The Abiotic Internet: Internet Mediation Through Organizational Practice at Na-Me-Res

by

Michel Ronald Mersereau

A thesis submitted in conformity with the requirements for the degree of Master of Information
Faculty of Information
University of Toronto

© Copyright by Michel Mersereau 2016
The Abiotic Internet: Internet Mediation Through Organizational Practice at Na-Me-Res

Michel Ronald Mersereau

Master of Information
Faculty of Information
University of Toronto

2016

Abstract

This thesis examines the role of the internet in sustaining the organizational practices of Toronto’s Native Men’s Residence (Na-Me-Res) by attempting to answer the question: how essential is the internet in sustaining the delivery of Na-Me-Res’s key programs and services? The theoretical framework employed in the course of this study synthesizes the concept of indirect interactions borrowed from Ecology Studies (Moon, Moon, & Keagy, 2010; Wootton, 1994) with a Systems Theory (Capra & Luisi, 2014; Luhmann, 1986) approach to explicating social patterns within complex organizations. Semi-structured interviews, visual aids, and non-participatory observations were employed with a view to investigating the internet’s role in supporting Na-Me-Res’s operations from the background of daily practice. The results illuminate that the internet can be framed as an abiotic resource within the organization, one that is indirectly implicated in the lives of clients and residents as a socially mediated technology resource.
Acknowledgments

Thanks to my long suffering advisor, Dr. Leslie Regan Shade, without whom I would never have reached this stage of my academic or intellectual journey.

Special thanks to my wife, partner, and best friend, Jennifer.

Very special thanks to our son Sebastian. The most emotionally honest soul I have ever met.

And finally… thank you Nes. We are all better for having known you.
Preface

Over the course of this study, my role as a researcher was necessarily mediated by my own cultural roots within the Aboriginal community; both for the access I was granted, as well as my regard for the spiritual, cultural, and physical imprints left by colonialism on the experiences of my participants. I bear those imprints myself, through my community and through my own family. I was a privileged recipient throughout this process. Privileged to hear the stories of my participants. Privileged to share my own in kind. Privileged to have embarked on this journey on the ancestral lands of the Anishinaabek; a land which itself tells the stories of our grandfathers and grandmothers. I have looked towards my own teachings in an effort to present these voices with dignity and respect. My goal from the outset was to investigate the internet’s utility as a shared resource, informative of collective need, by employing an underutilized theoretical perspective. In this context, the marginalization expressed through the living experiences of my participants are salient in that they constitute a threshold of community need against which Na-Me-Res’s programs and services can be reconciled. While not centrally situated as the focus of my study, critical, post colonial reflections on the legacy of colonization were threaded through each stage of the design of my study; including the boundaries which delimited the extent to which the personal histories of my participant’s were pursued. My engagement with participants followed a lengthy and thoughtful dialogue with Na-Me-Res administrators in which these boundaries, as well as my own history with the organization was discussed. Organizational approval was gleaned once these stakeholders were satisfied that the scope and nature of my investigation posed minimal risk to residents and clients, and that I had employed appropriate measures to protect their dignity and compensate their efforts.

Note: the term “Aboriginal” is used in reference to peoples and communities identified, or who self identify, as Aboriginal, Indigenous, First Nations, Inuit, American Indian and Métis. The term “First Nations” is used in reference to the socio-political bodies representing non-Métis/Inuit peoples.
# Table of Contents

Acknowledgments.................................................................................................................. iii
Preface........................................................................................................................................ iv
Table of Contents ....................................................................................................................... v
List of Tables .............................................................................................................................. viii
List of Figures ............................................................................................................................. ix
List of Appendices ..................................................................................................................... x
Chapter 1 Introduction ............................................................................................................... 1
  1.1 What is an Abiotic Resource? ............................................................................................ 3
  1.2 The Native Men’s Residence – A Locus of Remediating Services ................................ 5
  1.3 Na-Me-Res Services Overview ......................................................................................... 6
  1.4 The Internet & Na-Me-Res ............................................................................................... 6
  1.5 Chapter Outline ................................................................................................................ 12
    1.5.1 Chapter 2 - Literature Review .................................................................................. 12
    1.5.2 Chapter 3 - Methods ................................................................................................. 13
    1.5.3 Chapter 4 – Data Discussion .................................................................................... 13
    1.5.4 Chapter 5 – Summary ............................................................................................... 13
Chapter 2 Literature Review .................................................................................................... 15
  2.1 Topical Trends in the Internet Rights Narrative .............................................................. 15
  2.2 Technology Inclusion ....................................................................................................... 19
  2.3 Individual vs. Collective Affordances of the Internet ...................................................... 23
  2.4 A Systems Framing of Social Structures ........................................................................ 27
  2.5 Mediation ......................................................................................................................... 31
Chapter 3 Methods .................................................................................................................................................. 35

3.1 Frameworks .................................................................................................................................................. 35

3.2 Semi structured interviews ................................................................................................................................. 36

3.3 Visual Aids .................................................................................................................................................... 38

3.4 Participants .................................................................................................................................................... 40

3.5 Client & Resident Participants ............................................................................................................................ 41

3.5.1 Client & Resident Sample Range .................................................................................................................... 42

3.5.2 Compensation ............................................................................................................................................ 42

3.6 Data Analysis ................................................................................................................................................ 43

3.7 Research Ethics ............................................................................................................................................. 44

3.8 Preliminary Presentation of Findings – Research Poster .................................................................................. 45

Chapter 4 Discussion ........................................................................................................................................... 48

4.1 Characterizing Na-Me-Res ............................................................................................................................... 48

4.1.1 Risk Factors Facing Toronto’s Aboriginal Peoples .......................................................................................... 48

4.1.2 Risks & Vulnerabilities Faced by Aboriginal Men .......................................................................................... 50

4.1.3 Aboriginal Social Services in Toronto – A Needs Based Ecosystem ................................................................. 51

4.1.4 A Representative Voice For Urban Aboriginals .............................................................................................. 54

4.1.5 Na-Me-Res: Connected to Community Need .................................................................................................. 55

4.1.6 Na-Me-Res: Core Service Areas .................................................................................................................. 57

4.2 Findings ......................................................................................................................................................... 58

4.2.1 Perceptions of Organizational Capabilities .................................................................................................. 58

4.2.1.1 Reconciling Perceptions of Need With Community Risk Factors ............................................................... 59

4.2.1.2 Adaptation of Organizational Services Over Time ..................................................................................... 62

4.2.2 Perceptions of Clients & Residents Towards the Internet .............................................................................. 64

4.2.3 Perceptions of Staff Towards the Internet .................................................................................................... 67
4.2.4 Visual Aids........................................................................................................70
4.2.5 Organizational Internet Use ..............................................................................72
  4.2.5.1 Localization of Organizational Internet Practices ........................................75
  4.2.5.2 Internet Practices Implicated by External Stakeholder Relationships. ....76
  4.2.5.3 The Structuring Effects of Technology Adoption ..........................................78
  4.2.5.4 Intra & Extra Organizational Relationships .................................................80
4.2.6 Ascertaining the Essentiality of Internet Practices ...........................................81

Chapter 5 Summary ......................................................................................................84
  5.1 Summary of Findings ...........................................................................................84
    5.1.1 Concluding Thoughts on Findings .................................................................88
    5.1.2 Reflections on the “Bigger Picture” of Internet Access Rights ......................90
  5.2 Limitations ............................................................................................................91
    5.2.1 Validity ...........................................................................................................92
    5.2.2 Generalizability of Findings ..........................................................................93
  5.3 Final Thoughts .......................................................................................................94

Bibliography ..................................................................................................................97

Appendices .....................................................................................................................105
List of Tables

Table 1 - Organizational Employee Participant Sample

Table 2 - Client & Resident Participant Sample Range

Table 3 - Orientation of Aboriginal Service Agencies in Relation to Community Risk Factors

Table 4 - Program & Service Highlights in Nam-Me-Res’s Organizational Timeline

Table 5 - Na-Me-Res Key Programming & Services

Table 6 - Synthesis of Staff Perceptions Towards the Internet

Table 7 - Localization of Internet Practices

Table 8 - External Internet Practices
List of Figures

Figure 1 - Direct & Indirect Biotic/Abiotic Relationships ................................................................. 4

Figure 2 – Relational Diagram ........................................................................................................... 39

Figure 3 - Keywords ......................................................................................................................... 40

Figure 4 - Preliminary Findings Poster ........................................................................................... 46

Figure 5 - Mediated Relationships Constituted by Aboriginal Outreach Services .......................... 54

Figure 6 - Staff Relational Diagram ................................................................................................ 71

Figure 7 - Client/Resident Relational Diagram .............................................................................. 71

Figure 8 – Staff Participant Keyword Response ............................................................................... 72

Figure 9 - Individual Internet Practices ............................................................................................ 73

Figure 10 - Internet Practices of Frontline Staff ............................................................................. 74

Figure 11 - Community Workstations ............................................................................................... 74

Figure 12 - Potential Outcomes of Social Technology Mediation ................................................... 77

Figure 13 - Remaining Case Note & Log Books .............................................................................. 79

All images & illustrations © Copyright by Michel Mersereau 2015
List of Appendices

Appendix 1 - Ethics Consent ................................................................. 105

Appendix 2 – Interview Guide.................................................................... 106
Chapter 1
Introduction

Early in the morning of June 8, 2015, a power disruption crippled the internal and external communications capabilities at the Toronto Transit Commission’s (TTC) main operations control centre (Canadian Press, 2015; Peat & Shah, 2015). For 90 minutes, transit officials were unable to issue service updates through the TTC’s public facing information network as a result of lost internet connectivity. While transit delays themselves are not uncommon, the nature of this particular disruption was meaningful both in its scale (the entirety of Toronto’s subway network going offline during peak hours), and for the insight it provides into our complex, interdependent relationships to the internet. Though not directly responsible for causing the shutdown of subway services, the TTC’s temporary loss of internet connectivity was nonetheless implicated in the anxiety experienced by thousands of stranded commuters feverishly scanning their smart phones for service updates. While updates via email, Twitter or Facebook would not have remediated the service delay, the lack of formal communication from the TTC compounded the frustration experienced by commuters, and highlighted a breakdown between their expectations of service levels and the capabilities of the organization in meeting those expectations. The role played by the internet in co-shaping the organizational capabilities of the TTC illuminates how the technology can be framed as a mediated resource when considering the social technology needs of communities; one that informs widespread social experiences from the background of daily life.

Pragmatic approaches to redressing the technology needs of communities must consider the \textit{indirect} interdependency that is constituted by internet use; connecting the real world
experiences of communities to the technology practices of service providers through a complex chain of intermediate social practices. While an abundance of research explicates the community based outcomes of essential services providers (DiMaggio, Hargittai, Neuman, & Robinson, 2001; Eubanks, 2011; Warschauer, 2003), this research has mainly concentrated on investigations of the direct relationships to the technology facilitated by outreach and access initiatives. Despite the relevancy of indirect technology relationships to broader policy discussions, the sheer abundance and multiplicity of relationships that constitute the indirect interaction chain complicates the development of a meaningful framework. A bounded, taxonomic framework for illustrating the indirect relationships patterned by the internet is fascinating because it marries conventional understandings of the technology as an affordance of the individual, to the intrinsic co-dependency synthesized by network relationships.

Employing a perspective of indirect interactions borrowed from Ecological Studies (Moon et al., 2010; Wootton, 1994) and Systems Theory (Capra & Luisi, 2014), my research examines how the internet is utilized in the course of organizational practice at the Native Men’s Residence (Na-Me-Res), an urban homeless services shelter operating in Toronto. In this organizational context, the internet is framed as a socially mediated technology resource; one that is implicated in the daily lives of Na-Me-Res residents and clients irrespective of their individual access to the technology itself. Motivating this research is an attempt to answer the question; how essential is the internet in sustaining the delivery of Na-Me-Res’s key programs and services? I situate Na-Me-Res’s use of the internet within a socio-technological continuum of organizational practices, ranging from the highly localized practices of individuals to global practices that implicate the organizational whole, with a view to uncovering how the internet can constrain and enable the overall capabilities of the organization.
1.1 What is an Abiotic Resource?

My study examines how internet use has informed the structuring and distribution of organizational resources in response to the benefits and constraints realized through its use. For the purposes of this study, the “Internet” references a range of internet based applications to which specific organizational practices are tied. This is a co-determinant relationship between the material infrastructure (cables, routers etc..), and the applications themselves; as one cannot exist without the other. The relationship between technology use and organizational capabilities illuminates the many intersections between the internet supported practices of Na-Me-Res and the daily experiences of its clients. My theoretical framework situates the internet as an abiotic, or non-organic resource in the context of a dynamic organizational system. A systems view of organizational structure exposits the overall capabilities of any given system as emerging from the dynamic and ongoing reorganization of its constituent components (Capra, 1997; Galloway & Thacker, 2007; Luhmann, 1986; Seidl, 2004).

Dynamic systems, like natural ecosystems, cannot be understood by isolating individual components (Capra & Luisi, 2014). Systems are borne of a series of relationship patterns between constituent components, which are themselves organized to serve a larger purpose. Consequently, removing, dissecting or altering any individual component necessarily changes how the system as a whole can be characterized, as well as its overall capabilities with a view to sustaining itself (Capra, 1997; Wootton, 1994). Discerning the ultimate purpose of a system necessitates an understanding of its external operating environment. Not unlike the system’s constituent components, whole systems are situated within larger networks, each fulfilling co-determinant roles in relation to neighbouring systems, with none operating in isolation.
While the patterns of relationships between system components are essential in characterizing its overall capabilities, it is also important to understand how the processes that motivate those patterns rely on a myriad of interactions between human (biotic) and material (abiotic) resources. The interplay between human and material resources within a dynamic system is equally co-determinant. Social relationships can evolve in response to the nature, scope and availability of material resources. Concurrently, demand for new resources can emerge from changes in the social groups that consume them. Resource competition and scarcity can have practical implications for internal and external organizational stakeholders alike. It is from here that we can begin to develop an understanding of the relationship between material resources, social relationships, and organizational capabilities. Every material resource utilized by the system can be understood for its structuring effects on the social patterns that constitute the organizational whole. As illustrated in Figure 1, an abiotic resource can obviate the physical proximity or direct interaction of ecosystem members while still influencing them.
In the case of practice-based organizations like Na-Me-Res, the structuring effects of the material resources available to the shelter are expressed, or mediated, through the social patterns that constitute its client-facing practices. Hybridizing the concept of abiotic/biotic interplay with a systems based framework for understanding complex organizational systems provides us with a taxonomic illustration of how material resources can be mediated through the social practices of the organization, and how those effects can be experienced regardless of one’s awareness of, or direct access to the resource in question. The salient portrait of systems functioning that emerges is one where the capabilities of organized systems are understood as: a) the product of a dynamic relationship structuring between the system’s constituent components, b) that the reorganization of those components occurs in relation to changes in the system’s external operating environment, and c) that the nature of organic and material resources available to a system are necessarily implicated in its ability to restructure itself.

1.2 The Native Men’s Residence – A Locus of Remediating Services

Na-Me-Res provides a salient case example for situating access to the internet as a socially mediated resource. Na-Me-Res is an urban homeless shelter and outreach services provider engaged with male members of Toronto’s Aboriginal communities. The facility hosts a 63-bed shelter, and provides transitional and long term housing, mental and physical care, addiction rehabilitation, and street outreach services for homeless and at-risk community members. Organizational structure is comprised of five key service areas focused on long and short term housing support, mental health and addiction counseling, transitional and life skills support, cultural reclamation services, and a mobile street outreach team tasked with providing care and
support to homeless populations living outdoors. Na-Me-Res’s client population encompasses members of Toronto’s Aboriginal communities, as well as non-Aboriginal persons in need.

1.3 Na-Me-Res Services Overview

First opening its doors in 1985 as a 26 bed emergency shelter, Na-Me-Res's programs have evolved in response to a myriad of cultural, social and economic risk factors facing homeless and transiently housed Aboriginal men in Toronto. The shelter and housing services offered by Na-Me-Res facilitate both emergency relief, as well as transitional support to help homeless men secure stable, long term housing. In its current state, Na-Me-Res's housing provisions include a 63 bed residence, an emergency shelter, and a transitional housing facility for recently released Aboriginal offenders. Na-Me-Res also employs a number of support programs with a view to remediating the complex, interrelated social risks associated with homelessness. Life skills training is provided through a 3 - 6 month training program offered through Sagatay, which incorporates employability skills, writing, reading and communication workshops, nutrition and diet education, as well as resources to help clients overcome conflict. Addiction and mental health support programs are available to clients who struggle with substance abuse, depression and low self-esteem, and the shelter facilitates access to traditional healing and cultural support from the Elder community.

1.4 The Internet & Na-Me-Res

A series of semi-structured interviews with key program area staff, operational staff, and shelter clients, illuminated how the internet has a structuring effect on the organization in three broad relationship areas; the localized practices of individuals, the internal practices of the organizational whole, and the relationships between the organization and its external stakeholders. A correlation between the essentiality of the internet as an organizational resource,
the boundaries of the technology practice areas described above, and the nature of practitioner roles began to emerge. In each of these areas, utilization of the internet can be understood both in terms of its constraining or enabling influence on individual and organizational levels of practice, and a subsequent potential for service disruption in the absence of internet service. Framing the potential for shelter service disruption in this context implicates the availability of offline, or non-internet based resources to support the practice in question, as well as the restructuring of existing organizational resources that would be necessitated by a loss of internet access.

Significant correlations between internet essentiality and risks of service disruption were observed in practice areas that implicate organization wide internal operations, as well as the organization’s relationships with its external stakeholders. In the case of external relationships, several key technologies are employed by the organization with a view to reconciling the oversight of municipal and provincial authorities. Through Na-Me-Res’s relationship with the city’s Department of Housing & Homelessness Services (Community & Neighbourhood Services, 2015), a per-resident funding model is tied to the reconciliation of shelter operations with the city through a proprietary database accessed via the internet. In this case, limited offline alternatives to support the practice in question synthesize a constraining dependency on the internet implicated by a governing stakeholder relationship. Internally, internet technologies have been employed as an enabling resource, allowing for the restructuring of departments by taking advantage of increased efficiencies. Operations, for example, relies on internet based technologies to manage finance, payroll, and vendor relationships that would otherwise require a significant amount of human resources.

The essentiality ascribed to the internet in the practice areas observed provided insight into socially mediated presence of the technology in the daily lives of clients and residents. In this
way, the technology is expressed in the daily experiences of clients and residents through their engagements with shelter services and programs. Conversations with staff and residents illuminated their perceptions towards the internet as both an enabling and constraining presence in their lives. Where perceived as an enabling technology, participants framed their use of the internet in terms of outcomes. In contrast, constraining references were accompanied by descriptions of the technology as a utility. Interestingly, these contextual descriptions of the internet correlate with what I describe as the visible or hidden presence of the technology in the minds of organizational practitioners. Where seen as a constraining influence on the individual’s practices, the internet is pointed to as a visible implement, with the technology itself emerging as a subject of focus. Where viewed for its enabling influence, the subject focus of the user shifts away from the technology itself, and towards the outcomes they are able to achieve as a result of its use; the technology seemingly hidden in the background of practice. The hiddenness of the internet through practice is particularly insightful for its connections to the indirect relationships constituted by the technology. The perceptions of clients and residents were insightful in this regard by helping to explicate the informative, background role of the technology in their service experiences. Though not able to describe any intimate knowledge of the organization’s internet practices, clients and residents nonetheless expressed a dependency on the resources provided to them by Na-Me-Res.

Framing the complex, interdependent relationships patterned by the internet within Na-Me-Res illuminates how the technology can indirectly inform the experiences of client communities through the outcomes of organizational activities. In this way, the technology’s influence on the living experiences of Na-Me-Res’s client community is mediated through the daily practices of staff. Social technology mediation illuminates the co-determinant relationships between
technology and social practice, highlighting how organizations adapt to the constraints and opportunities presented by emergent technology use over time. The characteristics of an organization, like any living system, are constituted by patterns of structured relationships arranged to fulfill a purpose. And like other living systems, organizations exist within larger networks, which are themselves characterized and arranged to fulfill purpose. The dynamic, fluid exchanges of information that flow within the organization and the outside world are essential for it to regulate and reorganize itself. The overall capabilities of the organization, its abilities in meeting and servicing the needs of its stakeholder communities, are continually embodied through these processes of self-regulation and reconstitution.

While there is a tendency to isolate individual activities when examining internet use within organizational structures, the essential characteristics and capabilities of the organizational whole represent a synthesis of the characteristics and capabilities of its constituent components. The capabilities of the whole are always unique from those of any single component, and cannot be reconciled by isolating any single practice. From this perspective, the internet practices of individuals should not only be considered in a localized context, but must also be interpreted in the context of the broader organizational relationships they help to pattern. Likewise, this compels us to reframe the role of the internet from that of a discrete, serviceable technology that supports individuals, to the undercurrent of the relationship patterns that give the organization life. Analogous to the role of non-organic resources (sunlight, water, soil) in patterning the direct and indirect relationships between members of natural ecosystems, access to the internet intersects the immediate practice domains of individuals while simultaneously mediating the outcomes of those practices throughout the social body of the organization.
The complexity of the indirect relationships that exist between individuals who might not otherwise have direct contact with one another can preclude one’s insight into the mediated outcomes of their own activities, as well as the role of the internet in transmitting those outcomes beyond their local practice domains. While the patterns of social relationships that characterize organizational activity are repetitive and predictable, they do not obviate the agency of individuals in shaping localized activities. The characteristics of the organization allow for the symbolic and pragmatic cohesion between its members that motivates individual activities towards the embodiment of organizational goals. And while the capabilities of the organization, its ability to regulate and reorganize itself, is not constituted by the decision-making of any single member, they are nonetheless connected to the agency exercised by individuals within their localized domains. Repetitive patterns of organizational practices, punctuated by localized expressions of individual agency, illuminate how the technology performances of organizational members reflect a synthesis of technology skills and literacies developed inside and outside of the organization itself. This provides insight into the constructivist relationship between the capabilities of organizational members in-situ, and their broader technology capabilities as individuals.

Understanding the internet’s role in characterizing organizational structures and sustaining their capabilities brings us closer to regarding its essentialism as a socially mediated resource in broader contexts. To do so, we must qualify our interpretation of essential by reconciling it against the potential for service disruption should access to the internet be compromised. Social technology mediation illuminates how the internet practices of service providers, expressed through organizational capabilities, ultimately intersect with the living experiences of stakeholder communities. Likewise, any localized disruption to internet service within the
organization will be transmitted through, and expressed within those living experiences by way of its correlation to overall service levels. The characteristics of the service provider, its role, purpose and scale within the community, necessarily determines the scope, severity and potential harm caused by service disruptions. In the case of a local retail service provider, this may result in a decrease in sales. In the case of a major public transportation service, this may result in widespread delay affecting millions of people. The co-determinant relationship between the social and technological facets of internet practices implies that, in the absence of technology, the continuity of the social relationships patterned on its use must adapt.

This assumption leads to the question of what, if any, non-internet based options exist to maintain organizational services should the socio-technological partnership be compromised? Following this line of enquiry leads to a mapping of the junctures through which internet access is situated locally and globally within the organization. From here, we are able to ascertain the essentiality of the internet as an abiotic, socially mediated resource by delineating its various expressions of use through essentiality. That is, the probable levels of service disruptions reconciled by the availability of offline resources in lieu of internet access. Where organizational members have adapted unique internet practices to compliment existing resources in solving highly localized problems, compromised access to the internet is unlikely to result in major service disruptions. By contrast, where key organizational technologies exist in the absence of offline alternatives, the outcomes of internet service disruption are more likely to be widespread.

Framing the essentiality of internet access in terms of its critical expressions of use illuminates the adaptive relationship between the organization and the needs of its dependent community. As organizational capabilities evolve and adapt to the introduction of technological resources, so too do the needs and expectations of community stakeholders in response. We must consider the
fluidity of this relationship when attempting to qualify the potential for harm implicated by the risks of service disruptions. While the continuity of social patterns predicated on technology can adapt to a disrupted socio-technological relationship, the extent to which that disruption may cause a regression in services might be untenable for a dependent community. In other words, when is the risk of service disruption too great for a community to bear? The dilemma posed here is exacerbated when we frame the essentialism of internet access against the backdrop of service organizations who provide for the basic needs of vulnerable and marginalized populations.

1.5 Chapter Outline

1.5.1 Chapter 2 - Literature Review

Outlining the policy oriented and theoretical rationale underpinning my thesis, I begin this chapter by describing how the technology policy landscape in Canada has suffered from a protracted period of stagnancy informed by distributive policy approaches to redressing the problem of social technology exclusion within marginalized communities. Following my framing of the policy narrative, I introduce my theoretical construct by describing the problematic implications of neo-liberal framed perspectives of internet practices that centralize the primacy of the individual user over collective interests. My framework for situating the internet as a shared technology resource in the context of organizational practices follows, beginning with a description of my adaptation of the systems oriented approach to understanding complex systems. I conclude this chapter with a sharpened perspective on the concept of mediation, illustrating how the phenomenon is utilized in topical literature, as well as an exposition of its utility in describing how technology can become hidden from a user’s perception while in use.
1.5.2 Chapter 3 - Methods

This chapter describes the combination of semi-structured interviews and visual aids that were used to investigate internet practices at Na-Me-Res, the sampling methodology I used, and the distribution of participants that were engaged in the course of my study. Also included in this chapter is a description of my methodological approach to addressing the validity and generalizability of my study. This chapter concludes with an outline of the ethics related implications of my research, both in terms of my role as an acculturated researcher in the Aboriginal community, provisions for reciprocity towards the Na-Me-Res community, as well as the steps that were undertaken with a view to obtaining institutional ethics approval.

1.5.3 Chapter 4 – Data Discussion

In order to present a cogent synthesis of this study my data discussion first frames the state of homelessness amongst Aboriginal men in the City of Toronto. This framing illuminates Na-Me-Res’s operating environment by outlining the range of risk factors against which the organization has evolved its range of services, while also providing insight into the criticality of Na-Me-Res’s services in the lives of its client community. Perceptions of staff and clients towards these critical needs further synthesize the critical presence of the organization in the context of the larger phenomenon of homelessness in Toronto. The subsequent analysis outlines the various ways the internet informs Na-Me-Res’s intra and extra organizational relationships, and explicates the role of the internet as a socially mediated technology resource that implicates practitioners and practices in its outcomes.

1.5.4 Chapter 5 – Summary

My conclusion expositions the essentiality of the internet in the ongoing operations of Na-Me-Res by connecting the risks of service disruption to its various modes of use within the organization,
and its role in structuring critical relationships with external stakeholders. I hypothesize that socially mediated outcomes of organizational internet use indirectly implicates the technology in the living experiences of residents and clients by way of its correlation to maintaining overall service levels. The characteristics of the organization within the community it serves, as well as the ability of shelter clients and residents to absorb any disruption to critical services, necessarily determines the potential harm that could be caused by technological breakdown.
Chapter 2
Literature Review

The following discussion contextualizes my research within the broader internet rights debate and illuminates the theoretical approach I’ve employed through the course of my investigation. The key proposition here relates to the ways in which my theoretical concept has emerged from my observations of the stagnancy that has prevented meaningful internet rights policy momentum in Canada. My discussion opens with an overview of Canada’s current policy landscape, and illuminates the role of a neo-liberal policy aesthetic in mediating the tactics employed by policymakers in curating our national technology interests. An outline of the problems associated with digital technology marginalization follows, illustrating how distributive approaches to achieving social technology parity are themselves beholden to the auspices of the free market. My theoretical framing begins from there with a discussion of the problematic ways that consumerism and the notion of the primary of the individual have compromised popular notions of “the internet” as a collective resource. I conclude the chapter by outlining the systems and ecological approaches to explicating socio-technological relationships that constitute my interpretive lens.

2.1 Topical Trends in the Internet Rights Narrative

In April 2015, the Canadian Radio-television and Telecommunications Commission (CRTC) announced plans for public consultations with a view to reassessing its position on basic telecommunication service objectives nationwide (CRTC, 2015). Situating access to broadband internet service as the locus of these conversations, the CRTC is once again examining the
prospect of regulatory intervention in Canada’s telecommunications service market; a landscape dominated by the private sector, and devoid of a national access policy grounded in civic accountability or protections (Matear, 2002). The commission’s previous review of its oversight role in ensuring basic levels of broadband access fell short of recommending that the CRTC subsidize minimum service levels in areas deemed underserviced by existing telecommunications service providers (Canadian Radio-television and Telecommunications Commission, 2011; Moll & Shade, 2011). To do so would have required the CRTC to acknowledge that access to broadband internet services constitutes a civic prerogative. Sidestepping this position at the time, the commission instead announced the pursuit of minimum broadband speed targets without clarifying the scope of intended service distribution, or what measures would be employed to ensure internet service providers (ISP’s) reached these goals (Janigan, 2011). By maintaining the status quo of telecom policy in Canada, the CRTC affirmed its belief that the broadband and telecommunications interests of Canadians were best served by the private sector.

With the launch of its latest review, the CRTC seems to have reframed the broadband access needs of Canadians from one focused on individualism and consumer interest, to one that recognizes the needs of communities that are intrinsically dependent on the internet through a range of public and private services. By highlighting the contemporary role of the internet in facilitating access to a broad range of services, the CRTC has opened the door to a conversation which implicates the technology as an essential component of daily life beyond the discrete technology practices of individual users.

The CRTC’s attempts to reify the broadband access needs of Canadians illuminates the tensions faced by policymakers when attempting to demarcate public interest from consumer interest in
the broadband access debate; tensions arising from multiple characterizations of the internet, its multi-faceted role in people’s lives, and its many contexts of use. In business, the internet may represent critical operational infrastructure. In the public sector, a means for city planners to ensure efficient and safe road use. In social arenas, a way to maintain cohesion between friends and family. The multiple modalities through which the internet is expressed in daily life reflects its nearly ubiquitous embedding in the fabric of contemporary civic society, and its role in enabling both individual and societal capabilities. This complexity also illuminates how our conventional definitions of internet needs, expressed predominantly through the technology practices of individuals, can limit the scope of public policy discussions; they preclude us from fully recognizing the breadth of our interdependency with the technology. While individuals may assume political, consumer or social roles when engaged in internet based activities, the material essence of the internet remains an affordance of the free-market. This underlying tension, the technology being both a free-market commodity and a collective resource with multiple expressions of use, implicates the private sector in ways not comparable to other essential services or public utilities.

Categorizing the internet as a utility is limiting, and belies its socially constituted essence. Essential service designation is equally problematic. Compared with conventional civic services designated as essential (hydro, telecom etc.), there is no discrete labour group tasked with maintaining the operability of the internet or creating the content that gives it life. In the absence of a comparable socio-technologically descriptive model, and in the face of persistent technological advancement from within the private sector, policymakers have had few options but to react to trends in the internet market by framing the technology as a consumer commodity. From this perspective, nearly every relationship people have with the internet is expressed
through their roles as consumers and mediated by the free-market; the agency of the individual embodied not through civic interest or the collective good, but rather through a self-regulating marketplace absent of any state intervention (Swarztrauber, 2014; Szoka, Starr, & Henke, 2013). Although broadband internet access is centralized as a key proposition in the Conservative Government’s Digital Canada 150 action plan (Industry Canada, 2014), the federal government’s approach has remained tied to incentivizing the private sector absent any real consequences should proposed benchmarks not be reached. The policy tactics employed by the CRTC evidence the tension between consumer and civic values through the explicit assent given to the private sector to curate the broadband technology interests of Canadians, the distributive approaches to redressing technology access barriers, and assumptions made by the federal government with regard to the internet access capabilities of Canadians.

It would be incorrect, however, to regard this bias in public policy as a shortsightedness exclusive to policymakers. The near totality of free-market mediation of the internet, coupled with its ubiquitous presence in all aspects of daily life, has made it exceedingly difficult for individuals to separate their own civic interests from their consumer interests when attempting to reconcile internet need. Free-market mediation of public policy towards the internet is an endemic outcome of our conventional understandings of our relationships to the technology. It is an outcome of the broader political aesthetic of the 21st century (Johnston, 2007), and reflects the scope of public policy that has been co-shaped by self-interest and the primacy of the individual consumer. Broadening our understanding of the internet to be inclusive of the technology’s background role in sustaining contemporary civic society requires that we look beyond the binary relationship between individual consumers and individual technologies. We must instead consider how access to the internet can be mediated through social practice, and subsequently
expressed through access to a myriad of public and private services. This perspective should also consider how those services might be at risk of partial or complete disruption in the absence of internet access, and whose quality of life implications extend beyond the affordances of personal technology use and into the lives of connected and unconnected users alike.

2.2 Technology Inclusion

Many of the problems associated with technology marginalization have been framed against the rhetoric of the “digital divide.” Among these criticisms, contemporary scholars conclude that the approach assumes an overly deterministic, prescriptive and normative perspective of technological disenfranchisement (Eubanks, 2011; Raboy & Shtern, 2010; Warschauer, 2003). In the Canadian context, attempts to overcome the technology marginalization of lower income and vulnerable populations has been reconciled by attempts to diffuse access to the digital technologies in pursuit of broader societal outcomes (Hudson, 2012). The problem with this approach is that it fails to account for the complimentary in-use literacies required to realize the benefits of access to digital technologies. Canadian scholars have been particularly critical of federal stagnancy in the wake of the 1971 release of *Instant World* (Raboy & Shtern, 2010), a report by the federal Department of Communication which outlined Canada’s leadership trajectory in reifying the communications rights of citizens. Since the release of that landmark report, the actualization of those ideals has gone largely unrealized. In contrast to more progressive policy initiatives evidenced in the United States (e.g. Connect America Fund), Canadian policy makers have moved towards increasing deregulation in an effort to harmonize our telecommunications policy towards a common North American model (Hudson, 2012; Jaeger, Bertot, Thompson, Katz, & DeCoster, 2012).
Attempts to broaden support for the development of in-use technology literacies can be equally problematic when considering digital skills programming. Here, observers are quick to point out that training programs can serve to exasperate existing institutional inequity by prescribing “how” technology should be used (Eubanks, 2011). From this perspective, “digital outsiders” are not really victims of a technology divide; rather they are marginalized as a result of the embedded power structures that reinforce racial, class, and gender barriers to equity.

Virginia Eubanks (2011) offers the example of low-income residents of a women’s shelter in downtown San Francisco to illustrate her challenge to the popular notion of the “digital divide.” In this case, the technology practices of low-income women from diverse backgrounds support a technologically privileged class. The real divide, according to Eubanks, is reflected in the lack of provisions for empowering socially marginalized technology users, subsequently precluding them from overcoming the institutional race and gender barriers of post-industrial America (Castells, 2010a). Examinations of institutional and political inequity framed by technology use indicate that technologies can have enabling and constraining social outcomes, whether or not they are mediated or directly utilized (Spade, 2011; Warschauer, 2003). Eubanks argues that these outcomes are predictable, follow a pattern of “volatile continuity” where marginalized groups are the last to benefit from the introduction of new technologies, and are the product of technology practices that intersect with underlying social, political and economic assumptions about these communities (Eubanks, 2011, p. 421). The lived experience of Eubanks’ study participants suggests that the equalizing potential of digital technologies that underpins neo-liberal policy framing has resulted in a digital citizenship divide, exasperating the boundaries between those who command the social capital to make best use of digital technology and those who do not (Oyedemi, 2012; Stevenson, 2009). Eubanks’ hypothesis also illuminates how the
digital technology systems implemented in support of state welfare services constitute a layer of surveillance and prescriptive constraints on behaviour not commonly experienced by citizens who do not rely on them. Though technologies like the digital food card monitoring program (Gilliom, 2006) have been employed with a view to reducing fraud and minimizing overall cost, the lived experience of dependent users is implicated by increased scrutiny and a reification of their status as have not’s.

In practical terms, Eubanks was able to demonstrate how the technology practices of lower income communities are skewed towards the lower rungs of the service industry. This is an important, salient dimension which underscores the inherent problem with the concept of the digital divide, and the distributive remedies developed in response. In short, they tend to assume two types of relationships to digital technologies, that of users and non-users. This becomes problematic when we consider our near ubiquitous interdependency with digitally networked technologies. In the digitally networked society, it is increasingly challenging to find someone who is not a recipient of digital technology practices in way or another. Owing to this ecosystem of interdependency, it is more representative to consider the divide between the technology literacies of users, both direct and mediated, as a starting point in deliberating on technology informed social inequity.

When examining social technology exclusion in the context of lived experience, it is important to consider the roles of gatekeepers and intermediaries as instantiating agents of the digital information ecosystem. Dailey et al., (2010), Sims (2013), and Warschauer (2003) provide a perspective on how community organizations, libraries, and schools function as liaisons between the state and marginalized communities with a view to delivering the social and technological capital required to achieve critical digital citizenship. In light of the distributive prerogatives that
underpin most examples of public technology policy, these intermediaries are often the first and only community technology access point. The localized nature of the social capital upon which critical digital citizenship is built implicates the role of community based service providers. Localization also implies that the diffusion of technology resources will necessarily result in heterogeneous outcomes between communities. The efforts of community intermediaries reflect a contemporary sensibility towards the community informatics (Gurstein, 1998) approach to addressing the needs of distinct communities in urban and rural environments (Warschauer, 2003). This approach demonstrates how, given provisional access to technology resources (e.g. high speed internet service), separate communities should be encouraged to make differentiated use of those resources. This model also illuminates how distributive approaches to technology enfranchisement need not result in prescriptive or socially deterministic outcomes (Dailey et al., 2010). The central role played by schools and libraries in many communities situate these community gatekeepers a crucial resource in remediating barriers to digital technology.

Providing an analog of the informatics approach in a local, person-to-person setting, Christo Sims (2013) describes how normative cultural values intersect with provisional access to material technologies. Not only will different people approach technology with different outcomes in mind, Sims shows that there is a distinct semiotic proposition that informs individuated technology outcomes. This relationship demonstrates how the cultural capital of technology ownership itself (e.g. branded technologies) can obviate the desire or appreciation of an individual to acquire meaningful in-use literacies. Attempting to reconcile productive technology use in this context becomes problematic, as one’s semiotic valuation of technology is no less important towards their broader capabilities than an outsider’s perspective on what that technology should be valued for. Sims’s focus on differentiated, in-use practices demonstrates
how community based intermediaries, in their capacity as front-line technology agents, are well situated to identify and adopt technology practices to suit local needs. Sims also shows the challenges inherent in reconciling the localized, heterogeneous needs of communities against the very real-world, distributive prerogatives of broader policy initiatives.

2.3 Individual vs. Collective Affordances of the Internet

The internet permeates nearly every facet of daily life in a digitally networked society, shaping the way knowledge and information is embodied, perceived, structured and patterned through behavior and practice (Wellman & Hogan, 2004). Scholarly examinations of the material, human and social components of internet “infrastructure” (Clement & Shade, 2000; La Rue, 2011; Park, 2012; Sandvig, 2012) synthesize rights based access as imperative towards reconciling civic discord, education, social justice, polity and freedom of expression; a re-framing that situates the rights based argument as a societal outcome. Abstracting those arguments reveals that they tend to be derivative of an individualistic narrative. In other words, the playing field where rights based conversations occur tends to constrain the dialogue to the enablement/disablement of individual interests. Conversely, arguments opposing rights based access posit that ascribing such status to the internet belies free-will, agency and consumer choice.

Contextualizing the internet rights debate demonstrates the central role agency, self-interest and individualism have played in moderating the narratives, and illuminates that a “hands off” approach by policymakers has contributed to the consumer oriented framing of these conversations. Coining the term “technopoly,” Neil Postman (1993) articulates how state absenteeism has contributed to the development of a system “in which technology of every kind is cheerfully granted sovereignty over social institutions and national life, and becomes self-justifying, self- perpetuating, and omnipresent” (McChesney, 2013, p. 70). In Canada, regulatory
oversight of internet infrastructure development and service delivery falls to the industry itself, as evidenced by a 2011 CRTC (Canadian Radio-television and Telecommunications Commission, 2011) report outlining its national broadband penetration targets for 2015. The net result is an information society that inherits its attitudes towards internet use from a free-market perspective of consumer centered rights enablement (Johnston, 2007, p. 242). Proponents of rights based access argue that socio-economic, political and geographic barriers to the internet narrow the range of choices available to disenfranchised individuals; so called digital outsiders. These rights focused umbrella arguments encompass the public commons debate over online space, digital divides and literacy, and the online enablement of political freedoms. Collectively, they centralize the concept of individual enablement in their propositions.

A global context for rights based access to the internet was exposited by the United Nations Human Rights Council in May 2011 (La Rue, 2011). Reconciling internet access with the ability to exercise freedom of expression, the proclamation focuses a rights based proposition on the individual while simultaneously conferring gatekeeper status to the private sector (La Rue, 2011, p. 7). By drawing focus towards the co-determinant relationship between the private sector and the individual, the UN proclamation demonstrates a common tendency to couple rights based arguments with the auspices of the free-market. The complexity of the internet’s presence in the background of daily life complicates that assumption, as more and more people are both directly and indirectly dependent on the technology through a range of “connected” services. As essential services like hydro, healthcare and education increasingly rely on the internet, these direct and indirect connections deepen, making it nearly impossible for a anyone to entirely “disconnect.” From this perspective, it becomes increasingly incumbent upon us to consider how consumerism has co-opted our ability to perceive these broader, societal affordances. Josée Johnston (2007)
points to shifts in the political aesthetic of the consumer sector in the late 20th century with a view to describing the conflation of civic prerogatives into a hybridized citizen-consumer identity. Where pre and post war consumers tended to engage in politically mediated consumption habits (austerity, labour solidarity etc...), the abundance of choice available to modern consumers has refocused the political lens towards individual self interest (Johnston, 2007). One can point to the emergence of networked individualism (Warschauer, 2003), the globalized network economy (Castells, 2010b), and a period of relative stability in the post-war era as informative of the de-politicization of consumer habits. And though consumers have always derived pleasure and satisfaction from reconciling identity with consumption choices, the era of contemporary consumerism has seen a trend towards making choices that satisfy individual identity and competitiveness amongst peers rather than serving a common good. As the meanings behind consumption evolved towards self-interest and immediate gratification, one’s ability to differentiate between their roles as citizens and consumers have become increasingly complicated. In short, the contemporary consumer tends to view their intrinsic civic prerogatives (their rights and freedoms as prescribed by charter/constitutional citizenship) through a consumer lens concerned primarily with the perceived autonomy and choice afforded by an abundant marketplace. In the context of our topical discussion, the practical outcomes of this identity hybridization are twofold. First, it has allowed for the bartering and commoditization of civic prerogatives (like privacy) in exchange for consumer benefits. Second, it has contributed to a general ignorance towards the infrastructural role of the internet in the background of daily life.

Mansell (2012) explicates the idea of citizen-consumerism by describing how a neo-liberal ethos has mediated the dominant social imaginary of the 21st century, and subsequently reified the popular antagonism between individual and collective interests (Mansell, 2012, p. 33). Mansell’s
social imaginary demonstrates how normalizing behaviours and perceptions compete for legitimacy over time, with dominant assemblages rising to claim legitimacy. Mansell’s hypothesis can help explain the apparent resilience of the participant consumer aesthetic when framed against the dominance of capitalism through the post war/cold war era and beyond. Consumer technology development has proceeded at a relatively stable and uninterrupted pace, becoming so embedded in our socio-cultural fabric that it would be exceedingly difficult, if not harmful, for us to extricate ourselves from them (Pariser, 2011). One can perceive the totality of our interdependency with digital technologies when we reflect on the panic accompanying a nonresponsive email service (Ingham, 2014), or the perceived threat to human rights following a deliberate shutdown of internet service (Williams, 2011). From cloud based productivity software, to online commerce, networked traffic management systems and “smart” hydro-electric systems, our contemporary digital ethnography is replete with embedded digital technologies that function quietly in the background of daily life, collect input from us whether we are aware of them or not, and effect change in our material environment.

The extent to which these technologies operate beyond our ability to perceive their presence or control the data they glean from us can bely our sense of agency and control. While our conventional understanding of “internet use” implicates a number of first person activities (web browsing, online shopping etc…), the emergence of devices that autonomously monitor and respond to real world stimulus has broken down the discreet boundaries between the online and offline worlds (Andrejevic, 2005). No longer is the internet simply a destination space users choose to engage with, it is a space that can be projected into the real world, with the ability to simultaneously re-constitute itself as a result. From transit capacity monitoring systems (Giannopoulos, 2004) to Smart Grid meters (Citizens for Safe Technology, 2013), we perceive
the presence of these technologies insofar as we perceive their influence on our routines and activities; the trust we invest in them offset by our faith in the benefits they yield (Nissenbaum, 2011). In many ways, ubiquitously diffused smart technologies have subsumed the agency of the individual user, making the idea itself an increasingly challenging concept to reconcile.

2.4 A Systems Framing of Social Structures

With roots in the biological and neural sciences (Capra, 1997), systems theory understands complex living structures through their abilities in reorganizing and reconstituting themselves. The characteristics of such systems are representative of their essential capabilities, ultimately reflecting what the system is and what it can do. Subsequently, any attempt to characterize a living system requires an understanding of the organized patterns that emerge between a system’s internal components. From a systems perspective, system components are organized towards achieving predicable outcomes, help characterize the system as a unique entity, and reflect the system’s capacity to reconstitute itself. Any meaningful understanding of the system as a whole cannot be achieved by isolating components individually (Taylor, 2001).

Where repurposed by social scientists (Seidl, 2004; Viskovatoff, 1999), the systems perspective has been used to explicate understandings of the internal social relationships that instantiate, reify, and mobilize complex organizations (Mattheis, 2012). Niklas Luhmann (1989) situates the systems approach at the centre of his model of operative closure (Bechmann & Stehr, 2002), expositing that self determinism delineates organizational systems within their local environments. Luhmann’s framework of operative closure describes unique modes of internal communication that emerge within organizational systems. These modes are representative of recursive system properties that are not shared with the outside world, and that allow the system to be self referential with a view to reconstituting itself. Luhmann reconciles the agency of
organizational systems with the concept of *autopoiesis*, the ability of the system to reproduce itself from within (Taylor, 2001). Luhmann’s concept of operative closure does not imply that the system is isolated from the outside environment, only that the internal processes of any given system are unique to that system alone, and not shared between itself and the environment. Changes in the system’s external environment can stimulate responses within the system, but they cannot determine the nature of those responses.

Luhmann’s model of social systems addresses some of the key methodological shortcomings associated with traditional systems theory, namely the problem of innumerability. Given the commensurate scalability of relationships that can be implicated in any systems model of social relationships, the approach has been criticized for its descriptive rather than operational efficacy. Luhmann’s approach helps solve the problem of innumerability by describing how organizational systems represent decreasing scales of complexity, themselves nested within increasingly complex social structures. By reconciling the characteristics of social systems with internal self-determinism, Luhmann also allows for an assessment of organizational capabilities framed by responsiveness to changes in the external environment.

Despite its efficacy in redressing the problems of innumerability, the socially deterministic underpinnings of Luhmann’s approach precludes the effects of material resources in its consideration of organizational systems. This is problematic when attempting to reconcile the socio-technological relationships inherent in my discussion. Additionally, social systems theory obviates the role of the individual in constituting internal relationships, assuming the near totality of the network’s influence on local actors. This oversight implicates an individualist versus collectivist binary into the discussion that precludes co-constructivist approaches. Giddens (1987) and Galloway (2007) help to resolve both facets of Luhmann’s social and network
determinism by expositing the co-constructed relationships that are performed between individuals and networks. In place of total susceptibility to system influence, individuals exercise agency and mobilize change in their local domains through action. While those actions are individuated responses to various degrees of stimulus, they nonetheless carry the imprints of the larger network within which the individual is situated. In this way, the actions of individuals are mediated by a range of social, cultural or political norms and values that are performed through recursive practices, and reflective of the system’s overall characteristics. Systems can be viewed as collections of practices where the agency exercised by individuals through their practices are connected together by shared values or experiences, and whose interconnectedness constitutes the larger network that is itself capable of agency. The network is constituted by the individual, as much as it guides the individual.

The systems oriented perspective that emerges from the topical literature helps us to understand how the characteristics of an organizational system serve to delineate it within its local environment, and provide it with the organizing principles it needs to help structure its internal components. This perspective also illuminates how the capabilities of organizational systems cannot be reduced to any single individual, but that individual actions are essential to synthesizing and reifying those capabilities. It provides insight into the ways in which agency is critical for understanding how organizations can reconstitute and re-embady themselves, and that the agency exercised by an organizational system reflects the underlying interconnectedness that ties its individual components together. The principle of interconnectedness is particularly meaningful here, because it is through the interconnectedness of system components that we glean a perspective of the structuring effects material technologies can have. Of particular
relevance here is the idea that the technologies employed by organizations can implicate change on and within the system.

Ecology studies (Moon et al., 2010; Wootton, 1994) provides a co-determinant model for expositing the relationships between biotic and abiotic components in natural ecosystems. In that model, abiotic resources help to sustain the overall functioning of the local ecosystem by structuring the local relationships between biotic components. Both direct and indirect relationships are constituted by proximity to, and the availability of, the abiotic resource itself. Though the presence of an abiotic resource in the local ecosystem has implications for all its biotic components, the nature of the relationships between any given biotic component and the abiotic resource may differ. In some cases, a biotic component may have direct access to the resource, whereas another may depend on the same resource through any number of interactions with interstitial biotic and abiotic agents – constituting an indirect relationship to the abiotic resource (Wootton, 1994). The co-determinant model of material and biological relationships synthesized by ecology studies illuminates how changes to the material resources available in a system can affect its essential properties and functioning. This perspective compliments the socially predicated models of systems theory by allowing for a critical, connective link between neighbouring systems. While the operative closure of any given social system implies that the agency and social processes within that system cannot be shared externally, material resources need not reconcile with those constructed boundaries (Bansler & Havn, 2003). The biotic/abiotic model shows us that material resources are necessarily implicated in the relationships between neighbouring systems, and can demonstrate mediating qualities of their own.

Actor Network Theory (Law, 2003; Van House, 2003) helps to refine this conceptual relationship by expounding on the abilities of material technologies to affect change within
networks. By situating such technologies with a degree of agency, actor network theorists ascribe material technologies with the potential to have enabling and constraining influence on the network whole. The network chain exposted by actor network theorists, constituted by material and social actants, provides insight into the hiddenness and mediating qualities of technology within social structures. When functioning properly, the role of technologies in sustaining practice is nearly invisible. The functional hiddenness of material technologies is disrupted in the event of breakdown of the material system, causing this underlying infrastructure to become visible (Bowker & Star, 1999). By ascribing agency to the material components that constitute the network, Actor Network Theory illuminates the potential for technologies to effect the reorganization and restructuring of the social patterns that characterize and embody organizational structures themselves.

2.5 Mediation

The central proposition in my framework considers members of the local information ecosystem as interdependent agents of internet mediated behavior and practice. Unpacking this term distinguishes the proposed phenomenon from a user oriented narrative by decentralizing first-person technology behavior as a constituent of lived experience. Contemporary Information Studies (IS) contextualizes mediation by describing the roles social and institutional gatekeepers play in facilitating access to technologies and shaping in-use behavior (Dailey et al., 2010; Hoffman, Novak, & Venkatesh, 2004; Sims, 2013). Virginia Eubanks (2011), Dharma Dailey et al. (2010), and Christo Sims (2013) use mediation as a lens for describing how outreach organizations, libraries, and community volunteers facilitate access to the material and epistemological resources required to make best use of technology. From this perspective,
mediation is framed by the active roles intermediaries play in producing first-person technology use relationships.

In order to frame a concept of mediation that informs lived experience through indirect relationships, it is necessary to glean further perspectives from infrastructural and organizational theory (Bansler & Havn, 2003; Star, 1999; Verbeek, 2006), social psychology (Bubolz, Eicher, Evers, & Sontag, 1980) and ecology studies (Moon et al., 2010). Whereas contemporary IS and information and communication technology (ICT) literature provides subjective orientation for investigating mediation within the perceptual boundaries of interdependent agents, the broader literatures cited have helped me construct a framework for mapping the extra-perceptual relationships that inform those subjective experiences. This interdependent ecological perspective views agents as donors, recipients and transmitters of digital information practices. While these roles are complimentary, they are not necessarily reciprocal, nor do they assume agency or awareness on the part of the agents performing them. One’s performance while under surveillance, for example, can be reconciled by these roles in the absence of agency or awareness; the agent is a donor through his/her physical presence in the range of surveillance technology, the agent is a recipient of the practice of surveillance, and finally, the agent can transmit a response on the part of system administrators.

In the context of lived experience, indirect technology mediation has three distinct facets: it can bely participative agency or insight; it can be performed through social practices; and it connects people to the internet irrespective of their personal access to the technology. Mediation can thusly be framed as a phenomenon that implicates multiple actors in technology transactions, and as a lattice of interdependent connections that undergird contemporary digital society.
Direct use of a technology is not necessary for one to be implicated in a modern, digital technology system. Susan Leigh Star (1999) provides a perspective on this phenomenon that obviates the need to directly participate with a digital technology system in order to be influenced by it, illustrating how mediated technology relationships are imperceptible to most people. In Star’s narrative, hidden infrastructure becomes visible when the perceptual boundaries between subject and object break down – when the mediating infrastructure itself comes into focus. Heidegger (1927) describes this process from the user perspective by noting that, through contextual use, a technology object that facilitates a particular subject-activity will necessarily lose subject focus itself. Much like eyeglasses that become nearly imperceptible in-use, internet based technologies function as undercurrents to behaviour and practice, instantiating their presence by indirectly enabling and constraining our daily activities. Whether through a traffic congestion notice displayed on a digital bulletin board, or through longstanding relationships with service providers who themselves are connected, the information ecology re-frames concepts of participative agency or “opt-in.” Helen Nissenbaum (Nissenbaum, 2011) further elucidates on the challenges for agency reconciliation in this ecology of imperceptible connectivity. Predicated on her concept of the transparency paradox, she highlights how everyday activities that rely on internet technologies have undermined our ability to opt-out. In other words, our dependency on hidden internet infrastructure has progressed to the extent that divesting ourselves of their use would cause more harm than good.

The ecological allusions underscoring these perspectives implies an interdependency between actors that is performed visibly and invisibly, and one that functionally obviates any one actor’s awareness of his or her role in it (Hine, 2000). Mediation is less of a deliberate outcome of digital societies as it is an outcome of the total practices that facilitate, enable and constrain the
lived experience of networked technologies. As Star (1999) points out, functional systems tend
to be imperceptible in use. Hidden connections are in many ways the surreptitious partners to
visible connections. Breakdown occurs when people become aware of these hidden connections,
and when the mediation surfaces and confronts our perceptual assumptions about our
relationships to technologies. In the context of this research project, breakdown would result in
the arbitrary disconnection from internet based technologies of users who are not necessarily
aware of their dependency on it. The risk of this type of breakdown is not so far-fetched when
we consider the total control over internet access maintained by private interests in the absence
of civic protections.

The preceding discussion illustrates the grounding and intentionality of my research trajectory.
Particular attention has been paid to the governing, neo-liberal political aesthetic of the 21st
century insofar as it has “locked in” a popular attitude towards the internet as a consumer matter.
My subsequent data discussion illuminates how conventional attitudes towards the internet as an
individual affordance preclude the role of the technology in shaping a myriad of indirect, but no
less compelling, social outcomes. Explicating the ways in which the internet is embedded in the
organizational practices of service providers provides insight into its facility as a collective
affordance, co-determining living experience as a socially mediated technology resource.
Chapter 3
Methods

A combination of semi-structured interviews and visual aids were used to investigate the indirect, socially mediated internet practices that constitute interdependency between shelter employees, clients and residents. Perceptions towards the role of the internet in facilitating services was ascertained through participant dialogue surrounding their daily activities and routines. Descriptions of daily practices, interactions between staff and clients, and client activities within and outside of Na-Me-Res were examined for any underlying connections to the internet practices of peers and stakeholders. The structuring role of the internet was assessed by observing the outcomes of technology practices correlated to Na-Me-Res’s programming rather than the content of the technology practices themselves. Instead of a hierarchical approach to interpreting technology practices (where the emphasis is placed on the technology itself), this perspective views each participant as an equally interdependent technology agent.

3.1 Frameworks
A critical assessment of the methods I employed in the course of my study must consider the core theoretical concepts which constitute my observational lens. Interview questions, visual aids, and non participant observations emphasized the relationships and behaviours implicated by Na-Me-Res’s programming and services. Though Na-Me-Res’s activities influence the broader Aboriginal services sector, it was necessary for me to limit my focus to the organizational boundaries constituted by Na-Me-Res’s client facing programs and services. This approach reconciles with the theoretical groundwork borrowed from systems theory, and emphasizes the self regulating and recursive practices of complex social structures that both delimit and
characterize the capabilities organized whole (Luhmann, 1986; Seidl, 2004). In this context, Na-Me-Res’s core characteristics are reflected through the services it is able to deliver to its client community. An ecological framing of biotic/abiotic interactions was employed with a view to uncovering the mediated, or indirect implications of Na-Me-Res’s internet practices in the lives of clients and residents (Wootton, 1994). Open ended interview questions were employed in an effort to illuminate hidden, or background connections to internet based activities in the social practices described by participants. Visual aids, introduced at the end of the semi structured interviews, were used to reconcile participant feedback by providing a visual medium through which abstract concepts could be refined by the participant and the researcher.

Situating the internet as a “background” material resource can prove problematic without a clear interpretive context for the technology itself, as well as a range of indicators through which its social outcomes can be ascertained. With a view to uncovering the internet’s mediating presence, the content of internet activities are less salient towards uncovering the technology’s indirect influence on organizational practices than the ways in which the instantiation of the technology itself enables/constrains practitioner behaviour. In this way, the internet is framed as a material artifact whose effects on human activities can be gleaned by “inverting” its infrastructural presence (Star, 1999, p. 380). Following Star (1999), the internet’s infrastructural presence was ascertained by looking for indications of; its embeddedness within existing material and social structures, its transparency and/or hiddenness in the background or activity, and its constraining outcomes in the context of material or social breakdown.

3.2 Semi structured interviews

The participant focus of the study attempted to reconcile the perceptions of staff, clients and residents towards the internet through organizational practice. This process began with a semi-
structured interview between the researcher and each study participant. Although the interview questions followed a similar trajectory, they were differentiated between the staff, and the client and resident participants. In both cases, the participant’s history with Na-Me-Res was first established, followed by a discussion about any experiences they may have had as an internet user. The questions posed to the staff and client/resident participant groups diverged from that point forward. Staff members were guided towards describing their perceptions of the relevancy of Na-Me-Res programming in the lives of clients, and a deeper discussion of their perceptions towards the role of the internet in the daily practices of the organization. Some examples of the questions posed to staff members:

I’m going to ask you about your perceptions about how essential the services offered by Na-Me-Res are in the lives of clients

Discussions with staff proceeded with a view to uncovering how they perceive the internet as an enabling or constraining influence on their activities, as well as their perceptions of the essentiality of the technology:

From your perspective, how essential would you say the internet is in helping you to do your job at Na-Me-Res?

How would you think those capabilities might be affected if internet service was unavailable?

Clients and residents were engaged throughout the interviews with a view to uncovering the deeper meaning of Na-Me-Res’s programs and services in their lives, and what, if any, role the internet plays in their daily activities. Excerpts from the interview script employed in discussions with clients and residents are provided below:
As best as you can, tell me what you think the most important thing you’ve gotten out of your time at Na-Me-Res.

Can you describe some of the ways that the internet helps you in your day-to-day activities?

How you think the internet might help your fellow residents?

Can you think of that ways that Na-Me-Res may use the internet that affects your daily life?

The interviews provided a subjective orientation to the participant’s localized perceptions of the role of the internet in supporting their activities. The guiding theme of the semi-structured interviews was to uncover the in-situ perspectives of participants towards the nature, relevancy, and essentiality of internet based technologies in supporting their daily practices at Na-Me-Res. The interview questions were open ended in nature, and articulated in plain language.

3.3 Visual Aids

A relational diagram (Figure 2) based on Margaret Bubolz’ (Bubolz et al., 1980) interaction chain was introduced to the study participants at the conclusion of the interview. The relational diagram assisted in reconciling the perceptions of study participants towards their personal use of the internet, and their relationship with the technology through their activities at Na-Me-Res. Direct use of the internet was plotted in the diagram’s inner sphere. Activities that do not involve direct internet use, but are constituted in whole or in part by the internet practices of an intermediary, were plotted within outlying relational spheres representing a relative relationship to the participants themselves. In addition to the relational diagram, a keyword exercise (Figure
3) was introduced at the conclusion of the semi-structured interview. Participants were asked to circle any words they perceived as particularly relevant in relation to the internet, and having emerged as a result of the interview. In consideration of the potential literacy obstacles that may have been present with participants, the researcher offered to guide the exercise by annunciating the keywords.

Figure 2 – Relational Diagram
Figure 3 – Keywords

3.4 Participants

The boundaries delimiting the study considered the practical constraints placed on a single researcher. As such, the sample range was limited to organizational employees from Na-Me-Res’s core service areas and operational units, as well as five clients and residents for a total of ten study participants. The organizational employee sample range (Table 1) was comprised of three senior staff members situated in an oversight role relative to a program service area, as well as two staff members functioning in a more centralized, operational capacity. The employee sampling strategy was designed with a view to maximizing the range of practice areas that could be investigated within a limited timeframe, and allowed for observations of the crucial, “nested” relationships that exist between individuals, sub-groups, and the organizational whole:
<table>
<thead>
<tr>
<th>Employee Participant</th>
<th>Practice Area</th>
<th>Practice Outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Sagatay</td>
<td>Facilitates life skills development programs including employment, and health awareness</td>
</tr>
<tr>
<td>2</td>
<td>Fundraising &amp; Development</td>
<td>Engages with donors and community funding stakeholders</td>
</tr>
<tr>
<td>3</td>
<td>Operations</td>
<td>Oversees daily operations, including finance, IT support, and facility management</td>
</tr>
<tr>
<td>4</td>
<td>The Men’s Residence</td>
<td>Facilitates temporary housing and shelter needs of clients</td>
</tr>
<tr>
<td>5</td>
<td>Outreach Services &amp; Support</td>
<td>Facilitates services, outreach and transitional support for homeless populations living outdoors</td>
</tr>
</tbody>
</table>

Table 1 - Organizational Employee Participant Sample

### 3.5 Client & Resident Participants

Preliminary contact with staff members was undertaken prior to engaging clients and residents. Institutional consent was first obtained from the shelter’s Executive Director, who then discussed the research project with employees. Participants from the five core program areas facilitated the introduction of the study proposal to shelter residents and clients. Following initial contact with the researcher, the criteria for the selection of resident participants was based on one resident participant from each of Na-Me-Res’s core housing and outreach services for a total of five client and resident participants. This criteria did not preclude residents who might be engaged in multiple service areas, as this increased the likelihood of observing a broader range of perspectives on the implications of the internet for Na-Me-Res’s core services.
3.5.1 Client & Resident Sample Range

The client and resident sample range (Table 2) included one participant from each of Na-Me-Res’s core practice areas, with participants 6 – 8 engaged across multiple program areas:

<table>
<thead>
<tr>
<th>Client/Resident Participant</th>
<th>Programs &amp; Services Utilized</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>A temporary shelter resident who participates in the Ngim Kowa Njichaag and Sagatay programs</td>
</tr>
<tr>
<td>7</td>
<td>Participates with the Sagatay and Mino Kaanjigoo win programs</td>
</tr>
<tr>
<td>8</td>
<td>Temporary shelter resident who volunteers with Outreach Services Unit</td>
</tr>
<tr>
<td>9</td>
<td>Participates in Ngim Kowa Njichaag program</td>
</tr>
<tr>
<td>10</td>
<td>Engaged by the Outreach Services Unit</td>
</tr>
</tbody>
</table>

Table 2 - Client & Resident Participant Sample Range

3.5.2 Compensation

Each shelter resident was financially compensated for their participation with a cash payment of $100. The compensation was disbursed at the completion of the interview. The compensation format employed during the course of the study deviated from the format described in the preliminary ethics approval received from the University of Toronto’s Office of Research and Innovation. The researcher concluded that the initial proposition for compensating participants with pre-paid debit cards was problematic in light of a) the risk that the cards would constitute a tradable commodity, allowing the possibility of exchange abuse, and b) that efforts to redeem the cards might expose participants to unwarranted scrutiny and surveillance. Provisions for community compensation were also situated in the design of the study. This includes the
development of a technology skills literacy program to be incorporated into the life skills training provided by Sagatay.

While it is understood that financial benefits have the potential to influence the study, I was satisfied that the authenticity of in context behaviour would not be jeopardized, and that perceptions towards the underpinning relationships between participants and organizational internet practices would remain unaffected. Finally, there was an ethical prerogative to compensate study participants with a view to engendering good faith, future access, and mitigate any sense of exploitation they may have felt.

3.6 Data Analysis

Audio recordings of participant interviews were transcribed with corresponding field note entries, and a line by line numbering system was applied to the master transcript. Three levels of transcript analysis followed, first with a view to reconciling broad conceptual categories, followed by subsequent readings through which related, topical sub-categories emerged. The objectives of the preliminary data analysis were twofold; to explicate a concept of organizational capabilities by connecting perceptions of Na-Me-Res’s service outcomes to a range of community risk factors associated with homelessness, and to illuminate the dynamic relationship between organizational service levels over time and the adaptive needs of Na-Me-Res’s dependent community. The second stage of analysis produced interrelated conceptual sub-groups expositing the perceptions of participants towards the role of the internet in their daily activities, and the types of internet practices employed at individual, service area, and organization wide levels. Perceptions of participants towards the role of the internet in daily practice guided a third reading through which the concept of the essentiality of the internet emerged. At this stage, responses from operational employees helped to refine this concept further by illuminating the
potential for service disruption implicated by organizational dependency on internet technologies. A final, grounded reading of these conceptual groupings illustrated a co-determinant relationship between social practice, internet use, and Na-Me-Res’s overall service levels, helping to shape a concept of social technology mediation that subsequently underpins the outcomes of this study.

3.7 Research Ethics

The nature of the study population necessitated a rigorous approach to obtaining the requisite Level 3 ethics approval (Appendix 1). In this context, the marginalized socio-economic status of the shelter’s most vulnerable residents and clients amplified the pre-existing risks associated with research involving Aboriginal communities. It was paramount that the dignity of study participants be situated as the governing principle informing the researcher’s approach and pedagogy. In addition, it is important that the researcher:

- Recognize that the discourse between Aboriginal peoples and dominant Canadian society has been historically mediated by real and perceived power imbalances between Aboriginal communities and institutional representatives
- Recognize how the effects of colonialism resonate in the experiences of Aboriginal peoples, and are symbolically represented in scholarly, social, political, and economic discourse
- Recognize how solicitations for participation in scholarly research, however well-intentioned, can be perceived as remedial, prescriptive and culturally antagonistic within Aboriginal communities
• Recognize how traditional knowledge is situated within the oral and visual traditions of many Aboriginal people, as well as understand how those traditions have been reconciled with the discourse of the dominant society.

The multi-stage process for obtaining ethics assent included pre-approval revisions, and a post study compliance audit in which the researcher and the research supervisor outlined the measures employed to ensure the integrity and security of participant data, the anonymous presentation of findings, and provided a rationale for changes to the compensation format.

3.8 Preliminary Presentation of Findings – Research Poster

A research poster (Figure 4) that outlined the preliminary findings of the study was created during the early stages of data analysis. The poster was presented as part of a graduate student research event that took place at the Faculty of Information at the University of Toronto. The poster synthesized my preliminary interpretations of the role played by the internet in Na-Me-Res’s organizational practices by delineating three tiers of essential internet practices:

*Critical*: Where no offline option exists to support the operational activity. Extended disruptions to internet services are likely to cause a critical disruption to shelter operations.

*Essential*: Where operational activities have been structured around access to the internet and internet based technologies. While non internet based options exist, restructuring these activities is likely to cause a significant disruption in service.

*Supportive*: Where access to the internet and internet based technologies are used in conjunction with offline operational activities. Lack of internet access is unlikely to cause a significant disruption in service.
The preliminary interpretations that underpinned the concepts illustrated in the research poster proved to be an entry point in formulating my concept of *socially mediated technology practices*. While the poster exercise allowed me to synthesize the essentiality of the technology in terms of its role in sustaining Na-Me-Res’s programs and services, subsequent reflections on the potential service implications of disrupted access to the internet revealed a problematic technology bias underpinning my preliminary conceptual model. Simply put, the preliminary concept localized far too much agency on the technology alone. Deeper readings of my transcripts ultimately illuminated the intrinsic socio-technological nature of Na-Ma-Re’s organizational relationship to
the internet, explicating an understanding that any potential outcomes of this relationship cannot be discerned by isolating technology and social practice from one another.
Chapter 4
Discussion

This following chapter begins with a discussion of Na-Me-Res’s operating environment by outlining the range of community risk factors that inform homelessness. This provides insight into the criticality of Na-Me-Res’s services in the lives of its client community. Perceptions of staff and clients towards these critical needs further synthesize the critical presence of the organization in the context of the larger problem of homelessness. The data discussion outlines the various ways the internet informs Na-Me-Res’s internal and external relationships, and explicates the role of the internet as a socially mediated technology resource implicated by practitioners and practices.

4.1 Characterizing Na-Me-Res

4.1.1 Risk Factors Facing Toronto’s Aboriginal Peoples

Na-Me-Res’s programming and outreach model targets a distinct cross section of Toronto’s homeless, under, transiently and transitionally housed Aboriginal communities. Although a range of municipal and not-for-profit organizations have historically provided outreach services for Toronto’s homeless population, the need for a distinct, culturally supportive emergency relief shelter for Aboriginal men was identified by the Ontario Native Women’s Association (ONWA) in 1980. Following incorporation as a non-profit charitable organization in 1983, Na-Me-Res first opened its doors in 1985 with a 26 bed shelter (Native Mens Residence, 2014). The need for an Aboriginal men’s shelter in the city was identified commensurate with a steep rise in Toronto’s Aboriginal population throughout the 1980’s.
Although economic factors played a role in motivating the migration from reserves to urban centres, the bulk of the urban population increase during this period has been attributed to a relaxing of “status” criteria following amendments to the *Indian Act* in 1985 (Bill C-3 and C-31) (McCaskill, FitzMaurice, & Cidro, 2011; Simeone & Hurley, 2010). This amendment broadened the ability of previously excluded individuals to reclaim their Aboriginal ancestry, informing a subsequent rise in the numbers of Aboriginal peoples living off reserve. Though the numbers of Aboriginal peoples residing in the City of Toronto was increasing, accurate demographic data remained difficult to glean. Census data collected by the federal government between 1981 and 2006 shows a sharp divide in population numbers when reconciled against data collected by social services providers. In 2006, federal census records place Toronto’s Aboriginal population at 13,605 persons, while Aboriginal service agencies reported nearly 70,000 residents (Statistics Canada, 2010). A large portion of this discrepancy owes to the inherent limitations of federal census records, where only registered residents of private households are captured. Individuals living in community housing, institutions, and homeless populations, while not recorded in the federal census, are nonetheless enumerated by social services agencies upon initial contact.

Implicitly, the data omitted in the federal census correlate with many of the endemic obstacles faced by Aboriginal peoples when pursuing autonomy, independence and self realization in an urban environment; higher rates of incarceration, substance and alcohol addiction, mental health issues, domestic violence, transitional and cultural dislocation. Explicitly, the contrast in population numbers points to the overrepresentation of First Nations community members amongst Toronto’s homeless populations. Municipal outreach assessments evidence a decrease in the number of homeless individuals who identify as Aboriginal between 2006 and 2009 (16.2% - 15.4%). As a whole, however, the representation of Aboriginal peoples counted
amongst Toronto’s total homeless population remained disproportionately high (14% average). When examining the risks faced by the homeless, it is important to note the heightened vulnerabilities of individuals living outdoors as opposed to those who are under or transiently housed. Amongst this segment, Aboriginal peoples represent the highest percentage (28.7%) of Toronto’s outdoor homeless population (Community Development and Recreation Committee, 2010).

4.1.2 Risks & Vulnerabilities Faced by Aboriginal Men

Aboriginal peoples constitute a distinct segment of Toronto’s homeless population, are overrepresented on city streets, in city shelters, and are disproportionately exposed to the risks associated with homelessness (Golden, A., Currie, W., Greaves, E., Latimer, 1999; Patrick, 2014; Skye, 2013). Aboriginal men, in particular, evidence the lowest levels of income and education, the highest rates of transient/temporary employment, and are least likely to have secure housing. Subsequently, 66% of the total population of homeless Aboriginal peoples in Toronto are male (McCaskill et al., 2011). Accompanying the milieu of risk factors that inform the living experiences of Aboriginal peoples in Toronto, data collected by outreach agencies also point to higher rates of premature death amongst Aboriginal males. Aboriginal men aged 35-49, a demographic that is particularly susceptible to the risks correlated to homelessness, evidence premature mortality rates that are nearly four times those of non Aboriginal males (Shah, 2005; Trojan, 2014), constitute 71% of all murdered Aboriginal peoples in Canada (Andrew-Gee, 2015), and are seven times more likely to become homicide victims than non Aboriginal men (Mulligan & Miladinovic, 2015).

Abstracting the risks and vulnerabilities facing Aboriginal men in Toronto illuminates a matrix of social, economic and cultural characteristics that can lead one into, compound, and ultimately
reify homelessness as a normalized living experience. Aboriginal men face a multiplicity of interrelated risk factors that include a lack of transportation, substance and alcohol abuse, mental health issues, and barriers to employment and education. If homelessness is not prevented, the absence of secure and stable housing has been shown to compound and exasperate these risk factors (Skye, 2013). Once an individual is homeless, the stigmatization of “being homeless” can negatively mediate encounters with public and private service providers, while exposure to violence and abuse in and out of shelters becomes increasingly likely. As feelings of hopelessness develop, a sense of powerlessness in one’s ability to extricate themselves also begins to emerge. Antipathy towards the homeless, reflected through contacts with healthcare providers, education providers, police, courts, and the general public itself, has an anchoring effect on the homeless which can reify negative self characterizations, and further obviate feelings of self empowerment.

4.1.3 Aboriginal Social Services in Toronto – A Needs Based Ecosystem

While homeless Aboriginal men are not precluded from accessing non-Aboriginal focused social services, the living experience of being a homeless Aboriginal man in Toronto constitutes a unique intersection between the general stigmatization accompanying homelessness, and the systemic racism faced by Aboriginal peoples in general. The conflation of these institutional biases plays a key role in preventing Aboriginal men from seeking out support from non-Aboriginal service providers and, in the case of institutional care, exposes them to an increased risk of violence, abuse and self harm (Chartrand & Mckay, 2006; Patrick, 2014). The risk factors that inform poverty and homelessness within urban Aboriginal communities are neither discrete, nor reconcilable by any single outreach agency. The increasing numbers of Aboriginal peoples residing in Toronto throughout the 1980’s, accompanied by a greater understanding of the
stigmatization and institutional racism that had prevented many of them from accessing existing social services, resulted in a commensurate rise in the number of Aboriginal service agencies in the city. The majority of Aboriginal service agencies operating in Toronto today deliver programming focused on mitigating, preventing and remediating the social risk factors faced by the community. The network of services which has emerged in response to these community needs illustrates how service providers have situated themselves as preventative and remediating resources with a view to mitigating the interconnected risk factors that contribute to poverty and homelessness in urban Aboriginal communities. Using this framework, Aboriginal outreach agencies in Toronto can be broadly clustered as demonstrated in Table 3:
<table>
<thead>
<tr>
<th>Community Risk Factor</th>
<th>Agencies with a preventative focus</th>
<th>Agencies with a remediating focus</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Domestic Violence</strong></td>
<td>Native Child and Family Services of Toronto</td>
<td>Anduhyan Women’s Shelter Na-Me-Res</td>
</tr>
<tr>
<td><strong>Child &amp; Family Services</strong></td>
<td>Council Fire Native Cultural Centre</td>
<td>Anduhyan Women’s Shelter Native Child and Family Services of Toronto</td>
</tr>
<tr>
<td><strong>Cultural Services</strong></td>
<td>Council Fire Native Cultural Centre Na-Me-Res</td>
<td>2-Spirited People of the 1st Nations Native Canadian Centre of Toronto</td>
</tr>
<tr>
<td><strong>Housing Support</strong></td>
<td>Wigwamen Inc. Nishnawbe Homes Inc. Native Women’s Resource Centre Gabriel Dumont Non-Profit Homes</td>
<td>Anduhyan Women’s Shelter Na-Me-Res</td>
</tr>
<tr>
<td><strong>Employment Support</strong></td>
<td>Council Fire Native Cultural Centre Na-Me-Res</td>
<td></td>
</tr>
<tr>
<td><strong>Healthcare &amp; Addiction Support</strong></td>
<td>Council Fire Native Cultural Centre Na-Me-Res</td>
<td>Anishnawbe Health Toronto</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td>Council Fire Native Cultural Centre Na-Me-Res</td>
<td></td>
</tr>
<tr>
<td><strong>Legal Services &amp; Community Release Support</strong></td>
<td>Aboriginal Legal Services of Toronto Na-Me-Res</td>
<td>Aboriginal Legal Services of Toronto Na-Me-Res</td>
</tr>
</tbody>
</table>

Table 3 - Orientation of Aboriginal Service Agencies in Relation to Community Risk Factors
4.1.4 A Representative Voice For Urban Aboriginals

Reconciling the risk factors faced by the community with the range of programming offered by outreach agencies illustrates a dynamic interplay that exists between the changing face of community need, and the adaptability of service providers in response. Although Aboriginal focused service providers can constitute linkages between the Aboriginal community and non-Aboriginal focused services (healthcare, education, law enforcement etc.), Aboriginal agencies themselves cannot replace these broader services. Cultural representation is critical to engendering social, political and economic inclusiveness for urban Aboriginals in their relationships with the broader service sector. Figure 5 illustrates how Aboriginal service agencies can act as intermediaries between the Aboriginal community and a host of public and private sector services, providing a representative voice that ensured fair and equitable treatment.

Figure 5 - Mediated Relationships Constituted by Aboriginal Outreach Services
4.1.5 Na-Me-Res: Connected to Community Need

Homelessness is a problem that is intertwined with a myriad of fluctuating social, economic, cultural, mental and physical health risk factors (Gloger, Butt, & Thompson, 2004). While not contingent on any single risk factor, the overall vulnerability of Aboriginal men to different combinations of these risks changes over time. Coupled with increased insight into the socially rooted nature of homelessness, the focus of Na-Me-Res’s organizational capabilities have commensurately evolved over time. Table 4 provide a historical overview of Na-Me-Res’s growth into a multi-modal services provider, now operating three housing facilities, and delivering programing that targets the key vulnerabilities faced by homeless Aboriginal men:
<table>
<thead>
<tr>
<th>Year</th>
<th>Service Initiative</th>
</tr>
</thead>
<tbody>
<tr>
<td>1985</td>
<td>Opened 26 bed shelter for Aboriginal men ‘without a place to live’</td>
</tr>
<tr>
<td>1995</td>
<td>Street Outreach Services began with the introduction of Street Help, a harm reduction service for people living outdoors</td>
</tr>
<tr>
<td>2001</td>
<td>Street Outreach Service expanded to include Gimme Shelter, a case management service for people living outdoors</td>
</tr>
<tr>
<td>2002</td>
<td>Opened Tumivut Youth Shelter</td>
</tr>
<tr>
<td>2003</td>
<td>Street Outreach Service expanded to include Shelter Access, a shelter-to-shelter and transportation service to shelter for people living outdoors</td>
</tr>
<tr>
<td>2003</td>
<td>Increased capacity of Native Men’s Shelter from 26 to 63 beds</td>
</tr>
<tr>
<td>2004</td>
<td>Outreach Service expanded to include Mobile Housing, a housing service for people living outdoors</td>
</tr>
<tr>
<td>2005</td>
<td>After Care, a service which assists those now housed and previously living on the street to maintain their housing was implemented</td>
</tr>
<tr>
<td>2007</td>
<td>Introduced Oshkabaywis Service to provide client access to traditional healers and Elders and other traditional services and programs</td>
</tr>
<tr>
<td>2008</td>
<td>Implemented Special Needs, a specialized response for clients with severe mental health and addiction conditions</td>
</tr>
<tr>
<td>2009</td>
<td>Sagatay, the new transitional service opens and welcomes its first residents.</td>
</tr>
<tr>
<td>2011</td>
<td>Introduced the Ngim Kowa Mjichaag (Reclaiming My Spirit) Program. It’s goal is to assist clients reclaim their culture, identity, role and responsibilities through the delivery of culture based services within a “safe healing environment”</td>
</tr>
<tr>
<td>2012</td>
<td>Na-Me-res is now a housing provider offering 22 units of affordable housing in Parkdale</td>
</tr>
</tbody>
</table>

*Source: Na-Me-Res - A Brief History (Native Mens Residence, 2014)*

Table 4 - Program & Service Highlights in Nam-Me-Res’s Organizational Timeline
Contextualizing the changes in Na-Me-Res’s programs and services over time provides insight into the ways in which the organization has adapted and reconstituted its organizational capabilities in response to evolving community need. This adaptive relationship also illuminates how the expectations, and subsequent dependency of clients is commensurately intertwined with the re-patterning of the organization over time. As organizational capabilities evolve, so to does the threshold of need of clients and residents. This relationship is pluralistic, and crucial to framing an understanding of the potential risks any disruption to services may carry. For Na-Me-Res clients, the risks of service disruption are compounded by the cycle of hopelessness and sense of disempowerment commonly experienced by the homeless. In this context, the risks of service disruption should not only be reconciled against the community’s ability to adapt, but also against the harm adaptation itself may cause. Framing the risks of service disruption in this way forms a connecting thread between the localized, subjective experiences of Na-Me-Res clients, and the broader material and social relationships that characterize the organization.

4.1.6 Na-Me-Res: Core Service Areas

Na-Me-Res’s primary focus is to alleviate homelessness by providing temporary and emergency housing, transitional to long term housing support, as well as to host rehabilitative services that target the risk factors associated with homelessness. The complex and interrelated risk factors that inform poverty and homelessness necessarily implicate Na-Me-Res in all but one of the target categories focused on distinct community needs. In this context Na-Me-Res functions as a programming and service nexus on two essential levels. First, within the local network of service and outreach agencies, Na-Me-Res functions as an inter-organizational link amongst Aboriginal service providers, and between Aboriginal and non-Aboriginal service providers alike. Second, Na-Me-Res’s programs and services provide for the basic, essential and transitional needs of the
homeless, while simultaneously mediating their relationships with law enforcement, correctional services, the municipal and provincial governments, as well as healthcare and education providers. Table 5 outlines the five programming and service areas employed by Na-Me-Res that intersect with the key risk factors informing homelessness:

<table>
<thead>
<tr>
<th>The Men’s Residence</th>
<th>Facilitates temporary housing and the emergency shelter needs of clients</th>
</tr>
</thead>
<tbody>
<tr>
<td>Outreach Services &amp; Support</td>
<td>Facilitates outreach and support for individuals living on the street</td>
</tr>
<tr>
<td>Sagatay</td>
<td>Facilitates transitional housing and life skills development programs in communication, employment, and health awareness</td>
</tr>
<tr>
<td>Mino Kaanjigoowin</td>
<td>Facilitates mental health and addiction counseling support</td>
</tr>
<tr>
<td>Ngim Kowa Njichaag</td>
<td>Facilitates culture, identity reconciliation in accordance with traditional teachings</td>
</tr>
</tbody>
</table>

Table 5 - Na-Me-Res Key Programming & Services

4.2 Findings

4.2.1 Perceptions of Organizational Capabilities

Na-Me-Res’s core programs and services intersect with the most prevalent social, cultural and economic risk factors associated with homelessness amongst Aboriginal men. From emergency intervention to transitional care, the range of remediating services Na-Me-Res provides illuminates where the organization is situated across the lifecycle of homelessness. Given Na-Me-Res’s primary role as a critical and basic needs provider, its organizational capabilities are expressed through the frontline relationships that exist between its staff and the client/resident
community its serves. A range of organizational tenure, rural and urban backgrounds, and client histories with Na-Me-Res’s services were represented amongst the staff and client/resident participants interviewed. The perceptions study participants have towards the role of the organization in the daily lives of its dependent community members illuminates two significant themes which are outlined below; a reconciliation of service outcomes with community risk factors, and the adaptability of the organization over time.

4.2.1.1 Reconciling Perceptions of Need With Community Risk Factors

Of the five client/resident study participants, each was individually engaged with at least one of Na-Me-Res’s core service programs, with three simultaneously engaged in multiple service areas including addiction and mental health support, life skills development, and transitional housing support. When asked for their thoughts on the role Na-Me-Res plays in their lives, a range of personal experiences with the community risk factors faced by homelessness Aboriginal men was evidenced in the responses of clients and residents.

One Men’s Shelter resident describes how a history with alcohol addiction contributed to his separation from his family, ultimately leading to arrest and a subsequent re-engagement with Na-Me-Res while he pursued treatment and support:

I got arrested when I was on the streets during the cold alert, I went to my ex girlfriend’s and slept in basement and she called the cops and charged me with domestic. – Client Participant 6

Another client described a pattern of transient, insecure housing provisions prior to coming to Na-Me-Res:
I had a place, but I didn’t last there very long because my roommate attacked me in my sleep – Client Participant 8

Though many clients and residents had been able to secure temporary housing on their own, many articulated the role of alcohol and substance addiction in contributing to unstable environments, often finding themselves sharing accommodations with other drug and alcohol addicts, and creating environments that were ill-suited to treating addiction.

The need for a “clean and safe” treatment environment was highlighted as essential by several participants, as a number of clients described being targeted for assault in treatment facilities outside of the Aboriginal community. Both the emergency shelter and the transitional housing facility run by Na-Me-Res offer accessible, culturally appropriate provisions in this capacity:

They’re giving me stability housing wise, so it eases a lot of trouble for appointments, so people can find me for appointments, it gives me a contact place so my doctor can find me, I’m getting treatment for alcohol addiction at women’s college hospital where they give me medication to ease my cravings, and my family doctor is going to treat me for Hep C, so basically I need housing stability and this is a stepping stone - Client Participant 9

Alcohol and substance addiction constitutes a significant, ongoing risk factor amongst homeless Aboriginal men (Golden, A., Currie, W., Greaves, E., Latimer, 1999), and was subsequently identified as a primary needs based outcome in the responses of clients and residents:
I’ve gotten the time to work through my problems in a safe environment, without the negative influences that caused me to fall back into addiction in the past

- Client Participant 7

In addition to the risks of violence and abuse (both systemic and from the general public), the problem of alcohol and substance addiction are compounded for those homeless men living on the streets. Since its inception, Na-Me-Res has maintained its street outreach service with a view to providing relief and support for the most vulnerable cross section of the homeless population:

A lot of us come in from off the streets… abusing drugs and alcohol, that’s common in our stories, and having mental health issues, depression and anxiety, other issues but generally depressed and feeling hopeless, here we can get time to recover from that and to help us to set goals for our lives - Client Participant 8

I’d see them down at Bathurst/Queen, especially during the winter months, I’d be there all weekend, and by 4:30 in the morning we’d be coming out of there drunk and so sick, and they’d be there to help, they’d bring us stuff

– Client Participant 10

Homelessness has a compounding effect on the abilities of individuals to seek employment. In addition to the life skills training and educational programs provided by Na-Me-Res, a stable address is essential throughout the transitional process:

If you’re working on a resume it’s helpful, usually if you’re looking for a job they’ll ask for an address, especially if you don’t have a phone

- Client Participant 6
Responses gleaned from Na-Me-Res staff when asked for their perceptions of the role of the organization in clients’ lives illuminate a similar correlation between service outcomes and targeted risk:

The shelter saves people from moving directly on the street, by offering support for the family, mental health or substance issues someone may be facing that causes them to be isolated in their current space – Staff Participant 5

The overlapping risks faced by homeless Aboriginal men are implicated throughout the lifecycle of homelessness. Na-Me-Res’s Operations Manager illuminates how the organization’s programming is situated along this continuum:

When you get someone out of corrections and give them four walls, they don’t know what else to do, how to maintain their housing and their lives… when an aboriginal client gets housed in Toronto they are referred to our aftercare service, so we stay with clients for at least a year to ensure that their housing is maintained, show them where the foodbank is etc… give them the basic life skills you or I may take for granted – Staff Participant 3

4.2.1.2 Adaptation of Organizational Services Over Time

While clients and residents tended to frame the role of Na-Me-Res in their lives in terms of material benefits and immediate stability, staff members emphasized the ongoing outcomes of organizational services in the lives of dependent community members.
We’ve remained adaptive and changed to the needs of the community… examples are the change from youth shelter to adult, corrections community release programs, expanded the services that are most needed – Staff Participant 3

Regarding Na-Me-Res’s unique role in the broader landscape of Aboriginal service agencies:

We have diversified aboriginal programming here, and have assisted Aboriginal men since 1985, I know there are other services now, but Na-Me-Res was the only one for years, we’ve become known for that – Staff Participant 2

Staff members perceive the role of organizational services for their short and long term remediating influence in clients’ lives, providing insight into the structuring effects of intra-organizational culture norms (Sun, 2008). For acculturated staff members, a collection of shared values and principles can help to mediate and structure one’s enactment of sanctioned organizational practices (Serrat, 2009). In the case of Na-Me-Res, the values of the organization (to remediate homelessness) are implicated in the perceptions staff members have towards the short and long term outcomes of Na-Me-Res’s services.

Na-Me-Res is completely essential, this organization provides a service that is not duplicated by any other – Staff Participant 4

Na-Me-Res’s adaptation to evolving community need also highlights a crucial, commensurate relationship between the capabilities of the organization, and the expectations of its services on the part of clients and residents. The service level threshold occupied by the Na-Me-Res in the context of vulnerable population needs must be framed when considering how the organization’s use of technology resources implicates its overall capabilities:
It’s difficult because aboriginal men are at the low end of the totem pole with regard to funding, because they look more at youth and women, so its very difficult to convince potential funders of the importance of the programs here

– Staff Participant 2

4.2.2 Perceptions of Clients & Residents Towards the Internet

When discussing their thoughts on the role of the internet in their lives, both individually and as an organizational resource, clients and residents similarly framed their experiences with the technology as an enabling or constraining influence on their activities. In lieu of stable housing or a personal telephone, three of the five participants described how access to the internet is essential with a view to maintaining an email address for job seeking:

If you’re working on a resume it’s helpful, usually if you’re looking for a job they’ll ask for an email address, especially if you don’t have a phone

– Client Participant 9

Knowing where and how to access the internet helps to synthesize a stabilizing routine for several clients and residents. Participants alternately described their need to stay connected with friends and family, seek out information about service providers and look up addresses for the facilities that constitute their daily routines:

I use the internet a lot for job searches. Especially if I’m looking for an address, you can use Google Maps, especially when you’re looking for a job, you need to know how to get there, who to contact, address, a bus route… all that stuff. Especially when it comes to other services, just getting there you need to know
what social services are available in that area, welly (welfare) office
unemployment and all that stuff - Client Participant 7

The need for *routine* emerged as a consistent theme in client and resident interviews, both in terms of its positive effect on the treatment programming undertaken by clients and residents, as well as its role in overcoming the feelings of hopelessness experienced by many homeless men.

Where regarded for its constraining influence, participants described the various challenges surrounding physical access to the community terminals provided by Na-Me-Res, and a lack of wireless service within facility itself. All but one of the client and resident participants had access to personal devices capable of accessing the internet (smart phones and laptop computers), and all participants described been given a personal USB mass storage device by the employment counseling office on which to maintain employment related documents. While none could recall being apprised of the implications of maintaining their private information on portable devices, one client described having lost possession of his USB stick and smartphone after being robbed at another men’s shelter. For participants who did maintain possession of personal devices, the lack of wireless service provided by Na-Me-Res within its facilities was described for its limitations on their personal activities, requiring them to leave the facility in search of public access “hot spots”, or rely on the community access terminals:

> If they had wifi in here it would help, and that would alleviate some of the tension with people waiting to get on the terminals, and you kind of side step the people that don’t have a cell phone or don’t want one – Client Participant 6

The congestion and lack of public terminal availability was cited as a problem by many:
Some of them practically live on it, they can sit there for hours, sometimes we only have four computers, seems like there’s always somebody waiting to go on one, and if they didn’t turn them off when it’s time to do chores the chores wouldn’t get done – Client Participant 8

Upstairs we have six computers and they’re people who are on them 24/7 you know, certain four people who are always on it – Client Participant 7

One client identified the lack of wireless service as a deliberate response on the part of Na-Me-Res with a view to mitigating the possibility of residents secluding themselves in the facility if the service was widely available:

It would also be nice to have wifi here, but they’re afraid if they have wifi here people would be on their devices all the time and never go out and live their lives, some have depression issues and they never want to leave here and go out, they just want to stay in and watch TV, like hermits – Client Participant 7

Only two of the five participants had taken part in the computer skills training provided by Na-Me-Res, though all described the role of the client and resident community as a collective resource with a view to supporting the internet skills of individuals:

I think that the residents would probably help them, because I’ve seen already, the residents help each other here, The one I learned was free wifi at McDonalds
- Client Participant 8

A lot of it is common knowledge here, everyone talks to each other here, we utilize ourselves as resources and a lot of guys here are pretty knowledgeable
about the internet. You know, who do I talk to about smartphones! Everyone has their strengths here and gets singled out – Client Participant 9

Access to the internet through supportive technologies plays a key, stabilizing role in shaping the experiences of Na-Me-Res’s clients and residents. The responses provided by these participants illuminates how the technology is synthesized into their daily lives by their individuated experiences, their relationships with fellow clients and residents, and the efforts of institutional gatekeepers alike. One key observation that emerged from these conversations relates to the nature of the technology support resources employed by clients and residents. Though provisions for technology skills development are available through Na-Me-Res, clients and residents described how their fellow community members are a primary resource in this capacity. Several articulated the *common knowledge* and *tips* on “where to go” to find public WiFi hotspots and how to access various types of online content. A final observation emerged with regard to participant perceptions about the role of the internet in Na-Me-Res’s operations. Here, participants had difficulty connecting staff use of the internet to the delivery of programs and services. The “hiddenness” of Na-Me-Res’s organizational internet activities to clients and residents is not surprising, but does provide clues to the ways in which mediated technology practices can implicate the well being of dependent users even if they are unaware of its performance in the background of service practices.

4.2.3 Perceptions of Staff Towards the Internet

Discussions surrounding the role of the internet in the daily practices of staff members provided meaningful insight into the complex relationships that exist between the internet and social practices, the passive and active affordances of the technology, as well as its broader structuring effects on the organization. Perceptions of the technology as an *enabling* or *constraining*
influence on daily practice were abstracted from participant responses, correlating with descriptions of the outcomes of their use of the technology in terms of *tasks* or *outcomes*:

I could live without it but it makes things so much easier. For example, we have resource books where I can find information, or I can sit at my desk and find the info, I can email my coworkers about issues, or I can leave my desk and go find them – Staff Participant 5

When describing the outcomes of their use of the internet, the emphasis was placed on what they were able to do:

Moving things online makes our service more efficient. A lot of my work related research is done online, and I've been able to gain management skills

– Staff Participant 4

Alternately, staff also employed task-focused descriptions of their technology practices which focused on the restrictions implicated by their relationship to the internet:

Sometimes when our internet goes down, there’s nothing you can do… for a lot of tasks that are necessary for my role, the internet is required. There are always ways around that, but it would not be easy – Staff Participant 1

More insight emerged with regard to the constraining influence of technologies implicated in the reconciliation of external stakeholder relationships:

We’re limited by the updates the city provides to SMIS, and the resources they put into its development. The main problem with SMIS (Table 6, p. 67) is that it’s
not written to be distributive and has to be installed on each client computer, with 
admin privileges at the city! – Staff Participant 3

Staff members alternately reconciled the internet as a utility, or as a mediator of practice 
outcomes; illuminating how technologies can be perceived in the foreground or background of 
practice. This relationship describes the ways that technologies can become operationally 
imperceptible to users through habitual use (Heidegger, 1927), providing clues as to the 
difficulties participants had when asked to describe how the internet may mediate their own 
activities outside of their individual practice domains:

It’s a link that you don’t really think of, and I can’t think of a clear example of 
where I fit in. I guess the work done by intake staff would qualify as I’m 
indirectly affected there – Staff Participant 1

I think everything is affected in some way, work would still be done but it would 
take a hit, I remember when the outreach team lost Blackberry service for a short 
time and it doubled the workload on the shelter – Staff Participant 5

Table 6 illustrates a synthesis of staff descriptions of the internet in their daily practices; 
correlating perceptions of the technology as an enabling or constraining influence to its role in 
practice, and its presence in background or foreground of activity:
<table>
<thead>
<tr>
<th>Perceived as an Enabling Influence</th>
<th>Perceived as a Constraining Influence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emphasis on outcomes of tasks</td>
<td>Emphasis on tasks themselves</td>
</tr>
<tr>
<td>Articulated in the background of activity</td>
<td>Articulated in the foreground of activity</td>
</tr>
<tr>
<td>Terminology used:</td>
<td>Terminology used:</td>
</tr>
<tr>
<td><em>efficiency, able to correct errors, expanded capabilities</em></td>
<td><em>restrictive, foreign, broken, unwieldy</em></td>
</tr>
</tbody>
</table>

Table 6 - Synthesis of Staff Perceptions Towards the Internet

### 4.2.4 Visual Aids

Interviews were concluded with a guided exercise where participants were asked to locate themselves at the centre of a relational diagram, and identify any of the service based relationships implicated in their lives through which the internet might play a structuring role. The intent of this exercise was twofold; first, to provide insight into the extent to which participants were able to perceive the structuring role of the internet through the services that influence their daily activities, and second, to impress an awareness on participants towards the structuring and background role of the technology in daily life. Both groups of participants demonstrated difficulty plotting services beyond the “direct” relationship level without guidance, illuminating how the myriad of direct and indirect relationship that constitute complex systems can delimit the ability of system members to identify outlying relationships. Additionally, while
staff members tended to insert the name of the internet practice into the correlating relationship level (Figure 6), clients and residents chose to name the services themselves (Figure 7).

Figure 6 - Staff Relational Diagram

Figure 7 - Client/Resident Relational Diagram
The keyword exercise (Figure 8) was administered next, and demonstrated a contrast between the words participants circled in describing their perceptions of the internet at the end of the interview, compared to the perceptions they articulated verbally earlier in the interview. In this case, all participants overwhelmingly chose to circle words that situate the internet as an enabling influence, implying a processual or contextual influence on their attitudes towards the technology:

![Figure 8 – Staff Participant Keyword Response](image)

### 4.2.5 Organizational Internet Use

Na-Me-Res employs the internet through a series of internal and external practices that directly and indirectly implicate a range of users. When asked to describe the role of the internet in
organizational practices, four of the five staff members interviewed discussed their use of the technology for its relevancy within their individual and sub-group practice domains. At the individual level, the types of internet practices described by staff reflect a range of internet habits that have been adapted from their personal uses of the technology, illuminating how staff can exercise agency in some of their professional technology practices. Figure 9 captures one observation that was made of personal technology adoption in a professional context:

Google alerts keeps me updated on information that’s related to homelessness in Toronto, I get it right away…. Social media is another aspect I find very useful, twitter is one I use frequently at work, keeps me informed about other agencies

– Staff Participant 5

Figure 9 - Individual Internet Practices
At the sub-group level (within organizational departments), the use of customized and operationally situated internet based applications begin to emerge, correlating with an increase in the number of staff members utilizing any given internet based technology. Figure 10 shows frontline staff engaged in daily technology practices, and Figure 11 captures the community access terminals in use by Na-Me-Res clients:

We have a custom intranet and calendar, crucial to team’s communication, helps us function seamlessly and provide care to clients, so we know who’s here and who’s available, this helps me do the scheduling online – Staff Participant 1
The managers of Na-Me-Res’s Operations and Fundraising departments, situated in an organizational support capacity, provided insight into the more far reaching implications of specific internet practices. Unlike the sub-group level, the organization wide implications of these technology practices correlate to the central role of the practitioner in the organization:

ADP – payroll service for the company, used by finance 10/10, if this went down we would have to do payroll either via phone or manually – I don’t even want to entertain that – Staff Participant 3

Our large funders, like the United Way and Trillium, they all have online applications and online reporting systems – which is a large complex annual report, going back to a manual reporting system would impossible

– Staff Participant 2

**4.2.5.1 Localization of Organizational Internet Practices**

The model of organizational internet use that emerged from these conversations illustrates a range of internet practices from the highly localized practices of individual users, to practices that involve organizational sub-groups, and finally the practices that influence the entire organization. Table 7 outlines a range of types of internet use correlated to localized practice domains:

<table>
<thead>
<tr>
<th>Individual practices</th>
<th>Google Maps, Google Calendar, Google Alerts, Facebook, Twitter</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sub-group practices</strong></td>
<td>Intranet, SMIS, TAWL, Pirouette, CSC (Table 8, p. 76)</td>
</tr>
<tr>
<td><strong>Organization wide practices</strong></td>
<td>ADP (finance), Online Banking, Imagine Canada</td>
</tr>
</tbody>
</table>

Table 7 - Localization of Internet Practices
4.2.5.2 Internet Practices Implicated by External Stakeholder Relationships

Na-Me-Res’s programming and services model situates the organization within a larger network of sector stakeholders including; Aboriginal and non-Aboriginal outreach agencies, municipal and provincial governments, education, healthcare, law enforcement and private funding bodies. In a number of these relationships, the ability of the organization to comply with its regulatory and funding obligations is predicated on the use of dedicated internet based technologies, implicating the external stakeholder relationship in the internal technology practices of the organization. Table 8 details the third party internet applications implicated by Na-Me-Res’s external stakeholder relationships:

<table>
<thead>
<tr>
<th>Internet Technology</th>
<th>External Stakeholder</th>
</tr>
</thead>
<tbody>
<tr>
<td>SMIS - shelter capacity reporting system</td>
<td>City of Toronto</td>
</tr>
<tr>
<td>CSC - case management system</td>
<td>Corrections Canada</td>
</tr>
<tr>
<td>PIROETTE – outreach management system</td>
<td>City of Toronto</td>
</tr>
<tr>
<td>TAWL – housing database</td>
<td>For/Not for profit housing sector</td>
</tr>
</tbody>
</table>

Table 8 - External Internet Practices

The key observation that emerged from the localized groupings of organizational internet practices ties together the interdependent relationship patterns exposited by systems theory with an abiotic framing of the internet as an organizational resource. With this framework, the socially
mediated implications of the internet correlate to the nature of the internet practice commensurate to the nature of the practitioner’s role in the organization. The nature of both the internet practice and the practitioner’s role in the organization are salient with a view to explicating the co-determinancy underpinning social technology mediation; illuminating how a meaningful understanding of the phenomenon cannot be gleaned by analyzing the technological and social facets of technology practices independently. This allows us to understand how the same internet practice performed by two different people can have dramatically different socially mediated outcomes. Conversely, a range of internet practices performed by a single individual can result in similarly differentiated outcomes. This hypothesis helps to reconcile the potential implications of socio-technological disruption within the organization. Figure 12 illustrates social technology mediation in the context of potential individual and sub-group outcomes.

Figure 12 - Potential Outcomes of Social Technology Mediation
4.2.5.3 The Structuring Effects of Technology Adoption

Organizational restructuring in relation to the adoption of internet technologies emerged as a consistent theme throughout the interviews with staff members, and constitutes a salient connection to the concept of agency, self determinism, and organized capabilities exposted by Systems Theory (Seidl, 2004). The adoption of internet technologies into Na-Me-Res’s operations reflect both an expression of organizational agency (with a view to building capabilities), as well as the ways in which organizational agency has been compromised by relationships with governing stakeholders. In both cases, the broader organizational effects of adopting new internet based technologies were perceived for their positive and constraining influences.

The internet practices which were identified by staff as having a broad structuring influence on the organization include those implicated in external stakeholder relationships (SMIS, TAWL, PIROETTE), and those facilitating organization wide internal operations (ADP, Intranet). The three staff participants representing discrete program areas reflected on the positive outcomes accompanying the adoption of internet based technologies, with references to increased efficiencies, time savings, and a “freeing up” up staff time previously occupied by the use of paper based reporting tools (Figure 13):

- Using SMIS and the intranet allows me to be more efficient, tasks are quicker, and it’s easier to go back if mistakes have been made. Changes are easier with scheduling, and it allows us to do a lot more as well. It’s expanded our capabilities to do things in greater capacities as opposed to when we were restricted to paper documents - Staff Participant 1
Alternately, one of the staff participants centrally situated in an operations role reconciled the broader organizational benefits of these technologies with their constraining influence. Where the technology practice has been imposed on Na-Me-Res by an external stakeholder, the organization is placed in a position of dependency with little to no discretion in the design, serviceability or upgrade cycle of the technology in question:

We had a retreat a few weeks ago where some people came from the city who were talking about amalgamating SMIS and PIROETTE, which makes sense, but they’re two different beasts. We went to the BB (BlackBerry) passport this year primarily because PIROETTE is writing a mobile version, so I said to the city “don’t go backwards on the Smiths system.” In this sense we are hamstrung because our major supplier (the city) is behind the curve in the technology.

– Staff Participant 4
4.2.5.4 Intra & Extra Organizational Relationships

My interviews with staff participants provided important insight into the organizational boundaries delineated by Na-Me-Res’s intra and extra organizational practices, and the extent to which the use of internet technologies intersects with those boundaries. These observations proved salient with a view to reconciling a systems framework for understanding the processes of self regulation embodied within complex social structures.

Na-Me-Res’s internal practices reflect the organization’s unique abilities in reorganizing and regulating itself; structuring and motivating the activities of staff members towards an ultimate goal (s. 4.2.1.2). These internal practices represent *operatively closed* (Seidl, 2004, p. 3) organizational resources, as they are embodied from within Na-Me-Res itself:

> The internet is essential for our internal practices, and differs from one department to another. In one department the main function is to bring people into the shelter, in the counselling department it's for referrals, we've made it work in different ways – Staff Participant 3

Externally facing practices, however, reflect Na-Me-Res’s open, interactional relationship with its operating environment, illuminating how internet based practices mediate the ongoing exchange of resources between Na-Me-Res and its external stakeholders:

> Our submissions for funding, the old sheets which would take a day or so to complete, but now with the new SMIS system I takes maybe 5 or 10 minutes to get it done, it's not like I have choice, but it has made things easier when dealing with the city – Staff Participant 5

80
4.2.6 Ascertaining the Essentiality of Internet Practices

Understanding the implications of social technology mediation guides subsequent interpretations of the essential role played by the internet in Na-Me-Res’s organizational practices; reconciling the concept against the potential for harm, or service disruption, should access to the internet be compromised. Social technology mediation illuminates how the internet practices performed within Na-Me-Res intersect with the living experiences of its clients and residents through the delivery of programs and services by staff members. Likewise, any localized or organization wide disruption to internet service has the potential to be reflected through service constraints:

Even when we have a small internet outage it definitely does affect our work, simple things like email. An example is our outreach team, they have access to smartphones on the road, when we have a cut in service it’s very hard to access necessary information, like google maps to try and find a homeless guy
– Staff Participant 5

Na-Me-Res’s organizational characteristics as a frontline service provider are key considerations when ascertaining the scope, severity and potential harm that could be caused by service disruptions:

I think our capacity would be diminished, we’re a vibrant multi service organization supporting people in so many places and that would be compromised, I don’t know that we could do as much as we do
– Staff Participant 4

When framing the essentiality of the internet for Na-Me-Res’s operations one must also reconcile the relationship between the organization’s service levels and the commensurate, needs-based
expectations of clients and residents. As organizational capabilities have evolved and adapted to the affordances offered by new technologies, so too have the needs of community stakeholders. Although Na-Me-Res’s organizational practices could adapt to disruptions in technology availability, the process of adaptation might be untenable for its dependent community:

It would affect them (clients) in their day to day, things would look very different when documenting everything that we’re doing with them and making their referrals, a lot of what we do is outside referrals. So I wonder how that would look in regards to someone not knowing how to refer them, and then having to refer them in a crisis – Staff Participant 1

Where internet practices are tied to the reconciliation of relationships with external stakeholders, the implications of internet disruption have the potential to impede critical services in addition to Na-Me-Res’s funding. These risks are compounded by a lack of offline alternatives to crucial, stakeholder facing internet based practices:

If SMIS was unavailable, there would be a serious burden on staff and clients. We would have to move to a form based paper system but, in doing so, would lose client critical data, and be unable to refer flagged or dangerous individuals to appropriate institutions. On top of that, our per client funding is reconciled through SMIS, so I’m not sure how we’d get around that – Staff Participant 3

Where the organization has restructured internal operations by taking advantage of internet practices the human resources required to do the work offline are limited. In the case of shelter operations, a range of financial and accounting activities are serviced via online resources. The internal restructuring predicated on the adoption of internet based services means that Na-Me-
Res lacks the human resources to facilitate many of these operational activities in lieu of internet access:

I use ADP to manage payroll by myself, if this went down I’m not sure what we would do – I don’t even want to entertain that – Staff Participant 3

The perceptions of the two operations staff members interviewed provide important insight into the range of organizational relationships that can be implicated by the technology practices of individuals. Centrally situated within the organization’s operational structure, though not directly engaged with clients and residents, the technology practices of these individuals are capable of producing mediated effects through the entirety of the organizational body.

The essentiality ascribed to the internet through the practice areas observed provides insight into socially mediated presence of the technology in the daily lives of clients and residents, supporting the needs based service levels of the organization. In this way, the technology is expressed in the daily experiences of clients and residents through their engagements with shelter services and programs. While there is a tendency to isolate individual activities when examining internet use in organizational structures, a systems approach to interpreting technology practices helped to shape an understanding of the internet’s role in characterizing the organization and sustaining its overall capabilities. The perceptions of staff members towards the enabling and constraining presence of the technology in their daily lives have helped to reconcile the potential for harm, or service disruption, should access to the internet be compromised by correlating their use of the technology to overall service levels.
Chapter 5
Summary

5.1 Summary of Findings

The primary objective in this study was to seek an understanding of the role played by the internet in supporting Na-Me-Res’s organizational capabilities. Framing the technology as an abiotic resource situates the technology at the nexus of a myriad of direct and indirect relationship patterns implicated in its use. The results indicate that the internet can indirectly inform the experiences of clients and residents as a *socially mediated technology resource*. Data collected through interviews with organizational stakeholders have shaped a framework for explicating the socially mediated outcomes of Na-Me-Res’s internet activities by understanding the co-determinant relationship between the nature of the practitioner’s role, and the nature of the internet practice.

Na-Me-Res’s organizational capabilities situate the shelter within a local ecosystem of Aboriginal service agencies that has evolved in response to the larger social problem of homelessness in Toronto. In that context, Aboriginal service and outreach agencies have situated themselves as preventative or remediating social resources in relation to the dominant community risk factors faced by the Aboriginal community. Aboriginal men, in particular, are disproportionately exposed to a number of social, economic and cultural risks informing the cycle of homelessness. Aboriginal men represent a “lower rung” on the social outreach ladder, necessitating a dedicated set of services with a view to mitigating the bias and violence commonly experienced through non-Aboriginal services, and in an effort to obviate the conflation of physical and psychological risks leading to high early mortality rates. The
interrelated nature of these community risk factors implicates Na-Me-Res’s programming and service model across a wide range of service categories, and ties the organization to a number of Aboriginal and non-Aboriginal service providers. This necessarily situates the organization as a locus of remediating services for homeless Aboriginal men in Toronto.

Characterizing Na-Me-Res in its local operating environment provides an abstracted overview of the organization’s broader service functions, but a deeper understanding of its role in the daily lives of its dependent community necessitates perspectives from those who Na-Me-Res’s services most deeply affect. The perceptions of staff, clients and residents towards the needs of homeless Aboriginal men are important to forming an understanding of Na-Me-Res’s efficacy as a service provider, as it is through these relationships that the organization’s core capabilities are expressed in the living experiences of its community. These observations elucidate how the organization has evolved in response to the changing social, political and economic climates informing homelessness, and frames the dynamic interplay between Na-Me-Res’s organizational capabilities and the service needs of its community. The service level threshold constituted by Na-Me-Res through adaptation illuminates how the expectations of clients are intertwined with the evolving capabilities of the organization.

Discussions with staff, clients and residents regarding the role of the internet in their daily lives provided insight into the technology’s enabling and constraining influence on their activities. When perceived for its role in enabling practice outcomes, rather than being perceived as the focus of practice itself, it was observed that the technology can disappear into the background of activity. For clients and residents, the internet is perceived as a stabilizing influence that accompanies their activities in pursuit of employment, rehabilitation, and interconnectedness with friends and family. Where seen as a constraining influence, clients and residents frame the
internet as a discrete, material presence that is often broken down, not conveniently available throughout the facility, or one that constitutes a bottle neck owing to limited public access terminals.

Discussions with staff members also illuminated how they tend to reconcile the enabling and constraining influence of the internet with its localized implications for their activities. Within that context, an abstract of the range of implicated users in any given technology practice emerged; from the highly localized practices of individuals, to those that involve sub-groups of staff members, and finally to those practices that have organization wide implications. In the context of individual users, a number of personal technology practices were observed to have been adopted into the staff member’s professional activities. These examples of positive technology practice adoption accompanied perceptions towards the internet as an enabling influence. Where the technology practice originated from outside of the user’s personal domain and implicated the activities of sub-groups, perceptions of the technology as a constraining influence begin to emerge. These relationships illustrated how perceptions towards the constraining or enabling affordances of the internet correlate with its emergence into the foreground of activity, becoming the subject focus of practice as more users are implicated in its use.

At the level of practice that implicates organization wide relationships, the internet was perceived both for its constraining and potentially disruptive influence on Na-Me-Res. In these contexts, two modes of decision-making were observed to have motivated the adoption of technology practices; an internal mode undertaken with a view to engendering operational efficiencies, and an external mode with a view to complying with stakeholder oversight. Where the technology has been used to streamline operations, concerns were expressed with regard to
having “all of the eggs in one basket”, implying a recognition of the limited human resources available to undertake certain operations in lieu of internet access. Where the internet practice is expressed through a relationship with an external stakeholder, the constraints of the technology activity were perceived in relation to the challenges of maintaining a third party technology “imposed” on the organization with a view to compliance and funding. Here, the risks of critical service disruption in the absence of internet access are compounded by a lack of offline alternatives to support the practice in question.

Correlations were observed between Na-Me-Res’s use of the internet, and the intra and extra organizational practices that delineate the organization within its operating environment. Internally, these practices reflect the ongoing and dynamic processes of reorganization and self regulation that typify complex systems, while externally the technology constitutes a key material resource link between Na-Me-Res and its operating environment.

The question of the internet’s essentiality was ultimately reconciled by its influence on the daily experiences of shelter clients and residents as a mediated outcome of Na-Me-Res’s social practices. The data gathered in the course of this study allowed me to explicate the socio-technological relationship between the internet and organizational practitioners implicated in the performance of social technology mediation; ultimately connecting the theoretical concepts guiding my observations. These observations illustrate that the socially mediated implications of the internet correlate to the nature of the internet practice commensurate to the nature of the practitioner’s role in the organization. In the context of Na-Me-Res, this means that a disruption in the technological resources supporting the organization (the internet) is necessarily reflected in the social relationships (staff practices) implicated in the use of that resource. This relationship describes how the enabling and constraining affordances of the internet are expressed through the
overall capabilities of the organization. The positive influence of technologies cannot be
experienced in a vacuum, or in the absence of its potentially negative consequences. Na-Me-
Res’s Emergency Shelter provides a topical example through its utilization of the SMIS intake
management system. The internet practice in question is implicated in the domain of an
organizational sub-group and tied to the oversight of an external stakeholder. In the event of
internet service disruption, the outcomes for clients and residents must be reconciled both by the
operational necessity of the internet practice, and by the range of social relationships implicated
by each of the technology practitioners. In this case, every staff member who utilizes the
technology effects a range of relationships with shelter residents and other staff. The technology
itself allows for the reconciliation of incoming residents. In its absence, staff would be unable to
ensure secure intake of new residents, with resources being redistributed to the performance of
manual admissions. The perception of internet essentiality in this context is critical.

5.1.1 Concluding Thoughts on Findings

My observations illuminate how operational and program area staff tend to perceive the extent of
Na-Me-Res’s organizational dependency on the internet in different ways. I attribute this
phenomenon to differences in the scope of organizational relationships each participant perceives
as implicated by their role in the organization.

Socially mediated technology outcomes reflect a continuum of socio-technological practices. I
believe it is important to understand this when interpreting the more technologically
deterministic observations described in my findings (eg. where staff feel constrained by
technology). My observations indicate that within this practice continuum exists a range of
socially and technologically co-determinant relationships between practitioners and technology,
with an equally diverse potential for those relationships to be more socially, or more
technologically determinant. While social technology mediation implies that no relationship within the continuum can be entirely free of technological influence, it does not preclude the abilities of social structures to adapt to changes in technology resource availability. Indeed, social adaptation is implied in the ways that organizations are able to effect change in response to the adoption of new technologies. Rather than question whether Na-Me-Res can adapt to the loss of a technology resource, this concept instead asks what the effects of adaptation might look like.

Agency is a central concept in my thesis, both organizationally and individually. The systems model I have employed explicates how the agency of the organization exists both as a product of motivated individuals, and as a structuring force that mediates the practices and behaviours of those individuals in turn. At the individual level of practice, staff members were observed to exercise a significant degree of personal agency in their technology practices, reflected in their perceptions towards the internet as an enabling influence. Alternately, in larger workgroups the technology practices tend to be shared amongst increasing numbers of practitioners and stakeholders, lessening one’s ability to express individual agency through technology practice. I conclude that the correlating perceptions towards the internet’s constraining influence in this context emerges from the broader scope of expectations implicated by group and organization wide technology practices.

Finally, my preliminary taxonomy for describing the essentiality of the internet in Na-Me-Res’s operations attempted to reconcile this concept against the availability of offline alternatives to support implicated practices. Indeed, the availability of offline resources to support practices that are otherwise patterned on access to the internet emerges as a salient consideration when reflecting on the essential role of the technology. Where absent offline alternatives, the internet is regarded as a critical need. Similarly, where adoption of offline resources would result in
significant operational restructuring, the internet is again regarded as critical. Subsequent analysis and reflection on my data revealed a gap when attempting to reconcile this concept against the indirect, or mediating influence of the internet in Na-Me-Res’s organizational practices. On its own, this concept did not fully explain how internet practices can indirectly inform the experiences of individuals regardless of the availability of non internet based alternatives to support the practice in question. From here, it became apparent that the essentiality of the internet must also be considered in terms of the range of social relationships implicated by the practitioner(s) role, ultimately synthesizing the socio-technological underpinnings of the phenomenon.

5.1.2 Reflections on the “Bigger Picture” of Internet Access Rights

Framing the internet as an essential, socially mediated resource implicates a range of philosophical and ethical considerations into topical narratives focused on the technology needs of communities. The tension that emerges when we attempt to balance the prerogatives of the individual against collective needs is exacerbated when framing the internet as an abiotic resource in the context of organizations who provide for the basic needs of vulnerable and marginalized populations. The intractability of neo-liberal rhetoric regarding the internet’s role in people’s lives intersects with some of the deeper reflections emerging from my study, namely those relating to the ways in which Na-Me-Res might adapt to internet service disruptions of varying scope. My observations compel one to consider the extent to which organizational adaptation in the face of technological disruption might impact service levels, as well as the abilities of Na-Me-Res’s dependent community to absorb those disruptions. Against this backdrop, neo-liberal provisions for exercising total self determinism with a view to “staking one’s claim” in society fall short (Raymond, 2000, p. 25). Conventional attitudes towards
internet access are almost entirely curated by a free market ethos, and have conflated the affordances of the technology with the pursuit of personal luxury (Cerf, 2012; Takala, 2015). The socially mediated implications of the internet for the living experiences of Na-Me-Res’s dependent community undermines those assumptions, challenging neo-liberal foreclosure of social welfare approaches towards broader technology needs.

5.2 Limitations

The localized, situated nature of this research implicates a number of limitations inherent to a qualitative study undertaken by a single researcher. Key limitations emerge from the nature of the data collected via the semi-structured interviews. The localized, subjective nature of this data necessarily limits its generalizability outside of the perceptual and practice domains of the participants themselves. My participant selection criteria attempted to reconcile a range of perceptions across Na-Me-Res’s core service areas, including senior managers and client/resident program participants. The limited time and resources available to me precluded my engaging non-managerial staff; potentially prioritizing the perceptions of management over frontline staff. In the case of non-managerial staff, lingering questions remain as to their rationales for adopting personal internet practices in their roles, whose work might be unnoticed in organizational narratives, and how these staff members may perceive the potential for critical service disruption in the absence of internet access.

The intra-organizational focus of the study precludes a complete reconciliation of organizational perceptions towards internet essentiality. In this case, my inability to ascertain/glean/interview the external stakeholders implicated in Na-Me-Res’s compliance practices limits the practical scope of these interpretations with regard to the service disruptions that could emerge from the organization’s use of third party applications. My study was undertaken over the course of two
months at Na-Me-Res, limiting my ability to reconcile the adaptation of the organization to the emergence of new technologies over time. Interpreting changes to Na-Me-Res’s services and programming model over time as beneficial to clients and residents implies a commensurate increase in their own levels of satisfaction. These assumptions may be problematic in the absence of historiographical records illuminating similar perceptions of service efficacy, and may risk normalizing present day experiences.

The intentionalities and structural design of 3rd party technology systems have the potential to reflect socio-cultural narratives which may be antithetical towards the interests of Na-Me-Res’s core constituency. Subsequent questions that have emerged from my study relate to the ways in which the design of these systems were negotiated, and how those designs might be implicated in the constraining effects felt by practitioners.

Finally, my model for explicating social technology mediation emerged in the data analysis stage of my study. This limited my ability to test the hypothesis with a refined set of operationalized variables. As it stands, the theory is based on interviews with a limited range of practitioners situated at the initial “transmission” point of the technology practice. Future investigations of this theory would necessarily include a range of internet practice types, and involve practitioners implicated throughout the practice chain with a view to ascertaining a broader range of mediated outcomes.

5.2.1 Validity

From the outset, my intention was to employ an investigative framework that was well suited to reconciling my observations with the constructivist concepts undergirding my research question. Understanding that I would be approaching the performance of social reality armed with the
assumptions that technological and social phenomenon co-constitute one another, are not mutually exclusive, and can be explicitly and implicitly expressed through behaviour, I nonetheless attempted to reconcile the objective implications of my theoretical concepts in designing my study. I also understood that I would be approaching this study from the perspective of an acculturated community member, which provided me with the tacit skill set to interpret meaningful data in ways that might not be apparent to a non-Aboriginal researcher. My interpretations of the socially mediated implications of Na-Me-Res’s internet practices were subsequently grounded in a reflexive paradigm that acknowledged:

1. That my role as a researcher was mediated by my own history as an Aboriginal person
2. That my access to Na-Me-Res owed, in part, to my own history in accessing its services
3. That in designing my interview questions I was necessarily informing the reality I was interpreting
4. That I informed change in my study participants by engaging with them on the topic of mediated technology practices

Employing this reflexive approach in the articulation, design, and subsequent deployment of my study allowed me to delineate between subjectively and objectively grounded observations. I believe that the insight gleaned towards the intrinsic socio-technological expression of internet use through organizational practice at Na-Me-Res attests to my success in this regard.

5.2.2 Generalizability of Findings

The question of generalizability must be approached in two different contexts, the first as it relates to the essentiality of the internet in Na-Me-Res’s operations, and the second as it relates to the expression of the internet through socially mediated technology practices. The stated
limitations of my study identify a limited range of data collected with a view to correlating the potential for service disruptions implicated by the technologies employed in external stakeholder relationships. In this context, my study makes no attempt to reconcile Na-Me-Res’s experience with technology dependency against the organizational practices of other service agencies.

Explicating the organization’s use of the internet as a socially mediated technology resource draws parallels between the expression of this phenomenon in Na-Me-Res, and its likely performance in other dynamic service organizations. As a theoretical framework, systems theory has been utilized in organizational studies with a view to modeling the structuring effects of internal social patterns. It is not unreasonable to predict that the interplay of human and technological resources in other service organizations would follow similar patterns to those observed at Na-Me-Res, presenting an opportunity for a more focused examination of the socially mediated effects of internet access. Investigating the outcomes of social technology mediation amongst a range of service organizations with this framework may yield meaningful data in support of broader policy outcomes.

5.3 Final Thoughts

The trajectory of my research has been shaped by a desire to contribute to technology policy discussions where access to the internet plays a key role. Democratic communications rights speak to the legitimacy of a civil and just society, and recent CRTC hearings regarding the basic internet needs of Canadians may provide the opportunity for concretizing that precept as a cornerstone of national technology policy narratives. Disentangling technology discussions at the federal level illuminates the extent to which neo-liberal ideology underpins the political aesthetic of national policymakers. Redressing these entrenched sentiments will require a reframing of Canada’s technology policy narrative from one that favours private sector interests, to one that
counter balances those interests with the prerogatives of the broader public. If we accept that the internet informs broader social values as a shared resource, it is incumbent upon us to consider the degree to which the technology is transforming the ways citizens are able to access essential services. Situating the internet as a socially mediated technology resource in that regard, one that is implicated in people’s lives beyond the practice boundaries of individual users, may provide the leverage required to counter the near total framing of internet policy discussions as a “consumer” issue.

Despite the CRTC’s promising overtures, I believe that the impetus for meaningful technology policy outcomes lies within cities. Globalization has not only reshaped the international stage, it has informed the internal governance practices of entire nations (Castells & Cardoso, 2005). The technology sector deregulation observed at the national level must be understood in the context of the shifting priorities of nation states implicated by the emergence of digitally networked economies (Stevenson, 2009; Warschauer, 2003). The trend towards urbanization, the localization of knowledge and “creative” human capital in cities, and the accompanying self determinism of urban centres has afforded local policymakers with a degree of influence on national and international stages (Florida, 2004; Hoppers & Dalm, 2005). Any push for progressive public technology policy has intrinsically localized implications.

For these reasons, I believe that advocacy efforts at the municipal level of governance have the best chances of succeeding where initiatives at the provincial and national levels have fallen short. The City of Toronto, for example, has the legislative authority to civically protect access to the internet, the power to cultivate supporting revenue streams, and a history of pursuing socially just policy initiatives (The City of Toronto Act, 2006; Zizys, Bonnell, & Kosny, 2004). While urban centres have an opportunity to fill the technology rights policy void present at upper levels
of government, this does not obviate the responsibilities of provincial or federal policymakers in curating the technology interests of non-urban and remote communities. The Canadian experience, in particular, illuminates how the auspices of the private sector have failed to comprehensively remediate inequitable access in remote regions deemed unprofitable. The Canadian experience also demonstrates how the public policy initiatives that emerge in cities, such as publically subsidized healthcare, can provoke widespread adoption; first amongst collections of municipalities, then across provinces, and finally synthesizing themselves in progressive national public policy.

Public consternation following the whole and partial selloff of federal and provincial assets illuminates a persistent sentiment towards protecting the resources we deem vital to the collective good. Despite the hesitancy of policymakers to intervene in the internet marketplace by civically protecting the technology interests of Canadians, there remains an opportunity to provoke progressive dialogue by framing the role of the technology in sustaining collective interests. Explicating the ways that our daily activities as consumers, students, patients or commuters are indirectly shaped by the internet practices of service providers may provide enough momentum in that regard.
Bibliography


Athabasca University.


Appendix 1 - Ethics Consent

PROTOCOL REFERENCE # 30953

January 7, 2015

Dr. Leslie Shade
FAC OF INFORMATION STUDIES

Mr. Michel Mersereau
FAC OF INFORMATION STUDIES

Dear Dr. Shade and Mr. Michel Mersereau,

Re: Your research protocol entitled, "The Abiotic internet - Internet mediation through organizational practice at Na-Me-Res"

ETHICS APPROVAL

Original Approval Date: January 7, 2015
Expiry Date: January 6, 2016
Continuing Review Level: 3

We are writing to advise you that the Social Sciences, Humanities, and Education Research Ethics Board (REB) has granted approval to the above-named research protocol, for a period of one year. Ongoing research under this protocol must be renewed prior to the expiry date.

Any changes to the approved protocol or consent materials must be reviewed and approved through the amendment process prior to its implementation. Any adverse or unanticipated events in the research should be reported to the Office of Research Ethics as soon as possible.

Please ensure that you submit an Annual Renewal Form or a Study Completion Report 15 to 30 days prior to the expiry date of your current ethics approval. Note that annual renewals for studies cannot be accepted more than 30 days prior to the date of expiry.

If your research is funded by a third party, please contact the assigned Research Funding Officer in Research Services to ensure that your funds are released.

Best wishes for the successful completion of your research.

Yours sincerely,

Sarah Wakefield, Ph.D.
REB Chair

Dean Sharpe
REB Manager
INTERVIEW SCRIPTS

1 - Pre Interview Script

• Thanks for taking the time to speak with me. My name is Michel, and I will be asking you some questions about the internet. I’ll also ask you help me fill in this relational diagram. The purpose of the questions and the diagram is to help me get a sense of how you think the internet “fits” into your life. There are no right or wrong answers to the questions, and you are free to talk as much or as little as you want. Let me know if there is anything you want me to clarify or repeat.
  o Shelter residents: You will be compensated for your time with a pre paid debit card in the amount of $100 at the conclusion of the interview. If you choose to withdraw at any point during the interview, or up to the final publication of the study, and you will still receive your compensation with no penalty.

2 - Consent Script

• Before we begin, I want to go over your right to privacy and anonymity throughout this project, both in our time together and afterwards. I’ll need your written/verbal consent to proceed, and I’ll be taking every reasonable measure to protect your privacy. This means that any personally identifiable information you provide will be stored in a password encrypted format and kept secure, and not made public in any way, and I will not share your information with anyone. It’s important that you feel comfortable at all times, and that your wishes are respected. If you decide you do not want to continue, you can withdraw your consent at any time during this interview or up to the final publication of the results. After the study has been published, it will be nearly impossible to withdraw your information. I will also ask if you are comfortable with me audio recording our interview. You may choose to not have the session recorded. The audio recording is to help me transcribe our conversation, and once that’s been completed, it will be destroyed.

3 - Interview Script

• Are you from the Toronto area?
• Tell me about your history/role with Na-Me-Res?
• Did you have any experience using the internet before coming to Na-Me-Res?
  o If yes: Can you tell me about those experiences?
• Resident:
  o What role does Na-Me-Res play in your life?
  o What are the services you find most helpful?
  ▪ As best as you can, tell me what you think the most important thing you’ve gotten out of your time at Na-Me-Res
Have you had the chance to use the internet at Na-Me-Res?
- If yes: What types of things do you use it for?
Do you think the internet helps Na-Me-Res meet the needs of the people it helps?
- If yes: Tell me about the ways you think the internet helps Na-Me-Res
  - What do you think would be the easiest way for people to learn how to use the internet?
  - What would be the easiest way to “get online?”

Employee:
- How essential are the services offered by Na-Me-Res in the lives of residents?
- Describe your role in facilitating those services
- Prior to working at Na-Me-Res, did you have any experience in social/community services?
  - If yes: Please elaborate
- How essential would you say the internet is in enabling you to do your job at Na-Me-Res?
  - Can you distinguish between the internet based operational technologies NMR uses, and your personal problem solving or information seeking behaviours?
  - Is it irrelevant, constraining, or supportive?
  - Has your use of internet technologies expanded or declined in your time here?
    - If expanded:
      - How have your capabilities to perform your duties been affected?
      - How would those capabilities be affected if internet service was unavailable?
- Can you tell me about some of the ways you yourself use the internet to help you with your activities at Na-Me-Res?
  - How would you think those capabilities might be affected if internet service was unavailable?
- Can you think of how the internet enables your co-workers to do their jobs?
  - How about external stakeholders, like the government, vendors, or suppliers etc...?
- Do you rely only on computers or other internet devices provided for you by Na-Me-Res so help you with your duties?
  - If no: Can you describe some of the devices you’ve used that were not provided by Na-Me-Res?
- Think about how the internet affects your daily life. Would you say it’s something you need, don’t need, or haven’t really thought about in that way?
- How would you describe the level of internet technology use by clients?
  - Is the use of internet technologies in any way a requirement for accessing services?
4 - Keywords Script

- Please circle any of the words that best describe how you feel about the role of the internet in your life. There are no right or wrong responses, this is just to get a sense of how you feel the internet “fits” into your activities.

5 - Relational Diagram Script

- This is the relational diagram I mentioned earlier. The spheres represent the many relations that could exist between your, and someone else’s use of the internet for various activities. To start, we’ll place you, and the internet activities you mentioned at the centre. Let me know if you feel there’s something we’ve missed.
- If identified: We’ll place the internet activities of the people you work with directly onto the adjoining sphere.