010) *In Relational Sociology: A New Paradigm*.

Crossley’s approach is to integrate game theory, exchange theory, network analysis and symbolic interaction and specifies that the goal of relational sociology is the discovery of mechanisms that are the relational conditions and dynamics that recur in social life and have predictable outcomes. For Crossley agency and structure co-exist and are of greater or less importance depending upon on the context. Structures are networks, conventions and resources that are the result of interactions and then in turn constrain or enable actors (Dépelteau, 2011). Society is presented *not as a social thing* but a state of play in a web of ongoing interactions (Crossley, 2010). The whole or the structure is the result of these multiple interactions and that no one is in control. For Crossley there are five dimensions to interaction; symbolic, affective, convention-innovation, strategic, and exchange power. These five dimension allow him to move between game theory, exchange theory and symbolic interactionism to relational sociology. One criticism cited by Dépelteau (2011) is that Crossley too easily dismisses Latour’s need to integrate non-human actors into sociology. Another is the concern that casual social mechanisms is simply a soft presentation of positivistic determinism.

In Donati's (2010) *In Relational Sociology: A New Paradigm*, he places social relations at the core of society and hopes to preserve humanity and individual personality. Social facts are social relations and so there is no possibility of removing people from the equation and leaving behind the social (Archer, 2010; xi). If people are removed then no social would exist. Relational goods are not divisible in the sense that it is the social relationship that generates the relational good. Dividing relational goods makes as much sense as a divorcing couple deciding to divide the *marriage*. Relational goods reside in the relationship not the individuals that linked up. Social science that relies on game theory and exchange theory so much so that social relations have been ignored. Donati has been against the dominant doctrines of commodification and bureaucratic regulations as they destroy human relations. Donati's agenda has been the promotion of the pursuit of the common good in society. Contracts and electoral systems are of practical use but do not generate common good (Archer, 2010:xii). From Donati's perspective relational sociology is an emancipatory project of free giving, reciprocal relations rather than exchange or command relations. For Archer, Donati's relational sociology and critical realism are "fully complementary, both as meta-theories and as explanatory programmes" and any differences they may possess enriches the other (2010: xii). Relational sociologists and critical realists are concerned primarily with the human capacity for fulfilment and the multiple forms of suffering.

For Donati the relation does not eliminate the individual, subject or actors but instead it "reclaims, explores and expresses them" (2010: 18). Most of sociology is caught up in a liberty versus order and control dichotomy expressed in contemporary society as a compromise between state and the market animating social systems. Donati sees the emergence of several distinct phenomenon, among them virtual communities that cast doubt on this duality of state and market as the progenitors of change in social systems. Modern sociologists are blind to how globalisation has caused a shift in relations between persons.

This thesis is an attempt to express how one new form of collective reciprocity is being deliberated and instantiated.

2.7. Applications of relational analysis to the Internet

The application of social network analysis and thereby the application or not of *relational realism* and *relational critical realism* to communities that are present on the World Wide Web is the area to be covered in this section. Social scientists have been using hyperlinks as indicators of *other social phenomena* and the web is believed to be a good place to explore properties of network analysis.

There are two distinct approaches to the study of online communities or virtual social networks (VSN's) and the distinction is evident in how they title their approach. The online communities approach views the structure as a result of cultural or human interaction due to neighbourhood interactions or geographic locations while the virtual social network approach defines types of relations as being reducible to the technological platform that the interaction takes place within or reducible to shared values.

For D'Andrea, Ferri, and Grifoni, (2010) what they term virtual social networks (VSN) are defined based on their physical features or types of relations. The types of relations are generally reduced to that which is held in common among the parts that make up the whole of the network. It can be referred to as the values, meanings or identity or common interests. Etzioni et al. (1997) see virtual social networks as having two attributes, affect laden relations and commitment to shared values, meaning or an identity. Romm et al. (1997) defined a virtual social network as a group of people who communicate with each other and share common interests. Ridings et al define a VSN as a group who have common interests and communicate regularly via a common mechanism such as type of software being used. D'Andrea, Ferri, and Grifoni, (2010) contrast these three approaches with the "technology perspective" that focuses on the software supporting the relations and these technologies are said to support the communication, and help create boundaries. There is a distinction between these approaches regarding the nature of the causation – does culture shape the network or the network shape the culture?

Schneider and Foot (2005) suggest that there are three different methods to studying *web spheres* since the 1990's. The first approach employs discursive or rhetorical analysis of web sites and is more concerned with the content rather than its structuring elements. The focus is on texts and images. The texts and images are regarded as communicative practices and methods of discursive and rhetorical

analysis are said to unpack these practices. At times they believe that such analysis can be combined with hypertext analysis of cross site comparisons in order to shed light on relations (Schneider & Foot, 2005; 164). This seems to be an approach that sees culture as the creator of the network of relations.

The second set of methods focuses on the structural analysis of an individual web site, such as the number of pages, the existence of a search engine. This second approach also advocates the use of computer assisted macro level network analysis for mapping hyperlinks between sites. The structure of the links can then be discerned. However, the substance of the relations can be difficult to infer from the linkages alone (Schneider & Foot, 2005:165). Such approaches can elicit the co-production of online structures but limited in capturing meaning and values. This approach is the network causes the culture approach.

The third approach looks at analysing the multi-actor, cross site action on the web with a distinct approach that incorporates socio-cultural methods and advancing new strategies for media ethnography. They cite Howard's (2002) network ethnography as an example of this approach and wish to stress the use of analysing the hyperlinks in context and "situatedness" of the web sites. Such approaches involve field research techniques such as participant observation, interviews along with textual analysis and hyperlink analysis. This approach (Schneider & Foot, 2005:165) is particularly "helpful in analysing, complex processes such as collaborative mobilisation and co-production of features, pages and whole site, and across sites through links. This third approach seems like an attempt to traverse the culture versus network dichotomy. This moves away from the idea that cultural forms and network structures are autonomous entities that transmit or incubate or transform one another. Networks are composed of cultural processes of communication.

The approach here is that the definition of the group under investigation as *web sphere, community or virtual social network* that shapes the selection of the research methods. It is not a virtual social network or community of individuals. The Singapore blogosphere is a group that has the potential to be progenitors of change in their social system. Yuan (2012) argues that a culturalist critique of the notion of 'online communities' in media studies is lacking. I would add *virtual social networks* and *web spheres* to being in need of the same critique. The issue is the degree to which a network versus culture orientated perspective on networking has erased the context of

those groupings. Approaches to grouping together have so far inadequately conceptualised those groups according to a Western centric notion of community, virtual social network or web sphere, which all provide their own particular tradition of meanings for social action (Yuan, 2012). The Singapore blogosphere is a web sphere of multiple websites and blogs and the situatedness of the actions are within in a heavily regulated media environment. It is this regulation that adds (amongst other forces) to the creation of a culture that is specific to this web sphere.

The hyperlink is the signifier of a relation between two websites. The hyperlink is placed in the text by either a human or a non-human. Non-human software can automatically contain the code of the hyperlink. If I classify the Singapore blogosphere as a virtual social network I am open to the very likely possibility that what will follow will be a structuralism account and be accused of downwards conflation (Archer, 1995). If I commence by calling the relations an outcome of the individuals writing the blogs I will likely follow an individualist account and be open to accusations of upwards conflation (Archer, 1995). This is an attempt to remain between the two and refer to structures shaping individuals and individuals shaping structures and be able to state which causes which during specific periods of social change - avoiding central conflation (Archer, 1995). In order to achieve this “[w]hat have until now been paradigms that were ambivalent, dualistic, oppositional, complementarity etc. need to be reformulated according to a relational logic of social webs (Donati, 2011:18).

The hyperlink, in this study, *is the relation of the social web*. The hyperlink is a fundamental feature of the web and they have been the research objects in works by sociologist, political scientists, information scientists, geographers and media scientists (De Maeyer, 2012) and collapsed into downwards or upwards conflation.

2.7.1. Structural Approaches to Hyperlinks resulting in Downwards Conflation

The structural approach to hyperlinks and therefore the downwards conflation approach have been conducted by (Barabasi, 2003; Watts, 2004a, 2004b, Adamic & Huberman, 2001; Broder et al., 2000). Their work uncovered hyperlink patterns that help us to understand all types of networks such as the web being “a scale-free network, dominated by hubs and nodes with a very large number of links” (Barabasi, 2003:165). The researchers began the research journey from a structuralist stance and

concluded that individual nodes can have big influences etc. and from this they have asserted the universal power law (Adamic & Huberman, 2001:131). The macro structure of the web according to the approach breaks into four separate entities, a core, an in-component that can reach the core, out-component that the core can reach; and tendrils that cannot reach or be reached by the core (Broder et al., 2000).

2.7.2. Individual Approaches to Hyperlinks resulting in Upwards

Conflation

Another approach is one that is said to focus on individual nodes with the hyperlinks representing other phenomena. These studies; (Hsu & Park, 2011; Thelwall, 2006; Adamic & Adar, 2003; Rogers & Marres, 2000), assert that the hyperlinks are not placed randomly but the result of socially significant decisions. The hyperlinks are said to help us understand other facts such as information side-effects. This is when data intended for one use is collected by researchers and used to understand a possibly larger scale, phenomenon (Adamic & Adar, 2003:211). The idea is that hyperlinks represent a wider scale phenomenon at not just an individual level but a global level. That hyperlinks reflect social and cultural structures (Halavais, 2008:39). “Making a link to another site, not making a link, or removing a link, may be viewed as acts of association, non-association or disassociation, respectively” (Rogers, 2010:117).

The people writing the code that contains the hyperlink are making the association; people’s actions are signifying the relation. The structural and individual approaches to hyperlink network analysis combine quantitative link counts, qualitative inquiries and the valuation of field expertise to support hyperlink interpretation. The division between structuralist analysis of networks and the cultural-communicational analyses are rethought in relational terms (Donati, 2011; 18).

2.8. Virtual ethnography – development from Hines onwards

The application of ethnographic techniques to online settings in order to explore complex social settings began in the 1990’s (Hine, 2008:258). Early ethnographic accounts of the interaction taking place online showed how socially patterned the Internet interactions could be. The early studies focused on the ideal of online communities that existed online and independently of geographic location or physical

space. Two primary conventions emerged that are built on face to face ethnography; the importance of experiential learning; and an in-depth engagement with the field (Hine, 2008:257). According to Hine the notion of *community* is inadequate when trying to represent the “full spectrum of Internet social interactions” (2008:257). The distinction between offline and online however may no longer be a relevant marker for social interaction and so virtual ethnography as a separate method may no longer be a required distinction. For Hine the impetus for viewing the online environment as a social space came from the fictional writings of William Gibson in *Neuromancer* (1984) and Neal Stephenson’s *Snow Crash* (1992). A study of text based bulletin boards by Rheingold (1993) that focused on the interpersonal dynamics that occur when people met online to discuss topics of interest to them is an early example of studying a virtual community and cemented the idea that online interactions had social meaning. The first studies however to claim to be ethnographic appeared in work (Jones, 1995) that focused on cybersociety and a discussion group that came together to talk about soap operas (Baym, 1995).

Baym had been a participant observer in the group that she studied for more than three years after first encountering them as a member of the group and only later deciding to research them. She was interested in understanding the local humour and language as well as social hierarchies. As a result of her prolonged interaction with the group she was able to claim an in-depth understanding as well as the ability to take a step back and assess the interactions with a sociological framework. So there is much in common with the standard method of ethnography (Hine, 2008:259). The main ethnographic principle of developing an understanding through participation and a progressive collection of data in a virtual environment remains consistent with traditional approaches to ethnography (Hine, 2008:259). Other pioneering studies were carried out by Correll (1995) of an online lesbian café; and Reid’s (1993) ethnography of text based virtual reality environments called MUDs. Markham (1998) while conducting virtual ethnographies emphasised the idea that a level of reflexivity was required by the researcher with the result that the online experience can be viewed as place, tool or experienced as a way of being. There was a stress in the early works that the online environment needed to be understood in its own right rather than as a shadow or lacking environment. This was a response to those who viewed the online environment as somehow lacking in the quality of interaction experienced face to face. Others argued that the online interaction lacked social cues

(Sproull & Kiesler, 1986) and that visual anonymity tended to equalise social hierarchies and increase aggressive behaviour. The view that the medium contained inherent effects on behaviour was dismissed by work that searched for naturally occurring interactions that represented locally specific interpretations. Kanayama's (2003) study of older people in Japan provided insight into how textual culture of Japan combined with virtual culture to create a distinctive virtual sphere (Hine, 2008: 259).

With the appearance of sites such as Facebook and Myspace ethnography has been adapted to suit the social formations that they facilitate (boyd & Heer, 2006) and new forms to textual interaction such as blogging offered new forms of interaction to study (Doostdar, 2004). For Hine (2008:259) “[e]thnography has become embedded in academic culture as an appropriate way to explore how people make sense of the possibilities that the Internet offers them”. Ethnographers finding a virtual field site and conducting sustained enquiry became an established academic pursuit in the 1990's. Since then the shift in ethnographic focus has moved to problems of asserting that an online environment is a contained delineated cultural domain.

For Doostdar (2004) there were two main reasons for conducting ethnographic research into cyberspace and the work of Iranian bloggers. The first was that there is a numerous amount of social formations taking place and that those relations, linguistic practices, power dynamics and the construction of identities needed to be understood via ethnography grounded in social theory. Many researchers had made the same call (DiMaggio et al., 2001; Escobar, 1994; Fischer, 2003; Hakken, 1999; Kottak, 1996; Miller & Slater, 2000; Wilson & Peterson, 2002). Secondly there had been an over emphasis on dystopian or utopian positions that led to unsubstantiated assertions that the Internet was a revolutionary force in terms of the ramifications for social, cultural and political processes. What was needed was empirically based studies that would present a more realistic understanding of online communities. What Doostdar had hoped to uncover were the multiple levels of “structure, explanation, and meaning” (2005:8). Chapter 3 takes up the need for an empirically based study that provides are a more realistic understanding of an online community.

2.9. Systemic Functional Linguistics and Critical Discourse Analysis

White and Johansen (2005:418-419) in their concluding statement titled “What People Do and What People Say” compared norms and social behaviour in marriage choices from genealogical data with what the people they studied reported. The

informants stated that spouses were usually chosen to be of a similar age. With age data overall not available, they compared the levels of similarity in blood type of the different generations. They confirm that marriage mostly occurs between people of similar ages from analysing the blood types. They acknowledged that they also lacked norm reporting over the generations but cited the Koran to confirm the norm. A simpler way would be to have read the textual data collected during the conversations that they had had with the informants who state that marriage mostly occurs between people of similar ages.

The Internet provides researchers with a large amount of textual data. Linguistics and the work of Halliday (2008), as used by Fairclough (2003) and others in critical discourse analysis theorists may aid in the analysis of such data while acknowledging the political nature of such texts.

Systemic Functional Linguistics (SFL) is an analytical method from Halliday (2004). SFL is concerned with grammar's functionality or rather how it creates and expresses meaning. It regards grammar as a system of explaining things by referring to other things. Each system of the interconnected words constructs the 'meaning potential' shaped by the semantic choices being made and the activity in the brain. SFL's position is that when text is analysed it brings to the fore the meaningful choices made at the expense of the choices that were not made. It is this functionality, in language, that is central to language or rather that the function of language is to convey experience and to generate interaction with others. With the construction of experience and interaction needing cohesion and continuity of text, a second function of language emerges – that experience and interaction require text. According to SFL, language has three 'metafunctions': ideational, interpersonal and textual with 'metafunction' being used to ensure that function is regarded as an integral component of the interaction of the three terms.

My concern here is to focus on an analysis of texts rather than focusing on verbal or body language. Fairclough (2004) sees texts as multi-functional ways of acting, representing and being. The texts collected from the Internet are ways of being that allows the relationship between the text and persons involved to bring in social perspectives. Social perspectives correspond with Halliday's interpersonal function of language. So when analysing the texts from the Internet this accounts for social practices that are being realised in the texts.

Fairclough's Critical Discourse Analysis adopts a critical realist approach to the relationship social structure, social practices, and social events. Fairclough's position is that what is structurally possible (social structure) and what actually occurs (social events) is not predetermined but mediated by ways of controlling (social practices). These ways of controlling involve making choices of what to include and what to exclude. Long-term practices are those ways of controlling that remain over time.

Social structures, social practices, and social events are language, orders of discourse and text respectively (Fairclough, 2004). Language is an abstract social structure that defines what is and is not possible. Orders of discourse are linguistic practices that select which linguistic elements are included and excluded, and texts or social events are the products of the mediation by orders of discourse. In chapter 6, I outline my focus on analysing the use of modality on what people commit themselves to when they make statements, ask questions, make demands or offers (Fairclough, 2004) in the texts.

Chapter 3 Missing Ethnographic Accounts of Large-scale Communication Networks

3.1. An Approach to Network Analysis

Firmly rooted in ethnography, this thesis sits within the wider attempts to ensure the social and cultural aspects of domains in using social network analysis (SNA) to study a particular environment for a prolonged period. The approach to ethnography and network analysis taken here is that social structure exists both in the behaviour of individuals and in the verbalisations of those under observation. Behaviour has an effect on structure, processes (White & Johansen, 2005), and is in itself an instance of the wider symbolic system that can be read and interpreted. The main behaviour under observation in this study is that of writing hyperlinks between websites. Observing this behaviour and using the tools of network analysis will help to make evident that which is un-verbalised by the individuals under observation.

Using network analysis to uncover the social structures that go unmentioned with an analysis of the verbalisations or the content of the texts that the individual is publishing situates the cognitive utterances of the individuals within the un-mentioned structure.

Because networks include nodes, links, and the attributes of both, data on the cognition of individuals falls under the heading of micro properties, while shared cultural items have a distribution in a network that constitutes a macro property. To build a proper bridge between social networks on the one hand and cognition and culture on the other, we have to use multi-level network representations. These representations would set about to link the elements of cognition, for example, as existing both inside and outside the individual as an entity, and to set about identifying the linkage processes in cognition, the micro-macro links within cognition, and its emergent properties, cohesive units, and so forth (White & Johansen, 2005: 9-10).

This component of cultural items or cognitive structure is the environment under observation. According to White and Johansen (2005), to build a bridge between the micro level cognition of individuals and the cognitive structure at the macro level would require a multi-level network representation. It is my intention here to use White's (2008) three disciplines and their related valuation orders to represent the motivations for linking to others (the behaviour) and as a means of explicating the information contained within the micro-level utterances of individuals. In accordance with White and Johansen (2005), "structural properties [...] have important feedback on behaviour and cognition".

People may choose friends so as to avoid inconsistencies, like friends of friends who are enemies; and they are also more likely to choose friends who are already friends of friends. Preferences for buying a new computer may reflect the number of people with whom you can exchange files. The number of friends a person has may affect the probability that others will choose them for a new friendship. Each different kind of behaviour sets up certain shapes and variabilities as to how networks look from the individual's perspective. These are micro properties of a network (White & Johansen, 2005:9).

There are three genres of disciplines, interface, council and arena according to White (2008). However, to paraphrase White and Johansen (2005), the hyperlink structure is the result of decisions made by those writing the hyperlinks while avoiding inconsistencies i.e. not linking to others deemed outsiders and only linking to people who link to others like you. In attempting to galvanise action by linking to others that have acted in the past it makes sense to link to others whom you feel a connection. The number of others linked to by that website may also determine a link to someone else. Each of these linking behaviours at a micro level will shape the overall wider macro structure of the hyperlinks. However, each of these genres of discipline has a distinct process and valuation order.

For White and Johansen (2005) the focus of their study was on the emergent structural properties that resulted from long term interaction of the micro processes, while White's (2008) approach accounts for the interface of micro and macro level processes – the discipline. White (2008) and White and Johansen (2005) may be describing the same phenomenon but merely coming at it from different directions.

White (2008) and his three genres of discipline have advanced White and Johansen's (2005) rather sketchily drawn notion of motivation for action at the micro level. White and Johansen (2005) state clearly that their work focuses on the structural aspects of ethnographic approaches to show how structure controls the action of individuals at the micro level. It is these processes that the ethnographer conducting the observations are not directly aware of and the argument is that social network analysis tools can bring these structural processes to light. The focus of White and Johansen's (2005) work is on the macro level forces to the demise of the micro level actions of people as forces.

It is my contention here that White's three genres of discipline aid in bridging the micro and macro aspects that occur in an environment by allowing for meaning, identity, and most importantly values to shape the explication of the behaviour. An explanation of the behaviour that while incorporating the person's reasons also allows

for forces beyond the awareness of the person to explain the action. As well as observing hyperlink behaviour, I also archive and analyse the texts written by those under observation. Emergent behaviours, (White & Johansen, 2005) such as centrality and reciprocity, are uncovered due to the longitudinal observations and network analysis. Such tools bring these to the fore, revealing power relations and effects on the observed group in question. To observe these potential effects, a semantic analysis of the texts measures the nature of the constraining and facilitating properties on the linguistic practices. As White and Johansen state, “These may include effects on or constraints of social behaviour, cognition, economics, politics, linguistic practices, and other domains that ethnographers study for which understanding will remain incomplete without network studies” (White & Johansen, 2005:29). I posit that a network study is inadequate unless it also provides systematic study of cognition, economic, political and any other “domain” that arises during the ethnographic study. The emergent processes of the other domains appear in the linguistic practices of those under observation.

Rules of behaviour are not fixed or static. The network analysis and the cognitive mapping of the cognitive structure at the macro level belie the assertion by White and Johansen (2005) that anthropological approaches assume that rules of behaviour are fixed. I would argue that ethnographers possess not just dynamic models that are sensitive to demographics and time lags but also an understanding of the *meaning* of the behaviour under observation for that particular time and the cognitive, political and economic environment in which the behaviours take place by observing the evolving linguistic practices.

This is not simply by “assimilating their normative thinking to that of the people studied but remain alert to discrepant behaviour [...] they obtain the view of these people” (White and Johansen (2005:29) but by conducting analysis of the verbalisations or the content of the texts that the individuals are publishing.

To allow for issues of culture, identity, and agency involves the turn to White’s (2009) three genres of disciplines and relative valuation orders in order to overcome the social structure focus of White and Johansen (2005) and to add an analysis of the discourse used by those under observation.

According to Scott (2010), Emirbayer and Goodwin (1994) have contributed important work on the framework of ‘relational sociology’ that underpins social

network analysis and they have highlighted the structuralist approaches to social analysis that have dominated network analysis. They have drawn attention to the structuralist domination that has neglected the explanatory potential of other conceptual strategies that emphasis the non-relational dimensions of individual and collective action.

Emirbayer and Goodwin (1994) contend that there are three different types of structuralism within certain strands of social network analysis. They are structuralist determinism; structuralist instrumentalism and structuralist constructivism. Structuralist determinism neglects the potential causal effect of “actors’ beliefs, values and normative commitments or, more generally, of the significance of cultural and political discourses in history” (1994:1425). More relevant to my position here is that structuralist determinism neglects “ideals, discursive frameworks, and ‘cognitive maps’” (1994:1427). I generate these cognitive maps using the texts published by those under observation. So rather than merely formalising the objective social relations using the tools of network analysis I go further than that in an attempt to maintain “their active, subjective dimension and their cultural contents and meanings” (1994:1428).

Structuralist instrumentalism takes normative values unquestioningly and assigns the own authors normative values as the motivation for action of the people under observation. They tend to accept the prominent “role of social actors in history, but ultimately conceptualise their activity in narrowly utility maximising and instrumental forms.” It is hoped that with the application of the ethnographic approach that this tendency of structuralist instrumentalism, to supplant their own normative discourses of explanation on to the people being observed, will be overcome.

Structuralist constructivism, Emirbayer and Goodwin (1994) argue, fails to allow for competing interpretations of an event thereby not taking in to consideration the full complexity of the interplay between cultural and political discourses prevalent at the time of the study on actors. By conducting a detailed analysis of the various cultural and political discourses that the texts engage in, I intend to show the ebb and flow of particular discourses over time rather than imposing an overarching narrative on the texts.

Although White contends that:

"Social networks are phenomenological realities, as well as measurement constructs. Stories describe the ties in networks. [...] A social network is a

network of meanings" (1992: 65, 67).

He does not assign the same amount of attention to these stories and narratives as he does to the social networks. Moreover, Emirbayer and Goodwin (1994) argue that White's accounts are guilty of "central conflation" (Archer, 1988). The assumption is that intertwined cultural and social structures have no autonomy. Analysts can distinguish the interplay of culture and social structure. There are causal roles for ideals, beliefs and values, argue Emirbayer and Goodwin (1994). The mathematically focused tools used so far by network analysts allow for the patterned un-verbalised structures. However,

These tools, however, by themselves fail ultimately to make sense of the mechanisms through which these relationships are reproduced or reconfigured over time. Our own position is that a truly synthetic account of social processes and transformations that takes into consideration not only structural but also cultural and discursive factors will necessarily entail a fuller conception of social action than has been provided thus far by network analysts (Emirbayer and Goodwin, 1994: 1447).

This thesis does provide an account of the social structural forces at work according to an analysis of the hyperlinks using network analysis but it does not contain a new algorithm. Beyond a brief introduction to betweenness centrality, it does not engage in the merits or otherwise, of combining various ranking of blogs such as Google's PageRank, Hits and Blogrank algorithms. Thereby, avoiding the *algorithm fetishism* within network and linguistic analysis of the corpus collected from the environment under observation; allowing for culture, identity and agency.

Algorithm fetishism extends well beyond relational sociologists who have taken what was once a metaphor for category-focused sociologists and turned it into numerous empirical measurements such as centrality and degree. The metaphor of the network has come to stand in for categories of varied phenomenon well beyond the original scope of the relational application as can be seen from "The Rise of the Network Society" (Castells, 2000) to the 'Network of Networks' to describe the Internet, to the brain (Thompson & Swanson, 2010), to global ownership of corporations (Glattfelder & Battiston, 2009). All other categories fall under the meta-narrative of the network.

The dominant technological structure is a network (a graph) e.g. World Wide Web graph, each web page is a node and each (hyper) link is a directed edge; internet, social networks, networks in the molecular biology, a biological cell as a network of genes, neural networks, metabolic network, scientific citation network, energetic networks, phone calls, linguistic networks, networks in natural languages, ecological eco-networks, computer circuits [...](Guzmán & Oziewicz, 2004:602).

The emergence of ‘network’ dominating ideas and language used to explain such varied phenomenon leads to hegemony and the suppression of other categorical frameworks and organisational structures.

Social network analyses, or rather those elements within SNA fixated only on structuralist relational elements and therefore algorithms are in danger of providing justification of *supranational* systems – (states and multinational corporations) (Wolfe, 2010: 3). The indirectly observable force that has gone un-measured is now visualised by mathematical equations. Mathematical reductivism presenting analysts with a limited social physics devoid of all that is not capable of reduction to logic is a poor representation. Social network analysis has developed tools of measurement not dominance. To facilitate a more nuanced understanding, these tools need to allow equal weighting to social, cultural, and agency focused explanations of the social phenomena under observation.

For the tools of social network analysis to continue to move beyond mere description, while avoiding prescription - is there room for a *critical social network analysis* enabling self-reflexivity within network analysis itself and emancipatory projects; while advancing its contribution to “substantive theoretical questions” (Scott, 2010)? A main concern is to ensure space for agency in a field dominated by sociograms, statistics and algorithms in order to see the network aspects in the social as one explanatory device amongst many.

Denying the recognition of the voices of the repressed and ignoring their material conditions will continue to aid in the marginalisation of the disempowered. Focusing only on the relational aspects of the interaction and in the individual persons linked (Wolfe, 2010:3) creates a limited representation of the wider phenomena under study and a narrow awareness of the context in which these networks exist. I allow for other factors such as the cognitive structure, present in stories; “the common concepts imbued with cultural meanings” (Wolfe, 2010:17) for people that states and multinational corporations have tried to fix in their “languages and institutional memories”; (Wolfe, 2010:17) and the value-orientated motivations of the agents in reaction to those attempts at control.

3.1.1 Conceptualisation and Operationalization of White's Three Disciplines and Relative Valuation Orders

What makes a genre of discipline a genre of discipline? White's three genres of discipline are *interface*, *council* and *arena*. Including them here will bridge the structural and individual interpretations without collapsing into central conflation by allowing for meaning and identity expressed in values to shape the explication of the behaviour. According to White (2009), disciplines are status systems that create network patterns. An *interface* genre of discipline results in the creation of a physical object or other entity. This can also include the creation of events such as a university lecture or the factory manufacture of toys. Interface genres of discipline requires a level of commitment from an actor, whether a person or other and the work is orientated towards *quality*. Quality in this instance is in notoriety, citations, graduate students or the finished product. It is an increase in social status as perceived by others according to standing in the genre of discipline they are operating in. The *council* genre of discipline is applicable to that of the university council or other committee that has control of a resource. The council via mediation regulates the level of flow of people utilising the resources. In order to regulate the flow of people it operates under the values of *prestige* and thereby judges the suitability or 'soundness' of character of those wishing to access the resource. The *arena* genre of discipline is the formation of order that are part of country club admission, American university fraternity houses, of the Rotary Club. The distinction is that selection into such groups are bounded according to certain rules of selection and exclusion. This selection process is conducted in order to preserve a sense of *purity*. Such symbols of purity are passed on through marriage, or eligibility for marriage. Each of these genres of discipline are said to be status systems whereby the evaluative judgements create a network pattern. Each of these genres of discipline create a network pattern. Judgements made by those within the groups create task flows that generate network patterns.

The genres of discipline approach is similar in some ways to the idea of culture shaping the networks. Rather than use the term culture possibly due in part to White's previous anti-culturalist bias (Emirbayer & Goodwin, 1994:1437) – genre of disciplines is used to argue that what is important are the valuation orders of the genre in making an evaluation. This breaks down the notion of culture into something empirically recognisable. Rather than refer to taste or morals or ideas of deeply seated

moral frameworks (unconscious) that create empathy or the lack of it White presents us with a schema of motivations for actions that are similar but not identical to that of institutional boundaries. Viewing culture as organised into networks of cultural forms; such as but not limited to; concepts, categories, practices and narrative events in conceptual networks of relational principles and conceptual assumptions (Somers, 1995 cited Mische, 2011). These networks of cultural forms constrain processes of interpretation and concept formation as they are bounded to the conceptual framework in which they reside. The concepts cannot be operationalized. There is nothing outside the web of meaning and we are locked into communicative utterances and nothing beyond them. For Mische (2011; 11) there are two strands to this approach. A cognitive and discourse mapping approach and one that analyses narratives or sequential relations. Using the cognitive mapping approach alone as an observer would produce meanings of concepts embedded in the relationship to other concepts and it is then erroneously presented as the people's cognitive structure that only requires further analysis with network techniques (Carley, 1993). The presentation of the mapping of the cognitive structure as that of the persons is again downwards conflation. The analysis of narratives or sequential relations as dense clusters of narrative elements that are made up the autobiographical stories can create accounts of events that are free of re-interpretation. This approach (Mische, 2011), that focuses on the interaction of social and cultural structures as being embedded in the time and social location of the event amounts to autobiographical accounts of events as a representation among many representations and is therefore relativist in nature.

The fifth approach that Mische highlighted was that of networks as culture via interaction that sees networks as cultural processes of communication. It produces descriptions of how multiple identities are used to create civic and political intervention or how relations between speaker, target and unaddressed change over time. Such an approach would result in a communicative fallacy. Reducing human relations to the communicative act alone shaped by the interplay of institutional hierarchies and friendship networks. One such approach that does not collapse into communicative reductionism is that of McFarland (2004) in his study of how students switch between social [identities] and personal [identities] in settings that disrupt institutionalised interactions. The motivations for actions that produce conflict rather than consensus and a constant chipping away of institutionalised normative structures

are the focus. The position here is of action orientated towards social change rather than the reproduction of social order and hierarchical institutions.

In order to move social network analysis forward this is an approach that combines H.C. Whites three genres of disciplines and the emphasis on valuation orders; Donati's relational paradigm and its focus on the human at the centre of the sociological approach and critical realism's methodological considerations; avoiding various fallacies and connotations listed above. The idea that White's work will enable social network analysis to move forward is shared by Scott (2010) who argues that it is White's focus on culture, identity and agency that will move the paradigm forward. White's concepts (2008) are not hard and fast descriptions but heuristic guides to observation. A heuristic guide or model is used when one phenomenon enables the understanding of or knowledge of another phenomenon. Such models or guides can be metaphors, stories or ideal types. They are not expected to identically re-present the phenomenon in question. Heuristic models or guides can help in creative thought processes and in the construction of theories as opposed to the testing of hypothesis. So White's three genres of discipline are not hard and fast descriptions of empirically existing phenomenon. They are devices to aid observation. The heuristic guide is to enable the observer to view the interplay of culture (three genres of discipline), with identity and agency. The three genres of discipline provide a prism through which to observe the interplay of culture, identity and agency. From holding an anti-cultural bias (Emirbayer & Goodwin, 1994:1437), in earlier work, White has instigated a cultural turn in social network analysis. White's three genres of discipline represent the motivations for linking to others and as a means of explicating the information contained with-in the micro-level utterances of people. White's (2008) approach accounts for the interface of micro and macro level processes – at the level of the discipline. White's (2008) three genres of discipline works on the macro level forces but not to the demise of the micro level actions of people as forces.

The three genres of discipline aid in bridging the gap between macro and micro levels of analysis by facilitating the inclusion of meaning, identity, and values to shape the explanation of behaviour and social change. It is my contention here that White's three genres of discipline as part of a network study provide accounts for cognition, economic, political and any other domains that arise during the ethnographic study. The interplay of these multiple domains emerge via the linguistic practices of those under observation. If as White contends (1992: 65, 67), that stories describe the ties

in social networks and that a social network is a network of meaning then analysis of the texts that are those ties (the hyperlinks) and the text that surrounds them will avoid the central conflation that White is accused of falling into (Emirbayer and Goodwin (1994:1439). There are roles for ideas, beliefs and values and White's three genres of discipline is an attempt to incorporate them into the paradigm of social network analysis tool kit. Until White's cultural turn network analysts allowed for the un-verbalised structural patterns however this alone does not account for the reproduction and reconfiguration of relations over time. What White is facilitating is the inclusion of cultural and discourse factors (Emirbayer & Goodwin, 1994:1447).

Culture and social structures are populated by people as participants and observers who enable action. Identities are the results of attempts to control the chaotic mechanisms of cultural and social structure. In attempting to make sense of the chaos people create social realities for themselves and others. Such control does not result in the uprooting of other potential identities. A wrongly assigned normality is then assigned to that identity. This results in a constant haphazard coming together and breaking apart of identities periodically resulting in order that switches to chaos opening up the space for a new re-ordering to take root. These identities are the sources and receivers of communication to which identities assign meaning.

The networks are identities made up of a set of narratives that explain matters that arise and provide space for action to take place. The requirement for action creates a struggle over formation of a new identity. The three genres of discipline emerge out of network forms and the struggle for control rests on one of the three valuation orders. The interface genre of discipline rests on the valuation order of quality; council on prestige; and arena on purity. As these are ideal types through which to interpret relations. The people within the social relation make judgements about what action is to be taken and by whom and these judgements create task flows or things to do and in turn generate relational patterns. The genres of discipline are local status orders that have settled on a valuation order and are orientated to getting things done.

In the case of the Singapore blogosphere the assumption is that as opposed to getting a physical activity under way such as the manufacture of a toy or organisation of a conference the activity is discursive. Taking part in and continuing on a discussion taking place, replying to a post on a topic of interest; rebutting or seconding someone's argument. There is a status system that co-ordinates such activity such as citing others

in the debate or creating a link to evidence to support your position or undermine someone's assertions. When the Singapore blogosphere is an interface discipline it would be creating hyperlinks that pass the reader from one post to another referring to higher orders of validation and counter claim. When the Singapore blogosphere operates as council it would collectively issue declarations and be appealing to higher orders of authority based on written prescriptive and enabling rules or norms of expected behaviour when hyperlinking. When it behaves as an arena it would isolate certain groups from the conversation due to certain symbols of purity such as English language proficiency and exclude those who engage in debate via hyperlinking to those less proficient.

The Singapore blogosphere does all these things listed at various times and during various events. White's three genres of discipline enable the observer to interpret how relations are formed and dropped while monitoring the creation of hyperlinks and the debates and discussions that are taking place. At various stages the "participants commit to producing flows in interface, whereas in council they mediate among proposals, and in arena they select from candidates" (White, 2008:65). They are not hard and fast descriptions and relations amongst people that changeover time and on occasion come to rest on one genre of discipline before switching to another.

The settling or embedding of a discipline comes as the result of one of three formats; involution, dependence or differentiation. Involution occurs when the hyperlinks that are being recorded form self-referential loops and few others enter or leave the relation – this indicates that the relations are perceived by those involved as being specialised and unable to admit or have others wishing to enter the relations. The three genres of discipline can become embedded via involution as specialisation. A discipline can become locked together with other disciplines when it attempts to perform an action or get things done – interdigiting. Embedding via differentiation is when they reach out to those perceived to be of a higher authority according to their internal valuation order.

In order to empirically record the valuation order they need to be induced from the stories that are in the discourse. Valuation orders cannot be directly observed. The stories contain various different valuation orders that all have the potential to dominate the relations and become hegemonic. A genre of discipline requires that a number of people within the relations ascribes to a particular valuation order or rather

that a valuation order it is perceived as being prominent by members of the discipline. In the formation of the discipline the identities settle on a style, institution or regime (Padgett & McLean, 2006) formed via struggles to control the discipline.

The control struggles that have been evidenced in the Singapore blogosphere are first and foremost the need for anonymity and the use of pseudonyms. This crucial aspect at the person's level enables them to control the flow of information about themselves. Regarding the nature of the institution, the Singapore blogosphere is an informal institution shaping the presentation of self in everyday life (Goffman, 1959/1974) for Singapore bloggers at a micro-interactional level. For the blogger to fit in they must reproduce the use of anonymity or use of pseudonyms and also engage in communication with others who are also anonymous in order to fit in while remaining comprehensible to each other. Singapore bloggers could fit in according to other principles but interacting and relating to anonymous others has been shaped by third parties and in particular the laws and legislation being introduced by the Singapore government, MDA and press coverage.

It is this aspect of control over information flow via anonymity that is integral to the social interaction and relationships (Crossley, 2011). These interactions and relations require the Singapore bloggers to take up identities – online anonymous identities – and then frame each encounter accordingly. The maintenance of these anonymous identities is to control the information flow of who they are and facilitate their continued presence in the public space where the communication is taking place. It is crucial in that it allows for the online interaction to take place but also masks offline organisational and institutional affiliations and so protecting their offline self. The Singapore blogosphere is the front stage with anonymity ensuring that the backstage activities remain hidden. The anonymised relations create a sense of not knowing the other. A sense of not knowing the other creates a sense of secrecy and therefore adds to the relationship and the gradual chipping away at this secrecy allows for the build-up of trust.

The style of relations is informal and the boundaries are therefore porous with timing rather ad-hoc and unpredictable. This informal style structures the social processes and shapes the interpretation and feedback. The Singapore blogosphere is sustained by its rhetoric of anonymity and while they remain anonymous they can be self-sustaining and endure the regulatory demands of other organisations such as the

state. The Singapore government has on occasion questioned the anonymity of Singapore bloggers saying that it undermined the validity of assertions being made. This was and continues to be an attempt by regulators to control the mechanisms of control within the Singapore blogosphere. The Singapore blogosphere does not limit itself to relations with others how are anonymous but it expects that anonymity be accepted yet not enforced on others. The adoption of a style and the genre of discipline adopted can become a control regime that would be in conflict with the already embedded control regime of the Singapore state – the public meeting and online co-ordinated action of #freemyinternet is the Singapore blogosphere recognising itself as a social agent. This social agent engaged with the rhetoric of the MDA, countered the stories of what they perceived as an attack on their freedom of speech and did so in a manner that the Singapore state has not witnessed until now.

All three genres of discipline can be analysed abstractly but the actual functioning requires embedding in an operational environment (White, 2009:76). A discipline designates itself from others by literally naming itself or in this case the formation of the #freemyinternet movement. The components of the discipline are taken for granted by the people who populate the discipline and only become visible in failed disciplines (White, 2009:76). Such naming as has occurred establishes the commonness in action of those who make up the discipline. Disciplines are perceived and characterised as the embodiment of processes and in their naming they create a large space in which they are interacting which White refers to as the ‘operational environment’. The operational environment in which the Singapore blogosphere has embedded also contains Singapore government regulation and relevant press regulations. The social network that the Singapore blogosphere is operating within is not necessarily a physical space, although they have publically met face-to-face on one occasion on the 8th of June 2013 at Hong Lim Park in Singapore, but rather a social space that is both online and offline. Some bloggers reside in Singapore others live overseas. The social space is defined not by geographic location but by a shared commons. A desire to maintain a relationship with each other that is free from state interference. A relation with each other facilitated by an Internet that belongs to them and is not under tight regulation from the authorities. The social connection that they share is relational in that it lies within the relationship and formed out of the relationship.

The Singapore blogosphere does not have a well-defined structure, it does not adhere to a single model or single ideal type and it is not an indeterminate system. In relational terms it allows for a variety of reciprocated relationships between bloggers, other bloggers and their readers. It is an online society that is not based on a single identity nor on a single interest but on virtual forms of communication and this society cannot be assimilated to a single identity or single interest (Donati, 2011:219). It is always emerging and evolving. It is contingent and reproduced through practice. Its mode of being is that of a process that is constituted in relationships. It operates in a time of contextual discontinuity where the scope for routine behaviour has been diminished and reflexivity has become a necessity. It exists in relation to multinational corporations such as Facebook and Google and the attempts of a one party state to bind them to legal and regulatory constraints. The Singapore blogosphere is collectively reflexive but the reflexivity does not take place at the macro level – it is not a feature of the structure, or of a system or institution. The de-coding and encoding is taking place at the level of the person. The ability to consider oneself in a social context and how your action affects the social context is a property of the person. Institutions and systems cannot be reflexive. Institutions are forced to confront what they have brought about. The change that has been brought about by the introduction of the Internet and globalisation is too rapid for intergenerational socialisation to take place and assimilate it or paper over the cracks. It is at the level of the person where the scope for routine action has diminished creating a contextual discontinuity. Faced with rapidly varying new situations and events people are reflexively engaging with that change. The Singapore blogosphere is a space where people gather to engage in collective discourse to reflect upon their changing circumstances and work out how to best achieve their desired outcomes.

Asking the level of institutionalisation is a redundant question as it stems from a sociological position of modernity.

By assigning or designating one identity it does not preclude the other genres of discipline. The Singapore blogosphere and the blogosphere that it is interlocking with is clearly providing a public space in which people, groups and the public are able to voice their opinions on issues affecting them and others. Over the 14 month period the most prominent identity that emerges and dissipates is that of an oppositional *interface* to the ruling authorities. In relation to White's typology, the identity that emerged during the course of this study is that of the *interface* discipline.

The ethnographic approach is integral to unpacking the social and cultural forces that are at work *within* and *out with* the network in order to counter the social ignorance of automated electronic software and allowing meaning to come to the foreground. Integral to this unpacking of the social and cultural is White's three genres of discipline. These genres of discipline are not hard and fast and therefore facilitate the changing nature of the phenomenon under scrutiny. It does not present the observer with a hard and fixed interpretation or having to assign solidity to something in flux.

The Singapore blogosphere at times has embedded via dependence, locked together in an antagonistic loop with the external disciplines of the Singapore government and government affiliated mainstream press. This was uncovered in chapter 4 during the social network analysis of the hyperlinked network using the tools of network analysis developed by the mathematical wing of network analysis – betweenness centrality. The scope and size of the network was determined using these tools gathering the hyperlinks – *IssueCrawler* and assessed with *Netdraw* and *Pajek*.

Corporate sites are attempting to 'control' the Singapore blogosphere having a disproportionate level of control over the flow of information by attempting to control the level of anonymity available to those using their platforms. Corporate nodes that require real names not pseudonyms appear in July 2009 when the network betweenness centralisation dipped only to increase in August 2009 with corporate nodes dominating the hub. Open public spheres are being colonised and walled off by corporate entities. This leads to the potential side-lining of anti-corporate politics and the only information available being that which comes with a viable business plan. This places the control of communication in the hands of economic credentialed elites, governments and mass media outlets.

There is limited interest in reaching out to control or gain action (although the #freemyinternet is a case in point) and so the flows of information remain within its own bounded loop. Bloggers are primarily concerned with the quality of the blog posts and the quality of sources. Therefore, *quality* is the dominant valuation order of the Singapore blogosphere. This leads to the conclusion that it is primarily an *interface* discipline. The particular discourse in stories and the topics discussed has become *interdigitated*. The Singapore blogosphere has gained an element of *visibility*. An *interface* discipline requires a level of commitment from the bloggers towards quality.

There is a distinct quest for the truth as a valuation order that can be seen in the dominance of epistemic assertions rather than deontic. The evaluative judgements are made on the truthiness of a statement or attempts at providing the truth rather than lies or normative and manipulative assertions regarding how things ought to be. The discourse that is taking place is largely epistemic and so authentic persuasive discourse is taking place in the Singapore blogosphere.

This is an attempt to open up these issues by engaging with the Internet in an authoritarian regime (Habermas, 2006), with Singapore as a case study. A people governed by one political party since 1963 (The People's Action Party). The government of Singapore owns Temasek Holdings, a multinational investment corporation. Combined, the Singapore state and Temasek Holdings are a node in the wider *supranational* (Wolfe, 2010) system. The people of Singapore, facilitated by advances in communications technology have been able to build a space of resistance. The technology facilitates, but limiting any understanding to the "dominant technological structure" (Guzmán & Oziewicz, 2004:602) limits our understanding.

3.2.Singapore Blogosphere and Media Policy

The Singapore government dominates offline media and has disseminated "hegemonic views and values" (Soon & Hichang, 2011:97) that claim social cohesion exists amongst an ethnically diverse population during a post-colonial period.

Singaporean policy makers were keen to gain economically from advances in the communication technology industry. They adopted information communication technology into state governance, business, education and leisure (Soon & Hichang, 2011).

As a result, 83% of households in Singapore have access to a computer; 81% have Internet access and 80% have broadband access (Infocomm Development Authority of Singapore, 2010). According to Soon and Hichang (2011:97), "stringent regulatory controls that govern online discourse and Web site content" have undermined the democratising potential that the Internet facilitates. Whether or not the Singapore government has facilitated or undermined the alleged democratic potential of the Internet is not at issue here. It is in spite of the goal and force of governments that the democratic potential of the Internet is realised rather than because of it. In the case of the Singapore government and its ownership of Temasek

Holdings, that dominates the internal economy with its grip on offline media now a monopoly, the question is what is the nature of that space of resistance that exists online?

In March 2010, the Internet activity of individuals in Singapore was dominated by navigation, communication and publishing. A large amount of online activity centres on search engines (11%), portals (5%), email services (4%) and blogs (3%). The only commercial activity among the top 10 industries was stocks and shares (2%). Multimedia (4%), games (3%), software (2%) and reference (2%) sites in the top 10 show a “learning-orientation to web use”. However, the most dominant activity was social networking and forums (14%)⁸.

The take-up of the Internet in Singapore has changed the scene of communication and information control. This expansion of Internet usage makes it clear that attempts to censor and control the flow of information is untenable and may even be self-defeating (Yeo & Mahizhnan, 1998). In 1998 Lee Kuan Yew, the ongoing Minister Mentor of Singapore, and father of Lee Hsien Loong, the Prime Minister, stressed the impact of the Internet on politics,

Information technology, in particular the Internet, has made it impossible for inconvenient news to be suppressed for long.” [Thus, governments] “have to work with the technology, not suppress it. Governments that try to fight the new technology will lose [...] Indeed, information technology is rapidly undermining whatever monopoly control of the media governments might have known. Thus, along with the official view, many other views are available and known (Cited in Ang, 2007:24).

Eleven percent of Singaporeans create online content by maintaining blogs and posting videos via YouTube and Google Video. Seventy percent state that they have communicated via social networks, blogs, instant messaging, emails and peer-to-peer platforms (Infocomm Development Authority of Singapore, 2009).

3.3. Blogs and the Blogosphere

A blog is a regularly updated web page that shows posts in reverse chronological order and a collection of blogs is a blogosphere. The “evolution of hyperlinked corpora” of the blogosphere from a network perspective conducted by Kumar et al

⁸ All statistics from Hitwise Sandra Hanchard Senior Analyst, Hitwise Asia Pacific. Available at <http://weblogs.hitwise.com/sandra-hanchard/2010/04/singapore-social-networks-have.html>

(2005:35), states that there are both sociological and technical reasons for studying the blogosphere. Sociologically, the blogosphere (or as Kumar et al (2005) refer to it blogspace) differs from other web pages in that structurally “the *culture* of Blogspace focuses heavily on *local community* interactions between a small number of bloggers. Members of the *informal community* might list one another’s blogs” [emphasis added](Kumar et al, 2005:38). The second technical reason for researching the blogosphere is that the posts placed online by the authors are automatically time stamped thereby enabling viewing of the evolution of the blogosphere. From the “sociological” reason, it is quite clearly that structuralists use terms such as “culture” without clearly defining it is apparent in the study of the blogosphere using network analysis. Social structure subsumes culture.

“Social network analysis has been used to investigate the thematic and relational aspects of blogs” linking practices and structure of political blogs affiliated with a particular nation (Rosen, Barnett, & Kim, 2010:32). Blogs vary in content and they link to other blogs or websites using hyperlinks. Lin, Sundaram, Chi, Tatemura, and Tseng (2006) automated approach described the Singapore blogosphere as an isolated and distinct network with no theme or focus. The approach presented here is questioning the approaches of Lin et al and other automated blog research (MacDonald & Ounis, 2006; Ounis, et al., 2006; Ounis, MacDonald & Soboroff, 2008a; Ounis, MacDonald & Soboroff, 2008b).

Those conducting automated blog research are aware of the problem of validity with their method. In order to conduct such a test of validity, human assessors would need to be familiar with the topics and tasks of the specific sample of blog posts (Osman, Yearwood, & Vamplew, 2010). In order to provide a level of “gold standard” assessor (Bailey et al., 2008), I present the ethnographic approach to the immersion of assessors in the relevant topic context of the blogosphere under scrutiny for a sustained period of time in order to gain an appropriate level of familiarity. The specific tasks required to gain familiarity outlined here fall under the headings of being in context in order to provide an awareness of textual presence and absence.

My concern here is with Singapore blogs that engage in political communication. Research on political communication and blogs tends to focus on the United States of America. However, Park and Jankowski (2008) have conducted research in to political communication in South Korean blogs and highlight two

distinctive features of blogs; diversity of content and unlimited freedom of communication. The functionality provided by blog hosting servers allows the authors of the blog to link to other blogs, place comments on other blogs, read and cite whomever they want. It is this casual linking to the writings of unknown others that Park and Jankowski (2008:61) claim is “becoming a casual communication device”. However, they do admit that this is not a level or equal playing space in the market of ideas. It is rather that, certain prestigious blogs have a larger number of links to them. Thereby, shortening the distance between more peripheral blogs. The majority of blogs link to a very limited number of other blogs so it is partially interconnected.

Hypertext linking is the technological ability to connect one website to another. This is not simply a technical device but also a communication channel,

The configuration of link networks themselves can be a source conveying useful overall information about the (hidden) online relationship of communication networks in interpersonal, inter-organisational, and international settings (Park & Jankowski, 2008:61).

The sides of blogs also contain permanent links called ‘blogrolls’. These links indicate frequent visits to that particular blog and are the communications network of the blogger or rather an association with other blogs (Park & Jankowski, 2008). A number of studies have speculated on the nature of the relationship signalled by the use of hyperlinks (Park & Thelwall, 2008ab; Thelwall, Vaughan & Björneborn 2005). Mathematical models can reflect the web some argue (Barabási 2002; Pastor-Satorras & Vespignani 2004). With a focus limited to social structure Park, Kin and Barnett (2004) used social network methods to study hyperlinks. Park and Jankowski (2008:62) state, that there “have been [...] few in-depth quantitative link analysis studies of blogs in the political arenas”. Researchers have studied the use of hyperlinks between cities (Lin, Halavais & Zhang, 2007); political blogs using quantitative content analysis (Williams et al. 2005); political blogs using quantitative and qualitative methods, (Hargittai, Gallo & Kane, 2008); and conversational blogs using quantitative social network analysis, visualizations of link, and qualitative analysis of references and comments (Herring et al., 2005). These studies provide support for the argument that “*political communities* can be revealed through hyperlinks of blogs and the underlying dimensions of networked *communities* may be made clear [emphasis added]” (Park & Jankowski, 2008:62). This thesis is one such study but unlike those listed above the intention is to move beyond the social structure

approach and add to the studies mentioned above by not taking notions or categories such as ‘community’ and ‘political’ unquestioningly. The task is not to enforce my own preconceived ideas or normative stance on these terms as the structuralists tend to do but rather allow those under observation to reveal their own notions of ‘political’ and ‘community’ should such terms appear in their talk.

The work conducted on the Australian blogosphere has been developing methodologies for tracking and mapping how information flows across it (Bruns, 2007; Bruns, et al., 2008a; Bruns, et al., 2008b; Bruns & Jacobs, Eds., 2009a; Bruns, et al., 2009b; Bruns, et al., 2010). They are now crawling blogging activity as it occurs and using tools that distinguish between various content in order to focus on the content provide by archiving the blog. They then use network mapping and textual analysis tools to uncover themes and interlinking over a year. This focused on a quantitative approach and as Bruns et al. (2010) state “Obviously, such quantitative explorations can—and should—also be extended through further qualitative examination of the blogs concerned.”

Bruns et al. (2010:285-286) call for

New empirical research [...] that can track these identity or interest networks, to quantify and qualify the extent to which the remediation of everyday life via social media might be changing the face of public communication in these ways. For this, more large-scale, computer-assisted methods building on existing social media mapping techniques are required. However, this shift has major methodological implications for cultural and media studies. Work based on the framework above has, to our knowledge, never been undertaken in conjunction with large-scale computer-assisted techniques. Instead, it has used ethnography to understand the motivations and meaning-making practices of small groups of users [...] or has elaborated new theoretical perspectives on the basis of existing literature combined with small selections of illustrative texts.

This thesis is a large-scale computer assisted ethnographic study of a large-scale communication network. It is an attempt at uncovering the meaning making practices of a large group of blog users drawing on a large number of texts over 14 months by a researcher embedded in the communications network under observation.

Using *IssueCrawler* (Rogers, 2006), a Web ‘mapping’ device to collect *dynamic data* (Rosen, Barnett, & Kim, 2010) I conduct a hyperlink network analysis and visualise the blogs; I target blogs that are engaged in discourse regarding Singapore or have the author geographically living in Singapore.

The Singapore political blogs are the URL seeds for the extraction of the textual or corpus data using a site scraper called *HTTrack* (Roche et al., 2007). The data is

then initially analysed using *Leximancer* (Smith & Humphreys, 2006). *Leximancer* analyses the textual data and extracts two types of data, semantic and relational; it is an automated content analysis process. This then enables me to visualise the discourse beyond my immediate and limited scope of awareness as an ethnographer in the Singaporean blogosphere.

Chapter 4 Methodology

This chapter demonstrates the use of *IssueCrawler* (Rogers, 2006) - a Web 'mapping' device in order to conduct hyperlink network analysis and visualise the blogs orientated towards discussion of matters concerning Singapore. I target blogs that are engaged in discourse regarding Singapore or have the author geographically living in Singapore and the websites that they link. This shadow of the entire network produces the URL seeds for the extraction of the textual data using a site scraper called *HTTrack* (Roche et al., 2007). The data is initially analysed using *Leximancer* (Smith & Humphreys, 2006). *Leximancer* analyses the textual data and extracts two types of data, semantic and relational; essentially, it is an automated content analysis process.

This elaboration of the methods section sits within the wider debate regarding the emancipatory nature of the Internet in authoritarian regimes (Habermas, 2006), with the Singapore blogosphere as a case study. What are the methods of control and what is the nature of the Singapore identity online? These two questions are analysed by interpreting the first question as referring to 'power' within the blogosphere. An analysis of the online discourse will show how identity emerges out of attempts of control in a context of constant and turbulent flux (White & Godart, 2007).

4.1. Analytical Framework

4.1.1 Social Network Theory

As a continuation from chapter 2 the approach to social network analysis carried out here can be seen to adhere to the following basic ideas. Social order develops from the interplay of social structure and culture amid uncertainty and the chaos of social life. Social structure and culture are part of the complexities of discursive practices of those who populate the institutions and organisations. The people who populate culture and social structures as participants and observers enable the action and research to take place within them. As White (2008) states, *identities* are the results of attempts to control whilst within the chaotic and entangled generative mechanisms of culture and social structure. It is these attempts at control that become the social realities for other identities, it does not necessarily entail domination, coercion or force. One identity attempting to gain a root does not result in the uprooting of other identities. Others in an unproblematic manner assign continuity to that social reality

even though that social reality is adding to and maintaining the chaos that surrounds them and works in order to constitute them. Normality that - is wrongly assigned - to the context is in direct contrast to the haphazard and chaotic nature of what we directly experience as human beings. There is an ongoing haphazard bringing together of various perceived or reinterpreted components of the normal in order to assert an identity and thereby a sense of control where none exist. These identities are the sources of and receivers of communication to which identities assign meaning (White, 2008).

Meaning roots identities to stable positions from which information emerges. It is then possible to receive and assess that information. The accessing and assessing that passes between the identities are the entangled chaotic mix of culture and social structure from which meanings emerge. Discursive formations of meaning at its most basic level are similar to *statements* (Foucault, 1970) or *utterances* (Bakhtin, 1986). *Switchings* happen in physical and social environments that are uncertain and result in identities attempts at acting across and amongst divergent networks and domains of topics (Mische & White, 1998). It is this switching by which identities generate meanings and discursive formations or styles.

Mische and White (1998) assert that *netdoms* are first order elements from which networks and domains derive. Network relations and discursive formations are inter-related and co-constitutive. Networks are the formations of stories and stories are the formation of networks. "Social networks and discursive formations are second order processes which need to be accounted for from the dynamics of identity and control among netdoms" (White, 2008). New or fresh meaning emerges for humans during the process of switching between netdoms.

Netdoms are not things or physical phenomenon but are experiential processes that are so over whelming that the individual within it is unable to bring it into focus (White, 2008:7). Networks are identities and a common set of stories that are able to explain anomalies away and provide the space for social action to happen. When anything requires action, White's (2008) concept of discipline shows how struggles over control have the potential to generate an entirely new identity on a different level over the other sets of identities. Disciplines emerge out of network forms and the struggle for control comes to rest on a *valuation order*.

According to White (2008), there are three genres of disciplines; *interface*, *council* and *arena*. Each genre has a distinct process and valuation order. *Interface* has the valuation order of quality. *Council* discipline has the valuation order of prestige in particular linked to the influence of corporate action requiring ‘soundness’ of character. *Arena* discipline has the valuation order of ‘purity’ within the perceived group, passed on via marriage or eligibility for marriage as an example. Each of these disciplines is a status system where evaluative judgements create a network pattern. The judgments that those embedded within these disciplines make create task flows that generate network patterns.

These local status systems co-ordinate differently but are primarily geared towards getting things done. The networks that form around an interface discipline pumps flows from the outside upstream to downstream outside; the council discipline creates flows that reach out in attempts to control resources and people, while the arena discipline creates boundaries to avoid introducing perceived impurities into the group. The “participants commit to producing flows in interface, whereas in council they mediate among proposals, and in arena they select from candidates” (White, 2008:65). White’s concepts are not hard and fast descriptions but heuristic guides to observation. Hard and fast descriptions would run contrary to the position that neat and precise discriminations amongst social and network structures is at odds with more stochastic measures of messy social life.

The embedding of a discipline can adhere to one or a combination of formats; *involution*, *dependence* or *differentiation*. Involution of a discipline among other disciplines occurs when embedding takes place amongst the ricochets from network processes in and around other disciplines. Involution is observed when the chains of ties are seen to flow back in on their origin which ensures the continuation of the valuation order – *specialisation*. Embedding via dependence occurs when trying to accomplish a joint task in the operational environment, the discipline becomes locked together with external disciplines, this becomes evident when a particular discourse in stories and physical activities *interdigitates*. Embedding via differentiation happens when appropriate valuation members focus their attention towards those with a perceived higher prestige and begin to attract attention from outside the discipline, the differentiation determines a level of visibility.

Valuations are observable by inference and induced by looking at the story-sets active in the localised discourse. These story-sets contain within them the valuation order that has the potential to become hegemonic. At this stage, the discipline becomes an actor. Valuation orders also embed but do so internally within the discipline. Each member of the group ascribes to the valuation order. Disciplines require orderliness of at least perceptions by members of the discipline. The control struggles that formed the discipline surround the identities, settle into networks and settle on a particular style, institution and regime (Padgett & McLean, 2006).

Styles are evident in the interpretative used by the native expert and have a distinct texture, such as a graduation ceremony being quite formal and a dinner party is informal. Style aids in the generation of boundaries and tempos. The style structures the social process in terms of interpretative tone and feedback dynamics. Institutions are sustained by rhetoric that proves that the discipline is self-sustaining and enduring. Regimes generate control over the controls attempted by the participants of that discipline. With regimes, there is a limited scope of valuation ordering compared to other disciplines. In terms of enabling, it ensures identity and discipline. Styles and disciplines are prototypes for control regimes.

This leads to the question of ‘whether the Singapore blogosphere can become a control regime in conflict with the already embedded control regime of the Singapore state if it is enmeshed in the rhetoric, narrative and style of the Singapore state?’

4.1.2 Social Network Analysis

It is rarely that we find a community that is absolutely isolated, having no outside contact. At the present moment of history, the network of social relations spreads over the whole world, without any absolute solution of continuity anywhere. This gives rise to a difficulty which I do not think that sociologists have really faced, the difficulty of defining what is meant by the term ‘a society’. They do commonly talk of societies as if they were distinguishable, discrete entities [...] is the British Empire a society, or a collection of societies? Is a Chinese village a society, or merely a fragment of the Republic of China (Radcliffe-Brown, 1940:224)?

I chose the Singapore blogosphere as a case study as it is, according to others (Lin et al, 2006 and Hurst, 2006), an isolated and distinct network. The important factor is to not to arbitrarily demarcate a unit of analysis to study. By reducing the social to the network, it allows for the unit of analysis studied to materialise

throughout the process of conducting the research. I discover the network through empirical evidence rather than imposing it at the beginning.

Social network analysis is a formal, mathematical technique of analysing relational data. It is concerned with the contacts, ties and connections, group attachments and meetings (Scott, 2000:3). “The relations are not the properties of the agents themselves, but of systems of parts; these relations connect pairs of agents into larger relational systems.” (Scott, 2000:3). The appropriate method for the analysis of relational data is network analysis of qualitative measures of network structures. Emphasis is on the ‘structure’ of social action. “Structures are built from relations” (Scott, 2007:4). Social meaning constructed by the group members of the network founded on the perceptions and experiences of the context in which they are operating. Paths of connections run between the groups and these paths divide the groups into distinct regions. A lack of paths separates regions (Scott, 2007:11). Paths run within the regions but not between the regions. The regions are constraints or boundaries. These boundaries are the ‘forces’ that determine group behaviour.

The rhizomatic model of knowledge according to Cavanagh (2007:43) results in a network model that appears to be chaotic. Rhizomatic networks mean that a path to every other point in the network connects any point in the network. The term ‘network’ then refers to the logic of the connection in the rhizomatic network - movement. A connection is the sprouting off in a new line. The lines may appear to be random as they do in hyperlink analysis but they do have a purpose. Hyperlinked culture has as its main aim ‘intertextual evolution’ (Dreyfus, 2001) whereby all possible associations and linkage is enabled regardless of how tenuous they may appear. Resulting in a disordered knowledge and enabling a new form of knowledge to emerge. The main point with Deleuze and Guattari’s rhizomatic network is that there is no hierarchy; no node takes precedence over another. The order is in constant flux with total inclusiveness. The flow of information however pre-dates the existence of the nodes. The nodes are interruptions in the flow. The nodes merely channel the flow of information. Cavanagh (2007:47) argues that the main concern regarding the utility of Deleuze and Guattari’s rhizomatic network is a philosophical position rather than a method for studying hyperlinks. The Internet is the node in the flow of information and knowledge exchange.

Knox et al. (2006) argue that American Social Network methods map roles comprehensively and this results in the incorrect assumption that they have delineated the 'real' social structures. The problem is that it ends up reinforcing a view of relations that are removed from the everyday experiences of people. Knox et al. argue that Social Network Analysis' focus on structuralism has in recent years shifted to attempts at developing a cultural approach. This shift in focus has come about is the result of the studies of social movements by researchers such as Ansell (1997), Bearman (1995), Gould (1995), and Mische (2003).

4.1.3 Network Ethnography

The suitability of applying the ethnographic approach to the study of a Singapore blogosphere dominates this section. The major concerns with research conducted on online networks and the Singapore blogosphere are that they led to technological and/or organisational determinism. As well as filling the gap in previous research with their focus on the US, it is felt that a social network approach that involves an element of ethnography should bridge the gap.

Wilson (2006) has also referred to the shift from oral interaction within the ethnographic approach to a more text-based approach. The shift to texts in particular circumstances of production and consumption calls for ethnographic work at multiple sites. One approach to doing this is "network ethnography" (Howard, 2002).

Howard (2002) has put forward what is viewed as an amalgamation of social network analysis and ethnography for the study of 'new media' including that of online networks or as he refers to them 'epistemic communities'. Howard argues that social network analysis is better at defining a core group of members of a group and expanding on that number than traditional ethnographic approaches. Network ethnography is the process of using ethnographic field methods on sites or nodes selected by social network analysis. The field site may not necessarily be physical in nature. Accordingly, "network ethnography allows the qualitative researchers to think strategically about the selection of cases by empowering them to define the universe of cases themselves" (Howard, 2002:219). He also argues that such an approach will undermine inherent problems of the qualitative approach such as sample bias and maintain a balance between technological and organisational determinism on the one hand and the social construction of culture on the other hand.

4.2. Data Gathering

4.2.1 Extracting the Social Network using Hyperlink Network Analysis

Social network analysis traces the flow of information that passes through a network of relations. As actors make use of computer networks the computing networks are “clear indicators of communication structures within society” (Garrido & Halavais, 2003). Garrido and Halavais posit that, “A map of the communication network is roughly isomorphic to the structure of the relationships among the users (2003).”

In hyperlink network analysis, the unit of analysis can be web sites, a hyperlink, or a blog. In this instance, the unit of analysis are blogs and the hyperlinks between them. Hyperlinks allow actors or groups of actors to form social and communicative relations. Jackson (1997) suggests that the methods of social network analysis may be useful in understanding the relations of computer mediated social processes (Garton, Haythornthwaite & Wellman, 1997). Hyperlinks are not just technological tools but social channels. Websites and blogs are actors with hyperlinks among blogs representing a relational link (Park, 2003). A hyperlinked system exchanges information and cooperates around a given shared background, interest or project.

In order to begin I initiated a hyperlink analysis using *IssueCrawler* (Rogers, 2006) a Web ‘mapping’ device in order to conduct hyperlink network analysis and visualise the blogs orientated towards discussion of matters concerning Singapore. *IssueCrawler* is publically accessible software offered by the Amsterdam based Govcom Foundation⁹. Bruns (2007), Siapera, (2006) and McNally (2005) have all used *IssueCrawler* to uncover web-situated networks, focusing mainly on the USA or the international level. *IssueCrawler* is a server side Web network location software (Rogers, 2006).

Here I outline my specific uses of *IssueCrawler* (for a more detailed account see Bruns (2007)). *IssueCrawler* requires the user to input URL addresses as seeds and it runs a crawl of the URLs capturing page and site out links. It then performs co-link analysis, which means that it checks to see if the site that links to another has that link reciprocated. An advantage of using *IssueCrawler* is that as well as collecting the

⁹ <http://www.issucrawler.net>

links that are embedded in the pages designed by the specific blogger it also collects the links placed in comment sections thereby incorporating the comments and the readers hyperlink activity into the overall network.

An important factor in beginning a crawl-based analysis of a blogosphere is the starting points or URLs. According to Park (2003), there are two methods for gathering data on hyperlink networks. The first involves the researcher observing the sites and the second uses computer-assisted measurements. The use of human coders in the observational method does allow error to enter the process; it would also involve high labour costs if large. I used the second method of computer-assisted measurements for this research, namely *IssueCrawler*. I started by gathering a large set of political blog addresses, or URLs, by downloading a list of political blogs¹⁰ compiled by a group of Singapore bloggers, a group of undergraduate students and others. This list was expanded by using the original list of URL addresses or seeds and a snowball approach that combined an initial list of sites grouped along themes such as 'socio-political', 'gay and lesbian', 'social', 'Christian', and 'Malay speaking'. Using *IssueCrawler* I harvested the URLs and used them as starting nodes for the hyperlink analysis in July 2006. The parameters were set as follows; number of iterations (or repetitions) – 2, crawl depth (two levels of depth) - 2, co-link analysis by page (page analyses deep pages, and returns networks consisting of pages) and privileged starting point (this setting keeps the starting points, or URLs, in the results after the first iteration) was on. Over a period of fourteen months from January 2009 to February 2010, this resulted in over 1,200 websites.

Rather than being dependent on the visualisations generated by *IssueCrawler*, I relied on two types of data output generated by *IssueCrawler*. I used the UCInet data file. The UCInet data file is a *NetMiner* compatible output file that allowed me to conduct my own social network analysis. The second output file was the *IssueCrawler* xml file that contained the list of URLs visited by the web crawler in order to conduct the *HTTrack* site extraction.

I now turn to the use of *Netdraw* (Borgatti, 2002) for the social network analysis. Using *Netdraw* I measured *closeness centrality*, *closeness centralisation*, *betweenness centrality* and *betweenness centralisation* to assess which blogs are more 'important'

¹⁰ List available <http://spreadsheets.google.com/pub?key=pQcRq80yuyWXeqpakIg2ibA>

or rather in 'control' of the flow of information. The closeness centrality score of a particular blog indicates the number of other blogs divided by the sum of all distances (the shortest path between two blogs) between the blog and all other blogs (de Nooy & Mrvar et al., 2005). Closeness centralisation, which refers to the entire network or blogosphere, is the variation in the closeness centrality of blogs divided by the maximum variation of closeness centrality scores possible in a network of equal size (de Nooy & Mrvar et al., 2005). A blog's position indicates whether it has access to information and better opportunities to spread information. In a highly centralised network, information spreads easily but the centre is indispensable for the transmission of information. As the network of blogs becomes less centralised the possibility of the information flow being distorted increases. Closeness centrality is how easily a blog is reachable in the network (de Nooy et al., 2005). Another method of assessing the 'importance' of a blog in the network is to measure how large a role it plays as an intermediary (de Nooy et al., 2005). How many flows of information are disrupted when a blog becoming inaccessible or inactive? How many detours are required to access other blogs, which blogs control the flow of information because of their position in the network, if a blog is deleted from the network? To paraphrase de Nooy et al. (2005) "The betweenness centrality of a [blog] is the proportion of all hyperlinks between pairs of other [blogs] that include this [blog]. Betweenness centralisation, which again refers to the entire network [or blogosphere], is the variation in the betweenness centrality of [blogs] divided by the maximum variation in the betweenness centrality scores possible in a network of the same size."

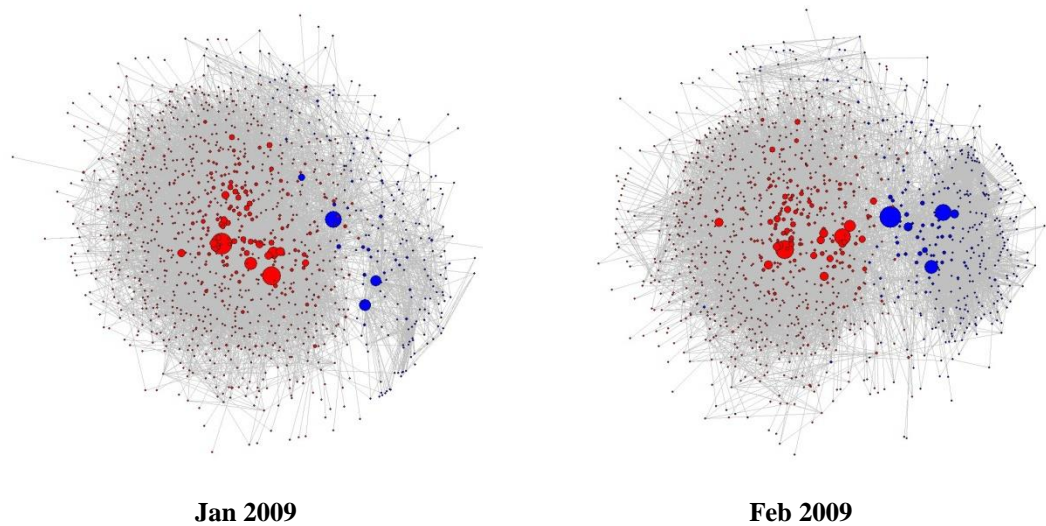


Figure 1 The Singapore blogosphere from Jan and Feb 2009 divided into 2 factions. The size of the node refers to in betweenness centrality. The red circles are blogs written in English and the blue circles on the right are blogs written in Malay.

4.3. Corpus Data Collection

After extracting the list of crawled URLs from the *IssueCrawler* results, I then used them as the input addresses to extract the front pages of each website and blog using *HTTrack*. *HTTrack* is a software programme freely available to the public that was developed by Xavier Roche and other contributors that enable a user to mirror any number of websites from the Internet. The user is then able to browse the sites offline on their personal computer without needing an Internet enabled browser. The Internet mirroring created files of approximately 12 megabytes in January and 12 megabytes in February 2009. I estimate this to be the equivalent of 4,000 A4 pages of textual data on both occasions. The scale of analysing such large amounts of textual data as a single researcher then arises.

4.4. Analysis

4.4.1 Analysing the Corpus

Analysing such large corpus introduces certain questions of scale and time. Manually attempting to analyse so much data would also increase the likelihood of human error and the potential bias of the researcher might skew the results. While the solution offered here limits the ‘in-depth’ analysis available to an ‘off-line’ ethnographer I feel that the results generated by the software programme still require

an assessor who is able to construct a narrative that fits with the software generated results and what has actually happened. Common approaches to analysing such large data sets would be to conduct a content analysis. The software employed here begins by conducting a content analysis, assessing the key themes within the corpus it then assesses the concepts that co-occur with that theme. The resulting co-occurrence information creates a concept map.

Leximancer (Smith & Humphreys, 2006:262) is;

[A] Method for transforming lexical co-occurrence information from natural language into semantic patterns in an unsupervised manner. It employs two stages of co-occurrence information extraction—*semantic* and *relational*—using a different algorithm for each stage. The algorithms used are statistical, but they employ nonlinear dynamics and machine learning.

Smith and Humphreys (2006:262) hope that by using *Leximancer* the analyst is aware of the global context and significance of the concepts and to help ensure that the analyst does not become fixated with some concepts to the detriment of others. *Leximancer* uses a combination of techniques such as Bayesian statistics that records the occurrence of a word and connects it to the occurrence of a series of other words. It then quantifies those outputs by coding the segments of text, from one sentence to groups of sentences or entire paragraphs depending on what the user has requested. Each word or concept is associated with a subset of related terms. The next step involves the machine learning from the concepts already uncovered and linked to other concepts creating a 'concept space'. It then iteratively creates a thesaurus around a group of seed concepts. This information is visualised using network analysis. Emergent themes are then visible to the user, and are expandable using the map visualisation that links directly to the areas of the corpus in which the concept occurs. The emergent themes enable a quick reading of the large data set. For my purposes, it then enables me to see what the dominant themes are, rather than imposing my own on the data, and then I can quickly navigate the large data set. The ethnographic component of my research then enables me interpret the themes and concepts according to my accumulated knowledge gathered as part of being a participant observer in the network for a number of years.

4.4.2 Analysis using Ethnographically Acquired Knowledge

This research employs network ethnography. I consider issues around the notion of 'being in context' and time or presence and absence, ethical considerations,

network ethnography and online versus offline approaches to ethnography. My online web presence consists of a blog. The observer aspect of the method involves data collection, textual, visual and audio data, as well as the analysis of that data from other sites. As well as the limitations and benefits of various forms of methods used in online research there are also theoretical and methodological issues to be considered which are touched upon when looking at the problems of technological and organisational determinism. Ethical considerations are central to any ethnography and the current geographic and online nature of the network highlights certain concerns. According to Hine (2005) there does exist considerable anxiety about how far traditional research methods are appropriate for studying technologically mediated interaction. What gaps exist in our current understanding when applying these methods to online networks?

This subject matter is still at the stage where we can learn most from detailed ethnography (Howard, 2001). Technological advances are not new but technological determinism is a dominant theme when trying to understand these innovations. An ethnographic study of the Singapore blogosphere can help to understand the ways in which the various styles of discursive practices of various generative mechanisms.

4.4.3 Being in Context

A problem encountered when in the field is that of defining the boundaries of the field or network. This problem is not unique to the study of online *virtual* networks. As Atkinson, (1992) states the field is produced (not discovered) through the social transactions engaged by the ethnographer. The boundaries of the field are not given. They are the outcome of what the ethnographer may encompass in his or her gaze. The nature of a network in a physical setting implies that it is socially constructed and so the reference to online networks as *virtual* networks is posited on the notion and belief that there are *real*, physically posited networks to make comparisons with. According to Renninger and Shumar (2002), there are three features in a network needed to be apparent in order for it to be a virtual network. Firstly a core group of users who continually return to a particular site of online interaction need to be identified, secondly temporal and spatial possibilities need to be considered and thirdly the linking of conversations between websites, archiving discussions and thereby allowing for the possibility of future discussions around the same resources.

Ethnographers in the 'traditional' sense are able to get out there and spend time learning about people in their native or natural context. The online ethnographer will encounter the same obstacles or learning paths such as gaining access, maintaining relationships when getting out there and spending time with people online. Examples include Tseng, Tatemura and Wu (2005), who used blog ranking and their social connections to devise a visual representation of blog communities. Lin et al (2006) and Hurst¹¹ (2006) have claimed that the Singapore blogosphere is isolated.

4.4.4 Textual Presence and Absence

The participant aspect is by blogging or rather producing an online web presence within the network highlighted by Lin et al (2006) and Hurst (2006). Such an undertaking will include issues that are not particular to online research. I have negotiated issues regarding gaining access. Rutter and Smith (2005) have referred to the automation of most of the data collection process for a technically aware social researcher. However, they argue that a sustained presence of the ethnographer in the culture under study is essential. As texts are the key elements in ethnography and within textual anthropology, in this instance textual data forms the raw data. The researcher as a participant in this instance seems to be in the generated text produced by the ethnographer, whether that is blog posts or comments on the sites perceived to be within the network.

The representation of the online network or blogosphere is at the textual level, and can only exist at the textual level. It will however be asserted that interpretations of texts by researchers and analysts maybe helpful. Ethnographic work coupled with an analysis of the various styles of discourse and discourse they employ uncovers the goals of blog producers.

Online research requires the researcher to become a member of a core group of users who continually return to a particular site of online interaction. Regular or daily interaction is required in order not to fit into the daily routine of other participants. Interacting daily within the group allows time to learn and understand as an outsider. This enabled the researcher to add to questions and follow alternative directions of research. Being able to blend in and acquire a feel for the norms of behaviour of the

¹¹See Appendix Figure 1: Matthew W. Hurst (Data Mining). Interactive version available at http://datamining.typepad.com/data_mining/2006/07/interactive_map.html

network is also crucial. In order to become a member of an online network I created a website linked to by the other members of the network.

The observer aspect of the method involves data collection, including textual, visual and audio data, as well as the analysis of that data from core sites or nodes within the Singapore blogosphere. Automated data archiving of texts, and photographs or screen grabs of sites is possible. The habits, customs and myths although made manifest in textual data will require the understanding of the technological and organisational setting as well as the culture being created and re-created by the people who populate the Singapore blogosphere.

Several issues are however to be considered when conducting online ethnographic research, as well as the suitability of various forms of methods used in online research there are also methodological issues to be considered which will be discussed in the following section.

4.4.5 Ethics of Online Ethnography

Since the blogosphere is in the public domain, the researcher is exempt from gaining informed consent. However, Reid (1996) argues that researchers should ensure to minimize the harm caused during the process of dissemination from 'disinhibited exposure' that many feel on the Internet. With the 'authoritarian' nature of the Singaporean state well documented these ethical concerns and guidelines were carefully adhered to before the dissemination of the research findings.

According to Hine (2005), there is considerable anxiety about how far traditional research methods are appropriate for studying technologically mediated interaction. As with offline ethnography, the issues of misrepresentation, consequentiality and anonymity play an important and key role in the present research design. It is also important to understand the wider offline environment in which the ethnographic research takes place when considering ethical issues.

The Internet facilitates existing social trends while at the same time opening efficient modes of social control (Lyon, 1994; Lyon & Zureik, 1996). An ethnographic approach will make the views and attitudes of the day-to-day users of the technology explicit and uncover how they interpret the engendering and endangering repercussions of engaging with the emergent properties of the blogging network. As levels of social control are high in Singapore it is paramount that I protect the

anonymity of those involved in the various daily interactions throughout the process of conducting the research.

The repercussions of being a ‘lurker’ when merely engaged in observation and the issues of copyright law when archiving the particular documents posted by various members of the blogosphere were considered. There is also the issue of ‘researcher effect’ to be considered when actively engaged with the Singapore blogosphere. The ethical disclosure of the researcher’s identity results in a diminished claim of validity.

The researcher should not cause harm because of the research. In this instance it is felt that a public dissemination of the actual names or IP addresses (an IP address is assigned to every computer in order to make it traceable should the need arise) of the participants would infringe such ethical guidelines.

It is also necessary to consider the ethical consequences of the researcher being in a rather contentious position. The researcher intends to become an active participant in the field, as any traditional ethnographer would do. This process of negotiating the field from an ethical position will be an aspect of the texts generated by the researcher when making decisions and postings within the online network.

4.4.6 Research on Online and Offline

Trying to generate a holistic approach to ethnography according to Hine (2000) is difficult as every account is always selective and partial. However, Wilson (2006) has taken the approach that the way forward maybe discerned through an “integration of ethnographic methods, both traditional (offline face-to-face) and virtual”, as they “can be helpful in developing rich and comprehensive understandings of relationships between online and offline [...]” (Wilson 2006:309). However this in no way undermines the importance of ethnographic approaches to Internet research as stressed by Markham (1998), Miller and Slater (2000), Mann and Stewart (2002, 2003), and Kendall (1999), as well as Hine (2000).

Chapter 5 Social Network Analysis of the Hyperlinked Network

5.1. Introduction

Blog mapping projects attempt to make multiple disparate blogs appear as a sphere, a collective, as points in a shared space. But the space they map is in the imaginary of the researcher, not in the bloggers' presence to themselves as a collective (Dean, 2010:73).

What follows is the presentation of the results for the social network analysis of the Singapore blogosphere from January 2009 to February 2010. This chapter answers the question of 'power' within the Singapore blogosphere. Using the tools of social network analysis it will describe attributes of the case study in question while also asking questions of the relevance of the social network analysis measurements used. The two main tools used are betweenness centrality and network betweenness centralisation. Using social network analysis to measure the betweenness centrality (Freeman, 1977) scores of each blog and website and comparing the dispersion of the betweenness centrality scores for the entire network. Put simply, betweenness centrality measures to what extent one particular blog or website is 'between' the other blogs and websites within the same network. It measures the extent to which one member acts as a 'gatekeeper' or 'broker' for the other members of the network, with a potential to control the others (Scott, 2000: 86). This chapter presents the locus of power for the Singapore blogosphere from January 2009 to February 2010. It also presents a faction analysis; the type of websites within the Singapore blogosphere; whether they are blogs or corporate owned hosting services; the network betweenness centrality scores and tracks the Malay speaking community within the Singapore blogosphere overtime.

5.2. Exposition and Explanation of Measures Used

The concept of community is problematic and has various network-based definitions. In the area of blogs and websites and other forms of social media, communities are comprised of users, content and metadata, all focusing on particular topics or events. These events and topics are social communications shaped and directed to infuse interactions. However, it is by analysing the structure of the networks that researchers (Papadopoulos et al, 2012:548) discover communities. The algorithms available to determine the communities in the networks consider the community structure to be a property of the entire network. However, it is never

possible to have more than partial knowledge of the network and the likelihood that membership of communities within a network overlap is an important aspect to remember. Topics and events that add in the delineation of communities overlap and change over time. Assigning communities according to hyperlinks is merely one method of doing so.

There are numerous ways of finding sub-groups in a network – from who is relating to whom; who are at the core and periphery and factions within the network. Conducting an analysis that produces a list of those at the core of the network would reveal those who are most densely connected and are therefore able to “co-ordinate and control” the actions of the network (Buckner & Cruickshank, 2008. 6). In order to conduct a core/periphery analysis it is first necessary to assume that the network is “an established coherent community” (Buckner & Cruickshank, 2008; 6).

Community detection algorithms are ‘proved’ and designed to run on smaller, hand drafted data sets gathered for research purposes by researchers who had prior knowledge of the community structure and of the social system from which the data were gathered (Lee & Cunningham, 2013). In doing so the use of algorithms supported the assertions of the researcher – algorithms do not discover unknown structures but “support, augment, and ‘make objective’ the expert knowledge built up over months of observation and first-hand research” (Lee & Cunningham, 2013:3). The groups are the result of events such as gatherings or crises according to the researcher. Since the 1990’s social network data from digital records are having the same algorithms applied to them and the same conclusions drawn – that the analysis has discovered groupings. It was not collected by researchers; nor for research purposes but extracted from databases and are much larger (Lee & Cunningham, 2013). Many new community detection methods were evaluated, not on the new data sets but on the old data sets. Lee and Cunningham, evaluated community detection algorithms on social network data “i.e. networks in which nodes represent humans and links represent relationships” (2013:5). Their approach included comparing the community groupings generated by the algorithms and comparing it with certain “ground-truth” data. Such as comparing Facebook friendships with the ground-truth attribute of sharing the same dormitory at university. They conclude, “The most popular algorithms fail to detect fine-grained community structure” as they are “flawed because they do not properly deal with the fact that the ground truth data is imperfect and incomplete” (Lee & Cunningham, 2013:1).

With that caveat in mind – we now look at faction analysis; betweenness centrality and network centralisation - a few methods among many for discovering who is at the core and the periphery of a network. The methods of determining the location of a particular node within a network dates back to Moreno's (1934) attempts to locate the “stars” and “isolates” within a network.

5.3. Faction Analysis

What is faction analysis?

When looking at the network created using Netdraw, it is clear that the network has two distinct groups with relatively few links between them. A second approach to creating subgroups is factions. Factions describe...

“...a society in which each person was closely tied to all others in their own subpopulation (that is, all sub-populations are cliques), and there are no connections at all among subpopulations” (Hanneman & Riddle, 2005).

Conducting a faction analysis is merely exploratory and should not be over interpreted by the reader, as the analysis of factors tends to generate results that are not stable. The subgroups created using faction analysis are in this instance stable for each month and between months.

There are multiple approaches to assigning nodes to groups and sub groups according to the number of ties or connections between nodes. The concern here is that the groups formed have meaning beyond sharing hyperlinks – they need to be grouped together because they share a common theme or topic, are engaged in a particular collective identity; have a shared value, goal or desired outcome. A faction (or factor) analysis helps in the exploration of the data and the shape of the network might encourage such an approach to begin with.

A faction (or group of nodes) is a part of a graph in which the nodes or websites are more tightly connected or hyperlinked to one another than they are to members of other factions. This is one method of uncovering subgroups or clusters. I conducted two other approaches - K-core and Modularity algorithms to see which if any of the three generate social and cultural structure that has sociological meaning. NetDraw's algorithm (a computer process that performs a sequence of operations) that has equal hyperlink weight and node repulsion (Koger & Masket, et al., 2010) creates the factions. (For a larger rendering of each figure see appendix 1 which also contains the top 100 blogs and websites for each month according to betweenness centrality score). The algorithm defines the distance between nodes or websites because of the similarity between the overall links to other network websites or nodes. So that websites that are in the same area are more likely to connect to each other (Tukker &

de Bruijn, 2008). The algorithm helps to identify clusters but the researcher must determine the meaning of a given factional clustering; software technology cannot assign this (Koger & Masket et al., 2010) it has been assigned by the researcher.

Figures 1 to 14 (below) show the Singapore blogosphere from January 2009 to February 2010 divided into 2 factions. A faction (or group of nodes) is a part of a graph in which the nodes or websites are more tightly connected or hyperlinked to one another than they are to members of other factions. This is one method of uncovering subgroups or clusters. *NetDraw's* algorithm (a computer process that performs a sequence of operations) that has equal hyperlink weight and node repulsion (Koger & Masket, et al., 2010) creates the factions. (For a larger rendering of each figure see appendix 1 which also contains the top 100 blogs and websites for each month according to betweenness centrality score). The algorithm defines the distance between nodes or websites because of the similarity between the overall links to other network websites or nodes. So that websites that are in the same area are more likely to connect to each other (Tukker & de Bruijn, 2008). The algorithm helps to identify clusters but the researcher must determine the meaning of a given factional clustering; software technology cannot assign this (Koger & Masket et al., 2010) it has been assigned by me.

Even though algorithms fail to detect fine-grained community structure - we now assess betweenness centrality for detecting core and periphery members of a large-scale social network of Singapore bloggers.

I used *Netdraw* for the social network analysis and visualisation of the blogosphere. Using *Netdraw*, I measured betweenness centrality and network betweenness centralisation to assess which blogs are more 'important' or rather in 'control' of the flow of information. A method of assessing the 'importance' of a blog in the network is to measure how large a role it plays as an intermediary (de Nooy et al., 2005). When a blog becomes inaccessible or inactive, detours are required, disrupting the flow of information. There are certain blogs that control the flow of information because of their position in the network. Removing a blog affects the flow of information.

Therefore, in order for an actor, or blog to have a high betweenness centrality the actor must lie between large numbers of other actors. Alternatively, as Shimbel (1953:507) writes:

Suppose that in order for [actor] *i* to contact [actor] *j*, [actor] *k* must be used as an intermediate station. [Actor] *k* in such a network has a certain “responsibility” to [actors] *i* and *j*. If we count all of the minimum paths which pass through [actor] *k*, then we have a measure of the “stress” which [actor] *k* must undergo during the activity of the network.

As well as performing the role of intermediate station [actor], when considering that the network that *k*, *i* and *j* reside in a relationship of communication, where [actors] *i* and *j* cannot create new lines, *k* could refuse to pass on the communication and blocking. Figure 15 presents the top ten nodes betweenness centrality scores from January 2009 to February 2010.

Freeman’s (1977) notion of betweenness centrality as a measurement of node importance has come under criticism (Borgatti, 2005:69). Borgatti’s concern is that the various methods of measuring centrality have “implicit assumptions about the manner in which things flow in a network” (Borgatti, 2005:56). A typology of different kinds of traffic: Borgatti (2005:57) assessed used goods, money, gossip, e-mail, attitudes, infection, and packages. Borgatti argues that closeness and betweenness centrality “do not actually measure node participation at all but rather indicate the expected participation if things flow in the assumed way” (2005:70) and that they are largely misapplied. The striking aspect of the typology that Borgatti presents is that it consists of inanimate objects rather than cognitive beings or people. Gossip moves from person to person as a packet of information moving between nodes. It is my assertion here that online it is people who create the hyperlinks and it is people that move between the nodes or hyperlinks not inanimate objects being passed from one node to the next. Rather it is people that decide upon which path that has been presented to them on screen. Describing that which passes amongst the nodes as packets of information makes sense only if we remove the human element from the process of surfing the Internet. The web browser is searching out and retrieving packets of information but only at the bequest of the user. The web browser seeks out and retrieves information from servers and the return pathway is not immediately accessible to the user because of the use of the web browser. While the user searches out and traverses hyperlink pathways presented to her within the web browser.

However, “when we measure how often a node handles a package in a package delivery process, the results match to a few decimal places what the Freeman betweenness formula predicts” (Borgatti, 2005:70), ensuring that Borgatti’s criticism although interesting, holds no weight when applied to hyperlink network analysis.

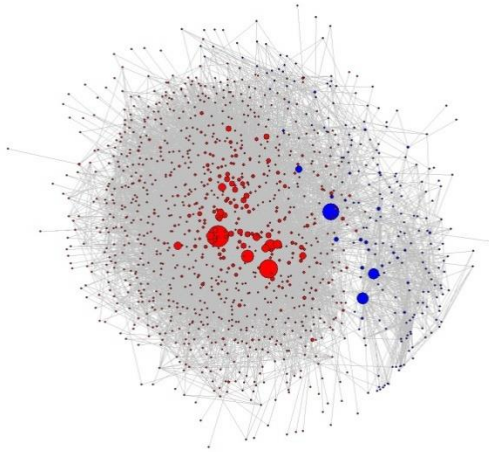


Figure 2 January 2009

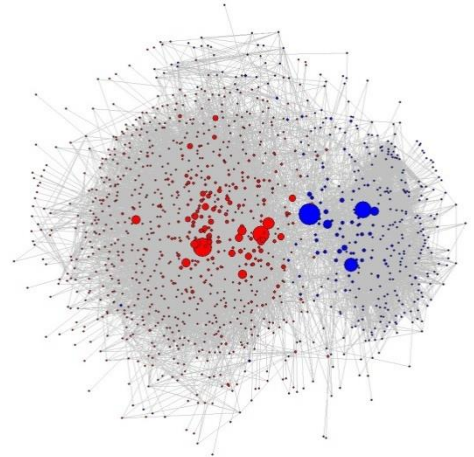


Figure 3 February 2009

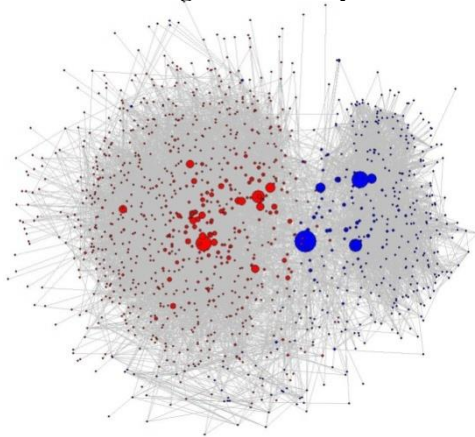


Figure 4 March 2009

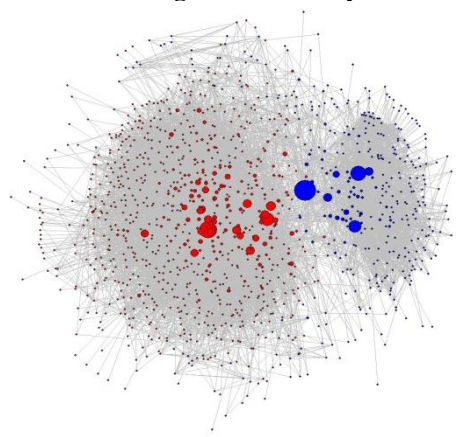


Figure 5 April 2009

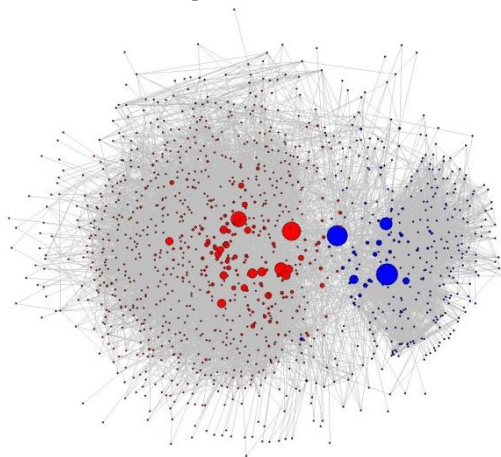


Figure 6 May 2009

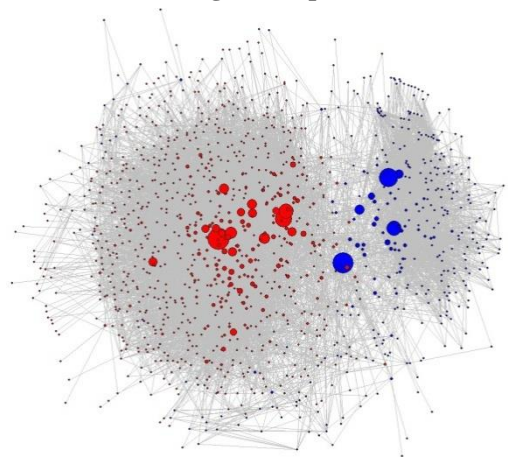


Figure 7 June 2009

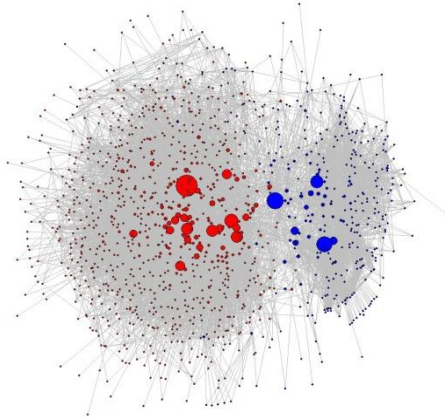


Figure 8 July 2009

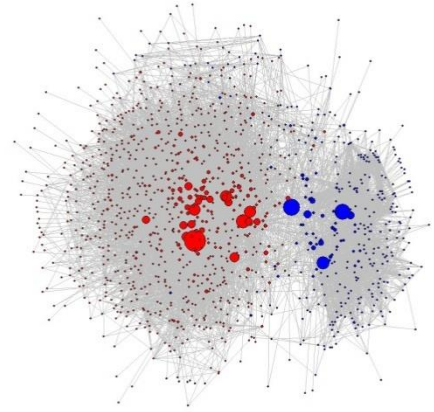


Figure 9 August 2009

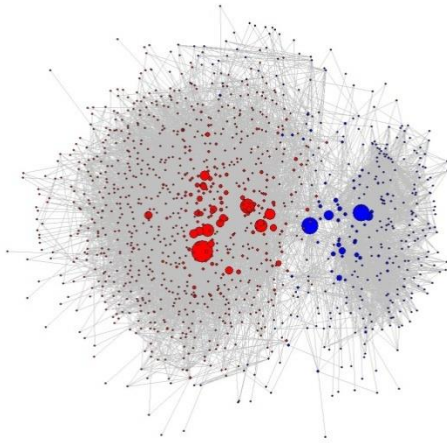


Figure 10 September 2009

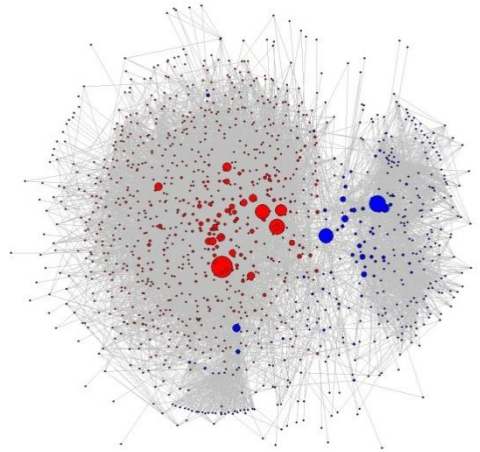


Figure 11 October 2009

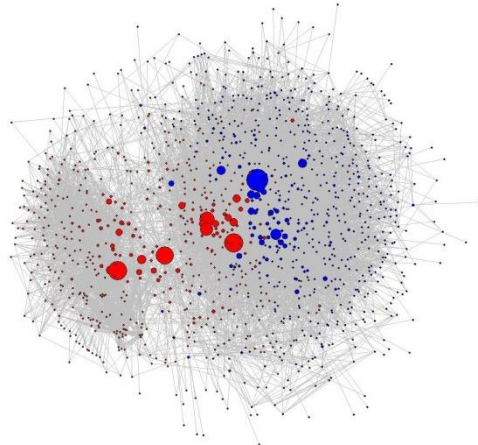


Figure 12 November 2009

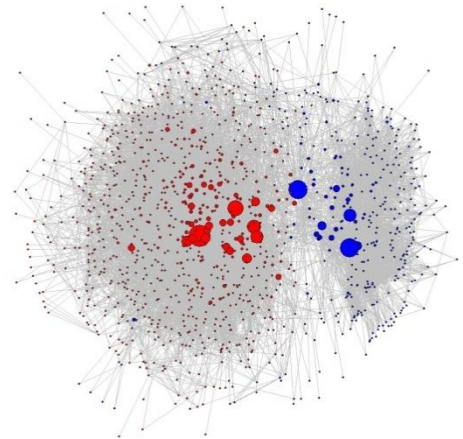


Figure 13 December 2009

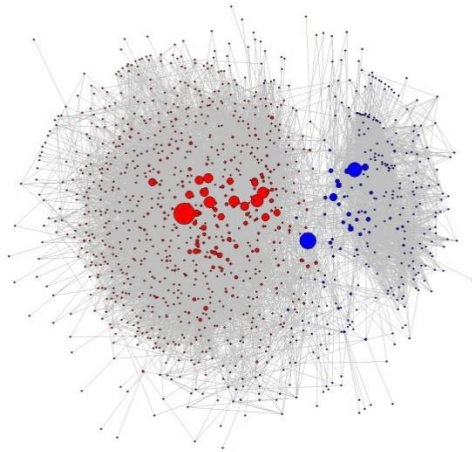


Figure 14 January 2010

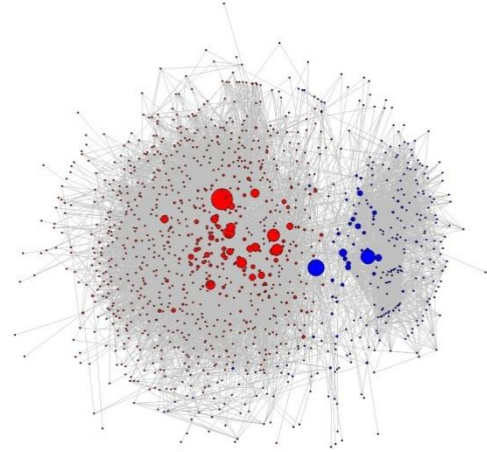


Figure 15 February 2010

Betweenness centrality score for that node determines the size of the node or circle. So the higher the betweenness centrality score the larger the circle. Factions measures partitions of the “network by grouping together actors on the basis of similarities in which they are tied” (Palau & Montaner, et al., 2004). This helps identify communities within the Singapore blogosphere. The red circles are blogs in faction 1 written in English and the blue circles refer to blogs from faction 2 written in Malay. The grey lines running between the nodes are the hyperlinks from one node to another.

Each month the English speaking blogs are marked as faction 1 in red and the Malay speaking blogs are faction 2 in blue. There is a visible divide between the two groups with lower levels of hyperlinking between them over time. This implies that there is a divide. The most prominent node that sits between these two factions is not acting as a bridge; it is not a blog. Therefore, someone reading an English speaking blog is unlikely to come across a hyperlink that directs them to a Malay blog and people are less likely to move from a Malay speaking blog to English. This is consistent for each month. The two factions are consistent over time and indicate that there is little flow of people between them. The largest blue node between the two factions is *photobucket.com* owned since 2007 by *Fox Interactive Media, Inc.*, a division of *News Corporation* that allows users to upload, share and link to images and videos free of charge. Functionally, it is limited to photo and video sharing and does not have deliberative capabilities. It does however allow comments beneath images.

The assigning of faction 1 to the English blogs and faction 2 to the Malay blogs is consistent for all but one month. Figure 11 shows that faction 1 corresponds with the Malay blogs and faction 2 to English blogs. This maybe because of a hyperlink from a blog titled *MrWangSaysSo* linking to a previous blog, called *MrWangBakesGoodKarma*, written by the same author appearing in a post in October 2009. The older blog had numerous incoming links from blogs with higher levels of betweenness centrality such as tomorrow.sg. This would shorten the geodesic pathway between *MrWangSaysSo* and tomorrow.sg. The theme of the posts was the nature of legal discrimination in job advertisements. There were also a large number of spam blogs linking to *MrWangBakesGoodKarma*, which were part of the Malay faction. The results for the faction analysis returned to their previous state thereafter.

Another contributing factor was *MySpace* shifting from the English blog faction for October 2009 to the Malay faction in November 2009. *MySpace* was one geodesic step from *Photobucket* in November only to no longer have the direct pathway in December 2009. *News Corporation* purchased *MySpace* in July 2005. The acquisition of new online sites adds an extra node or in this case millions of new nodes registered on one URL (<http://www.myspace.com/>[...]). The structure of the *MySpace* URL reads all addresses as - myspace.com, with the user name as a subdirectory on the server while other blogging formats – wordpress.com and blogspot.com assign the users page as a separate address. The flow of traffic in the network skewed. However, because of the structure of the URL address of *MySpace* user accounts software such as *IssueCrawler* are unable to uncover the hyperlinks between user domains.

The dominance of the Malay speaking nodes in November 2009 maybe accounted for by the actions of individuals, such as *MrWangSaysSo*, adding hyperlinks to archived blogs; and, corporations such as *News Corporation* adding direct hyperlinks between spaces, services and tools in attempts at reducing the need for users to leave a media conglomerates network (Milberry & Anderson, 2009).

5.4. Betweenness Centrality

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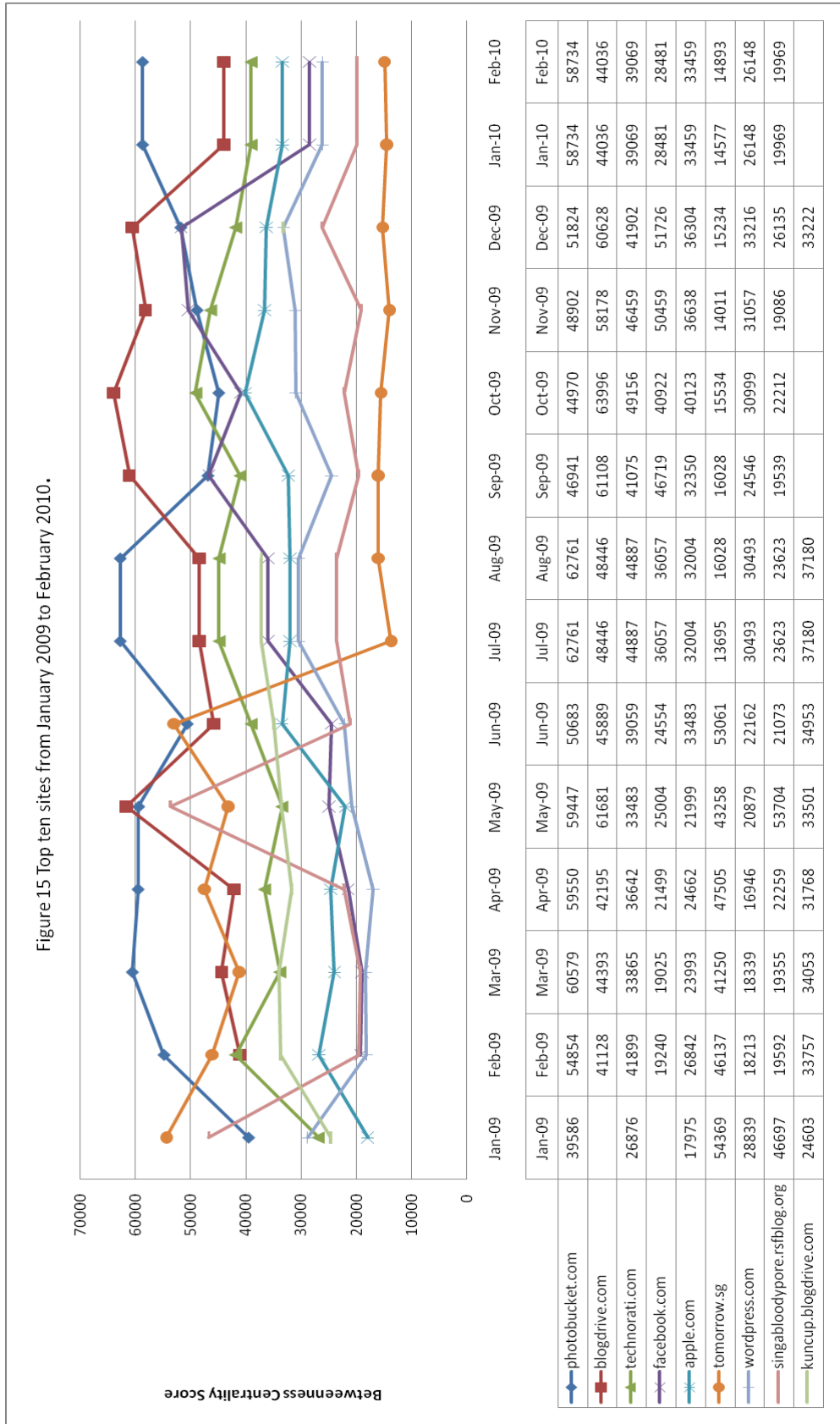


Figure 16 Top 10 sites from January 2009 to February 2010

5.5. Network Betweenness Centralisation

What is network betweenness centralisation?

The network betweenness centralisation score compares the observed disparity in betweenness centrality in a network with the most unequal network of the same size. The node at the centre holds the highest betweenness centrality score of (1) therefore every user needs to pass through them to get to another node. Network betweenness centrality reveals attributes of the entire network rather than individual nodes. A highly centralised network indicates that the network is dominated by one or a few nodes. A network that is highly centralised can be said to be overly reliant on a few nodes and if these nodes are removed then the network breaks up or fragments. A network that has a low level of centralisation is resilient even when certain nodes are removed. A score of 1 would indicate a highly unequal and highly centralised network (Hawe & Ghali, 2008).

The network betweenness centralisation for the Singapore blogosphere from January 2009 to February 2010 is in Table 1 calculated using *Pajek* (Batagelj, & Mrvar, 2003). The lowest possible score is 0.00, (linear shaped network which is not centralised and highly equal) while the highest is 1.00 (star shaped network which is highly centralised and unequal). So the closer the result gets to a score of one the more centralised and unequal it has become. The network betweenness centralisation score average for January 2009 to February 2010 is 0.086569.

One node or a group of nodes, referred to as a hub, dominate a highly centralised network. It has a disproportionate level of control over the flow of information. If the centralised node or hub disappears, the network will fragment into unconnected smaller networks. Less centralised networks will not contain a dominant single node or hub; allowing for the failure of some nodes whilst the overall connectivity of the network is unaffected.

Date	Network Betweenness Centralisation Score	Date	Network Betweenness Centralisation Score
January 2009	0.09591	August 2009	0.12199
February 2009	0.07729	September 2009	0.08565
March 2009	0.07302	October 2009	0.09822
April 2009	0.06843	November 2009	0.07809
May 2009	0.07799	December 2009	0.07143
June 2009	0.07732	January 2010	0.11083
July 2009	0.06497	February 2010	0.11083

Table 1 Network Betweenness Centrality Scores from Jan 2009 to Feb 2010

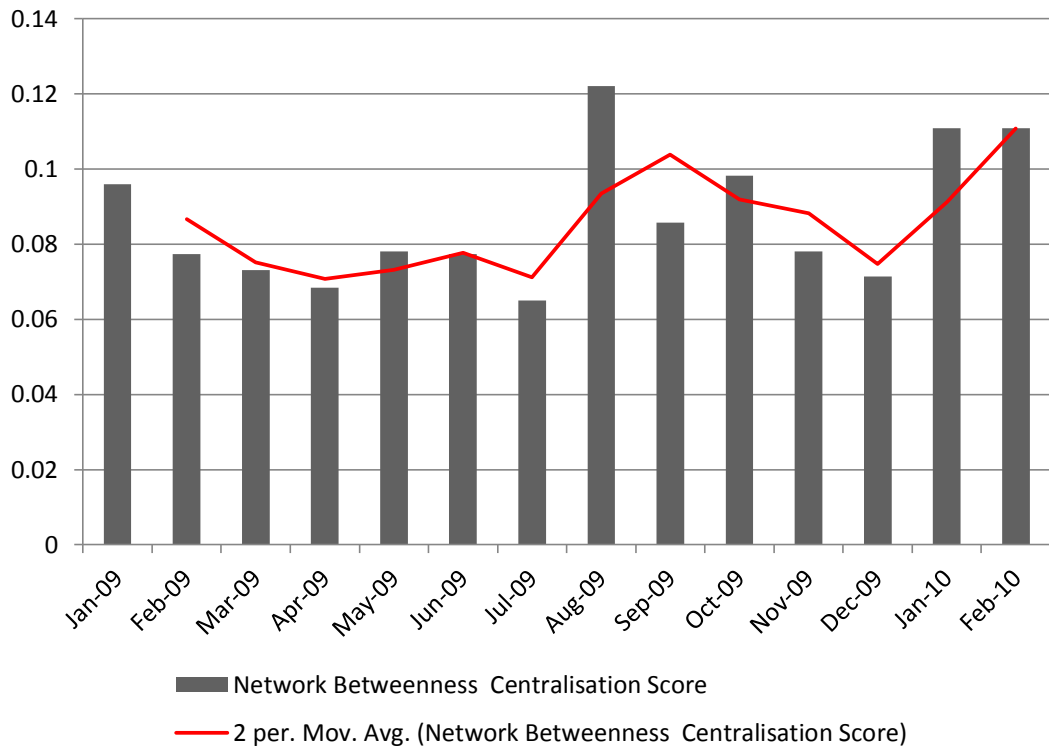


Figure 17 Network Betweenness Centralisation Scores from Jan 2009 to Feb 2010 for the Singapore blogosphere

From figure 17, we can see that the network betweenness centralisation dipped to its lowest point in July 2009 (0.06497) and peaked in August 2009 (0.12199). For January and February 2010 (0.11083), the score shows a marked increase on December 2009 (0.07143). By comparing the same network over time, it is possible to assert that the level of centralisation, of a node or hub; or dispersion of the network fluctuates over time with July 2009 least centralised and August 2009 the most. For a random graph, created with *Pajek* consisting of 1,220 nodes (these numbers refer to January 2009) and 12,496 arcs, directed links between them; with an average degree of 20.48, the network betweenness centralisation score is 0.00397. Compared with the generated network betweenness centrality score it can be asserted that the Singapore blogosphere has a high level of network betweenness centralisation. Therefore, one node or a hub of nodes, dominate the Singapore blogosphere.

The most central nodes of the Singapore blogosphere are listed in figure 16. They are Photobucket.com; blogdrive.com; Technorati.com; Facebook.com; Apple.com; tomorrow.sg wordpress.com; singabloodypore.rsf.org and kuncup.blogdrive.com.

5.6. Sites by Type

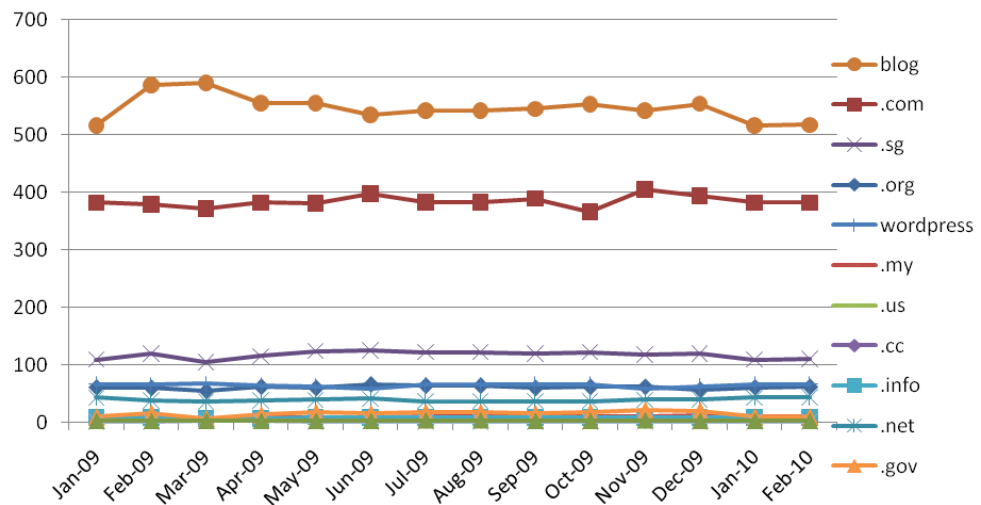


Figure 18 Number of sites by type from January 2009 to February 2010

Figure 18 shows the types of URL addresses that the crawl has produced from January 2009 to February 2010 (depending on the inclusion of .org or .com for example in the http address) total websites collected using *IssueCrawler*. From figure 17 it can be seen that the phrase ‘blog’ is the most common tag for each of the 14 months covered with ‘.com’ second and ‘.sg’ in third place for all 14 months. Subtracting the suffixes ‘blog’ and ‘wordpress’ from the larger number of sites that have the suffix .com gives the number of ‘.com’ websites. A number of blog service providers have a .com suffix.

Figure 16 (above) presented the top ten sites online for Singapore in terms of betweenness centrality for the same period (a list of the top 100 websites in terms of betweenness centrality is available in appendix 2). Blogs that are high in terms of betweenness centrality are gatekeepers who are responsible for collecting and disseminating information serving as hubs for communication. The top blog in January 2009 was tomorrow.sg an aggregator blog that collects posts from other blogs, usually submitted by members of a team. In April 2009, tomorrow.sg and singabloodypore.rsfblog.org had sudden increases in their betweenness centrality scores; this coincides with the controversy that surrounded the Association of Women

for Action and Research (AWARE¹²) for the same period. AWARE is an advocacy group for gender equality in Singapore. A group of between 80 to 100 women, led by Dr Thio Su Mien former Dean of law from the National University of Singapore and associated with the Church of Our Saviour¹³, who recently joined the organisation, had managed to oust the incumbent leadership. New members took over leadership positions at their annual general meeting on March the 30th. The concern was that these new members would not uphold the organisation's vision and mission to ensure gender equality including that of gays and lesbians in Singapore. The following request appeared online after stories reported in *The Straits Times* and *Today* newspapers;

“We have experienced a hostile takeover and need to get the organisation back in safe hands that actually care about the org's vision and mission.”

Facebook group :

<http://www.facebook.com/group.php?gid=25846462465#/group...>

“If you are female, or care about the people around you who are female, i.e: your mothers, wives, sisters or daughters, please join us and help spread the word.”

The call for support began in the mainstream press, moved to the blogosphere, on to *Facebook* attracting 3,317 members, and finally to the organisations meeting place.

In May of 2009, the AWARE extraordinary general meeting (EOGM) took place, the founding members ousted those who had tried to take over the organisation. A video of the EOGM is available here¹⁴. For a public re-presented as merely interested in economic success and not concerned with political matters this presents a different image. An image of a public prepared to rally together to defend an organisation that promotes gender equality.

By July of 2009, tomorrow.sg had a sudden drop in its betweenness centrality score and did not regain it. The second top blog in January 2009, singabloodypore.rsfblog.org also had a dramatic increase and then decrease in betweenness centrality scores for the same period.

Central nodes may act as bridges between the two factions. However in this case *Photobucket*, the most dominant node between the English and Malay factions, as a

¹² <http://www.aware.org.sg/>

¹³ <http://www.coos.org.sg/index.html>

¹⁴ http://www.youtube.com/watch?v=zWNfkA-vVNo&feature=player_embedded

result of the lack of deliberative functionality on the site did not enable the AWARE galvanisation of members to include those from faction two as it was acting as a block and not a bridge. *Juncup* remained unaffected by the sudden burst of Internet activity taking place within faction 1 as it was a member of faction 2 and few hyperlinks existed between to the two factions.

Juncup.blogdrive.com dropped considerably in August 2009 and did not make it into the top 10 again. Its owner had removed the site. Sites that are increasing in betweenness centrality score are facebook.com, blogdrive.com, apple.com, wordpress.com, technorati.com and photobucket.com. All either blog service providers, corporate social network sites, or online hosting services and have the potential to act as bridges or blocks depending not only on their function capabilities but also on requirements to act according to the laws of Singapore.

5.7. Assigning Community Status by applying Algorithms

There are numerous methods of community detection available within various network analysis software and one way to illustrate the uses and limitations of using network analysis is to look at the pioneering work of others.

Crossley (2008; 89) states how “the concept of ‘networks’ and the tools of formal social network analysis can play an important role in the sociological analysis of music scenes and subcultural movements”. The production and circulation of music is, according to Crossley, akin to that of social movements. What is crucial is the significance of cultural production between people who are linked and embedded in social networks. Crossley assigns the status of nodes in the creation of punk to those who performed on stage as members of the punk bands and the level of movement of people between the bands. Thereby limiting the people involved to particular groupings, formal groupings of people referred to as bands and those who frequented a McLaren’s clothes shop, attended performance venues, lived together, or were romantically involved or friends before 1976. Essentially, they formed a grouping or core as they know each other. Crossley’s analysis focused on the density of the network, claiming that the spread of punk was the result of the core 46 members being densely connected thereby generating ‘social capital’. The members were therefore able to help each other or rather they felt socially obliged to each other. McLaren and Rhodes; two central nodes in Crossley’s analysis and the connections that McLaren

had with television and the fashion industry are mentioned by Crossley. The “power generated by their resources was further amplified by their network positions” (2008; 108) is how Crossley refers to their influence. A statement that be rendered sensible by stating that their resources amplified their network positions as key players. These points aside – Crossley concludes that the “more densely networked that mass is, the higher the degree of its members and the smaller the diameter of the network as a whole, the more likely it is to transmogrify into a coherent scene or movement” (2008; 113). The analysis assigns boundaries from the outset – limiting the people involved to those mentioned in biographies and personal accounts of the development of the bands at the time. The claim that density generates social obligation may be true in this instance but is not necessarily true. Access to resources are acknowledged by Crossley but the position within the network takes primacy when explaining influence. Crossley (2008) provides us with a structural analysis of networks; a network of human interaction and adds another dimension to the analysis of the formation of groupings. It downplays the significance of culture and access to resources in order to illustrate what it is that social network analysis can facilitate.

The groups analysed here are significantly different in that they do not know to each other. Many are anonymous and using pseudonyms. Interactions take place not in shops or bands but on the Internet. Affiliation is hyperlinks using HTML code and the boundary of the network cannot be so clearly and easily delineated.

Of primary importance is the need to group or cluster the blogs and websites according to the content or theme they focus on. The community detection algorithms are all different in one way or another and sometimes the differences are not presented clearly, which can make the job of deciding which algorithm rather complicated. The decision of selecting the appropriate tool is dependent on the “system of interest” (Labatut & Balasque, 2012:1). The system of interest in this case is the content of the Singapore blogosphere. The hyperlinks between the websites and blogs is one aspect of the textual content that interest this research. Human beings have placed these hyperlinks purposefully. DeMaeyer (2012b) provides a rationale for studying hyperlinks and other forms of linking by who stating that placing a hyperlink is not a random act. Hyperlinks are widely regarded as substitutes for something else – indicators of social phenomenon (Rogers & Marres, 2000:6) and are “socially significant in some way” (Hsu & Park, 2011:355). It is widely believed that hyperlinks between web pages can provide useful information (Park & Thelwall, 2003). There

are two underlying assumptions when viewing hyperlinks as containing useful information about the wider context; every link has been created with a purpose and links make sense when taken together on a larger scale – that they reflect social and cultural structure (Halavais, 2008:39) that a hyperlink has a sociological meaning (Hsu & Park, 2011: 364). Interpreting hyperlinks requires a mixed methodology. A methodology that combines “quantitative link counts, qualitative inquires and valuation of field expertise to support link interpretation” (DeMaeyer, 2012a; 12).

The main algorithms available for detecting communities all tend to have the same major problem – they all assign a node to one and only one cluster or community when the real world shows that people can be members of multiple clusters, groupings, and communities at the same time. So on choosing an algorithm that assigns each blog to one cluster or community the resulting groupings are the result of the algorithm and not the result of the decision by the blog author to place hyperlinks. The researcher imposes the communities; they are not necessarily naturally occurring groupings. Returning to this matter later – there are three essential questions that need to be answered when detecting communities within a network” (Labatut & Balasque, 2012:2).

1. Which algorithms are to be applied?
2. How will the results be compared?
3. How are obtained communities to be interpreted?

Assessing which algorithm to apply is also constrained by the technical competence of the researcher and limited to testing K-core, and Modularity algorithms to see which if any generate social and cultural structure that has sociological meaning.

As soon as the researcher selects the algorithm, the communities have been assigned. The next step is to give them meaning in relation to the nature of the system that is under analysis. The first step is to assess the nature of the collected data – hyperlinks between websites and blogs. There is also a temporal aspect to the data; from Jan 2009 to Feb 2010. According to Labatut and Balasque (2012), there are two types of community detection available – *partitions* or *covers* – “mutually exclusive and overlapping communities”. Few algorithms can detect *covers*. Therefore, Labatut and Balasque preferred option was *partitions*. This research however, has different criteria and *covers* is the best option. The third and most important concern is the

nature of the communities that each algorithm is able to determine and the selection of an algorithm according to these criteria (Labatut & Balasque, 2012:4).

The concept of *community* is a group or cohesive subset of nodes that are densely interconnected when compared to the other nodes in the network. The concept of community is categorised according to density, pattern, node similarity and link centrality. Density measures subsets of nodes according to levels of cohesion and separation and then defines a measure for the overall network by considering the difference between the levels or ratio of cohesion and separation.

Node similarity interprets the idea of community to be that of a group of nodes, which are similar to each other and dissimilar to the rest of the nodes in the network. Once this distance based cluster analysis algorithm is applied, it minimises the internal distance between nodes while maximising the external distance between clusters. This approach allows for play with the notion of similarity. Two nodes are similar because they share the same links to other nodes or are structurally equivalent. The resulting community structure places nodes together because they share an attribute.

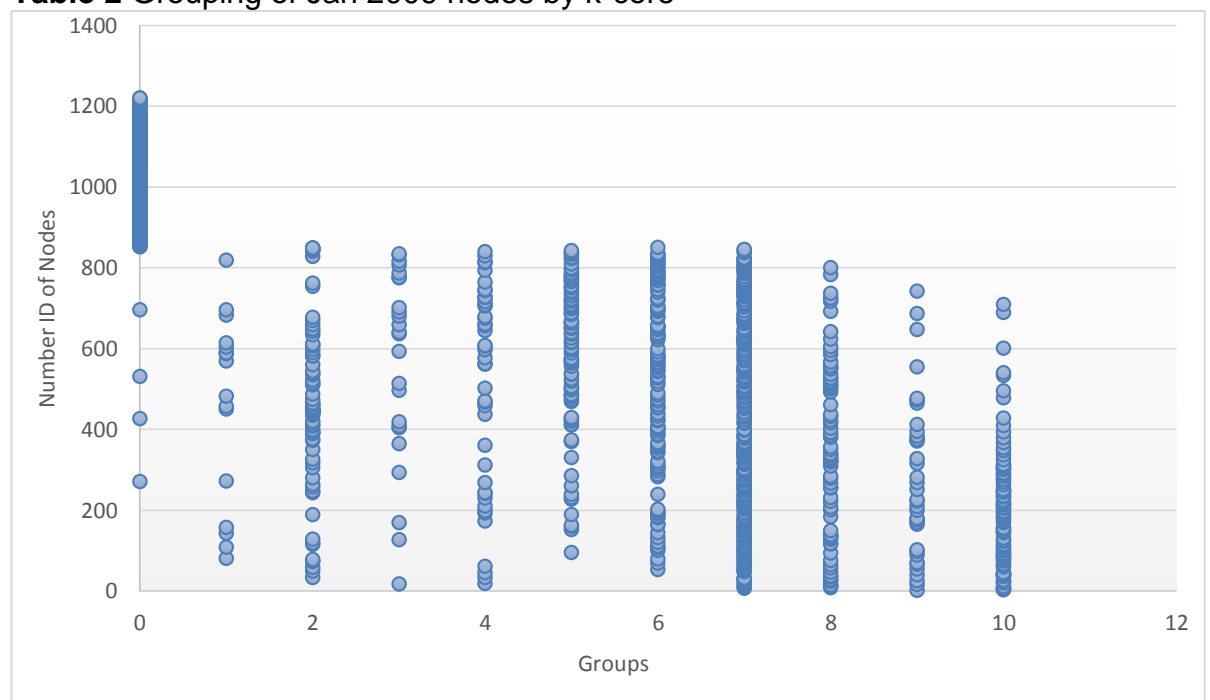
Link centrality is related to two properties – number of pairs of nodes the link is connecting and how “likely these connections are to be used” (Labatut & Balasque, 2012:9). Again, the notions of similarity and cohesion are important to this measurement of community. A community is “a set of nodes whose links centrality must not be greater than a certain threshold” (Labatut & Balasque, 2012:9).

Pattern or clique is viewed (Labatut & Balasque, 2012:7) as more qualitative as it is not reliant on numerical values. Separation is represented by looking for the maximum number of subsets that are separated from the network. This is more akin to looking for patterns of separation and cohesion according to the idea of mutual friends. The assigning of the term clique to a group of nodes is dependent on all nodes connected to each other or a relaxing of these criteria – i.e. nodes connected to a certain percentage of other nodes to be in the clique. Looking for communities via pattern based approaches does have one qualitative advantage over the other methods of assigning community structure to the network and nodes – “If any a priori knowledge of the studied system is available, it is possible to use it to constrain the community identification process” (Labatut & Balasque, 2012:7). As I have prior knowledge of the Singapore blogosphere and the data–, the pattern-based approach seems applicable.

To begin testing the algorithms and as assigning nodes to clique structure is not suitable for real-world networks (Labatut & Balasque, 2012:7; Fortunato, 2010; Hanneman, & Riddle, 2005) I have chosen a less constrained clique algorithm – the k-core. The k-core sub-grouping is based on nodal degree (Seidman, 1983). Each node is adjacent to at least a minimum number of the other nodes in the sub-graph. Seidman (1983) refers to the subgroupings as being not necessarily interesting in their own right but that they are spaces where other interesting subgroups may be present.

A k-core analysis of the data for January 2009 returns 10 groups. The table below shows the number of nodes assigned to each of the 10 groups with group 7 appearing to be the most densely populated.

Table 2 Grouping of Jan 2009 nodes by k-core



Group 7 contains photobucket.com (photography hosting site), yawningbread.org (political and social activist), livejournal.com (blogging platform service), sixapart.com (blogging platform service) sgblogawards.omy.sg (aggregating site), myspace.com (blogging platform service), shianux.jiyuuu.org (personal blog) and mrwangsaysso.blogspot.com (personal blog).

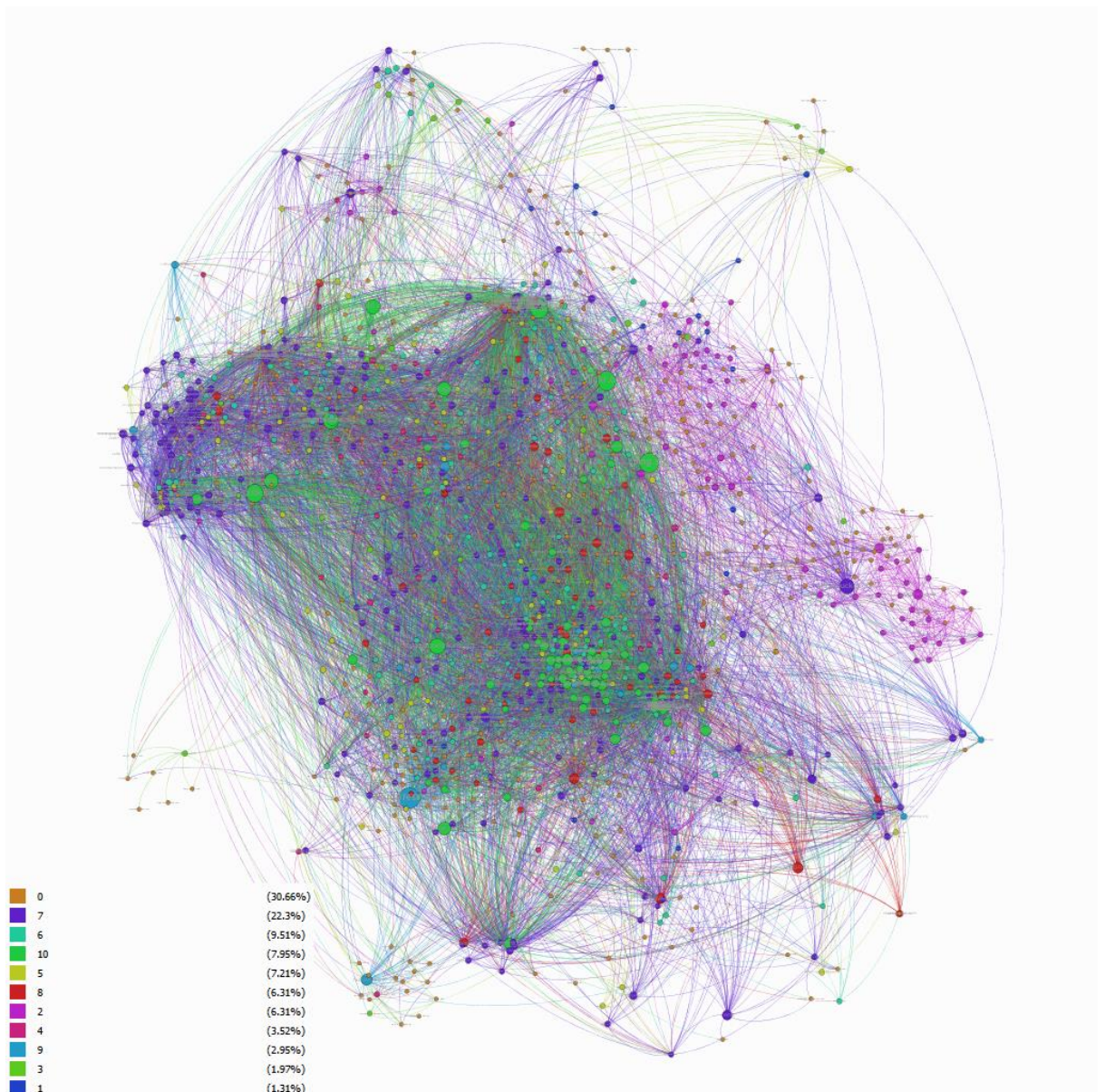


Figure 19 Jan 2009 colour of node is the k-core grouping and size of node is according to in-degree layout of graph is Openord on Gephi.

The obtained communities are as follows; Subgroup 10 that makes up 7.95% of the total network has the highest level of in-degree. It contains social media services such as Facebook and YouTube. Two aggregator sites are in the top 10 - Ping.sg that describes itself as a Community Meta Blog for Singapore Bloggers an aggregator site and Tomorrow.sg. Flickr.com is a site to store photographs on and Technorati.com is a blog search engine. Mrbrown.com is the site of an A list blogger who had previously worked as a journalist for Today.com a Singapore newspaper. Each sub-grouping from 10 to zero follow a pattern of the websites and blogs with the highest in-degree scores – uniformly as they grouped by in-degree. Websites listed in group 10 have higher levels of degree than those listed in group 9 and so on. The measure of degree

in relation to the blogs is one aspect of the content of the “system of interest”. The concern here is that the “system of interest” is reduced to the hyperlink and this narrowing of the “interest” to one aspect missed the themes and content. The measurement of degree relates to the number of links from other nodes – it is grouping nodes together because they similar levels of popularity (more blogs link to them). This in no way reflects a social or cultural structure (Halavais, 2008: 39).

The focus on assuming that the homogeneity or community of the blogs is the result of hyperlinks and the measuring of the degrees of those blogs is limited and creating “communities” that are incomprehensible beyond mathematics – or rather mathematically constructed and imposed rather than meaningful. The two underlying assumptions are that every link has been created with a purpose and that links make sense when taken together on a larger scale - are at issue here.

The next algorithm to be tested is *modularity* (Blondel et al., 2008). The idea is that a good measure of when to stop assigning nodes to a group is when cohesion within the group is higher than outside. Modularity ranges from 1 to 0 and it is positive if the number of links inside the group is more than the expected number and the variation from 0 indicates the difference with a random situation. The algorithm has been applied to a number of “real-world network data sets [...] showing it to give both intuitively reasonable divisions of networks and quantitatively better divisions as measured by modularity” (Newman, 2006: 8578). Modularity “outperforms all other methods for community detection” (Newman, 2006: 8578).

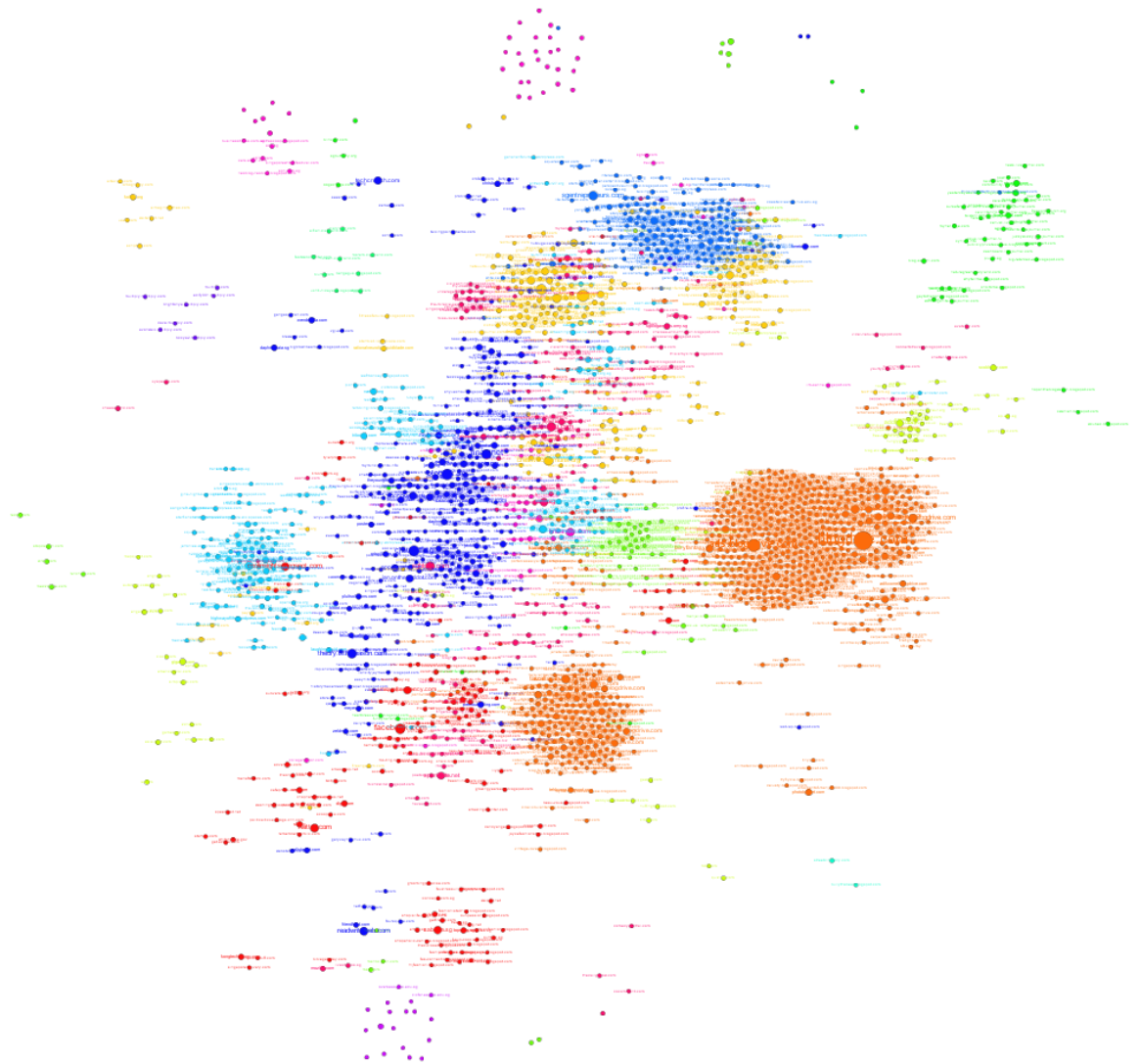


Figure 20 Singapore Blogosphere Jan 2009 to Feb 2010 Colour of node is cluster according to modularity. Size of the node is degree.

6	blogdrive.com	(31%)
0	blog.dk.sg	(15.08%)
5	tomorrow.sg	(9.69%)
13	wordpress.com	(9.11%)
14	sgblogs.com	(7.39%)
1	sgentrepreneurs.com	(7.3%)
4	facebook.com	(7.08%)
2	krisandro.com	(3.32%)
3	addthis.com	(3.14%)
8	sixapart.com	(2.65%)
7	fark.my	(2.65%)
9	nus.edu.sg	(0.8%)
10	oggix.com	(0.4%)
11	multiply.com	(0.31%)
12	bullythebear.blogspot.com	(0.09%)

The key to the left contains the most prominent (according to degree) blog or website by modularity cluster and the percentage of nodes in the network that are within that sub-group. So the largest sub-group has blogdrive.com a blog publishing platform – other blog publishing platforms at the centre of subgroups are wordpress.com; facebook.com; addthis.com; sixapart.com; oggix.com and multiply.com. There are a number of blog aggregator sites - tomorrow.sg; sgblogs.com; sgentrepreneurs.com and three personal blogs - blog.dk.sg; and krisandro.com and bullythebear.blogspot.com. One site is no longer

reachable – fark.my and one website of a major organisation - nus.edu.sg – the National University of Singapore’s website.

The hyperlinks that collectively make up the structure of the network create sub groupings of nodes. They are not random. The programmers and coders who designed the blog platforms such as wordpress.com and blogdrive.com on which people then create websites and blogs generate them. The original hyper link mark-up language that comes pre-packaged for the users have self-links embedded within them – rendering community assigning to presenting the domination of those who wrote the code on which others are reliant.

Attempts to find sub-groups, cliques, k-cores or n-cliques “communities” – are measurements of hyperlinks. Hyperlinks are not randomly placed – this however does not mean that they reflect “social and cultural structure” (Halavais, 2008: 39) unless by stating that we mean sub-groupings clustering around blog publishing platforms. Hyperlinks are embedded in hypertext mark-up language written by coders. They pre-dominate the results. They are creating and shaping sub-groups because all other blogs are built on a core of blog publishing platforms. Sociologically the coders and programmers determine the “communities” when using hyperlink network analysis.

Categorising the communities according to levels of degree or whether they are part of a core or the periphery generates time and again, regardless of the algorithm used, the same dominant corporate players because they created the code or platform upon which the content I am analysing rests.

5.8. Malay Community over Time

As the original URL seed list is made up of 5 different categories it seems reasonable to assess if the results are still representing that initial input as 5 different factions. The gay and lesbian URLs are not discernable from the political faction; the Christian group has disappeared into a larger Malay and National University of Singapore (NUS) grouping. The two other factions are commercial and Web2.0. Broken into five factions the original Malay faction in the two-faction analysis in January 2009 becomes part of a faction that has tentative links to the NUS cluster.

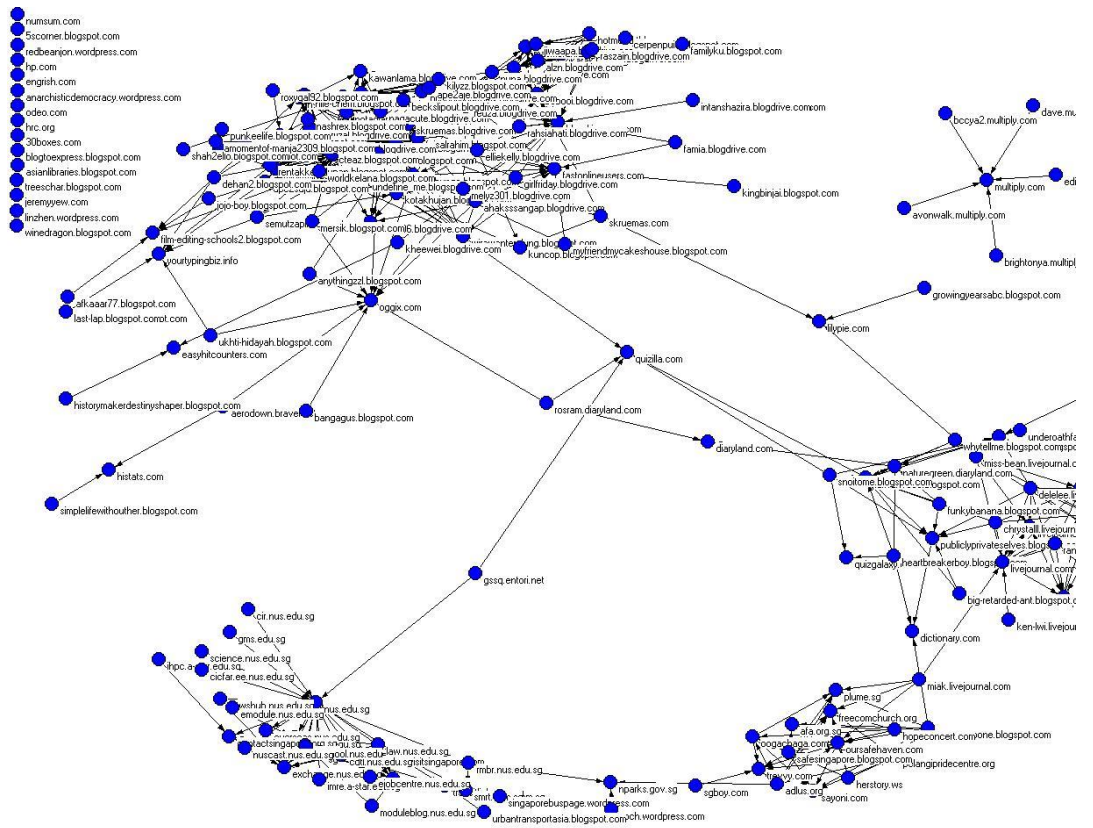


Figure 21 Malay speaking blogs and others linked to the National University of Singapore Cluster for January 2009.

The blogs written using Malay are the group to the top left of figure 21 (imaged using *Pajek*, Fruchterman Rheingold 2D algorithm) and the National University of Singapore (NUS) sites and blogs are to the bottom of figure 21. There are no direct geodesic pathways between the Malay blogs and the NUS sites. Figure 22 (below) presents the results of the hyperlink network analysis for February 2010.

5.9. Discussion

The problem, she said, is not that “code is law” or that “code regulates.” The problem is that “we haven’t had a conversation about how code regulates.” And then to the rest of the audience, she said, “Did all of you like the debate we had about whether Microsoft Word documents would carry in them a unique identifying number? Was that a satisfying debate?” (Lessig, 2006:323)

The inclusion of html code (such as Photobucket.com; blogdrive.com; Technorati.com; Facebook.com; Apple.com; tomorrow.sg and wordpress.com) that directly link to the source of the code embedded in the blog site are *trademarks* [a symbol, word, or words legally registered or established by use as representing a company or product]. Trademarks are used to protect and differentiate products. Whether the trademark is registered or not its purpose is to dissuade others from using it without permission; it enables the owner to take legal action if used without permission; facilitates criminal charges against counterfeiters and makes the product private property, which can then be sold on, franchised and licenced for others to use. Unregistered trademarks still allow for action if used by someone else. The common law of *passing off* can come in to force if it can be proved that the mark is yours; you have built up a reputation in the mark and you have been harmed in some way by the other person’s use of the mark (<http://www.ipo.gov.uk/types/tm/t-about/t-protect.htm>).

Using algorithms to define the communities of blogs and websites via hyperlinks is a method of assessing who the code or trademark belongs to, the reach of the reputation of the trademark and who is using the code or trademark without permission. The algorithms are code that “perfects the machine of monitoring code - that automates perfect sample selection, that facilitates databases of results, and that simplifies the process of connecting” the use of trademarks (Lessig, 2006:204).

This monitoring of code is the membrane that returns the “prescribed circuits” that are enveloping the user into the enclosed spaces of the corporations. These enclosed spaces are the content layer of the Internet; the software, web applications, social networking sites, news delivery and information services. Common space is now shaped by market constraints; with users categorised and sold off to advertisers (Milberry & Anderson, 2009).

Photobucket.com; blogdrive.com; Technorati.com; Facebook.com; Apple.com; and wordpress.com all inject advertisements into the stream of personal communications, and online movement is shaped and directed to infuse interactions with advertisements. While at the same time all the personal communication that flows through this market is monitored, mined and sold on using social network algorithms. Individual nodes in the machine are valued according to their levels of influence. The level of influence determined by varying levels of betweenness centrality or page rank scores.

Source codes regulate and control the content layer of the Internet in the same way that law regulates society. Source codes work invisibly and ideologically to control taken for granted freedoms. Algorithms that monitor and mine the uses of the source codes in the layers of content assign monetary values to the nodes and content of the communications between individuals – commodifying personal interactions.

“i have seen many people spill their guts on-line, and i did so myself until, at last, i began to see that i had commodified myself. commodification means that you turn something into a product which has a money-value. [...] i created my interior thoughts as a means of production for the corporation that owned the board i was posting to, and that commodity was being sold to other commodity/consumer entities as entertainment.” (Humdog, 1994)

These algorithms and codes are invisible to most and ultimately the result of human decisions and actions taking place within the corporate worlds of Facebook, Photobucket (owned by Microsoft), and Google.

This chapter also presented a faction analysis of the Singapore blogosphere tracking the Malay speaking community over time, demarcated, from the larger English speaking faction. Ethnicity plays a major part in structuring the Singapore blogosphere.

Figure 18 does indicate a consistent number for each of the types of sites from January 2009 to February 2010. Blog sites outnumber the .com sites. However, the corporate sites ‘control’ the Singapore blogosphere (Figure 16). Network betweenness centralisation shows the ease by which information flows dipped to its lowest point in July 2009. The corporate nodes have a disproportionate level of control over the flow of information. If the corporate hub disappears, the network will fragment into unconnected smaller networks and fragment the flow of information. The shift from ‘control’ by blogs to corporate nodes appears to have occurred in July 2009 when the

network betweenness centralisation dipped only to increase in August 2009 with corporate nodes dominating the hub.

A hub of nodes that in January 2009 consisted of blogs dominated the Singapore blogosphere but by the February 2010, the central hubs are consistently corporate nodes. Open public civic spheres are being colonised by closed corporate private markets.

Chapter 6 Themes and Concepts as Cognitive Structure

This chapter presents the findings from the *Leximancer* analysis of the textual data gathered over 15 months, from January 2009 to February 2010, from the Singapore blogosphere. Beginning with the definitions of the various terms used followed by an explanation of the *Leximancer* software and how to read the results. This chapter then provides detailed examples in order to illustrate the analysis carried out. Starting by looking at the dominant themes, the associated concepts and values the chapter makes explicit the cognitive structure that Singapore bloggers are operating within and (re)producing. This chapter answers two questions, ‘is the Internet creating a public sphere?’ and ‘is the discourse persuasive or manipulative?’

Persuasive discourse contains epistemic modality while manipulative discourse contains deontic modality (Blass, 2005:185). The term epistemic refers to that which is concerned with the nature and scope (limitations) of knowledge and the term deontic refers to necessity, duty or obligation, or expressions conveying this. Modality assigns meaning between positive and negative assertions or in other words gives an interpretation of the uncertainty that lies between ‘yes’ and ‘no’ (Halliday & Matthiessen, 2004:147). This chapter presents the themes and concepts that are the context in which the discourse takes place and what agents value - legitimacy, social identity or voice. The themes and concepts are subjective representations of the context.

Theme is related to the discursal, or informational, component; under this heading are brought together the principal options whereby the speaker introduces structure into the discourse and (in the ideal case) ensures ‘comprehension’ – the recognition of the text as a text, and its interpretation along predicted lines (Halliday, 2008:179).

Analysing the themes, concepts and modality of the example quotations, provided below, depends on the example quotations having behind them individual subjectivity that has the relevant knowledge to pass judgement on situations.

The themes and the concepts that co-occur with them, to varying degrees, are the knowledge or cognitive structure of the context as understood by the individual’s subjectivity. Individual subjectivity or rather subjective participant interpretations are formulations of the context in which the speaker or speakers negotiate understanding. If gender, class, ethnicity, age, position or power, operated objectively or even

deterministically on discourse then everyone embedded in those structures would speak the same way. The context is however, not an objective or deterministic constraint on the society or culture but a mental construct of the participants (van Dijk, 2006:163). The discourse, and thereby the themes and concepts, arise because of the contexts controlling them. These contexts are cognitive structures, which ensure relevance while at the same time allowing for subjective interpretation of the constraint as understood by the participants. Therefore, it is not

‘objective’ gender, class, ethnicity or power that control the production or comprehension of text and talk, but whether and how participants interpret, represent and make use of such ‘external’ constraints, and especially how they do so in situated interaction (van Dijk, 2006:163).

These cognitive structures or knowledge only indirectly influences the production and understanding of discourse. The cognitive structures are rarely explicitly referred to in discourse itself, unless to clarify ambiguity or misunderstanding. This knowledge is taken-for-granted and presupposed. Contexts, defined as mental constructs of relevant aspects of the social situation or environment then in turn explain what people say and how they say it (van Dijk, 2006:165-166). These mental constructs are subjective and unique and they contain socially shared knowledge and other beliefs that the participant associates with the theme.

The issue of modality is an issue on what people commit themselves to when they make statements, ask questions, make demands or offers (Fairclough, 2003). There are different ways of doing each of these that make different commitments. The following examples illustrate the points; for instance, if I write ‘Governments that are successful on the Internet operate differently from their laggard counterparts’. I might have written ‘Governments that are successful on the Internet *seem* to operate differently from their laggard counterparts’ or ‘Governments that are successful on the Internet *may* operate differently than their laggard counterparts’ (Fairclough, 2003:165. Emphasis added). Depending on what I actually write commits me to a level of truth. These differences are differences in modality (Fairclough, 2003:165).

According to Halliday and Matthiessen (2004:626), the use of modality is interpersonal projection. In interpersonal projection, the speaker or writer always involves the use of ‘*I think*’, ‘*I say*’, ‘*do you say*’, ‘*do you think*’ and is always implicit unless made explicit by the use of grammatical metaphor in which ideational resources are utilised. Modality is part of the practice of asserting authority of interpretation or understanding of a given set of events or issues. Linguists explain

semantics in terms of modality by reference to morphology, which describes the lexical forms of modality in various languages, syntax describes the complex syntactic configurations, semantics identifies modal meaning, and the various ways they can be expressed (Lillian, 2008:2). This chapter takes a discourse analytic approach and employs the concept of modality to characterise whether texts are orientated towards manipulative or persuasive discourse. Modality appears in the use of various verbs, adjectives, adverbs and certain nominalisations. The most common assertions of modality appear in auxiliary verbs *may, shall, must, need*, and others; sentence adverbs *probably, certainly, regrettably*; adjectives such as *necessary, unfortunate, certain* and verbs and nominalisations; *permit, predict, prove; obligation, likelihood, desirability, authority* (Fowler, 1985: 73). Fowler (1985) proposes five categories of modality, which indicate the attitudes to the proposition they utter.

The attitudes fall into the areas of validity – the speaker expresses greater or lesser confidence in the truth of the proposition; predictability – the future events referred to are more or less likely to happen; desirability – practical, moral, or aesthetic judgments; obligation – speaker's judgment that another person is obligated to perform some action; permission – speaker allows addressee to perform some action (Fowler 1985: 72).

Here I focus on two forms of modality - deontic and epistemic; in deontic the speaker is expressing an obligation and permission and in epistemic modality, they are asserting certainty (Fowler, 1991: 64 and Fowler, 1985: 73). All five categories are part of practices by means of which authority is asserted and my focus here is on deontic and epistemic. The first two categories, validity and predictability fall within the epistemic category and desirability, obligation, and permission fall within the deontic category (Lillian, 2008:3).

The important point to consider is that the assertions being made when using modality are not just 'private' but make explicit the social relations that are at play within text or speech. Modality textures identity at the personal or private level as well as at the social level. When someone makes a strong commitment to a truth, also tied up in this, it is the position of the speaker as being of a social position that allows such truth assertions. Who is able to commit themselves to strong truth claims about aspects of the world (Fairclough, 2003:167)? For example, we can all make predictions, but who has the socially ratified power of predictions?

The focus of this analysis is whether the discourse that is taking place online is persuasive or manipulative in nature. Modality is manipulative as well as persuasive

and only functions one way or the other in specific communicative situations (van Dijk, 2006:372). What van Dijk (2006) classifies as manipulation some may classify as propaganda (Jowett & O'Donnell, 2006). Persuasive discourse has a focus on the reader or listener that ensures the acquiring of knowledge and learning, and the speaker's point of view does not trump the listener. Propaganda or manipulative discourse ensures the speaker's interests whether or not they concur with the recipient's interests (Jowett & O'Donnell, 2006:7). The receiver of the manipulative discourse is unlikely to be aware or conscious of the linguistic structures affecting their perceptions as speaking and understanding are the unconscious aspects of all the processes of human culture (Halliday, 2002: 246). The manipulated must be unaware that they are receiving manipulated information and it is dependent upon there being an imbalance of power between writer/speaker and reader/listener.

[M]anipulation is illegitimate in a democratic society, because it (re)produces, or may reproduce, inequality: it is in the best interests of powerful groups and speakers, and hurts the interests of less powerful groups and speakers (van Dijk 2006: 363-364, italics in original).

6.1. Leximancer Analysis

Using *Leximancer*, the maps of the themes cluster via concept co-occurrence scores so that concepts that sit next to each other have connections between them. The analysis was uniform for all textual data collected during the 15 months from January 2009 to February 2010. To begin I processed all texts from start to finish of the Leximancer analysis in the default settings mode to create initial exploratory maps and then I adjusted a small number of settings. In the pre-processing phase, I included the Malay stop list¹⁵ as well as the preset English stop list. In the settings phase the Automatic Concept Detection is off. In the Concept Seed Editor user defined concepts were added. The Concept Seeds are an amalgamation of seed lists generated by Fisk, Cherney, Hornsey and Smith (2009), designed to extract concepts concerned with issues surrounding legitimacy, social identity and voice during processes of nation building. Then combined with concepts on Singaporean politics; social issues, religion, gay rights and NGO's involved with Singaporean issues (see Appendix 1). I

¹⁵ The 'stoplist' refers to words that demarcate a sentence and are also removed from each sentence in the analysis, it includes punctuation and frequently occurring words like 'and' and 'of' as well as the headers in Internet emails and news groups (Leximancer Manual, 2009)

then translated the English concept seed list into Malay with assistance from a native Malay speaker (see Appendix 2). After adding the manual seed list, the Thesaurus Learning Function ran, which generates the thesaurus definitions automatically with the manually entered seed list. Although the profiled concepts are seeded from words that are relevant to the prior concepts (the seed list), the automatically generated concepts are independent concepts. By inputting the seed list of words the output is more specific to particular themes or issues; i.e. legitimacy, social identity, voice, Singaporean politics, social issues, religion, gay rights and Non-Governmental Organisations (NGO's). However, it allows for other related concepts and themes to be included in the final map.

All maps generated were set to the following parameters; concept size 100%, theme size 30% (default setting) and degree of rotation 0%. The colours of the circles, themes and concepts are 'heat mapped', so the concepts that have the greater level of co-occurrence are closer to the red end of the spectrum. The brightness of a concept correlates with its frequency and so the brighter the concept the more often it appears in the text. The brightness of the links that run between concepts relates to how often the two connected concepts co-occur within the text. The proximity of two concepts indicates how often or not they appear in similar conceptual contexts. The themes are the coloured circles around clusters of concepts. The lines or pathways navigate the most likely path in conceptual space between concepts in order to aid reading the map. The connectivity score reflects the degree, (equivalent to degree score in network analysis) to which the theme is connected to the other concepts in the map.

In order to elaborate on the detailed analysis techniques employed for all 15 months of textual data, I have included here three months, (December 2009, January 2010 and February 2010), of thematic, conceptual and modal data with relevant mappings. Two of the data sets contain the dominant theme of people and one of rights. All other data sets are available in Appendix 3.

6.2. December 2009 – Themes and Concepts

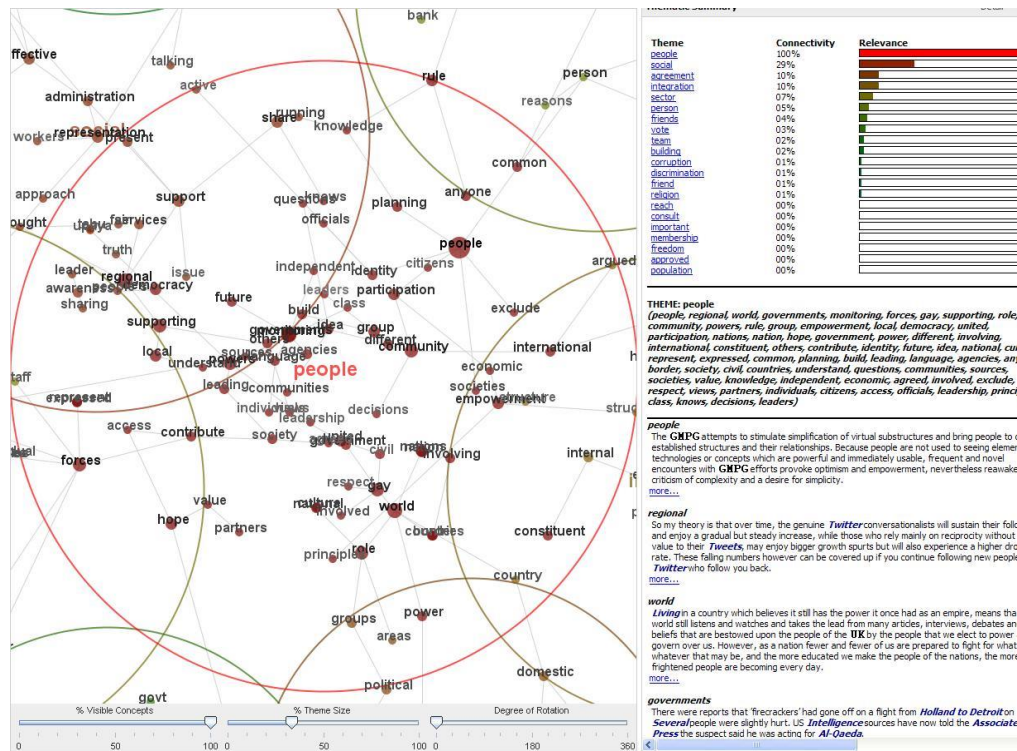


Figure 23 The result of the analysis of textual data collected from 1,233 sites (69.6 MBs) from the Singapore blogosphere in December 2009 with associated concepts.

It is important to note the marked increase in the number of sites downloaded for December 2009; sites that were dormant for months suddenly surged in posts and reflect in the 69.6 MBs of textual data for this month. This reflects the changing levels of engagement with in-active sites being re-activated. Map 1 highlights the theme of PEOPLE as the concept that has a greatest level of connectivity with the following concepts (people, regional, world, governments, monitoring, forces, gay, supporting, role, community, powers, rule, group, empowerment, local, democracy, united, participation, nations, nation, hope, government, power, different, involving, international, constituent, others, contribute, identity, future, idea, national, culture, represent, expressed, common, planning, build, leading, language, agencies, anyone, border, society, civil, countries, understand, questions, communities, sources, societies, value, knowledge, independent, economic, agreed, involved, exclude, respect, views, partners, individuals, citizens, access, officials, leadership, principles, class, knows, decisions, leaders) as the most central theme that grouped concepts together related to social identity. In the centre of Map 1 concepts that are clustered around this theme are ‘community’, ‘agencies’, ‘idea’ ‘group’ and ‘different’,

‘decisions’, ‘united’, ‘leadership’ and ‘views’. The top ranking concepts that appear alongside the theme of PEOPLE are ‘citizens’, ‘planning’, ‘identity’, ‘participation’, ‘anyone’ and ‘exclude’ indicating that social identity was an important factor within the Singapore blogosphere’s conception of ‘people’ in December 2009. In order to conduct modal analysis of the text it is necessary to extract examples of the text that best utilises the theme and related concepts. In order to do this I run a query that searches the text to extract characteristic example quotations. Below are example quotes from a ‘people’ query. Conducting a query using Leximancer produces example quotations that the software regards as characteristic of the use of the concept in the textual data. The first line of each example quotation is a reference to the source document.

2. /december2009/fridae.com/index~1.html/1/1_46

“Living in a country which believes it still has the power it once had as an empire, means that the world still listens and watches and takes the lead from many articles, interviews, debates and beliefs that are bestowed upon the people of the UK by the people that we elect to power and govern over us. However, as a nation fewer and fewer of us are prepared to fight for what is right, whatever that may be, and the more educated we make the people of the nations, the more frightened people are becoming every day.”

Quotation 2 from the advocacy group website *Fridae* contains two examples of deontic modality, “a country *which believes*” and “the more frightened people *are becoming* every day”. It also contains five examples of epistemic modality, “it still *has* the power”, “it once *had* as an empire”, “beliefs that *are* bestowed upon the people of the UK”, “fewer of us *are* prepared to fight for what is right” and “whatever that *may be*”.

3. /december2009/fridae.com/index~1.html/1/1_60

“I continued to ask him further probing questions, and he had no idea that alongside the Jews in WWII, many communities were executed for being different, whether disabled, communist, slow of learning or indeed the nation that we are part of . . . the homosexual community and yet, here we are over sixty years after the end of WWII and still reading about nations wishing to execute men and women for loving and caring for people of the same sex.”

Quotation 3 contains five occurrences of epistemic modality, “I *continued to ask* him further probing questions”, “he *had* no idea”, “many communities *were* executed for being different”, “the nation that *we are* part of” and “here *we are* over sixty years”.

10. /december2009/gawker.com/index~1.html/1/1_88

views, society, responsible, concerned, individual, staff, values, national, governments, citizens, influence, freedom, agencies, rule, expressed, areas, democracy, considered, opinion, contribute, establishment, cultural, majority, demands, informed, leader, regional, violations, powers, presence, justice, independent, identity, leadership, infrastructure, mandate, represented, meetings, governance, democratic, domestic, appropriate, courts, gender, authorities) as the most central theme that grouped concepts together related to social identity. In the centre of Map 2, the concepts that cluster around this theme are ‘infrastructure’, ‘international’, ‘democracy’ ‘organization’ and ‘influence’. The top ranking concepts that appear alongside ‘rights’ are ‘influence’, ‘powers’, ‘establishment’, ‘society’ and ‘concerned’ indicating that legitimacy was an important factor within the Singapore blogosphere’s conception of ‘rights’ in January 2010. Below are example quotes from a ‘rights’ query.

3. /jan2010/singabloodypore.rsfblog.org/index~1.html/1/1_138

“The human rights movement’s ability to raise that price has grown substantially in recent years. Today, activists are capable of exposing abuses most anywhere in the world, shining an intense spotlight of shame on those responsible, rallying concerned governments and institutions to use their influence on behalf of victims, and in severe cases, persuading international prosecutors to bring abusers to justice.”

Quotation 3 from the theme of RIGHTS contains three examples of epistemic modality, “that price *has* grown substantially”, “activists *are* capable of exposing” and “persuading international prosecutors *to bring* abusers to justice”.

5. /jan2010/singabloodypore.rsfblog.org/index~1.html/1/1_166

“Singapore’s legal framework continues to perpetuate an authoritarian state tightly controlled by the ruling People’s Action Party (PAP). Although the party has won all elections since 1959 and is currently represented by 82 of the 84 parliamentarians with full voting rights, it is concerned that the next election, slated for no later than 2011, may demonstrate significant erosion of its popular support.”

Quotation 5 contains four epistemic assertions, “the party *has* won all elections”, “and *is* currently represented”, “it *is* concerned that” and “*may* demonstrate significant erosion”; and one deontic assertion, “*continues to perpetuate* an authoritarian state”.

43. /jan2010/www.littlespeck.com/index~1.html/1/1_2

“Society A bit pushier More people are untraditionally fighting in public for what they think is their rights - but these are mostly foreigners. By Seah Chiang Nee. Read”

Quotation 43 contains three epistemic assertions, “people *are* untraditionally fighting”, “they think *is* their right” and “these *are* mostly foreigners” on the theme of rights and foreigners.

54. /jan2010/www.thinkcentre.org/index~1.html/1/1_23

““ As Singapore begins to emerge from the international financial crisis and focuses on elections that are likely to be held later this year, the government should act to improve its poor human rights record” Human Rights Watch”

Quotation 54 contains one epistemic modality, “Singapore *begins* to emerge” and two of deontic modality “elections that *are likely to be* held later this year” and “government *should act* to improve its poor human rights record” on the theme of RIGHTS and GOVERNMENT.

6.4. February 2010 – Themes and Concepts

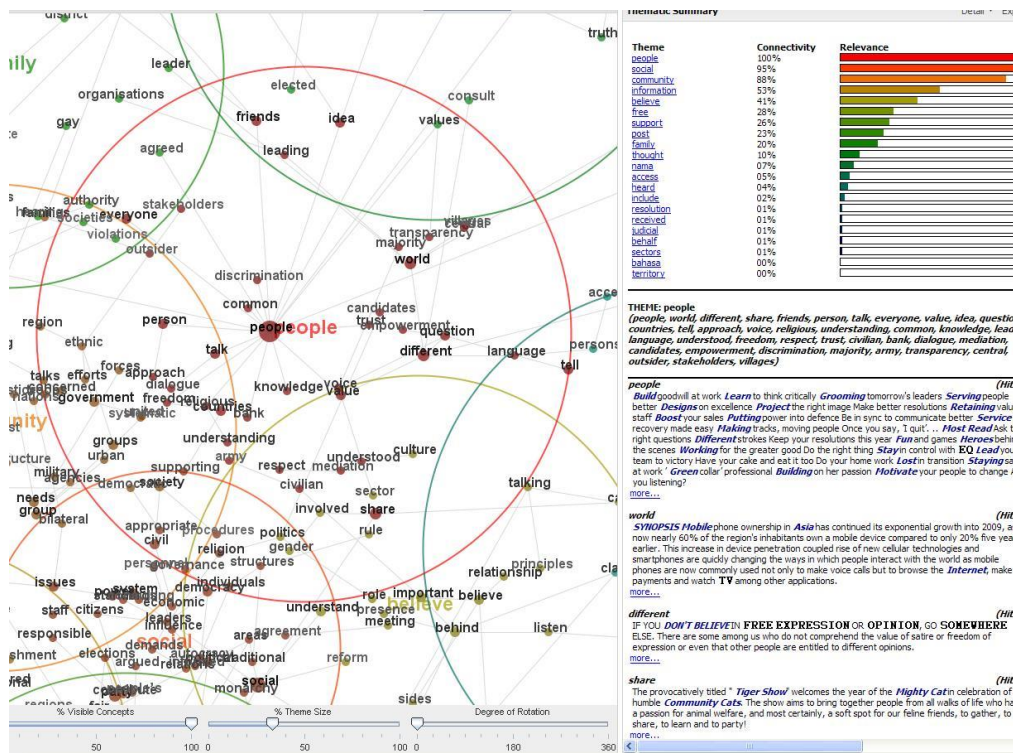


Figure 25 The result of the analysis of textual data collected from 582 sites (18.9 MBs) from the Singapore blogosphere in February 2010 with associated concepts.

Map 3 highlights the theme of PEOPLE (people, world, different, share, friends, person, talk, everyone, value, idea, question, countries, tell, approach, voice, religious, understanding, common, knowledge, leading, language, understood, freedom, respect, trust, civilian, bank, dialogue, mediation, candidates, empowerment, discrimination, majority, army, transparency, central, outsider, stakeholders, villages). In the centre of Map 3 concepts that are clustered around this theme are ‘people’, ‘common’, ‘discrimination’, ‘candidates’, ‘trust’, ‘empowerment’, ‘voice’,

‘knowledge’ and ‘talk’. The top ranking concepts that appear alongside the concept of ‘people’ are the same as for the theme indicating that voice was an important factor within the Singapore blogosphere’s conception of ‘people’ in February 2010. Below are example quotes from a ‘people’ query.

2. /Feb2010/www.temasekreview.com/index~1.html/1/1_28

“Written by Our Correspondent According to influential Asian online gay portal fridae.com, some 85 people including prominent young filmmakers Sun Koh and Royston Tan have lodged police reports last weekend against Lighthouse Evangelism Senior Pastor's disparaging remarks about homosexuals in video clip which was initially posted on his website, but had been taken off after he was hauled up for questioning by the Internal Security Department (ISD) last Monday. Pastor Rony sparked a massive outcry in Singapore for trivialising some teachings of Buddhism and Taoism during a church session which was uploaded to Youtube and widely circulated in cyberspace.”

Quotation 2 on the theme of PEOPLE contains four examples of epistemic modality, “Royston Tan *have* lodged police reports”, “clip which *was* initially posted”, “but *had been* taken off” and “he *was* hauled up” on the topic of remarks made in a video and posted online about homosexuals.

3. /Feb2010/tomorrow.sg/index~1.html/1/1_169

“It takes guts to crunch that shiny black carapace complete with deadly stinger tail. Supposedly good for rheumatism, twitches and convulsions, but some people may start convulsing at the mere suggestion of eating scorpions.”

While quotation 3 contains one example of deontic modality on the theme of PEOPLE; “people *may* start convulsing”.

6. /Feb2010/singabloodypore.rsfblog.org/index~2.html/1/1_257

“Police of the southern province of Tay Ninh and guards at HCM City’s Tan Son Nhat airport on February 9 rescued nine girls who were about to sold to brothels in Singapore. Police arrested three people, Tran Thi Kim Ngan, 19 from Tay Ninh, Ly Thanh Mong, 25 from Vinh Long province and Do Van Thanh Nhut, 21 from HCM City when they were carrying out formalities for nine girls to leave Vietnam to Singapore at the Tan Son Nhat airport.”

Quotation 6 on the theme of PEOPLE contains two examples of epistemic modality, “girls who *were* about to sold to brothels” and “when they *were* carrying out formalities”.

9. /Feb2010/www.daphnemaia.com/index~1.html/1/1_156

“*Tonight’s* little dinner was held in a cozy private dining room overlooking *Orchard Road* for just 11 people, and the menu served up to the guests and hosts was a mouth-watering line-up of foie gras pate, mushroom soup, filet mignon, and chocolate fondant.”

Quotation 9 on the theme of PEOPLE contains two epistemic modal assertions, “dinner *was* held in a cozy private dining room” and “hosts *was* a mouth-watering line-up”.

10. /Feb2010/www.ingridmak.net/index~1.html/1/1_184

“So the story follows Doctor Parnassus (Christopher Plummer) and his traveling theater troupe, which includes Anton (Andrew Garfield), Percy (Verne Troyer) and his daughter Valentina (Lily Cole) as they try to show people the enlightenment within life – through a mirror which brings u to the imaginarium that’s some sort of dreamland where your wildest fantasy are realized. Mr. Nick (Tom Waits) aka the Devil, on the other hand, allows people to get quick gratification they desire.”

Quotation 9 on the theme of PEOPLE contains four examples of epistemic modality, “*which* includes Anton”, “a mirror *which* brings u to the imaginarium”, “wildest fantasy *are* realized” and “people *to get* quick gratification”.

What follows are the knowledge pathway (illustrates the relationship and direction of the concepts under examination) scores for ‘discrimination’ and ‘people’ and example quotations from the month of February 2010 for a query on ‘discrimination’ within the theme of PEOPLE in order to elaborate on its high co-occurrence rate for that month. The concept ‘discrimination’ does appear in the theme of PEOPLE in April 2009 but correlates with the theme of FRIENDS. Table 1 contains the results of running a knowledge pathway for ‘discrimination’ and ‘people’ from April 2009 to February 2010. A knowledge pathway defines the most likely path in conceptual space from one concept to the next and offers insight into the indirect relationships that contribute to meaning in the text (Leximancer Manual, 2009). Reading the concepts as nodes and the lines between them as links the number of moves between them are geodesic steps.

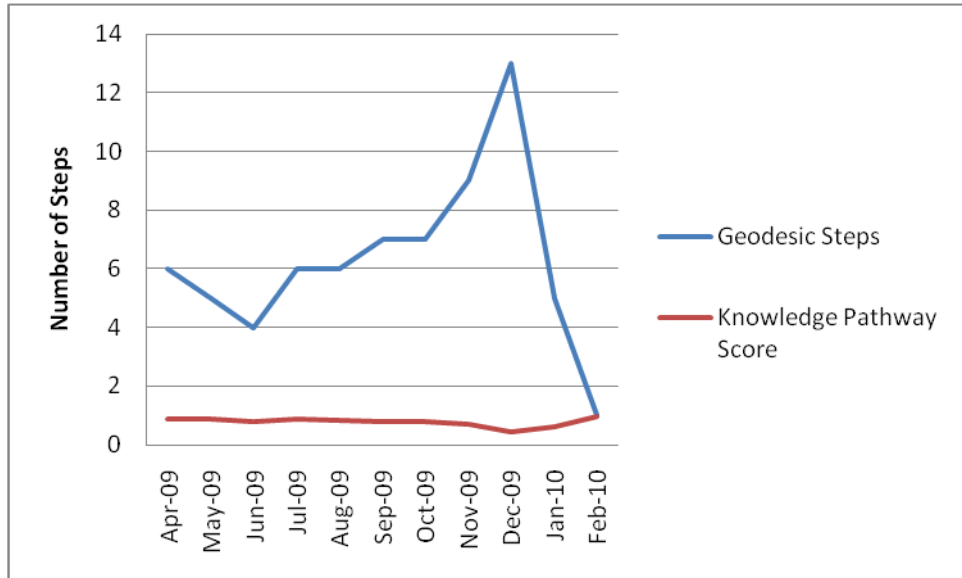


Figure 26 The trajectory of the concepts ‘discrimination’ and ‘people’ from April 2009 to February 2010

Theme	Connectivity	Relevance
people	100%	100%
social	29%	29%
agreement	10%	10%
integration	10%	10%
sector	07%	07%
person	05%	05%
friends	04%	04%
vote	03%	03%
team	02%	02%
building	02%	02%
corruption	01%	01%
discrimination	01%	01%
friend	01%	01%
religion	01%	01%
reach	00%	00%
consult	00%	00%
important	00%	00%
membership	00%	00%
freedom	00%	00%
approved	00%	00%
population	00%	00%

Table 3 List of themes for December 2009: Ranked by connectivity

As the geodesic steps score for ‘discrimination’ and ‘people’ increased in December 2009 to 13; the concept ‘discrimination’ appeared in the textual data as a theme, ranked number 12 with 0.1% connectivity in the same month (see table 3). The knowledge pathway scores are ranked from zero (0) to one (1) with a score of one (1) being the highest level. In April 2009, the knowledge pathway score for ‘discrimination’ and ‘people’ was 0.89. In December 2009, the knowledge pathway score dipped to 0.45 while appearing as a theme ranked number 12 with 0.1% connectivity (see Table 3 above). In February of 2010, the knowledge pathway score

for ‘discrimination’ and ‘people’ was 0.97 (with a score of 1 being the highest possible) of co-occurrence between the two concepts.

The following are the example quotations that result from a query for the concept of ‘discrimination’ in February 2010 and a modal analysis of the quotations.

1. /Feb2010/freecomchurch.org/index~1.html/1/1_10

“The FREE COMMUNITY CHURCH affirms that all individuals are persons of sacred worth and created in God's image. Given the discrimination that Lesbian, Gay, Bisexual and Transgendered (LGBT) persons still face in society, our Church affirms that same-sex relationships are consistent with Christian faith and teachings, when lived out in accord with the love commandments of Jesus.”

This example quotation contains four examples of deontic modality; “The FREE COMMUNITY CHURCH *affirms* that”, “*Given* the discrimination that Lesbian, Gay, Bisexual and Transgendered (LGBT) persons *still face* in society”, “Church affirms that same-sex relationships *are consistent*” “when *lived out in accord with* the love commandments of Jesus”. As well as two occurrences of epistemic modality; “*created* in God's image” and “all individuals *are* persons”.

2. /Feb2010/freecomchurch.org/index~1.html/1/1_12

“Instead, it is discrimination based on sexual orientation and homophobia that are inconsistent with Christian teachings. We welcome all LGBT persons to our family.”

The second example quotation from the same website contains three examples of epistemic modality; “*it is discrimination* based on sexual orientation and homophobia”, “*that are inconsistent with*” and “We *welcome all LGBT* persons to our family”.

3. /Feb2010/blog.aaron-ng.info/index~1.html/1/1_66

“I am not against a liberal immigration policy, nor is this blog entry intended to engender any form of discrimination against PRs or new citizens. In fact, I like a more diverse Singapore, but the speed at which we are allowing immigration in order to counter low birth rates is certainly detrimental to native Singaporeans, especially those on the lower rungs of the education ladder or the workforce, and the best solution is to bring Singapore's fertility levels back up.”

The third quotation of characteristic usage of the concept of ‘discrimination’ in the text contains eight occurrences of deontic modality; “*I am not against* a liberal immigration policy”, “*nor is this* blog entry intended to engender any *form of discrimination* against PRs”, “*In fact, I like a more diverse Singapore*”, “*but the speed at which we are allowing* immigration”, “to counter low birth rates *is certainly detrimental*” and, “*the best solution is to bring* Singapore's fertility levels back up”.

4. /Feb2010/blog.simplyjean.com/index~1.html/1/1_92
 “Sadly, that’s how misconceptions are formed and this begets fear which in turn begets discrimination.”

Quotation 4 contains two examples of epistemic modality; “*that’s* how misconceptions” and “*are* formed”; and two occurrences of deontic modality, “*begets* fear” and “*begets* discrimination”.

6.5. Summary

Table 4 contains a summary of the results of the analysis of the *Leximancer* defined dominant themes and co-occurring concepts, values and the text that contains both epistemic and deontic modality for all textual data. The complete data analysis with maps is in Appendix 3.

January 2009	Modality
<p><i>Cognitive Structure</i></p> <p><i>Dominant Theme:</i></p> <p>GOVERNMENT - ‘constitution’, ‘society’, ‘leader’, ‘democratic’, ‘legislation’</p> <p><i>Concepts:</i></p> <p>‘opinion’, ‘views’</p> <p><i>Value:</i></p> <p>voice</p>	<p><i>Epistemic:</i></p> <p>“The <i>fact</i>”, “<i>it is</i> untenable”, “Government <i>will</i> spend \$5.1 billion to <i>help</i> Singaporeans”, “Government <i>will</i> extend \$5.8 billion of government capital to <i>stimulate</i>” , “this system <i>is</i> actively maintained by an <i>autocratic</i> government”, “<i>is</i> predicated on Lee Kuan Yew's idea”, “<i>are</i> more than ordinarily endowed”, “who <i>has</i> bludgeoned into the minds”, “<i>it does</i> have broad support” and “the electorate <i>is</i> increasingly becoming vocal”</p> <p><i>Deontic:</i></p> <p>“the government <i>will</i> have to”, “<i>help</i>” “autocratic” , “bludgeoned” and “<i>will</i> be tolerated”</p>
<p>February 2009</p> <p><i>Dominant Theme:</i></p> <p>PEOPLE - ‘active’, ‘meeting’, ‘sources’, ‘administration’, ‘structures’</p> <p><i>Concepts:</i></p> <p>‘sources’, ‘national’, ‘freedom’, ‘identity’, ‘culture’, ‘national’, ‘freedom’, ‘identity’</p> <p><i>Value:</i></p> <p>social identity, voice</p>	<p><i>Epistemic:</i></p> <p>“<i>was</i> “a sad day for Singapore””, “<i>exists</i> for all people”, “We <i>used to</i> have just three”, “we <i>are</i> now pushing 5 million”, “There <i>are</i> many ways”, “<i>are</i> cities that” and “<i>charms</i> <i>are</i> never”</p> <p><i>Deontic:</i></p> <p>“<i>has</i> “exposed the hypocrisy”, “<i>should</i> have lobbied” , “<i>has</i> caused great misery”, “<i>having</i> good business” “how <i>can</i> purely profit-driven businesses”, “<i>believe</i> they need” “I <i>would</i> never say” and “I <i>have</i> come away”</p>
<p>March 2009</p> <p><i>Dominant Theme:</i></p>	<p><i>Epistemic:</i></p>

<p>TALKING - syarikat (company), pihak (party), kami (us), tradisional (traditional), and 'alasan' (reason)</p> <p><i>Concepts:</i></p> <p>'perhatian' (attention), 'others', and 'issues'</p> <p><i>Value:</i></p> <p>voice</p> <p>April 2009</p>	<p>"is actually", "was carried out", "was so bright", "I can not work" "companions are good" "I have a problem" "he is the one" and "what is virtual"</p> <p><i>Deontic:</i></p> <p>"I must again undergo", "I really can do", "people should" and "him was Allam"</p>
<p><i>Dominant Theme:</i></p> <p>PEOPLE - 'participation', 'includes', 'build' 'community' and 'active'</p> <p><i>Concepts:</i></p> <p>'discussions', 'value', 'support' and 'share'</p> <p><i>Value:</i></p> <p>voice</p> <p>May 2009</p>	<p><i>Epistemic:</i></p> <p>"as it was the last day", "is built" "are on the", "was confusing", "There is a divide" and "is labelled as detrimental"</p> <p><i>Deontic:</i></p>
<p><i>Dominant Theme:</i></p> <p>PEOPLE - 'majority', 'knowledge', 'understood' and 'social'</p> <p><i>Concepts:</i></p> <p>'meeting', 'important', 'effects', 'truth', 'talks' and 'understood'</p> <p><i>Value:</i></p> <p>voice</p> <p>June 2009</p>	<p><i>Epistemic:</i></p> <p>"scholars have addressed", "It is now clear" "Photos of Abu Ghraib are being withheld", "they are inhuman and barbaric", "its too easy [sic]", "the truth sincerely", "the truth as precisely", "they've unwittingly" "they have studied 'too much'", "this is nice", "we really have Earth Hour", "think that you are saving the Earth", and "my computer is essential", "response is a two-stage one", "it is amazing" and "one is famous"</p> <p><i>Deontic:</i></p> <p>"counselling needs to be developed", "they can't afford", "advice could well find", "knowledge-based economy doesn't want people", "they can always be assured", "considered was damning and sinning" and "people will be starting"</p>
<p><i>Dominant Theme:</i></p> <p>POLITICAL - 'political', 'responsibility', 'elections', 'institution', 'government' and 'accept'</p> <p><i>Concepts:</i></p> <p>'responsibility', 'elections', 'institution', 'government', 'accept' 'independence' and 'policies'</p> <p><i>Value:</i></p> <p>legitimacy</p>	<p><i>Epistemic:</i></p> <p>"Siew Kum Hong was vocal about gay rights", "that he and Maruah accepted foreign handouts", "is dedicated to protecting", "which provides long-term care", "Maybe we have telepathy", "terrorism has raised concerns", "nation is facing its worst economic crisis", "which was rapidly drafted" and "which has ruled the city state"</p> <p><i>Deontic:</i></p> <p>"Parliament to get more diverse voices", "some may construe", "the neutrals will deem it" and "powers could be used by authorities"</p>

<p>July 2009</p> <p><i>Dominant Theme:</i></p> <p>PUBLIC - 'responsibility', 'economic', 'sectors' 'community' 'bodies' and 'standards'</p> <p><i>Concepts:</i></p> <p>'systems', 'trust', 'systematic', 'sector', 'services' and 'inform'</p> <p><i>Value:</i></p> <p>social identity</p>	<p><i>Epistemic:</i></p> <p>"public service <i>is not</i> looking for conformists and 'yes-men'", "<i>is a good step</i>", "mavericks <i>is</i> equipped" "article <i>will</i> begin", "Singapore woman <i>are</i> constructed", "It <i>will then</i> demonstrate", "gender images <i>have</i> corresponded", "It <i>came as</i> a shock", "we <i>were</i> shown evidence", "<i>are</i> selling", "the public sphere <i>produced</i> a new public vocabulary", "<i>continues</i> to inform", "political liberalisation <i>are</i> described", "two pieces <i>were</i> widely discussed", "in particular <i>drew</i> a strong reaction from the state", "<i>described</i> as more appropriate", "heterosexuals <i>invites</i> lewd remarks", "beatings, gay sex <i>has been</i> a taboo" and "if the law <i>was</i> repealed."</p> <p><i>Deontic:</i></p> <p>"it <i>was obviously</i> a misleading", "the public <i>into</i> believing in", "it <i>can only be</i>", "<i>most respected</i> restaurant critics" and "this <i>rigorous system</i>"</p>
<p>August 2009</p> <p><i>Dominant Theme :</i></p> <p>PUBLIC - 'integration', 'important', 'talks' 'needs' 'domestic', 'opinion', 'cultural', 'agenda, and 'nations'</p> <p><i>Concepts:</i></p> <p>'region', 'international', 'troops', 'military' and 'appropriate'</p> <p><i>Value:</i></p> <p>social identity</p>	<p><i>Epistemic:</i></p> <p>"there <i>are</i> more faces to a company" "there <i>were</i> three years ago", "there <i>are</i> more public inquirers", "world <i>is</i> rife", "the gaps <i>that</i> grow", "influence <i>can</i> command", "<i>rises</i> a little lower in public regard", "taxi-cabs <i>were</i> introduced" and "it <i>was</i> brought"</p> <p><i>Deontic:</i></p> <p>"<i>The pathetic</i> level of journalism", "newspapers <i>just never</i>", "public to suspect <i>it to be</i> part of ongoing anti-vice" and "newspapers <i>just never</i>"</p>
<p>September 2009</p> <p><i>Dominant Theme :</i></p> <p>PEOPLE - 'social', 'freedom', 'partners' 'relations', 'consulting' and 'agencies'</p> <p><i>Concepts:</i></p> <p>'talk', 'force', 'decision', 'believe', 'understand' and 'district'</p> <p><i>Value:</i></p> <p>voice</p>	<p><i>Epistemic:</i></p> <p>"Secularisation <i>due to</i> three crucial", "Descartes <i>attempted to</i> find a truth", "everybody <i>could</i> agree", "all people of goodwill <i>could</i> live together", "among people <i>can never</i> be justified", "One <i>can</i> find murderers", "We <i>reproduce</i> the report", "We <i>also would</i> like to", "who <i>made</i> this event" and "Were you <i>from</i> any"</p> <p><i>Deontic:</i></p> <p>"people <i>affectionately</i> remembers"</p>
<p>October 2009</p> <p><i>Dominant Theme :</i></p> <p>PUBLIC - 'central', 'transparency', 'including' 'demands' and 'address'</p> <p><i>Concepts:</i></p>	<p><i>Epistemic:</i></p> <p>"<i>had</i> participated in a protest", "<i>was conducted</i> for SDP", "<i>we have</i> the monitoring problems", "that <i>have</i> low transaction", "and <i>are</i> the most susceptible", "technocrats <i>can be</i> air-dropped", "that <i>are</i> non sequitur (to an expert)", "<i>has been</i> attempting", "<i>happens to be</i> false", "<i>happens to be</i> true", "<i>has managed</i> to make enemies", "London <i>will confer</i> the Queen Elizabeth II",</p>

<p>‘policy’, ‘monitoring’, ‘vote’ and ‘reform’</p> <p>Value: voice</p> <p>November 2009</p>	<p>“Prof Chan <i>is the first</i> Singaporean”, “Fridae <i>has organised</i>”, “Fridae <i>has financially</i>”, “it <i>was first held in 2005</i>”, and “<i>was also a beneficiary of Fridae’s Milk Fundraising Gala Premiere</i>”</p> <p><i>Deontic:</i></p> <p>“<i>who was then being unjustly</i>”, “<i>we would demand transparency and accountability</i>” and “<i>do not permit a high degree</i>”, “the public almost always <i>does not want to listen</i>”, “<i>does not believe in the government’s explanations</i>” and “<i>but wants to make noises</i>”</p>
<p><i>Dominant Theme :</i></p> <p>GOVERNMENT - ‘population’, ‘governments’, ‘agenda’ ‘represent’ and ‘freedom’</p> <p><i>Concepts:</i></p> <p>elected’, ‘leaders’, ‘persons’, ‘standards’, ‘corruption’ and ‘families’</p> <p>Value: legitimacy</p> <p>December 2009</p>	<p><i>Epistemic:</i></p> <p>“the government <i>is sticky</i>”, “it <i>didn’t stop</i>”, “Hospital porters <i>would also soon enjoy</i>”, “<i>was held on 19 November 2009</i>”, “the event <i>was</i> Guest-of-Honour Chairman of the National Research Foundation Dr Tony Tan”, “<i>have consistently ranked Singapore highly</i>”, “<i>has a well-established legal framework</i>”, “that <i>have been ranked</i>”, “<i>application was rejected without explanation</i>”, “<i>human rights violations is better</i>”, “Singapore <i>has won accolades</i>”, “NUH <i>has been lauded in local papers</i>”, “<i>what is known as responsible outsourcing</i>”, “<i>don’t take advantage</i>”, “Chan Sek Keong <i>has said</i>” and “the balance between defamation and free speech <i>was</i> “much misunderstood””</p> <p><i>Deontic:</i></p> <p>“they <i>could not disclose</i>”, “Asian mentality on society <i>values stability above anything else</i>”, “Singapore government <i>could do to improve her services</i>” and “that critics <i>may be missing the point</i>”</p>
<p><i>Dominant Theme:</i></p> <p>PEOPLE - ‘community’, ‘agencies’, ‘idea’ ‘group’ ‘different’ ‘decisions’, ‘united’, ‘leadership’ and ‘views’</p> <p><i>Concepts:</i></p> <p>‘citizens’, ‘planning’, ‘identity’, ‘participation’, ‘anyone’ and ‘exclude’</p> <p>Value: social identity</p> <p>January 2010</p>	<p><i>Epistemic:</i></p> <p>“it still <i>has the power</i>”, “it once <i>had as an empire</i>”, “<i>beliefs that are bestowed upon the people of the UK</i>”, “fewer of us <i>are prepared to fight for what is right</i>”, “whatever that <i>may be</i>”, “I <i>continued to ask him further probing questions</i>”, “he <i>had no idea</i>”, “many communities <i>were executed for being different</i>”, “the nation that <i>we are part of</i>”, “here <i>we are over sixty years</i>”, “unable to spend money”, “<i>Will recent recessions leave similar psychological scars</i>”, “In <i>the era of the instant web</i>”, “how hard <i>is it to get credible information</i>”, “While <i>being constantly inundated</i>” and “<i>it’s hard to differentiate</i>”</p> <p><i>Deontic:</i></p> <p>“a country <i>which believes</i>” and “the more frightened people <i>are becoming every day</i>”</p>
<p><i>Dominant Theme:</i></p>	<p><i>Epistemic:</i></p>

<p>RIGHTS - 'infrastructure', 'international', 'democracy', 'organization' and 'influence'</p> <p><i>Concepts:</i></p> <p>'influence', 'powers', 'establishment', 'society' and 'concerned'</p> <p><i>Value:</i></p> <p>legitimacy</p> <p>February 2010</p>	<p>"that price <i>has</i> grown substantially", "activists <i>are</i> capable of exposing", "persuading international prosecutors <i>to bring</i> abusers to justice", "the party <i>has</i> won all elections", "and <i>is</i> currently represented", "it <i>is</i> concerned that", "<i>may</i> demonstrate significant erosion", "people <i>are</i> untraditionally fighting", "they think <i>is</i> their right", "these <i>are</i> mostly foreigners" and "Singapore <i>begins</i> to emerge"</p> <p><i>Deontic:</i></p> <p>"elections that <i>are likely to be</i> held later this year", "<i>continues to perpetuate</i> an authoritarian state" and "government <i>should act</i> to improve its poor human rights record"</p>
<p><i>Dominant Theme:</i></p> <p>PEOPLE - 'people', 'common', 'discrimination', 'candidates', 'trust', 'empowerment', 'voice', 'knowledge' and 'talk'</p> <p><i>Concepts:</i></p> <p>'common', 'discrimination', 'candidates', 'trust', 'empowerment', 'voice', 'knowledge' and 'talk'</p> <p><i>Value:</i></p> <p>voice</p>	<p><i>Epistemic:</i></p> <p>"Royston Tan <i>have</i> lodged police reports", "clip which <i>was</i> initially posted", "but <i>had been</i> taken off", "he <i>was</i> hauled up", "girls who <i>were</i> about to sold to brothels", "when they <i>were</i> carrying out formalities", "dinner <i>was</i> held in a cozy private dining room", "hosts <i>was</i> a mouth-watering line-up", "<i>which</i> includes Anton", "a mirror <i>which</i> brings u to the imaginarium", "wildest fantasy <i>are</i> realized" and "people <i>to get</i> quick gratification"</p> <p><i>Deontic:</i></p> <p>"people <i>may</i> start convulsing".</p>

Table 4 Summary of thematic, conceptual and modal analysis of 15 data sets.

From table 4 the most prevalent form of discourse is epistemic modality for each of the dominant themes from January 2009 to February 2010. Epistemic Modality occurred 160 times (76.2%) and Deontic Modality occurred 50 times (23.8%) in total. There are a number of recurring dominant themes, PEOPLE 6 counts (42.8%), PUBLIC 3 counts (21.4%), GOVERNMENT 2 counts (14.2%), with others appearing only once; POLITICAL 1 count (7.1%), RIGHTS 1 count (7.1%), and TALKING 1 count (7.1%). The most prominent value is voice (8 counts, (53.3%)), followed by social identity (4 counts, (26.6%)), and finally legitimacy (3 counts, (20%)).

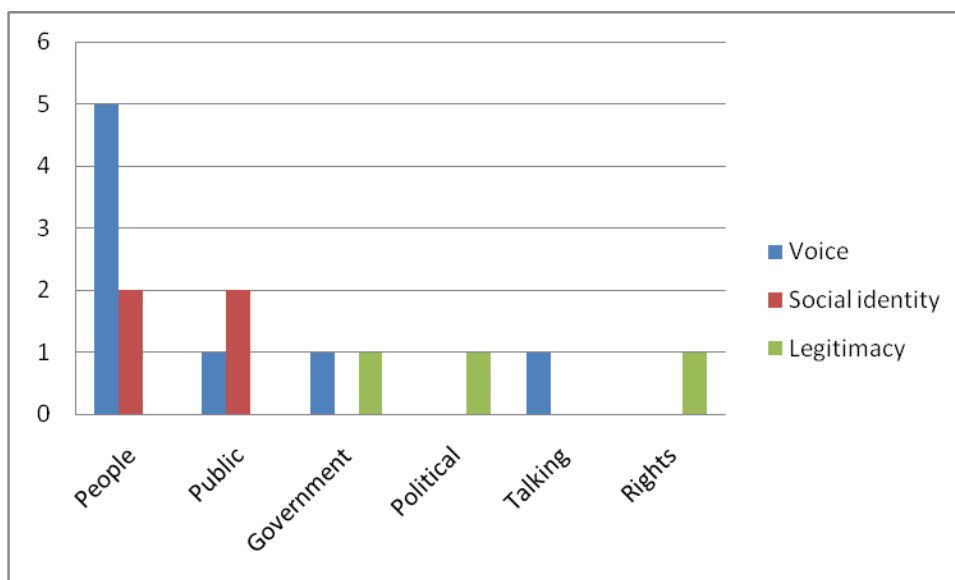


Figure 27 Occurrence rate of Themes with associated Value of 14 data sets.

For February 2010, the concepts most closely associated with the theme of PEOPLE contained the concept of ‘discrimination’ this concept had until then remained on the periphery of various dominant themes. The example quotations that result from a query for the concept of ‘discrimination’ in February 2010 and a modal analysis of the quotations shows a strong spike in deontic modality 15 counts (68.2%) with epistemic registering 7 counts (31.8%).

Deontic modality appears in all themes apart from the theme of people in April 2009. Whether the appearance of deontic modality is manipulative depends on the power relationship between the author and the perceived or imagined reader.

Month	Theme	Opposition	Support	Topic
Jan-09	GOVERNMENT	✓		government
Feb-09	PEOPLE	✓		business
Mar-09	TALKING		✓	identity and religion
Apr-09	PEOPLE			[no deontic occurred]
May-09	PEOPLE	✓		knowledge-based economy
Jun-09	POLITICAL		✓	parliament
Jul-09	PUBLIC	✓		system
Aug-09	PUBLIC	✓		journalism

Sep-09	PEOPLE		✓	location
Oct-09	PUBLIC	✓		government
Nov-09	GOVERNMENT		✓	government
Dec-09	PEOPLE	✓		identity
Jan-10	RIGHTS	✓		government
Feb-10	PEOPLE	✓		discrimination

Table 5 Reading the occurrence of deontic modality from the characteristic quotations as in support or opposition to the topic.

In table 5, in the case of January 2009 under the theme of GOVERNMENT, deontic modality takes an oppositional stance to the concept of ‘government’; for February 2009 under the theme of PEOPLE, deontic modality appears in opposition to the concept of ‘business’; for March 2009 under the theme of TALKING it is in support of a private identity and religion; for May 2009 under the theme of PEOPLE it is in opposition to the concept of ‘knowledge-based economy’; for June 2009 under the theme of POLITICAL it is in support of ‘parliament’; in July under the theme of PUBLIC in opposition to ‘system’; in August 2009 under the theme of PUBLIC in opposition to the concept of ‘journalism’; in September 2009 under the theme of PEOPLE in support of ‘location’; for October 2009 under the theme of PUBLIC in opposition to ‘government’; in November 2009 under the theme of GOVERNMENT in support of ‘government’; for December 2009 under the theme of PEOPLE in opposition to ‘identity’; in January 2010 under the theme of RIGHTS in opposition to ‘government’; in February 2010 under the theme of PEOPLE in opposition to discrimination.

Therefore, while the textual data provides evidence to support the position that the Internet is creating an oppositional space whereby public spheres of persuasive discourse take place, it is also perpetuating dominant themes of manipulative discourse.

This chapter looked at the appearance of persuasive discourse, which contains epistemic modality, and manipulative discourse, which contains deontic modality (Blass, 2005:185). The appearance of epistemic modality within the text is not in itself uninteresting and as laid out above it dominates the discourse of the characteristic quotations for each dominant theme over the period of data collection. This largely

epistemic space does add weight to the position that the Internet is creating public spheres in Singapore. What is more interesting is where and when deontic modality appears and the themes in which it appears. The appearance of the concept of ‘discrimination’ under the theme of PEOPLE in February 2010 is a case in point. The manipulative discourse dominates the characteristic example quotation on the concept of ‘discrimination’. The authors target homosexuals and immigrants and “(re)produces, or may reproduce, inequality: it is in the best interests of powerful groups and speakers, and hurts the interests of less powerful groups and speakers” (van Dijk 2006: 363-364). The authors of these texts may or may not be members of the dominant elite. However, they are showing tendencies that they believe in and act according to already present manipulated cognitions. Racist and homophobic ideologies serve as a permanent basis for the discrimination of immigrants and homosexuals.

Chapter 7 Network Ethnography of Singapore's Political Blogosphere

7.1. Introduction

An ethnography cannot give us a glimpse of reality that resides beyond the story told within the ethnography; the story is all (Kent, 1993:67).

Conducting ethnography that involves the use of the Internet has been termed many things; “virtual ethnography” according to Hine (2000), “network ethnography” (Howard, 2002), “netnography” (Kozinets, 2010), “cyberethnography” (Domínguez et al., 2007) and “webnography” (Puri, 2007). All according to Androutsopoulos (2008) are attempts to move the methodology and method of ethnography to settings that involve computer-mediated communication (CMC). Aside from the problematic notion of conducting social research of any kind in contemporary settings without including some form of CMC component this chapter moves beyond such a debate by questioning the distinction and therefore the methodological utility of the term “virtual” when applied to any setting (Rogers, 2009).

With the end of the virtual/real divide, however useful, the Internet may be rethought as a source of data about society and culture. Collecting it and analyzing it for social and cultural research requires not only a new outlook about the Internet, but method, too, to ground the findings. Grounding claims in the online is a major shift in the purpose of Internet research, in the sense that one is not so much researching the Internet, and its users, as studying culture and society with the Internet (Rogers, 2009:29).

Taking one-step further, I would argue the same point with regard to the use of prefixes such as “cyber”, “net” and “web” to ethnography of the Internet.

Network ethnography that addresses issues of technological and organisational determinism by allowing for the social and cultural is the focus of this chapter. Another aim is to allow agency to play a more dominant role in the debate. My major concerns with research conducted on online networks and, of the Singapore blogosphere (Lin, Sundaram, Chi, Tatemura, and Tseng, (2006) and Hurst (2006) are that they led to technological and/or organisational determinism. A social network approach that involves an element of ethnography should bridge the gap (Howard, 2002) and avoid *nodocentricism* (Mejias, 2010). Nodocentricism is the assertion that the researcher only needs to account for the activity of the nodes. Howard argues that network ethnography is the process of using ethnographic field methods on sites or nodes selected by social network analysis. This lays the network ethnographic

approach open to the criticism that it is nodocentric. Nodocentricism raises the issue that nodes are only able to see other nodes and privileges nodes over that which the map does not represent; providing an incomplete representation of the phenomenon in question. It further asserts that that which is not a part of the network may only exert influence of the network by becoming a node in the network. The network, or rather the discourse of network science according to Mejjias (2010) is all-encompassing; leaving nothing beyond its scope, or reducing that which lies beyond the boundaries of network science discourse to mere epiphenomena. This limits the potential for the creation of other forms of organisational structure. Therefore, the issue in question is what is the “white space” of the maps presented in the figures throughout previous chapters? Mejjias refers to this “white space” as the *paranode*,

[This] space gives nodes their history and identity: shifts in the paranodal translate into changes in the location of nodes and the relationship between them, and consequently into changes in the network itself. In short, the instability of paranodal space is what animates the network, and to attempt to render paranodal space invisible is to arrive at less, not more, complete explanations of the network as a social reality (2010; 612).

In considering Mejjias’ position, I prefer the term “white space” to paranodal space as the *para* of the term implies a phenomenon that lies outside normal experience and does not manifest itself empirically, neither directly nor indirectly. This implies that phenomenon that lies outside direct experience is not having an affect or that the phenomena are not inter-dependent. To move beyond the nodocentric approach this chapter is a brief account of the ethnographic element of the research that I carried out from July 2003 to February 2010. It will focus, after describing the processes of gaining access and presence, on the period from January 2009 to February 2010.

7.2. Network Ethnography

Ethnography is useful in capturing and categorising community symbols and keywords, their usage demarcates social boundaries, and roles (Howard, 2002:257) and it explains the context of the Singapore blogosphere.

7.2.1 Anonymous and Authentic

I anonymously established a presence in the Singapore blogosphere in July 2003 by setting up a blog called, Singabloodypore¹⁶ while living and working in Singapore. The main description of the site was as follows,

“Social and political issues related to Singapore and the South East Asia region. A blog, which attempts to do [sic] so in a non-trivial manner treating opposing views with the respect they deserve. Contributions are welcomed from all regardless of your political persuasion.”

My motivation for blogging from my office desk in Singapore with hindsight seems to reinforce Schoneboom’s (2007) position on working bloggers. Schoneboom (2007:419-420) argues that, by pursuing identities outside of the working environment bloggers are creating an identity that increases their resilience to corporate culture. In a collaborative form with other work bloggers, a public dialogue that is “counter-hegemonic” (Schoneboom (2007:403) activity against the organisational culture in which I worked. An early post from 3 July 2003 may help to illustrate this point,

“well today at work the natives have asked me to fill in a small piece of paper, ticking boxes as i go along... declaring that I am aware of and that i [sic] am going to abide by the rules and regulations of the organisation... [...]

these multiple lists have been drawn up without my knowledge or involvement and have in the past been known to change without prior consultation. So this results in myself and my fellow workers having to abide by rules that we don't even know exist. its [sic] all getting very Kafkaesque on this little island.”¹⁷

My initial idea was to try in some sense make up for the lack of time that I was able to allocate to research. I was lecturing up to 8 hours per day, sometimes 6 days a week. What started as a creative outlet gradually shifted focus to the social and political aspects of living and working in Singapore.

The first pseudonym I used was - John Hicky - and I set the blog up using *Blogger*, with periods of mirroring and moving the site to *Wordpress*, *Civiblog* and finally a free webhosting service offered by *Reporter Sans Frontier*¹⁸ in February 2007. Upon leaving Singapore in October 2004, I began to post using my real name and the pseudonym - soci - in November 2005. The reason I had been blogging anonymously, while living in Singapore, was that the Media Development Authority

¹⁶ <http://singabloodypore.blogspot.com>

¹⁷ <http://singabloodypore.blogspot.com/2003/07/well-today-at-work-natives-have-asked.html>

¹⁸ <http://singabloodypore.rsfblog.org>

(MDA) could ask me to register with them. The legislation states that “individuals, groups, organisations or corporations engaged in providing any programme for the propagation, promotion or discussion of political and religious issues relating to Singapore” (Singapore Broadcasting (Class Licence) Notification (N1, 2004 Revised Edition) reg. 3) had to register with the authority (Seng, 2008). It was this potential registration demand that resulted in a large number of bloggers remaining anonymous.

The ability to be anonymous and to maintain anonymity for the bloggers involved in the Singapore political blogosphere continues to be a key concern. One blogger called *Pseudonymity* states, “Using a pseudonym and remaining anonymous doesn't mean I do it out of fear. Instead, one of the uses of a pseudonym is to direct & focus the attention of readers to my posts in this blog”¹⁹. Authors of the blog as well as a large number of comments are done so using pseudonyms; facilitated by blog hosting software. While adding to the confusion at first, quickly the time tagging facility for comments became a way to direct a comment to a previous comment. In July 2006, the *National Internet Advisory Committee* decided that bloggers in Singapore did not have to register with the MDA as “existing laws are deemed enough to rein in errant online diarists” (From Asia Media Archive²⁰) who were considered a threat to the interests of the public and society. Therefore, while bloggers such as *Pseudonymity* acknowledge the existence of fear they are keen to explain that he or she is not anonymous out of fear. Knowing that the MDA could alter their policies and require bloggers to register maintains the fear.

This use of “discursive anonymity” (Qian & Scott, 2007) is complicated in that the sense of anonymity while online is a false assumption. The blogger believes that they are able to prevent their personal information such as their name, age, email, gender and location from the audience. However, Internet Protocol or IP address tracking is easy to do. This will reveal the location of the blogger and if need be provide information on how to access who the IP address is associated with. The use of proxy servers in order to mask the IP address of the user is a skill limited to those with more extensive computer usage than the average user.

¹⁹ <http://singabloodypore.blogspot.com/2006/08/pseudonymity.html>

²⁰ <http://www.asiamedia.ucla.edu/article.asp?parentid=48678>

Anonymity continues to be the default position for many Singapore bloggers even after a number of events highlight the true lack of anonymity of bloggers and that they are *recognised*, but in a negative and hostile manner:

- Jiahao Chen (who used the pseudonym *AcidFlask*) was accused by Singapore state funded A*Star of posting on his blog *caustic.soda* “untrue and serious accusations against A*Star, its officers and other parties” in May 2005.
- In October 2005, two Singaporean men were fined the equivalent of USD 5,000 and sentenced for one month and one day under the Sedition Act and for posting remarks denigrating Muslims and Malays.
- In January 2006, a Singaporean man (using the online pseudonym of *Char*) was charged with violating the Sedition Act after posting cartoons of Jesus on his blog. They dropped the charges although they did confiscate his computer.
- In November 2006, Social Democratic Party activist, Yap Keng Ho served ten days in jail for refusing to pay a fine for speaking in public. The judge also ordered him to remove a video of his speech from his blog (*News Release by UncleYap²¹*). Yap Keng Ho was not blogging anonymously. Certain elements of the Singapore state are monitoring and censoring blogs.

While Ulicny and Kokar, et al., (2010:38) state that “Total anonymity is the opposite of accountability”, it is also the case that making yourself knowable online and the consequences of speaking truth to power in a system heavily weighted in favour of those in power may be too great for some. The notion of accountability also requires that the process of checking the accountability of a statement or utterance be within the discipline in which it took place. It is up to other bloggers to assess the validity of an assertion. Judicial accountability is a cause of disagreement within the Singapore context. Demanding that bloggers are not anonymous in the drive to achieve accountability may lead to self-censorship. Being accountable to a judicial system weighted in favour of the political elite of Singapore does not make for a level

²¹ <http://uncleyap-news.blogspot.com/>

playing field but enforces self-censorship. The anonymous Singapore bloggers are not very anonymous. However, it may enable enough time to escape Singapore's judicial reach.

7.2.2 Anonymous Identity

Not being anonymous and relying on social capital such as gender, race, class and official position rather than the content of voice and merits of the argument is dependent upon ascribed position within a different discipline other than the Internet; rather than achieved position which is developed over time and through interacting with others from within the Singapore blogosphere.

When *Pseudonymity* states that, he or she is blogging anonymously not out of fear but in the hope that the reader will pay greater attention to the content of the posts; this highlights that authenticity is a key value within the Singapore blogosphere. By authenticity, I mean the ability to be something other than that as defined by the ascribed positions of gender, race, class and official position. To be authentic is the ability to be you in spite of the external forces of expectations due to racial stereotypes or socially and culturally defined gender roles. This drive for authenticity may be the expression of the desire to become someone not constrained by his or her offline roles and position.

By allowing for anonymity, the Singapore blogosphere is creating an oppositional space. A space that is oppositional to the social and cultural expectations or ideology of the Singapore state. Reputations and relationships that are formed within the Singapore blogosphere are dependent not on the *ascribed* social capital of the offline world but the *achieved* social capital (Weber, 1946) within the Singapore blogosphere. Bloggers achieve and maintain their identities overtime within the blogosphere. Academics, journalists and politicians may present themselves online as such but offline credentials do not automatically ascribe the identity of expert. It is the content of posts and comments overtime and attempts at presenting an authentic and recognisable self to the others, stripped of symbolic external signs of social capital that are not present in the blogging environment, that generates credibility, whether posted anonymously or not. The content of blogs are presented as one persons "take" on the issue at hand (Lenhart, 2005:58), not the presentation of expert opinion but merely one interpretation of events. It is authenticity achieved by allowing for

interpretability (Langellier & Peterson, 2004), that lends validity to a post. In that, it creates a space for the interpretation and voice of the reader and other bloggers. This opens up discourse; rather than attempting to close down discourse by referring to offline social capital and assertions of being an expert. Asserting that you are an expert is an attempt to trump all other interpretations of lived experience. Thereby, denying voice to the reader:

The currency that draws people to these [online] communities ... is recognition. We-think communities provide their participants with what they most value: recognition for the worth of their contribution, the value of their ideas, the skills of their trade (Leadbeater, 2008 cited Couldry, 2010).

The denial of voice to another is the failure to recognise or misrecognising the other as a peer. The worst-case scenario is that of negatively acknowledging the other in order to degenerate them. Examples are the cases outlined above of Jiahao Chen in May 2005, the two men fined USD 5,000 and sentenced under the Sedition Act in October 2005, the man charged with violating the Sedition Act in January 2006, and, Yap Keng Ho who served ten days in jail in November 2006. The damage done does not extend only to those directly involved. Bringing such cases to judicial review damages the integrity and misrecognises the group. When an outside party denigrates a member of the social network all members feel that outside groups do not recognise them as human agents. That is that they were not recognised as someone “as a person whose capabilities are of constructive value to a concrete community” (Honneth, 2007). Within the Singapore blogosphere amidst all the tensions and arguments small factions are able to form and respect each other, work on each other’s esteem, show solidarity in times of conflict and treat each other with a basic level of respect. In short, it is the members of the network who are the readers and commentators that provide internal recognition, creating hyperlinks, trackbacks and writing comments on each other’s posts.

The Singapore political blogosphere is orientated towards producing posts that are of a high quality. Quality means that the claims and assertions made are sound. Any facts or figures mentioned in the post link to the source of the data. Others are able to comment on the assertions or provide alternative data that may contradict the earlier assertions. Large sections of the blogosphere take each speech, talk or pronouncement by the government ministers or representatives of ministries, dissecting, and undermining them. An opposition to all perceived to be of the

mainstream. The Singapore political blogosphere is the articulation of political dissent in Singapore by counter-elite.

By the 10th of July 2007, *Singabloodypore* had 14 anonymous contributors. This number fluctuated throughout the duration of the research. However, all contributors remained anonymous and I am still unaware of their real names. Some went on to set up their own blogs on different issues. Topics included single issues such as gay and lesbian rights and anti-capital punishment.

On moving to the United Kingdom in 2004 and beginning a period of research, my position as an anonymous blogger shifted to that of overt social researcher with a blog presence within the network. The first post that mentioned that I was conducting research into Singapore's political blogging scene²² received 97 comments, which was high in comparison to other posts on the blog. This high number of comments may not have been the result of my announcement to research the Singapore blogosphere. It may have been more to do with the (then perceived), nature of blogs that I had been able to find, and the question of what blogs are as defined by bloggers. The three most dominant themes of the comments were INFANTILE, BLOGS and BLOGOSPHERE. The comments also focused on who I was and whether I had any *right* to be involved in the Singapore political blogosphere. My concern at the time was how to research the Singapore political blogosphere when I could not find it. Other members of the Singapore political blogosphere became aware of my nationality, gender, race, place and age.

In 2004, *Singabloodypore* was one of a small number of websites and blogs that discussed the Singapore political scene. The blog had a list of 25 hyperlinks to other sites. Searching other sites and following trackbacks I conducted variation, extreme, snowball and theoretical sampling (Howard, 2002). By 2007, the list of known Singapore political bloggers had increased to 68. A group of Singaporean bloggers in collaboration created this number²³.

Rather than limit the Singapore political blogosphere to those bloggers who described themselves as political bloggers I collected blogs that stated that they

²² <http://singabloodypore.blogspot.com/2005/04/infantile-blogosphere.html>

²³ <https://docs.google.com/leaf?id=0AmAr4fJJWizucFFjUnE4MH1eVdYZXFwYWtJZzJpYkE&sort=name&lyout=list&num=50>

focused on social issues, gay and lesbian, Christian, and Malay themes in an acknowledgement of a much wider definition of political.

7.2.3 The Role of Network Ethnographer

Unable to locate the Singapore political blogosphere I extended my definition of politics and embarked on a process of blogging while asking myself – what I was doing as a researcher and which genre of blog did my blog fit into.

For Walker (2006:130-131) academic research blogs fall within three genres; ‘Public Intellectuals’ potentially giving voice to unrepresented minorities to blogs run by or on the behalf of celebrity academics, ‘Research Blogs’ used to share research data, results and discussions and ‘Pseudonymous Blogs’ that criticise academia from within. Murthy (2008) argues that these three genres are rather limited in their scope and extends the use of pseudonymous blogs for covert research in order to assess discourse not readily available to researchers. While research blogs may try to engage in meaningful consultation and review with those in the field thereby becoming “potentially democratising forces in the ethnographic process” (Murthy, 2008:847). Accepting Murthy’s extension to the three types of academic blogs I would like to extend the remit of the ‘Pseudonymous Blog’ to incorporate covert or overt research conducted by a researcher. However, the pseudonymous element becomes redundant and a better term might be the ‘Netnographic Blog’.

Although most if not all the encounters I made online were anonymous they were no less personal and touching at times. However, the nature of identity online involves the realisation that people may or may not be who they claim to be. In 2004, Grace Chow living in Rotterdam in the Netherlands approached me with a request to review a book that she had written.

I quickly learned that the book was autobiographical and that Grace had a terminal illness. She was a 32-year-old Singaporean living in Europe diagnosed with cancer three years earlier. I agreed to write a brief review for her book and subsequently posted it online²⁴. We also had a very brief but frank discussion on Singaporean politics and her reason for leaving her home country. I also added a link

²⁴ <http://singabloodypore.blogspot.com/2004/11/pain-in-neck-by-grace-chow.html>

to Grace's blog, that she started one month before her death (<http://dyingis.blogspot.com/>) and began reading it. One of Grace's last posts touched upon the need for recognition. Grace wanted to know that someone was listening and thereby providing her with voice and recognition.

“My only option is to flee to my mind, where I have so, so much to say and tell... but I have no one to tell it to.”

What the book and the blog had enabled was to give Grace an audience to speak to and to respond to her voice. Other members of the Singapore blogosphere began to take notice and her story made it to the Singapore mainstream media, with an article by Sharon De Castro appearing in *The Straits Times* in December 2004.

A second encounter that happened after meeting someone online may help to illustrate the potential dangers of having an online presence. In May 2005, I received an email from someone claiming to be the Managing Editor for an Italian television company, Ian McKenzie;

“Hello Steven,

I read your blog site with interest. I'm the managing editor with an Italian television company. Would you be interested in doing some free-lance work with us? If so, perhaps you could tell me something about your background, what you are doing now, why you left Singapore etc.

Ian”

Ian McKenzie ian.mckenzie@europe.com

A few days later, after I asked “which Italian television company he worked for?” I received an email that simply stated www.italica.rai.it. After a number of emails between each other, we arranged to meet at a hotel in Bloomsbury, London WC1N on the 16th of June 2005. When I arrived at the hotel in London and I asked the receptionist to inform Ian McKenzie that I was waiting in the hotel lobby, the receptionist telephoned the room that Ian MacKenzie was staying. After hanging up - the receptionist informed me that Ian MacKenzie, who was in the hotel, had not arranged to meet with anyone. It had been a hoax. The hoax specifically targeted me by name over a number of weeks. The hoax, or as it is commonly known as a 419 fraud, is the promise of an advance fee in order to transfer funds from one bank account to another. The real motive is to get the victims bank account details. However, I did not exchange bank details; the only request was to ensure that I was in a particular place at a particular time. On returning home, the flat I lived in remained un-burgled.

The source of the emails, worked out by checking the IP address 205.158.62.67 was Old Greenwich in the United States of America. The IP address is on five Real-time Blackhole Lists and is a source of spam. The emails however could have originated from anywhere.

Aside from the initial embarrassment that I felt; and after convincing myself that it was a hoax - there was also the feeling of paranoia that someone had targeted my online presence and affected my offline life enough to have a wasted journey to London.

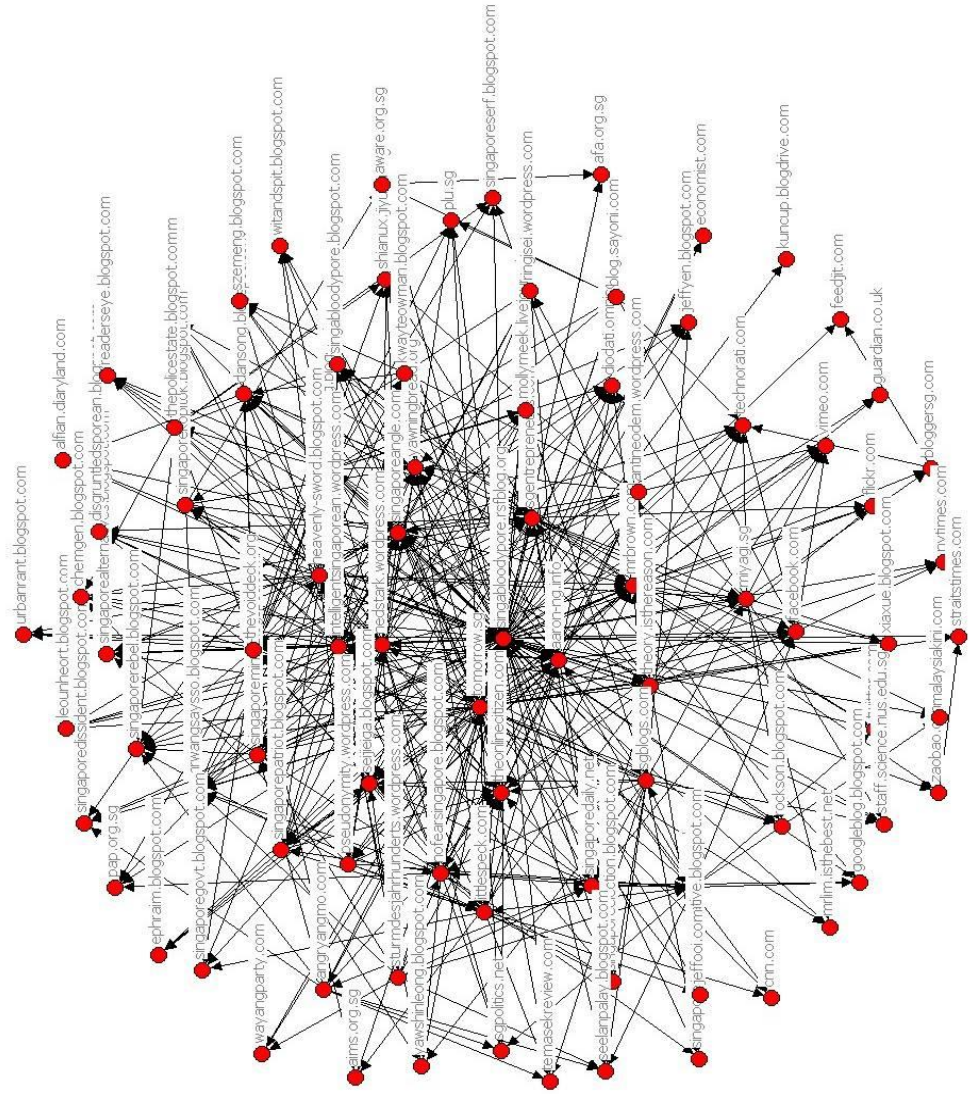
7.2.4 Type of Blog

According to Cardon and Delaunay-Teterel et al. (2007), there are four types of communication between blog posts and comments. Type one - the blogger reveals to others intimate aspects of their personality. Type two - they post about everyday life activities. Type three - they post about specific competencies or a particular interest or hobby. Type four - posts are on issues that are isolated from the person, in which case they are shared public objects.

In order to assess the type of public that *Singabloodypore* generated I conducted an ego-network analysis and a semantic analysis of all posts. An ego-centred network analysis of the node *Singabloodypore* in both manifestations (rsfblog.com and blogspot.com) creates a relational structure similar to form four of Cardon and Delaunay-Teterel et al's (2007) typology (see figure 25 below).

This would indicate that the content focused on topics that are beyond the personal, that the site contains many external links, that it is large and has a low in-degree score and a polarised ego network. The polarised ego-network applies in this case Cardon and Delaunay-Teterel et al. (2007).

Figure 25 Ego-network analysis of the hyperlinks for Singabloodypore node as of February 2010.



with an overall average of 19.38 incoming links for the Singapore political blogosphere a score of 86 is more than the average.

Next, I analysed the blog posts from the first one in 2003 to the last in 2007. The group of contributors made the following thematic contributions to the flow of information within the Singapore political blogosphere.

The main themes from the posts made on singabloodypore.blogspot.com are CIVIL, POLITICAL, RIGHTS, DIFFERENT, ISSUE, ELECTION, GOVERNMENT, PEOPLE, BELIEVE, PERSON, VOTE, BORDER, FAMILY, KNOWLEDGE, ROLE, SIDES, TALKING, INFRASTRUCTURE, MECHANISMS and CONSULT. The dominant theme of CIVIL concurs with type four of Cardon and Delaunay-Teterel et al's (2007) typology. It identifies our contribution to the Singapore political blogosphere as having a civil identity commonly produced by journalists, citizens or political blogger.

However, the ego-in degree does differ from their typology. Meaning that the in-degree would be low according to their typology but *Singabloodypore* has an in-degree score of 86 that is above average for the Singapore blogosphere. From 2003 to 2007, the bloggers contributing to Singabloodypore.blogspot.com created a civil space. From 2007 to 2010, the main themes were GOVERNMENT, COUNTRY, ISSUE, PUBLIC, PEOPLE, APEC (Asia-Pacific Economic Cooperation), GROUP, LEGAL, RIGHTS, INFORMATION, LEADERS, FAMILY, THOUGHT, RECEIVED, HEARD and GOD. The concept of government had 6,075 hits or occurrences, country (2,632), issue (1,019), public (3,538), people (4,778), APEC (5,477), group (1,265), legal (1,692), rights (8,006), information (1,231), leaders (12,238), family (816), thought (472), received (532), heard (453) and god (65).

This section although helpful in unpacking the nature of the contribution that *Singabloodypore* made to the cognitive structure of the Singapore blogosphere it relays little of the everyday nature of being a member of the Singapore political blogosphere during the period described. In order to address this factor it is necessary to introduce a small number of the themes and characters who resided there.

7.2.5 The Themes of the Singapore Blogosphere

Lin, Sundaram, Chi, Tatemura, & Tseng (2006) claimed that the Singapore blogosphere was a community with no central topic. They described the Singapore blogosphere as:

The members of this community are real online friends—most of them are 20-30 year-old youngsters living in Singapore and Malaysia—they are aware of each other and frequently interact with each other but the topics of their talks are not restricted to a specific area. This is a closed community of bloggers from other countries, [...] (Lin, Sundaram, Chi, Tatemura, & Tseng, 2006).

Lin et al argue, “Intuitively, a valid community should have coherent topics discussed and consistent vocabulary used among community members”. Their means of discerning whether a group has, a central topic is measuring the extent to which the key words gathered from a specific group deviates from a larger set of blog text. They conclude by asserting that it is possible to ascertain the topic of a set of blogs by conducting a keyword extraction. The word clouds, word maps or word lists that Lin et al (2006) present are merely presenting the words that appear at the demise of the narratives and stories (Dean, 2010:89). I present the themes, topics and sentences in which the words occur thereby allowing for context, tonality and for meaning to sit alongside frequency and proximity.

7.2.5.1 We the People

The theme of PEOPLE is the most dominant theme throughout the entire period of data collection, appearing six times next to topics such as discrimination, business, knowledge based-economy, location and identity.

The first characteristic text extract on PEOPLE is on the topic of discrimination of homosexuals and attempts to repeal a piece of the Penal Code (Singapore) known as Section 377a. Section 377a states that “Whoever voluntarily has carnal intercourse against the order of nature with any man, woman or animals, shall be punished with imprisonment for life, or with imprisonment for a term which may extend to 10 years, and shall also be liable to fine.”

2. /Feb2009/repeal377a.com/index~1.html/1/1_74

“Straits Times: ‘ Discrimination enshrined in law’ Wong Suan Yin writes that the decision not to repeal s377A was “a sad day for Singapore” as a double standard now exists for all people before the law thus making a “mockery of the Pledge we learnt from young”. He says that the debate has “exposed the hypocrisy of those who urged the retention of Section 377A” since this group should have lobbied to maintain the Penal Code outlawing “unnatural acts” for all individuals instead of making it “perfectly fine for heterosexuals but still a crime for homosexuals”.”

The extract presented here is the reposting of an article that first appeared in the Straits Times in 2007 (an English written national newspaper in Singapore) and is a letter submitted by a Singapore citizen expressing sadness at the verdict of the appeal process. The result, in 2007 was that Section 377a would remain in the Penal Code as a symbolic gesture and would not be “proactively enforced”²⁵ by the Singapore government. So when first published in 2007 in the Straits Times the questioning of the symbolic nature of retaining Section 377a may have seemed alarmist. When the article re-appears as a linked to article in an on-going debate in January of 2009, it seems prophetic when visited again from the position of ethnographer in 2010.

First published in 2007, it appears in a data mining exercise conducted in February of 2009. Automated software selected this as characteristic text; the importance and context of which, spans over two years. It is this ability to discern the meaning of texts that are present as well as the significance of texts that are absent that automated software package cannot conduct. Meaning requires insight accrued by longitudinal participant observation. The ability to place extracts of texts in a wider context enables the discernment of manipulative and persuasive communication.

Since the ruling in 2007, the retention of Article 377a as a symbolic act has fallen to the wayside. In September 2010, a man received “two weeks jail on September 3 for engaging in [...] sexual activity²⁶” with another man. In the same month, a lawyer launched an appeal on behalf of a client who “was charged for allegedly having oral sex with another consenting male²⁷”. Moreover, in November 2010 a man received a fine of \$3,000 (Singapore Dollars) “after being caught engaging in oral sex with another man in a shopping mall toilet cubicle²⁸”. In the third case, the man was charged under Article 377a of the Penal Code (Singapore).

The next characteristic extract of text for the theme of PEOPLE is also from February 2009 only this time the topic is immigration and the influx of foreigners into Singapore and aligned with the land reclaiming project off the coast.

9. /Feb2009/popagandhi.com/index~1.html/1/1_94

²⁵ Taken from the speech made in Singapore Parliament on the 23rd of October 2007 by Prime Minister Lee Hsieng Loong - “The Government does not act as moral policemen. And we do not proactively enforce section 377A on them.” Available online
http://www.parliament.gov.sg/reports/public/hansard/title/20071023/20071023_S0003_T0002.html#1

²⁶ <http://www.channelnewsasia.com/stories/singaporelocalnews/view/1082967/1/.html>

²⁷ <http://www.todayonline.com/Singapore/EDC100924-0000220/Lawyer-challenges-gay-sex-law>

²⁸ http://www.straitstimes.com/BreakingNews/Singapore/Story/STISStory_601542.html

“We used to have just three and a half million people; not many years from when I was in school learning three and a half million populations and 642 square kilometre areas, we are now pushing 5 million. The numbers keep changing — they won’t stop importing sand from Indonesia to dump into our sea, to fatten and lengthen our shores in nationally sanctioned asset augmentation.”

The topic of migration has appeared within in wider debates on how Singapore’s economy is going to prosper in the “knowledge-based economy” and the extract below questions the need to have highly educated individuals over-qualifying themselves and unable to find employment.

13. /May26052009/heavenly-sword.blogspot.com/index~1.html/1/1_30

“Despite all the rhetoric about ‘wanting talent’, ‘cherishing talent’, ‘upgrade or perish’ etc, the Singaporeans who really heed such advice could well find themselves facing a grave that they’ve unwittingly dug for themselves - they have studied ‘too much’ by Singapore’s standards and nobody in this country wants to hire them now! Ironically, Singapore’s knowledge-based economy doesn’t want people with too much knowledge.”

The manufacturing of electronic goods for export is the base of Singapore’s economy and this rather tongue-in-cheek extract implies that Singapore ministerial talk of talent is mere rhetoric and Singapore is no longer hiring Singaporeans but foreign workers.

The wider economic crisis that culminated in the recession of 2008 on a global scale with the collapse of the banking system has also affected Singaporean’s sense of morality. The lack of accountability, how PEOPLE bear the burden of risky business deals, and the ramifications for wider society are evident in this extract:

19. /Feb2009/vantan.org/index~1.html/1/1_142

“Knowing how greed, corruption and the repackaging of financial debt has caused great misery to people, I’ve often thought, how can purely profit-driven businesses ever add this kind of value to society? But now I’m reminded that having good business sense also helps society.”

The stock of knowledge that these bloggers, cultural intermediaries and critics are able to draw from is global and local. Referring to the atrocities carried out by the United States military in Abu Ghraib in Iraq:

4. /May26052009/www.islamicity.com/index~1.html/1/1_4

“Islamic Counseling & Psychotherapy Few scholars have addressed this area in a significant way, beyond assertions that Islamic counselling needs to be developed into a well structured discourse that captures the breath and spirit of Islam in helping people. More Abuse Photos and Justice It is now clear that the Photos of Abu Ghraib are being withheld because they are inhuman and barbaric, reminding people of the dark ages of Europe.”

Comparing Singapore with other international business hubs like Dubai:

23. /Feb2009/popagandhi.com/index~1.html/1/1_173

“There are many ways in which I would never say Dubai was like Singapore, or vice versa, but at the end of my short sojourn here I have come away with the conclusion that both

cities are cities that take time, and plenty of effort, because their charms are never as immediately obvious as their annoyances are. And that in both cities, the small motley crew of people you discover who love and hate the city as much as you do, who give life to the city and try to turn it into what it is not, believe they need to go in order to come back and make our young, growing cities what we want them to be: better places to live in.”

To the ongoing Speak Good English campaign in Singapore that is an attempt to undermine the use of *Singlish* (a mixture of English, Chinese, Malay and other dialects):

11. /April2009/tribolum.com/index~1.html/1/1_13

“There is a divide between our overly-involved (IMO, anyway) government and the people. Singlish - the language organically evolved by the people, is labelled as detrimental to our progress, something to be avoided, unclear, almost.”

All drawn upon to add their distinctive voices to the hubris of noise that surrounds them. Sometimes advice on how best to reassure children is offered:

17. /May26052009/catherinelim.sg/index~1.html/1/1_107

“The best possible response is a two-stage one: first, letting our children know exactly how we feel and what our anxieties, wishes, hopes, etc for them are (it is amazing how people in general value honesty and decry insincerity and hypocrisy) and second, letting them know that regardless of what they become or do in their lives, they can always be assured of our love and support (it is amazing how such. parental reassurances remain as comforting memories throughout life).”

In addition, even discussions on how to protect the environment and giving thanks for those taking part in activist activities no matter how limited that action may have been:

14. /May26052009/arzhou.com/index~1.html/1/1_67

“While all this is nice and dandy, I really wonder if people (or Singaporeans) in general actually know WHY we really have Earth Hour. If you think that you are saving the Earth by turning off your lights and other non-essential appliance for 1 hour (it can be argued in my case that my computer is essential) can actually save the Earth... then as what the guy in White Tiger (good book btw) says, “What a beeping Joke”.”

18. /May26052009/blog.simplyjean.com/index~1.html/1/1_70

“Then again, thanks to the new AWARE’s expose of what they considered was damning and sinning on the part of the old guards, people will be starting to search for “spider lillies”, “ SG butterfly” and perhaps “ Alex Au”?. Nay, the last one is famous enough.”

4. /Septe2009/blog.aaron-ng.info/index~1.html/1/1_106

“Racial stereotyping for the purpose of fear-mongering and perpetuating irrational hate among people can never be justified. One can find murderers, rapists, robbers, burglars, thieves, con men and other kinds of criminals in any racial group.”

5. /Septe2009/blog.sayoni.com/index~1.html/1/1_61

“We reproduce the report here for you. We also would like to take this opportunity to thank all the people who made this event possible – photo/videographers, ushers, receptionists, logistics, voluntweers (ie the volunteer tweeters), and just anyone who helped out.”

This drawing on a wide global and local repository of knowledge and insight; and the passing on to others of advice all couched within greater historical events formulates unique and interrelated senses of self in a globalised and localised discourse. A sense of progression while orientated towards values for the good of all people:

3. /Septe2009/www.wilfridwong.com/index~1.html/1/1_56

16th century sees the acceleration of Secularisation due to three crucial and formative movements: the Renaissance, the Reformation, and the Scientific Revolution. And in the mist of all the conflicts of that time, philosopher Descartes attempted to find a truth on which everybody could agree – Catholics, Protestants, Muslims, deists, and ‘atheists’ - so that all people of goodwill could live together in peace.”

This alignment of the theme of PEOPLE with issues such as discrimination, employment and immigration, business, national identity, language, race, religion, and the environment all link to notions of sovereignty. In a nation governed by one party titled the *People’s Action Party*. A sense of who are valued within Singapore as persons and the nature of that value conditioned under the theme of PEOPLE.

7.2.5.2 An Active Public

The theme of PUBLIC appears three times in relation to system, journalism, and government. The critics point out that in Singapore the level of conformity expected by the public service has lessened in recent times. The scope however, for the public servant to engage in critical discourse within the Singapore system is doubted in the following quotation:

3. /july 282009/blog.alicecheong.com/index~1.html/1/1_43

“This declaration that the public service is not looking for conformists and ‘yes-men’, is a good step forward, but hopefully, the few mavericks is equipped with sufficient Emotional Quotient, that enables him or her to survive without the possible backlash ranging from transposition of credit dues and mistakes committed and bad performance review**, leading to stagnant in salary, additional or impossible. workload, and/or assign/transfer to strategically remote post as part of job rotation/career development initiative.”

Now that the public service is no longer looking for “yes-men” but seeking a “few mavericks” they will still have to be prepared to suffer a “backlash” questioning the idea that the public service is actually willing to accept people with alternative views. Therefore, the “declaration” is critiqued and undermined.

The following author raises the gendered nature of the public sphere or rather, how the images of women are “constructed and legitimised” in the public sphere. The style of the opening sentence, informing the reader of what is to come in the piece

mimics that of the academic abstract or introduction paragraph – “This article will begin by [...]”:

6. /july 282009/catherinelim.sg/index~1.html/1/1_166

“This article will begin by discussing how images of the Singapore woman are constructed and legitimised in the public sphere. It will then demonstrate how these gender images have corresponded to the Singapore state’s “masculine” image and society’s “emasculated”, “infantilised”, and “feminised” images.”

The author in extract 6 above argues that the image of women that the public sphere constructs in Singapore is one of woman as “emasculated” and “infantilised”. This refers to society as “emasculated”, “infantilised” and “feminised”. This is in stark contrast to the state as “masculine” that does not value the “Emotional Quotient” referred to in extract 3 above.

38. /july 282009/www.deadpris.com/index~1.html/1/1_37

“It came as a shock to us, when we were shown evidence of how other slimming centers in Singapore actually use misleading labels and bombastic tech jargon to lead the public into believing in what they are selling. One article even gave the description of Cenosis’s latest machine technology called Cavitation, but it was obviously a misleading advertisement since you need a N2 license from NEA to own that machine and it can only be operated by doctors and physiotherapists.”

The public market space in quotation 38, referred to in relation to slimming products assumes that what is demanded is regulation from “doctors and physiotherapists” of “misleading and bombastic” jargon used in the promotion of slimming products. The author is making an appeal to the imagined dominant reader who is able to act upon such matters and by that act calling into question the unregulated market space in which “slimming centers” operate in Singapore. Women have also not been passive in the past as evidenced in extract 40:

40. /july 282009/catherinelim.sg/index~1.html/1/1_163

“Her intervention in the public sphere produced a new public vocabulary for thinking about Singapore’s political condition, and continues to inform how prospects for political liberalisation are described today. The two pieces were widely discussed among Singaporeans in 1994, and the second in particular drew a strong reaction from the state that foreign journalist Kieran Cooke (24 February 1995) described as more appropriate to “a government teetering on the edge of collapse than... one of the world’s most enduring political machines”.”

The notion of women as passive is questioned with reference to “two pieces” and “Her intervention” written in 1994 in extract 40 and the male and state reaction that it invoked at the time. This places the role of women within the PUBLIC against Singapore’s political condition and “the strong reaction from the state” in a historical context.

The active PUBLIC presented in these extracts is a PUBLIC of women in opposition to a state and professional institutions dominated by men and heterosexuality. Quote 42 highlights concerns regarding the reaction of “Indians” in relation to the PUBLIC displays of affection and in particular the display of affection between homosexuals in a PUBLIC were “gay sex has been a taboo”. It also refers to the Article 377a when asking, “if the law was repealed”:

42. /july 282009/blog.sayoni.com/index~1.html/1/1_47

“In a country where public hugging and kissing even among heterosexuals invites lewd remarks and sometimes beatings, gay sex has been a taboo, leaving the government unsure how conservative Indians would react if the law was repealed.”

The same author on *Sayoni* (which describes its goal as to empower Asian queer women) in October of the same year returns to the theme of PUBLIC when recalling the actions of NGOs funded by *Fridae* in Singapore. *Fridae* is an organisation that sets its agenda as empowering gay Asia:

11. /October 2009/blog.sayoni.com/index~1.html/1/1_69

“Since 2005, Fridae has organised six movie-fundraisers raising over S\$60,000 in benefit of a variety of NGOs including Action for AIDS, AWARE, Cat Welfare Society; two independent short films by Boo Junfeng and Loo Zihan; and Indignation – which Fridae has financially and in other ways supported since it was first held in 2005. Pink Dot, the first-ever official LGBT public gathering held in May 2009 in Singapore, was also a beneficiary of Fridae’s Milk Fundraising Gala Premiere held earlier this year.”

Fridae funded “Action for AIDS, AWARE, Cat Welfare Society; two independent short films” since 2005 and funded the “first-ever official” lesbian, gay, bisexual and transgender public event in 2009 in Singapore. *Sayoni* (with over 2,000 members) is acting as a news bulletin board on ongoing LGBT issues taking place in Singapore. It is reporting on the actions of the LGBT PUBLIC in Singapore claiming the society in which they live and defining it on their terms.

Issues raised under the theme of PUBLIC also question “The Naked Corporation” and the role played by “citizen journalists” and “public inquiries” and the feedback loop that this relationship has created for companies and customer services:

1. /august2009/thepr2.0universe.com/index~2.html/1/1_458

“The Naked Corporation and its Many Public Faces The point is – there are more faces to a company today than there were three years ago; and there are more public inquirers in the form of citizen journalists. The world is rife with ‘ Accidental Spokespersons’ like Scoble, evangelists like Kaltschnee or unwitting newsmakers like the Comcast technician who fell asleep at a customer’s home while being put on hold by his own company’s customer service!”

Extract 1 from August 2009 shows a self-awareness of the potential affect that bloggers can leverage on corporations when writing about such corporations. The following quotation questions the growing gap between the rich and poor in Singapore:

3. /august2009/budak.blogs.com/index~1.html/1/1_52

“Young and old, rich and poor – the gaps that grow with each generation shrivel just a little on the shore, where no measure of wealth or influence can command the tide or wish away the tired clouds of a mournful day. Only the man of the street, in rude boots and thin bags that double as makeshift ponchos, rises a little lower in public regard for his intrusion into a scene of unearned leisure.”

The extract refers to the visual impact that this “the gaps that grow with each generation” is having on the public spaces of Singapore. The following reference to the use of rickshaws in Singapore; that are still evident in some areas of high deprivation and used by homeless men as means of earning some money, also refers to the historical context of Singapore being a place for Chinese immigrants:

22. /august2009/yesterday.sg/index~1.html/1/1_168

“Rickshaws - those people-powered taxi-cabs were introduced in Singapore on 16 February 1880, the same year it was brought to Shimla in the Himalayas but some time before it first appeared in Beijing in 1886. Rickshaws originated from Japan and soon became a major form of public transport and a primary source of income for the thousands of Chinese immigrants to Singapore between the 1880s to the 1930s.”

Therefore, it places the current debates on foreign talent entering Singapore into its historical settings and part of the wider history of Singapore’s ever changing identity. The nature of journalism in Singapore is questioned “pathetic level of journalism” in particular the Singapore Press Holdings, which is affiliated to the People’s Action Party. The article then continues to attack what the author sees as the bias against opposition parties in Singapore and its rather biased coverage of the AWARE affair:

23. /august2009/nowhere.per.sg/index~1.html/1/1_75

“The caption in Chinese reads: Helicopter hovering at low altitude caused public to suspect it to be part of ongoing anti-vice operations (Taken from Lianhe Wanbao [联合晚报])The pathetic level of journalism in our Singapore Press Holdings (SPH) newspapers just never . . .”

This perceived bias in Singapore’s media encourages the airing of opposition party news in the following article published in October 2009. It recounts the arrest of Social Democratic Party members after a “protest march” in support of party leader Dr Chee Soon Juan for speaking in public without a permit:

3. /October 2009/www.sgpolitics.net/index~1.html/1/1_42

“On that day, democracy and human rights activists Mr Gandhi Ambalam, Mr John Tan, Ms Chee Siok Chin, Mr Charles Tan and Mr Chong Kai Xiong had participated in a protest march from Hong Lim Park to Parliament House, and then to Queenstown Remand Prison, where a quiet but poignant evening vigil was conducted for SDP Secretary-General Dr Chee Soon Juan who was then being unjustly held for speaking in public without a permit.”

In the same month, the theme of PUBLIC focused on the lack of acceptance of explanations provided by the government. However, the arguments presented by the PUBLIC “are non sequitur (to an expert)”:

8. /October 2009/xiaoluo.blog.friendster.com/index~1.html/1/1_76

“For any unfavourable announcement, the public almost always does not want to listen and does not believe in the government’s explanations, but wants to make noises that are non sequitur (to an expert). Paul Krugman, for long in his writings, has been attempting “to explode some plausible-sounding idea that happens to be false or to promote some implausible, disturbing idea that happens to be true”, and in the end has managed to make enemies.”

Thereby, calling into question public interpretations of events and placing the interpretations of experts as superior to those of the PUBLIC. The final example of text on the theme of PUBLIC focused on the accountability of government officials when it comes to matters of “central banking”:

6. /October 2009/xiaoluo.blog.friendster.com/index~1.html/1/1_244

“And we have the monitoring problems (principal-agent, for those familiar with the technicalities), where we would demand transparency and accountability from government officials. Areas that have low transaction volume with high specificity, such as central banking, do not permit a high degree of variance according to local conditions and are the most susceptible to reform, where (to quote the author) “ten bright technocrats can be air-dropped into a developing country and bring about massive changes for the better in public policy”.”

Again, this extract is calling for sublimation of local government officials with externally sourced experts who “do not permit a high degree of variance according to local conditions and are the most susceptible to reform”. Arguing what appears to be the position that outside external monitory experts are better placed to deal objectively with nation banking matters. The issues raised here are whether governments can act alone with impunity; while ignoring the voices of the PUBLIC and experts alike. This is the dominant representation of the theme GOVERNMENT in the following section.

7.2.5.3 Government under question

The top ranking concepts that appear alongside the concept of ‘government’ are ‘opinion’ and ‘views’ that indicate voice as an important factor within the Singapore online contextualisation of GOVERNMENT (appears twice) as a theme in January 2009. Below are example quotes from a ‘government’ as a concept query. The example quotations are characteristic of the use of the query term:

1./jan2009/www.cherian.blogspot.com/index~1.html/1/1_249

“The fact of the matter is that it is untenable for the PAP government to preside over a Singapore that includes any urban slum. Whoever the MP is, the government will have to intervene before any HDB estate becomes decrepit.”

This extract is from a Singaporean academic and journalist. His work focuses on aspects of the media and its relation to the Singapore government. Evident in the

extract is someone voicing an authoritative opinion, stating what ought to happen in relation to a hypothetical housing situation:

8. [/jan2009/topmleehsienloong.blogspot.com/index~1.html/1/1_52](http://jan2009/topmleehsienloong.blogspot.com/index~1.html/1/1_52)

“Jobs for Singaporeans. The Government will spend \$5.1 billion to help Singaporeans stay employed so they can continue to support their families by introducing a, Enhancing SPUR, (Skills Programme for Upgrading and Resilience) providing a WIS Special Payment and expanding recruitment across the public sector. Stimulating Bank Lending The Government will extend \$5.8 billion of government capital to stimulate bank lending through enhancing existing schemes and a new Special Risk-Sharing Initiative (SRI).”

Extracts on the theme of GOVERNMENT is a list of topics that appear in the left hand section of a blog. It is a list of previous blog posts and again contains an authoritative opinion on what the government of Singapore will do to support families, employment and bank lending. This extract is from a blog titled ‘To PM Lee Hsien Loong’. The blog speaks directly to the Prime Minister of Singapore and the author is a mother who as well as writing the blog is active in taking up local issues with other government ministers. The extract that follows is from *Singabloodypore* and refers to the discourse of there being no alternative to Lee Kuan Yew and the PAP’s rule in Singapore:

9. [/jan2009/singabloodypore.blogspot.com/index~1.html/1/1_127](http://jan2009/singabloodypore.blogspot.com/index~1.html/1/1_127)

“The report also demonstrates that this system is actively maintained by an autocratic government whose political philosophy and practice is predicated on Lee Kuan Yew's idea that state resources should be concentrated on the top 5 percent of the population "who are more than ordinarily endowed physically and mentally." Most importantly, this essay presents a clear alternative to the course taken by the PAP who has bludgeoned into the minds of the populace that there isn't, and can never be, one.”

It refers directly to “Lee Kuan Yew’s idea” and critiques it as not the only possible direction for the nation of Singapore. Although I did not write the essay that is mentioned in the extract, readers might assume; that as I am posting this on my blog, that I adhere at least in some part to the sentiments being expressed. At the very least, I am also engaged in analysing the government policies like so many others within the online blogosphere. The extract below takes this one-step further and argues that “the electorate is increasingly becoming vocal” and that political discussions are “tolerated”:

10. [/jan2009/singaporeangle.blogspot.com/index~1.html/1/1_213](http://jan2009/singaporeangle.blogspot.com/index~1.html/1/1_213)

“I do think the PAP stays in power because it does have broad support among the people, but here is where I made the other point, that the electorate is increasingly becoming vocal, and that the government, in conceding openly (rather than leave the OB markers invisible) that discussions of a political nature will be tolerated (ok, problematic word, I am not going to address at this point) is. Responding to the changing nature of the electorate.”

This is all in stark contrast to the official government line that all the people of Singapore are uninterested in politics but rather they place a premium on economic security. This author claims that the “government, in conceding openly”, has admitted that political discussion is “tolerated”. The word “tolerated” is presented as in itself being problematic; “ok, problematic word, I am not going to address at this point”, but the issue is not discussed. This extract in particular brings out the lack of engagement of the Singapore government with the online blogosphere of Singapore. The online critics are voicing opinions that they know are not being listened to or engaged with by government. Now they are “tolerated” but not recognised as providing a valid space for deliberative debate in the interests of the governance of the country. Although a large proportion of the extracts listed here are critical of the GOVERNMENT as a theme there are at times posts from bloggers that are more supportive of the governments record on “human rights violations”:

13. /november2009/james.seng.sg/index~1.html/1/1_31

“Asian mentality on society values stability above anything else. I quote Kishore Mahbubani “An imperfect government that commits some human rights violations is better than no government, in many societies”.”

This extract posits that not only do Singaporean’s have an “Asian mentality” but that this “mentality [...] values stability above anything else”. Going even further and stating, “[a]n imperfect government that commits some human rights violations is better than [sic] no government”. An appeal to wider “Asian” values in order to imbue the Singaporean position on human rights as belonging to a wider, imagined collective in order to provide support for the government of Singapore.

7.2.5.4 Everyday Talk

The theme of TALK was dominant only in March 2009 and the extracts generated by the *Leximancer* co-occurrence and relational analyses are all from three Malay speaking bloggers within the Singapore blogosphere. This is the one occurrence when a theme-taking place within the Malay faction of the network analysis has dominated. All other theme extracts are from the English speaking faction. The language used here is a mixture of Malay and slang terms that are not easily translatable into English. This is what demarcates the Malay speakers from the English speakers in the Singapore blogosphere. Up until this point, the *Leximancer* software has been highlighting English themes as dominating the Singapore blogosphere. As part of the translation process, it was first run through Google translate and then further tied up by a native Malay speaker. The idiosyncrasies are

here in order to show the distinction between the English and the Malay speakers' style of language in their blogs. It becomes clear that the English speakers are using their ability to switch to properly formatted English grammar and spelling as a sign of *quality*.

The TALK theme, at first glance displays a distinctly non-Political discourse. However, the topics under consideration are linked. Extract 1 refers to “working nights” and “back pain” as the result of a slipped disk:

1. /March2009take2/rickywan.blogspot.com/index~1.html/1/1_37

(Salam to all & good day, yesterday morning I lelapkan hard right eye after working nights, back-up landing back home continue to mattress kat room, feeling very tired, feeling body mcm nk start balik fever, today fever well before I new to Indonesia, but the body was x sedap ni feel right, I back pain due to disk slip mcm want to return first, between the central spine I, felt a little numbness and when trying to turn my body back when I lie down, feel like I have needles menucuk behind me, doom god only knows. X really comfortable I made this morning, ni back pain if back, I must again undergo address operational, dah tak tahan bear such pain, I see the face JE healthy, can still smile, if nk in ikutkan, I really can do x outdoorsy activities, but I also try to do, because x want too weak kinds first, later I also I difficult. Ni slip disc is actually painful, if not done surgery to remove excess disk I deviated tu, x, but I do the operation, I just do phisio and traditional sequence, the sequence was carried out after 15, see byk reduction, so I stop and not phisio I make operation as recommended by specialist doctors in the hospital I went past.)

And references to “operations” and impending surgery “to remove excess disk” and the pending operation as “recommended by specialist doctors in the hospital” are mirrored in extract 13 by references to feelings of that the author “cannot work” and telephoning the place of work to request and receive permission to take e a day off:

13. /March2009take2/jojo-boy.blogspot.com/index~1.html/1/1_8

(morning was so bright, kulihat sky above the clouds so white that captures so beautifully for me pingin ditatap somehow make a story in posting ku dihari that falls on 15 June 2006. alkisah about a child's human life that escape from feeling happy, sad, love, pain and the hag in her life. This day feels hot weather outside there, today I can not work in somehow I felt ngak badanku wine, before I decided not to enter the office I TELEPHON first companions in the office that morning, her companions are good places curhatanku dikala once I have a problem anyone with either family or boyfriend bernamanya essence he is the one high, yellow skin. long straight hair. Hey I kriiiing essence this virtual "what is virtual, voice heard essence respond, please bilangin gini ama Personalia that I can not in this day because of pain, all feel badanku ngak enak nih, terlontar virtual voice" ok deh, I bilangin if you sick "heard the voice again essence reward" and said virtual "thanks so really you are good companions.)

The reason such a request to take a day off was put down to feelings of “pain” by the author. The two extracts highlight that the criticism by these two bloggers is not of the government but at working conditions for Malay’s in Singapore. These extracts are not representative and no generalisations from this limited amount of source material are permissible.

20. /March2009take2/kilyzz.blogspot.com/index~1.html/1/1_5

(Providing food for the deceased's family members to neighbors and people should karabat far provide food for family members of the deceased, as Shallallahu Allah be upon him was Allam said to its members get glad when death Saiyidina Ja'far bin Abi Talib: which means: "You create not food for the family Saiyidina Ja'far, has indeed found them busy. (on the death of Ja'far Saiyidina).)

The final extract from the theme of TALK for March 2009 is on the topic of death; "deceased's family", "family members of the deceased" and "death"; and community assistance from "neighbors and people", and how this is sanctioned with reference to religious texts "Shallallahu [peace] Allah be upon him was Allam said to its members". This is indicative of the Malay community within Singapore calling on communal resources in times of mourning.

7.2.5.5 Political Voice

The theme of POLITICAL is less critical of the government in Singapore and the theme contains extracts such as that listed below from June 2009. It is in relation to the AWARE issue and refers to allegations that a Nominated Members of Parliament (who are appointed to parliament rather than elected) (NMP) by the names of Siew Kum Hong and "Maruah" received money "foreign handouts" from a "Swede gentleman, Johan Skarendal":

1. /june2009/perspectives.singaporeangle.com/index~1.html/1/1_51

"Presumably because NMP Siew Kum Hong was vocal about gay rights and AWARE's stress on gender rather than women's rights per se, his political adversaries shrewdly capitalised on allegations that he and Maruah accepted foreign handouts from a Swede gentleman, Johan Skarendal. Allegations to which Siew Kum Hong angrily denied and strongly objected to."

The allegation of receiving money from non-Singaporean sources could have resulted in the NMP's dismissal from parliament. However, what is interesting about the post is the use of the phrase "shrewdly capitalised on allegations", which is neither an assertion of the same allegations nor a denial, merely a restatement of multiple allegations. With these "allegations" framed with the reference to the NMP being "vocal" about gay rights and receiving money from a "Swede gentlemen", it appears that the extract is *accusing* the NMP of being a homosexual. The extract concludes with the proviso being made that the NMP not only "angrily denied" but also "strongly objected to" to the plural "allegations". The allegations are that he received money from an overseas source and that he is homosexual (the criminalisation of homosexuality has been discussed in section 5.4 above). The theme of POLITICAL in this extract is not of the parliament in Singapore but rather an attack on one member

of that parliament. Siew Kum Hong is one of the few NMPs that are in parliament in order to ensure an *independent* voice.

The following extract refers to “protecting human life and dignity”, and the activities of an NGO operating within Singapore. It states that they respond to emergencies, “regardless of race, creed, religion or political beliefs” and in the next sentence “the Disabled”:

3. /june2009/www.singaporegp.sg/index~3.html/1/1_440

“sg) is dedicated to protecting human life and dignity, relieving human suffering and responding to emergencies, regardless of race, creed, religion or political beliefs. The SRC runs a range of services benefiting the vulnerable in our community including the Red Cross Home for the Disabled which provides long-term care to individuals with severe and multiple disabilities, non-emergency ambulance service, blood donor recruitment, disaster management, Red Cross Training Centre providing first aid and CPR courses and Red Cross Youth activities.”

In the context of extract 1 under the theme of POLITICAL within Singapore, it does mention gender, marital status, sexual orientation or ethnicity as potential criteria that might result in a discriminatory response in a time of crisis. This highlights a rather limited notion of social justice and potential inequality in Singapore.

The next extract is rather up beat as the author was “pleasantly surprised” and supported of comments made by “Prime Minister Lee Hsien Loong in Parliament” regarding the inclusion of more “diverse voices”.

4. /june2009/nofearsingapore.blogspot.com/index~1.html/1/1_22

“Maybe we have telepathy? Cheers, Dr. Huang Shou Chyuan The published letter (29.5.09) ST Forum YESTERDAY’S report, ‘Parliament to get more diverse voices’, left me pleasantly surprised by the wide range of changes to the electoral system announced by Prime Minister Lee Hsien Loong in Parliament on Wednesday. Although some may construe this as an ingenious gambit by the establishment to liberalise Singapore’s political system with little risk to People’s Action Party (PAP) dominance, the neutrals will deem it otherwise.”

It provides support for the government’s attempt to “liberalise” “Singapore’s political system” while maintaining the “People’s Action Party’s (PAP) dominance”. The style of the language used and the presentation of the “People’s Action Party’s” followed by “(PAP)” is a style of discourse used by an academic. The construction in the text of counter interpretations of the same action as either an “ingenious gambit” or a risk at liberalising without undermining the PAP dominance seems to have set up positions of polar opposites, but the phrase “neutrals will deem it otherwise” makes the sentence confused and ambiguous. A neutral position between these two polar opposite interpretations of the statement from the Prime Minister; that it is either a gamble of genius or a gamble that leaves the outcome to chance is still a gamble and uncertain. Rather, than present the liberalisation of Singaporean politics as a strategy

of the PAP, it is presented as leaving it to chance or that the “changes to the electoral system” will further enhance the PAP’s dominance and limit the number of alternative voices in parliament. The post that the extract is taken from goes on to state; “This is a tacit recognition that we are all Singaporeans, whoever we vote for, and that a diversity of views is a strength and not a weakness”²⁹.

Following this are recommendations to enhance the diversity of voices present in the Singapore parliament. The final extract presented here from the theme of POLITICAL is also from the month of June 2009 and questions the “Public Order Act” from *Singabloodypore*. It is a copy and pasted extract from an article “By Tony Sitathan”:

5. /june2009/singabloodypore.rsfblog.org/index~1.html/1/1_152

“By Tony Sitathan SINGAPORE - New legislation passed by parliament in the name of combating terrorism has raised concerns that discretionary powers could be used by authorities to further silence political opposition and suppress public dissent when the island nation is facing its worst economic crisis since achieving independence. The Public Order Act (POA), which was rapidly drafted and passed without much fanfare in April, represents the latest legislation to boost the discretionary powers of the People's Action Party-led government, which has ruled the city state uninterrupted since 1959, in the name of upholding national security.”

The article states, “New legislation passed by parliament” to combat “terrorism” raises concerns that it may be used to “silence political opposition and suppress public dissent”. It claims that the legislation does not combat terrorism but “boost[s] the discretionary powers of the People’s Action Party-led government” and that the assertion that it is to uphold “national security” is not the real motivation.

The theme of POLITICAL contains extracts that are overtly critical of government policy and legislation and criticism of individual members of parliament appears. The issue of having diverse voices in parliament extends to those of various faiths and political beliefs. However, women, Malays and other ethnic minorities, and homosexuals are not recognised. The call for diversity in POLITICAL voices is limited.

7.2.5.6 Human Rights

The final dominant theme that emerged over the 14 month was RIGHTS (appears once). Two of the extracts under this theme are from *Singabloodypore* and

²⁹ <http://nofearsingapore.blogspot.com/2009/05/singapores-electoral-reform-great-but.html>

were all posted in January 2010. The first extract refers to the “human rights movement’s ability” to report on abuses of human rights “anywhere in the world”;

3. /jan2010/singabloodypore.rsfblog.org/index~1.html/1/1_138

“The human rights movement's ability to raise that price has grown substantially in recent years. Today, activists are capable of exposing abuses most anywhere in the world, shining an intense spotlight of shame on those responsible, rallying concerned governments and institutions to use their influence on behalf of victims, and in severe cases, persuading international prosecutors to bring abusers to justice.”

The position presented is that these human rights organisations are able to call on the influence of “governments and institutions”. However, questions of precisely which governments are called to action and which organisations are able to generate activity within which specific countries are all left unanswered. The following extract, again from *Singabloodypore* labels the Singaporean government as an “authoritarian state” as the PAP controls it;

5. /jan2010/singabloodypore.rsfblog.org/index~1.html/1/1_166

“Singapore's legal framework continues to perpetuate an authoritarian state tightly controlled by the ruling People's Action Party (PAP). Although the party has won all elections since 1959 and is currently represented by 82 of the 84 parliamentarians with full voting rights, it is concerned that the next election, slated for no later than 2011, may demonstrate significant erosion of its popular support.”

It is labelled as “authoritarian” even though it has elections. With the use of manipulative discourse in the form of deontic modality: “may demonstrate significant erosion”, it predicts that by the time of the elections in “2011” the “popular support” for the PAP may erode. This creates a rather ambiguous reading of the Singapore government as either “authoritarian” and/or “popular”. The next extract from the *Think Centre* follows on the same theme of RIGHTS and linking it with the “elections”:

54. /jan2010/www.thinkcentre.org/index~1.html/1/1_23

““ As Singapore begins to emerge from the international financial crisis and focuses on elections that are likely to be held later this year, the government should act to improve its poor human rights record” Human Rights Watch”

Calling on the government to “act to improve its poor human rights record”; this is an extract from an international NGO, *Human Rights Watch*. The final extract mentions that people within Singapore are “fighting in public” for “their rights”:

43. /jan2010/www.littlespeck.com/index~1.html/1/1_2

“Society A bit pushier More people are untraditionally fighting in public for what they think is their rights - but these are mostly foreigners. By Seah Chiang Nee. Read”

However, it laments the fact that those taking to the streets within Singapore “are mostly foreigners”. It makes it clear that foreign workers in Singapore are those least recognised and have resorted to public demonstrations to demand their rights.

7.3. Conclusions

What is clear is that voice and speaking onto those in power is an important element of why these bloggers are maintaining their blogs. Authors present the researched material in a clear and direct manner in an attempt to influence government policies that affect them and wider society.

The Singapore blogosphere and the blogosphere that it is interlocking with is clearly providing a public space in which individuals, groups and the public are able to voice their opinions on issues affecting them and others. The nature of the Singapore identity online is that of an oppositional *interface* to the ruling authorities. In relation to White’s typology, the identity that emerged during the course of this study is that of the *interface* discipline.

This chapter is situated within the wider debates of attempting to ensure that the ‘social’ and cultural aspects of domains are re-presented in social network analysis; the concern that ‘network discourse’ is gaining hegemonic ground rather than remaining truly descriptive, that it is being used in a prescriptive manner. The main concern however is to ensure the recognition of agency in a field dominated by the algorithm.

The ethnographic approach is integral to unpacking the social and cultural forces that are at work *within* and *out with* the network in order to counter the social ignorance of automated electronic software and allowing meaning to come to the foreground.

George (2008), with reference to citizen journalism and alternative media in Singapore argues that online media is witnessing the “growing participation of experts and specialists who are no less authoritative than full-time professional journalists.” The rise of the more professional, specialist blogs, and the domination of the flow of information based on betweenness centrality of these blogs heralds a shift towards entrenched elites dominating the political sphere. With these group blogs containing ex-journalists and members of parliament, it lends weight to Wallsten’s (2005) argument that bloggers amplify the opinions of mainstream media and other elites.

Blogging technology, such as *Blogspot*, *Wordpress*, and *Livejournal* breakdown centralised authorship but with professional groups dominating the flow of information, it increases the possibility of professionals creating content to sell on the open market.

The strategy regarding the Singapore government and Singapore bloggers is a strategy to legitimise the claim to speak on behalf of the ‘public’. Dewey (1927 cited Kelly & Etling, 2008) argues, “The outstanding problem of the Public is discovery and identification of itself.” In a nation state where mass media outlets are tightly controlled which mode of public discourse can effectively shape public opinion, a distributed online form of peer production or a centralised mass media system (Kelly & Etling, 2008). The public is engaging in discourse that the entrenched Singapore elite does not recognise.

Chapter 8 Discussion

'And these three things abideth – class, role and network – and the greatest of these is network' (Mitchell, 1969:1).

Here we return to the themes and ideas first outlined in the literature review section above (chapter 2). It takes assertions made by other authors and assesses the validity of their claims in light of the material presented in chapters 5, 6 and 7. It assesses Dutton's rise of the fifth estate and the people's ability to enhance the communicative power of individuals. This chapter outlines recent moves by the Singapore blogosphere and the relationships between the media and political system. It also questions the salience of Hallin and Mancini's prominence of the western ideals of democracy. It argues that the flow of information is beyond nation state and corporate ownership of the means of communication. The work of Kalathil and Boas (2003) is re-assesses in the section titled revisiting studies of communications under authoritarian regimes. The position held here is that the Internet produces nothing. The idea that relations on the Internet 'cause' or 'help' is assessed in the Singaporean context. Rather the Internet is a reflector of people's actions. This chapter returns to the importance of the ethnographic approach and the work of Harrison C White and the three genres of disciplines in aiding our understanding of the transitions that are taking place in the relations that Singaporeans are forming on the Internet.

8.1 Revisiting Media Systems and Political Systems

Earlier chapters presented literature on the political impact of the Internet as well as the work of Hallin and Mancini's discussion of media systems. The themes and debates generated by these authors are now returned to and reassessed in light of the analysis and discussions generated here.

Dutton asserted the growth of a fifth estate. What is happening in the context of Singapore is not the growth of a Fifth Estate as referred to by Dutton (2009). Singapore bloggers are a network of individuals but they are unable to reconfigure access to alternative sources of information, people and other resources. They are able to critique existing institutions but in the context of Singapore this does not result in politicians, press, or experts being held to account. What they are able to do is organise themselves online and in certain cases offline.

One recent example of organising themselves was the #freemyinternet movement that culminated in a public rally in Singapore in 2013³⁰. Utilising not only blogs but also Facebook and Twitter the Singapore blogosphere voiced their concerns regarding the introduction of new legislation that required websites that regularly published 8 news articles a month about Singapore and had monthly page views of 50,000 Singaporeans to register and submit a ‘performance bond’ of \$50,000 with the Media Development Authority. The deposit had to be made as either a cash deposit or bank guarantee. Any website that published ‘questionable content’ would have to remove said content within 24 hours or forfeit its performance bond. 162 websites and blogs took part in an online campaign whereby they blacked out their websites and did not publish articles for 24 hours on the 6th June 2013. They also held a rally at Hong Lim Park on the 8th of June 2013 with estimates of approximately 2,500 protestors taking part.

Dutton’s assertion that the fifth estate is enhancing the communicative power of individuals holds true in this instance. It may not be enhancing the communicative power of institutions but it is enhancing their surveillance capabilities. So individuals are able to voice opposition to the works of the other estates or institutions of governance but this does not hold them to account or empower the users of the Internet. It is communication that is empowered as Dutton states. The Singapore bloggers may be left with very little room to operate in – a case in point is that Hong Lim Park is a free speech corner operated and controlled by the local police and demonstrations are only permitted within that area. However, online the space of the reach of the protest was global. The networked Singapore bloggers operated at a global level. The global space that was created was created by networked individuals who were prepared to out manoeuvre the mainstream media of Singapore. The space was opened up because they are one-step ahead of the political, economic and cultural institutions of Singapore. As Hafez posits “ we are witnessing a communicative turn [...] the media sector and the public sphere hurry ahead of changes in the political systems” (2010:2). Contrary to Hallin and Mancini (2004) actual communications are moving targets that are typified or trying to replicate the ideal of western orientated systems. Singapore bloggers in their act of defiance and in voicing their opinions

³⁰ http://www.youtube.com/watch?v=vrE6FkMRZ_c&feature=youtu.be

dropped the mask of anonymity at great personal risk. The fact that the Singapore mainstream media reported on the rally highlights attempts by the press in Singapore to recognise the voice of those protesting and engage with their concerns. The new legislation however still stands and no further consultation has been announced. The Singapore bloggers are not affiliated with any political party on mass. Individual bloggers may express support for a political party but the #freemyinternet movement attracted no interest from the major political parties and opposition MPs were in attendance. Beyond institutional politics is the dynamic interplay of people's ideas and interests (Engesser & Franzetti, 2011).

In this instance the Internet is undermining censorship in an authoritarian regime (Habermas, 2006) and this may in due part be because Singapore does not have a free press. However, the interplay between the press and the Internet is not hard and fast even in authoritarian regimes. In this instance the main stream media did cover the events by presenting the images from the rallies, a few vox-pops and the opinion of the MDA. Social movements, even if #freemyinternet can be called such a thing, are able to interfere more decisively than in the past. Whether or not these two sides can be harnessed by a third institution remains to be seen in the context of Singapore. The communicative power that the Internet facilitates is not controlled by any institution and the desire or need to have one do so is not expressed within the Singapore blogosphere. What is at work is the exchange of values and ideas that are embedded in the regulatory frameworks, institutions and the impetus emerging from the Singapore blogosphere. The political and media institutions are having to reconcile or acknowledge the existence of opposition to aspects of the regulatory frameworks. It is a debate about the relations of communicative power.

In Singapore the uses of the Internet by the Singapore blogosphere has facilitated the "expansion of politically relevant media" (Castells, 2004). There are a myriad of voices and sources and the definition of what is political in Singapore has been reclaimed to an extent by the Singapore blogosphere. The gatekeeper role has been usurped and the flow of information is no longer in the power of the ruling elite. The gatekeeper role is in the hands of the Singapore publics'. The relational communicative power that the Internet presents is undermining the ability of elites to frame events and the meaning of events. The Singapore blogosphere is able to undermine dominant hegemonies of the Singapore state. The media system that was once seen as a subset of the political system is now *a progenitor* of social change. An

era of communicative turn in Singapore. Singaporean media and with them Singapore political culture are developing faster than the Singapore political system (to paraphrase Hafez, 2010:1).

Next we return to the issues raised by Hallin and Mancini's (2004) four criteria (see Chapter 2 Section page 15) with which they identify and categorise western media systems - State interventionism, political parallelism, media industries and professionalisation comes with a structuralist position in that element of the social structure help us to "understand the news media" (Hallin & Mancini, 2004:8). In the context of Singapore it is the people who organise themselves via the Internet as individuals or groups that are creating new spaces for communicative power and altering hierarchies. The Singapore state intervenes in mainstream media but less so with the political spaces created online. The newspapers, mainstream media and political parties evolved together but there is now a disjuncture between those political parties and the Singapore blogosphere. The criteria of professionalism of journalists is also of importance to Hallin and Mancini however the amateur writings of Singapore bloggers undermines the control of the state. A control that was the result of state interference and a culturally specific interpretation of professionalism as calibrated coercion. Hallin and Mancini (2008) talk of ideal types or models; polarised pluralist model, democratic corporatist model and liberal model. Models shaped largely the notion of the nation state being *the progenitor* of social change. It is communicative power on a global scale that has nation states reacting to it. The flow of information is no longer bounded by nation state or corporate ownership of the means of communication. Dysfunctional systems that attempt to control the flow of information can no longer provide adequate ideal types or models of how things ought to be. The network of networks is relational communicative power.

Hallin and Mancini's (2008) four criteria with which they identify and categorise western media systems are as expected; limited to Western democracies. When the Singapore government decides that it wishes to transfer the regulation that it has to control the mainstream media to that of the Internet in the interests of social order the Singapore blogosphere counters the argument. This is no trivial matter in an authoritarian state. The Singapore government's attempts to *get a grip* are failing so long as there are counter arguments. As a nation state the Singapore government is responding to this opening up of communicative space by enacting laws and regulations in order to bind that space in order to exert control over the communication

taking place. The Singapore state is re-acting to unfolding events by trying to close down or limit that space.

In contrast to Hallin and Mancini - Singapore bloggers are immersed in values of institutions but those values are not simply reducible to those institutions. They are reworking those values and unmasking state attempts at closing those spaces as dysfunctional.

8.2 Revisiting Studies of Communications under Authoritative Regimes

Singapore is cited by Kalathil and Boas (2003) as of special merit as the state has, according to them, managed the impossible. They argue that there has been the development of ICT without the erosion of political control. This position no longer holds as the discourse that is taking place is undermining the control of the Singapore state. The intervention of the Singapore state into online discourse continues. From the extensive Information Communication and Technology advances and the state continues to impact the situation but not in the manner they would like. It is most definitely not a static situation. Recent events such as the Media Development Authority's demand that certain news outlets register with them have reshaped debate regarding freedom of speech and the Internet in Singapore. Rather than the population accept the new legislation unquestioned it resulted in online and offline protest. For the first time the Singapore political bloggers organised a public demonstration. The attempts to manipulate discourse and thereby reinforcing a climate of fear resulted in a growing sense of collective identity amongst previously anonymous bloggers. They met on mass in face to face debates and listened to speakers arguing that the MDA were introducing unnecessary legislation in an unfair manner. Rather than appearing efficient, responsive, legitimate and beneficial for their citizens (Kalathil & Boas, 2003) the MDA was presented as dysfunctional in the Internet age. Threatening use of legislation did not filter access to particular sites, block access or remove material that the state found threatening rather it resulted in Singaporean bloggers defending their ability to do so. Rather than create a level of self-censorship the state was informed that do not control the environment in which the Internet takes place. Interaction that had largely taken place online was now taking place offline. Kalathil & Boas (2003:142) wrongly concluded that what would be needed to precipitate political change in Singapore would be an economic crisis and that the Internet would

not be likely to play a role in that change. Political change is taking place in Singapore not as the result of an economic crisis but because of a crisis of legitimacy for the Singaporean state and the use of the Internet by the people of Singapore is a driver, among others, of that change. This change is also the result of regulative and legislative attempts by the state to control the Internet.

The nation state no longer controls and dominates the communicative space that the Internet facilitates. In the context of Singapore the state is no longer the loci of power and control. Singaporean bloggers are prepared to test the bounds of legality and question the regulations that are put in place. After years of Singapore state propaganda the people are not sceptical of media that they themselves, as networked individuals, create. The Internet is no longer marginal.

The Internet is not confined to the elites of Singapore and while access to the Internet has spread within Singapore, it is now less than ever dominated by an elite group. While the majority with access to the Internet will follow the user patterns of users in non-authoritarian countries; shopping and communicating with family and friends some are retrieving and creating political information. The impact is no longer limited as the mainstream media have also broadcast the rally that took place in June 2013. Fledgling opposition groups are forming in what was once defined as a de-politicised environment. Rather than organising via the already existing Civil Society Organisations (Kalathil & Boas, 2003:144) they are self-organising network of individuals, potentially because CSOs are viewed as conformist. CSOs in Singapore have been silenced by threats of legal prosecution and the government can alter regulation to make certain actions too risky for CSOs.

These self-organising networked individuals are not affiliated with any political party and are no longer a purely Web based organisation. In the context of Singapore the Internet is facilitating a plurality of voices that are reverberating on to the political parties and mainstream media. This is not a shift to a US or European model. The legal, social and economic conditions as well as the political system in which they operate curtail the actions of CSO's and political parties in Singapore. The power that these networked individual wield has not been fragmented but rather reinforced by their reactions to new legislation and regulation. It is in spite of government regulations and legislations that the communicative space is being opened and maintained. The Sedition Act; the Defamation Act; Contempt of court and contempt

of parliament; The Internal Security Act; The Official Secrets Act; The Public Entertainments and Meetings Act; The Penal Code; The Maintenance of Religious Harmony Act and there is the Parliamentary Election Act, the Broadcasting Act and the Films Act (Tang, 2009:11-12), affect activity on the Internet. These Acts do not affect the Internet in the way that the legislators desire alone. It is the pushing back and defiance of such Acts that generates the communicative space of the Singapore blogosphere. These overlapping laws and Acts might prevent opposition politicians and their supporters from using the Internet effectively but politics is not restricted to the institution of the political party. Where the Singaporean is presented with confusing legislation they continue to relate to one another and interact in a manner that generates for them certainty. They are less cautious.

In Singapore where there was said to be a “symbiotic relationship between the media and the state” (Ang, 2007; 23) with the print media monopolised since 1984, and the combined control of the television and broadcasting within the Media Corporation of Singapore and Radio and television broadcasting all controlled and owned by MediaCorp. There was a monopoly of the media in Singapore. The use of the Internet by the people of Singapore is changing that. There is no longer a symbiotic relationship between media and state. There is a narrative of nation building with the media taking a pro-government and pro-establishment stance but the media has realised that such a stance can no longer be justified when dissenting voices need to be calibrated into their broadcasts. Where once journalists out of conviction and necessity aligned themselves with the PAP they now realise that in order to maintain relevance they are disentangling themselves from the state. Laws that silenced multiple political parties and movements with multiple newspapers and broadcasting organisations are no longer effective.

“Calibrated coercion” (George, 2005) or strategic self-constraint of the use of state powers will help in understanding why professional journalists and other media players remain engaged with the rhetoric of nation building and it also helps us to understand why now they are broadcasting images of bloggers (and others) demonstrating against the introduction of new legislation. The media that once had to contend only with the desires and mores of state now have to calibrate their actions to the values of those who are active and vocal online. As the Singapore bloggers become more vocal the leaders of the press are compelled by the perceived audiences to not be seen as government mouth pieces. Access to the audience is no longer monopolised

by the mainstream media. The mainstream media of Singapore no longer dominates the audience and market forces. The profit motive shapes news reporting and the flow of information in mainstream media outlets in Singapore. In order to stem the flow of profit to online companies the mainstream press are having to engage with a communicative space in which they would very easily be cast as mouth pieces for the government. The professional values of journalism in Singapore may be shifting to incorporate support for the Singapore community and loyalty to readers and viewer. A Singapore community that voices dissent in the communicative space of the Internet and the offline environment; the critique of government policies; and continued loyalty to government. However, what is the order of preference?

8.3 Revisiting the Internet in Comparative Contexts – Authoritative versus Democratic

According to Habermas (2006:423) online communicative spaces lead to fragmentation of large politically focused audiences into isolated issue publics. The ability of these issue publics to focus is dependent on the attention of the press such as national newspapers and only then does political communication take place. These chat rooms and other online communicative spaces appear fragmented because of the limited empirical data collection methods at work within political communication research. For Habermas public spheres only exist as a result of the involvement of journalists and politicians addressing public opinion. Other types of elite actors that mediate political communication are lobbyist, corporate interest groups, advocates, experts, moral entrepreneurs and intellectuals. All others are reduced to a mob that generates merely irrelevant noise. Such gatekeepers to deliberation from Habermas' perspective are blocks to facilitating democracy according to Dutton (2010). The potential to undermine these elites resides with the mob. Journalists and politicians are said to mediate the content of the communicative action that the Internet is facilitating. In the context of Singapore the journalists and politicians are having to re-orientate their responses to this mob. Algorithms and search engines have the potential to help them in recognising the voices and mediate the flow of communication.

For Habermas this crisis of legitimation can be overcome. It requires a self-regulating media system and anonymous audiences granting feedback between informed elite discourse and a responsive civil society. The censorship regime that

existed in Singapore has been undermined by anonymous producers and consumers of online discourse.

Whether viewed from Habermas' or Dutton's perspective the mob or *the people* are without agency to affect wider political and social change. They regard the potential of the Internet is something removed from the utility of the public. The public is defined as what journalists, politicians and other elite cultural intermediaries say it is. In non-liberal regimes, such as Singapore, whether the Internet would spread democracy have the Internet doing or causing something. The Internet is presented as the progenitor. In the context of Singapore the people are the progenitor of political and social change. It is not the Internet that is the main actor or first mover. The Internet is the facilitator of the action of networked individuals in Singapore. Networked individual are the spark that ignites the myriad of necessary properties for democratic deliberation to emerge.

What I have provided here is a systematic study grounded in empirical data to present how the structure and agency interact in the context of Singapore and the Internet. Shifting the focus away from only allowing for institutional and political economic forces to allow the actions of the people to shape the Internet and the institutional and political reactions to that. Research has tended to approach the Internet according to four frameworks. Inequality or the digital divide; community and social capital, political participation and voter turnout; organisations and institutions; and the levels of cultural participation and diversity (DiMaggio et al, 2001). What has been produced here is an understanding of the Internet as an ever-changing phenomenon. The idea of the Internet producing anything has to be laid to rest. Utopian versus dystopian and therefore simplistic dichotomies may be the result of technological or institutional determinism. Moving beyond simplistic determinism required more theory. The Internet does not impact political communication and those advocating such a position are producing simplified, anecdotal, unsubstantiated hyperbole. In this context the people are not simply reduced to the audience but presented as the generators of social and political change in Singapore. It is unacceptable to separate the uses of the Internet or Web from the people. The Web does not contain within it the political capacity to achieve change. That capacity is the utility of the people who seek recognition. The notion that the nation state or corporations can ensure the "the freedom of personal and social communication among a state's population should be the highest priority, closely followed by securing

individual citizens' ability to speak in public" (Shirk, 2011) is to not only place the priority in the wrong order but also misses the point. The nation states and corporations are not progenitors of freedom, social communication or security providers for individuals. Quite the opposite really.

8.4 Revisiting the Internet as the 'Cause' of the Polarisation of Political Opinion

What has been presented here is research that place the activities of people at the centre of the research as opposed to associating the success or agency on an organisation or other facilitator as has been done by Drezner and Farrell (2008). They argued that in the US it resulted in fragmentation or rather a group of decentralised, non-profit, contrarian and discordant websites and how it could affect political and policy outputs. They argued that blogs could focus attention on issue that are largely ignored by mainstream press in US. The research conducted here draws similar conclusions but relishes the decentralised, non-profit, contrarian and discordant nature of the Singapore blogosphere. Blog readers and producers may group around blogs that agree with their political beliefs and few may read cross-ideologically but these groupings are not static but moving and evolving over time. How they group together and how that can be presented in any meaningful way over time is beyond the scope of currently available algorithms. The appearance of #freemyinternet on mainstream news bulletins indicates that certain opinion maker within the media in Singapore are reading blogs and being affected by the material contained within them. As Benkler and Shaw (2010) assert in the context of the US, the polarisation between English and Malay speakers in the Singapore blogosphere may be the result of the adoption of different blogging platforms. So a link analysis may exaggerate the ethnic polarisation. The Singapore blogosphere may be no more polarised along ethnic lines than the offline environment is. Cross-ideological or in the case of Singapore cross-ethnic deliberation may occur in discussions that are not explicitly political and may arise in an unpremeditated fashion. In order to assess the levels of ethnic segregation online it would require measurements of the level of offline segregation.

For Gentzkow and Shapiro (2010) the Internet is not becoming more segregated but rather levels of segregation online is lower than that of face-to-face interaction. So in the context of Singapore the interaction taking place within that communicative space may not be increasing ethnic segregation but ameliorating it.

8.5 Revisiting the Internet ‘Helping’ the Spread of Democracy

The technological structure of the Internet is said to spread democracy because ‘it’ regards censorship as an attack and the complex organism that ‘it’ re-roots and thereby enables the continuation of the organism as a whole (Albert, Jeong, & Barabási, 2000). Of course I use the term ‘it’ to highlight the simplicity of such statements. The removal of Websites, blogs and social network sites causes interference in the transmission of information. With the use of sophisticated software and algorithms a knowledgeable agent can cause disproportionate damage. The filtering and censorship of content and online surveillance is able to cause considerable interference in the flow of communication. The Internet is no more an ‘it’ but the actions of networked individuals maintaining a communicative space.

The four phases of Internet regulation, from open Internet, to access denied, access controlled, access contested (Palfrey, 2010) are the ongoing deliberative debates that are taking place online. Palfrey (2010) argued that the argument today; that regulation, which must be conducted, be done effectively is what was being contested by the Singapore blogosphere and the #freemyinternet demonstration. The MDA and thereby the Singapore government had argued that they needed to control what certain media companies do online. The attempt to constrain what companies can do was seen by Singapore bloggers as further diminishing of the communicative space that they inhabit. It is this communicative space that the debates are about and the environment in which they are taking place. This space may be a network that could be regulated but it continues to be a network of individuals supporting the freedom of expansion and association in a regime where the public media environment was constrained (Palfrey, 2010: 19). Democratising government encourage the diffusion of the internet more so that autocratic ones and in the case of Singapore the actions of the MDA imply continued autocratic rule in Singapore. The regulation introduced by the MDA resulted in collective social action. The MDA helped to turn anonymised, individualised, localised and directionless dissent into a movement with a collective identity, shared grievances and realisation of the opportunities for action. It is the regulation, laws, surveillance, censorship and threats that enable people to express opinions and organise themselves. The Internet in Singapore has documented these ideas that the people created and shared.

The socio-political tactics applied by the Singapore state have been to regulate and re-write laws to ensure a continuation of offline jurisdiction to cover online communicative space. They have yet to resort to denial of service attacks, trolling, nor the nationalisation of search engines and email providers (Morozov, 2011:67). The Singapore government is however making sure that Internet Service Providers ensure that users comply with regulations. The outsourced application of automated network analysis and data mining techniques are an attempt to ensure the demise of “Internet Freedom” (Morozov, 2011:74) or rather the curtailment of human relations.

The counter foil to such approaches are methodological approaches that see the Internet as a reflector of human agency (Farrell, 2011). As daily social relations become entwined and inseparable from the digital environment the social sciences require different kinds of data collection and analysis that have at their centre a humanist agenda.

The combined methods of social or hyperlink network analysis, semantic network analysis and network ethnography allow for the recognition of voice.

The currency that draws people to these [online] communities ... is recognition. We-think communities provide their participants with what they most value: recognition for the worth of their contribution, the value of their ideas, the skills of their trade (Leadbeater, 2008 cited Couldry, 2010:65).

Within the Singapore blogosphere amidst all the tensions and arguments small factions are able to form and respect each other, work on each other’s esteem, show solidarity in times of conflict and treat each other with a basic level of respect. In short, it is the members of the network who are the readers and commentators that provide internal recognition, creating hyperlinks, trackbacks and writing comments on each other’s posts.

While ensuring that the social and cultural aspects of domains are re-presented in social network analysis; the concern presented throughout this work is that ‘network’ discourse is gaining hegemonic ground rather than remaining truly descriptive, or rather that it is being used in a prescriptive manner. In asking if there is room for the *social* in network analysis enabling self-reflexivity as well as emancipatory projects it provides a description of an attempt to do so. The main concern however is to ensure the recognition of agency in a field dominated by the algorithm. This at the same time allowed questions regarding the Internet in an authoritarian regime – Singapore to be approached.

The ethnographic approach is integral to unpacking the social and cultural forces that are at work *within* and *out with* the network in order to counter the social ignorance of automated electronic software and allowing meaning to come to the foreground. Integral to this unpacking of the social and cultural is White’s three genres of discipline. These genres of discipline are not hard and fast and therefore facilitate the changing nature of the phenomenon under scrutiny. It does not present the observer with a hard and fixed interpretation or having to assign solidity to something in flux.

Discipline	Interface	Council	Arena
Valuation Order	Quality – e.g. University Lecture	Control – e.g. University Council	Purity – e.g. Rotary club
Nature of Flow	Outside upstream, downstream outside	Reaches out to control	Creates Boundaries
Embedding	involution via specialisation	dependence via interdigiting	Differentiation via visibility

Table 6 White’s (2008) three genres of discipline and relative valuation orders

The Singapore blogosphere has embedded via dependence, locked together in an antagonistic loop with the external disciplines of the Singapore government and government affiliated mainstream press. This was uncovered in chapter 4 during the social network analysis of the hyperlinked network using the tools of network analysis developed by the mathematical wing of network analysis – betweenness centrality. The scope and size of the network was determined using these tools gathering the hyperlinks – *IssueCrawler* and assessed with *Netdraw* and *Pajek*.

Corporate sites ‘control’ the Singapore blogosphere having a disproportionate level of control over the flow of information. Corporate nodes appear in July 2009

when the network betweenness centralisation dipped only to increase in August 2009 with corporate nodes dominating the hub. Open public spheres are being colonised and walled off by corporate entities. This leads to the potential side lining of anti-corporate politics and the only information available being that which comes with a viable business plan. This places the control of communication in the hands of economic elites, governments and mass media outlets.

There is limited interest in reaching out to control or gain action and so the flows of information remain within its own bounded loop. Bloggers are primarily concerned with the quality of the blog posts and the quality of sources. Therefore, *quality* is the dominant valuation order of the Singapore blogosphere. This leads to the conclusion that it is primarily an *interface* discipline. The particular discourse in stories and the topics discussed has become *interdigitated*. The Singapore blogosphere has gained an element of *visibility*. An *interface* discipline requires a level of commitment from the bloggers towards quality.

I have developed a country profile on core concepts. Each month new texts added to the corpus and altered that profile. The Singapore blogosphere is not an isolated and distinct network without theme or focus. Two separate factions exist within the Singapore blogosphere, with ethnic Malays separated from the larger English speaking faction. The Singapore blogosphere may have been isolated in 2006 but by 2009, it shows clear links to the wider global blogosphere. Views reinforced within Singapore are juxtaposed with alternative - uncontrolled views. Ethnic Malay speakers may be confined in their ability to share views within the Singapore blogosphere but this in no way inhibits their ability to connect and coordinate with Malays in Malaysia and globally. This heightens the ethnic divide between the majority Chinese and minority Malay.

Analysis of the textual data provides evidence to support the position that the Internet is creating an oppositional space whereby public spheres of persuasive discourse take place; it is also perpetuating dominant themes of manipulative discourse. This largely epistemic space does add weight to the position that the Internet is creating public spheres in Singapore. The manipulative discourse dominates the characteristic example quotation on the concept of 'discrimination' targeting homosexuals and immigrants and (re)produces, or may reproduce

inequality. Racist and homophobic ideologies serve as a permanent basis for the discrimination of immigrants and homosexuals.

The Singapore blogosphere is orientated towards producing posts and articles that are of a high quality. Quality means that the claims and assertions made are sound. Any facts or figures mentioned in the post link to the source of the data. Others are able to comment on the assertions or provide alternative data that may contradict the earlier assertions. Large sections of the blogosphere take each speech, talk or pronouncement by government ministers or representatives of ministries, dissecting, and undermining them. The network is the articulation of oppositional voice. The Singapore blogosphere is an oppositional voice unrecognised by the Singapore government.

The representation of what the public desired or expected, produced by the mass media, was in stark contrast to how they 'the public' perceived their expectations. This discourse was taking place not in taxis, or coffee shops but in full public view. It was criticism of the justification of the government to know what the public is or wants. The most important political and social issues faced by the Singapore public, as defined by the 'public' and not mediated by a state controlled press, will continue to find space and expression in the Singapore blogosphere, retaining the potential to engender democracy.

The rise of the more professional, specialist blogs, and the domination of the flow of information based on betweenness centrality of these blogs heralds a shift towards entrenched elites dominating the political sphere. With these group blogs containing ex-journalists and members of parliament, it lends weight to Wallsten's (2005) argument that bloggers amplify the opinions of mainstream media and other elites. Professional writers or writers with professional backgrounds that represent the dominant elite are trying to dominate the public space.

White's (2008) concept of discipline shows how struggles over control have the potential to generate an entirely new identity on a different level over the other sets of identities. Disciplines emerge out of network forms as the struggle for control comes to rest on a *valuation order*. The story sets in the localised discourse contain the valuation order of quality and while the professionalisation of the space continues all other story-sets are subsumed by quality. *Quality* has the potential to become hegemonic. The control struggles that formed the discipline surround the identities,

settle into networks and settle on a particular style, institution and regime (Padgett & McLean, 2006).

There is a crisis of legitimacy for the Singapore state because of the communicative power of the Internet by the people of Singapore. The continued use of the doctrine of *calibrated coercion* (strategic self-constraint of the use of state powers) has seen the People's Action Party's dominance of local elections being undermined. Since the PAP won 86.7% of votes in 1968, it has dropped to a low of 60.1% in 2011. Since 2007, the PAP set up two committees that oversee the 'counter-insurgency' to undermine anti-PAP discourse after a drop in votes to 66.6% in 2006. It has not managed to reverse the decline in votes. The counter-insurgency can call on the views and ideas of the political elite but from 2009 to 2010 the Internet in Singapore was dominated by non-elites and dissenting voices.

Critics of the Singapore government are using the Internet for political communication and the use of the Internet is central to demands for political change. Such demands are made by the Singapore blogosphere. Previous studies have placed greater prominence on nation states and their governments with the Internet pushed to the periphery because the nation state created it. This focus on the Internet as technology misses the crucial uses that that technology is put to by the people within and beyond the borders of specific nation states. The Singapore state is able to voice its opposition to and apply laws to offences that take place on the Internet but they do not control the communication that is taking place, they react to it but do not shape it. The Singapore government may be involved in using the Internet to spread manipulative discourse but the level of persuasive discourse outweighs this. The people receive an alternative interpretation of events that may adhere more to their own interpretations. This undermines the state monopoly on defining events and meaning creation that older media systems ensured. The impact of the Internet, or rather the use of the Internet by the people of Singapore is undermining the control of the People's Action Party. It is not a demand for individual freedoms or greater consumer choice but an active, collective that questions the government, has a political voice and is interested in human rights.

These political voices and their interests were classified by Hurst (2006) and Lin and Sundaram et al., (2007) as isolated and clearly demarcated with no central topic. The automated use of mathematical algorithms in gathering and analysing blog

content obscures the people creating the blogs. Network analysis is useful to the researcher in that it presents the connections between people, but the researcher embedded in the meaning and understanding of the people they are observing ensures the social significance and importance of those connections in the analysis.

The approach contained within this thesis is one way of overcoming the limitations of using only mathematical algorithms in gathering and analysing blog content. Focusing on the people's uses of the Internet allows for a richer and more dynamic understanding of what is happening.

Mitchell looked at who people interacted with as dynamic, fluid, and tried to capture that while focusing on norms, identity, control and conflict. While some (White & Johansen, 2005) saw this as limiting the application of social network analysis - the danger, as Mitchell argued, of defining people as nodes in a network and the relationship between people as lines, is that the use of the term network as a metaphor subsumes the social relationships between people. In subsuming, it obscures roles, norms, values, identity, control and conflict. The approach presented here allows for a return to Mitchell's position and in so doing brings people back to the central role rather than obscured on the periphery.

Rather than merely acknowledge that the Singapore blogosphere is a place of conflicting groups of elites and non-elites the way forward is to view each of these groups as legitimate voices. Once the other is recognised, the groundwork for creating a space or institution can then begin in Singapore. Such an institution would harness the communicative power of the Internet and result in a more democratic space. Not doing so will ensure that conflict, regulations and censorship will continue while the Singapore government tries to maintain its calibrated coercion of the events. This would prolong the lack of legitimacy of the Singapore state as it continues to frame the Internet as a place of insurgency and counter-insurgency, a space of conflict as opposed to one of consensus building.

The malaise at the intersection of the various academic approaches to studying the Internet and possible implications for politics is that they operate under the misguided belief that online behaviour is unregulated. It is – the algorithm – or code that regulates online behaviour (Lessig, 2006). It is *algorithm fetishism* that has blinded us to the existence of and manipulation by the code.

Algorithm fetishism – is similar to that of commodity fetishism in that what is presented as containing human attributes do not – the objects merely appear to possess such human attributes. The mathematical algorithms that are used to sort and sift code are mathematical abstractions. These abstractions appear on the screen as virtual objects. Every interaction conducted on screen in the digital environment is code – the reification of code misrepresents social relations. It is this matter that is taken up in the application of various tools that group individuals into clusters and factions in chapter 5.

The misrepresentation of social relations, in this instance of online interaction, is the presentation of what appears to be a level or non-manipulated space – the algorithms are social constructions. They are mathematical algorithm but to infer some natural attribute to the resulting algorithm is misguided. Algorithms used for clustering take for granted such terms as relation – control – power – connection. Not merely do they reduce the interactions of nodes to only one possible configuration but also take highly contested social concepts such as “power” as unproblematic. Defining power as merely the interplay of which node or collection of nodes is connected to which others and denying the wider myriad of potential attributes (especially when dealing with the interaction of people) of that node is problematic and mathematical reductionism. A node such as Facebook is powerful in the network as it is connected to a greater number of important nodes and those external nodes contain links and code turn it into a listening resource for Facebook.

The Internet is a human or social construction and the rules and regulations that control it are algorithms. These algorithms are the result of people designing and creating code that enables us to navigate the Internet. HTML enables us to operate within the World Wide Web, hyperlinks enable us to move from one website or webpage to another. Websites and web pages are also code. If the Internet is the study of its interconnections and those interconnections on the WWW are hyperlinks. Then the study of the WWW is the study of hyperlinks. Hyperlinks can in certain situations be the result of a human being entering text and assigning it the status of a link to another site. On many occasions a hyperlink is the result of an algorithm. The links that we see once we have entered a search term into a search engine such as Google. The hyperlinks that we are presented with while running a Google Search are the result of Page and Brin’s (1998) algorithm – PageRank. To research and study only the hyperlinks between nodes is to deny all the other resources and practices at work.

Code and algorithms are the rules and sanctions. The algorithms and codes are how the space is defined and regulated. According to Lessig (2006:24), these codes and algorithms are the spaces of the Internet – spaces are distinguished as code and some spaces are more easily regulated than others are. The Internet’s architecture is its politics. In order to study the politics of the Internet requires a study of its architecture – the codes and algorithms as well as the other attributes of the nodes.

This study paid particular attention to connections using of one type of code the hyperlink and used a number of different algorithms to quantify the groupings of the spaces linked by these pieces of code. To study the Internet is not to study how the online affected the offline outcome in an election but to study the codes and algorithms – to state the assumptions they are founded on and reveal the implications of being controlled by them.

There is urgency in the need for research of the Internet. There may be the opportunity to test theories at the early stages of the “*mediums diffusion*” (Emphasis in original) (DiMaggio et al, 2001:308) but the assumption that it enables us to test media effects on the levels of “*institutionalisation*” as DiMaggio et al assume is limiting the scope of possible outcomes of the theories that are to be tested. There is also the assertion that the Internet is somehow unique and that it combines types of content and communications in one medium – but the uniqueness can be overstated as the “new” medium has evolved out of other technologies and is technologically dependent upon them. This is a evolution not of the technology but of the application of that technology to evolve and destroy institutions and practices. The rules and regulations being passed will shape the Internet (DiMaggio et al, 2001:308) but the rules and regulations exist outside the legal system. These rules and regulations are the algorithms and codes being written by software engineers. They are shaping the Internet’s “technical and normative structure for decades to come” (DiMaggio et al, 2001:304). It is these algorithms and codes that need to be debated and contested rather than taken for granted in their reified form.

These algorithms and codes are being worked out by mathematicians – there is little if any debate regarding them in other academic disciplines. If the Internet is “at the centre of the integration of a new media ecology which transforms the structural relations” (Carey, 1998) and as “[t]he outcome will not be determined by the technology alone but by an actual political struggle in which alternative visions of the

future, which are much more than ‘interests’ get translated into the laws and regulations that will govern our lives” then the algorithms and codes require input from non-mathematical disciplines.

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Appendix 1 English Seed List

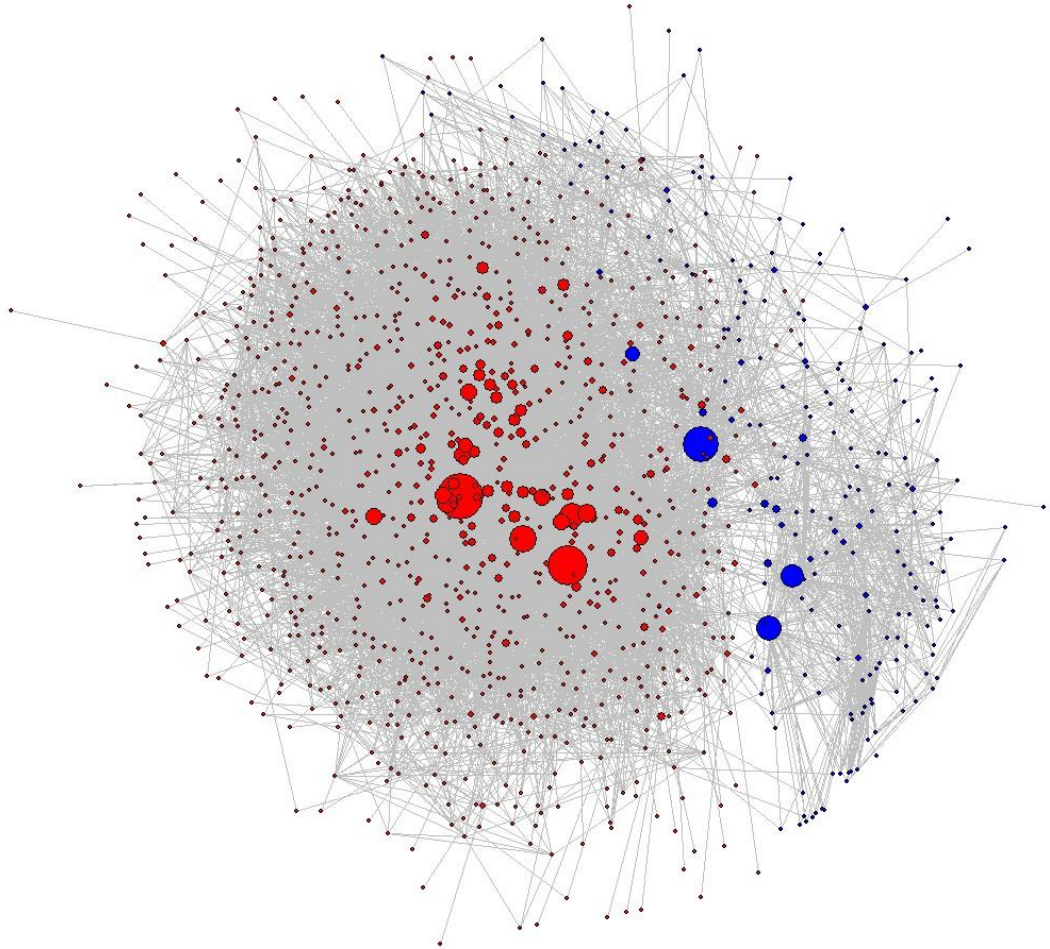
Accept Access Accountability Active Actors Address Administration Agencies Agenda Agreed Agreement Alex Au Align Allah American Americans Anyone APEC Approach Appropriate Approved Areas Argued Army ASEAN Attention Australia Author Authorities Authority Autocracy Autonomy Available Awareness Behalf Behind Believe Bilateral Bodies Border Build Building CA Candidates Care Caste Central Chiam Citizens Civil Civilian Civilians Class Coalitions Combatants Commander Commissioners Common Communities Community Concern Concerned Concerns Concult Considered Constituent Constitution Constitutional Consult Consultation Consulting Contribute Contribution Cooperate Cooperation Corruption Council Countries Country Court Courts Cultural Culture Decision Decisions Demands Democracy Democratic Dialogue Different Discrimination Discussions Displaced District Districts Domestic Donor Donors Dr Chee Economic Effective Efforts Elected Election Elections Empowerment Establishment Ethnic EU Everyone Exclude Excluded Excluding Exclusion Expatriate Expressed External Fair Families Family Force Forces Foreign Free Freedom Friend Friends Future gay Gender God Governance Government Governments Govt Group Groups Groups Include gurl Heard Hearing Hearings Hope Humanity Idea Identified Identity IMF Important Include Included Includes Including Inclusion Inclusive Independence Independent Indian Indians Indigenour Indigenous Individual Individuals Indonesia Indonesian Indonesians Influence Inform Information Informed Infrastructure INGO INGOs Input Institutional Institutions Integration Internal International Interventions Involve Involved Involvement Involving Issue Issues Jesus Judicial Judiciary Jurisdiction Just Justice Knowledge Knows Language Law Laws Leader Leaders Leadership Leading Lee Hsieng Loong Lee Kuan Yew Legal Legislation Legitimacy Listen Local Majority Mandate Marginalized Mechanisms Mediation Meeting Meetings Member Members Membership Military Monarchy Monitoring Nation National Nations NATO Needs Negotiation NGO NGOs Officials Opinion Organisations Organization Organizations Others Outgroup Outside Outsider Ownership PAP Participants Participation Parties Partners Party Peace-building People People's Perpetrators Person Personnel Persons Plan Planning Police Policies Policing Policy Political Politics Poor Population Post-Colonial Power Powers Ppl Prayers Presence Present Pressure Principles Private Procedures Process Processes Processes Respect Protest Public Question Questions Reach Reasons Received Reconstruction Reform Reforms Regime Region Regional Regions Reintegration Relations Relationship Religion Religious Report Represent Representation Representatives Represented resolution Respect Response Responsibility Responsible Rights Role Rule Running Say sayoni SDP Section Sector Sectors Security Services Share Sharing Sides Social Societies Society Sources Speak Staff Stakeholders Standards Status Structural Structure Structures Support Supported Supporting System System Systematic Systems Talk Talking Talks Team Tell Temasek Territory Testimony Them Thought Told Traditional Transitional Transitional Administrator Transparency Troops Trust Truth UN UN Security Council UN Transitional Authority UN's Understand Understanding Understood UNDP United Nations United Nations Transitional United States Urban Us USA Value Values View Views Village Villages Violations Voice Vote Wants Washington workers party World Bank

Appendix 2 Malay Seed List

Terima Akses Akuntabilitas Aktif Pelakon Alamat Pentadbiran Lembaga Setuju Perjanjian Amerika Seseorang APEC Pendekatan Sesuai Diluluskan Daerah Berpendapat Darat ASEAN Perhatian Australia Author Authorities Authority Menteri Autonomi Tersedia Kesedaran Nama Di belakang Mempercayai Bilateral Badan Sempadan Membangun Bangunan CA Calon Perhatian Kasta TengahCentral Chiam Warga Sipil Kelas Koalisi Kombatan Komander Komisioner Umum Komunitas Komunitas Keprihatinan Prihatin Kebimbangan Conculat Dianggap Konstituen Perlembagaan Perlembagaan Rujuk Konsultasi Consulting Sumbangan Bekerjasama Kerjasama Rasuah Majlis Negara Pengadilan Mahkamah Budaya Budaya Keputusan Tuntutan Demokrasi Demokratik Dialog Berbeza Diskriminasi Perbincangan Displaced Kabupaten Daerah Domestik Penderma Donatur Dr Chee Ekonomi Efektif Upaya Terpilih Pemilihan Pemberdayaan Penubuhan Etnik Eropah Setiap orang Dikecualikan Dikecualikan Mengecualikan Pengecualian Expatriate Dinyatakan Governments Adil Keluarga Tentera Angkatan Asing Bebas Kebebasan Teman Teman-teman Depan gay Jender Dewa Governance Kerajaan Groups Sertakan gurl Mendengar Mendengar Sidang Harapan Kemanusiaan Diidentifikasi Identiti IMF Penting Sertakan Termasuk Mencakup Termasuk Inklusi Inklusif Kemerdekaan Independen Indian Indigenour Adat Individu Individu Indonesia Pengaruh Inform Maklumat Infrastruktur INGO INGOs Input Kelembagaan Lembaga Integrasi Internal Antarabangsa Intervensi Melibatkan Terlibat Penglibatan Melibatkan Persoalan Isu Jesus Keadilan Judiciary Yurisdiksi Hanya Keadilan Knowledge Tahu BAHASA Hukum Hukum Pemimpin Kepemimpinan Leading Lee Hsieng Loong Lee Kuan Yew Hukum Legislasi Legitimasi Mendengarkan Local Majoriti Mandat Terpinggirkan Mekanisme Mediasi Mesyuarat Members Keahlian Ketenteraan Monarki Monitoring Bangsa Nasional Bangsa Keperluan Negosiasi Pejabat OpiniPertubuhan Lain Outgroup Di luar Luar Pemilikan PAP Peserta Partisipasi Pihak Mitra Pesta Keamanan Orang-orang Rakyat Pelaku Person Personil Orang Rencana Perancangan Polisi Kepolisian Politik Miskin Penduduk Post Kolonial Kekuasaan Powers Ppl Sembahyang Kehadiran Saat ini Tekanan Prinsip Swasta Prosedur Proses Proses Muat Respect Protes Umum Soalan Soalan Menjangkau Alasan Diterima Rekonstruksi Reformasi Rezim Daerah Kawasan Reintegrasi Hubungan SingleAgama Laporan Mewakili Perwakilan Timbalan Mewakili resolusi Respect Respon Tanggungjawab Penanggungjawab Hak Hebat Peraturan Menjalankan Berkata sayoni SDP Bahagian Sektor Sektor Keselamatan Perkhidmatan Berbagi Sisi Sosial Masyarakat Masyarakat Sumber Bercakap Staf Stakeholders Standard Status Struktural Struktur Struktur Menyokong Disokong Penyokong Sistematik Sistem Bercakap Perbincangan Pasukan Menceritakan Temasek Territory Kesaksian Mereka Pemikiran Memberitahu Tradisional Transisi Administrator Peralihan Transparansi Pasukan Percaya Kebenaran PBB Majlis Keselamatan Pihak Berkuasa Peralihan PBB Memahami Mengerti UNDP Pertubuhan Bangsa Peralihan PBB Amerika Syarikat Urban Kami USA Undian Lihat Tinjauan Desa Pencabulan Suara Vote Ingin Washington Bank Dunia

Appendix 3 Enlarged figures and tables containing top 100 websites and blogs for January according to Betweenness Centrality Score

January 2009



ID	Degree	Betweenness	Closeness	*Factions2
tomorrow.sg	226	54368.523	3722	1
singabloodypore.rsfblog.org	100	46697.242	3830	1
photobucket.com	73	39586.113	4161	2
wordpress.com	115	28838.838	3992	1
technorati.com	119	26875.951	3869	1
blogdrive.com	51	26513.658	4613	2
kuncup.blogdrive.com	56	24603.119	4636	2
sgentrepreneurs.com	136	21082.211	3894	1
apple.com	72	17975.463	3993	1
flickr.com	98	17531.486	3964	1
nus.edu.sg	55	17092.059	4220	1
miyagi.sg	106	16841.604	3900	1

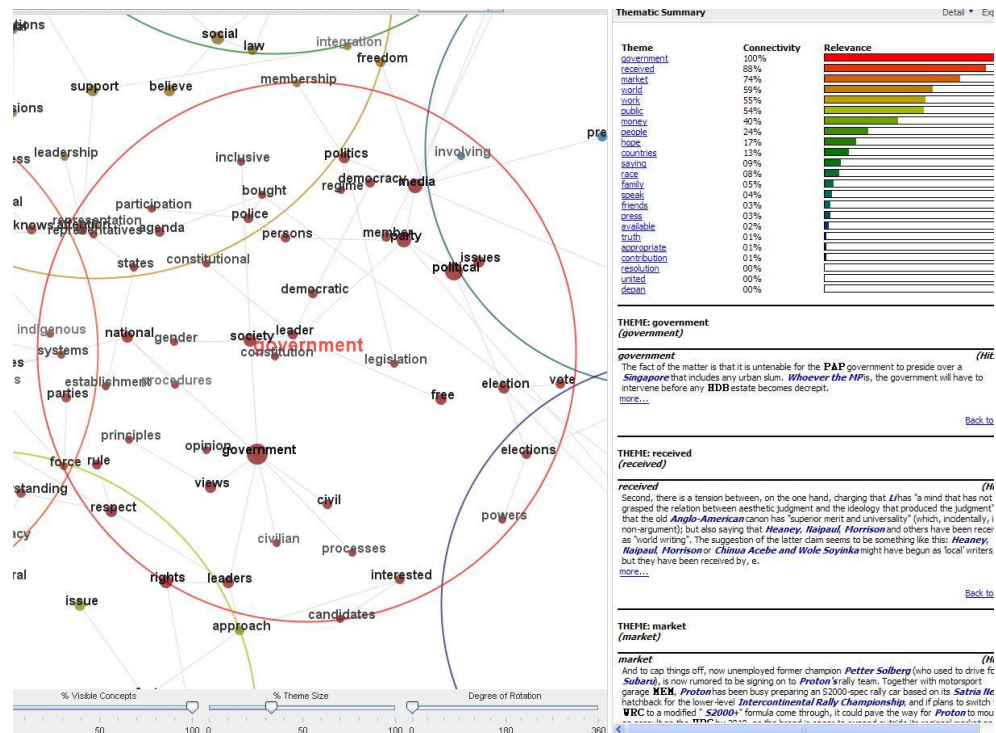
creativecommons.org	110	16355.752	3918	1
claudia.sg	157	15619.328	3980	1
bleongcw.typepad.com	130	15007.011	3908	1
coolinsights.blogspot.com	116	13105.171	3941	1
blogshopr.com	43	12490.965	4342	2
sixapart.com	73	12296.688	4142	1
mrbrown.com	109	11871.69	3949	1
toomanythoughts.org	79	10866.46	4109	1
clappingtrees.com	98	10859.379	3924	1
youtube.com	71	10531.919	4038	1
rinaz.net	119	10470.112	4005	1
facebook.com	90	10379.912	4001	1
sgblogs.com	107	10292.924	3993	1
sheylara.com	135	10011.058	4037	1
ping.sg	122	9951.441	4051	1
tribolum.com	78	9782.947	4026	1
sgblogawards.omy.sg	32	9680.728	4432	1
topsites.sg	68	9653.919	4350	1
xiaxue.blogspot.com	69	9636.455	4063	1
jason.sg	73	9598.261	4111	1
bloggersg.com	47	8644.901	4290	1
addthis.com	45	8644.771	4273	1
blogskins.com	28	8282.607	4392	2
sabrina.sg	87	8117.581	4080	1
uniquefrequency.com	102	8111.397	3979	1
feedburner.com	57	8090.169	4154	1
xtralicious.com	100	7713.883	4127	1
livejournal.com	38	7261.629	4245	1
cnn.com	39	7255.586	4182	1
nadnut.liquidblade.com	101	7234.268	4091	1
ian.onthereddot.com	85	6870.25	4083	1
blog.dk.sg	128	6730.285	4033	1
vantan.org	71	6575.834	4076	1
imeem.com	23	6499.521	4508	2
liewcf.com	60	6491.278	4179	1
orphicsoliloquy.blogdrive.com	22	6426.033	4741	2
metafilter.com	62	6353.342	4243	1
deadpoetscave.com	64	6341.952	4118	1

exampaper.com.sg	66	5999.502	4148	1
singaporeangle.com	74	5958.893	4059	1
xanga.com	36	5950.308	4406	1
james.seng.sg	60	5944.373	4168	1
aaron-ng.info	66	5921.205	4126	1
edirectory.sg	37	5883.133	4560	1
friendster.com	31	5818.237	4249	1
popagandhi.com	67	5733.65	4220	1
jayleif.blogspot.com	57	5669.173	4160	1
yesterday.sg	60	5639.308	4199	1
millionbloglist.com	75	5610.29	4174	1
uniquefrequency.wordpress.com	77	5584.736	4009	1
imageshack.us	16	5549.26	4829	2
herewith-yanni.com	36	5544.183	4327	1
readwriteweb.com	75	5430.537	4193	1
blog.sayoni.com	31	5208.676	4420	1
multiply.com	10	5154.596	4756	1
none	38	5096.981	4310	1
fastonlineusers.com	21	5047.106	4849	2
daintyflair.net	65	4972.243	4157	1
feedjit.com	20	4955.567	4540	1
blog2u.sg	72	4850.214	4254	1
leonardpng.blogspot.com	62	4800.015	4247	1
plaktoz.com	75	4797.909	4090	1
wirawanterulung.blogspot.com	21	4682.856	4681	2
theonlinecitizen.com	63	4596.956	4189	1
bunnyherolabs.com	18	4495.665	4656	1
yawningbread.org	45	4463.895	4342	1
bloglines.com	28	4458.974	4454	1
ramblinglibrarian.blogspot.com	48	4344.01	4261	1
wayangparty.com	49	4339.439	4264	1
uglyfatchick.blogspot.com	43	4331.625	4220	1
youth.sg	40	4275.886	4218	1
sgblog.com	44	4228.65	4384	1
blogarama.com	33	4204.5	4354	1
pluitsolutions.com	59	4193.419	4158	1
twitter.com	62	4145.427	4202	1

decayonnet.blogspot.com	92	4084.932	4063	1
widgetbox.com	17	4061.512	4595	1
techcrunch.com	60	3983.468	4229	1
mssheepy.com	31	3811.636	4287	1
myspace.com	28	3736.265	4309	1
thedigitalmovement.org	77	3628.046	4198	1
armchairtheorist.com	58	3622.743	4231	1
theyoungbusinessman.biz	60	3600.485	4216	1
nowhere.per.sg	62	3522.074	4179	1
davienne.blogspot.com	61	3505.097	4140	1
kennysia.com	55	3474.155	4190	1
princessbutterfly.blogdrive.com	16	3434.321	4854	2
mysql.com	44	3377.554	4321	1

Appendix 4 Leximancer Results from January 2009 to February 2010

January 2009 - Themes and Concepts of the analysis of textual data collected from 1,432 sites (70.9 MBs) from the Singapore blogosphere with associated concepts.



The above highlights the theme of government (government, political, media, party, rights, society, leaders, national, attention, politics, issues, election, views, respect, free, leader, elections, civil, democracy, member, rule, vote, police, democratic, persons, interested, agenda, bought, opinion, regime, states, representatives, participation, candidates, constitutional, inclusive, constitution, principles, gender, establishment, powers, legislation, processes, procedures, civilian) as the most central theme that grouped concepts together related to legitimacy. In the centre of Map 1 the concepts cluster around the theme of government are ‘constitution’, ‘society’, ‘leader’ ‘democratic’ and ‘legislation’. The top ranking concepts that appear alongside government are ‘opinion’, ‘views’, indicating that voice was an important factor within the Singapore online contextualisation of ‘government’ in January 2009. Below are example quotes from a ‘government’ query.

1./jan2009/www.cherian.blogspot.com/index~1.html/1/1_249

“The fact of the matter is that it is untenable for the PAP government to preside over a Singapore that includes any urban slum. Whoever the MP is, the government will have to intervene before any HDB estate becomes decrepit.”

The use of “*The fact*” and “*it is untenable*” in the above quotation are examples of epistemic modality in relation to the theme of the government of Singapore; and “the government *will have to*” is an example of deontic modality in stating that the government has a moral obligation.

8. /jan2009/topmleehsienloong.blogspot.com/index~1.html/1/1_52

“Jobs for Singaporeans. The Government will spend \$5.1 billion to help Singaporeans stay employed so they can continue to support their families by introducing a, Enhancing SPUR, (Skills Programme for Upgrading and Resilience) providing a WIS Special Payment and expanding recruitment across the public sector. Stimulating Bank Lending The Government will extend \$5.8 billion of government capital to stimulate bank lending through enhancing existing schemes and a new Special Risk-Sharing Initiative (SRI).”

In the example quotation marked 8 there are two examples of epistemic modality “Government *will* spend \$5.1 billion to *help* Singaporeans” and “Government *will* extend \$5.8 billion of government capital to *stimulate*”. However, the inclusion of the term “help” in the example highlights the moral obligation that is being met to look after families; thereby making it a deontic modality. While the inclusion of the term “stimulate” refers to a biological mechanism; that is pragmatic action to support the banking system.

9. /jan2009/singabloodypore.blogspot.com/index~1.html/1/1_127

“The report also demonstrates that this system is actively maintained by an autocratic government whose political philosophy and practice is predicated on Lee Kuan Yew's idea that state resources should be concentrated on the top 5 percent of the population "who are more than ordinarily endowed physically and mentally." Most importantly, this essay presents a clear alternative to the course taken by the PAP who has bludgeoned into the minds of the populace that there isn't, and can never be, one.”

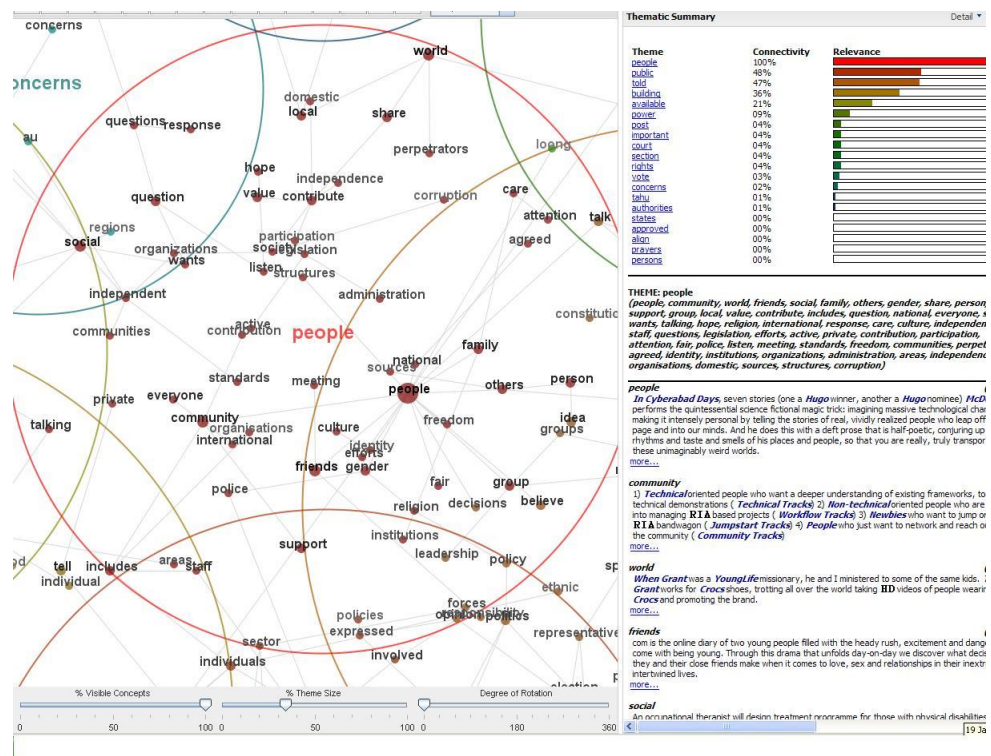
Example number 9 utilises epistemic modalities, “this system *is* actively maintained by an *autocratic* government”, “*is* predicated on Lee Kuan Yew's idea”, “*are* more than ordinarily endowed” and “who *has bludgeoned* into the minds” and deontic modality “*should be* concentrated” and “there isn't, and *can never be*”. The use of the terms “autocratic” and “bludgeoned” do however imply a level of deontic assertion with the use of emotive language. It reports on a speech made by another subject. However, it is clear that epistemic modality is set in opposition to the deontic assertions.

10. /jan2009/singaporeangle.blogspot.com/index~1.html/1/1_213

“I do think the PAP stays in power because it does have broad support among the people, but here is where I made the other point, that the electorate is increasingly becoming vocal, and that the government, in conceding openly (rather than leave the OB markers invisible) that discussions of a political nature will be tolerated (ok, problematic word, I am not going to address at this point) is. Responding to the changing nature of the electorate.”

In quote 10, epistemic modality occurs in; “it *does have* broad support” and “the electorate *is increasingly becoming* vocal”. While “*will be tolerated*” is an example of deontic modality with the use of the term “tolerated” implying allowed and requiring permission from another source of power.

February 2009 – Themes and Concepts of the analysis of textual data collected from 1,216 sites (62.2 MBs) from the Singapore blogosphere in February 2009 with associated concepts.



The above highlights the theme of people (people, community, world, friends, social, family, others, gender, share, person, support, group, local, value, contribute, includes, question, national, everyone, wants, talking, hope, religion, international, response, care, culture, independent, staff, questions, legislation, efforts, active, private, contribution, participation, attention, fair, police, listen, meeting, standards, freedom, communities, perpet agreed, identity, institutions, organizations, administration, areas, independent, organisations, domestic, sources, structures, corruption) as the most central theme that grouped concepts together related to social identity. In the centre of Map 2 concepts that are clustered around the theme of people are ‘active’, ‘meeting’, ‘sources’ ‘administration’ and ‘structures’. The top ranking concepts that appear alongside ‘people’ are ‘sources’, ‘national’, ‘freedom’, ‘identity’ and ‘culture’, with direct links to ‘national’, ‘freedom’ and ‘identity’; indicating that social identity and voice were important factors within the Singapore blogosphere’s conception of ‘people’ in February 2009. Below are example quotes from a ‘people’ query.

“Straits Times: ‘ Discrimination enshrined in law’ Wong Suan Yin writes that the decision not to repeal s377A was “a sad day for Singapore” as a double standard now exists for all people before the law thus making a “mockery of the Pledge we learnt from young”. He says that the debate has “exposed the hypocrisy of those who urged the retention of Section 377A” since this group should have lobbied to maintain the Penal Code outlawing “unnatural acts” for all individuals instead of making it “perfectly fine for heterosexuals but still a crime for homosexuals”.”

The example quotation labelled 2 is under the theme of people and the topic of the extract is on Section 377A which is an Act in Singapore that outlaws “gross indecency” between two men and can result in a prison sentence of 2 years. Again epistemic modality appears in “*was* “a sad day for Singapore”” and in “*exists* for all people” and deontic modality in “*has* “exposed the hypocrisy” and “*should have* lobbied”.

9. /Feb2009/popagandhi.com/index~1.html/1/1_94

“We used to have just three and a half million people; not many years from when I was in school learning three and a half million populations and 642 square kilometre areas, we are now pushing 5 million. The numbers keep changing — they won’t stop importing sand from Indonesia to dump into our sea, to fatten and lengthen our shores in nationally sanctioned asset augmentation.”

Under the theme of people and in this instance referring to immigration and land expansion the example quotation includes two epistemic modalities “*We used to have* just three” and “*we are now* pushing 5 million”; and one occurrence of deontic modality “*they won’t* stop”.

19. /Feb2009/vantan.org/index~1.html/1/1_142

“Knowing how greed, corruption and the repackaging of financial debt has caused great misery to people, I’ve often thought, how can purely profit-driven businesses ever add this kind of value to society? But now I’m reminded that having good business sense also helps society.”

The example quotation above refers to the economic downturn, has three examples of deontic modality “*has caused* great misery”, “*having* good business sense, and *can* that conveying permission in the sentence “how *can* purely profit-driven businesses”.

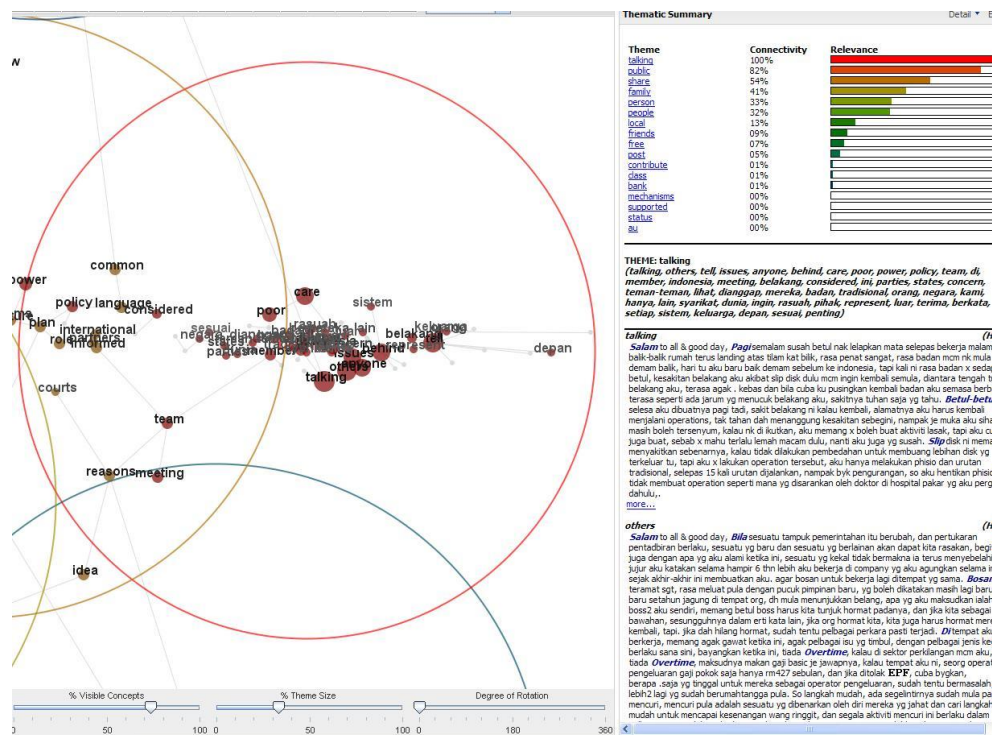
23. /Feb2009/popagandhi.com/index~1.html/1/1_173

“There are many ways in which I would never say Dubai was like Singapore, or vice versa, but at the end of my short sojourn here I have come away with the conclusion that both cities are cities that take time, and plenty of effort, because their charms are never as

immediately obvious as their annoyances are. And that in both cities, the small motley crew of people you discover who love and hate the city as much as you do, who give life to the city and try to turn it into what it is not, believe they need to go in order to come back and make our young, growing cities what we want them to be: better places to live in.”

There are three examples of epistemic modality in this quotation discussing emigration “There *are* many ways”, “*are* cities that” and “charms *are* never”; and 3 occurrences of deontic modality in “*believe* they need” “I *would* never say” and “I *have* come away”.

March 2009 – Themes and Concepts of the analysis of textual data collected from 1,201 sites (71.7 MBs) from the Singapore blogosphere in March 2009 with associated concepts.



The above highlights the theme of talking (talking, others, tell, issues, anyone, behind, care, poor, power, policy, team, di (the), member, indonesia, meeting, belakang (back), considered, ini (this), parties, states, concern, teman-teman (my friends), lihat(see), dianggap (is considered), mereka (their), badan (bodies), tradisional (traditional), orang (people), Negara (countries), kami (us), hanya (only), lain (others), syarikat (company), dunia (world), ingin (want), rasuah (corruption), pihak (party), represent, luar (rural), terima (received), berkata (say), setiap (every), system (system), keluarga (family), depan (future), sesuai (appropriate), penting (important)) as the most central theme that grouped concepts together related to voice. In the centre of Map 3 concepts that appear under this theme are clustered around syarikat (company), pihak (party), kami (us), tradisional (traditional), and ‘alasan’ (reason). The top ranking concepts that appear alongside talking are ‘perhatian’ (attention), ‘others’, and ‘issues’ indicating that voice was an important factor within the Singapore blogosphere’s conception of talking in March 2009. Below are example quotes from a ‘talking’ query with the original Malay or Bahasa Indonesian followed by a translation in English.

1. /March2009take2/rickywan.blogspot.com/index~1.html/1/1_37

“Salam to all & good day, Pagi semalam susah betul nak lelapkan mata selepas bekerja malam, balik-balik rumah terus landing atas tilam kat bilik, rasa penat sangat, rasa badan mcm nk mula demam balik, hari tu aku baru baik demam sebelum ke Indonesia, tapi kali ni rasa badan x sedap betul, kesakitan belakang aku akibat slip disk dulu mcm ingin kembali semula, diantara tengah tulang belakang aku, terasa agak . kebas dan bila cuba ku pusingkan kembali badan aku semasa berbaring, terasa seperti ada jarum yg menucuk belakang aku, sakitnya tuhan saja yg tahu. Betul-betul x selesa aku dibuatnya pagi tadi, sakit belakang ni kalau kembali, alamatnya aku harus kembali menjalani operations, tak tahan dah menanggung kesakitan sebegini, nampak je muka aku sihat, masih boleh tersenyum, kalau nk di ikutkan, aku memang x boleh buat aktiviti lasak, tapi aku cuba juga buat, sebab x mahu terlalu lemah macam dulu, nanti aku juga yg susah. Slip disk ni memang menyakitkan sebenarnya, kalau tidak dilakukan pembedahan untuk membuang lebihan disk yg terkeluar tu, tapi aku x lakukan operation tersebut, aku hanya melakukan phisio dan urutan tradisional, selepas 15 kali urutan dijalankan, nampak byk pengurangan, so aku hentikan phisio dan tidak membuat operation seperti mana yg disarankan oleh doktor di hospital pakar yg aku pergi dahulu.”

(Salam to all & good day, yesterday morning I lelapkan hard right eye after working nights, back-up landing back home continue to mattress kat room, feeling very tired, feeling body mcm nk start balik fever, today fever well before I new to Indonesia, but the body was x sedap ni feel right, I back pain due to disk slip mcm want to return first, between the central spine I, felt a little numbness and when trying to turn my body back when I lie down, feel like I have needles menucuk behind me, doom god only knows. X really comfortable I made this morning, ni back pain if back, I must again undergo address operational, dah tak tahan bear such pain, I see the face JE healthy, can still smile, if nk in ikutkan, I really can do x outdoorsy activities, but I also try to do, because x want too weak kinds first, later I also I difficult. Ni slip disc is actually painful, if not done surgery to remove excess disk I deviated tu, x, but I do the operation, I just do phisio and traditional sequence, the sequence was carried out after 15, see byk reduction, so I stop and not phisio I make operation as recommended by specialist doctors in the hospital I went past.)

In this extract there are a number of deontic modals used to describe a personal physical ailment, under the theme of talking; “I *must* again undergo “and “I really *can do*”, and a small number of epistemic modals “*is actually*” and “*was carried out*”. The blog that this data is from appears to be a spam blog and results in error warnings when visited.

13. /March2009take2/jojo-boy.blogspot.com/index~1.html/1/1_8

“Pagi ini begitu cerah, kulihat langit diatas awan putih yang begitu menawan begitu indah untuk ditatap entah mengapa aku pingin membuat suatu cerita di dalam postingku dihari ini yang jatuh pada tanggal 15 june 2006. alkisah tentang seorang anak manusia yang kehidupannya tak luput dari rasa gembira, sedih, cinta, dan rasa sakit yang diderita dalam

kehidupannya. siang ini terasa panas cuaca diluar sana, hari ini aku tidak bisa masuk kerja entah mengapa aku merasa ngak enak badanku, sebelum aku memutuskan tidak masuk ke kantor aku telephon dulu sahabatku di kantor pagi itu, sahabatku ini anaknya baik sekali tempat curhatanku dikala aku punya masalah dengan siapapun entah keluarga atau pacar bernamanya sari dia itu orangnya tinggi, kulitnya kuning, .rambutnya panjang lurus. kriiiing haloo sari ini aku maya" ada apa maya, terdengar suara sari menyahut, gini tolong bilangin ama personalia bahwa aku tidak bisa masuk hari ini karena sakit , seluruh badanku terasa ngak enak nih, terlontar suara maya " ok deh, aku bilangin kalau kamu sakit" terdengar suara sari lagi memberi balasan" dan maya berkata " thanks ya memang kau sahabatku yang baik."

(morning was so bright, kulihat sky above the clouds so white that captures so beautifully for me pingin ditatap somehow make a story in posting ku dihari that falls on 15 June 2006. alkisah about a child's human life that escape from feeling happy, sad, love, pain and the hag in her life. This day feels hot weather outside there, today I can not work in somehow I felt ngak badanku wine, before I decided not to enter the office I TELEPHON first companions in the office that morning, her companions are good places curhatanku dikala once I have a problem anyone with either family or boyfriend bernamanya essence he is the one high, yellow skin. long straight hair. Hey I kriiiing essence this virtual "what is virtual, voice heard essence respond, please bilangin gini ama Personalia that I can not in this day because of pain, all feel badanku ngak enak nih, terlontar virtual voice" ok deh, I bilangin if you sick "heard the voice again essence reward" and said virtual "thanks so really you are good companions.)

This personal blog post contains epistemic modals “*was so bright*”, “*I can not work*” “*companions are good*” “*I have a problem*” “*he is the one*” and “*what is virtual*”.

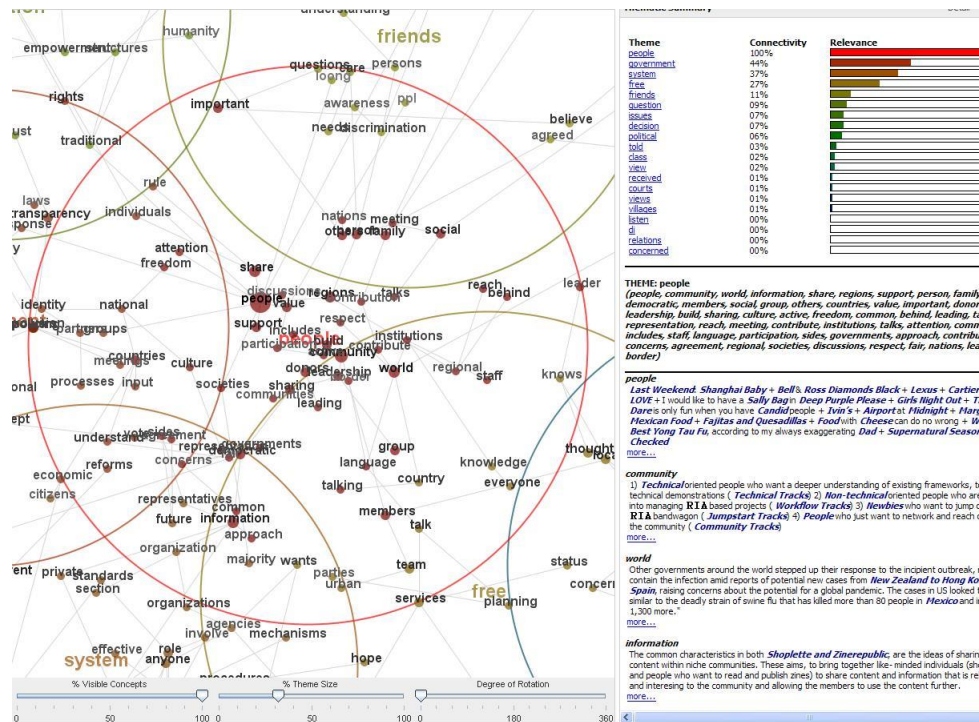
20. /March2009take2/kilyzz.blogspot.com/index~1.html/1/1_5

“Menyediakan Makanan Bagi Ahli Keluarga Si mati Sunat bagi jiran dan kaum karabat yang jauh menyediakan makanan untuk ahli keluarga si mati, sebagaimana Rasulallah Shallallahu ‘alaihi wasallam bersabda kepada ahlinya ketika mendapat khabar kematian Saiyidina Ja‘far bin Abi Thalib: yang maksudnya : “ Kamu buatkanlah makanan bagi keluarga Saiyidina Ja‘far, sesungguhnya telah didapati mereka itu kesibukan. (atas kematian Saiyidina Ja‘far).”

(Providing food for the deceased's family members to neighbors and people should karabat far provide food for family members of the deceased, as Shallallahu Allah be upon him was Allam said to its members get glad when death Saiyidina Ja'far bin Abi Talib: which means: "You create not food for the family Saiyidina Ja'far, has indeed found them busy. (on the death of Ja'far Saiyidina).)

This characteristic quotation regarding the theme of talking is about an Islamic religious figure “Ja'far Saiyidina”. The phrase “people *should*” is an example of strong deontic modality and “him *was* Allam” is the use of epistemic modality.

April 2009 – Themes and Concepts of the analysis of textual data collected from 1,232 sites (72.3 MBs) from the Singapore blogosphere in April 2009 with associated concepts.



The above highlights the theme of people (people, community, world, information, share, regions, support, person, family, democratic, members, social, group, others, countries, value, important, donors, leadership, build, sharing, culture, active, freedom, common, behind, leading, talking, representation, reach, meeting, contribute, institutions, talks, attention, communities, includes, staff, language, participation, sides, governments, approach, contribution, concerns, agreement, regional, societies, discussions, respect, fair, nations, leader, border) as the most central theme that grouped concepts together related to social identity. In the centre of Map 4 concepts that are clustered around this theme are ‘participation’, ‘includes’, ‘build’ ‘community’ and ‘active’. The top ranking concepts that appear alongside ‘people’ are ‘discussions’, ‘value’, ‘support’ and ‘share’ indicating that voice was an important factor within the Singapore blogosphere’s conception of ‘people’ in April 2009. Below are example quotes from a ‘people’ query.

8. /April2009/brennan.sg/index~1.html/1/1_96

“On the most recent Sunday afternoon, I joined Mum for a puppet parade at Raffles City Shopping Centre. Although there strangely less people shopping there on a Sunday as it was the last day of the school holiday, the puppet parade consisting of a line of ad-hoc puppeteers and musicians making traditional Balinese-like music still attracted quite a number of onlookers.”

The first extract that is characteristic of the use of the theme people and its surrounding concepts is this personal account of daily life and includes epistemic modality “as it *was* the last day”.

9. /April2009/dooce.com/index~1.html/1/1_22

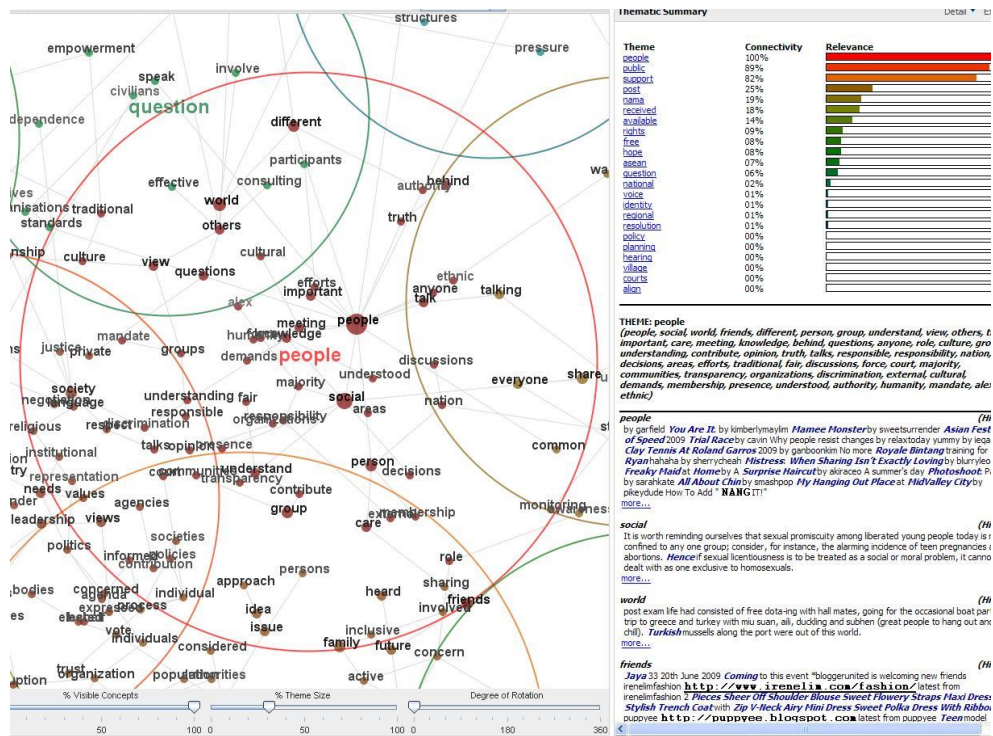
“Quick note: our house is built into the side of a hill so that from the front it looks like a one-story house, from the back a two-story house, and all our bedrooms are on the lower floor where one side sits against the hill and the other side opens up to the backyard. Saying "we go upstairs to the kitchen" was confusing a lot of people and causing them to cry.”

The second extract again is a personal account of daily life and is indicative of a personal style of blogging on the theme of people and contains epistemic modality “*is* built” “*are* on the” and “*was* confusing”.

11. /April2009/tribolum.com/index~1.html/1/1_13

“There is a divide between our overly-involved (IMO, anyway) government and the people. Singlish - the language organically evolved by the people, is labelled as detrimental to our progress, something to be avoided, unclean, almost.”

The final extracted quotation is less personal although it is still on the theme of people, however it is on the use of *Singlish* and the governments attempts to minimise its use in Singapore; it contains epistemic modal assertions on a political topic “There *is* a divide” and “*is* labelled as detrimental”.



Map 5. The result of the analysis of textual data collected from 472 sites (17.7 MBs) from the Singapore blogosphere in May 2009 with associated concepts.

Map 5 highlights the theme of people (people, social, world, friends, different, person, group, understand, view, others, talk, important, care, meeting, knowledge, behind, questions, anyone, role, culture, groups, understanding, contribute, opinion, truth, talks, responsible, responsibility, nation, decisions, areas, efforts, traditional, fair, discussions, force, court, majority, communities, transparency, organizations, discrimination, external, cultural, demands, membership, presence, understood, authority, humanity, mandate, alex, ethnic) as the most central theme that grouped concepts together related to social identity. In the centre of Map 5 concepts that are clustered around this theme are ‘majority’, ‘knowledge’, ‘understood’ and ‘social’. The top ranking concepts that appear alongside ‘people’ are ‘meeting’, ‘important’, ‘effects’, ‘truth’, ‘talks’ and ‘understood’ indicating that voice was an important factor within the Singapore blogosphere’s conception of people in May 2009. Below are example quotes from a ‘people’ query.

4. /May26052009/www.islamicity.com/index~1.html/1/1_4

“Islamic Counseling & Psychotherapy Few scholars have addressed this area in a significant way, beyond assertions that Islamic counselling needs to be developed into a well structured discourse that captures the breath and spirit of Islam in helping people. More Abuse Photos and Justice It is now clear that the Photos of Abu Ghraib are being withheld because they are inhuman and barbaric, reminding people of the dark ages of Europe.”

Epistemic modality appears 4 times in this characteristic quotation from the theme of people while referencing an international topic of Abu Ghraib with “scholars *have* addressed”, “It *is* now clear” “Photos of Abu Ghraib *are being* withheld”, and “they *are* inhuman and barbaric”. It contains one instance of deontic modality “counselling *needs to be* developed”

6. /May26052009/naturegreen.diaryland.com/index~1.html/1/1_27

“i mean, people rarely listen to completely learn, they can't afford to. so when one talks about something as deep as the spiritual, its too easy to lapse into sermonistic over-righteous exhortations or wary, self-conscious shallow commentary, both springing from the best of intentions (the former to convey the truth sincerely, the latter to apply the truth as precisely and applicably) - maybe i'm just stressed with the exams looming over.”

Quotation 6 contains one occurrence of deontic modality, “they *can't* afford” and two occurrences of epistemic modality, “*its* too easy [sic]”, “*the truth* sincerely” and “*the truth* as precisely”.

13. /May26052009/heavenly-sword.blogspot.com/index~1.html/1/1_30

“Despite all the rhetoric about 'wanting talent', 'cherishing talent', 'upgrade or perish' etc, the Singaporeans who really heed such advice could well find themselves facing a grave that they've unwittingly dug for themselves - they have studied 'too much' by Singapore's standards and nobody in this country wants to hire them now! Ironically, Singapore's knowledge-based economy doesn't want people with too much knowledge.”

Quotation 13 that questions the distinction between rhetoric and actual circumstances contains two examples of deontic modality “advice *could* well find” and “knowledge-based economy *doesn't want* people; and two examples of epistemic modality “*they've* unwittingly” “they *have* studied 'too much’”.

14. /May26052009/arzhou.com/index~1.html/1/1_67

“While all this is nice and dandy, I really wonder if people (or Singaporeans) in general actually know WHY we really have Earth Hour. If you think that you are saving the Earth by turning off your lights and other non-essential appliance for 1 hour (it can be argued in my case that my computer is essential) can actually save the Earth... then as what the guy in White Tiger (good book btw) says, “What a beeping Joke”.”

This example quotation on the topic of environmentalism under the theme of people is largely made up of epistemic assertions; “this *is* nice”, “we really *have* Earth Hour”, “think that you *are* saving the Earth”, and “my computer *is* essential”.

17. /May26052009/catherinelim.sg/index~1.html/1/1_107

“The best possible response is a two-stage one: first, letting our children know exactly how we feel and what our anxieties, wishes, hopes, etc for them are (it is amazing how people in general value honesty and decry insincerity and hypocrisy) and second, letting them know that regardless of what they become or do in their lives, they can always be assured of our love and support (it is amazing how such. parental reassurances remain as comforting memories throughout life).²

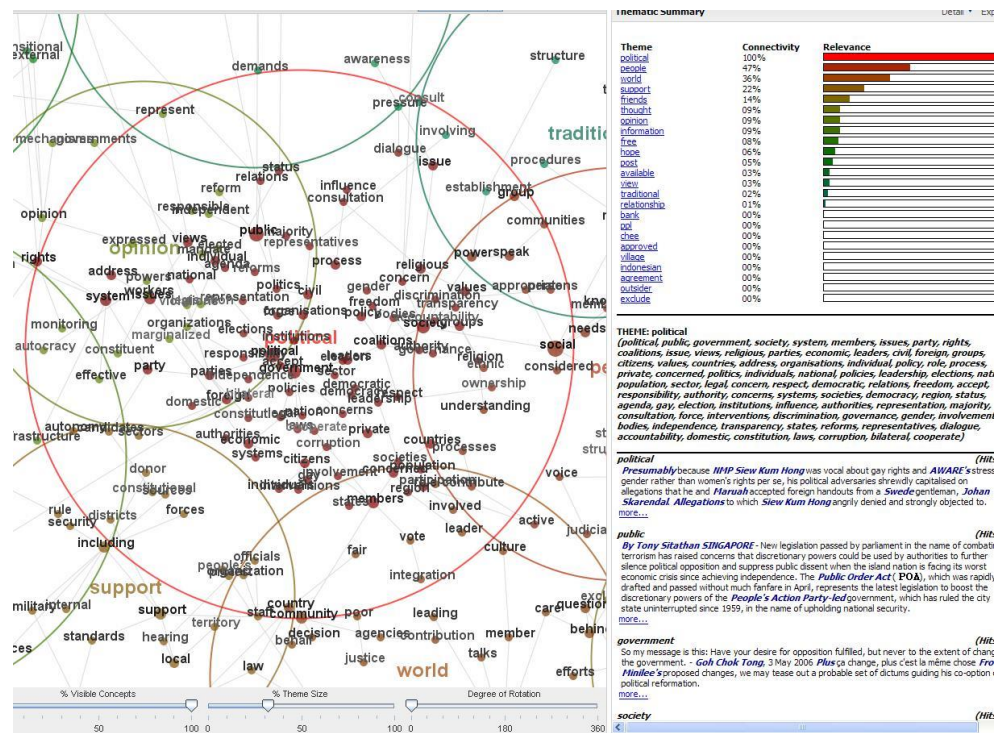
Quotation 17 contains a dialogue on the relationship between parent and child and has two epistemic assertions; “response *is* a two-stage one”, “it *is* amazing” and one deontic; “they *can* always be assured”.

18. /May26052009/blog.simplyjean.com/index~1.html/1/1_70

“Then again, thanks to the new AWARE’s expose of what they considered was damning and sinning on the part of the old guards, people will be starting to search for “spider lillies”, “SG butterfly” and perhaps “ Alex Au”? Nay, the last one is famous enough.”

The topic of this quotation, from the theme of people is on the Association of Women for Action and Research (AWARE) it contains two deontic modals; “considered *was damning* and *sinning*” and “people *will be* starting”; and one epistemic modality “one *is* famous”.

June 2009 – Themes and Concepts



Map 6. The result of the analysis of textual data collected from 509 sites (19.6 MBs) from the Singapore blogosphere in June 2009 with associated concepts.

Map 6 highlights the theme of political (political, public, government, society, system, members, issues, party, rights, coalitions, issue, views, religious, parties, economic, leaders, civil, foreign, groups, citizens, values, countries, address, organisations, individual, policy, role, process, politics, private, concerned, relations, freedom, accept, responsibility, authority, concerns, systems, societies, democracy, region, status, agenda, gay, election, institutions, influence, authorities, representation, majority, consultation, force, interventions, discrimination, governance, gender, involvement, bodies, independence, transparency, states, reforms, representatives, dialogue, accountability, domestic, constitution, laws, corruption, bilateral, cooperate) as the most central theme that grouped concepts together related to legitimacy. In the centre of Map 6 concepts that are clustered around this theme are ‘political’, ‘responsibility’, ‘elections’, ‘institution’, ‘government’ and ‘accept’. The top ranking concepts that appear alongside ‘political’ are ‘responsibility’, ‘elections’, ‘institution’, ‘government’, ‘accept’ ‘independence’ and ‘policies’ indicating that legitimacy was

an important factor within the Singapore blogosphere's conception of political in June 2009. Below are example quotes from a 'political' query.

1. /june2009/perspectives.singaporeangle.com/index~1.html/1/1_51

“Presumably because NMP Siew Kum Hong was vocal about gay rights and AWARE's stress on gender rather than women's rights per se, his political adversaries shrewdly capitalised on allegations that he and Maruah accepted foreign handouts from a Swede gentleman, Johan Skarendal. Allegations to which Siew Kum Hong angrily denied and strongly objected to.”

Quotation labelled 1 from a query of the theme political contains two epistemic modal assertions relating to the gay rights, AWARE events and the receiving of funds from overseas; “Siew Kum Hong *was* vocal about gay rights” and “that he and Maruah *accepted* foreign handouts”.

3. /june2009/www.singaporegp.sg/index~3.html/1/1_440

“sg) is dedicated to protecting human life and dignity, relieving human suffering and responding to emergencies, regardless of race, creed, religion or political beliefs. The SRC runs a range of services benefiting the vulnerable in our community including the Red Cross Home for the Disabled which provides long-term care to individuals with severe and multiple disabilities, non-emergency ambulance service, blood donor recruitment, disaster management, Red Cross Training Centre providing first aid and CPR courses and Red Cross Youth activities.”

Again, in quotation 3 there are two epistemic modal assertions this time referring to the non-government organisation, the Red Cross in Singapore; “*is* dedicated to protecting” and “*which* provides long-term care”.

4. /june2009/nofearsingapore.blogspot.com/index~1.html/1/1_22

“Maybe we have telepathy? Cheers, Dr. Huang Shou Chyuan The published letter (29.5.09) ST Forum YESTERDAY'S report, 'Parliament to get more diverse voices', left me pleasantly surprised by the wide range of changes to the electoral system announced by Prime Minister Lee Hsien Loong in Parliament on Wednesday. Although some may construe this as an ingenious gambit by the establishment to liberalise Singapore's political system with little risk to People's Action Party (PAP) dominance, the neutrals will deem it otherwise.”

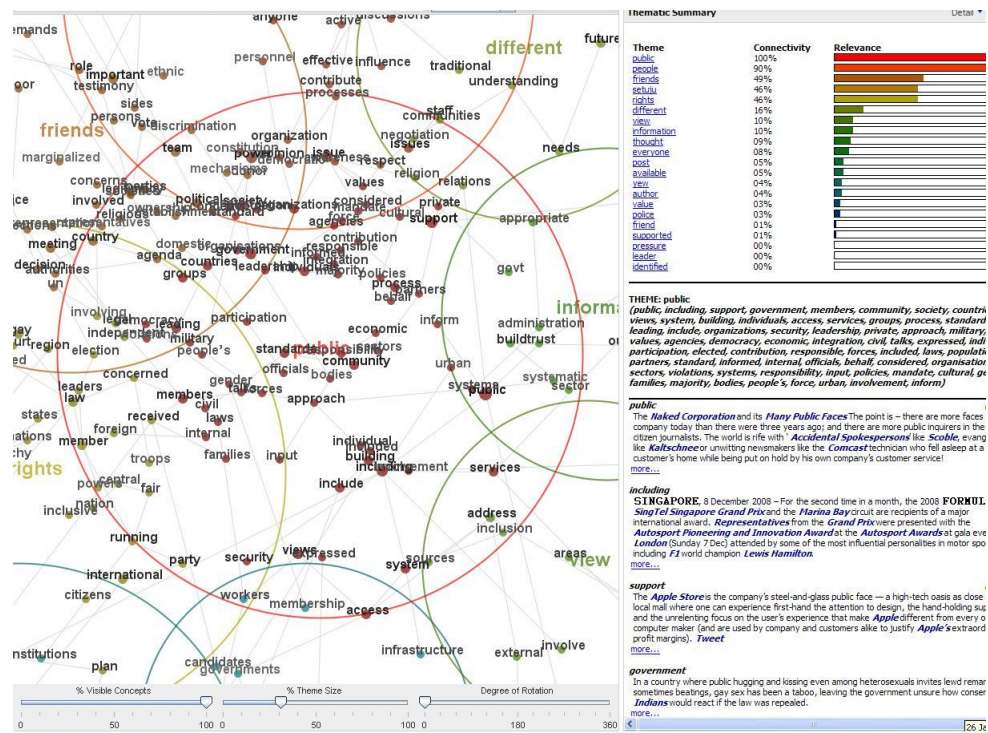
Changes to the electoral system is the context of the political theme contained in quotation 4 and contains one epistemic modality “Maybe we *have* telepathy” and three occurrences of deontic modality; “Parliament *to get more* diverse voices”, “some *may* construe” and “the neutrals *will deem* it”.

5. /june2009/singabloodypore.rsfblog.org/index~1.html/1/1_152

“By Tony Sitathan SINGAPORE - New legislation passed by parliament in the name of combating terrorism has raised concerns that discretionary powers could be used by authorities to further silence political opposition and suppress public dissent when the island nation is facing its worst economic crisis since achieving independence. The Public Order Act (POA), which was rapidly drafted and passed without much fanfare in April, represents the latest legislation to boost the discretionary powers of the People's Action Party-led government, which has ruled the city state uninterrupted since 1959, in the name of upholding national security.”

The example quotation number 5 is in relation to terrorism and the introduction of new laws or powers to suppress opposition politics in Singapore and contains four epistemic modal assertions “terrorism *has* raised concerns”, “nation *is facing* its worst economic crisis”, “which *was* rapidly drafted” and “which *has* ruled the city state”. In addition, one deontic modality, “powers *could be used* by authorities” appears.

July 2009 – Themes and Concepts



Map 7. The result of the analysis of textual data collected from 462 sites (14.6 MBs) from the Singapore blogosphere in July 2009 with associated concepts.

Map 7 highlights the theme of public (public, including, support, government, members, community, society, countries, views, system, building, individuals, access, services, groups, process, standards, leading, include, organizations, security, leadership, private, approach, military, values, agencies, democracy, economic, integration, civil, talks, expressed, individual, participation, elected, contribution, responsible, forces, included, laws, population, partners, standard, informed, internal, officials, behalf, considered, organisations, sectors, violations, systems, responsibility, input, policies, mandate, cultural, gender, families, majority, bodies, people's, force, urban, involvement, inform) as the most central theme that grouped concepts together related to social identity. In the centre of Map 7 concepts that are clustered around this theme are 'responsibility', 'economic', 'sectors' 'community' 'bodies' and 'standards'. The top ranking concepts that appear alongside 'public' are 'systems', 'trust', 'systematic', 'sector', 'services' and 'inform' indicating that social identity was an important factor within the Singapore blogosphere's conception of 'public' in July 2009. Below are example quotes from a 'public' query.

3. /july 282009/blog.alicecheong.com/index~1.html/1/1_43

“This declaration that the public service is not looking for conformists and ‘yes-men’, is a good step forward, but hopefully, the few mavericks is equipped with sufficient Emotional Quotient, that enables him or her to survive without the possible backlash ranging from transposition of credit dues and mistakes committed and bad performance review**, leading to stagnant in salary, additional or impossible. workload, and/or assign/transfer to strategically remote post as part of job rotation/career development initiative.”

The above example quotation contains three epistemic modal assertions; “public service *is not* looking for conformists and ‘yes-men’”, “*is* a good step” and “mavericks *is* equipped” in a piece on retaining a job in the economic turmoil of the time.

6. /july 282009/catherinelim.sg/index~1.html/1/1_166

“This article will begin by discussing how images of the Singapore woman are constructed and legitimised in the public sphere. It will then demonstrate how these gender images have corresponded to the Singapore state’s “masculine” image and society’s “emasculated”, “infantilised”, and “feminised” images.”

The characteristic quotation labelled 6 contains four examples of epistemic modality; “article *will* begin”, “Singapore woman *are* constructed”, “It *will then* demonstrate” and “gender images *have* corresponded” on the topic of how females are represented negatively in Singapore.

38. /july 282009/www.deadpris.com/index~1.html/1/1_37

“It came as a shock to us, when we were shown evidence of how other slimming centers in Singapore actually use misleading labels and bombastic tech jargon to lead the public into believing in what they are selling. One article even gave the description of Cenosis’s latest machine technology called Cavitation, but it was obviously a misleading advertisement since you need a N2 license from NEA to own that machine and it can only be operated by doctors and physiotherapists.”

Quotation number 38 highlights consumer rights issues and contains three epistemic modal assertions; “It *came as* a shock”, “we *were* shown evidence” and “*are* selling”, and three deontic assertions “it *was obviously* a misleading”, “the public *into believing* in” and “it *can only be*” in relation to the theme of public as consumer.

40. /july 282009/catherinelim.sg/index~1.html/1/1_163

“Her intervention in the public sphere produced a new public vocabulary for thinking about Singapore’s political condition, and continues to inform how prospects for political liberalisation are described today. The two pieces were widely discussed among Singaporeans in 1994, and the second in particular drew a strong reaction from the state that foreign journalist Kieran Cooke (24 February 1995) described as more appropriate to “a government teetering on the edge of collapse than... one of the world’s most enduring political machines”.”

The quotation labelled 40 highlights an historical account of the discourse surrounding the public sphere and the reaction by the state in 1994. It contains six epistemic modalities; “the public sphere *produced* a new public vocabulary”,

“*continues to inform*”, “political liberalisation *are* described”, “two pieces *were* widely discussed”, “in particular *drew* a strong reaction from the state” and “*described* as more appropriate”.

41. /july 282009/dubdew.com/index~1.html/1/1_34

“The inaugural 2008/2009 edition profiled 320 restaurants in Asia as based upon the opinions of the region’s most respected restaurant critics and food writers, popular public vote, the votes of The Miele Guide’s invited jury, as well as anonymous tastings conducted by The Miele Guide’s contributing editors and editorial team. Through this rigorous system, The Miele Guide showcases establishments that deliver excellence and exceptional dining by Asian standards.”

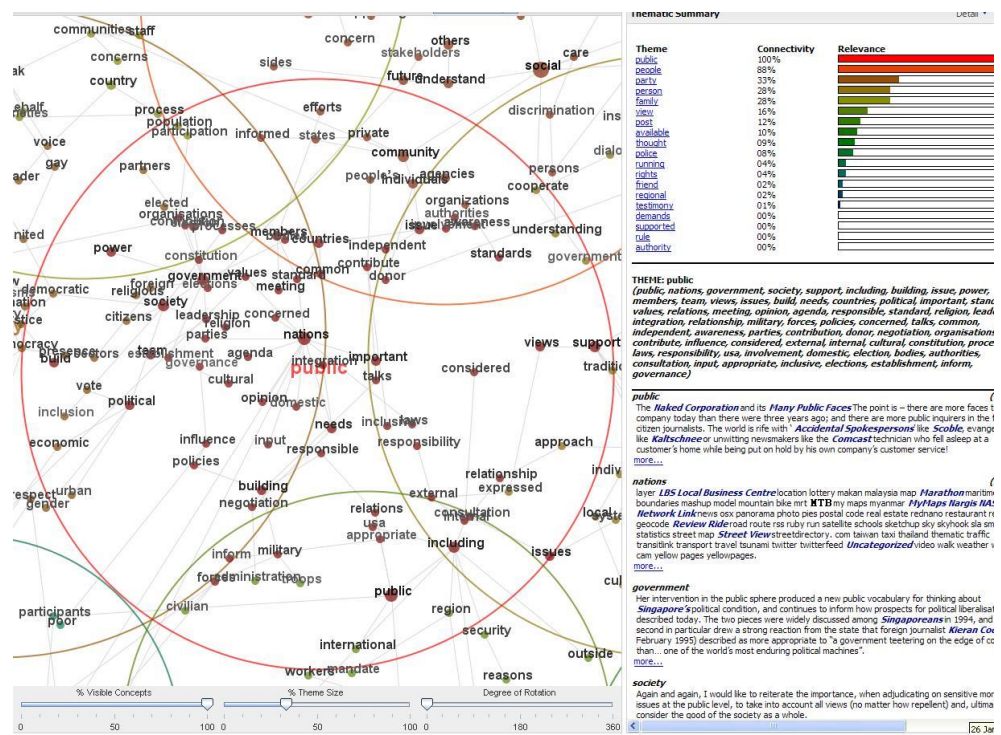
Quotation number 41 describes restaurants in Asia and contains deontic assertions on food, “*most respected* restaurant critics” and “this *rigorous system*”.

42. /july 282009/blog.sayoni.com/index~1.html/1/1_47

2In a country where public hugging and kissing even among heterosexuals invites lewd remarks and sometimes beatings, gay sex has been a taboo, leaving the government unsure how conservative Indians would react if the law was repealed.”

Quotation number 42 is on the discussion of the theme public and the issue of homosexuality in the Singaporean context and ethnic concerns with three epistemic modal assertions; “heterosexuals *invites* lewd remarks”, “beatings, gay sex *has been* a taboo” and “if the law *was* repealed.” In this case, “the law” refers to Section 377 that prohibits sex between consenting male adults.

August 2009 – Themes and Concepts



Map 8. The result of the analysis of textual data collected from 458 sites (19.5MBs) from the Singapore blogosphere in August 2009 with associated concepts.

Map 8 highlights the theme of public (public, nations, government, society, support, including, building, issue, power, members, team, views, issues, build, needs, countries, political, important, standards, values, relations, meeting, opinion, agenda, responsible, standard, religion, leadership, integration, relationship, military, forces, policies, concerned, talks, common, independent, awareness, parties, contribution, donor, negotiation, organisations, contribute, influence, considered, external, internal, cultural, constitution, processes, laws, responsibility, usa, involvement, domestic, election, bodies, authorities, consultation, input, appropriate, inclusive, elections, establishment, inform, governance) as the most central theme that grouped concepts together related to social identity. In the centre of Map 8 concepts that are clustered around this theme are 'integration', 'important', 'talks', 'needs', 'domestic', 'opinion', 'cultural', 'agenda, and 'nations'. The top ranking concepts that appear alongside 'public' are 'region', 'international', 'troops', 'military' and 'appropriate' indicating that social identity was an important factor within the Singapore blogosphere's conception of public in August 2009. Below are example quotes from a 'public' query.

1. /august2009/thepr2.0universe.com/index~2.html/1/1_458

“The Naked Corporation and its Many Public Faces The point is – there are more faces to a company today than there were three years ago; and there are more public inquirers in the form of citizen journalists. The world is rife with ‘ Accidental Spokespersons’ like Scoble, evangelists like Kaltschnee or unwitting newsmakers like the Comcast technician who fell asleep at a customer’s home while being put on hold by his own company’s customer service!”

In this example quotation there four epistemic modal assertions; “there *are* more faces to a company” “there *were* three years ago”, “there *are* more public inquirers” and “world *is* rife” on the theme of the public and nature of corporations and how they have been affected by citizen journalists.

3. /august2009/budak.blogs.com/index~1.html/1/1_52

“Young and old, rich and poor – the gaps that grow with each generation shrivel just a little on the shore, where no measure of wealth or influence can command the tide or wish away the tired clouds of a mournful day. Only the man of the street, in rude boots and thin bags that double as makeshift ponchos, rises a little lower in public regard for his intrusion into a scene of unearned leisure.”

In this rather poetic extract from the textual data there are three epistemic assertions on the theme of the public and the wealth divide; “the gaps *that* grow”, “influence *can* command” and “*rises* a little lower in public regard”.

22. /august2009/yesterday.sg/index~1.html/1/1_168

“Rickshaws - those people-powered taxi-cabs were introduced in Singapore on 16 February 1880, the same year it was brought to Shimla in the Himalayas but some time before it first appeared in Beijing in 1886. Rickshaws originated from Japan and soon became a major form of public transport and a primary source of income for the thousands of Chinese immigrants to Singapore between the 1880s to the 1930s.”

This example quotation is a historical account of taxis and rickshaws in Singapore and contains two epistemic assertions, “taxi-cabs *were* introduced” and “it *was* brought”.

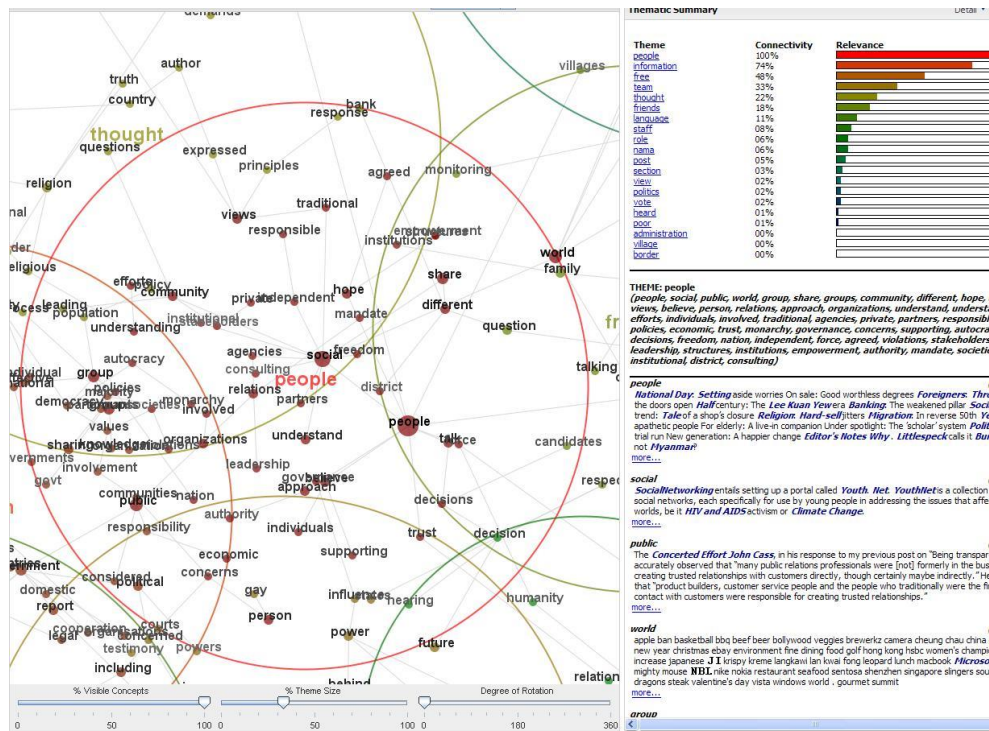
23. /august2009/nowhere.per.sg/index~1.html/1/1_75

“The caption in Chinese reads: Helicopter hovering at low altitude caused public to suspect it to be part of ongoing anti-vice operations (Taken from Lianhe Wanbao [联合晚报])The pathetic level of journalism in our Singapore Press Holdings (SPH) newspapers just never . . .”

The final example quotation of August 2009 on the theme of the public refers to the quality of journalism in the mainstream press in Singapore and contains emotive and deontic assertions on the subject; “*The pathetic* level of journalism”, “newspapers

just never”, “public to suspect *it to be* part of ongoing anti-vice” and “newspapers *just never*”.

September 2009 – Themes and Concepts



Map 9. The result of the analysis of textual data collected from 454 sites (15.6 MBs) from the Singapore blogosphere in September 2009 with associated concepts.

Map 9 highlights the theme of people (people, social, public, world, group, share, groups, community, different, hope, talk, views, believe, person, relations, approach, organizations, understand, efforts, individuals, involved, traditional, agencies, private, partners, responsible, policies, economic, trust, monarchy, governance, concerns, supporting, autocracy, decisions, freedom, nation, independent, force, agreed, violations, stakeholders, leadership, structures, institutions, empowerment, authority, mandate, societies, institutional, district, consulting) as the most central theme that grouped concepts together related to voice. In the centre of Map 9 concepts that are clustered around this theme are ‘social’, ‘freedom’, ‘partners’ ‘relations’, ‘consulting’ and ‘agencies’. The top ranking concepts that appear alongside people are ‘talk’, ‘force’, ‘decision’, ‘believe’, ‘understand’ and ‘district’ indicating that voice was an important factor within the Singapore blogosphere’s conception of people in September 2009. Below are example quotes from a ‘people’ query.

16th century sees the acceleration of Secularisation due to three crucial and formative movements: the Renaissance, the Reformation, and the Scientific Revolution. And in the midst of all the conflicts of that time, philosopher Descartes attempted to find a truth on which everybody could agree – Catholics, Protestants, Muslims, deists, and ‘atheists’ - so that all people of goodwill could live together in peace.”

Quotation labelled number 3 contains four epistemic modalities; “Secularisation *due to* three crucial”, “Descartes *attempted to* find a truth”, “everybody *could* agree” and “all people of goodwill *could* live together” on the theme of people living together consensually.

4. /Septe2009/blog.aaron-ng.info/index~1.html/1/1_106

“Racial stereotyping for the purpose of fear-mongering and perpetuating irrational hate among people can never be justified. One can find murderers, rapists, robbers, burglars, thieves, con men and other kinds of criminals in any racial group.”

Quotation number 4 on the topic of racism has used epistemic modals; “among people *can never be* justified” and “One *can* find murderers”.

5. /Septe2009/blog.sayoni.com/index~1.html/1/1_61

“We reproduce the report here for you. We also would like to take this opportunity to thank all the people who made this event possible – photo/videographers, ushers, receptionists, logistics, voluntweers (ie the volunteer tweeters), and just anyone who helped out.”

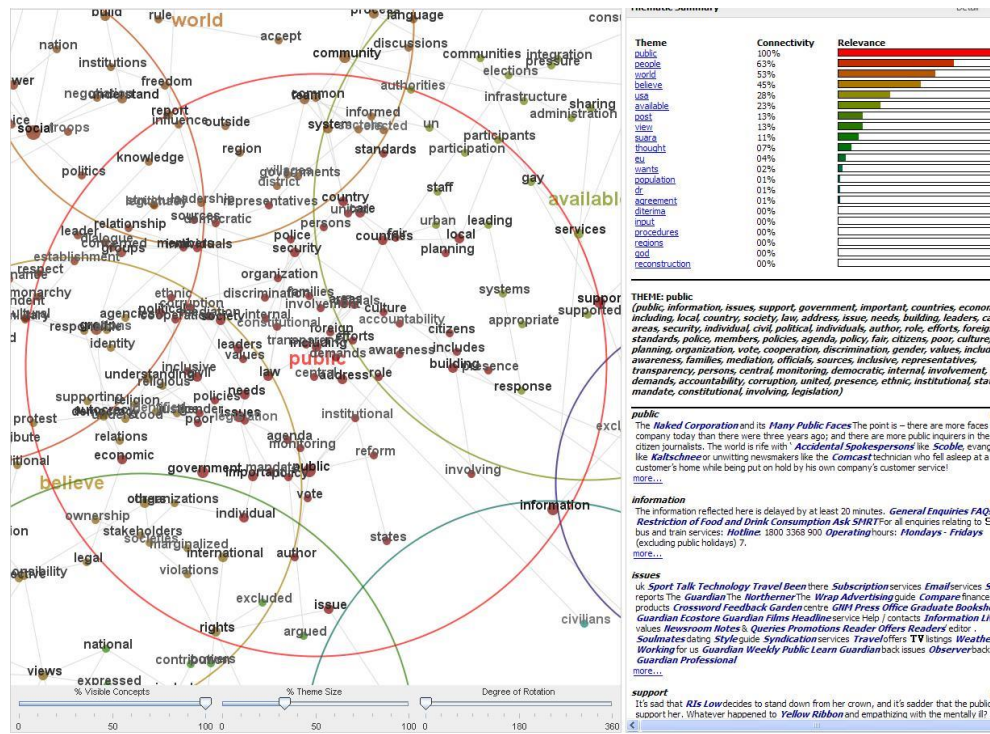
This quote taken from the textual data is on the theme of people and refers to the organisation of an event with epistemic modality dominating the discourse; “We *reproduce* the report”, “We *also would* like to” and “who *made* this event”.

6. /Septe2009/nowhere.per.sg/index~1.html/1/1_133

“Grievous : Most people affectionately remembers [sic] the place as either zup lau (10 storey) or zup lak lau (16 storeys). Were you from any of the schools there, Tanglin Halt Kid?”

Example quotation number 6 is from text that is engaged in reminiscence of geographic areas of Singapore and contains deontic modality, “people *affectionately remembers*” and one epistemic modality. “Were *you from* any”.

October 2009 – Themes and Concepts



Map 10. The result of the analysis of textual data collected from 1,541 sites (22.1 MBs) from the Singapore blogosphere in October 2009 with associated concepts.

Map 10 highlights the theme of public (public, information, issues, support, government, important, countries, economic, including, local, country, society, law, address, issue, needs, building, leaders, care, areas, security, individual, civil, political, individuals, author, role, efforts, foreign, standards, police, members, policies, agenda, policy, fair, citizens, poor, culture, planning, organization, vote, cooperation, discrimination, gender, values, includes, awareness, families, mediation, officials, sources, inclusive, representatives, transparency, persons, central, monitoring, democratic, internal, involvement, reform, demands, accountability, corruption, united, presence, ethnic, institutional, states, mandate, constitutional, involving, legislation) as the most central theme that grouped concepts together related to social identity. In the centre of Map 10 concepts that are clustered around this theme are ‘central’, ‘transparency’, ‘including’ ‘demands’ and ‘address’. The top ranking concepts that appear alongside ‘public’ are ‘policy’, ‘monitoring’, ‘vote’ and ‘reform’ indicating that voice was an important factor within the Singapore blogosphere’s conception of public in October 2009. Below are example quotes from a ‘public’ query.

3. /October 2009/www.sgpolitics.net/index~1.html/1/1_42

“On that day, democracy and human rights activists Mr Gandhi Ambalam, Mr John Tan, Ms Chee Siok Chin, Mr Charles Tan and Mr Chong Kai Xiong had participated in a protest march from Hong Lim Park to Parliament House, and then to Queenstown Remand Prison, where a quiet but poignant evening vigil was conducted for SDP Secretary-General Dr Chee Soon Juan who was then being unjustly held for speaking in public without a permit.”

In quotation 3 we have two examples of epistemic modality, “*had participated in a protest*”, “*was conducted for SDP*”, and one example of deontic modality, “*who was then being unjustly*”.

6. /October 2009/xiaoluo.blog.friendster.com/index~1.html/1/1_244

“And we have the monitoring problems (principal-agent, for those familiar with the technicalities), where we would demand transparency and accountability from government officials. Areas that have low transaction volume with high specificity, such as central banking, do not permit a high degree of variance according to local conditions and are the most susceptible to reform, where (to quote the author) “ten bright technocrats can be air-dropped into a developing country and bring about massive changes for the better in public policy”.”

Quotation labelled number 6 contains four examples of epistemic modality; “*we have the monitoring problems*”, “*that have low transaction*”, “*and are the most susceptible*” and “*technocrats can be air-dropped*”, and two occurrences of deontic modality, “*we would demand transparency and accountability*” and “*do not permit a high degree*”.

8. /October 2009/xiaoluo.blog.friendster.com/index~1.html/1/1_76

“For any unfavourable announcement, the public almost always does not want to listen and does not believe in the government’s explanations, but wants to make noises that are non sequitur (to an expert). Paul Krugman, for long in his writings, has been attempting “to explode some plausible-sounding idea that happens to be false or to promote some implausible, disturbing idea that happens to be true”, and in the end has managed to make enemies.”

Quotation 8 on the relationship between the government and the public contains three occurrences of deontic modality, “*the public almost always does not want to listen*”, “*does not believe in the government’s explanations*” and “*but wants to make noises*”. It also contains five examples of epistemic modality, “*that are non sequitur (to an expert)*”, “*has been attempting*”, “*happens to be false*”, “*happens to be true*” and “*has managed to make enemies*”.

9. /October 2009/www.afa.org.sg/index~1.html/1/1_16

“Later today, the Royal Society for Public Health (RSPH) in London will confer the Queen Elizabeth II Gold medal on the professor for his outstanding contribution towards

public health and health promotion within the Commonwealth. Prof Chan is the first Singaporean to be given the award.”

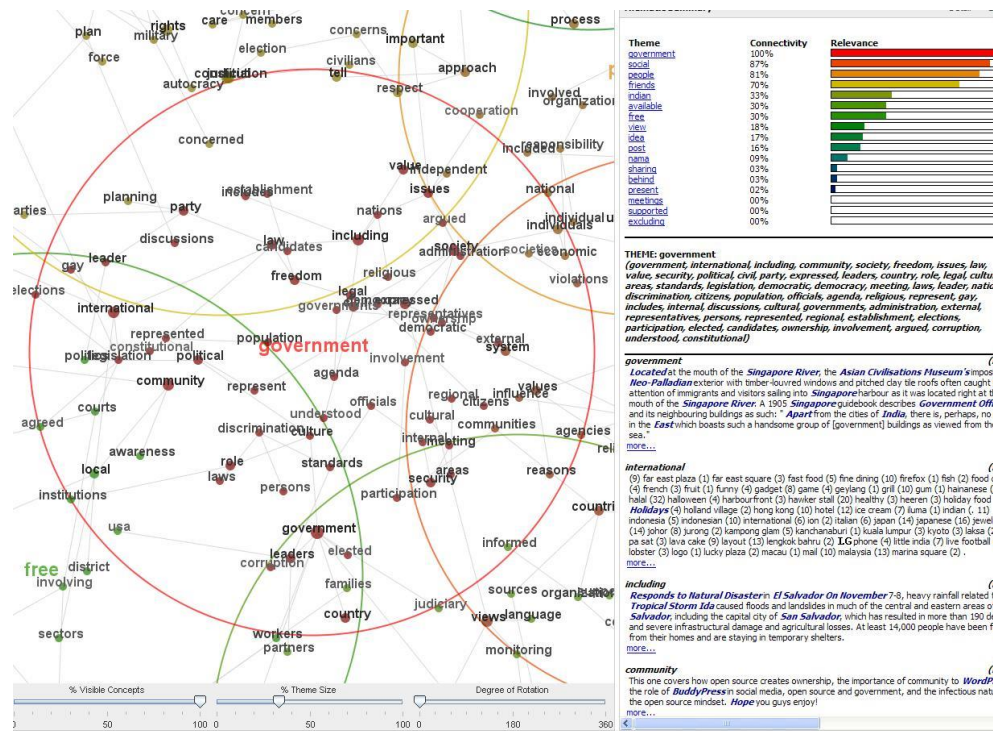
Example nine on the topic of a Singaporean professor receiving an award contains two occurrences of epistemic modality, “London *will confer* the Queen Elizabeth II” and “Prof Chan *is the first* Singaporean”.

11. /October 2009/blog.sayoni.com/index~1.html/1/1_69

“Since 2005, Fridae has organised six movie-fundraisers raising over S\$60,000 in benefit of a variety of NGOs including Action for AIDS, AWARE, Cat Welfare Society; two independent short films by Boo Junfeng and Loo Zihan; and Indignation – which Fridae has financially and in other ways supported since it was first held in 2005. Pink Dot, the first-ever official LGBT public gathering held in May 2009 in Singapore, was also a beneficiary of Fridae’s Milk Fundraising Gala Premiere held earlier this year.”

Quotation 11 on the topic Fridae, a gay and lesbian advocacy group website contains four examples of epistemic modality, “Fridae *has organised*”, “Fridae *has financially*”, “it *was first held in 2005*”, and “*was also a beneficiary of Fridae’s Milk Fundraising Gala Premiere*”.

November 2009 – Themes and Concepts



Map 11. The result of the analysis of textual data collected from 440 sites (13.3 MBs) from the Singapore blogosphere in November 2009 with associated concepts.

Map 11 highlights the theme of government (government, international, including, community, society, freedom, issues, law, value, security, political, civil, party, expressed, leaders, country, role, legal, culture, areas, standards, legislation, democratic, democracy, meeting, laws, leader, nation, discrimination, citizens, population, officials, agenda, religious, represent, gay, includes, internal, discussions, cultural, governments, administration, external, representatives, persons, represented, regional, establishment, elections, participation, elected, candidates, ownership, involvement, argued, corruption, understood, constitutional) as the most central theme that grouped concepts together related to legitimacy. In the centre of Map 11 the concepts that are clustered around this theme are ‘population’, ‘governments’, ‘agenda’ ‘represent’ and ‘freedom’. The top ranking concepts that appear alongside government are ‘elected’, ‘leaders’, ‘persons’, ‘standards’, ‘corruption’ and ‘families’ indicating legitimacy was an important factor within the Singapore blogosphere’s conception of ‘government’ in November 2009. Below are example quotes from a ‘government’ query.

“Although the government is sticky on implementing a minimum wage law, it didn’t stop NUH from stipulating a minimum wage when it tendered out its cleaning contract; and awarding it to a company that bothers to upgrade their low-wage workers. Hospital porters would also soon enjoy more pay after NUH renegotiate its contracts based on productivity rather than purely man-hours.”

Quotation 2 on the introduction of a minimum wage contains three epistemic modal assertions, “the government *is* sticky”, “it *didn’t* stop” and “Hospital porters *would also* soon enjoy”.

5. /november2009/nus.sg/index~1.html/1/1_105

“The inauguration of the new premises of the NUS Solar Energy Research Institute of Singapore (SERIS) was held on 19 November 2009. Gracing the event was Guest-of-Honour Chairman of the National Research Foundation Dr Tony Tan, as well as some 250 local and international guests from the industry, government and research sectors.”

Quotation 4 contains two epistemic modal assertions on the theme of government, “*was held* on 19 November 2009” and “the event *was* Guest-of-Honour Chairman of the National Research Foundation Dr Tony Tan”.

7. /november2009/singabloodypore.rsfblog.org/index~2.html/1/1_191

“Independent global surveys on government effectiveness and quality have consistently ranked Singapore highly. It has a well-established legal framework and an independent judiciary that have been ranked among the top in the world by the World Economic Forum (WEF), the International Institute for Management Development (IMD) and Political & Economic Risk Consultancy Ltd (PERC).”

Quotation 7 contains three epistemic modal assertions, “*have* consistently ranked Singapore highly”, “*has* a well-established legal framework” and “that *have been* ranked”.

8. /november2009/singabloodypore.rsfblog.org/index~1.html/1/1_98

“Bland’s visa renewal application was rejected without explanation by the Manpower Ministry on October 1, according to Bland. When the reporter inquired why the government refused, the ministry’s senior assistant director, Yeo Kim Huat, told him on October 15 that, after internal discussions, officials decided that they could not disclose their reasons for the rejection.”

The removal of a working permit is the topic related to the theme of government in quotation number 8 and contains one epistemic assertion, “application *was* rejected without explanation” and one deontic modal assertion, “they *could not* disclose”.

13. /november2009/james.seng.sg/index~1.html/1/1_31

“Asian mentality on society values stability above anything else. I quote Kishore Mahbubani “An imperfect government that commits some human rights violations is better than no government, in many societies.”

Quotation 13 contains one deontic assertion, “Asian mentality on society *values stability* above anything else” and one epistemic modality, “human rights violations *is better*”, on the theme of government and human rights.

16. /november2009/websg.org/index~1.html/1/1_42

“We took some time at the WebSG meetup to discuss possible avenues for improving the government’s online efforts. While Singapore has won accolades for its drive for eGovernment, participants at the meetup highlighted a few steps the Singapore government could do to improve her services.”

Again, quotation 16 contains one epistemic assertion, “Singapore *has* won accolades” and one deontic modality, “Singapore government *could do to* improve her services”.

17. /november2009/thevoiddeck.org/index~1.html/1/1_66

“Alas, a government hospital getting into the news for the right reasons. NUH has been lauded in local papers for practising what is known as responsible outsourcing aka don’t take advantage of low-wage workers.”

Quotation 17 contains three epistemic modal assertions on the theme of government and health provisions, “NUH *has been* lauded in local papers”, “*what is known as* responsible outsourcing” and “*don’t take* advantage”.

18. /november2009/journalism.sg/index~1.html/1/1_13

“Chief Justice Chan Sek Keong has said that critics may be missing the point when they accuse Singapore’s courts of lack of independence in defamation cases involving the government. He said that the balance between defamation and free speech was “much misunderstood”.”

Quotation 18 on the theme of government and the issue of free speech contains two epistemic modals “Chan Sek Keong *has* said” and “the balance between defamation and free speech *was* “much misunderstood”” and one deontic “that critics *may be* missing the point”.