

COLLECTIVE MINDFULNESS WITHIN A FOOD SECURITY NON-PROFIT ORGANIZATION  
DURING THE COVID-19 CRISIS: A CASE STUDY

by

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## Abstract

This study focussed on how collective mindfulness contributes to resilience in non-profit organizations coping with crises, such as the COVID-19 pandemic. Taking a Vancouver B.C. non-profit organization's emergency food security response as a case study, it examines the role that mindfulness plays in non-profit organizations' adaptations to the COVID-19 pandemic through the lens of complexity science. Specifically, it identifies emergent mindfulness processes and their effects on organizational resilience within non-profit organizations. This qualitative research employs a responsive, phronetic-iterative approach to interviewing and analysis that is grounded in a post-structuralist paradigm; attempts to advance a complexity-based theory of collective mindfulness; and furthers complexity science as a comprehensive interpretive framework. Findings demonstrate that collective mindfulness may be enacted through interdependent processes of dynamic reflexivity, responsive self-organization, and flexible co-evolution, through which resilience may emerge.

## Lay Summary

This research explored if and how collective mindfulness – an adaptive practice within organizations that operate in high-risk environments – is relevant to non-profit organizations during crises. While collective mindfulness has previously been studied in organizations that face extreme risks from failure, such as nuclear power plants and commercial airliners, non-profit organizations are a new and important context for this research. I conducted a case study with a Vancouver, B.C. food security non-profit that provided food access programs during the COVID-19 pandemic. I conducted 15 interviews with staff, volunteers, and partners to investigate how the organization adapted to the challenges and opportunities of the pandemic, with a goal to understand changes in organizational structure, roles, relationships, and responsibilities through a systems lens (focused on how different components interact holistically). I found that the organization enacted collective mindfulness in their crisis response through reflexivity, self-organization, and co-evolution, which enhanced their resilience systemically.

## Preface

This thesis is an original intellectual product of the author, M. Hudson. The data collection reported in Chapter 3 was covered by The University of British Columbia's Behavioural Research Ethics Board Certificate number H21-00560.

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*To Zara*

*In your light I learn how to love.  
In your beauty, how to make poems.*

*- Rumi*

# Chapter 1: Introduction

## 1.1 Background

Collective mindfulness, the process through which organizations capture discriminatory details about emerging threats and cultivate the ability to rapidly respond to them, is correlated with beneficial organizational outcomes in challenging contexts “characterized by complexity, dynamism, and error intolerance” (Sutcliffe et al., 2016, p. 56; Weick et al., 1999; Weick & Sutcliffe, 2007). Given that crisis situations frequently embody these characteristics, and are further complicated by unexpectedness and uncertainty, one would expect crises to be a fertile ground for understanding collective mindfulness in action. However, this line of research has not yet been well developed within the organizational behavior and organizational psychology literature. In particular, while collective mindfulness has been studied in organizations facing difficult contexts, it has not been explicitly studied in non-profit organizations responding to crises, which are defined as “low probability/high consequence events that threaten the most fundamental goals of an organization” (Weick, 1988, p. 305).

This is a significant gap in research because non-profit organizations, from grassroots community groups to international NGOs, are often the first line of response in the face of crises. From sharing locally grown produce with urban residents plagued by food insecurity during the COVID-19 pandemic, to providing life-saving humanitarian aid to people displaced by war, non-profit organizations operate on the frontlines of care and essential service provision in response to local and global emergencies. Errors in judgement, delays, and disruptions in service provision detrimentally affect the vulnerable populations who rely on non-profits for essential support – populations that often experience multiple marginalizations and disadvantages through an intersectional lens. Given this, non-profit organizations (and the populations they serve) stand to

benefit immensely from the incorporation of collective mindfulness into their action repertoire for resilient crisis response.

This research constitutes a starting place from which to understand the role of collective mindfulness in non-profit organizations' responses to crises. It adopts the COVID-19 pandemic as the crisis context and analyses qualitative interview data from a grassroots food security non-profit organization in Vancouver, BC to investigate how collective mindfulness contributes to organizational resilience. Organizational resilience refers to “an organization’s ability to anticipate potential threats, to cope effectively with adverse events, and to adapt to changing conditions,” and is comprised of a range of organizational capacities that interact on multiple scales over time (Duchek, 2020, p. 220). In adopting this approach, this research advances understanding of the nature of collective mindfulness within non-profit organizations, as well as identifies mechanism(s) through which collective mindfulness contributes to organizational resilience in crisis situations. Ultimately, this research proposes a complexity-based theory of collective mindfulness for non-profit crisis response and furthers complexity science as a comprehensive qualitative methodology.

## 1.2: Crisis Context

Since the COVID-19 pandemic began, social non-profit organizations in Vancouver, B.C. have experienced heightened needs in the communities they serve, as well as significant barriers to respond to such needs due to operational, financial and workforce challenges created by the pandemic (City of Vancouver, 2020). Disruption to and increased demand for services, rising expenses, funding shortfalls, and issues with staff retention and mental health are among the most prevalent obstacles local non-profits have encountered (City of Vancouver, 2020). Despite these challenges, many non-profit organizations have adapted to local demand for basic needs

such as meals and groceries and respond to community vulnerabilities such as rising food insecurity (City of Vancouver, 2020). In this context, adaptation refers to “a system’s capacity to adjust to changes in the environment without endangering its essential organizational features” (Chiva et al., 2014, p. 691) and represents a form of long-term learning that increases an organization’s knowledge base; helps avoid or minimize the adverse impacts of crisis; and involves adjusting behavior in pursuit of organizational advancement (Duchek, 2020).

### 1.3: Food Security Challenges

In the first year of the pandemic, large urban centers nationwide experienced extreme upswings in demand for food access services, such as those provided by food banks; during this time, client visits more than doubled in 28% of food banks in large urban centers (Food Banks Canada, 2021b). Populations driving this trend included those experiencing employment loss or reduced employment, who identify as racialized, and who have dependent children (Food Banks Canada, 2021b). While shocking, this trend is not surprising, as vulnerable, minority, and marginalized populations - such as new immigrants, essential service and care workers, low-wage workers, single parents, the elderly, and those with disability - have been disproportionately affected by the negative health, social, and economic effects of the COVID-19 pandemic (City of Vancouver, 2020; Go & Konanur, 2021; Howard, 2020; Kantamneni, 2020; Social Sciences and Humanities Research Council of Canada, 2020). Furthermore, it is well documented that these are populations that many social non-profit organizations, such as those in the food security sector, predominantly serve (City of Vancouver, 2020). For example, nearly a quarter of food bank clients in BC relied on provincial disability support as a source of income in 2022, and disability support was the most commonly reported income source for food bank clients province-wide (Food Banks Canada, 2022).

As the COVID-19 pandemic persists in the context of rising costs of living and heightened food insecurity both locally and nationally, the need for innovation and adaptation within the non-profit sector remains high (Food Banks Canada, 2022). In British Columbia, food bank visits increased 31% between 2019-2022, demonstrating the significant and enduring impact that the pandemic and associated economic shifts have had on local food insecurity (Food Banks Canada, 2022). For local organizations with a food security mandate, such as food banks and other food access providers, the need for a resilient response to the COVID-19 crisis – as well as a mindful transition to provide sustainable post-pandemic services – continues to be integral to supporting society’s most vulnerable.

#### 1.4: Organizational Response

Little Mountain Neighbourhood House (LMNH) is one such organization. Located on the East Side of Vancouver, BC, LMNH provides a range of free and low-cost social services to the community, including settlement assistance, childcare, senior's outreach, and counselling. As a Greater Vancouver Food Bank Community Partner, Good Food Organization, and a United Way Food Hub, LMNH also provides nutritional supports through community kitchens, low-cost meals, harvest matchmaking, and food distribution. LMNH serves a population that is diverse in age, ability, race, ethnicity, and citizenship/residency status. In the face of the COVID-19 pandemic, however, much of this population has been united by heightened food insecurity (J. MacKinnon, personal communication, January 8<sup>th</sup>, 2021). For this reason, like many other local non-profits, LMNH has focused its programs and resources on emergency food support for those in need. When asked to describe the need in her community, Joanne Mackinnon, Community Engagement Coordinator at LMNH, shared that,



We are seeing an increase in the level of food insecurity in our community. More families, seniors, and individuals are in need of veggies and food support. At LMNH and with the support of our funding partners, we are addressing the needs through various programs. We are serving families who receive food bank contributions, families, and seniors who have identified a need; and our LMNH program participants. The LMNH Food Distribution Program [...] is designed to increase healthy food access and provide an equitable distribution of food as a community response to COVID-19. (J. MacKinnon, personal communication, January 8, 2021).

In responding to heightened community food insecurity, LMNH and other local non-profits have experienced unique operational, financial, and workforce challenges. According to research by the City of Vancouver (2020), operational challenges have included adapting food distribution procedures to comply with public health guidelines; inadequate staffing, space, delivery capacity, and supplies; funding shortfalls; and mid-to-long term unsustainability of the emergency food response. Financial barriers have included unmet annual fundraising goals; decreased donations due to supply chain shortages and lack of surplus; and concerns about the longevity of emergency funding programs. Workforce obstacles have included reduced volunteer activity and fatigue/burnout among staff, volunteers, and board members. Significantly, lack of volunteers was the biggest challenge faced by food banks across Canada in the early months of the pandemic (Food Banks Canada, 2021a). In this context, local charitable food providers urgently need “support in navigating back to fulfilling their original mandate and normal operations/programs, and planning for how to stay this course” in upcoming pandemic waves (City of Vancouver, 2020, p. 7).

As LMNH entered the second year of the pandemic at the time this research was conducted, community food needs remained high while ongoing access to essential funding was not a given. Since food security is dependent on food availability, economic and physical access, and utilization – as well as the stability of these factors over time – the COVID-19 pandemic posed multiple intersecting threats to food security on both household and community levels, such as supply chain disruptions, income loss, self-isolation periods, prolonged illness, and disability (European Commission - Food and Agriculture Organization of the United Nations Food Security Programme, 2008, p. 1). For this reason, LMNH prioritized emergency food distribution and dignified food access at the forefront of their COVID-19 pandemic response. LMNH also anticipated that food security, which “exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life” (Food and Agriculture Organization of the United Nations, 1996), would remain a focal point beyond the acute phase of their crisis response (J. MacKinnon, personal communication, January 8<sup>th</sup>, 2021).

### 1.5: Research Project Development

When I began my research in the spring and summer of 2021, LMNH was engaged in a process of reflection and strategic planning as it continued to respond to the pandemic-affected local food security landscape and envision a sustainable future for its community. This reflective process involved planning for an uncertain future in which COVID-19 and other crises, such as earthquakes and climate disruptions, were expected to continue to play a major role in both the organization's ability to function and the lives of the community members it serves. At this time, Joanne Mackinnon welcomed my proposal to develop a community based participatory-action style research project together. The shared goal of this research was to help LMNH identify successful aspects of their pandemic response and highlight areas for growth, while contributing

scholarly insight into the inner workings of non-profit organizations' responses to crises (see also Section 2.7 Research Gap).

Through speaking with fifteen personnel – executive leadership, managers, staff, volunteers, and community partners – over the course of several months, I learned that LMNH responded resiliently to heightened community food needs brought to light by the pandemic. In dialogue with interviewees, and through a phronetic-iterative approach to research, reflection, and reinterpretation grounded in complexity science, I discovered that collective mindfulness played a prominent role in their crisis response and identified several core interactive processes that enabled LMNH to act rapidly and cohesively in the face of major disruptions.

## Chapter 2: Literature Review

### 2.1: Defining Collective Mindfulness

Collective mindfulness, which is also often referred to as organizational mindfulness or mindful organizing, refers to the interactive processes through which an organization captures discriminatory detail about emerging threats and creates a capability to swiftly act in response to these details (Weick et al., 1999; Weick & Sutcliffe, 2007). It involves awareness, communication (Jordan et al., 2009; McKinney & Barker, 2005; Novak & Sellnow, 2009), enactment, sensemaking, and action, and is a defining attribute of organizations that tend to avoid crises despite functioning in high-stakes contexts (Novak & Sellnow, 2009; Weick & Sutcliffe, 2015). Collective mindfulness is created through the interaction of five core cognitive processes, which are: preoccupation with failure, reluctance to simplify interpretations, sensitivity to operations, commitment to resilience, and deference to expertise (sometimes referred to as flexible decision structures) (Sutcliffe, 2018; Weick et al., 1999) (see Table 1). Together, these processes operate socially to construct a “mindful infrastructure” (Weick et al., 1999) that enables organizations to dynamically detect and respond to unexpected events, which enhances their capacity to prevent, cope with, and learn adaptively from crises (Weick et al., 1999).

Table 1 - Collective Mindfulness Processes

<p><b>Collective Mindfulness Process</b></p>	<p><b>Description</b> <i>(adapted from Sutcliffe, 2018; Weick et al., 1999)</i></p>
<p>Preoccupation with Failure</p>	<p>Proactively analysing potential surprises and vulnerabilities in order to detect unusual system behaviors and prevent crises.</p>
<p>Reluctance to Simplify Interactions</p>	<p>Intentionally complexifying interpretations in order to avoid surprises, such as through generating alternative scenarios, identifying what is not known, and rejecting generalizations.</p>
<p>Sensitivity to Operations</p>	<p>Constructing a holistic awareness of operations in the moment through continuous attention and adaptation to real-time information, thus preventing latent issues from compounding into crises.</p>
<p>Commitment to Resilience</p>	<p>Continually enhancing individual and organizational abilities to flexibly cope with the unexpected and recover from mistakes.</p>
<p>Deference to Expertise</p>	<p>Prioritising individual ability over organizational hierarchy in order to expand the pool of skills and knowledge that may utilised to problem solve in the face of uncertainty.</p>

## 2.2: Methods

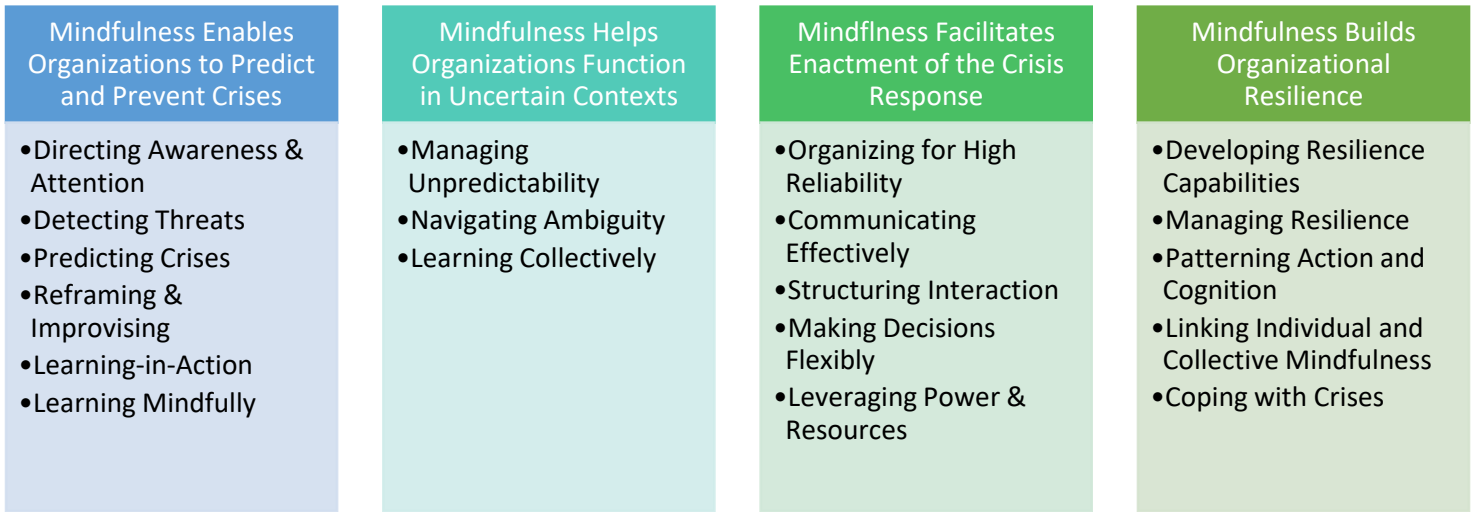
My literature review aimed to uncover and analyze the current state of knowledge about the intersection of collective mindfulness, non-profit organizations, and crisis, in order to ground my research in a holistic understanding of how these topics interact across scholarly disciplines. Since the terms collective mindfulness, organizational mindfulness, and mindful organizing tend to be used interchangeably in the literature, I incorporated all of these terms into my literature review and used them fluidly throughout my research.

To initiate my literature review, I conducted multiple sequential Boolean searches using UBC Library Summon Search, employing various combinations of the following keywords: either “collective mindfulness,” “mindful organizing,” or “organizational mindfulness”; and either “nonprofit\*” or “non-profit\*”; and either “crisis” or “crises.” However, this combination of search terms yielded extremely limited results, none of which proved to be of relevance to my research question. I then expanded the scope of my search as recommended by Foss (2015) by first replacing “non-profit\*”/ “non-profit\*” with “organization\*,” and then by removing “organization\*” from my search terms. With these modifications, my search yielded a significant number of high-quality results, so I did not broaden the scope of my search further. Analysis of the most relevant results generated through my literature search and targeted citation tracing formed the basis for this review.

In my review of the literature, I found that collective mindfulness contributes to organizations’ ability to respond resiliently to crises in four key ways: it enables organizations to predict and prevent crises; it helps organizations function in uncertain contexts; it facilitates enactment of the crisis response; and it builds organizational resilience. The processes and

practices that comprise these four functions are outlined in Figure 1 and described in the four sections of my review.

Figure 1 - Four Key Functions of Collective Mindfulness in Crises



## 2.3: Mindfulness Helps Organizations Predict and Prevent Crises

### 2.3.1: Directing Awareness & Attention

Collective mindfulness employs awareness and attention to predict crises and prevent catastrophes, helping organizations strengthen their anticipation capabilities for resilience (Duchek, 2020). Blind spots (Weick & Sutcliffe, 2015), collective blindness (Weick & Sutcliffe, 2015), failures of foresight (Turner, 1976), and ignorance to hazards and signals of danger (Perrow, 2011) are pitfalls in collective awareness that organizational mindfulness seeks to prevent. In directing organizational attention toward early identification of unanticipated events, organizational mindfulness encourages sensitivity to errors and accurate detection and interpretation of subtle cues of impending danger (Weick et al., 1999). Detecting errors proactively requires searching the environment for weak signals and symptoms of impending crisis, and identifying unexpected system behaviors as they arise (Sutcliffe, 2018; Sutcliffe & Vogus, 2014). In the absence of such behaviors, surprise can be considered a “predictable

outcome” (Eastburn & Boland, 2015, p. 176). Mindful organizations recognize that pre-emptively analysing surprises and threats facilitates learning and prevents oversimplification of underlying causes of the unexpected (Weick & Sutcliffe, 2015).

### 2.3.2: Detecting Threats

Since many small errors can add up to disaster (Mu & Butler, 2009), mindfulness requires organizations to be aware of the dynamics that underly identification or dismissal of emerging warning signs of opportunities and threats (Weick & Sutcliffe, 2015). Within organizations, strengthening shared capacity to identify threats and repair mistakes can generate more sustainable outcomes (Ndubisi et al., 2020). In complex multi-stakeholder contexts, such as megaprojects (Wang et al., 2021), organizations can strengthen their capacity for mindfulness by highlighting risks collectively identified by different stakeholders (Carlson, 2018). Collective mindfulness can also “cognitively and emotionally mitigate conflicting or competing logics” in these contexts (Wang et al., 2021).

### 2.3.3: Predicting Crises

Predictive aspects of organizational mindfulness develop the capacity to forecast future turns of events and proactively adapt to evolving challenges (Eastburn, 2018; Weick & Sutcliffe, 2015). While organizational mindfulness is not purely predictive, it does encourage ongoing reflection on the presence or absence of factors that enhance readiness for coping with future disruptions (Eastburn, 2018). Engaging in continuous reflective practices may inhibit crisis incubation and limit latent crisis potential (Seeger et al., 2003), given that organizations often fail to identify root causes of impending crises that grow, unnoticed, under the surface (Veil, 2011). In the face of compounding, systemic issues that amplify the effects of individual behaviors (Novak & Sellnow, 2009), such as the underreporting of errors (Baran, 2011) and environmental ambiguity (Eddy-Spicer, 2019), a reflective approach facilitates mindful discussion and



intervention (Eddy-Spicer, 2019) and drives present-moment situational understanding (Sutcliffe & Vogus, 2014), enhancing both collective alertness and awareness (Sutcliffe, 2018).

#### 2.3.4: Reframing and Improvising

Since mindfulness transcends the “interpretive boundaries of culture,” it opens the door to improvisation and inquiry that broaden the scope of what may be conceptualized as a threat or opportunity, engaging “imagination, intuition, hunches, and creativity” in the process (Nævestad, 2009, p. 134). Collective creativity plays an essential role in reflective reframing, an aspect of organizational mindfulness that involves continuous reinterpretation (Weick & Sutcliffe, 2015), questioning past experiences (Gärtner, 2011), and carefully considering contextual and environmental factors surrounding current and past events (Veil, 2011). To expand the scope of perception, organizational mindfulness employs reframing practices that generate multiple theoretical pasts and futures (Gebauer, 2013) through storytelling (Denning, 2011), scenario planning (Schoemaker, 1995), and role playing (Armstrong & Franke, 2001). Proactive reframing (Veil, 2011), and cultivating working environments that are equitable and accountable (Oeij et al., 2018), also contribute to reduced frequency, duration, and intensity of crises (Veil, 2011).

#### 2.3.5: Learning-in-Action

Practices that enable organizations to identify weaknesses in their mindfulness may drive actions that enhance both preparedness and prevention (Carlson, 2018). Proactive investments in problem solving may enhance organizational capacity to interpret early warning signs of crisis and improvise successfully when crisis situations occur (Gebauer, 2013). Such investments support a learning orientation to organizational mindfulness, in contrast to a change-based perspective in which organizations “sit back [...] then brace for impact” (Rerup, 2012, p. 17). A learning orientation assumes that future crises produce warning signs that may be detected in the

present, and proactively engages in activities that amplify and respond to such signals (Rerup, 2012). Given that allowing crises to develop can be costly, a learning orientation prioritizes ongoing cultivation of a supportive and inclusive organizational culture within which information flows freely – rather than one that simply waits, with its head in the sand, for the next big thing to go wrong (Rerup, 2012).

#### 2.3.6: Learning Mindfully

One example of a learning-orientation to organizational mindfulness can be found in the Mindful Learning Model (Veil, 2011), which shows how learning can buffer organizations from real and potential crises. Building on organizational learning theory, which has typically focused on post-crisis learning, the Mindful Learning Model highlights barriers to learning in the pre-crisis, or anticipation, stage (Veil, 2011). This model demonstrates that going through crises can alter organizations' perceptions of both crises and risks, and that developing awareness of obstacles to learning can interrupt patterns of mindlessness and over-dependence on past positive outcomes – two significant threats to organizational mindfulness and resilience (Veil, 2011). Ultimately, the Mindful Learning Model claims that while learning can take place before, during, and following crises, its beneficial effects are amplified in the pre-crisis stage because learning that happens before crisis strikes may prevent crisis from actually occurring. Thus, the organization may remain in the pre-crisis stage, actively seeking out and responding to future threats (Veil, 2011).

### 2.4: Mindfulness Helps Organizations Function in Uncertain Contexts

#### 2.4.1: Managing Unpredictability

Unpredictability characterizes most environments in which organizations function, and can be managed effectively through organizational mindfulness (Gebauer, 2013). Indeed, no organization is defect-free, and while disasters and successes may occur unpredictably, their

eventual occurrence is a given (Mu & Butler, 2009). Prevention, preparedness, and team learning are three pathways through which organizational mindfulness builds capacity to function within and respond to unpredictability. Preventing crises begins with intra-organizational actions (Mykkanen & Vos, 2017) that cultivate context-dependent degrees of confidence and wariness (Gunia et al., 2015), and employ a systemic lens to risks, mishaps, and growth opportunities (Mu & Butler, 2009). Such an approach may include risk-assessment and preparedness training (Mykkanen & Vos, 2017). Given that both crises and opportunities may emerge unforeseen, managers should be conscious that long-term stability is elusive (Gebauer, 2013), a perspective that may be protective against the disabling effects of crises (Mu & Butler, 2009). In light of this, effective management must acknowledge that despite the best laid plans, successful crisis response is foundational to organizational survival, requiring both an enduring commitment to resilience (a core organizational mindfulness principle) and an ability to highlight positive outcomes when they occur (Mu & Butler, 2009).

#### 2.4.2: Navigating Ambiguity

While ambiguity is inevitable, it is generative only to the extent that it is leveraged to test default anticipatory schema (Eddy-Spicer, 2019), routines, and patterns of action to develop a holistic view of a situation (Sutcliffe & Vogus, 2014). In organizations, having a practical understanding of operations, such as through noticing errors and opportunities on the “front lines,” can help define ambiguous situations, de-escalate issues and prevent disruptions from evolving systemically (Mu & Butler, 2009, p. 31; Shultze & Orlikowski, 2004). Such knowledge can prepare organizations to identify “latent failures,” “hazard[s]”, and “loopholes in the systems’ defenses,” making it possible to implement minor changes to prevent escalation into crisis (Reason, 2016; Sutcliffe & Vogus, 2014, p. 68). Effectively interpreting practical and front-line knowledge entails “differentiation of perceptions and reframing of conceptions” and

seizing upon “new imperatives for noticing” to reduce ambiguity (Sutcliffe, 2018, p. 68; Weick, 2011). In doing so, organizations are able to process information with greater discernment and innovation, deepen their ability to detect small details of potentially large importance, and enhance attentional continuity and dynamism, all of which strengthen perceptive and preparatory dimensions of organizational mindfulness (Sutcliffe, 2018; Weick & Sutcliffe, 2006).

### 2.4.3: Learning Collectively

Team learning can help organizations develop essential skills and capabilities for solving problems and responding to crises in the context of uncertainty. Team learning is “an ongoing process of reflection and action, characterized by asking questions, seeking feed- back, experimenting, reflecting on results, and discussing errors or unexpected outcomes of actions” (Edmondson, 1999, p. 353). Teams learn emergently (Bell et al., 2012) through negotiation and dialogue to build collaborative knowledge (Bell et al., 2012) and mindfulness (Veil, 2011). Team learning is an important component of mindful infrastructure, which also includes “team psychological safety,” “team voice,” and “complexity leadership” (Oeij et al., 2018, p. 450). Mindful infrastructure supports teams to predict and cope with critical situations, expands the scope of learning opportunities, channels individual ideas and opinions effectively, and scaffolds creativity and innovation (Oeij et al., 2018). Multiple studies highlight a positive association between core dimensions of mindful infrastructure (such as team mindfulness, team psychological safety, and team learning behavior) and favourable team perceptions of project outcomes (Oeij et al., 2016, 2018).

## 2.5: Mindfulness Facilitates Enactment of the Crisis Response

### 2.5.1: Organizing for High Reliability

While mindful infrastructure is a characteristic of the organization, mindfulness is something an organization does (Oeij et al., 2018; Reneclé et al., 2020). Mindful organizing

involves communication (Jordan et al., 2009; McKinney & Barker, 2005; Novak & Sellnow, 2009), enactment, sensemaking, and action, and is a defining attribute of organizations that tend to avoid crises despite functioning in high-stakes contexts (Novak & Sellnow, 2009; Weick & Sutcliffe, 2015). Such organizations, which are often called “high reliability organizations,” operate in high-stakes environments in which their “next failure to meet aspirations could also be their last-ever action” (Weick & Sutcliffe, 2006, p. 515). Due to the unique barriers to learning that high-reliability organizations face, such organizations provide particularly fertile ground for observing mindful organizing at work (Weick & Sutcliffe, 2006).

#### 2.5.2: Communicating Effectively

In high-reliability organizations, as well as other organizations that seek to organize mindfully, participatory communications are vital to prevent risks from evolving into crises (Novak & Sellnow, 2009). Participatory communication practices both generate and embody mindfulness, and therefore provide a foundation for collaboratively creating and re-defining mindful workplace communication norms (Novak & Sellnow, 2009). Within organizations, communication is enacted through interactive routines that may be continuous or arise spontaneously in response to the unexpected (Jordan et al., 2009). Interactively, mindfulness is generated through practices that invite questioning of habits and expectations, and foreground contextual factors that support or hinder interrelation (Jordan et al., 2009). Such routines are considered “interactive” because they may be enacted in the context of groups, teams, or pairs (Jordan et al., 2009).

#### 2.5.3: Structuring Interaction

Collective construction of interactive routines may take place in a range of contexts to enhance threat identification and coping abilities (Jordan et al., 2009). Ultimately, interactive routines seek to excavate the unexpected, provoke mindfulness, and foster “reflection-in-action”

(Jordan et al., 2009, p. 468). When interactive routines are “heedfully interrelate[ed]” (Weick & Roberts, 1993) into organizational processes, they construct networks of interrelating that enhance organizational capacity to identify and respond to unanticipated events (Jordan et al., 2009) – in essence, the capacity for mindful organizing itself. Flexible decision-making structures, resilience, and sustaining complexity in interpretations also help mindful organizations avoid disastrous failures in communication through centering context and highlighting limitations (Angeli & Norwood, 2017). Given these interrelated factors, it is unsurprising that collective mindfulness broadly depends upon communication.

#### 2.5.4: Making Decisions Flexibly

Flexible decision-making structures generate strong informal networks, engage participatory communication (Novak & Sellnow, 2009), and rely upon collective sensemaking (Gebauer, 2013) to proactively respond to threats and prevent escalation (Renecle et al., 2020). Flexible decision-making structures (which reflect deference to expertise) decouple status from decision-making power, “subordinat[ing]” rank to expertise and allowing problems to be tackled by the person(s) best suited to the job (Sutcliffe, 2018; Sutcliffe & Vogus, 2014, p. 412). Flexibility in the organizational system frees up resources to cope with uncertainty and ambiguity with greater resilience than would be possible within hierarchical decision-making regimes (Sutcliffe & Vogus, 2014; Weick et al., 1999). Indeed, it is common for organizations to structure decision-making hierarchically by default, concentrating decision-making power in the hands of significant decision makers who oversee multiple decisions (Weick et al., 1999). Organizational mindfulness, on the other hand, privileges individual knowledge, skill, and experience, seeking to fine-tune the fit between problems and the people who solve them (Sutcliffe & Vogus, 2014)(Sutcliffe & Vogus, 2014). Leveling the decision-making field also

allows organizations to cope with systemic interdependence and collectively detect, share, and respond to threats in real-time (Renecle et al., 2020).

#### 2.5.5: Leveraging Power & Resources

In multi-stakeholder and intra-organizational contexts, issues of power and access to resources complicate organizational mindfulness in practice. Power plays a key role in acting mindfully, and while organizational mindfulness is often positively framed through a lens of action and cognition, it is not a given that all members of an organization will behave altruistically (Gärtner, 2011). Information imbalances and opportunism highlight dynamics of power, domination, and conflict that shape action and inaction within the organizational arena (Gärtner, 2011). In some circumstances, “leveraging power relations” can be considered “constitutive” for enacting mindfulness as alerting decision-makers to small cues of potential threat requires at least some degree of empowerment (Gärtner, 2011, p. 260). When confronted with the unexpected, access to resources and support comports power and may be leveraged to improvise or modify behavioral routines, which is imperative to mindfulness (Homberg et al., 2019). In this light, investigating how resources are used, distributed, or withheld may represent a first step towards understanding how power shapes and constrains mindfulness within organizations (Homberg et al., 2019; Weick et al., 1999).

### 2.6: Mindfulness Builds Organizational Resilience

#### 2.6.1: Developing Resilience Capabilities

Within organizations, resilience capabilities are built through diversified action repertoires that harness collective expertise and generate the ability to flexibly manage surprises in stride, which together may help contain unexpected events as they unfold (Sutcliffe & Vogus, 2014; Weick et al., 1999). Organizations can develop such robust action repertoires through education, practice, trial runs, reflecting upon critical feedback, diversifying roles and

responsibilities, and nurturing informal networks (Weick et al., 1999); cultivating a teamwork culture (Mu & Butler, 2009); sharing knowledge, memories, and expertise (Vogus, 2004); and regularly discussing events after they have occurred (Sutcliffe & Vogus, 2014).

### 2.6.2: Managing Resilience

Management can act as a bridge between organizational mindfulness and the unexpected (Eastburn, 2018) through establishing norms and socialization practices that nurture commitment to resilience and deference to expertise (Mu & Butler, 2009), which are core organizational mindfulness principles (Weick et al., 1999). For example, managers and other team members may share “war stories” about how crises and near disasters have been overcome in the past, and communicate expectations that normalize going above and beyond defined roles to support one another (Mu & Butler, 2009, p. 43). Such practices, which may be especially useful for new team members coping with crises (Vogus, 2004), can be empowering to individuals and improve team dynamics and performance (Ndubisi et al., 2020), as observed in high performance nursing teams in which someone always “step[s] up” (Vogus, 2004, p. 101). Team members’ willingness to “step up” reflects robust ad-hoc networks and extensive knowledge of individuals’ domains of expertise (Vogus, 2004).

### 2.6.3: Patterning Action and Cognition

From the perspective of the organization, institutionalized norms and patterns of action regulate both interactive routines and individuals’ mindful practices, and thus drive organizational mindfulness (Jordan et al., 2009). Such patterned behaviors and expectations may “paradoxically seek to institutionalize surprises and instability rather than stable structures” as a means of generating coping resources, normalizing ambiguity and change, and making mindfulness a priority (Jordan et al., 2009, p. 469). For this reason, mindful organizations rely on



variable activities and consistent sense-making processes to detect, prevent, and cope with crises (Weick et al., 1999). As Weick and colleagues explain:

Unexpected events require revisions of assessments, plans, and tactics but this revision is possible only because processes of “understanding,” “evidence collection,” “detection,” “evaluation,” and “revising” themselves remain stable in the face of new events. These stable cognitive processes do the “detecting,” the variable patterns of activity do the “adapting to events which require revision.” (Weick et al., 1999, p. 35)

Variation in activity is essential to mindful organizing as “unvarying procedures can’t handle what they didn’t anticipate”; in other words, rigid action repertoires break down when confronted with the unexpected (Weick et al., 1999, p. 35). For this reason, mindful organizing relies upon “stable processes of cognition directed at varying processes of production that uncover and correct unintended consequences” (Weick et al., 1999, p. 35). Mindful organizations integrate diverse sources of insight, alternative practices and perspectives, and nuanced and complex interpretations to harness “requisite variety” (Ashby, 1956) and proactively seek out and manage the unexpected (Sutcliffe & Vogus, 2014). In doing so, mindful organizations embody a “reluctance to simplify” that facilitates adaptive enactment, re-enactment, adjustment, and re-adjustment of activities and routines, as well as mindful awareness of the information generated through such variations in action (Sutcliffe & Vogus, 2014; Weick et al., 1999).

#### 2.6.4 Linking Individual and Collective Mindfulness

Organizations that operate in rapidly evolving contexts develop capabilities for ongoing adaptation through diversifying action repertoires to cope with unanticipated challenges (Gärtner, 2011), which may be enhanced by individual-level mindfulness. Collegial relationships can support the practice of individual mindfulness (Novak & Sellnow, 2009), especially when

individual agency to address emergent issues is upheld (Burgoon et al., 2000). Collective mindfulness both encourages and harnesses individual mindfulness through drawing attention to the ways in which personal and collective cognitive processes interrelate within individuals and between co-workers (Weick et al., 1999). Ultimately, both individual and collective mindfulness arise from a complex and generative interplay between perception and cognition that “induce[s] a rich awareness of discriminatory detail and a capacity for action” (Weick et al., 1999, pp. 36–37).

#### 2.6.5: Enacting Mindfulness

Put into action, organizational mindfulness is “local, situated, and involves thinking in real time, simultaneous with action” (Levinthal & Rerup, 2006, p. 504). Mindfulness must be put into action because plans rarely proceed perfectly, organizational “messes” (Ackoff, 1979, pp. 99–100) proliferate, and decision-making is an iterative learning process (Feldman, 2000; Levinthal & Rerup, 2006). In adapting to messes, organizational actions may alter or reinforce existing routines; as a result, crossing thresholds, or “tipping points,” into domains of “mindless organizing” is always a possibility (Gärtner, 2011, p. 265). For example, transposing existing routines into new or changed contexts on “autopilot” may signal an impending tipping point (Levinthal & Rerup, 2006). While mindless organizing may play a role in organizational learning (Rerup & Levinthal, 2014), mindful organizing is robustly associated with resilience, “the ability to contain and manage real-time unexpected events in an adaptive, flexible fashion” (Levinthal & Rerup, 2006). In practice, mindful cultivation of relationships within and between organizations generates adaptive communication networks, structuring interactions for organizational resilience (Ishak & Williams, 2018). Adaptive networks, which may be highly responsive to crises, are just one component of organizational mindfulness as a meta-capability for resilience (McKinney & Barker, 2005).

### 2.6.6: Coping with Crises

Most organizations are confronted with daily small-scale mishaps and relative crises (Sutcliffe & Vogus, 2014) that, in the absence of organizational mindfulness, may leave them disabled by the unexpected (Weick & Sutcliffe, 2015). While coping with crisis is traditionally the domain of crisis management, organizational mindfulness has many valuable insights to offer for the coping stage of organizational resilience (Duchek, 2020). Organizational mindfulness is as much about enactment, action, and interaction as it is about anticipation. When crisis strikes, mindful recovery requires coordinated stakeholder attention, avoidance of blame, emotional distancing, delineation of crisis-management roles, highlighting of shared priorities, streamlined resource allocation, and responsive information flows (Wang et al., 2021). A view of organizational mindfulness as coordinated social action (Weick & Sutcliffe, 2015) foregrounds the capability to fluidly alter behaviors in response to real-time information (Sutcliffe & Vogus, 2014) and manage changing conditions with varied and responsive action repertoires (Weick et al., 1999).

### 2.7: Research Gap

While my review initially sought to identify the intersections of collective mindfulness, non-profit organizations, and crisis in the literature, I broadened my search due to a dearth of research that addressed the non-profit experience. While recent research has found that collective mindfulness can arise in regenerating and non-permanent organizations that “do not have the need, time, and resources to invest in the development of such permanent organizational capabilities” (Bigley & Roberts, 2001; Vendelø & Rerup, 2020, p. 11), there is lack of empirical evidence to support this conclusion in non-profits facing time and resource constraints within a crisis context. This suggests that more research is needed to understand if and how collective mindfulness arises within non-profits facing crisis, and to specifically identify the mechanisms

through which it may enable non-profit organizations to predict and prevent crises, function in uncertain contexts, enact a crisis response, and build organizational resilience. I framed my research open-ended so that it addresses the nature of collective mindfulness within non-profit organizations' responses to crises. Thus, this research is a foundational exploration of the topic, without restricting potential findings to pre-determined categories.

## Chapter 3: Methods

### 3.1: Conceptual framework

#### 3.1.1: Research Construct

I identified my core research construct, collective mindfulness, through a phronetic-iterative process that involved continuously seeking out emergent themes in my data and relevant frameworks in the literature. In my original thesis proposal, I sought to investigate how “learning emerged within one non-profit organization’s emergency food response to the COVID-19 pandemic” as well as “what learning processes have enhanced this organization's ability to adapt to changing community food security needs,” and designed my original interview guide with this goal in mind. However, through the interview process, new questions and framings emerged in conversation with my participants, which I incorporated into later interviews such that my interview guide evolved over time to include participants’ own understandings and experiences.

Through uncovering emergent themes in early cycles of data analysis during, and following the completion of, my interviews, I refined my research question to specifically investigate “resilience-enhancing, adaptive learning,” and presented this updated question, along with a draft working theory, to my committee. My draft working theory focused on defining learning and identifying and categorizing learning processes that “interactively generate resilience in organizations facing crisis.” The primary categories of learning processes I identified were dialectical processes, which I defined as “concerned with or acting through opposing forces,” and synergistic processes, which I defined as “relating to the interaction or cooperation of [...] agents to produce a combined effect greater than the sum of their separate effects.” My committee approved this refined direction for my research.

As I continued to deepen my data analysis while immersing myself in the crisis management, organizational behavior, and organizational psychology literature in preparation for

my literature review, my understanding of the most relevant construct to anchor my research in evolved. In an analytic memo written on February 13<sup>th</sup>, 2021, I noted that the learning processes I had identified “demonstrate principles of organizational mindfulness in action.” I also noted that they “can both drive and stabilize change to enhance resilience,” an observation that aligns with Weick’s assertion (1999) that both stability and variability are critical for organizational mindfulness. In an analytic memo written on February 14<sup>th</sup> that followed the advice given in “Formulating Your Research Question” (Foss, 2015, pp. 38–48), I revised my research question to focus on how “collective learning emerge[s] in organizations’ adaptations to crisis,” and noted that the learning processes I previously identified “gave rise to learning through ongoing, interactive cycles of reflection and action that generated a range of team learning behaviors” as defined by Edmondson (1999).

Since team learning builds mindfulness and is an important component of mindful infrastructure (Oeij et al., 2018), the team learning construct developed a conceptual bridge to the construct that ultimately proved to be the best fit for my data: collective mindfulness. In a subsequent analytic memos, also written on February 14<sup>th</sup>, I iteratively refined my research question multiple times; revisions included “what role does collective mindfulness play in organizations’ ability to learn from crisis?” and “What role/function does collective mindfulness play in non-profit organizations’ response to crisis?”.

Seeking to crystallize a robust framing of this research question that had the capacity to generate complex results, I revised my research question once more, landing on the following framing: “what is the nature of collective mindfulness within non-profit organizations’ responses to crisis?”. I then evaluated this phrasing using several criteria suggested “Assessing Research Questions” (Foss, 2015, p. 43), including identifying the theoretical construct and the

recognizability of the construct, the question's ability transcend the data, its potential contribution to understanding the theoretical construct, and its capacity to surprise. I then shared a revised outline detailing these revisions, among others, with my committee. I received and incorporated their feedback and continued on to carry out subsequent cycles of data analysis, develop my literature review framework, and draft my introductory chapter. I also shared the refined research question with my participants, who welcomed it enthusiastically and looked forward to incorporating strategic and actionable findings relating to collective mindfulness into their work.

### 3.1.2: Methodological Framing

I investigated the question "What is the nature of collective mindfulness within non-profit organizations' responses to crises?" through a conceptual framework that was situated in a post-structuralist paradigm and grounded in complexity science.

While no consensus definition exists, complexity science is generally "concerned with systems of interacting parts that exhibit emergent, synergetic behaviors," and aims to "observe changes in individual behavior patterns as they self-organize and emerge into systemic structures" (Luhman & Boje, 2001, p. 163). As is convention in the literature (e.g. Anderson et al., 2005; Morcol, 2001), I use the terms "complexity science" and "complexity theory" interchangeably in this research. Since post-structuralism, which refers to a "movement or theory [... that] sees inquiry as inevitably shaped by discursive and interpretive practices" (Merriam Webster, n.d.), investigates how structures (such as knowledge) are brought into being through language and social interactions, I sought to understand how collective mindfulness emerges through discourse and (inter-)action within non-profit organizations in response to crisis (Mease, 2016). My approach rejected the search for a single, objective reality of the pandemic, at once

recognizing the plurality of experience distributed across participants and the dynamic and unpredictable nature of the pandemic itself (Gear et al., 2018).

Since organizations are organic, living systems that can be holistically understood through the lens of complexity science (Capra, 2002), "case study designs, in combination with a complexity science perspective, provide important new tools for studying organizations" (Anderson et al., 2005, p. 670). These tools arise from application of several important extensions of complexity theory, including focusing on processes and non-linearities, looking for the unexpected, shifting foreground and background, and learning the system's history (Anderson et al., 2005). Overall, case study design and complexity science complement each other as they share an objective to understand systems as integrated wholes (Anderson et al., 2005). Given that complexity theory focuses on understanding patterns of interactions across various levels over time (McDaniel & Driebe, 2001), researching from a complexity viewpoint puts the focus on how organizations learn, which is an important dimension of collective mindfulness and a primary goal of the present study (Anderson et al., 2005).

While complexity theory does not have a long history as a primary methodology within qualitative research, it holds untapped potential for guiding qualitative inquiry (Gear et al., 2018). From the perspective of qualitative research, complexity theory can be applied as a robust methodology to guide the entire research process, including choice of theoretical perspective, conceptualization of research problems, selection of methods, and approach to data analysis (Gear et al., 2018). A complexity theory approach conceptualizes the research problem itself as a complex adaptive system, enabling researchers to "explore the interaction between [the] many diverse elements that give rise to the complexity of the problem" (Gear et al., 2018, p. 5). In all, employing complexity theory as a guiding qualitative methodology enables



qualitative researchers to identify patterns of interaction, communication, dynamism, and emergence within systems that are less visible through more traditional qualitative approaches (Anderson et al., 2005; Gear et al., 2018).

Approaching my research from a qualitative perspective responded to the need for studies that are "less retrospective and more ethnographical" to strengthen emerging understandings of organizational resilience (Duchek, 2020, p. 238) and collective mindfulness. Developing my research in this way strategically positioned it to capture and make sense of "highly complex, socially embedded, and path-dependent resilience capabilities" (Duchek, 2020, p. 238) within organizations, such as those embodied in collective mindfulness. In employing complexity theory to guide my research from conception to completion, I aimed to follow Gear and colleagues' (2018) approach to further the application of complexity theory in qualitative research design. Specifically, I sought to advance complexity science as a holistic qualitative case study methodology within collective mindfulness studies.

### 3.2: Researcher Role

I came into my researcher role supported by a collaborative working relationship built over the past 8 years with Joanne MacKinnon, who was my main point of access to LMNH. Prior to this research, I worked with Joanne and other LMNH staff and community members as part of a small-scale community-based food asset mapping project in 2014, which was well received within the organization and has since been successful city-wide. In the spring of 2021, Joanne and I received funding from the Center for Community Engagement and Learning at UBC, in the form of a Chapman and Innovation Grant, to develop and implement a community-based participatory action project entitled "Building Collective Food Security Resilience During the COVID-19 Pandemic" [BCFR]. As the UBC team lead for this project, I worked alongside

LMNH personnel, students, consultants, and key stakeholders from across the Lower Mainland to develop a theory of change to strengthen the resilience of local food security and food justice work.

The BCFR project, which ran from May 2021 to February 2022, provided remarkable insight into the nature of grassroots food security, social justice, and policy advocacy work. I approached my role in the BCFR and my thesis research as a mindful insider-outsider, acknowledging that my scholar status set me apart from most of my collaborators, yet afforded me the flexibility to join them in their community-based activism work. Through conducting my thesis research and the BCFR simultaneously, I developed close relationships with LMNH staff as we worked alongside one another, although at times boundaries between these roles were murky. Given that building on existing relationships, continuity of involvement, and a foundation of mutual trust are all factors that enhance knowledge exchange, I am grateful that my dual role as researcher and BCFR collaborator was well received and that access to the field remained open for me despite the disruptions of the pandemic (Mitton et al., 2007; Reed et al., 2014).

Coming to this work as a white, heterosexual, cisgender, highly educated female settler from an upper-middle class background, I was aware of the privileges bestowed through my identity that shaped my research. Using the Power & Positionality Wheel (Hudson & Robinson, 2020) to reflect on how different aspects of my identity comported power and privilege enabled me to bring this awareness into my research design, interactions with participants, data analysis, and writing process. While many facets of my identity provided unearned privileges, such as being able to access the Canada Emergency Student Benefit (CESB) on a basis of my Canadian Citizenship status, other aspects of my identity comported disadvantages that were exacerbated

by the COVID-19 pandemic. For example, being a single parent and sole caregiver to a young child during the COVID-19 pandemic was a barrier to engaging in my academic work, and lingering post-concussion syndrome following a head injury made it difficult to work on a computer or other screened device for several months. In these instances, identifying as a single parent, and as temporarily physically impaired, complicated my ability to conduct this research. Fortunately, my participants and collaborators were extremely gracious and accommodating – for example, conducting meetings after hours once my child was asleep, or connecting on the phone rather than on a video call – for which I am deeply grateful. My experience working across my complex, sometimes contradictory positionality deepened my compassion towards those I worked with and the community members whose well-being my participants sought to support. Having first hand knowledge of how crises, such as pandemics, re-inscribe power and oppression on the basis of identity continues to motivate me to engage in community-based participatory action research and advocacy work.

### 3.3: Sampling

My case study focused on discourse and (inter-)actions within LMNH; as such, the boundaries of the case roughly reflected those of the organization. Through a complexity lens, however, system boundaries are thought to connect, rather than separate, agents and interactions. Anderson et al. (2005) speak to this phenomenon when they suggest that,

we must pay more attention to the interdependencies across the boundaries of systems.

Traditionally, case studies bound the case and then study phenomenon within the boundary. Complexity science suggests that important insights can be gleaned by studying the behavior that occurs at and across the boundaries that define the case (p. 674).

Following this logic, I centered talk, text, and (inter-)action within LMNH as the focal point of my research, while training my peripheral vision on liminal/boundary-crossing discourses, interactions, and agents. I identified research participants in collaboration with my LMNH contacts, including Joanne MacKinnon and Art Bomke, board member at large, over the course of several meetings and emails in spring 2021. Initial interview invitations were virtually distributed via email by Joanne through her network of connections within LMNH. Participants had management, staff, or volunteer status within LMNH and were involved in its COVID-19 food response in some capacity. I also interviewed an individual who was not a LMNH staff or volunteer but worked across the organizational boundary to support LMNH's food security programming as an external partner. This sampling plan allowed me to investigate unexpected outcomes through employing multiple lenses, which is an essential component of a complexity science approach to case study research (Anderson et al., 2005).

#### 3.4: Data Collection

I collected data through virtual Zoom interviews with fifteen participants, through which I generated audio recordings and video recordings of all interviews. I transcribed the audio recordings using Otter.ai software with manual verification, formatting, and revision as needed. Transcripts were the primary source of data for my analysis. Throughout my interviews, I interacted with research participants from a responsive stance (Rubin & Rubin, 2012). Responsive interviewing is consistent with complexity theory as a methodology as it acknowledges that researchers have an effect on both interview and interviewee, with the potential to influence interviewee's understandings and behavior (linked to the principle of co-evolution); it aims to generate depth of understanding rather than breadth (linked to the goal of understanding the system as a whole); and emphasizes flexibility and responsiveness of the research design as the project unfolds (linked to the concept of emergence) (Anderson et al.,

2005; Rubin & Rubin, 2012). Self-awareness and self-reflexivity are key elements of a responsive approach to interviewing, as is cultivating empathy within the interview relationship (Rubin & Rubin, 2012).

Since researchers' assumptions, preconceived notions, and ideas about the topic of study are prominent challenges in employing complexity theory as a research methodology (Gear et al., 2018), a responsive stance was well-suited for my research due to its emphasis on highlighting researcher biases and fostering an openness to learning and growth (Rubin & Rubin, 2012). It is important to note that responsive interviewing has many similarities (and no known contradictions) with "complexity-led interviewing," which emphasizes researcher self-reflexivity, encourages responsiveness to emerging findings in real-time, and "involves learning by both the researcher and participant as they interact" (Gear et al., 2018, p. 6). However, since complexity-led interviewing is an emerging concept with little explicit guidance to support its implementation, as a budding qualitative researcher I chose to ground my interviews in responsive interviewing, a time-tested and well-explicated approach (eg. See Rubin & Rubin, 2012).

I conducted interviews, transcription, and data analysis sequentially, rather than waiting until I had completed all interviews to begin the data analysis process. This approach wove complexity science principles into data collection and analysis through facilitating adaption and responsiveness to emergent real-time findings (Gear et al., 2018). I conducted interviews according to case study logic, in which "interview questions and foci transform over time so that sequentially later interviews focus on emergent issues that are most poignant, but are still unclear, and require more insight" (Tracy, 2020, p. 174). Employing case logic and sequential interviewing together is thought to provide an efficient pathway to saturation: Small (2009)

claims that under these conditions, saturation can be reached in ten to twelve interviews. While Joanne reached out to seventeen potential interviewees on my behalf, only fifteen of them chose to participate in the study, which exceeded my minimum target sample size of twelve participants according to Small's claims. While I did not apply objective criteria to measure saturation, I was satisfied that no significant new themes were emerging at the conclusion of sequential interviews and data analysis, and that I had contacted all of the potential participants that met my selection criteria.

Throughout this process, I communicated with my participant-collaborators through email, Zoom meetings, and phone conversations. A core group of participants emerged – those who were also involved in the BCFR project – with whom I frequently clarified uncertainties, discussed their goals for the research, and shared emergent findings. Doing so kept my research aligned with the perspectives of my participants, and ensured that evolution of my analysis and understanding reflected shared goals. While I acknowledge that not all participants' views were reflected in these informal communications, and recognize this as a limitation to the participatory claims of my research, I feel that interacting with a handful of participants in this way was a small step towards community-led, decolonizing qualitative research. While it would have been ideal to interact with all participants on a regular basis, this simply was not possible due pandemic-related constraints on conducting fieldwork and participants' limited capacity to engage in the research beyond their initial interview.

### 3.5: Data Analysis

A complexity science view of data analysis approaches the data itself as a complex adaptive system. This means that complexity theory principles such as uncertainty, non-linearity, co-evolution, and emergence are expected to characterize the *process* of data analysis, as well as

eventual findings and conclusions. As discussed in the previous section, my data analysis process was adaptive and responsive as I interacted with the data in real-time (Gear et al., 2018).

Throughout, my analysis was grounded in a phronetic-iterative approach, which alternated “between emic, or emergent, readings of the data and an etic use of existing models, explanations, and theories” (Tracy, 2020, p. 209).

I began my data analysis using Nvivo qualitative data analysis software to conduct open coding or “primary-cycle coding” to “examine the data and assign words or phrases that capture their essence” (Tracy, 2020, p. 219). In primary cycle coding, I relied on first level codes, or descriptive codes, to describe what was present in the data without venturing into analysis or interpretation (Tracy, 2020). I returned to primary-cycle coding in several different iterations of my data analysis process to deepen my emic reading of the data.

Through descriptive primary-cycle coding, I noticed that many participants employed figurative language to communicate experiences that they struggled to describe literally. I was intrigued by the hidden meanings behind these utterances, so I engaged in metaphor coding to investigate them further. According to Saldana (2021), “metaphor coding identifies the participants’ use of metaphors or vivid comparisons to related ideas and imagery in narrative and visual data” (p. 201). This type of analysis is meaningful because, as Lakoff & Johnson (2003) suggest, “[m]etaphor is one of our most important tools for trying to comprehend partially what cannot be comprehended totally: our feelings, aesthetic experiences, moral practices, and spiritual awareness” (p. 193). By analyzing participant’s speech through the window of metaphor, I sought to understand the hard-to-articulate experiences that lay on the other side of the glass. Given that all participants had experienced the potentially traumatic upheaval of the

COVID-19 crisis, I wondered if these experiences were emotionally charged, incongruous with their narratives of self, or otherwise troublesome – and therefore worthy of attention and inquiry.

Following Saldana’s (2021) suggested procedures for metaphor, first, and second cycle coding, I first identified “in vivo” use of metaphors and figurative language in participants own words within my transcripts. These words and phrases became my codes (see Fig. 2). I then listed all of the codes from a single interview in a Microsoft word document in the order they appeared. Next, I sorted the codes into alphabetical order, scanned the list, and wrote down my preliminary thoughts, questions, and ideas about the codes. I then moved on to “second cycle Focused Coding” to group the codes into categories. I began moving the codes into “clusters of what ‘looks alike’ and ‘feels alike’” (Saldana, 2021, p. 103), then organized the clusters into an outline format, rearranging codes hierarchically, moving codes that fit better elsewhere, and

Figure 2 - Word Cloud of In-Vivo Metaphor Codes (word size increases with frequency)





removing outliers that I deemed insignificant, in a process that Saldana refers to as making “order out of chaos” (p. 104). Next, I selected codes from each cluster that best represented or encompassed the other codes in the group and adopted them as “second cycle Focused codes” or category labels. Following Saldana’s (2021) suggestion, I selected three category labels for each interview and organized my clusters of codes within these categories based on the relationships that I perceived between them.

Next, I reflected on how each category label, and the codes it represented, captured the “essence of the transcript data,” which involved interpretation and claim making. I sought to understand the symbolic meaning of my categories and the codes within them, and noted my developing thoughts and questions in a “codeweaving” analytic memo for each category. Saldana (2021) defines codeweaving as “the actual integration of key words from coding into the analytic memo narrative [...] a practical way to ensure that you are thinking how the puzzle pieces fit together” (p. 64).

I then employed arts-based analysis, as recommended by Saldana (2021), to develop a diagram of how the categories for each interview interrelated. I selected one photo to visually represent each category label, and used graphic design to meld these images together into a diagram. By translating textual codes into visual representations – in a practice that I like to think of as “visual codeweaving” – I invited non-linear and uncodified forms of interpretation into my data analysis. Doing so furthered the centrality of non-linearity and emergence within my research. I then reflected on and synthesized the relationship between the three categories in a written codeweaving narrative.

Since “codes are symbolic prompts or triggers for deeper meanings the data may evoke during analytic reflection” (Saldana, 2021, p. 107), I sought to deepen my understanding of the

data by coding it again through a complexity theory lens. I returned to my category labels and re-organized them into eight new meta-categories based on the following complexity theory concepts: self-organization, co-evolution, feedback loops, far from equilibrium, path dependency, emergence, non-linearity, and boundaries. I used the definitions of these concepts from Gear et al (2018) and Anderson et al (2005) to develop a legend (see Fig. 3) to guide this process.

*Figure 3 - Legend of Complexity Concepts Used in Coding (adapted from Gear et al., 2018 and Anderson et al., 2005)*

<b><u>legend- CAS concept tags</u></b>	
	<b>self-organization</b> - interactions cause new relationships/patterns
	<b>co-evolution</b> - interactions change system and agents
	<b>non-linearity</b> - unpredictable responses and outcomes
	<b>feedback loops</b> - interactions over time cause / undermine change
	<b>path dependency</b> - system history affects behavior/events now
	<b>far from equilibrium</b> - seems stable by balancing interactions/loops
	<b>emergence</b> - new system properties from self-org/non-lin. intxns
	<b>boundaries</b> - fluid points of connection btwn system/environment

Based on my interpretation of each category label, the codes it represented, and associated meanings, I sorted each category into the complexity theory concept that I felt it best demonstrated, encompassed, or reflected, using Saldana’s “looks alike” or “feels alike” criteria. I then wrote a codeweaving analytic memo narrative for each complexity theory concept, and synthesized emergent themes from across these memos into a master codeweaving narrative (see Fig. 4 below).



notes as I went along. Next, I checked each pile to ensure that all of the codes it contained were relevant and “shared some characteristic,” rearranging codes as needed and removing those that seemed to be insignificant outliers.

In order to develop an explanatory schema, a “conceptual, organizing principle that allows you to tell the story of your data in an original and insightful way,” I used the sticky note labels for each pile to find relationships between the piles of codes. I grouped and regrouped the labels creatively until I found a relationship or organizing structure that connected them. I wrote down my thoughts about the schema as an analytic memo narrative, took a picture of the schema, then dismantled the schema and mixed up the labels. According to Foss (2015), the first schema that a researcher develops is unlikely to be truly original, so I followed her advice to repeat the process of grouping and regrouping the labels until I arrived at an explanatory schema that was unique, encompassed all of the major categories of my data, represented an “organic and coherent relationship among my labels,” provided a “clear and plausible fit between [my] schema and [my] coded data,” and felt like a “an a-ha” crystallization of the themes that had emerged (pp. 262–263).

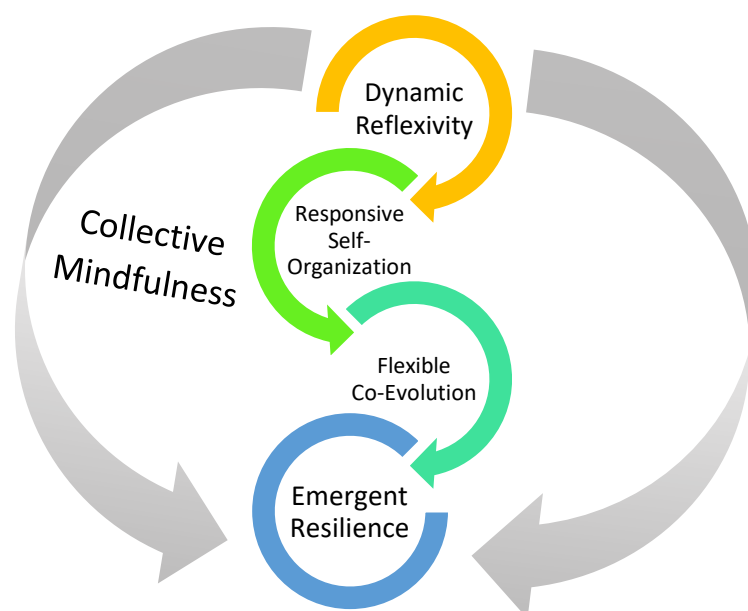
The third schema that I developed met these criteria. Seizing the moment, I took a picture of my schema and captured my thoughts in an analytic memo narrative, constructing a rough anatomical “atlas” of my findings. Then, I chose the explanatory terms, or labels, for my schema and documented them in a visual diagram. Next, I selected explanatory terms for each sub-category within my schema, and developed a visual diagram that illustrated the relationships between them. Selection of explanatory terms was largely informed by insights gained through the complexity theory lens of my analysis.

While I developed my explanatory schema using the descriptive codes from my first stage of data analysis, my understanding of the relationships between these codes was deeply affected by the practice of metaphor and complexity theory coding. The themes, concepts, and insights generated through these stages of analysis both broadened and nuanced my interpretations of participants' experiences, diversifying my perceptions of how they interrelated and diverged. From a post-structuralist perspective, constructing the subjective "truth" of participants' experiences in such a layered, complex, and "messy" way is an honest, authentic, and credible approach to qualitative research. As Weick (2001) suggests, the goal of research is not to find the singular "story" of the data like a needle in a haystack, but rather to consider the multitude of possible "stories" that the data may enable a researcher to tell (p. 461). Thus, my results reflected a pluralistic pursuit of meaning-making that guided my data analysis from start to finish.

## Chapter 4: Results: Mindfulness is Enacted Through Reflexivity, Self-Organization, and Co-Evolution During Crisis

Through my analysis, I found that Little Mountain Neighbourhood House enacted mindfulness through interrelated processes of reflexivity, self-organization, and co-evolution while coping with the COVID-19 crisis (see Fig. 5). Dynamic reflexivity arose in response to the disruptions and stressors of the pandemic through a cycle of perceiving, reframing, and learning at individual and collective scales. Responsive self-organization was generated through interaction of three core components of the interpersonal infrastructure: roles, networks, and boundaries. Personnel (re-)navigated, (re-)negotiated, and (re-)configured these three pillars in response to needs, opportunities, and challenges catalysed by the pandemic. Through continuous and organic restructuring, the interpersonal infrastructure supported flexible co-evolution of communication, collaboration, and leadership practices, which took place through a cycle of communicating, problem solving, and pivoting. Together, dynamic reflexivity, responsive self-

*Figure 5 - Emergent Resilience Model of Collective Mindfulness in Non-Profits Experiencing Crisis*

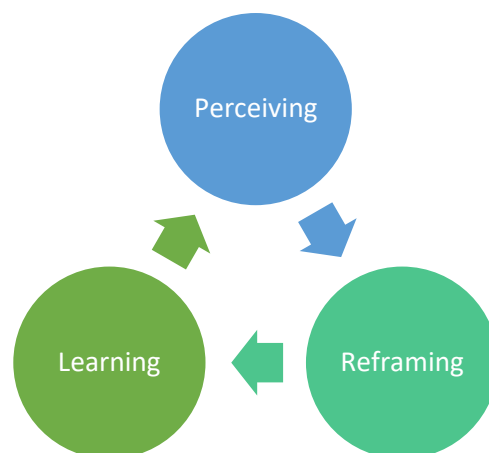


organization, and flexible co-evolution propelled the organization to continually enact mindfulness, generating collective resilience as an emergent system property.

#### 4.1: The Dynamic Reflexivity Cycle – Perceiving, Reframing, and Learning

While coping with the COVID-19 pandemic, reflexivity unfolded across Little Mountain Neighbourhood House [LMNH] through a dynamic, iterative process of perceiving, reframing, and learning that involved awareness, creativity, and enactment (see Fig. 6). This process, which I have named the “dynamic reflexivity cycle,” shares commonalities with Edmondson’s definition of team learning “as an ongoing process of reflection and action, characterized by asking questions, seeking feedback, experimenting, reflecting on results, and discussing errors or unexpected outcomes of actions” (Edmondson, 1999, p. 353). However, it goes beyond Edmondson’s conceptualization through developing an analysis of reflexivity and reframing, which are not a part of her team learning model.

*Figure 6 - The Dynamic Reflexivity Cycle*



In the perceiving stage of the dynamic reflexivity cycle, awareness of self, others, the collective, and beyond the organization enables personnel to understand complex pandemic impacts on emotional, interpersonal, organization, community, and societal planes. This awareness primes personnel for inquiry, praxis, and action, which propels them into the next

phase of the dynamic reflexivity cycle. In the next phase, “reflective reframing” builds capacity for integration of past experiences into the organizational knowledge base. In the final stage of the dynamic reflexivity cycle, lessons learned are considered in the context of collective action, such as through prioritizing disaster preparedness and anticipating future crises. Putting learning into action generates impacts that stimulate further awareness, and so the dynamic reflexivity cycle continues in a spiralling fashion as the organization continues to cope with crisis.

Reflexivity refers to the ability to be able to examine one’s own “feelings, reactions, and motives [...] and how these influence what they do or think in a situation” (Cambridge Dictionary, n.d.). From a linguistic perspective, reflexivity can also be interpreted as “showing that the person who does the action is also the person affected by it” (Cambridge Dictionary, n.d.). These definitions converge in my findings, as analysis of my interview transcripts showed that personnel across LMNH were individually and collectively reflexive – examining not only the nature and impacts of their own emotions and perceptions but also those of others, individually and as a group – and positioned within networks of enactment in which the outcomes of individual actions were collectively felt (and vice versa).

#### 4.1.1: Perceiving

Perceiving is the starting point for dynamic reflexivity, and is facilitated through personal, collective, and systemic awareness. It involves identifying what flies “under the radar” of perception and includes noticing personal and collective blind spots as well as recognizing new insights that come to light. Emotions, praxis, aspirations, new information, and diverse ways of seeing enhanced awareness across the organization in response to the COVID-19 crisis. Being aware of one’s own and others’ emotions enabled individuals to be accountable for their actions and re-actions, especially those generated by intense stress. Collective awareness of heightened



community needs prompted individuals to reflect on the value of theory versus action, generating self-awareness of their role as socially responsible citizens. Noticing the gap between needs and services/resources in the neighbourhood generated new ways of perceiving the social and economic fabric of the community, and opened individuals' eyes to systemic issues of trauma, inequity, and poverty that are entrenched city-wide. As the first stage of the dynamic reflexivity cycle, perceiving acted as both a catalyst and a foundation for more complex processes of synthesis, reflection, and creativity that take place in the reframing phase.

For many personnel, awareness began with locating their perceptions vis-à-vis others and in relation to their role in the organization. Steve, who worked for several months on the “frontlines” of the Food Distribution Program, was aware that his role enabled him to see things differently than his managers, who ran the program at a distance. In discussing challenges associated with rapid Food Distribution Program growth, he explained, “as someone who was kind of in the middle of it, I couldn't see that in a way that [management] could.” His manager, Denise, also acknowledged that her role structured what she could and could not perceive. While discussing how LMNH adapted their food programming to the pandemic, she shared that, as a manager, “it's hard to sometimes reflect and kind of take that time to see what programs are actually doing” on the frontlines. Both Steve and Denise demonstrated awareness of the blind spots constructed by their unique roles within the Food Distribution Program, an issue that Sophia also reflected on. Discussing her transition to a management role, she shared that “it's different. It's, you know, it's its management. So you're not in touch with, you're not doing the frontline work as much. But it's still challenging and interesting to see kind of what happens in the background.”

The gap in what was perceivable between management and the frontlines highlighted the importance of reflection and effective communication across diverse roles. This was especially important with regards to managing stressors and regulating emotional responses relationally. For example, Sophia reflected on the emotional burden of the pandemic, and shared how she brought it into awareness to maintain relational harmony within the management team. Referring to the compounding stresses of the pandemic, she explained,

Sometimes, people take it out on others. And, you know, that's not okay. So we had to really keep ourselves in check. And, I mean, even in the management team, we've said a few times, sorry, you know, if I blew up at you, I was just really stressed out. And, you know, it's been a hard year.

Sophia's account demonstrates that emotional awareness sometimes catalyzed interpersonal action, such as taking ownership of one's emotions. Taking ownership included clarifying assumptions, which Denise reflected on while discussing her interactions with Food Distribution Program clients. She shared that, "I think sometimes we can make assumptions or judgment of people without knowing them. So yeah, I think definitely getting more information [is important], getting more details. I'm asking a lot of questions."

Inquiry, as both a source and outcome of awareness, led some volunteers to reflect on praxis, or putting theory into action, in their food security work. For example, when asked about the lessons he has learned from working with food during the pandemic, Varouj shared, "I've found between practice and concept, what's happening for me is these things that I used to theorize or read about equality are actually happening, you know, and like the food security. It gives me a lot of nourishment." Robert, another volunteer who was involved with the Riley Park Community Garden and Yard Gardens, echoed Varouj's perspective. In describing the lessons he

has learned, he reflected on putting academic knowledge into practice for the benefit of his community. He explained,

[F]rom a positive point of view, this is all stuff that that that I was talking about, during my years as an instructor [...] And I'm now back in my community, and its now time to sort of try to do stuff [...] small scale, in a small way, to try to be satisfied that I've done something here, and where I know the community, where I'm part of it.

This praxis-oriented awareness enabled Robert to both locate his work in the social world and ground himself in a sense of contribution and belonging. Chris, a leader within LMNH, channeled his high-level awareness to steward the vision of the organization through the pandemic response. When asked to describe his role, he shared,

I guess the key role is to sort of keep the vision of the organization, you know, keep the vision clear [...] And staying aligned, like not losing vision drift, where you sort of start doing things and it takes you off in this direction. You're going 'How did we end up here?'

“Keeping the vision clear” required Chris to cast awareness across multiple time frames and integrate insights into both current operations and long term “big picture” planning. While discussing how decisions were made at the neighbourhood house during the pandemic response, Chris shared that “you're afraid to take time and energy away from what the implementation is to create a strong vision, bringing it all together, which takes sort of having a lot of space and time to be able to do that.” His statement positions vision – awareness – and implementation – action – as dimensions of crisis management that compete for limited resources, describing this tension as a “chicken and egg sort of thing.” In doing so, Chris sheds light on the resource-intensive

nature of enacting reflexivity at an organizational scale, contextualizing LMNH's experience moving through the Dynamic Reflexivity cycle.

Awareness was also generated across organizational boundaries. The pandemic shone a spotlight on new and pre-existing food security needs within and beyond the neighbourhood, and revealed the contribution of systemic issues of gentrification and socio-economic stratification to local food insecurity. While discussing surprises in her work during the pandemic, Rachel shared that "the pandemic made us pay attention" to local food security needs. Rachel's comment constructs the pandemic as a wake-up call for the neighbourhood house, demanding both awareness and action. For many personnel, discovering the true extent of local food security needs was an unsettling surprise. While discussing surprises during the pandemic, Cathy, a staff member who worked across food programs, explained,

It's just how many people are food insecure [...] how many people are really living under the radar. And that was, I guess, a little bit of a surprise? Because we didn't know there was so many people that were in such great need.

Gail, a long-time manager at the neighbourhood house, echoed Cathy's revelation, sharing that one "thing [that we learned] was sort of the need in the community, where we thought that there wasn't as big a need as there is." Cathy and Gail's comments demonstrate how the pandemic opened their eyes to the true extent of community food insecurity. Building on this new awareness, and projecting reflexivity into the community, many personnel looked deeply into the lives of community members to identify root causes of food insecurity that predated, or were amplified by, the pandemic's disruptions. Chris elaborated on this awakening, explaining that,

I think the pandemic unveiled sort of a layer of food insecurity that, with our community being gentrified, we didn't realize the extent of that, and, you know, it's not clear whether the pandemic was the cause of all that because of people losing jobs and stuff, or whether just because we started to respond to it allowed people to come out of the corners and engage in our programs.

Several personnel demonstrated enhanced awareness about the factors that underly community food insecurity as well. When asked about what she thought was causing people to experience food insecurity, Amanda, who worked with the Food Distribution Program from its conception, shared that “I think a large part of them were affected by COVID [...] they already had food insecurity issues, but it was made way worse by COVID taking away their jobs or kind of like health reasons that came up.” While sharing lessons learned, Rachel, a staff member who worked extensively with the Yard Gardens, elaborated that “often people who need food aid are traumatized in some kind of way. And need and have been lacking support.” These reflections, among others, show how the pandemic helped personnel recognize that food insecurity is a multi-faceted issue with deep, and often systemic, roots.

In the context of the pandemic, personal barriers to food security, such as job loss, health problems, and trauma, were compounded by systemic issues of relative poverty and skyrocketing real-estate prices in one of the least affordable cities in the world. While identifying needs of the Little Mountain community, Robert explained that,

[W]e know that the wages in Vancouver are not amongst the highest in Canada, they're relatively lower, relatively speaking, as you probably are aware, so COVID exacerbated this problem of people people's income. Once they've paid the rent, not being adequate to

have all the, you know, perhaps to eat well, but to have other things. And so I think that was exacerbated by COVID. But I think it's a systemic problem.

Continuing to discuss surprises in her food security work, Rachel described gaining awareness about the vulnerability of the food supply for all people living in urban environments. She shared,

Generally I got the sense that the people that were seeking food were was not because of pandemic losses, but were other systemic things going on in lack of supports [...] I think COVID brought out our dependence on food, like our food supply chain, and how kind of vulnerable we are, and how much capacity there is in urban environments.

Responding to the COVID-19 pandemic enhanced collective awareness of community food insecurity and its systemic determinants, which generated insight into the precariousness of the urban food supply in general. Looking to the future, Gail predicted that meeting the need for locally sourced and accessible food will continue to be a priority at the neighbourhood house. In reflecting on silver linings in her food work during the pandemic, she shared,

So this [food distribution] program is, you know, has not only been valuable COVID, but it's something that is probably necessary in the future. So, shifting to, you know, maybe not shifting of focus, but realizing that food distribution food security program, it's an important component of the neighborhood house, because it's an important need within our community. So it's not a real silver lining, but it's, you know, it's, it's an awareness.

Gail's perspective anchored awareness as both a source of knowledge and catalyst for future action. Robert extended this perspective, adding that "we would like to know who they are and be able to help if we can" in reference to community members experiencing current and future food insecurity. Ultimately, personnel from across the neighbourhood house viewed food

as a gateway to community. Robert summed up this perspective, explaining, “I think that food offers us a window into other issues in the community, some of which we can serve through our program and neighborhood house and some which we would refer to other agencies perhaps.” This perspective strengthens the connection between awareness and action: seeing through the “window” of food drives action towards meeting community members’ complex needs.

Other needs observed in the community included issues of equity, diversity, and decolonization. While discussing the origins of the Food Distribution Program, Sophia, a manager, articulated the need to improve equity in foods provided to the community. She explained that “certain cultures [...] have very specific food needs or preferences. So we also have to think about how to meet everybody's needs.” Reflecting on lessons learned, Rachel explained that without addressing cultural dietary preferences, food security cannot be achieved. She reflected that “the definition [of food security] includes culturally appropriate foods [...] food security is culturally relevant and food of people's choice.” Sophia and Rachel anchored equity at the forefront of food provision, an awareness that was strengthened through their work in the pandemic response.

This shared awareness also extended to issues of diversity and decolonization. While sharing lessons learned, Robert explicitly linked decolonization to food security by stating that, [Colonization] relates to food security as well. No question about it. The land and Indigenous People’s connection to the land, and the way it sustained them. And the way that was disrupted by colonization is part of what we’re trying to deal with today. The aftermath of it.

Reflecting on silver linings, Rachel shed light on decolonization and diversity in food growing work. She explained that,

[A]nother piece that I'm working on right now is sort of like decolonizing what we're doing, and we are not like, to speak candidly, it is not just a bunch of white people that are coming out and being a part of this project. Because I know, like, especially agriculture, that over representation is huge on that. So I'm glad that we've been able to create, like, kind of a space for a diversity of individuals to come out.

Rachel demonstrated awareness of not only the dynamics of diversity within LMNH's food growing programs, but also in the context of representation within agricultural work more broadly. Her perspective embodied an expanded sense of reflexivity, which was mirrored in Robert's reflection on the relationship between food security and colonization. Through their commentary, both Robert and Rachel demonstrated a strong capacity to link the personal and local to the community and global, framing justice as both a personal and collective act. This orientation was generated through a heightened awareness of self and others that arose through the pandemic response and shaped personnel's visions for the future. When asked about the future, Varouj shared concerns of "equality, equity, food distribution," explaining that,

And all we can do as community [...] we never know what globally it's going to happen. So I'd like to see new ideas, new methods, talk about affordability, you know, like on and on, right, the social dilemma that Vancouver needs a big shake up, you know, kind of thing.

By bridging local concerns with global uncertainties, Varouj highlighted the pandemic as a globally disruptive force with distinctly local impacts. In calling for a "shake up" in the face of social inequity within the city, he linked awareness to radical action that is local and political. His commentary highlights the social power that can be generated through shared awareness and



action-oriented reflexivity, which personnel across the neighbourhood house – and LMNH as a collective – embodied in their pandemic food security response.

#### 4.1.2: Reframing

The reframing phase of the dynamic reflexivity cycle involves reflecting on silver linings, failures, and risks; envisioning future challenges and outcomes; and thinking and interacting creatively. This phase of the reflexivity cycle enabled personnel to integrate awareness into personal and collective knowledge, which helped them to prepare for future action. Through reframing, new possibilities were discovered and priorities established, strengthening the organization’s ability to cope with the pandemic and prepare for future crises.

In LMNH’s response to the pandemic, silver linings were a beacon of hope amidst ongoing challenges. Reflecting on how the pandemic impacted her work, Sophia remarked that “there’s always a silver lining; it was hard at the same time.” Contextualizing difficulties in “silver linings” empowered personnel to make sense of their struggles in a positive light. Reframing enabled personnel to shift their focus between successes and difficulties, creating mental flexibility and bridging binary modes of perception. Reflecting on accomplishments achieved through overcoming challenges, Sophia integrated positive and negative experiences to share “We did pretty good. We didn’t do too bad. We didn’t do too bad.”

Amplifying successes was another dimension of reframing that boosted team morale and helped build momentum amidst ongoing challenges. When invited to reflect on operations during the pandemic, Robert shared that “as we have successes, they tend to lead to more successes.” Discussing the decision to scale down the Food Distribution Program, Denise shared that her goal was to build on past successes, which entailed “taking the good stuff to see how we can even enhance that even more.” Reflecting on what she would like people to know about her work

experiences during the pandemic, Sophia explained that “it's been challenging. Exciting. I like to focus on the positive and what, you know what worked.” By paying attention to successes amidst hardships, personnel enhanced their mental flexibility, which helped them anticipate and respond to both opportunities and threats.

Reframing during crisis also involved integrating emotional and cognitive information to make sense of one’s experiences. Reflecting on positive feelings enabled personnel to channel emotional awareness into new and evolving understandings, enhancing coping resources and motivating future action. For example, when asked to describe her involvement with LMNH, Lisa explained that, “I found you know, I've been useful to the program. So it's rewarding for me. So I just kept on going and I probably will go till the COVID is over or the grant runs out.” Chris found that focusing on positive outcomes kept him motivated at work, sharing that,

[Y]ou just put out all that energy, and you don't really know. Don't spend too much time sort of focusing on the stress of it or the all the challenges, but focus on the impact and the outcomes that come out of that work, is what for me anyways, keeps me going.

Focusing on positives also helped personnel cope with the emotional impacts of pervasive uncertainty. When asked to describe how uncertainty affected his role, Steve shared that he coped through “staying positive [and] allowing myself to like, feel frustrated and feel angry, but then move through it.”

While focusing on positives helped personnel persevere despite the hardships of the current crisis, reflecting on challenges, disappointments, and failures helped expand their cognitive and action repertoires to anticipate and cope with future crises. Keeping a balanced view of successes and failures helped them remain vigilant to threats while building momentum upon past positive outcomes. Reframing leadership, responsibilities, and values through the lens

of disappointment enabled personnel to imagine how these experiences could have gone differently, thus carving out a path for improvement. For example, when asked to describe changes in leadership during the pandemic, one staff (who asked for this comment to be shared anonymously) expressed feeling taken for granted in their role. They shared that “I did not love some of the leadership styles that were given to me. And it started to feel quite exploitive [...] being asked a lot [and] not being supported. And then not a ton of expression of gratitude.” Personnel in leadership positions also sometimes expressed disappointment with staff behavior. For example, when asked to describe a time when things weren’t going well, Gail shared,

[W]e thought that somebody was on top of [...] it, and the information had gone out to other staff members to check on and this sort of thing. And we found out after the fact, it didn't happen. So kind of being let down by, you know, an individual in some respects.

Framing such disappointments as lessons learned, and communicating constructive feedback to the appropriate personnel, was an essential next step towards translating failures into improvements. Without communication, such experiences could not be integrated into the organizational knowledge base, thus preventing future corrective action.

A balanced view of successes and failures led personnel to consider what sustainability could look like for the neighbourhood house and its programs in the future. For example, when asked how decisions were made during the pandemic, Chris explained that the neighbourhood house was on a collective journey to envision and establish long term sustainability. He shared that “I think we're in that transitioning to figure out what does this mean, long term, what does sustainability look like? And how to sustain it, and what is the model? What's the vision for that?”. When asked to describe how LMNH adapted food programs during the pandemic, Robert shared that sustainability was an ongoing concern. He reflected,

[W]hat happens to this food security program that we have started in response to a need?

Will we be able to sustain it in terms of staffing and terms of funding and so on? So

that's, that's a question that's, that's out there. I'm hopeful that we can keep it going.

Because I'm quite interested, and I think what we're doing is important, but you know,

maybe it's not enough that that we can sustain it, but we will see.

Working towards sustainability as an organization involved overcoming setbacks and learning collectively from past mistakes. When asked about how learning took place during the pandemic, one staff anonymously reflected on the rapid growth and eventual scaling back of the Food Distribution Program, sharing that,

I think it was a nice experience for them to see the building of a food program and then its downfall. But I think now maybe they know to not also grow something so quickly without checking if it's actually sustainable.

Reframing enabled personnel to collaboratively construct a vision for the future based on past experiences and through investing lessons learned to generate adaptive changes. While

discussing lessons learned, Cathy reflected on how learning from the pandemic created the backbone of a transition [...] the lessons that this is how we shifted. And so these are the things that now become the normal operations, normal means of communication that we didn't have before. And so, they become just part of our normal, normal way of operating.

Transitioning through crisis pushed personnel to reframe risks as a necessary part of adaptation. For example, when asked about his experience of leadership during the pandemic, Chris shared that “I think [it] potentially could be construed that we took more risks than some other organizations that were, you know, really risk averse and said, Okay, we're shutting down for eight months.” Reflecting on changes in food programming during the pandemic, Robert

elaborated that “COVID [...] opened the door to risk taking. You couldn't do what you did before, what occupied you fully before, things have changed so how do you respond to it?”.

Navigating opportunities and risks through the pandemic was a juggling act for many personnel. When asked what they would like people to know about their experiences, one staff, who requested this comment be anonymous, reflected that,

[It is] extremely challenging, because you have a million things that you're sort of responsible for, and every one of them could take all your energy. So you're having to figure out, you know, how do you keep all the balls in the air and where to, you know, which one you should throw higher, and which one you can let drop for a while and then pick it up.

Juggling opportunities, risks, and needs required personnel to think and act creatively. Many personnel viewed engaging creativity as a collaborative and integrative process. When asked to describe the role of creativity in her work, Rachel reflected that “I guess creativity for me is how to engage everybody. That's where I derive my own creativity.” In her experience, engaging people included “sparking up other people's creativity” and “listen[ing] to other people's creative ideas.” When asked the same question, Robert explained that “creativity kind of comes in terms of how to put it all together [...] taking, you know, a bunch of different sources of food, for example, and how do we put this all together?”. The view of creativity as a collective process of generating and integrating ideas illustrates creativity's role as a resource for resilience during crisis. Chris elaborated that, in the context of the pandemic,

thinking about how to do the delivery of the service differently, or connect with people differently, tapped into people's creativity in a really positive way [...] I think people did

incredibly well with being resilient and figuring out, almost out of necessity, creative responses.

He explained that when it comes to thinking and acting creatively as an organization “sometimes it takes a crisis or something really being shaken up for you to actually go there.” His comment demonstrates how reframing crisis as an opportunity for adaptation encouraged creative risk-taking and innovation within LMNH across the course of the pandemic.

#### 4.1.3: Learning

In the learning phase of the dynamic reflexivity cycle, personnel channeled lessons learned into future actions, adapted their mental models of crisis, and reflected on the importance of being prepared for the next emergency. When asked how she envisioned the future for LMNH, Sophia shared that “this is the opportunity for looking at what's working, what doesn't work anymore? What can we like, integrate from what we've learned this past year and a half?”. Sophia's remark suggests that evaluation and re-evaluation, assessment and re-assessment, are core dimensions of learning during crisis. While describing how creativity has played a role in his work during the pandemic, Chris shared that,

I think there is sort of a sense that “maybe this makes sense.” Maybe it's easier to do that this way, maybe we'll continue to, to, you know, not just go back to how we did [things] before [the pandemic], but continue, where it makes sense to do that. It's sort of left those options open and how we have meetings, all that stuff is now all up for discussion.

Chris' perspective illustrates how learning through the pandemic as an organization was a continuous dialogical process. While describing how boundaries evolved during the pandemic, Denise explained that “we're learning as we go, right? Because it was a pilot program. And then now we are we're trying to make it more manageable.” Denise's comment illustrates how learning

can take place simultaneous with action. Steve provided insight into the growth mindset that drove learning-in-action, sharing that “being really thoughtful about kind of, like not just not being complacent, and always wanting it to be better” was the key to generating organic solutions to emergent issues.

While learning-in-action provided the opportunity to implement changes on the fly, it also introduced new challenges. When asked to elaborate on how the food programs developed during the pandemic, Rachel explained that, “I call last year ‘flying by the seat of your pants year’ [...] it was very chaotic and disorganized.” Steve echoed this perspective, elaborating that he is “normally kind of a winging it kind of person, but I can see how a little bit more thoughtfulness going into how something that starts out can grow, and still be manageable would have been important.” Amanda described her experience building the Food Distribution Program as “a big learning curve [...] there were definitely a lot of things I didn't see coming,” linking learning to a desire for enhanced awareness. Rachel echoed this perspective in relation to the experience of burnout, sharing that,

[W]e all learned from that experience. Like I was pretty vocal about the burnout, and all of the different things going on. And I think there's Yeah, there's still learning happening with the burnout, and also just like understanding how it all comes together. So it is very complex, though.

While Rachel’s commentary illuminated psycho-emotional impacts of the present crisis, other personnel reflected on learning in the context of future crises. For example, when invited to reflect on a time that things didn’t go according to plan, Cathy shared that,

it's been a, it's been a challenging year. And we've learned a lot. And also, I think how to by capturing the lesson learned, how can we in the case of another emergency which will happen? Emergencies are just more dominant, right? There'll be another one soon.

Cathy's perspective demonstrates a shift in her mental model for the concept "emergency," in which crises are viewed as inevitable, rather than avoidable. This shift was accompanied by a broadened understanding of what qualifies as an emergency. Cathy elaborated,

Whether it's the power outage or there's something [...] Are you prepared for an emergency? Are you prepared? Now, we always talked previously about the earthquakes that we're expecting, right? And so that disaster preparedness piece of it, but I think it's the definition of that has just expanded. It's not just about preparing for an earthquake.

Redefining what constitutes an emergency drove awareness of lack of emergency preparedness at an organizational level. When invited to reflect on lessons learned, Chris elaborated,

the biggest one [lesson learned], initially was how unprepared we were for when the pandemic hit, how we didn't, you know, and I don't think we are alone, but how little organizations had really prepared for some type of emergency like that. So that definitely sort of a lesson in needing to do more risk planning, risk management planning, that sort of stuff for in the event, or emergency planning in the event that emergencies happen.

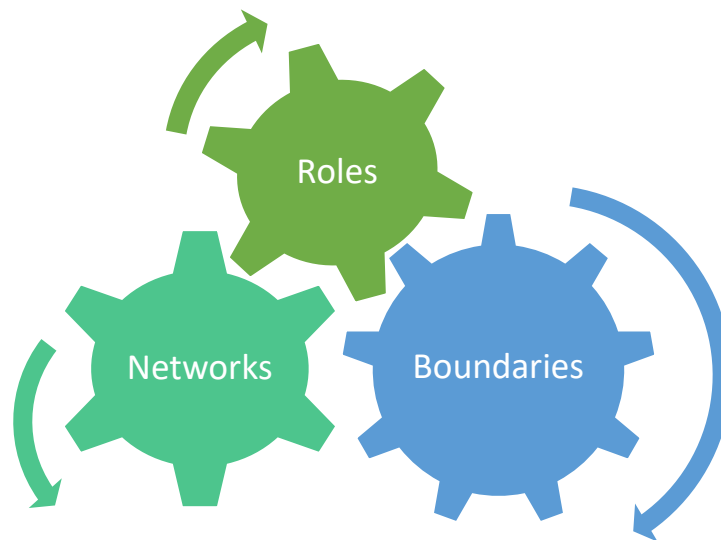
Overall, personnel shared a view that learning is continuous during crises and in their aftermath. Reflecting on surprises in his work during the pandemic, Robert summed up their shared belief that, "when it comes to learning, I still think we're partly there. But it's an ongoing process [...] there's always learning involved, that doesn't stop."



#### 4.2: Responsive Self-Organization – Roles, Networks, and Boundaries

Self-organization refers to “the spontaneous emergence of new relationships, forms, or patterns of behavior arising from repeated agent interactions over time” (Gear et al., 2018, p. 2) that enables people to adapt to evolving needs (Cilliers, 1998), cope with changing environmental conditions, (McDaniel & Driebe, 2001), and interrelate responsively (Anderson et al., 2005). Within LMNH, self-organization emerged as personnel interactively made sense of and responded to risks and responsibilities while coping with the COVID-19 pandemic. Roles, networks, and boundaries were primary sites of self-organization within the interpersonal infrastructure (see Fig. 7).

*Figure 7 - The Three Pillars of Responsive Self-Organization*



“Interpersonal infrastructure” refers to the norms, practices, and relationships upon which interactions are founded. It includes patterns of inter-relating, expectations about others’ behavior, and implicit assumptions about personal and collective responsibilities. At LMNH, personnel navigated the interpersonal infrastructure in responsive, self-organizing ways in

response to the pandemic, which drove adaptation through discussion, negotiation, and enactment.

#### 4.2.1: Roles

During the pandemic, individuals responsively self-organized in their roles through a collective process of harnessing expertise, which involved pooling knowledge, experience, and insight to solve problems and make decisions. Personnel harnessed expertise across departments through collaboration and knowledge-sharing. Harnessing expertise included counting on others to know both what needed to be done and how to do it in the context of the fast-paced pandemic response. For example, when asked to describe her current role, Gail shared that,

I have good staff and the good staff run the programs without issues and concerns, and a lot of them are long time staff. So I rely a lot on their expertise. Because a lot of them have way more expertise in various areas than I do.

Gail's reflection illustrates that the interpersonal infrastructure was built on trust in others' knowledge and abilities. Relying on others' expertise required Gail to acknowledge that they knew more (or differently) than her in some ways, and to trust them to implement that knowledge appropriately. Trusting in others' expertise and abilities enabled managers to let staff lead. As Chris explained, "a big part of it is trust [...] leadership trusted frontline workers that they had capacity to take on this new [challenge and] be innovative and come up with new approaches. And their input and their feedback was welcomed and received." While discussing her approach to leadership, Denise explained that "it's been really good to be able to kind of step back and see the coordinators underneath the management team really stepping up and taking the lead. And, yeah, I fully trust in them, you know, leading the program." Denise and Chris'

comments reveal that expertise is power, and that trusting personnel's ability to put their specialized knowledge into practice involved sharing power between management and staff.

Staff engaged in knowledge and power sharing through taking ownership of their work and contributing ideas. For example, when asked how leadership changed during the pandemic, Steve explained that “top down, [management] has created this atmosphere that really encourages people to take ownership and to bring their ideas and their personality to the work.” When asked about her experience of leadership during the crisis-response, Amanda reflected on feeling empowered to take ownership of the Food Distribution Program, sharing that “the leaders that I came in contact with [...] they were pretty like hands off. So it was really nice that they gave me the opportunity to kind of make this [Food Distribution Program] my own.” Within this dynamic, staff shared their knowledge freely with management and other personnel. While discussing what she wished others knew about her work, Gail reflected that “what they know, you know, they make it as an open book,” referring to open communication pathways with the staff she manages.

Harnessing expertise also involved learning from one another through discussion and collaboration. Describing her day-to-day responsibilities, Amanda shared that “when we had meetings, and there were issues, it was nice to have other people who have worked there for longer brainstorm solutions for me.” Amanda's comment reflects a collaborative dynamic in which problem-solving was a shared responsibility. Steering the vision of the organization was also a collaborative practice. For example, while discussing his role, Robert explained that,

I feel like when I go to a board meeting, quite often its like going to class. So I listen to these other board members who have quite often different amount of experience in

different areas than I do. And I think, wow, that's amazing. I didn't know that you know, and so, hopefully, each one of us brings something different to the table.

Being open to diverse skills and knowledge that others bring “to the table” was an important pre-requisite for harnessing personnel’s specialized abilities. Channeling others’ expertise required noticing individuals’ strengths and co-creating opportunities for them to shine. Such opportunities were abundant during the pandemic. For example, when asked how leadership changed during the pandemic, Sophia reflected,

I liked kind of doing this new [re-opening and wellness] committee stuff. And we all have our little skills. Like I really like doing forms and surveys, and [another member] she's got great, good ideas, good, like, policies and procedures. And same with [a third member] they're really big idea thinking. And so it was neat to see everybody's kind of skills coming out that way.

Working in an environment that supported sharing one’s specialized skills and knowledge helped personnel develop mental maps of others’ expertise; when problems arose, or facts needed to be “checked,” most personnel knew who to approach for assistance. Bridging and integrating others’ knowledge was another important component of harnessing expertise. For example, reflecting on feeling supported in her work, Cathy explained that,

I'm learning so much all the time [...] I get to work with all the managers, I get to work with all the programs. [...] And so I get to learn, take little bits and pieces of that, and try to mirror that.

Facilitating knowledge transfer and integration across programs was highly valued by management within LMNH. While discussing how the food programs evolved over the course of the pandemic, Sophia reflected on the valuable role that cross-departmental personnel, like

Cathy, played by connecting the dots within the organization. She shared that Cathy “tried to connect all of like, she has the big picture. And she looks at us. She looks at the food within all the departments. So that's helped me anyways to think about it more holistically.” Pooling diverse perspectives through collaboration constructed a “big picture” understanding of the organization that transcended any one individual’s point of view. While discussing what he wished others knew about his work, Robert commented,

one of the things that inspires me and energizes me is to work together with people who come from different perspectives, both from academic background, non-academic background, hands on skills, cultural differences, ages, age differences, and so on. But to come together and work on a problem and see, hopefully, the sum be greater than the parts.

Robert’s comment reflects that the interpersonal infrastructure was adaptive in response to individuals’ expertise. When personnel brought their unique perspectives and experiences to collective problem solving, they combined expertise to co-create emergent solutions that transcended individuals’ problem-solving abilities.

Harnessing and sharing expertise was critical for personnel to navigate their complex roles. When asked to describe his role, Robert reflected on how effective and sustainable operations required personnel to “meld all this [expertise] together and try to have [...] actors understanding the other's role, and informing each other and helping each other out.” As staff shared knowledge flexibly and openly, they navigated roles that often overlapped, lacked clear boundaries, or were hybrids of diverse responsibilities. The pandemic caused some personnel to, in Robert’s words, “pivot from their normal duties,” which required them to occupy multiple roles, or wear “a couple of hats for the organization.” Under the pressures of the crisis response,

wearing many hats meant that personnel were often expected to pitch in beyond their formal roles, which Cathy viewed as a preventative action to becoming “siloe” as an organization. Reflecting on what she wished others knew about her work, Cathy shared that “It's more than just a job [...] I'm more than happy to pitch in and help out and, you know, I think that was also more a lesson learned. This is, we're not stovepipe, we're not siloe.”

Communication was an important precursor to pivoting and pitching in to fill gaps in support. For example, when asked about his current role, Steve explained that, “Little Mountain started this food program. And the person that was running it asked for some more support. And so luckily, they asked me.” He elaborated that management “sort of pulled me into as extra support for the person that was running the program.” In Steve’s situation, pitching in beyond his role was initiated from the top-down in response to a stated need for more support. Sometimes, personnel pivoted at the grassroots level, such as when volunteers stepped up to support programs affected by staff absences. For example, in describing her work with the Food Distribution Program, Lisa shared that “I'm kind of in charge helping with that because the lady who runs there [...] she's not gonna be there, she's gonna need [my] help.” Pitching in ad hoc, whenever and wherever need was detected, strengthened management’s confidence in personnel and sparked gratitude. For example, while discussing how personnel pitched in to support the Food Distribution Program, Denise shared that “it's been great to kind of have a lot of people to support the team.” Her comment reflects that while personnel were assigned specific roles, their contributions were valued beyond their job descriptions.

At the volunteer level, individuals were encouraged to collaboratively define their roles in conversation with the staff who coordinated them. For example, while discussing what volunteering looked like in the Yard Gardens program, Serena shared,

we're very open to what our volunteer opportunities look like. So it's not even just about signing up for a volunteer role that we already have. We always love suggestions of how we want people to get involved, like sometimes, we've had some volunteers come up, especially in your gardens who have a certain skill set. And we have a discussion together [...] and figure out a position for them, rather than just shoving them into a label or a box that's already been created.

Defining roles outside the “box” was a source of both enthusiasm and apprehension for some personnel. Reflecting on her role in Yard Gardens, Rachel discussed the “logistical challenges” of overcommitment in her loosely defined role, sharing that,

it was this very broad title, which I was really excited about, because there were lots of ideas [... I was] really excited by all of these ideas like being thrown at me like, yeah, I want to do that, too. And then afterwards, realizing the logistical challenges of doing all of those things all at once.

Other personnel shared Rachel’s perspective and offered suggestions about how to improve their roles. For example, when asked how communication could have improved in her work, Amanda explained that “it would have been nice if each staff [...] were given, kind of like what their responsibility would be in aiding the program, that would have provided more structure for what they can actually, you know, help with.” Amanda’s comment demonstrates that the organizational norm of pitching in beyond one’s role amplified the stressors that arose from navigating broadly defined roles during the pandemic. In response to such feedback, personnel in leadership roles demonstrated adaptive learning-in-action by developing new protocols to address emergent issues. For example, reflecting on coordinating volunteers for Yard Gardens, Rachel shared,

something that I've learned that's been like, hugely impactful for me, and also like noticing how successful that's been in the program, is that we broke down all of the things that we needed in this project, and all of the different places that we needed help into individual roles. And so then people could express interest in them. And then we could talk about those different roles. And then they would be solely responsible for that. And they not only knew exactly what was expected of them, but then they saw how that fit into the sort of larger cog of everything we were doing.

From Rachel's perspective, clearly defining roles was "successful" for the program because it helped volunteers understand the bigger picture, which prevented their work from being siloed. Training and capacity building also helped personnel navigate their roles and manage "overwhelm" during the pandemic response. For example, when asked how learning took place, Denise responded that,

I think for staff, definitely getting, we've been learning about training, so just getting more training in place, because we have a lot of clients that are vulnerable, they may have addiction or mental health issues. So just, you know, getting staff trained. We're working on de-escalation, as well [...] So just really preparing staff with those skills, because I know it can be overwhelming.

Through undertaking training together, personnel built shared capacity and enhanced their collective knowledge base. Both of these pathways helped them harness expertise and navigate roles more fluidly and efficiently, thus strengthening the interpersonal infrastructure upon which they relied.

#### 4.2.2: Networks

Networks were the second pillar of responsive self-organization during the pandemic response. Networks emerged and adapted as personnel navigated emotional and mental health



challenges, departments expanded their scope, and the organization charted a path towards a more integrated future. Through strengthening and diversifying interconnections between people and programs, networks both supported and enacted the interpersonal infrastructure upon which communication, coordination, and relationships relied. Sites for network emergence and adaptation included providing social-emotional support, building upon existing organizational infrastructure, and seeking to integrate programs.

Through observing and interacting with others, personnel identified an urgent need for enhanced social-emotional supports during the pandemic. For example, when asked what she would like others to know about her work, Cathy explained,

[T]he importance of the ongoing mental and physical health and that we, I think, some people [...] didn't observe soon enough in some people, that they were having problems or being challenged, the staff people that were being challenged, and volunteers that were being challenged [...] so how do you put the support mechanisms in place? So that's another thing we definitely know, personally, I think we really learned [...] those are things that we need to ensure are in place for people.

Managing others' emotional support needs challenged management and required them to adapt their roles and responsibilities. For example, when asked about the role of creativity during the pandemic, Chris explained that "I would focus more of my leadership on sort of, almost like coaching or, you know, calming people trying to lower their anxiety so that they could get to a place where they felt they could be creative." He elaborated that "part of my role during this time is to be a calming force, so people, my staff [...] convey to the others in the community that we're gonna be okay [...] we're gonna get through this, we're resilient." Through adopting the role of "calming force," Chris communicated reassurance to personnel and community, laying

the foundation for a grounded pandemic response. Other personnel in management adapted their roles in similar ways. For example, when asked how her role changed during the pandemic, Gail explained,

I would say, during COVID, I dealt more with a lot of emotional stress, ensuring that the staff are being heard and listened to, not overwhelmed with the various duties because, of course, it became more difficult to deliver services [...] my job shifted to be more of a mental health support person. And being sort of very cognizant of how people are managing and coping, working during COVID.

Gail's comment frames reflexivity as a precursor to and necessary component of support, demonstrating the interconnectedness between collective mindfulness processes at an interpersonal level. Providing support also required management to be self-aware of their own emotional responses and regulate their reactions for the greater good. Describing how her work was impacted by the pandemic, Sophia explained,

that was a challenge to manage [...] to be like, Oh, my God, someone's freaking out over here. And the other person's completely, just didn't care. So that was, you know, so that was hard. But I try not to panic. I tried not to at all, and I think that was good.

Prioritizing others' support needs often arose from a place of shared understanding. Sophia elaborated that "I did feel people's anxieties. And yeah, and I understood where they came from," illustrating that the roots of the social-emotional support network were grounded in empathy. Discussing what leadership was like during the pandemic, Steve shared that "part of working in this field, is that like people are interested and caring about other people's feelings," explaining that he wanted to "emphasize the importance of holding on to care for each other

while we're doing this work.” Steve’s comment exemplifies the collective value of empathy from which interpersonal support networks evolved.

Managers made changes collaboratively in response to personnel’s support needs as well. Developing a new staff wellness committee during the pandemic is one example of how managers worked together to institutionalize support for their staff. While discussing the mental health impact of the pandemic on personnel, Sophia explained that,

we started a wellness committee because of this, myself and one of my colleagues from the management team. We were getting like both of us had staff that had the anxiety and the stress. And so we thought, Well, why don't we just like start this monthly meeting?

Responding to the same question, Gail elaborated that within the well being committee, “staff had the opportunity to go [...] and just chat. It was just a committee and an informal group of people getting together just to you know, here's a YouTube video on meditation or something like that, you know, gives them skills and tools that they may or may not already have in their own toolbox [...] just as simple as you know, go out for a walk, take 15 minute breaks, do some kind of meditation, that sort of thing.

The establishment of the wellness committee was greatly appreciated by staff, who felt cared about and prioritized by leadership. Discussing the wellness committee from a staff perspective, Cathy explained that

there's always some education perspective, and just around how can we better support you?[...]I have a lot of respect for the leadership in that this is important. People's mental health and well being is important

Feeling like their wellbeing was valued led staff to reflect on LMNH's collaborative and egalitarian culture. When asked about what leadership was like during the pandemic, Serena shared that,

it didn't almost feel like it was a job, it felt more like a collaborative effort. And so I definitely didn't get the sense of that someone was above me or I was below them. It really was a strong sense of community, like we're all working together, and we all play a role in this, that's equally as important.

Working together as equals built a resilient network of support among volunteers, staff, managers, and leadership. This network extended to community members as well, who both benefited from and contributed to LMNH's resilience. When asked what resilience meant to the organization during the pandemic, Chris explained that,

I think our organization showed that I think the staff, you know, pulled together volunteers, community members all really just pulled together and said, How do we support each other? And that, I think that, you know, really connect, you know, sort of strengthen some bonds with people in a positive way.

Strengthening the interpersonal infrastructure through building social-emotional support networks coincided with building on existing programs and resources to expand and improve operations. Programs and services that pre-dated the pandemic acted as a foundation from which to adapt, improvise, innovate, and expand in response to new opportunities, challenges, and needs. Work to strengthen and diversify food programs at the neighbourhood house began long before the pandemic struck. When asked to describe a timeline of food security programs at LMNH, Chris explained that,

a couple years before the pandemic, we had, I think that the organization recognized the need for more of a better understanding and a focus on around food in general. So we applied to the federal government and became a Good Food organization [...] So I think that gave us both, we did training around it within our organization, identified where was food happening, and where were the gaps and that sort of thing. And how do you sort of the production and the delivery of food with dignity, those kinds of ethical issues around how to respectfully distribute food and food choices.

Strengthening the collective knowledge and resource base pre-COVID positioned LMNH to respond swiftly to needs revealed by the pandemic. Discussing how the Food Distribution Program originated, Gail shared that,

[When] COVID hit, and we had to shift something [...] the food bank, I think they contacted us, and asked, Would you like to become a food hub? We said yes, which then became sort of the beginning of our Food Distribution Program. At the same time, we there was monies coming in or monies being offered through Canada food access funds. So it all kind of I'm gonna say hit [...] that's when sort of the Food Distribution Program initially started. [...] And from there, it's sort of, I'm gonna say, somewhat skyrocketed. You know, Boom.

When asked how he saw things looking in the future, Varouj reflected on how the Food Distribution Program had evolved up to this point, sharing that “that's a neat thing with the neighbourhood house because it wasn't like, starting from scratch, you know, you already have things and then I think they just piggyback, and it's created new ideas, it became quite creative that way.” Varouj’s comment illustrates how aspects of dynamic reflexivity, such as creativity, were engaged through adapting and building upon existing programs in the pandemic context.

Through collective adaptation to the pandemic, personnel identified synergies emerging from the interaction of new and pre-existing food programs, while acknowledging a shared desire to strengthen interrelationships between these programs (specifically, the Riley Park Garden, Yard Gardens, and the Food Distribution Program). For example, discussing how she viewed things being in the future, Sophia reflected that, “there's like three, three big food things. And they're, they're connected, but they're a little bit disconnected as well.” She elaborated that,

I feel like there's a little bit of, there's going to be some growing pains going forward a little bit just to talk about the structure of how that [integration] will look. And, but it's exciting at the same time, like to see the potential and just to have those conversations, like people have such exciting ideas and, and the desire to do new programs and include food.

In the midst of the pandemic, enhancing the alignment between programs was a growing organizational priority. For example, when asked how leadership had changed during the pandemic, Serena shared that “we're trying to figure out a way to incorporate all our food programs equally and create more of like a unified sense to the programs.” She elaborated that “I think we're all on the same page is in terms of where we want the program to go. But in terms of just how exactly we want it to look like, people can have different ideas.”

Creating, enhancing, and harnessing synergies was a driving force behind the shared goal of program integration. Reflecting on interconnections between the Riley Park Community Garden, Yard Gardens, and Food Distribution Program, Denise shared that “I do feel like there's definitely some synergies to maintain it.” While these programs shared resources and operated with the common goal to strengthen neighbourhood food security, Denise attributed such synergies to interdepartmental collaboration. She explained that, “I feel like it's been very

collaborative. I feel like we've had different staff from different departments contributing to the program[s]. Yeah, it's definitely been a collaborative experience.” As a result, personnel viewed food programs at the neighbourhood house as highly interdependent and complex; for example, Rachel referred to them as “a huge web.”

This overlapping network of food programs and personnel responsibilities was grounded in shared organizational values. When asked how organizational vision had shifted during the pandemic, Chris reflected that “we've sort of always seen food distribution and food security, as food in general is sort of a way to help connect people.” While describing how food programs evolved at LMNH, Sophia echoed this sentiment, sharing that,

A lot of our programs have a little bit of food. Like whether we provide a snack or you know, there's always food in the programs [...] there's always food. And I think that's really something that connects all of the cultures and backgrounds is food [...] even though we don't openly say it or maybe even admit it but I think we all know the value of it. Like, how important it is for people to feel - it's a way, is a way to welcome people as well, like just maybe they missed a meal or their child missed a meal. And they, you know, at least we have something there for them. And it's also a way to, to break the ice a little bit. It's a social environment where they're just, they're talking and they can have a conversation over coffee, and you know, something. So yeah, I think all of us across departments really value, value food.

Sophia's reflection demonstrates how food permeates the organization, brings staff and clients together across programs, and constructs a nexus between vision, values, and implementation. Prior to the pandemic, organizational priorities were increasingly grounded in food security. Once the pandemic hit, this grounding enabled personnel to rapidly self-organize

into networks of support and collaboration that were responsive to heightened community food security needs. Sustained awareness of personnel and community needs enabled the organization to continue to self-organize responsively throughout the pandemic, such as through working to integrate food programs to a greater degree in the future.

#### 4.2.3: Boundaries

As personnel self-organized through roles and networks in response to the pandemic, establishing adaptive boundaries was a necessity. Since personnel occupied flexible and overlapping roles, and participated in collaborative support networks, clear boundaries were essential for programs to run smoothly while maintaining social-emotional well-being. From a complexity science perspective, the term “boundary” refers to a “socially constructed reference point which connects (not separates) a system with its environment” (Gear et al., 2018, p. 2). Within the pandemic response, personnel constructed boundaries personally, interpersonally, and between the organization and community, which contributed to self-organization.

Personnel viewed setting boundaries as an essential learning process during the pandemic response. For example, when asked how learning took place during the pandemic, Denise responded that,

what I'm learning is that I have to be basically clear with my boundaries [...] sometimes you want to say yes, yes, yes to try to help but you have to learn how to say no and have your boundaries sometimes.

She continued to describe the different types of boundaries that were essential in her work, elaborating that,

I think the boundaries, you know, can be a boundary with a volunteer, boundary with the participant, boundary with who you're reporting to, you know, as a staff person, [it] can



be the boundary with just the Food Distribution Program in general [...] So yeah, the word boundaries can be used in a lot of different contexts.

On a personal level, boundaries were essential to protect mental health and prevent burnout. When asked about lessons learned, for example, one staff (who asked to remain anonymous) reflected on the importance of boundaries in their work with the Food Distribution Program. They shared that,

I think setting up clear boundaries for myself, is something that I took away a lot from, just with, not only with the staff, but also with the community members, like a lot of them when asked to come in on a different day. And I would try to accommodate for that. But at the end of the day, I only have so much time. So I think I have to put my like, my drive and motivation aside and just stick with what needs to be done for me to not burn out.

This staff's comment illustrates the inner conflict that personnel experienced while trying to respond to community needs and manage their own well-being. In this context, boundaries were an essential resource to limit overwhelm and prevent burnout. Other staff, such as Cathy, elaborated on the significance of boundaries in the Food Distribution Program, likening boundaries to "backbone." When asked what she would like others to know about her work, Cathy reflected that,

you needed to [...have] backbone. You know, inner strength to be able to deal, to look people in the eye? And to say, yeah, yeah. Sorry, we're out of food. Or you know, sorry. Right, and to feel okay, that you've done that, and to have the support systems in place, so that your mental health and your physical health are not impacted

Personal boundaries rested on a foundation of shared boundaries co-created within the Food Distribution Program to ensure its survival. Discussing the evolution of food programs

during the pandemic, Varouj reflected that, “So we're talking about boundaries, there was you know, it was how far can you go right to serve. So we had to kind of realize our limits was within neighborhood house, you know?”. Limits placed on the Food Distribution Program from within the neighbourhood house included shrinking the geographic region served, prioritizing in-person pick-up over delivery, and stretching funding dollars by emphasizing food over gift cards. When asked to describe what conflict looked like in his work with LMNH, Anthony reflected on how personnel worked together to make tough decisions and set limits for the Food Distribution Program. He explained that,

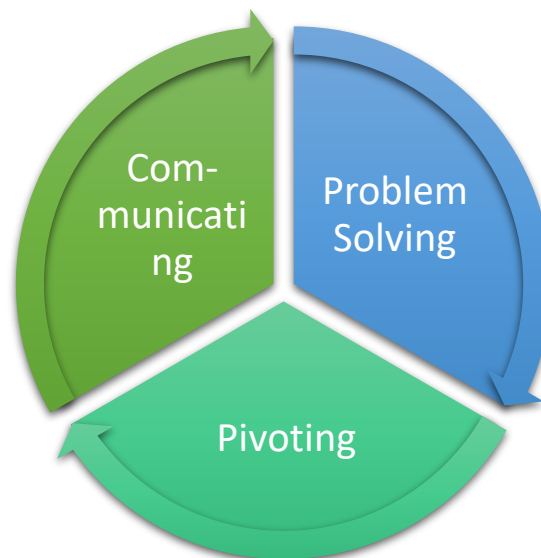
[T]here was a lot of families that we were handling, I think we had to come to this like conclusion of like, well, there's not enough money to support everyone in Vancouver. So let's set up these like boundaries [...] no one wanted to make this decision of like, telling people that you can't come anymore. But I don't think that there was anyone that was like, really hard pressed, fighting, fighting against it, because it was it, you know, there wasn't enough resources. So in the end, I think that it's like discussed enough that we do come to this, like, mutual agreement, because, you know, that it's not possible.

Anthony's remark demonstrates the tension between idealism and realism that surfaced in LMNH's food response work. While shared values, such as serving community, encouraged personnel to expand programs in response to community needs, limited physical, financial, and personal resources required boundaries to be clearly defined on individual and collective scales. Such boundaries were ultimately a safeguard for sustainability, and enabled personnel to continue to serve community effectively despite the ongoing interpersonal and emotional toll of the COVID-19 pandemic.

#### 4.3: Flexible Co-Evolution – Communicating, Problem Solving, and Pivoting

Co-evolution refers to a continuous process of adaptation driven by interaction with others and the environment (Gear et al., 2018). Through this process, information exchange generates changes in action repertoires that link past behavior to present and future action and modify the environment itself (Anderson et al., 2005; McDaniel & Driebe, 2001). Within LMNH’s response to the COVID-19 pandemic, co-evolution was enacted through a cycle of communicating, problem solving, and pivoting among neighbourhood house personnel (see Fig. 8). Communicating facilitated information exchange and included checking in with one another, clarifying confusions, and managing misunderstandings proactively. Pivoting was enacted through innovation and action that were sensitive to new information and attuned with the evolving context. Problem solving arose through collaborative decision-making, judicious conflict resolution, and slowing down to plan for sustainability. The three stages of the flexible co-evolution cycle propelled one another forward interdependently as the organization coped with the ongoing crisis.

*Figure 8 - The Flexible Co-Evolution Process*



#### 4.3.1: Communicating

Communicating is the first stage of the flexible co-evolution cycle. In this phase, personnel shared, discussed, and integrated information into the organizational knowledge base. When misunderstandings arose, they sought clarity through checking in and using alternate modes of communication. Personnel overcame barriers to understanding through proactively identifying issues and troubleshooting responsively. Listening to others with a growth mindset enhanced personnel's openness to constructive criticism and helped them balance communication processes and outcomes.

During the pandemic response, "checking in" formed the foundation for effective and mutual communication. Personnel checked in with one another often through informal conversations and formalized debriefing processes. For example, when asked how decisions were made in the Food Distribution Program, Denise explained that,

We meet weekly. So every Monday, we're debriefing. Well, we basically debrief in the morning on the Friday and after the program. And then on Monday, we take the feedback from that volunteer team and the two staff that are working on that day, and then we debrief on Monday to kind of review the decisions.

Denise assessed the effectiveness of this communication structure, reflecting that, "I feel like we are we're doing a good job of that, like, definitely with our debriefs and checking in with our, with our team at the beginning and end of our actual food distribution days." Her comment illustrates how communication within the Food Distribution Program was rooted in checking in with one another. Other personnel also felt that this communication model was important and effective. For example, when asked how leadership changed during the pandemic, Steve reflected that,

the thing that I really like about this program is that we, we were doing it kind of casually, but we sort of formalized the like a debrief process at the end of each Friday to talk about what went well, what could go better, and also, like, recognizing that sometimes it can be quite an emotional experience for people to, to be working with people that are struggling.

From Steve's perspective, check-ins were as much about providing emotional support as they were opportunities for knowledge exchange. Cathy echoed this perspective, positioning checking in as a practice that strengthened team bonds. Discussing how situations were handled when things didn't go according to plan, she explained that the Food Distribution Program manager "has really pulled together the food distribution team [...] with her check-ins, check-outs and how she does that." Other personnel viewed checking in as a vital practice for conflict prevention. For example, when asked how conflict was handled, Sophia shared that "checking in was really important. Before the conflicts happen, I guess." She elaborated that,

We check in pretty frequently, a couple of my colleagues, so the team of us is six. So we check in like, pretty frequently, almost on a daily basis, but there's a few that we don't check in with and then there's communication breakdown [...] I check in with my staff [...] on a one on one basis. I check in with them at least once a week, maybe twice. And they approach me and like, yeah, so it's, it's good. There's a good communication there.

Sophia described a dynamic of fluid check-ins that were informally structured into her interactions with colleagues and staff. She shared that she sometimes felt that "it's gonna be a disaster if we don't talk about this," suggesting that clear communication was crucial to avoid catastrophic misunderstandings. When asked what she had learned through her work with the

pandemic response, Denise also reflected on the importance of clear communication to prevent breakdowns, sharing that,

So it's just really learning communication, and who we're communicating to, and redirecting that staff person back to the appropriate manager, having more, you know, clear communication with the other manager, you know, and actually inviting her to our meetings [...] So I feel like the communication piece is really, really paramount, because there has been a few times where there has been some breakdowns.

Denise's comment illustrates that effective communication was not linear, and instead involved an informal system of redirection and looping each other in to generate shared understandings. However, enacting such circuitous communication pathways was complicated by remote work and reliance on email correspondence. Discussing challenges encountered in her work, Serena reflected that "a lot of people have different ideas. And of course, it's hard to communicate when you're not in person. And there's so many different email threads."

Elaborating on how conflict was handled in her work, Sophia also shed light on how communication breakdowns arose through email correspondence, sharing that,

I think part of it is, is the working from home even, even though it's so good in many ways, it's also there was email conflicts or conflicts that started via email sometimes, coupled with the stress and the anxiety and being overworked [...] I think all of that contributed to like a miscommunication in a few situations with emails, like people interpreted tones, maybe the wrong way, so there was a few situations where the communication was definitely breaking down. And I think, again, it was because of the stress because or because we misread the emails, and we weren't there at the office to talk about it. So we're just at home like imagining this situation, which may or may not have

been the case, but it definitely, yeah, I could see where being together at the office, it might not have happened.

Sophia's comment sheds light on the context in which communication breakdowns were likely to arise, which was characterized by a tense interpersonal landscape and emotional overwhelm. Rachel emphasized that communicating via email amplified misunderstandings and made individuals' intentions more difficult to interpret and clarify. When asked about the difference between email and in person communication, she shared that,

I think maybe [the difference is] being able to clarify if someone doesn't understand. So if you're emailing, sometimes a response wouldn't make sense to someone or the context all of a sudden wouldn't make sense. But it would still be an answer, it was just sort of the wrong answer. Whereas you could kind of ask more follow up questions, and really understand that both people were on the same page during a meeting. Yeah. And also, I think, just emails take a lot of work, in terms of writing them. And so sometimes, like just having to be back and forth all of the time was, like, quite exhausting. And then you would get shorter answers that just weren't as complete just because of the amount of extra work it was to do via email.

Personnel shared the view that, regardless of the mode of communication, listening to one another and being able to ask clarifying questions were imperative to both understanding others and being understood. For example, when asked how she communicated with colleagues during the pandemic response, Denise explained that,

I think it's important that they're hearing the message, they're under there understanding it, giving them the space to ask questions. And if they're curious, or they're confused, I think it's really important that we're able to answer those questions. And I know, like,

working in such a fast-paced environment, like, sometimes that may get lost. So I think it's really important that we give space to staff or even volunteers.

Giving space involved listening to others' concerns with a collaborative, growth-oriented mindset. For example, when asked about how leadership changed during the pandemic, Serena explained that "it's more about a collaborative effort where I want to listen to you. So how can I be a good listener, but at the same time, still get what we need done?". Her comment highlights the difficult balancing act of voicing and receiving opinions while implementing necessary actions. Discussing how decisions were made, Denise reflected that "definitely just listening [is important]. I think just being open to receive the feedback even when it's bad." Denise's perspective demonstrates an openness to critical feedback and a willingness to learn from past errors or inadequacies. Through approaching communication in this way, personnel were able to talk through potential issues before they escalated, building shared understandings and enhancing interpersonal relationships in the process.

#### 4.3.2: Problem Solving

Collaborative decision-making and consensus building were primary pathways for problem solving during the pandemic response. Talking it out, brainstorming, and weighing in on one another's ideas drove decision-making and compromise amidst conditions of pervasive uncertainty. Despite operating within an "on paper" hierarchy of managers, staff, and volunteers, equal consideration was given to opinions voiced from across this structure. As a result, collective voice was strengthened in tandem with norms of open-mindedness and empathic listening.

The pressures of the pandemic required quick thinking simultaneous with action, which engaged personnel in ongoing constructive dialogue. Throughout the crisis response, decisions were made as a team subject to approval from management, which was rarely withheld. For



example, when asked how decisions were made, Anthony shared that,

in the end, the final say goes to the managers, but [...] I feel like even though, like, you know, there's always a decision, like always a person that can say yes or no, I've never felt like there was somebody that was like, opposed to something that was explained and was reasonable. I've never noticed that. [...] I would say that the team makes the decision really in the end, because we just like talk it through until we have come to a conclusion.

Anthony's comment illustrates how consensus building operated as a default pathway for decision making. Despite the inherent power differential between managers, staff, and volunteers, they co-operated as equals to make and implement difficult choices together. Denise reflected on how decisions were made from a management perspective, sharing that,

I feel like the decision making is a is a team process, and just you know, taking their ideas, I think they've got a lot of great ideas to share. So and then just trying to support the ones that we feel as a team that we want to support and hopefully get them approved.

Denise's reflection demonstrates that management acted in a facilitation role, encouraging participatory decision making and fostering team voice. Within this model, staff usually felt comfortable sharing their ideas and seeking feedback from others. For example, when asked what decision making looked like in her role, Amanda explained that,

As for brainstorming, I had a lot of ideas [...] And I would kind of propose this to the team on Mondays when we had our weekly meetings to be like, Hey, what do you guys think about this? And they would say like, Yes, that sounds great, or no.

In situations where personnel didn't agree on a decision, they continued discussing until they reached a compromise. Reflecting on what happened when personnel didn't see eye-to-eye,

Serena explained that compromise was constructed through solutions-oriented discussion, sharing that,

[W]e have weekly meetings, and it's more of like a discussion base, and we get our [...] volunteers involved as well. And they get to throw in ideas and more of a collaborative effort [...] we find middle ground with each other [...] if there are cases where maybe we disagree on a certain thing, we'll chat about it. And then maybe we'll turn more into a compromise. But we usually always find a solution at the end of the meeting. So [there] hasn't been any issues like that yet.

When disagreements persisted, personnel sought to understand each others' perspectives and find common ground, which required an open mind. For example, discussing leadership during the pandemic response, Anthony reflected that,

a lot of people were really willing to compromise. Because I think when you're given such an extraordinary challenge, you have to be open minded to how you're going to address stuff [...] I just haven't really seen that happen, where like, two people both have ideas, and they like are so far opposed, that we haven't been able to come to a conclusion [by] talking it through. And that's kind of why [...] it's always compromising.

From Anthony's perspective, the challenging conditions of the pandemic primed personnel for compromising, framing collaborative communication not only as essential to navigating the pandemic as an organization, but also as an emergent property of the crisis response. Chris shared this view, linking collaborative decision-making to being thrust into organizational "start-up" mode by the pandemic. Describing how decisions were made during the crisis response, Chris reflected that,

I haven't been part of many start-ups, but I think that the decisions are sort of uh, everyone just throws ideas in the pot, and they sort of get, you know, filtered up or filtered down and everyone's sounds good. Let's go.

He elaborated that “you're sort of in a response of, ‘let's do something mode’ and so I think, yeah, I'm trying to describe that sense of quite an organic process of you know, how different things came together.”

Operating in “let’s do something mode” illustrated how co-evolution emerged through interaction between collective mindset and behavior in response to the COVID-19 crisis. Such co-evolution was mediated through interactive brainstorming, discussion, decision-making, and implementation under trying crisis conditions. However, over time personnel discovered that operating in “start-up” mode was not sustainable in the long term due to overwhelming demands on human and financial resources. Reflecting on the evolution of the Food Distribution Program, Denise shared that “after the first fiscal year [...] we had to really make some tough decisions to say that, you know, we don't have the capacity, staff are getting burned out, we need to you know, re-evaluate the program.”

Working towards more sustainable operations, personnel approached “tough decisions” through the same collaborative, consensus-building processes that they employed in “startup” mode. For example, when asked how conflict was handled within his team, Steve reflected on an instance in which they were asked to make an exception for a client within the Food Distribution Program, explaining that,

We just had a meeting this morning [...] about like making an exception for one person [...] And I was like, honestly, I’m sitting on the fence on this. I can’t decide this is a good

idea or not. My heart wants to do this. But is it a good idea? And so we talked about it.

And we decided, no, it wasn't a good idea, because this is how things got out of hand.

Steve's account demonstrates how lessons learned earlier in the pandemic response were incorporated into collective decision-making to improve the sustainability of future operations. Some personnel viewed solving problems together in this way as both a natural outcome of crisis and a foundation for organizational and community resilience. For example, reflecting on how leadership and decision-making took place during the pandemic, Sophia explained that,

I think in a crisis, you know, people can come together and they bring out the best, to problem solve and to find a solution. So, yeah, I think that was good [...] that helps the organization as well. Because, you know, if we're okay, like, you know, then everybody else, you know, will feel okay, hopefully, as well.

Across the organization, personnel also slowed down decision-making in order to shift into a more sustainable mode of operating. For example, when asked how conflict was handled, Anthony explained that "if we want to make a change [...] there's a bit of like, a 'let's not go too quickly' question. Because I think that was something that was kind of challenging at the beginning [...] it kind of got out of our hands." Rachel emphasized the importance of slowing things down from the perspective of community impact, sharing that "just really taking the time to actually slow down and think through the logistics and think through what's needed is like really helpful for any kind of food impact." Serena echoed this perspective, reflecting on how slowing down can contribute to systems redesign in ways that benefit community. Describing silver linings in her work, she shared that,

one good thing is that I feel like we're all slowing down and rethinking the systems that we have in place, not even just in terms of like health and safety, but in terms of like how

we can build a community better, and how we can support our communities. So I think everyone kind of seems to slow down and really rethink the design and model that we have. So now there's more ideas coming up. And we're taking more time to restructure what we've put in place, which I think is a good thing.

Serena's comment illustrates how, through co-evolution, change rippled out through the organization and into the community. Collective processes of decision-making and problem solving, coupled with learning from past experiences and implementing lessons learned, drove co-evolution in group mindset and behavior and acted as a foundation for systems change. Together, these processes generated adaptation in the next phase of the flexible co-evolution cycle: pivoting.

#### 4.3.3: Pivoting

Pivoting refers to adaptation-in-action that arose in response to the challenges and opportunities of the pandemic. It entails considering both present needs and the organization's history in order to rapidly develop and implement changes. Pivoting was enacted collaboratively by personnel across the organization and was grounded in both dynamic reflexivity and responsive self-organization. Awareness and reframing drove detection of opportunities to pivot, while roles, networks, and boundaries were sites in which pivoting was enacted.

Pivoting was frequently catalysed by current or anticipated challenges, such as lack of physical space within the neighbourhood house. Sophia summarized the space issue in a nutshell, sharing that "our space is just so limited and crowded at Little Mountain, like we're always fighting for – all the departments are fighting for space." Robert elaborated on how the pandemic exacerbated pre-existing space constraints, reflecting that,

we have tremendous constraints because of the size of our building and when COVID hit, it was like, it's a no go area. [...] And so it was an ongoing constraint before COVID and it became an extreme one following COVID

Robert explained that, even a year and a half into the pandemic, “we still are heavily limited by our physical facilities.” Limited physical space was described as an operational constraint by 9 out of the 15 personnel I interviewed, despite the fact that I did not ask them about the physical space directly. For example, Cathy discussed the implications of working within a small space during the crisis response, explaining that, “we don’t have enough to cook and feed people [...] that’s a limitation.”

In the face of this major challenge, pivoting involved making use of any available space outside of dedicated food storage areas, which impacted personnel’s’ ability to use those spaces for other purposes. Describing how the food programs evolved during the crisis response, Sophia reflected on the implications of pivoting in this way, sharing that,

The food is everywhere. I think it's all in the kitchen and multipurpose room, it's going down to the basement. You know, it's in the other side where the lunch room was, there's a huge freezer in there. So that room, you know, we can't use that room anymore, really for meetings, which doesn't really matter to me, but it's just one less room right? Or a couple of less rooms that we have for already a very tight space.

Sophia’s comment at once acknowledges the loss of functional space caused by overflowing food storage and minimizes its effects. Her commentary demonstrates that pivoting can entail mental justification and is not just a physical act employed to cope with challenges.

As the pandemic unfolded, the neighbourhood house underwent a “huge transition,” as Varouj described it, with pivoting at its core. According to several personnel, pivoting is what

enabled the organization to function, adapt, and innovate through the crisis response and carve out a path to sustainable future operations. When asked to describe a timeline of the food response, Cathy explained that,

around mid March [...] it was like, Oh, the neighborhood house, we're closing. And so how do you shift from having this overflowing house of activity, where it didn't matter which program you were running, it could be a citizenship class, that there was always food being provided. And in some cases, while we didn't identify it as being food security, providing that food was a major support to families and to people [...] that stopped. And so how do you pivot [?]

Reflecting along these lines, Robert described how pivoting took place through redistribution of human resources towards food security activities, sharing that,

we found that some of the programs couldn't be offered. So it required then some pivoting in terms of responsibilities for staff to do other things. And I think that the food security program was an area that some of this additional capacity got deployed into.

Sophia elaborated on this view, sharing that "I think you know, again, because of COVID I think we had to adapt and explore different programming and food was definitely one of them." Sophia and Robert's comments demonstrate that pivoting was catalysed by opportunities as well as challenges, a point of view that Steve echoed. When asked how he saw things looking in the future, he explained that,

I think there's been a recognition that, you know, there's a strong need, I mean, in every community, there's a strong need for this kind of support. [...] the pandemic has provided

this opportunity to, for people that are willing to put the effort in [...] to leverage that into, you know, having funders support a continued food program.

According to multiple personnel, funding opportunities for emergency food distribution proliferated in the early days of the pandemic. As Denise reflected, “the good side of [the pandemic] is the funding that's been allocated to food, because it's been definitely an area, definitely in the sector that's been underfunded.” Capitalizing on emergent funding opportunities required leveraging existing food programs, redistributing human resources, and being aware of and responsive to community needs. For example, when asked about how the pandemic affected her work, Denise elaborated that LMNH’s goal was

just being responsive, I think, you know, not a lot of people have responded to the needs that have been highlighted during the pandemic. So I think it's been really good to see the neighborhood house be responsive to something that's been happening in the community. And it feels really good that they prioritized it.

Pivoting as an organization required ongoing management of opportunities, challenges, and synergies. From his upper-leadership role, Chris described how the organization pivoted while navigating the confluence of opportunities and needs generated by the pandemic, explaining that,

as the pandemic hit a couple of things happened, right then one is the federal government gave monies through United Way to provide emergency food and as well as through the Good Food Foundation [...] that gave us the financial support to start to ramp up a whole approach to increasing our food distribution. At the same time, as you know, our frontline staff were identifying families and seniors and other pockets of our community that were food insecure. So it's very much sort of a number of things coming together over a



number of years that took us to that moment and gave us the opportunity to sort of start to build a somewhat of a robust response to food insecurity, as COVID hit us.

Chris' comment, which demonstrates strong reflexivity on an organizational scale, constructs a narrative that grounds adaptation in a fortuitous combination of chance and latent capacity that was "a number of years" in the making. While the foundation for pivoting successfully was laid long before the pandemic, it took "shaking the tree of the organization" for potential adaptations to be put into action. Reflecting on how she saw things looking in the future, Sophia elaborated that,

It's almost like we were forced to like, because we've been kind of [...] moving along, and like, nothing really happens. And then all of a sudden, you know, we get like, forced into making a change. And I think it was kind of time for a bit of a change.

Chris echoed this perspective, reflecting that,

I think, you know, that that sort of shaking, shaking the tree of the organization, it's actually quite, can be quite healthy. And often it happens when you have a change of leadership or a change, you know, there's some major change that causes it. But I would say we shouldn't wait for leadership change, you just gotta, you got to shake it up to make sure that you're keeping things fresh and like you're keeping, asking those questions. And you're curious about how change, the impact of changes that will be made.

Sophia and Chris' perspectives demonstrate an openness to change that was instrumental to pivoting successfully as an organization in response to the COVID-19 crisis. Sophia, Chris, and other personnel I spoke with emphasized the value of being responsive to emergent needs and opportunities, which appeared to be a shared core value across management, staff, and volunteers. Adapting to fluctuating global, community, and organizational conditions required

personnel to communicate and collaborate under pressure for an extended – and potentially indefinite – period of time. The determinants of their collective capacity for adaptation included reflexivity and self-organization, which created a culture of awareness and a versatile interpersonal infrastructure within which people and environment mindfully co-evolved. Reflecting on the transformative effects of the pandemic on the organization, Chris concluded that,

it's healthy, and it's really good for an organization to, to go into that sort of startup mode. And in certain aspects, because it allows, it does allow for a lot of synergy and a lot of creativity and a lot of innovation and a flow of ideas. And it's not held back by structures that you need to have in place in order to run organizations and things like that for the long term. So, you know, I think that that was a good lesson and a good reminder.

From Chris' perspective, the high-pressure conditions of the pandemic were a catalyst for beneficial changes within LMNH. Across the 15 interviews that I conducted, this sentiment was universally shared by personnel. As a collective, personnel at LMNH felt positively about the organization's food security response to the pandemic and were proud of their role within it. From analysing their experiences, it is clear that through interrelated processes of reflexivity, self-organization, and co-evolution, the organizational system – and people who enacted it – embodied mindfulness and learning in their collective crisis response, which generated organizational resilience as an emergent system property.

## Chapter 5: Conclusions & Implications

### 5.1 Summary

Through this research, I sought to understand the nature of collective mindfulness within non-profit organizations' responses to crises. To do so, I conducted a participatory-action case study of Little Mountain Neighbourhood House's food security response to the COVID-19 pandemic with fifteen participants. Throughout research design, data collection, and data analysis, I worked collaboratively with participants to identify their goals for the research and seek feedback on the relevance of emergent findings. In my researcher role, I led with deep awareness of my positionality.

The design of this research was grounded in complexity science as a conceptual framework and guiding qualitative methodology. This grounding allowed the research question to be investigated as a system through focusing on how interactions, processes, boundaries, and synergies interrelated within LMNH's crisis response. Employing a responsive approach to interviewing, which was empathic and attuned to participants' experiences, facilitated ongoing adaptation of interview questions in response to emerging themes. Conducting data analysis in a phronetic-iterative fashion allowed for alternating between emic framings and etic interpretations of the data. Data analysis procedures included descriptive coding, metaphor coding, arts-based analysis, complexity theory coding, and codeweaving.

Analysis revealed that LMNH enacted collective mindfulness through interdependent processes of dynamic reflexivity, responsive self-organization, and flexible co-evolution during their crisis response, which generated resilience as an emergent system property. Dynamic reflexivity was enacted through a cycle of perceiving, reframing, and learning, which enhanced collective awareness of opportunities and threats, generated cognitive flexibility, and primed personnel for action. Responsive self-organization took place through adaptive changes to roles,

networks, and boundaries within the interpersonal infrastructure, which generated supportive patterns of interaction. Flexible co-evolution involved interrelated processes of communicating, problem solving, and pivoting that enabled LMNH to respond favorably to changing conditions, cope with conflicts, and transition towards sustainability. Together, these processes interactively constructed mindfulness and enhanced LMNH's ability to predict challenges, navigate disruptions, and manage variable conditions. In this way, organizational resilience emerged through the enactment of collective mindfulness.

## 5.2 Limitations

Like all research grounded in a post-structuralist paradigm, my research does not intend to describe a universal or objective truth. Rather, I acknowledge that my research was highly subjective and limited in several important ways. Subjectivity is a characteristic of qualitative research that I view as a strength. Part investigation, part storytelling, qualitative research humanizes the process of scholarly inquiry in ways that mirror the lives we live. Talking with people about their experiences is not the same as measuring them; dialogue is creative and reconstructive, involves memory and emotion, and is a collaborative experience in which meaning is co-created between speaker and listener. Through dialogical processes of meaning-making, interpretation is fluid, not fixed. Therefore, to affix meaning to words, words to the page, in reporting my findings is like taking a snapshot of a butterfly in flight – it conveys a truth held captive to the frame, but which in reality continues to beat its wings beyond the lens.

Interpreting my participants' speech through the looking glass of metaphor was both liberating and daunting. It freed me to explore my participants' words as a portal to their worlds, yet risked reflecting too much of myself – my own ideas, biases, and assumptions – back to me. To account for this risk, I layered my metaphorical interpretations with complimentary modes of

analysis, such as descriptive coding, which conveyed more straight-forward emic meanings. In doing so, I was able to construct an explanatory schema, or skeleton, to report my findings based on more literal interpretations developed through descriptive coding, and add fleshy details to this schema based on the metaphorical nuances I uncovered.

Conducting my data analysis in a phronetic-iterative fashion, in which descriptive, metaphorical, arts-based, and complexity theory analysis practices were intertwined, felt like speaking multiple languages at times. Just as certain meanings are possible in some languages, and not in others, so too were different insights available to me through diverse data analysis practices. While I became fluent in each language through practicing it, translating between languages was a challenge when it came time to write up my results. To navigate this dilemma, I tried to report my findings in the clearest language possible that would be accessible to most readers; in doing so, some nuances were lost, which reflects a limitation of my translation rather than of the content of my results.

Developing my research as a case study allowed me to look deeply into LMNH's crisis response through interviews and analysis over the course of the past year. Being able to dedicate sustained attention and detailed focus to their experience was vital in order to construct a theory of collective mindfulness based on my observations and interpretations. While digging a deep well was essential in my work with LMNH, I acknowledge that doing so limits the generalizability of my results. With this in mind, I hope that my theory can serve as a starting point for other researchers to build upon in their work on collective mindfulness within non-profit organizations facing crises.

In claiming that non-profit organizations such as LMNH may enact collective mindfulness through interrelated processes of reflexivity, self-organization, and co-evolution

during crisis situations, I do not mean that organizations explicitly set out to enact these processes. On the contrary, the goal of this research was to make sense of the practices that people and organizations deliberately employ – such as being aware of others’ needs, wearing many hats in their roles, and making decisions collaboratively – in terms of their contributions to collective mindfulness processes. Doing so allows for explication of the patterning and relationships between these practices and description of how they function together on an organizational scale. Focusing analysis in this way was useful because it enabled me to generate a theory that connected everyday practices to collective mindfulness processes. My hope is that such theory may serve as a tool for reflection for other non-profit organizations and enable them to understand their own operations through the lens of complexity science. Developing this type of organizational knowledge may enable organizations to make changes to operational processes and practices that enhance collective mindfulness through a beneficial ripple effect, rather than making many small, disconnected changes that may not amount to systemic change

## 5.3 Implications

### 5.3.1: Theory

My analysis contributes novel insights into how collective mindfulness functions within non-profits facing crises. To the best of my knowledge, collective mindfulness in crisis situations had not previously been studied within non-profit organizations, and especially not through a complexity theory lens. Bridging these new frontiers through my case study generated a new non-profit specific, complexity-based theory of collective mindfulness in crisis that both affirms and extends what is known in the literature.

Viewing collective mindfulness as an outcome of reflexivity, self-organization, and co-evolution grounds mindfulness within a systems view of non-profit organizations. This framing is important because non-profits operate within fluid operational contexts that are dependent on

variable funding, volunteer labor, and the needs of the populations they serve. Thinking about non-profit organizations as systems centers the continuous adaptation required to function even in non-crisis circumstances, as the ability to sustain operations is never a given (Gorley, 2012). Viewing non-profit organizations in this way is also vital in order to investigate their situatedness within community, of which boundary-crossing interactions with funders, partners, and the populations they serve are defining characteristics.

The three stages of the dynamic reflexivity cycle – perceiving, reframing, and learning – demonstrate how collective mindfulness enables non-profit organizational systems to predict and prevent crises through enhanced awareness, flexibility in cognition, and readiness for adaptive action. This finding suggests that collective mindfulness plays a similar role in proactive threat detection and response within non-profits as it does within other organizational contexts in which it has been previously studied, such as high reliability organizations (Weick et al., 1999), megaprojects (Wang et al., 2021), the financial service industry (Eastburn, 2018), multinational enterprises (Ndubisi et al., 2020), and others. Similarly, the finding that responsive self-organization takes place through changes to the interpersonal infrastructure, and resulting adaptive patterns of interaction, suggests that collective construction of “heedful[ly] interrelated” interactive routines (Weick & Roberts, 1993) that center both context (Angeli & Norwood, 2017) and the unexpected (Jordan et al., 2009) plays a significant role in enactment of non-profits’ crisis response. It also demonstrates that emergent patterning of interactive routines, especially those that “paradoxically seek to institutionalize surprises and instability” (Jordan et al., 2009, p. 469) takes place within the non-profit crisis context, suggesting that the coupling of variable responses and consistent interpretive processes is a pathway to organizational resilience in non-profits facing crisis (Weick et al., 1999). Further, identification of the roots of flexible co-

evolution within the interpersonal infrastructure demonstrates how such infrastructure supports the process of mindful organizing within non-profits facing crisis. This builds upon what is known about the synergistic relationship between mindful infrastructure and mindful organizing within high-reliability organizations (Oeij et al., 2018; Weick et al., 1999), such as those in the nuclear power industry (Renecke et al., 2020), and extends this knowledge to a novel organizational context.

Holistically, my findings encourage theoretical reconceptualization – or at the very least, expansion – of the collective mindfulness construct. While the literature historically frames collective mindfulness as a collection of five interactive cognitive processes (Weick et al., 1999), my findings demonstrate that a systems view of collective mindfulness is both possible and needed. In order to extend the state of knowledge beyond the “high-reliability” organizational context in which collective mindfulness has typically been studied, it is my view that different perceptive, interpretive, and analytical frameworks hold untapped potential. I am of the belief that such frameworks may better equip scholars to identify how collective mindfulness processes emerge and interact under circumstances in which the first mistake is not necessarily the “last-ever action” (Weick & Sutcliffe, 2006) - that is, within organizations with some tolerance for error. In my case study of LMNH, collective mindfulness did not obviously arise through the five distinct processual categories that Weick and others describe; instead, I found that the core characteristics and outcomes of these processes emerged across the organizational crisis response through interactive cycles and structures, which would not have been identifiable without a systems approach. Thus, the most significant theoretical contribution of my research is to suggest that alternative conceptual framings and investigative frameworks are relevant to the study of



collective mindfulness, and may in fact be necessary for this field of study to meaningfully engage with understudied organizational contexts, such as non-profit organizations.

### 5.3.2: Practice

From a practical perspective, my findings inform several recommendations for non-profit organizations. While some of these recommendations target a specific phase of the crisis response, most are applicable across both crisis and non-crisis contexts. My first recommendation is for non-profits to proactively invest in strengthening the dynamic reflexivity cycle within their teams and across their organizational structures. Such investment should ideally be initiated pre-crisis, but can take place during and after crisis as well. The processes of perceiving, reframing, and learning, which drive dynamic reflexivity, are an accessible entrypoint to building collective mindfulness from the ground up. Strengthening one of these processes will have a beneficial impact on the others due to their interactive and synergetic nature.

To enhance the perceiving phase of the dynamic reflexivity cycle, teams could conduct quarterly “all-hands-on-deck” strategic planning sessions that include guided personal reflection and group brainstorming about blind spots, potential threats, new/changing information, as well as possible responses. Personal reflection should include prompts to consider one’s role in relation to co-workers and the organizational structure, as well as deepening awareness of one’s emotional states across various workplace scenarios. Group brainstorming should include talking about the emotional climate at work, strategies for keeping the organizational vision clear, and how to work together to proactively identify circumstances that could generate threats to the organization or the populations it serves.

Teams can strengthen the reframing phase of the dynamic reflexivity cycle through regularly reflecting on risks, failures, and silver linings in their work experiences. For example,

team leaders could invite team members to share a story about a challenge they have recently encountered in their work, and prompt them to identify any risks they overlooked or mistakes they made at the time. Then, they could open the floor for co-workers to reframe that challenging experience through the lens of silver linings and potential learnings. Lastly, they could invite the group to discuss how such learnings could inform their work together as a team moving forward. To optimize investments made in the perceiving and reframing phases, managers should strive to nurture a team culture in which learning doesn't stop during crisis – it intensifies. The more fast-paced, challenging, and adaptive the work environment, the more opportunities there are to meaningfully learn-in-action, both individually and as a team. Regularly reflecting on “what is working, and what doesn't work anymore?”, and strategizing about how to integrate solutions together, is one way to promote a learning culture. Asking personnel to identify areas for improvement, even when things are going well, is another way to foster continuous learning-in-action.

When it comes to strengthening responsive self-organization, effectively sharing and applying individuals' expertise should be a priority for non-profits across all stages of the crisis response. This can be approached through collaboratively developing “maps,” or profiles, of team members' strengths, skills, and know-how that include both role-specific and role-transcending details. Keeping these “maps” on hand and accessible to management and team members can give organizations a head start should they need to shift roles and responsibilities, or call in extra support, in response to crisis. In addition, it can also be beneficial for personnel to develop an understanding of one another's roles and responsibilities, which may be accomplished through job shadowing or supplemental training. Doing so may equip team members to step up, support one another, or “wear multiple hats,” when enacting a crisis

response. However, it is also important for managers to encourage staff to establish healthy boundaries as their roles adapt within evolving crisis conditions, as failing to do so may result in poor mental health or burnout. Since the foundation for healthy personal boundaries lies in the co-creation of shared boundaries, management should play a proactive role in facilitating the discussion and negotiation of the limits of their teams' work, which may be especially challenging in non-profit contexts where need typically exceeds organizational capacity and resources.

Catalysing flexible co-evolution is especially important during crisis situations. Communicating, problem solving, and pivoting – the three stages of the flexible co-evolution cycle – are a part of most regular operations in non-crisis contexts, but are placed under additional pressures when crisis occurs. Under such pressures, the way they are approached can either foster adaptation and resilience, or present major stumbling blocks towards these goals. In order to foster effective, resilience-enhancing communication during crisis, organizations should prioritize practices that promote clarity and understanding between personnel, such as increasing the frequency of check-ins and debriefs; using alternative modes of communication to clarify misunderstandings (e.g. following up an unclear email with a phone call); and emphasizing the importance of listening to understand, rather than just to respond (especially when it comes to disagreements or receiving critical feedback). Supporting management and personnel with collaborative decision-making and consensus building training or facilitation can strengthen problem-solving in crisis situations, as can inviting voices from across the organizational hierarchy to the table when decisions are made about issues that affect them. Supporting decisions to be made on, or as close as possible to, the level they are implemented within the organization is another way to nurture participatory problem solving that builds collective

mindfulness in crisis. Lastly, organizations can lay the foundation for pivoting, or adaptation-in-action, in response to challenges and opportunities generated by crisis through cultivating shared values of responsiveness across all organizational levels, an openness to operating differently during the crisis response (e.g. in “start-up mode”), and a willingness to implement temporary and short-term solutions that may not be sustainable in the long term, but align with the organizational mandate in the crisis context.

### 5.3.3: Future Research

Since researching collective mindfulness in non-profit organizations facing crises is a new frontier, my first suggestion for future research is simply that more research is needed. While my findings articulate a starting point for understanding the nature of collective mindfulness within non-profit organizations in crises, many questions, ambiguities, and uncertainties remain. The first research priority that I foresee is to conduct more case studies on this topic through a systems approach that is grounded in complexity theory. Through generating additional in-depth perspectives in this way, convergences or contrasts may emerge in relation to my present findings that can refine directions for further inquiry. Additionally, doing so may pave the way for investigation of collective mindfulness through a systems approach in other understudied organizational contexts. While, from my perspective, this approach should take priority in shaping the research agenda, an argument can also be made for prioritizing investigation of this topic through alternative methodological framings, such as grounded theory, critical theory, or post-modernism, in order to anchor the growing body of knowledge in diversified paradigmatic roots.

Other priorities for future research include targeted study of each process (reflexivity, self-organization, and co-evolution), including investigation of both their individual and

interactive practical contributions to collective mindfulness. While some scholars argue that, though “intuitively appealing,” some of the principles of mindfulness may be challenging to put into practice (Nævestad, 2009, p. 133), my research found that collective mindfulness can emerge *from* collaborative practices within an organization’s crisis response. Thus, more research is needed to develop a robust model that links awareness of potential threats, proactively verifying assumptions, and adaptive behavioral changes to organizational resilience within a collective mindfulness framework (Barton & Sutcliffe, 2009; Nævestad, 2009).

Complementing these priority research areas, there is also a need to conduct collective mindfulness research in other types of non-profit organizations, such as international NGOs, and in different crisis contexts, such as natural disasters; cross-sectional research that investigates collective mindfulness across a range of non-profit organizations within a specific time frame; and longitudinal research that follows one or more organizations responding to multiple crises over time. As findings emerge from these research areas, it will be important to integrate them with novel insights from similar research conducted in different types of organizations, such as for-profit organizations and government agencies, in order to avoid siloing these evolving research streams.

## References

- Ackoff, R. L. (1979). *The Future of Operational Research is Past*. 24(3), 441–446.
- Anderson, R. A., Benjamin, C. F., Steele, D. J., & McDaniel, R. R. (2005). Case Study Research: The View From Complexity Science. *Qualitative Health Research*, 15(5), 669–685.  
<https://doi.org/10.1177/1049732305275208>
- Angeli, E. L., & Norwood, C. D. (2017). Responding to Public Health Crises : Bridging Collective Mindfulness and User Experience to Create Communication Interventions. *Communication Design Quarterly Review*, 5(2), 29–39.
- Armstrong, J., & Franke, G. (2001). Principles of forecasting. In *Journal of Marketing Research*.  
<http://elibrary.ru/item.asp?id=4643952%5Cnpapers2://publication/uuid/2EF07596-D9F9-463E-8773-080AE5DD8ADC>
- Ashby, W. R. (1956). *An introduction to cybernetics*. J. Wiley.
- Baran, B. E. (2011). Managing for high reliability: The relationships of collective mindfulness and managerial communication with social-exchange perceptions, performance, and creativity. *ProQuest Dissertations and Theses*, 124.  
[http://simsrad.net.ocs.mq.edu.au/login?url=https://search.proquest.com/docview/873951198?accountid=12219%0Ahttps://multisearch.mq.edu.au/openurl/MQ/MQ\\_SERVICES\\_PAGE?url\\_ver=Z39.88-2004&rft\\_val\\_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+%26+](http://simsrad.net.ocs.mq.edu.au/login?url=https://search.proquest.com/docview/873951198?accountid=12219%0Ahttps://multisearch.mq.edu.au/openurl/MQ/MQ_SERVICES_PAGE?url_ver=Z39.88-2004&rft_val_fmt=info:ofi/fmt:kev:mtx:dissertation&genre=dissertations+%26+)
- Barton, M. A., & Sutcliffe, K. M. (2009). Overcoming dysfunctional momentum: Organizational safety as a social achievement. *Human Relations*, 62(9), 1327–1356.

<https://doi.org/10.1177/0018726709334491>

Bell, B. S., Kozlowski, S. W. J., & Blawath, S. (2012). *Team learning: A review and integration*. 2(Cdm), 859–909.

Bigley, G. A., & Roberts, K. H. (2001). The Incident Command System : High-Reliability Organizing for Complex and Volatile Task Environments Author ( s ): Gregory A . Bigley and Karlene H . Roberts Published by : Academy of Management Stable URL : <http://www.jstor.org/stable/3069401> REFERENCES. *Academy of Management Journal*, 44(6), 1281–1299.

Burgoon, J. K., Berger, C. R., & Waldron, V. R. (2000). Mindfulness and interpersonal communication. *Journal of Social Issues*, 56(1), 105–127. <https://doi.org/10.1111/0022-4537.00154>

Cambridge Dictionary. (n.d.). Reflexivity. In *Cambridge Dictionary*. <https://dictionary.cambridge.org/dictionary/english/reflexivity>

Capra, F. (2002). *The hidden connections: Integrating the biological, cognitive, and social dimensions of life into a science of sustainability*. . Doubleday.

Carlson, E. (2018). Vigilant resilience: the possibilities for renewal through preparedness. *Corporate Communications*, 23(2), 212–225. <https://doi.org/10.1108/CCIJ-04-2017-0030>

Chiva, R., Ghauri, P., & Alegre, J. (2014). Organizational Learning, Innovation and Internationalization: A Complex System Model. *British Journal of Management*, 25(4), 687–705. <https://doi.org/10.1111/1467-8551.12026>

Cilliers, P. (1998). *Complexity and postmodernism : understanding complex systems*. Routledge.

- City of Vancouver. (2020). *Impacts of Covid-19 on Social Services and Community Development Non-Profit Organizations in Vancouver*. <https://vancouver.ca/files/cov/social-services-npos-covid-19-impacts.pdf>
- Denning, S. (2011). *The Leader's Guide to Storytelling: Mastering the Art and Discipline of Business Narrative*. Jossey-Bass.
- Duchek, S. (2020). Organizational resilience: a capability-based conceptualization. *Business Research*, 13(1), 215–246. <https://doi.org/10.1007/s40685-019-0085-7>
- Eastburn, R. W. (2018). Organizational Mindfulness in Banking : A Discriminating Factor for Firm Performance. *Journal of Managerial Issues*, XXX(1), p122-147.  
<http://search.ebscohost.com.nassdoceresources.remotexs.in/login.aspx?direct=true&db=eue&AN=128481757&site=ehost-live>
- Eastburn, R. W., & Boland, R. J. (2015). Inside banks' information and control systems: Post-decision surprise and corporate disruption. *Information and Organization*, 25(3), 160–190.  
<https://doi.org/10.1016/j.infoandorg.2015.05.001>
- Eddy-Spicer, D. H. (2019). Where the action is: Enactment as the first movement of sensemaking. *Educational Leadership, Organizational Learning, and the Ideas of Karl Weick: Perspectives on Theory and Practice*, 94–118.  
<https://doi.org/10.4324/9781315114095>
- Edmondson, A. (1999). Psychological Safety and Learning Behavior in Work Teams. *Administrative Science Quarterly*, 44(2), 350–383.
- European Commission - Food and Agriculture Organization of the United Nations Food Security



Programme. (2008). *Food Security Information for Action - Practical Guides: An Introduction to the Basic Concepts of Food Security*.

<https://www.fao.org/3/al936e/al936e00.pdf>

Feldman, M. S. (2000). Organizational Routines as a Source of Continuous Change.

*Organization Science*, 11(6), 611–629. <https://doi.org/10.1287/orsc.11.6.611.12529>

Food and Agriculture Organization of the United Nations. (1996). *Rome declaration on world food security and world food summit plan of action : World Food Summit, 13-17 November 1996, Rome, Italy*.

Food Banks Canada. (2021a). *A Snapshot of Food Banks in Canada and the COVID-19 Crisis*. 1–55.

Food Banks Canada. (2021b). *Hunger Count 2021 Report*. 1–58.

<https://hungercount.foodbankscanada.ca/>

Food Banks Canada. (2022). *Hunger Count 2022: From a Storm to a Hurricane*.

Foss, S. K. (2015). *Destination Dissertation: A Traveler's Guide to a Done Dissertation* (Second). Rowman & Littlefield Publishers.

Gärtner, C. (2011). Putting new wine into old bottles: Mindfulness as a micro-foundation of dynamic capabilities. *Management Decision*, 49(2), 253–269.

<https://doi.org/10.1108/00251741111109142>

Gear, C., Eppel, E., & Koziol-Mclain, J. (2018). Advancing Complexity Theory as a Qualitative Research Methodology. *International Journal of Qualitative Methods*, 17, 1–10.

<https://doi.org/10.1177/1609406918782557>

- Gebauer, A. (2013). Mindful Organizing as a Paradigm to Develop Managers. *Journal of Management Education*, 37(2), 203–228. <https://doi.org/10.1177/1052562912458573>
- Go, A., & Konanur, S. (2021, January 14). Canada's immigration rules kept families apart even before COVID-19. Now, as immigrants suffer from the pandemic, family reunification seems impossible. *Toronto Star*.  
<https://www.thestar.com/opinion/contributors/2021/01/14/canadas-immigration-rules-kept-families-apart-even-before-covid-19-now-as-immigrants-suffer-from-the-pandemic-family-reunification-seems-impossible.html>
- Gorley, C. (2012). *Adaptive capacity as a proactive approach*.  
[https://www.researchgate.net/publication/308093747\\_Adaptive\\_Capacity\\_as\\_a\\_Proactive\\_Approach](https://www.researchgate.net/publication/308093747_Adaptive_Capacity_as_a_Proactive_Approach)
- Gunia, B. C., Kim, S. H., & Sutcliffe, K. M. (2015). *TRUST IN SAFETY-CRITICAL CONTEXTS*. 423–437.
- Homberg, F., Vogel, R., & Weiherl, J. (2019). Public service motivation and continuous organizational change: Taking charge behaviour at police services. *Public Administration*, 97(1), 28–47. <https://doi.org/10.1111/padm.12354>
- Howard, J. (2020, April 24). *The Difficult Economic Side-Effects of COVID-19 For Women*. Canadian Women's Foundation: <https://Canadianwomen.Org/Blog/the-Difficult-Economic-Side-Effects-of-Covid-19-for-Women/>.
- Hudson, M., & Robinson, J. (2020). *The Power & Positionality Wheel: A Tool for Self-Reflexivity and Justice in the Anthropocene* [eBook edition]. Apple Books.  
<https://books.apple.com/ca/book/the-power-positionality-wheel/id1545640339>

- Ishak, A. W., & Williams, E. A. (2018). A dynamic model of organizational resilience: adaptive and anchored approaches. *Corporate Communications*, 23(2), 180–196.  
<https://doi.org/10.1108/CCIJ-04-2017-0037>
- Jordan, S., Messner, M., & Becker, A. (2009). Reflection and mindfulness in organizations: Rationales and possibilities for integration. *Management Learning*, 40(4), 465–473.  
<https://doi.org/10.1177/1350507609339687>
- Kantamneni, N. (2020). The impact of the COVID-19 pandemic on marginalized populations in the United States: A research agenda. *Journal of Vocational Behavior*, 119.  
<https://doi.org/10.1016/j.jvb.2020.103439>
- Lakoff, G., & Johnson, M. (2003). *Metaphors We Live By*. University of Chicago Press.  
<https://books.google.ca/books?id=r6nOYYtxzUoC>
- Levinthal, D., & Rerup, C. (2006). Crossing an apparent chasm: Bridging mindful and less-mindful perspectives on organizational learning. *Organization Science*, 17(4), 502–513.  
<https://doi.org/10.1287/orsc.1060.0197>
- Luhman, J. T., & Boje, D. M. (2001). What is Complexity Science? A Possible Answer from Narrative Research. *Emergence*, 3(1), 158–168. [https://doi.org/10.1007/978-3-642-50007-7\\_2](https://doi.org/10.1007/978-3-642-50007-7_2)
- McDaniel, R. R., & Driebe, D. J. (2001). Complexity Science and Health Care Management. In *Advances in health care management* (Vol. 2, p. 367). Elsevier.
- McKinney, E. H., & Barker, J. R. (2005). How swift starting action teams get off the ground: What United Flight 232 and Airline Flight Crews Can Tell Us About Team

- Communication. *Management Communication Quarterly*, 19(2), 198–237.  
<https://doi.org/10.1177/0893318905278539>
- Mease, J. J. (2016). Postmodern/Poststructural Approaches. In *The International Encyclopedia of Organizational Communication*. Wiley. <https://doi.org/10.1002/9781118955567.wbieoc167>
- Merriam Webster. (n.d.). post-structuralism. In *Merriam-Webster.com dictionary*.
- Morcol, G. (2001). What Is Complexity Science? Postmodernist or Postpositivist? *Emergence*, 3(1), 104–119. [https://doi.org/10.1207/s15327000em0301\\_07](https://doi.org/10.1207/s15327000em0301_07)
- Mu, E., & Butler, B. S. (2009). The assessment of organizational mindfulness processes for the effective assimilation of IT innovations. *Journal of Decision Systems*, 18(1), 27–51.  
<https://doi.org/10.3166/jds.18.27-51>
- Mykkanen, M., & Vos, M. (2017). Serious Games, Learning and Crisis Communication. In *Communication in Turbulent Times: Exploring Issue Arenas and Crisis Communication to Enhance Organisational Resilience*.  
<https://jyx.jyu.fi/dspace/bitstream/handle/123456789/55151/978;jsessionid=E93DF42F070AC42770F47640F7E57A13?sequence=1>
- Nævestad, T. O. (2009). Mapping research on culture and safety in high-risk organizations: Arguments for a sociotechnical understanding of safety culture. *Journal of Contingencies and Crisis Management*, 17(2), 126–136. <https://doi.org/10.1111/j.1468-5973.2009.00573.x>
- Ndubisi, N. O., Al-Shuridah, O., & Capel, C. (2020). Greening multinational enterprises in the oil, gas and petrochemicals: Environmental sustainability and the moderation role of environmental sensitivity. *International Journal of Manpower*, 41(7), 967–985.

<https://doi.org/10.1108/IJM-08-2019-0361>

Novak, J. M., & Sellnow, T. L. (2009). Reducing organizational risk through participatory communication. *Journal of Applied Communication Research*, 37(4), 349–373.

<https://doi.org/10.1080/00909880903233168>

Oeij, P. R. A., Dhondt, S., Gaspersz, J. B. ., & De Vroome, E. M. M. (2016). Can teams benefit from using a mindful infrastructure when defensive behavior threatens complex innovation projects? *International Journal of Project Organisation and Management*, 8(3), 241–258.

Oeij, P. R. A., Van Vuuren, T., Dhondt, S., Gaspersz, J., & De Vroome, E. M. M. (2018).

Mindful infrastructure as antecedent of innovation resilience behaviour of project teams: Learning from HROs. *Team Performance Management*, 24(7–8), 435–456.

<https://doi.org/10.1108/TPM-09-2017-0045>

Perrow, C. (2011). *Normal Accidents: Living with High Risk Technologies (Updated)*. Princeton University Press.

Reason, J. (2016). *Managing the Risks of Organizational Accidents*. Taylor & Francis.

Reneclé, M., Gracia, F. J., Tomas, I., & Peiró, J. M. (2020). Developing mindful organizing in teams: A participation climate is not enough, teams need to feel safe to challenge their leaders. *Revista de Psicología Del Trabajo y de Las Organizaciones*, 36(3), 181–193.

<https://doi.org/10.5093/JWOP2020A18>

Rerup, C. (2012). Picking Up the Signals That Trigger Crises. *IESE Insight*, 4(15), 13–19.

<https://doi.org/10.1038/nrg1078>

Rerup, C., & Levinthal, D. A. (2014). Situating the Concept of Organizational Mindfulness: The

- Multiple Dimensions of Organizational Learning. In S. O. Idowu & R. Schmidpeter (Eds.), *Mindful Change in Times of Permanent Reorganization* (pp. 33–48). Springer.  
<http://www.springer.com/series/11565>
- Rubin, H., & Rubin, I. (2012). Qualitative Interviewing (2nd ed.): The Art of Hearing Data. In *Qualitative Interviewing (2nd ed.): The Art of Hearing Data*. SAGE Publications, Inc.  
<https://doi.org/10.4135/9781452226651>
- Saldana, J. (2021). *The Coding Manual for Qualitative Researchers* (J. Seaman (ed.); 4th ed.). SAGE Publications Inc.
- Schoemaker, P. J. H. (1995). SCENARIO PLANNING: A TOOL FOR STRATEGIC THINKING Schoemaker, Paul J H Sloan Management Review; Winter 1995; 36, 2; Periodicals Archive Online pg. 25. *Sloan Management Review*.
- Seeger, M. W., Sellnow, T. L., & Ulmer, R. R. (2003). *Communication and Organizational Crisis*. Praeger.
- Shultze, U., & Orlikowski, W. J. (2004). A Practice Perspective on Technology-Mediated Network Relations: The Use of Internet-Based Self-Serve Technologies. *Journal of Allergy and Clinical Immunology*, 130(2), 556. <http://dx.doi.org/10.1016/j.jaci.2012.05.050>
- Small, M. L. (2009). “How many cases do I need?”: On science and the logic of case selection in field-based research. *Ethnography*, 10(1), 5–38. <https://doi.org/10.1177/1466138108099586>
- Social Sciences and Humanities Research Council of Canada. (2020). *Perspectives on COVID-19: Impacts on Underrepresented Populations*. [https://www.sshrc-crsh.gc.ca/News\\_room-Salle\\_de\\_presse/Perspectives/Covid-](https://www.sshrc-crsh.gc.ca/News_room-Salle_de_presse/Perspectives/Covid-)

19/Underrepresented\_communities-Communautes\_sous-Representees-Eng.Aspix.

- Sutcliffe, K. M. (2018). Mindful Organizing. In R. Ramanujam & K. H. Roberts (Eds.), *Organizing for reliability: A guide for research and practice* (pp. 61–89). Stanford University Press.
- Sutcliffe, K. M., & Vogus, T. J. (2014). Organizing for Mindfulness. *The Wiley Blackwell Handbook of Mindfulness, 1–2*, 407–423. <https://doi.org/10.1002/9781118294895.ch22>
- Sutcliffe, K. M., Vogus, T. J., & Dane, E. (2016). *Mindfulness in Organizations : A Cross-Level Review*. <https://doi.org/10.1146/annurev-orgpsych-041015-062531>
- Tracy, S. J. (2020). *Qualitative Research Methods: Collecting Evidence, Crafting Analysis, Communicating Impact* (2nd ed.).
- Turner, B. A. (1976). *The Organizational and Interorganizational Development of Disasters*  
*Author ( s ): Barry A . Turner Published by : Sage Publications , Inc . on behalf of the Johnson Graduate School of Management , Cornell University Stable URL :*  
[https://www.jstor.org/stab.21\(3\),378–397](https://www.jstor.org/stab.21(3),378-397).
- Veil, S. R. (2011). Mindful learning in crisis management. *Journal of Business Communication, 48*(2), 116–147. <https://doi.org/10.1177/0021943610382294>
- Vendelø, M. T., & Rerup, C. (2020). Collective mindfulness in a regenerating organization: Ethnographic evidence from Roskilde festival. *Safety Science, 123*(October 2019), 104537. <https://doi.org/10.1016/j.ssci.2019.104537>
- Vogus, T. (2004). *IN SEARCH OF MECHANISMS: HOW DO HR PRACTICES AFFECT ORGANIZATIONAL PERFORMANCE?* by (Vol. 5).

<https://doi.org/10.1017/S0165115300023299>

Wang, L., Müller, R., Zhu, F., & Yang, X. (2021). Collective Mindfulness: The Key to Organizational Resilience in Megaprojects. *Project Management Journal*, 52(6), 592–606.

<https://doi.org/10.1177/87569728211044908>

Weick, K. E. (1988). Enacted Sensemaking in Crisis Situations. *Journal of Management Studies*, 25(4). <https://doi.org/10.1111/j.1467-6486.1988.tb00039.x>

Weick, K. E. (2001). *Making Sense of the Organization*. Blackwell Publishing Ltd.

Weick, K. E. (2011). Organizing for Transient Reliability: The Production of Dynamic Non-Events. *Journal of Contingencies and Crisis Management*, 19(1), 21–27.

<https://doi.org/10.1111/j.1468-5973.2010.00627.x>

Weick, K. E., & Roberts, K. H. (1993). Collective Mind in Organizations : Heedful Interrelating on Flight Decks Author ( s ): Karl E . Weick and Karlene H . Roberts Source : Administrative Science Quarterly , Vol . 38 , No . 3 ( Sep . , 1993 ) , pp . 357-381 Published by : Sage Publications , In. *Administrative Science Quarterly*, 38(3), 357–381.

Weick, K. E., & Sutcliffe, K. M. (2006). Mindfulness and the quality of organizational attention. *Organization Science*, 17(4), 514–524. <https://doi.org/10.1287/orsc.1060.0196>

Weick, K. E., & Sutcliffe, K. M. (2007). Managing the unexpected: Resilient performance in the age of uncertainty, 2nd ed. In *Managing the unexpected: Resilient performance in the age of uncertainty, 2nd ed.* (pp. xii, 194–xii, 194). Jossey-Bass.

Weick, K. E., & Sutcliffe, K. M. (2015). Managing the Unexpected. In *Managing the Unexpected*. <https://doi.org/10.1002/9781119175834>



Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (1999). Organizing for High Reliability: Processes of Collective Mindfulness. In A. Boin (Ed.), *Crisis Management: Volume III* (Vol. 6, Issue 3). SAGE Publications Inc.