

Losing One's self:
A Case Study of Disaster Recovery Processes Through an Identity Approach

by

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Author's Declaration

I hereby declare that I am the sole author of this thesis. This is a true copy of the thesis, including any required final revisions, as accepted by my examiners.

I understand that my thesis may be made electronically available to the public.

Abstract

Climate disasters are characterized by the changes delivered in their wake. Despite the mass disruption brought on by such events, it can only ever be *experienced* by agents. Ensued by the larger rapid environmental transition, individual agents experience en masse changes to their subjective environments. Through a Symbolic Interactionist lens, these jarring alterations to individuals' object environments threaten their sense of self as interactional patterned continuity is ruptured. Although such micro-macro relations mark disaster processes' innate complexity, the interplay of 'self' in disaster scenarios is significantly under-researched. Thus, this case study focuses on this interplay within the context of Beira, Mozambique, following Cyclone Idai (2019). Five years post-cyclone landfall, 37 semi-structured interviews were conducted among informal market vendors who experienced temporary or permanent loss of economic livelihood activities. A qualitative thematic analysis, informed by a literature review, was used to analyze the transcribed interviews and to develop a theoretical framework. The theoretical framework proposes multiple propositional relationships that inform mechanisms underpinning the disaster recovery process. To summarize, the vast changes to individuals' object environments (composed of animate beings, inanimate things, and intangible processes) brought on through the disaster-driven rapid environmental transition may result in identity continuity challenges, leading to agency loss and past-oriented recovery trajectories, resulting in a perpetually liminal recovery process. Findings from this thesis work suggest that the proposed theoretical framework is helpful in identifying and explaining these relations. First, through a Symbolic Interactionist lens, participants' changes to their livelihood activities, social networks, and time allocation following Cyclone Idai demonstrate significant object environment shifts, insinuating that identity continuity challenges have occurred. Second, participants expressed a positive association of normalcy with their pre-cyclone states, and a desire to return to such a state, implying a past-oriented recovery trajectory. Finally, participants demonstrated low levels of human agency which may have been brought on by failed goal attainment. These findings in combination may illuminate previously untheorized causal mechanisms that impede post-disaster recovery processes. As such, this work contributes to ongoing disaster management research and the emerging space of disaster-induced identity loss.

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Dedication

This thesis is dedicated to those lost to Cyclone Idai and those still finding themselves.

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1 Introduction

1.1 Background

Climate disasters are drivers of change. The disruptive effects following the dissonant mixture of hazards and human systems necessitate reformations, characterized as damage and impacts to the affected area (UNDRR, 2017). As large-scale disturbances, disasters alter the physical environment and disrupt the functioning and trajectory of systems (Pickett et al., 1985; Turner, 2010). To disrupt is to rupture the continuity of an ongoing process, fundamentally altering its previous course. Such systemic shocks derived from the catastrophic combination of hazards and human systems represent a macro-level perturbation in which equilibrium (emerging or re-established) will eventually be reached (Holling, 1973; Pimm, 1984; Wu & Loucks, 1995). However, given that a system is defined by its functional output and interconnected components (Meadows, 2008), system shocks may be the cumulative occurrence of micro-level perturbations. The complexity of disasters draws breath from this dynamic and interconnected micro-macro relationship.

The ‘changes’ in disaster scenarios are trans-scalar, occurring at both macro and micro levels, and can be described as rapid environmental transitions. At the micro-level, such jolting transitions overhaul an individual’s relative environments through the characterized destruction of things, people, and processes. Such micro-level perturbations are ineffable; simultaneously shared as a generalized phenomenon yet solely experienced by the individual to which they occur. Through a symbolic interactionist lens, individuals’ object environments from which the ‘self’ is formed by way of interaction are altered, rupturing their established patterns of interaction and expectation.

Symbolic interactionism is a sociological paradigm that views the world through meaning derived from object interactions. It is premised upon 1) humans, as agents, acting upon objects (physical things, social beings, abstract ideas) due to their perceived meaning; 2) interaction between the agents and objects creating meaning for the agents; and 3) meaning being interpreted by the agents (Blumer, 1986). This derived and interpreted meaning is the foundation for ‘self’, or ‘identity’ of individual agents. Under a symbolic interactionist lens, the self-concept is created through these interactions, internalized meanings, and the comparative existence between agents and objects (Mead, 1934). A basis of identity stability is formed through establishing patterns of interactions and fulfilling expectations with objects (Breakwell, 1986; Snyder, 1996). Such a view then contends that the nature of self-meaning is dependent upon the availability of objects and agents with which to interact. With this, the micro-level lens of symbolic interactionism centers the individual agent in focus, thus creating an environment of external objects for interaction relative to the agent. However, rapid environmental transitions can disrupt these object environments and agents’ ability for patterned interactions, potentially threatening one’s identity.

In disaster scenarios, not only must individuals cope with the loss of securities and capitals, but they must also contend with the loss of identity. Such losses beget efforts toward recovery. The recovery phase within disaster management marks the systematic efforts taken to address the disruptions caused by disasters, restoring what has been damaged (UNDRR, 2017). On an individual level, this recovery process requires effective levels of agency, demonstrated through appropriate action. However, the associated loss of identity may complicate the success of such processes. As the destruction of objects¹ creates an obstacle to fulfilling patterned

¹ Or migration out of an individual’s environment.

expectations, the failed obtainment of interaction and subsequent meaning creation may have demoralizing effects on the individual (Snyder, 2002). Further, individuals may aim their efforts towards mending their ruptured continuity via implausibly² re-establishing patterned interactions with unavailable objects (past-based temporal orientations) rather than establishing new interactions and meaning (Breakwell, 1986). This suggests that micro-level recovery may be impeded by the very losses that occur following the intersection of human systems and hazards.

Late on March 14th, 2019, Cyclone Idai made landfall in Beira, Mozambique. In its wake, Idai became the deadliest cyclone in the southern hemisphere, recording more than 1500 deaths across three countries (Disasters Emergency Committee, 2021; Mutasa, 2022). Catastrophic damage was reported as mass flooding and wind gusts wreaked havoc on infrastructure (Charrua et al., 2021; Lokotola et al., 2022). Existing vulnerabilities were unequally heightened for some as impacts compounded (Williamson et al., 2023). Overnight and in the months after, Beira became an illustrative example of extensive change caused by climate disasters. However, Beira is only the macro representation of system disruption; it is the human components who experience the effects.

As such, this research reports on the proposition of identity loss occurring in response to environmental changes brought on by Cyclone Idai in Beira, Mozambique, and the cascading relational effects on agency and recovery. This thesis reviews an array of literature in sociology, psychology, anthropology, economics, and environmental studies to create a theoretical framework that identifies novel impacts, relationships, and processes in disaster scenarios. This thesis also reports on respondent interviews conducted in Beira, Mozambique, that begin to provide empirical evidence of the proposed theory.

² Such re-establishment is deemed implausible because it requires the presence of the object that was previously interacted with. In the case of the object migrating or being destroyed, it is no longer available for interaction.

1.2 Problem Statement

Extreme weather-related events have been on the rise for decades (CRED, 2023; Thomas & Lopez, 2015) and are expected to continually increase in intensity and frequency (IPCC, 2023). As the relationship between anthropogenic climate change and disasters has become clearer (Banholzer et al., 2014; Benevolenza & DeRigne, 2019; Trenberth, 2018; Van Aalst, 2006) and GHG emissions continue to trend upward with limited mitigation efforts (Lamb et al., 2021), the frequency and volatility of disasters is likely to increase.

Climate disasters create highly complex scenarios due to micro and macro-level impacts and processes, but also due to the intertwining of built environments, ecological, economic, and social systems. A time dimension is also pertinent as disruptive and corresponding recovery processes are relative to the present agents (Tierney & Oliver-Smith, 2012), leading to panarchical³ realities (Gunderson & Holling, 2002). With this complexity in mind, some places and people do not successfully progress through the phases of disaster recovery.

Coherent institutional arrangements are essential to recovery processes, given the sudden dependence on aid, programming, and service delivery following disasters, meaning that institutional strength plays an important role in recovery processes (Becerra et al., 2014; Ghimire, 2021; Raschky, 2008). In the case of weak institutions that fail to guide the process of disaster management, the task is then left to the micro-level agents. As Mozambique has struggled with political and economic institutional fragmentation (Mairoce et al., 2021; Pereira & Luiz, 2019; Vollmer, 2013b, 2013a), institutional weakness is insinuated. This thesis research

³ Cross-scalar interaction (Gunderson & Holling, 2002). In this case, each agent's temporal perception and experiences are relative to them. Multiple agent's may exist simultaneously in each other's environments but be moving through different processes in their own way and at their own pace. The combined form of these subject-relative processes is a cross-scalar (micro-macro) and cross-agent panarchical reality.

contends that where help is not given, people must help themselves. Agency, as the action-ability of individuals, is meant to fill the void left by prevailing institutions in Beira, Mozambique. Agency is important in responding to changing environments and their impacts (Brown & Westaway, 2011). Yet, in spaces like Beira, that continue to be characterized by long-lasting disaster impacts (Sunu, 2024), one must question the presence of human agency and its relation to recovery. With this questionable presence of agency, there is an impetus to understand the micro and macro-level causations of such a lack of displayed agency.

1.3 Research Gap

No one academic discipline can aptly and holistically understand disaster events, their embedded processes, or their impacts. As disaster management attempts to contend with such systems, there is an implied requirement to bridge disciplines. Within this space, scholarly literature that draws connections between disasters, identity, agency, and recovery is also sparse. Quarentelli (1987) specifically called for the cessation of symbolic interactionism in sociological disaster research as its micro-level focus did not capture larger macro trends that guided practical applications. As time has passed and a vast array of research has better captured impacts, processes, and practices in disaster management, the re-engagement of symbolic interactionism may be prudent in drawing out connections. No contemporary research has drawn on psycho-social understandings of symbolic interactionism and identity to inform processes of disaster recovery.

The re-engagement of symbolic interactionism in this thesis focuses on the impacts on agency and identity following climate disasters. Previous research on identity loss in disaster scenarios has explored health impacts and outcomes (Deeny & McFetridge, 2005; Scott et al., 2014), collective memory and place (McKinnon et al., 2016), and business communities'

recovery (Dinger et al., 2020). Research contending with the processes of identity loss tied to object environments (from a symbolic interactionist approach) in disaster scenarios is non-existent. For agency losses in disasters, Kudejira (2024) reported on the loss of survivor agency as an impact of failed institutional aid delivery. More general research on agency in disasters recognizes its importance but often embeds the concept within resilience or adaptive capacity (Brown & Westaway, 2011; Grove, 2014; Masten & Obradovic, 2008).

1.4 Research Questions and Objectives

This thesis work argues that the vast environmental changes that characterize climate disasters disrupt identity continuity, leading to the undermining of human agency and the impediment of recovery. By using symbolic interactionism to situate identity loss as a product of the rapid environmental transition caused by Cyclone Idai, this study will build connections between the altered environment, identity loss, agency loss, and recovery.

Research Question 1. Using a symbolic interactionist lens, how does identity loss occur during rapid environmental transitions among individuals who experienced livelihood⁴ challenges following Cyclone Idai in Beira, Mozambique?

Research Objective 1.1. Describe the various and major outstanding changes that have occurred in individuals' lives post-cyclone Idai.

Research Objective 1.2. Relate identified changes to identity continuity challenges through symbolic interactionism.

⁴ Livelihoods is defined as “the capabilities, assets (including both material and social resources) and activities required for a means of living” (Carenny, 1998, p. 4).

Research Question 2. How do impacts on agency affect recovery processes in contexts of identity loss among individuals who experienced livelihood challenges following Cyclone Idai in Beira, Mozambique?

Research objective 2.1. Evaluate individuals' agency in relation to future recovery outlook.

Research Objective 2.2. Describe individuals' recovery trajectories in terms of temporal orientations.

1.5 Study Significance

This research acts as a theoretical springboard for addressing previously unaddressed obstacles in the disaster recovery process. Through symbolic interactionism, this work contends that identity loss can be a major psychosocial impact of disasters that may derail disaster recovery. From both a practical and academic standpoint, this work contributes to furthering understanding of impacts and processes that shape recovery, potentially leading to the future implementation of practical solutions. Further, through the development and refinement of the proposed theoretical framework⁵, academic footholds will be discovered for future research to address.

1.6 Scope of Study

This thesis is divided into five sections. Section One provides the initial background material that frames this study with a discussion on disasters as drivers of change, the complexity that arises from such change, and the impetus to focus on micro-level impacts. Section One also provides the Problem Statement, Research Gap, Research Questions and Objectives, and the Study Significance. Section Two explores the relevant literature for this study and provides the

⁵ Detailed in section 2.3.

Theoretical Framework which outlines the relational propositions that this study aims to uncover. Section Three discusses the methodologies used for this study. Section Four reports on the analyzed results and combined discussion. Lastly, Section Six summarizes this study's findings and provides recommendations for future work.

2 Literature Review

2.1 Climate Disasters

Recorded disasters have quadrupled since the 1970s (CRED, 2023), while hydrological and meteorological events have tripled since the 1980s (Thomas & Lopez, 2015). In these periods, climate-disaster-attributed deaths have fallen with each event on average, while the economic costs of these same events have increased (CRED, 2023; Pielke, 2018). Similarly, cyclone intensity has increased over the past few decades and is likely to continue to trend upward (Kossin et al., 2020). Coincidingly, Cyclone Freddy (2023 landfall) was widely reported as being the longest-lasting cyclone in recorded history (Liu et al., 2023). The exponential increase of GHG emissions since the 1960s has contributed to warming temperatures and has been directly linked to climate hazard events (Thomas & Lopez, 2015; NOAA, 2023). As long as warming continues, high-volume precipitation events will increase.

2.1.1 Impacts

Cyclone impacts can take many forms; beyond loss of human life and physical injuries, infrastructural damage, water and food security losses, energy loss, agricultural loss, etc. and are reported to have directly impacted more than 460 million people between 1980 and 2009 (Doocy et al., 2012). End-of-year reports for 2024 estimate costs from the North Atlantic and Northwest Pacific cyclones amounting to US\$ 133bn and exceeding 10-year averages (MunichRE, 2024). Of equal concern to the sheer number of those affected and costs is the inequitable distribution of negative impacts that are generally felt more in the global south and among low-income populations (Fothergill & Peek, 2004; Füssel, 2010; Smith et al., 2022). To demonstrate this, MunichRE (2024) reports that US\$ 25bn of the US\$ 38bn in damages from Hurricane Milton in Florida, USA was insured (~65%) while only US\$ 1bn of the US\$ 14bn in losses from Hurricane

Yagi (affecting the Philippines, China, Vietnam, and Myanmar) were insured (~7%). The inequitable burden of climate change and disasters has and is likely to continue to increase vulnerabilities among already vulnerable populations (Füssel, 2010; Islam & Winkel, 2017). As researchers identify the increasing risks of climate disasters (e.g., Thomas & Lopez, 2015; Van Aalst, 2006), there is an evidenced need to further understand the impacts of such disasters.

Despite disasters seemingly happening in an instant, their impacts can be felt for years to come. Research on long-term physical and psychological health impacts generally agrees on the association between singular (or repeated) disaster events and negative long-lasting health outcomes (Cook et al., 2008; Fergusson et al., 2014; Leppold et al., 2022; Mitchell et al., 2024; Newnham et al., 2022; Saeed & Gargano, 2022; To et al., 2021; Zhong et al., 2018). However, discourse in economic research varies in determining positive or negative economic outcomes following disaster events. Multiple studies found negligible long-run impacts on economic growth at national levels but reported some nuance in community or sector levels (Cavallo et al., 2013; Jaramillo, 2009; Xiao, 2011). The trend of neutral or positive economic growth is often attributed to ‘creative destruction’, emphasizing Schumpeter’s (1942) position that for productivity to increase, old inefficient processes must be replaced with new innovative ones. Despite the significant losses, some discourse points toward the economic creation of space for improvement within post-disaster markets (Skidmore & Tonya, 2007; Cuaresma et al., 2007; Xiao & Nilawar, 2013). On the other hand, some research outlines the enduring negative effects, which are often found at the regional level and among more vulnerable populations and countries (Noy & duPont IV, 2016). Carter et al. (2007) evidenced the occurrence of poverty traps in Honduras and Ethiopia following disasters, while Cas et al. (2014) and McDermott & Cobham (2012) found that disaster impacts were associated with negative psychological outcomes and

adverse family functioning (via Noy & duPont IV, 2016). Pelling and Uitto (2001) also found that the vulnerability characteristics of small-island nations predisposed them to negative outcomes and exacerbated vulnerability following disasters.

2.1.2 Vulnerability and Resilience

This work defines vulnerability as the assessed combination of risk and ability to absorb and adapt to environmental shocks and hazards (Adger, 2006; Blaikie et al., 2014; Cutter, 1996; Cutter et al., 2003). By such a definition, individuals, populations, and/or countries (multi-scalar) who elicit high risk exposure and low abilities to absorb and adapt to shocks are more likely to experience harsher and lasting effects. A related but distinct concept in disaster studies, resiliency is the capacity to respond to shocks, often marked as the ability for dynamic systems-level adaptation (Folke, 2006; Folke et al., 2010; Herrman et al., 2011; Holling, 1973; Klein et al., 2003; Manyena, 2006). In literature, both vulnerability and resiliency have emerged as key concepts in assessing potential and actualized disaster impacts, as evidenced in Cutter's Hazards-of-Place model which focuses on assessing risk through social and physical vulnerability (Cutter, 1996; Cutter, 2003; Cutter et al., 2008) and the Pressure and Release model which centers on root (systemic) causes of vulnerability (Blaikie, 1994). Both resilience and vulnerability are central concepts in these disaster models.

2.1.3 Disaster Management

Discourse on disasters suggests interpretive complexity due to socio-cultural subjectivity and fuzzy temporal and spatial scale-measurements (Alexander, 2002; Quarantelli, 1998). The UNDRR offers the accepted definition for 'disaster' through the Sendai Framework as "A serious disruption of the functioning of a community or a society at any scale due to hazardous events interacting with conditions of exposure, vulnerability and capacity, leading to one or more

of the following: human, material, economic and environmental losses and impacts” (2017, p.13). Disaster Management is “the organization, planning and application of measures preparing for, responding to and recovering from disasters” (UNDRR, 2017, p. 14) and developed as a modern concept and practice alongside emergency management to better integrate the contextual environmental and process characteristics of disaster scenarios (Coppola, 2006). Further, discourse generally accepts that disaster management can be conceptualized by the four components, or phases, of the disaster management cycle: mitigation, preparation, response, and recovery (Alexander, 2002; Coppola, 2006). Alexander (2002) generalizes these phases as such:

- Mitigation – actions to reduce impact from future disasters
- Preparedness – actions to reduce impacts from imminent disasters
- Response – emergency actions taken during and after disaster
- Recovery – repairing actions taken after disaster.

Although the four phases mentioned simplify the process, deep complexities permeate throughout the cycle. For one, the core integration of human systems that define disasters introduces socio-spatial and socio-temporal elements whose existence is subjective and multi-scalar (Aubrecht et al., 2013). This insinuates that the disaster management phases are simultaneously occurring at various rates, in various spaces, and at different levels and formations (individual, communal, institutional, governmental, etc.). Although significant work has been done through a sociological lens (See: Tierney, 2012, 2020, 2025; Tierney & Oliver-Smith, 2012), the inseparable integration of humans as agents and subjects of change within disasters points toward a need for more psychosocial work within all disaster management phases.

2.2 Disasters and the Psychosocial

2.2.1 Livelihoods

At the micro-level, loss characterizes much of the impacts ‘felt’ following a disaster. The term ‘loser’ in the case of economic competition and market changes refers to a temporary or permanent loss of income, either at the hands of a lack of employment (in the case of employees) or a lack of revenue (in the case of business owners). Wu et al. (2019) reported following a meta-regression analysis of existing literature that employment and remuneration were highly impacted in the short-term following cyclone landfall and that low-income groups were more vulnerable to changes. Mannila (2015) also reports that those who engage in informal work are more vulnerable compared to their formal counterparts. Much of the literature on disaster-induced unemployment similarly points towards a variance in vulnerability between income groups, emphasizing a resilience gap that favours high-income groups over low-income groups (e.g., Masozera, et al., 2007; Sadeka & Reza, 2013; Sarker et al., 2019; Wu et al., 2019). This is much in line with the inequitable distribution of other disaster impacts previously mentioned.

The loss of work is partially indicative of a loss of livelihood. Carney (1998, p. 4) defines livelihood as “the capabilities, assets (including both material and social resources) and activities required for a means of living”, and adds that “A livelihood is sustainable when it can cope with and recover from stresses and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base”. The mentioned ‘capabilities’, ‘assets’, and ‘activities’ (Carney, 1998) that come to define a livelihood broadly represent facets of an individual’s capitals (Rakodi, 2002). Although livelihood and economic ‘work’ are not directly interchangeable terms as offered definitions provide a broader understanding (e.g., Carney, 1998; Chambers & Conway, 1992; Scoones, 1998), the financial

means to enable one's living is generally a requirement in market systems. Thereby, the loss of one's financial ability to secure the necessities for life through 'work' exists tandemly with a loss of associated livelihood. This thesis research will utilize both 'work' and 'livelihood activity' interchangeably to represent the economic action taken to sustain one's livelihood.

Given that 'livelihood' as a term brings in non-material components in its holistic understanding of life, disaster research has shifted away from pure survivability towards more social and environmentally conscious resilience (Berke et al., 1993; Cutter, 2003; Eid & El-Adaway, 2018; Manyema, 2006; Tierny & Oliver-Smith, 2012). The loss of a livelihood activity, which is determined in part by existing 'securities' or 'capital'⁶ (Haan, 2002), likely also results in the simultaneous loss of such capital. This stock of capital is represented as the quantity and quality of 'assets' such as "their cash..., their health, their labour, their knowledge and skills, their friends and family, and the natural resources around them" (Rakodi, 2002, p. 10). For example, McCordic et al., (2022) found that individuals who lost food and financial security following cyclone landfall in Mozambique would temporarily engage in informal work to recover lost securities, representing temporary but necessary shifts in livelihood activities in post-disaster scenarios. Similarly, other research identifies the importance of resource access, community, and 'place' in livelihood recovery (e.g., Bebbington, 2004; De Haan, 2000; Joakim & Wismer, 2015; Sadeka & Reza, 2013; Sanderson, 2012).

2.2.2 Identity

Economic arguments in favour of market turnover following disasters⁷ do little to explore the non-material impacts or personal experiences of those affected as they remain affixed at the

⁶ de Haan and van Ufford (2002) contend that an individual's capital (human, social, physical, financial, and natural) create the foundations that secure and maintain their livelihood. Subsequently, the unexpected loss of livelihood likely occurs tandemly, or causes, loss of capital.

⁷ In reference to creative destruction.

macro scale, yet non-material impacts are still a reality. Furthering the importance of lost livelihood is the coinciding and associated loss or alteration to the personal and social identity of individuals. Deeny and McFetridge (2005) observed that there was a growing body of psychosocial research for disaster discourse, but little in the way of individual identity impacts. This narrative has remained true as subsequent research has revolved around group identity and community resilience. Arcaya (2020) mirrors this concern, explaining that the recovery of a place does not equate to the recovery of individuals who were impacted. This is to say that community or group recovery does not equate to the recovery of the individuals who compose the collective. With this, an exploration of individual identity is justified.

2.2.2.1 An Interactionist Approach

Most identity theories have some attachment to Mead's (1934) creation of the self-concept in relation to the 'generalized other', setting the foundations of symbolic interactionism (Carter & Fuller, 2016; Serpe, 1987; Shrauger & Schoeneman, 1979; Stryker, 2008). In essence, one can only understand oneself as they compare themselves to others. Kelly (1962) begins to unfurl this interactionist approach by posing that "[the] self is built almost entirely, if not entirely, in relationship to others" (Kelly, 1962, p. 9); it can be understood that 'other' is more likened to anything outside of oneself to which they can interact. Mead (1934, p. 154) also originally posited that:

It is possible for inanimate objects, no less than for other human organisms, to form parts of the generalized and organized - the completely socialized - other than for any given human individual, in so far as he responds to such objects socially or in a social fashion (by means of the mechanism of thought, the internalized conversation of gestures). Anything - any object or set of objects, whether animate or inanimate, human or animal,

or merely physical - toward which he acts, or to which he responds, socially, is an element in what for him is the generalized other.

Rochberg-Halton (1984) investigates this further in their exploration of object relations that are more specific to inanimate objects. Within these interactions with external-to-the-self objects, “the self grows through a progressive internalization of the empathetic, gestural, and verbal dialogues it carries on with its surroundings” (Rochberg-Halton, 1984, p. 345), speaking then to the continual development of self through its ‘dialogue’ with other (object). This thesis research summarizes that the combination of animate and inanimate interactions with the self forms the basis of identity.

This thesis research suggests that the following theories help to form an understanding of identity, but do not singularly represent it. As such, this thesis work positions such theories as being seated within symbolic interactionism. Theories of Identity, Social Identity, Place, and Solastalgia will be discussed in relation to Symbolic Interactionism.

2.2.2.1.1 Identity and Social Identity Theory

Clarke (2008) recognizes the necessity of group recognition within the formation of the ‘self’ as comparisons against ‘others’ create a sense of belonging to the group the individual is a part of. Social Identity Theory follows that one’s social groups or categories help define their self-concept (Hatch & Schultz, 2004; Hornsey, 2008; Tajfel, 1974; Tajfel et al., 1971; Tajfel & Turner, 2004; Turner et al., 1994). Identity Theory deals instead with roles that are embodied and used to self-define (Hogg et al., 1995; Stets & Biga, 2003; Stets & Burke, 2000; Stets & Serpe, 2013; Stryker & Burke, 2000). Stets and Burke (2000) attempt to find common ground between ‘Identity Theory’ and ‘Social Identity Theory’ as they present the simplified argument that identity can simultaneously be “who one is” and “what one does” as an individual relating to a

group. This means that they exist comparatively as people but also through the roles (work, family, social, etc.) that they play (Baumeister, 2011). This is to say that in identity and social identity theory, the individual requires other actors as a means to obtain an identity, implying that the loss of the social self may be akin to the loss of the individual self. As social network loss and social fragmentation have been observed following disasters (Bryant et al., 2017; Lee et al., 2017; Paveglio et al., 2019), it is likely that social-based identities would also be impacted, yet few studies directly look at such losses (Dinger et al., 2020). In symbolic interactionism, this network loss and fragmentation is drawn equivalent to a loss of objects for interaction.

2.2.2.1.2 Place

It is not just the direct interaction between objects (animate or not) that inform identity in oneself, but the space in which such interactions occur. In other words, ‘place’ is created by the imbued meaning put forth onto a spatial context as symbolic interaction occurs and is interpreted by the individual within that context. This thesis work then follows Proshansky’s (1978; 1983; 1987) conception of ‘place-identity’, understanding that place becomes a part of the individual’s larger identity (1983). Proshansky defines it as a “pot-pourri of memories, conceptions, interpretations, ideas, and related feelings about specific physical settings, as well as types of settings” (1983, p. 60 via Hauge, 2007). The bond between oneself and place (Stedman, 2002) that forms place attachment through patterns of symbolic interactionism inherently implies that it can be broken. Utilizing Breakwell’s (1986) identity process theory, Speller et al. (2003) offer a theoretically important exploration of the implications of locational transitions and associated identity impacts on relocated populations, finding that ‘place’ was not a sole determinant of identity structure, but part of a larger complex and dynamic system. Further, numerous

contemporary cases exist that attempt to situate place transitions (loss of place) within disasters (See Jamali & Nejat, 2016 for a comprehensive list).

2.2.2.1.3 Solastalgia

Relating to ‘place’ and specifically the loss of place, solastalgia has been introduced as a concept to describe feelings associated with a “homesickness” despite being home (Albrecht, 2005, p.48). More generally, solastalgia represents a longing for the past in which meaning from a ‘sense of place’ was derived. Existing literature poses that despite continuing to physically exist (locationally), associated place attachment and ‘sense of place’ may erode following environmental changes (Albrecht, 2005, 2006a, 2006b; Albrecht et al., 2007; Albrecht, 2020; Warsini et al., 2014). Solastalgia, as a concept, has been used by researchers to connect environmental transitions (slow and rapid) and the erosion of individual’s or collective’s sense of place; however, a lack of engagement with identity theories represents a gap in this thesis work.

2.2.2.2 Salience

As the above theories (Identity Theory, Social Identity Theory, Place Identity, and Solastalgia) offer different perspectives on identity formation and meaning, the concept of identity salience assists in disseminating how these different identity views may be held within an individual all at once. The relationship of salience and identity within symbolic interactionism is that the derived meaning from various interactions exists simultaneously, insinuating that such derived meaning from interactions may be more or less important than others. Identity salience can be imagined as selective usage or hierarchical organization of meaning (McCall & Simmons, 1966; Stryker, 1968, 1980). When identity is framed according to roles, Callero (1985) and Rosenberg (1981) explain that the more important a role is for an individual, the more it will guide their understanding of themselves. The concept has been extensively expanded upon and is

commonplace in identity literature (See: Serpe, 1987; Stets & Serpe, 2013; Stryker & Serpe, 1994; Walker & Lynn, 2013). For this thesis study, salience is used to simply indicate that individuals may hierarchically place certain activities, roles, and relationships as more important to their sense of self than others. For example, an individual may see themselves as more of a mother than a food seller, potentially exhibiting a stronger connection towards one identity over another despite engaging in activities associated with those roles.

2.2.2.3 Identity Loss

As loss characterizes much of the accrued damage in disaster scenarios, this research contends with the psychosocial implications of identity loss. Theoretically, such actions of identity loss following disasters may be addressed using Breakwell's (1986) Identity Process Theory (See also: Breakwell, 1992, 1993, 1999, 2014). Breakwell outlines four guiding principles found in their Identity Structure processes:

- Self-Esteem – sense of self-worth.
- Continuity – psychological connection of self through time.
- Distinctiveness – perception of being unique or distinguished from others.
- Self-Efficacy - feelings of competence and control over one's actions⁸.

Pertinent to this thesis work and its relation to disaster-driven disruption, continuity acts as the representative principle for identity loss. The “persistent sameness with oneself” (Erikson, 1980, p. 109 via Breakwell, 1993) describes the need for congruence of the self and thereby congruence of interactions from which the self is derived. Multiple studies have been conducted to, in part, assess continuity against, or within the contexts of, identity commitment (Dunkel,

⁸ Definitions derived from Jaspal et al. (2020) and Speller et al. (2003) interpretations of Breakwell's work.

2005), nostalgia (Iyer & Jetten, 2011), group dynamics (Smeekes & Verkuyten, 2016), place (Speller et al., 2003), and loss of significant others and jobs (Papa & Lancaster, 2016). Breakwell (2014) takes a holistic approach to identity, explaining that it “will encompass elements that are dynamically derived from every aspect of the person’s experience – social category memberships, interpersonal relationships, social representational exposure, individual activity and observation and so on.” (p.24), insinuating that disruptions in the continuity of these elements from which identity is derived may equate to challenges to identity.

This thesis study on identity, agency, and recovery specifically engages with individuals who experienced livelihood activity disruptions and transitions. Research surrounding job loss and identity is overwhelmingly situated within the fields of management and management psychology, yet some findings can help explore disaster and market effects on individuals. One’s work is important to identity recognition both in terms of the social network that may be lost, but also in terms of how the individual views themselves as their role within the organization or community of workers (Walker & Lynn, 2013). ‘Liminality’ emerges as a concept in this thesis research as it is applied to being ‘betwixt and between’ states (Turner, 1967) of identity (Ashforth, 2001; Beech, 2010; Conroy & O’Leary-Kelly, 2014; Ibarra & Obadaru, 2016). This is to say that liminality represents the transition process; the space/movement of an agent, object, or idea between settled states (equilibrium). In connection with disasters, Maitlis (2009) asserts that trauma can initiate identity transition. Conroy and O’Leary-Kelly (2014) identify three phases of identity-liminality as “separation [detaching from the old sense of self], transition [resolving ambiguity inherent to this indeterminate state], and reincorporation [establishing a new sense of self]” (p.68). Although all phases are important, separation and transition represent the phases in which the heaviest toll is taken on the ‘self’ as it contends with the loss of identity (Conroy &

O'Leary-Kelly, 2014). What's more, is that although identity transition is common in terms of job loss, individuals can end up stuck in a space of 'identity instability' when they do not smoothly transition through the process (Conroy & O'Leary-Kelly, 2014) as Slotter et al. (2015) found that individuals that were presented with associated group loss would experience a lack of self-clarity and self-esteem. These concepts of identity liminality associated with job loss and associated livelihood loss have yet to be connected to post-disaster scenarios.

2.2.3 Agency

In reference to the transitioning action present in the concept of liminality, the agent's ability to act is imperative. Agency is the capacity of an individual to take action towards an objective. Bandura (1989, 2001, 2006, 2018) suggests four core principles that compose human agency:

- Intentionality – purposive thought for action.
- Forethought – future consideration in planning.
- Self-Reactiveness (self-regulation) - appropriate construction of, and motivation for, action plans.
- Self-Reflectiveness (self-efficacy) - functional awareness of action ability.

Bandura developed these principles of agency within a framing of emergent interactive agency and Social Cognitive Theory⁹, which are both well aligned with symbolic interactionism as they depend upon the constant learning by the agent through observation and interaction with the external world and internal self (1986, 1989, 2001). Such principles “enable people to play a part

⁹ SCT is an extension of Bandura's social learning theory. It describes that knowledge is created through socialization with, and observation of, others. This knowledge creation is reflected in subsequent behaviour (Conner & Norman, 2015; Schunk, 2012).

in their self-development, adaptation, and self-renewal with changing times” (Bandura, 2001, p.2).

Comparatively, Emirbayer & Mische (1998, p.971) propose three constitutive elements of agency:

- Iteration – routinized patterns of thought that create stability.
- Projectivity – future-oriented courses of action.
- Practical Evaluation – judgment and response to possible actions.

Emirbayer & Mische frame agency as a “temporally embedded process of social engagement” (1998, p.963), similarly emphasizing the interactive element of agent and other. Both of these conceptualizations generally include future-oriented appraisals and planning, as well as assessments of action and adaptation against plans. The iterative element of Emirbayer & Mische (1998) adds further nuance that hints at pre-conditions of patterned thoughts and actions creating a foundation from which the rest of Emirbayer & Mische’s constitutive elements and Bandura’s principles take effect. Emirbayer & Mische (1998) preconditions that create varying stability is a recognition of the past agent-object interactions, contending temporality as a central tenet to agency processes.

2.2.3.1 Structure

Following Emirbayer & Mische’s focus on temporal and interactional context, structure emerges as an integral component in defining agency. Gorski (2013, p. 668) explains, “Human agents are bio-psycho-social structures with emergent powers of intentionality. Conversely, social structures have agency, an agency that transcends and influences the intentions of the individual agents that co-constitute them”. Structures are enduring social mechanisms that enable

or constrain agents (Bhaskar, 1975, 1979; Sayer, 1999)¹⁰. Structure (social, natural, physical) is seen to precede individual action and binds agents' capacity to act; however, human agents can also reinforce or transform such structures¹¹ (Archer, 2010; Bhaskar, 1979). With this, Ahearn (2001) defines agency as the “socioculturally mediated capacity to act” (p. 112), specifically recognizing the social (and cultural) structures that guide agents 'action-ability'. If agents are constrained by such structures, reflexivity and intentionality become defining attributes of agency as agents must take deliberate actions toward an objective while understanding the influences of self and other (Bhaskar, 1979).

2.3 Theoretical Framework

This thesis work proposes that through the utilization of a symbolic interactionist lens, a relationship between environment, identity, agency, and recovery may be discovered. This proposition contends generally that as extensive changes to individuals' environments following climate disasters likely lead to identity losses based on continuity challenges, this in turn may negatively impact human agency levels and recovery trajectories of affected individuals. These propositions are theoretically detailed below.

2.3.1 Identity, Interaction, & Environment.

One's identity, or sense of self, is the cumulative perceptive understanding of the material, social, and spiritual components of the individual (James, 1892). This identification of self can only occur in observational understanding and comparison with others (Graumann, 1983; Kelly, 1962). To clarify, if nothing exists outside of oneself, the self has nothing to which it can base its understanding of self on, thereby relying upon the existence of 'other'. The

¹⁰ This definition follows the critical realist research philosophy. Critical realism is further defined under section 3.2.

¹¹ Similar to Giddens' structuration theory (see Giddens 1979; 1984).

conscious and unconscious reflective comparisons are premised upon an interaction between an individual and an object (other). This interaction can take place with either animate beings or inanimate objects. To summarize, an individual derives symbolic meaning from its interaction with external objects; such meaning is then internalized, forming a part of oneself (Carter & Fuller, 2016; Mead, 1934; Rochberg-Halton, 1984; Serpe, 1987; Shrauger & Schoeneman, 1979; Stryker, 2008). These external objects, in combination with each other, when bound to a defined (scalar) spatial context, make up the individual's environment(s) in which identity is constructed.

This symbolic interactionist approach also follows that the derived meaning of interactions is held in memory. The interaction that occurs in the experienced present of the individual is combined in part with similar or differentiated interactions in the past through conscious and unconscious memory to create meaning (Shoemaker, 1959). This signals a temporal element to identity as it is constantly reshaped throughout time. Breakwell (1993) similarly signals this temporal importance in their conception of continuity as being important to the formation and maintenance process of identity. The 'everyday' high quantity interactions create a relational familiarity (Serpe, 1987) through the achievement of goal-objects (Snyder, 1996). The repetitive positive interaction with objects or achievement of goal-objects (a thing, experience, or person) (Rexroad, 1933; Snyder, 1996) creates continuity in identity as a pattern develops. Further, as these interactions and pattern recognitions exist as memory, more broadly in the mind, they may also exist in imagined realities (Ryan & Irie, 2014; Szpunar et al., 2012; Williams, 1973). This is to say that identity may also be formed in part by expectations and interactions that do or do not actually occur. As memory of repetitive interaction informs future expectations, temporal contexts are entrenched in identity processes.

It is pertinent to this framework to differentiate ‘place’ and environment in relation to identity. Place is founded upon derived meaning projected onto a spatial context. This thesis research defines environment as the combined available objects for interaction in a spatial context, while place is the meaning of interactions (imagined and actualized) that have occurred in a spatial context. Thus, place is tied to a spatial and temporal context subjected to the individual’s perceived experience, while the environment exists outside of perception. Place exists in the mind, whereas an environment objectively exists.

2.3.2 Separation & Liminality

In the event of a natural or climate hazard interacting with established human systems, disasters emerge as immediate drivers of environmental transitions (Gares et al., 1994; Turner, 2010; Warsini et al., 2014). As these environments are composed of readily available objects for interaction, the mass material destruction of such objects in a disaster scenario marks a rapid evolution of the combined form into a comparatively (to previous) different environmental state. This thesis work hypothesizes that the characterized destruction of objects coincides with the destruction of opportunities for, and memory of, patterned symbolic interactions with said objects, which have been utilized to construct identities over time. As the available objects for interaction that make up an individual's environment are altered¹², active object interaction opportunity no longer matches the memory-based meaning of patterned object interactions. This discrepancy between expectation and experience signals unobtainable goal objects (Snyder, 1996) and an emerging rift in identity continuity (Breakwell, 1993). This emergent rift implies that object environments must also demonstrate continuity for their interpreting agent¹³.

¹² destroyed or migrated.

¹³ Environments are subjective to individual agents.

Environments are not stagnant entities. They are in a constant process of transition as their component parts (objects) exit and enter the system (spatial context). From an anthropocentric perspective, this constant process of environmental transition occurs on a temporally slow scale due to individuals' relative perception of time (Adam, 2013; Pahl et al., 2014; Wood, 2008). Accordingly, identities are under constant but slow redevelopment (Breakwell, 1986; Twigger-ross & Uzzell, 1996) as perceived micro-changes to available objects (entrance and exit of individual objects) within spatial contexts define available interaction opportunities. This is to say that under 'normal' conditions, environmental transition and identity formation occur at relatively similar rates. The nuance to these seemingly coupled processes is that environmental transition is externally occurring while meaning-based identity formation occurs in the mind but is dependent in part upon the environment. It is a commensalistic relationship, wherein the individual needs the environment but not vice versa. The rift in this relationship occurs as environmental transitions transpire rapidly in disaster scenarios apathetically to the humans that exist within it's spatial context.

In these scenarios, where the environment (and the physical individual) quickly 'jumps forward', the meaning-defined identity of the individual is tied to an environment that effectively no longer exists. As the physical environment and individual concurrently exist in the present, while memory and meaning are tied to the past, there is a hypothetical gap in which identity-in-the-mind lags behind the new reality in which its body exists. As the environment continues to transition at a varying pace in this changed state, the identity of the individual will be challenged to unconventionally quicken its pace of reformation to catch up, or risk existing perpetually in a state of liminality. Simply, this implies that there is a lag between the individual's identity (sense

of self) that had come to be based on the previously experienced interactions in an environment, and the reality of the changed environment in which the individual must now exist.

2.3.3 Diminishing Agency

This thesis work accepts the general disaster management cycle in both traditional and contemporary formats (See: Alexander, 2002; Coppola, 2006; Sawalha, 2020) that are founded on the four phases of Response, Recovery, Mitigation, and Preparation. These phases may vary in scale and scope, but this specific work centers on individual-level impacts with emphasis given to agency effects in the recovery phase. Following agentic thinking, phase succession within disaster management relies upon the achievement of individuals that are combined to represent collective measurements of progress, meaning that individual-level processes are more important than previously perceived. Through the hypothesized exploration and utilization of this theoretical framework, this research argues that not only is loss of (or lagging) identity an impact of rapidly transitioning environments, but that this loss has qualified importance as it represents a psychosocial barrier (agency loss) to recovery on an individual level.

Agency is the capacity of an individual to take action towards an objective. Bandura (2001) suggests its tenets include intentionality, forethought, self-regulation, and self-efficacy. Emirbayer & Mische (1998) add ‘the iterational element’ to human agency definitions, contending that there is also a need for stability in the self that is achieved through “patterns of thoughts and action” (p. 971). In disaster scenarios, much attention is allotted to physical resources, capital, or securities recovery (Tierney & Oliver-Smith, 2012), as the material outcomes may be more easily measurable and have come to represent the overall success of implemented strategies or health of the system. The importance of agentic thinking in such scenarios may be nuanced, but it better comprehends that the suggested outcomes rely on the

manipulation-action of present resources to achieve objective pathways. Without the ‘action’ component, there will be no movement in any direction. With this, agency becomes indispensable in the process of progress.

Agency likely exists in a constant waxing and waning flux, subject to the individual's experiences. Snyder (2002) suggests that emotions stemming from stressors, external events, goal attainment or non-attainment, act as determinants in a feedback loop that may strengthen or weaken the individual's agency regarding that specific objective or others. Generally speaking, when an individual is unable to achieve goal attainment as expected (controlled scenarios), they will likely see reductions in agency. This may feed back again and again, leading to diminishing agency and outcome returns. This is pertinent to this proposed environmental-identity framework as goal attainment may be drawn equal to patterned expectations of object interactions (Snyder, 1996), meaning that when patterned expectations of interaction cease to be fulfilled and sustained, the resulting impacts may decrease overall agency in the individual. This mirrors Emirbayer & Mische (1998) requirement of stability through iteration, supposing that a lack of stability by means of ruptured iteration would shake the foundations for agency. This thesis work surmises that such identity loss through breakages in patterned interactions and goal obtainment begets agency loss, resulting in diminishing abilities of individuals to achieve a measured state of ‘recovery’.

2.3.4 ‘Recovery’

Agency, in the case of this thesis work, is deployed in relation to recovery efforts of individuals in the aftermath of Cyclone Idai. Following the preceding theoretical hypotheses about causation and effect of identity loss within disaster scenarios, this thesis work poses a further implication that inhibits the progression of the disaster management cycle. This thesis

research hypothesizes that ‘recovery’ has a dualist form in which conceptions vary between disaster management perspectives and the individuals who are meant to undergo the recovery process. Within the academic and practitioner discourse of disaster management, adaptation and future-thinking are employed with the understanding that individuals, communities, and the more general society of a given area must learn to exist in a post-disaster scenario, drawing recovery akin to ‘moving forward’ (Tierney & Oliver-Smith, 2012). Dichotomously, individuals who have experienced the effects of disaster, including that of the proposed identity loss, may be drawn towards ideas of recovery as returning to how things were pre-disaster (Cox & Perry, 2011). The issue with the individuals' warranted trajectory into the past is that the environment in which they previously resided essentially no longer exists, as a rapid environmental transition has occurred. There is an aim to return back to ‘normal’ (Sawalha, 2020), to the comfort and security of a bygone environment, rather than develop alongside the emerging environment. In accordance with this framework’s proposition of agency loss, this thesis work then poses that not only do individuals have a lessened ability to address their scenario, but the trajectory of existing agency is aimed in the wrong direction.

3 Methods

3.1 Research Design

This study uses a qualitative methods research approach to collect in-depth human experiences and understandings (Creswell & Creswell, 2023) of identity loss and associated agency challenges following a rapid environmental transition. Exploring human experiences and narrative discovery is vital to crafting nuanced findings that build connections between physical damages from disasters and their psychosocial impacts. Specifically, this research utilizes an instrumental case study design to analyze the occurrence and process of identity loss and agency challenges for individuals following the landfall of Cyclone Idai (2019) in Beira, Mozambique (Creswell & Creswell, 2023; Stake, 1995). The instrumental case study is used to develop a theoretical framework that connects identity loss to poor recovery outcomes through agency effects in rapid environmental transition scenarios (Baxter & Jack, 2008; Stake, 1995).

This research centers on adult individuals working in informal markets who experienced temporary periods of unemployment directly following the landfall of Cyclone Idai (2019) in Beira, Mozambique. Data collection took place five years post-cyclone landfall with the assumption that individuals had an appropriate amount of time to engage in recovery processes dictated in the disaster management cycle. With this, there is a 5-year time boundary between the landfall of Cyclone Idai and the conduction of this research; however, this research recognizes that recovery processes have temporal subjectivity (Tierney & Oliver-Smith, 2012) while identity formation and agency are not temporally bounded (Bandura, 1989; Baumeister, 2011; Emirbayer & Mische, 1998). This research design is crafted to answer the following two questions:

RQ1. Using a symbolic interactionist lens, how does identity loss occur during rapid environmental transitions among individuals who experienced livelihood challenges following Cyclone Idai in Beira, Mozambique?

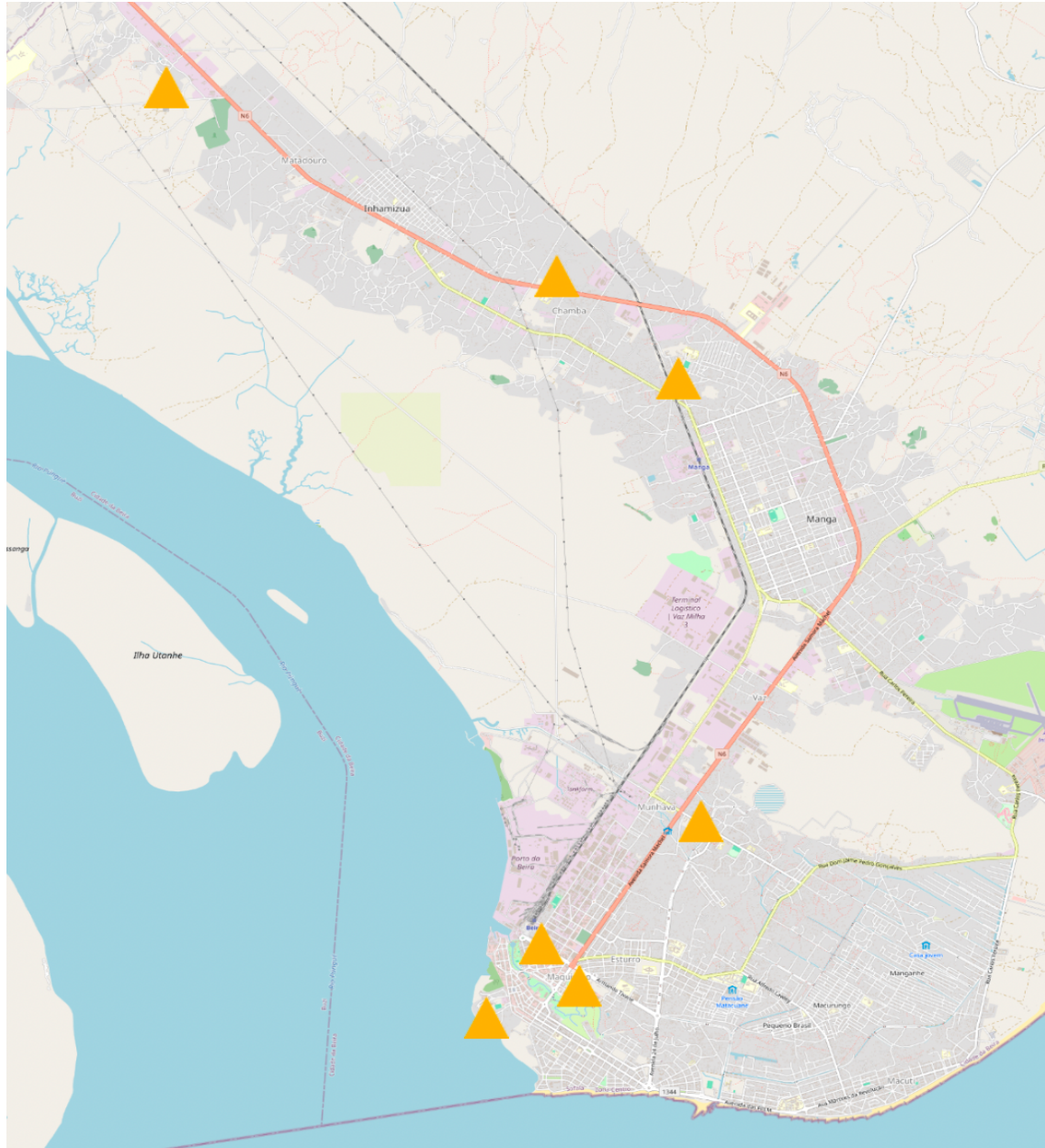
RQ2. How do impacts on agency affect recovery processes in contexts of identity loss among individuals who experienced livelihood challenges following Cyclone Idai in Beira, Mozambique?

3.1.1 Case Study Sites: Informal Markets of Beira, Mozambique

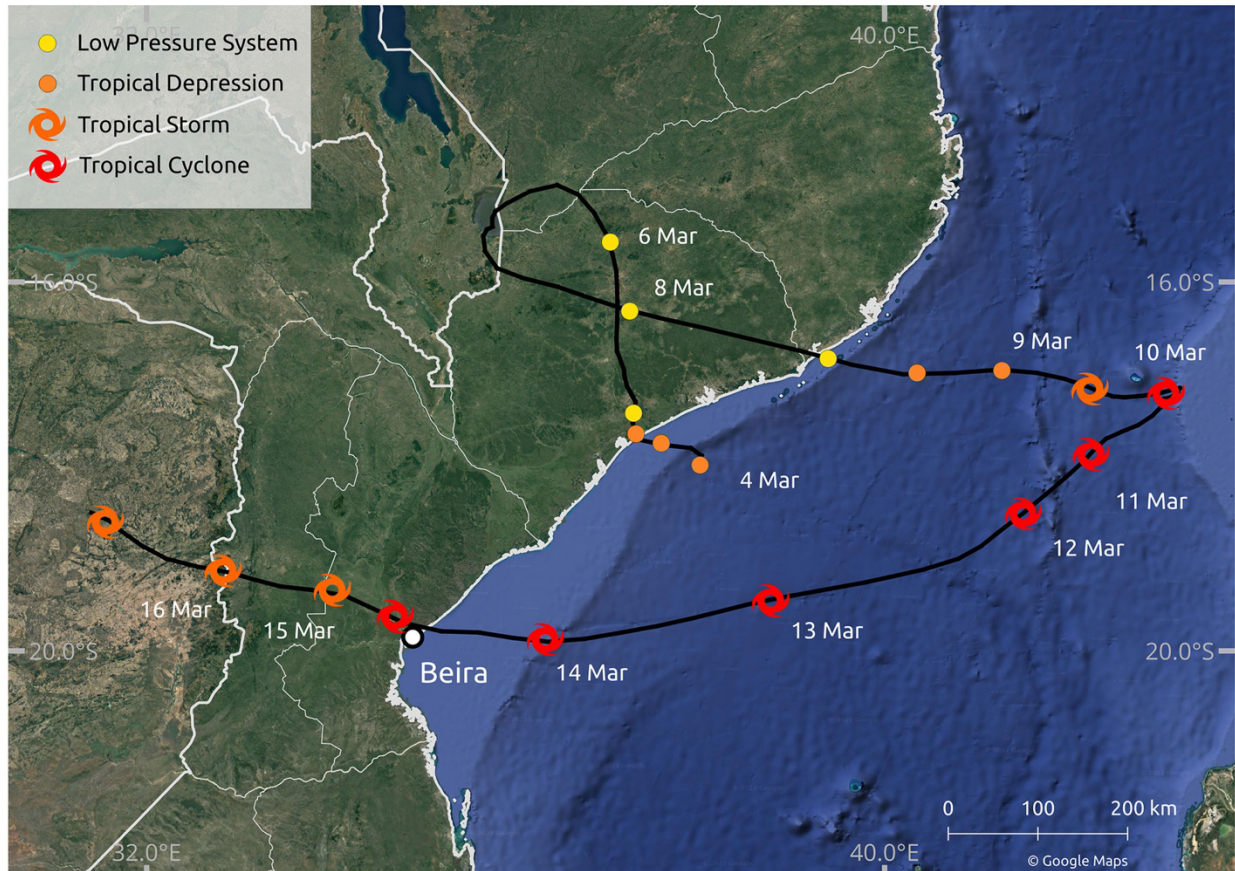
In March of 2019, Beira, Mozambique, became a landfall site of the deadliest cyclone in the southern hemisphere to date. The port city is situated on the eastern coastline, exposed to the Mozambique Channel. The secondary city¹⁴ is the capital of Sofala province, and the second largest city by land mass in Mozambique, with a population of just under ~600,000 (Maunze et al., 2019; Ramalho et al., 2018 via Sunu et al., 2025). Geographically, the city is located at the confluence of the drainage basins of the Púngoè and Búz rivers and is characterized by its large low-lying area, making it more vulnerable to flooding (van Berchum et al., 2020).

Research was conducted across seven informal markets in Beira. Following Manilla's (2015) work on informal work and vulnerability, informal markets were chosen as operating vendors were more likely to have experienced temporary or permanent work stoppages due to their assumed vulnerabilities in combination with system shocks brought on by Cyclone Idai. These markets included: Mercado Goto, Mercado Praia Nova, Mercado Maquinino, Mercado Munhava, Mercado Chingusura, Mercado Ceramica, and Mercado MoBeira. These markets were selected through the recommendation of our partners at Licungo University to represent a plethora of potential livelihood activities and narratives of loss.

¹⁴ Secondary cities are often smaller cities that tend to be more vulnerable to hazards (McCordic et al., 2022).



3.1 Beira, Mozambique. Informal Market Interview Sites.



3.2 Cyclone Idai Pathway (Mester et al., 2023, p. 3468)

3.2 Research Philosophy

This research is conducted using a critical realist paradigm, which assumes there is a universal reality that partially exists outside of human perception and that knowledge derived from observation of that reality is fallible (Archer, 1998; Bhaskar, 1975, 1979, 1989; Gorski, 2013). Critical realism stratifies reality into three domains: empirical (observable), actual (events), and real (causal mechanisms and structures), emphasizing the importance of discovering causation of the events and observed experiences (Bhaskar, 1989; Danermark, 2002; Sayer, 1992). This usage of critical realism allows this research to explore and hypothesize the causal mechanisms and structures that impede disaster recovery processes. As such,

retroduction¹⁵ is used in this research to develop and refine theory that explains such relationships. Critical realism deals directly with causes (structure) and agency impacts, connecting closely with this study's subject matter of identity, agency, recovery, and environmental transition. In tandem, this research also utilizes a symbolic interactionist lens, which is considered a sociological paradigm (Ritzer, 1975), to understand the social construction of identity and impacts of environmental processes.

3.3 Research Methods

3.3.1 Methodology

This investigation relied on qualitative methods to study the nuanced interconnections between rapid environmental transitions, identity, and agency within recovery processes. Semi-structured interviews (interview guides attached in appendices) were utilized to capture individuals' subjective experiences, associated emotions, narratives, and perceptions. Semi-structured interviews can combine both open and closed-ended questions, allowing for both a structure of set topics and free-flowing narrative exploration (Adams, 2015).

3.3.2 Sample

This research collected data across seven informal markets in Beira, Mozambique. Between June 18th and June 26th, 2024, 37 in-depth interviews were conducted with those who reported to have experienced livelihood changes following the landfall of Cyclone Idai in 2019. Specifically, interviews were conducted with individuals who experienced livelihood disruption (loss of livelihood activity) and later recovered it (previously practiced livelihood activity), and individuals who experienced livelihood disruption (loss of livelihood activity) and began a new

¹⁵ Retroduction is the practice of starting with an observed phenomenon and then moving backwards to hypothesize causation. It works to develop and refine causal theory through iteration of this process (Belfrage & Hauf, 2017). Retroduction is often drawn akin to abduction.

livelihood experience (new livelihood activity). This group of participants, within informal markets, were selected as a loss of livelihood activity would theoretically signal an identity continuity rupture that may involve social group losses (Social-identity theory), role losses (Identity theory), and loss of place (place attachment). Initial goals were to collect between 25-30 interviews with participants across five markets to ensure a diversity of livelihood representation and meaning saturation for thematic analysis, aligning with concepts of sample sizes and saturation of Braun & Clarke (2021), Francis et al. (2010), and Hennink et al. (2017). However, as language constraints of the primary researcher prevented them from aptly assessing ongoing interviews for saturation, additional interviews were conducted in two added markets, resulting in 37 interviews across seven markets. During data analysis, it was found that sample saturation was achieved within the first four days (25 interviews) as no additional novel codes and subsequent themes emerged following these. Partners at the University of Licungo assisted in estimating sizes of markets in order to proportionally allocate interviews across sites. To identify potential interview participants, inclusionary criteria were used: 1) Was the participant present in Beira during Cyclone Idai? (If 'yes', proceed to question 2; 2) Was the participant's livelihood activity (job) disrupted within 30 days following Cyclone Idai's landfall? (If 'yes', proceed to categorize the disruption as permanent change or recovered).

Snowball sampling was attempted but unsuccessfully implemented, leading to the utilization of iterative purposive sampling across the seven markets. A purposive matrix was used to stratify potential participants across various categories, which included observed age, gender, and current livelihood activity. Before approaching potential participants with the inclusionary criteria questions, these matrix categories were used. The interviews were conducted across seven markets to ensure approximate proportional representation of market

sizes (per the advice of partners at the University of Licungo) and saturation of categorized participants. Ethical concerns of demographic data being used alongside market locations and other information to potentially identify respondents have led to these categorizations being unreported.

Table 1: Interview Locations

Market Name	Interviews Conducted	Interviews Used
Mercado Goto	7	7
Mercado Praia Nova	5	4 ¹⁶
Mercado Maquinino	9	9
Mercado Munhava	4	4
Mercado Chingusura	5	5
Mercado Ceramica	4	4
Mercado MoBeira	3	3

3.3.3 Data collection

While in Beira, Mozambique, the main data was collected through semi-structured interviews with sampled participants based on the previously mentioned inclusion criteria within the identified informal markets. Interviews took place within the market sites where participants were identified, often within or near the individual's stand/workspace. Some participants' livelihood activities were mobile by nature; these interviews were conducted in shared/public spaces. Participants were informed that they may continue to conduct business during the

¹⁶ Employee's manager was present for interview; power dynamics of a present superior were questionable. Manager would interrupt at times. Interview was deemed unusable.

interviews if necessary. Interviews were recorded. All interviews were conducted by the primary researcher of the study and a local research assistant who translated questions and responses from Portuguese to English and English to Portuguese. Interviews lasted between 15-50 minutes depending on the engagement of participants. In addition to interviews, observations were utilized by the primary researcher during interviews in combination with post-interview conversations with the translating research assistant to help identify emotional responses and grounded contexts of participants within their working environments (Creswell & Creswell, 2023), as well as to better prepare for future interviews. These observations were used so as not to misrepresent quotations during data analysis.

Following the initial two days of interviews (June 18th and 19th), a second and third version of the semi-structured interview guide were developed to better reflect the emerging narratives and experiences of participants¹⁷. The original interview guide included a question about whether or not the participants who experienced livelihood activity challenges blamed their losses on any larger market players; this question was deemed unimportant after all initial participants responded with “no”. The core instrument remained the same throughout all interviews. In general, participants were asked to recall their pre-cyclone livelihood activities and social associations and then compare them to their current livelihood activities and social associations. They were also asked to describe their initial loss of livelihood activities due to Cyclone Idai, how they spent their time when out of work, and then the process of recovering or developing a new livelihood activity. In addition, they were asked to express or evaluate their emotional states during these different periods of time. Finally, participants were asked to assess their current risk of livelihood activity loss and describe their future outlooks.

¹⁷ Interview guides attached in appendix.

3.3.4 Data Analysis Plan

This research relies on thematic analysis to identify, analyze, and report patterns that emerge from the data (Braun & Clarke, 2006). The nature of thematic analysis requires both inductive and deductive reasoning to both generate and assess theory using empirical data. Following Braun & Clarke (2006) guide to thematic analysis, this thesis work follows the six outlined steps: familiarizing oneself with the data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. This thesis work's specific usage of these steps is detailed below.

Familiarizing yourself with your data: Following the initial phase of field interviews with participants, audio recordings of interviews were transcribed in Portuguese and translated into English by hired research assistants (RAs). These were reviewed by the primary researcher and back-translated with the field RA who helped conduct the interviews. The field RA (who had a stronger comprehension of local dialects that were present) re-translated the submitted transcripts. Following the re-translation, all translated transcripts were uploaded from Microsoft Word files into NVivo version 15. This stage was followed by an initial line-by-line read and a reread of the transcripts by the investigator.

Generating initial codes & Searching for themes: Initial codes were developed following the initial reread. These codes were based on grouping questions that were then refined more specifically to represent similar responses. Initial codes were also developed based on more obvious theoretical concepts. As more nuanced codes formed across question groups, themes began to emerge. Word-specific queries helped identify specific narrative usage. In total, 36 codes were developed and then refined.

Reviewing themes & Defining and naming themes: Narrative patterns emerged from codes which led to theme development. Themes were then combined and further differentiated from each other as a thematic map developed. The narrative structure from the thematic map led to further coding and theme refinement. The initial naming of themes also allowed for refinement of theme content, feeding back into more specific renaming. Current themes and sub-themes used are:

- 1.1 - Livelihood-Related Identity Definitions
- 1.2 - Instances of Recognized Identity Loss/Change
- 2 - Social Network Changes as Object Loss
- 3 - Time Allocation Changes
- 4 - Emotional Impacts of Continuity Challenges
- 5 - Aimed Trajectory – Return to Normal
- 6.1 - Goal Obtainment
- 6.2 - Doubt, Hope, & Trust in God.

Production of the Report: The thesis was split into two parts in order to align with the two main research questions. Part One explores identity and loss with the aim to situate identity formation and loss within the context of the post-Cyclone Idai environment. This section relies on symbolic interactionism to explain how the environment has shaped individual's identity formation. Part Two of the thesis explores agency and recovery and discusses the psychosocial implications of the losses experienced by individuals following Cyclone Idai. This section investigates the emotional impacts of these losses and their potential effects on human agency, and the recovery trajectories of individuals.

3.3.5 Limitations

There are several limitations present in both the sampling and analysis in this study.

- Time Constraints – Due to the nature of conducting interviews in active markets during work hours, the primary researcher understood that time spent in an interview was a loss of time spent potentially gaining income for vendors. This led to shortened interviews if participants became disengaged, which may have resulted in a lack of data richness in some instances. Although saturation was believed to have been reached in the field, the fieldwork timeline was constrained by logistical considerations and it is difficult to determine whether saturation was truly reached in these interviews.
- Language/Translation Constraints – Due to the reliance on live translation, interview processes also depended on the hired RA's ability to articulate the purpose of each posed question to the participant as well as the individual responses to those questions. This may have led to unidentified misunderstandings and lost opportunities for follow-up. Similarly, despite utilizing observations, some context is likely to be lost when analyzing text transcripts.
- Contextual Scope – Due to this case study taking place in Beira, Mozambique, following Cyclone Idai, findings from the data may not be generalizable to all disaster contexts. This research recognizes the infinite number of variables that create specific contexts, limiting the ability to generalize results without direct comparison to other case studies.
- Sample and Narrative Bias – The inclusionary criteria for this research study meant that interviews only occurred with individuals who experienced temporary or permanent livelihood activity pauses, meaning that results may not be generalizable to the entire population within the case study's geographic boundary.

- Memory Reliance – As this study is taking place five years after Cyclone Idai, it relies on the recall of events and associated emotions before, during, and after the cyclone. Due to the nature of working with disaster victims, there is also an assumed likelihood of experienced trauma from Cyclone Idai, meaning that lasting mental impacts may also affect results.

4 Results and Discussion

4.1 Identity & Loss

RQ1. Using a symbolic interactionist lens, how does identity loss occur during rapid environmental transitions among individuals who experienced livelihood challenges following Cyclone Idai in Beira, Mozambique?

This section presents results and discussion on RQ1. As this thesis work attempts to situate identity as a major component of the characterized loss associated with climate disasters, such intangible concepts of self will be disaggregated and discussed using a symbolic interactionist approach. In the context of livelihood challenges following Cyclone Idai in Beira, Mozambique, this section will focus on: 1) livelihood-related identity definitions, 2) instances of recognized loss, 3) social network changes as object loss, 4) time allocation change, and 5) emotional impacts of continuity challenges.

4.1.1 Theme 1.1: Livelihood-related identity definitions

Work is a crucial element of self-definition in many identity theories. As a practice, work allows individuals to create economic value, benefiting themselves, their families, and the greater society. This, in turn, may cement their role (McCall & Simmons, 1966; Stets & Burke, 2000; Stryker, 1968; Turner, 1987) as a provider for their family and as a productive citizen who contributes to their community (Gini, 1998). Alternative views may also pose work as creating spaces for ‘in-group’ and work roles development (Oakes et al., 1994; Turner, 1987). From a place perspective, association with a setting occurs if the location is consistent. These views are complementary to each other as they are merely a way to interpret meaning.

When interview participants were asked if their current work defines who they are, most confirmed an association of their identities with their work. Simple confirming responses

included: “Yes, yes, work defines.” (MeMaP5), “Defines me, naturally.” (MeChP5), and “For now? Yes, it has to define.” (MeGaP2). These and other similar responses are in line with self-categorization practices that see livelihood practices as integral to self-definitions (Abrams & Hogg, 2006; Turner, 1987; Turner & Onorato, 1999). Some interviewees elicited responses that aligned with roles as providers, stating: “My work does define who I am because, as the head of the house, my work defines me as the head of the house, someone who is responsible for a house, responsible for a family, so it's from my own work.” (MeMbP1) and “It's defining me, it defines me because at home I'm able to support people, children, women, etc.” (MeCeP1).

Similar to MeMbP1 and MeCeP1, despite denying work as defining, participants stated similar explanations: “What I am doing now, it doesn't mean this is what I want to do in life. I'm just doing so that I will have something for my kids. Not to beg.” (MeMuP2) and “Yes, it's a way to endure....Haaa, [complaint], it doesn't define anything.” (PrNoP5). These responses further elicit a dissociation with their current livelihood practices but merely see them as a vehicle for the attainment of financial security.

Two participants directly denied work as identity-defining and offered explanations that centre self as the defining body instead of external perceptions. One participant stated “Actually, my job doesn't define who I am, what defines who I am is me, because if I depend on my job to define who I am, hiii, [complaint], I will have a lot of personalities... because yesterday I was at Startimes, today I am here, and I don't know what I will do tomorrow, so if all this defines who I am, I think I won't have a personality.” (PrNoP4). This participant likely interprets work as an outward-facing activity that others perceive, but due to the inconsistency of the activity that they have experienced, lacks an aspect of self-esteem and does not associate themselves with it (Baumeister, 1999; Stets & Burke, 2014). Further, this quote may represent that participant

PrNoP4's livelihood activities may not be salient, or important, to their self-definition (Callero, 1985; McCall & Simmons, 1966; Stryker, 1980). Here, participant PrNoP4 poses the ambiguity of future identity as they struggle with finding continuity (Breakwell, 1993). Alternatively, another participant, when asked what defines them, responded with "I think, following my dreams." (MeMaP9). Participant MeMaP9 later confirmed that their 'dream' was to be a teacher, meaning that their future definition of self may revolve around their work.

4.1.2 Theme 1.2: Instances of Recognized Identity Loss/Change

Within the same line of questioning relating livelihood practices to identity, participants were specifically asked about current livelihood practices compared to previous (often longer-held) practices, and periods following Cyclone Idai when they were out of work. This questioning was used to understand situations of perceived loss of previously held identity.

Interview participants expressed that they were engaged in their current work out of necessity for attaining security, but do not fully identify with it compared to previous practices. One participant explained, "I say this one doesn't define who I am because I chose that (previous) profession, and wholeheartedly, it was a job I loved doing, but this one is just an effort to maintain." (MeGaP4). Similarly, another participant expressed, "Yes, I can see myself selling something else, I often see that...But when you don't have the funds, you have to stay where you are" (MeCeP4). Along with those who do not fully embrace current livelihood practices as being a part of their identities, there is also hinting at an immobility in their current states, specifically emphasizing a lack of financial ability to (re)obtain work that they may better identify with. Similar immobility will be assessed through agency considerations under section 4.2.

For those asked about periods between work, a common expression of lost value or identity appeared, marking that for some participants, their work and associated livelihoods have

higher salience in their concept of self. One participant explained that “Without work, I defined myself as a person, but when you have nothing to do, no occupation, you don't fully define yourself as a person. Because when you have an occupation, you feel it.” (MeCeP4). While two others similarly expressed that “When a person has no job, they don't identify as a person.” (MeMBP2) and “I felt very bad, felt very bad, it was no longer like me... I was a different person” (MeMBP3). Although these three responses may express a loss of value to society or of a role (work or home), they also represent a rupture in identity due to a break in continuity. These losses of livelihood have lessened the individuals’ self-esteem associated with the achieved consistency and value creation of previous roles (Baumeister, 1999; Breakwell, 1986, 1993; Stets & Burke, 2014).

The multiple takes on identity expressed throughout Themes 1.1 and 1.2 exist tandemly within an interactionist approach as ‘work’ becomes a place of object interaction. What emerges from held discussions with participants is generally livelihood practices, whether previous or current, are held as a component of one’s identity. For a portion of one’s day, the work environment that they submit themselves to provides the opportunity for object interaction, and thus the symbolic meaning ascribed to the various interactions that occur. From participants who shared experiences of shifting to new work, or periods of no work, it was clear that their continuity¹⁸ was challenged. As they had previously established themselves in a livelihood practice that in some way provided value to themselves, a pattern of repeated interactions and attainment of goal objects created an expectation. Damages from Cyclone Idai that altered their work environments directly or their ability to partake as they once had in such environments hampered their experience of interactive continuity. This break in continuity challenges self-

¹⁸ In terms of their livelihood activity and prevailing identity attached to that activity.

perceptions of identity and indicates a loss of opportunity for such patterned goal attainment. Although symbolic interactionism follows that individuals may not necessarily be aware of internalized meaning of interactions, responses under themes 1.1 and 1.2 demonstrate that in reference to livelihood activities and their importance in the participants' lives, there is a conscious understanding that these livelihood activities may contribute to their self-concepts.

4.1.3 Theme 2: Social Network Changes as Object Loss

During major climate disasters, individuals' social networks inevitably change. As Cyclone Idai is marked as one of the deadliest ever cyclones in the Indian Ocean, claiming more than 1500 lives (Disasters Emergency Committee, 2021), death and injury may be centred in some individuals' social network changes. Inward, outward, and intra-neighbourhood migration that occurred following Idai in Beira also drove these social network changes. Following the interactionist line of thinking outlined in this work's theoretical framework, other people that make up individuals' social networks are taken to be understood as readily available objects for interaction. This is not a reduction of qualified value as animate beings are held equal to inanimate objects, but an interpreted basis to understand a singular individual's perception of self through their interaction with the external (Aksan et al., 2009; Blumer, 1962). More simply, the value of interactions with objects (people, things, and processes) is determined by the individual's perception. In the case of social network change, this interactionist approach would suggest that such changes should be interpreted as changes to readily available objects for interaction. More specifically, this would mark the loss of objects in which patterned expectations have been developed, implying a break in the ability to achieve expected goal objects (Snyder, 1996) and thus a break in the ability to maintain interaction-based identity (Breakwell, 1993).

In this subsection, participants were asked about changes observed in their social networks. Although this thesis research questioned participants on their experiences of livelihood loss, interviewees provided various experiences of social network changes that both do and do not directly relate to their work-based networks. A common reasoning for change, as previously mentioned, was the participants themselves or individuals in their networks relocating residences. In the case of relocation, there is a physical distance between the individual and the object (friend/coworker/family), which dictates the future of the interactive relationship and derived meaning. Multiple participants explained: “Yes, they changed, I mean, we ended up separating, right?...One (friend) moved to another place, another moved to another province...I don't cross paths with anyone anymore.” (MeGaP2), “I moved houses because my house was not in good condition, I moved into my parents' house.” (MeChP2), and “Others moved to other districts, even I moved from one house to another.” (MeMbP3). Cyclone Idai can be characterized as a driver of migration as it either directly (through damages to households/businesses) or indirectly (through creating insecure economic conditions) forced many people to relocate. Physical relocation can bring about social network change as physical interaction with existing relational objects (people) is limited by distance. As participant MeGaP2 mentions, the physical change to locations has negated their ability to interact with their friends and colleagues who were associated with their previous workplace location. These relationships that stop actively occurring begin to exist only in memory without the opportunity for maintenance through interaction. One participant noted that although his work-based network stayed mostly the same, his at-home dynamic changed, explaining that “Now, since the business is not going well, I took the family to the district, so here I am alone, every day I manage and send fifty to survive” (MeMaP3). This example is representative of the larger issue of economic

insecurity that people faced post-cyclone Idai, which has caused many struggling individuals to seek out and take up more work to provide for their families.

Non-relocation social network loss also occurred among participants. In two cases, participants expressed changes in relational dynamics that were not impacted by relocation. The first participant reflects on a felt judgement of others, stating, “Yes, I can say with a bit of disdain because you know when you are at a different level of life and then it changes, people look at you with contempt. Like you are one of those who can no longer do, no longer do that...” (MeGaP4). This participant’s response suggests that those ‘who can no longer do’ are of lesser value and may not want to be associated with. They go on to explain that “Thirty percent changed, because some close family members helped me both with strength and economically, but some family members distanced themselves from me. Because when things changed, and they saw there was nothing to gain, there was no more interaction, and things changed and respect itself changed.” (MeGaP4). In this instance, participant MeGaP4 suggests that their relationship with family members changed because their family members could not benefit from the continued existence of their relationship. This tandemly shows a loss of actively available objects for the individual as well as elucidates a specific interaction that they are deriving symbolic meaning from. A second case similarly points to the management of relationships as a coping strategy. A participant explains, “I felt isolated, because when you have, when you don't have, smiles change, change, some smile with you a little, some smile a little because they think if they smile too much, they might be asked for salt. Friendships also diminish.” (MeMuP3). Participant MeMuP3 reflects on how their interactions with colleagues and friends have changed following Cyclone Idai based upon perceived resource securities. Relationships are being tinged with acts of resource investigations and judgments based on visible securities as individuals hide

any surplus of assets that they are unwilling to share. In both cases, MeMuP3 and MeGaP4 are deriving meaning about themselves from their interactions and lack of patterned interactions in previous forms.

4.1.4 Theme 3: Time Allocation Changes

As objects provide the opportunity for interaction, time allocated to certain environments creates the interaction opportunity with objects specific to those environments. Elicited from preceding results, there exists a qualitative component within the symbolic meaning derived from interactions. Specifically, within social spaces, individuals attribute more weight to certain purposes and actions. In connection with seated identity theories, the qualitative form of interaction is what is often measured and theorized. Importantly, a quantitative component is also pertinent to an interactionist approach, especially within this proposed framework, as the establishment of patterned expectation and the effects of breaking such formations occur with both high-quality and high-quantity interactions. Although quantifying the exact number of interactions (actualized or not) that an individual has with an object in any given temporal period is implausible, a time-based perspective allows for a general understanding of opportunity for such interactions. To demonstrate this, participant MeCeP1 agreed that during the two-month period that they were out of work, they had shifted to defining themselves by the other activities that they were engaging in until they established a new livelihood practice.

As time, and more specifically how individuals choose to spend theirs, represents the opportunity and assumed seizing of such opportunity for interaction with various objects in an environment¹⁹, a logical derivation is that time spent can also be a measure of identity formation

¹⁹ This logic draws upon the concept of opportunity costs (Buchanan, 1991; Shaw, 1992) in relation to time. The basic concept of opportunity costs contends that if a resource is spent on one thing, it cannot be spent on another thing. As such, opportunity is limited. In relation to one's time, if someone chooses to spend time in one environment, it simultaneously reflects time not spent in a different environment.

and maintenance. Meaning that the more time one spends in an environment, the more opportunities for interaction within a given environment will present themselves, and the more likely interactions that occur in this environment will come to contribute to their sense of self. Following this logic, changes in time spent in different environments which provide a basis for identity formation would result in altered identity for that individual. Interviews conducted in Beira's informal markets for this research revealed that participants' time spent in workplace settings had increased compared to pre-cyclone scenarios. Twenty participants outlined their pre-cyclone work hours, which averaged out to 10.3hrs or 10 hours and 18 minutes per day. Twenty-two participants outlined their current (five years post-cyclone) work hours, which averaged out to 11.8hrs or 11 hours and 48 minutes per day. This equates to an increase of 1.5hrs or 90 minutes per day. Whilst this is likely indicative of the generally poor economic conditions and lack of securities that individuals are experiencing post-cyclone, for this thesis study, work environments and work-based interactions are increasingly centred in people's existences, indicating a shift of importance towards livelihood-based identities.

The change in time allotment is a shift in the established salience of identity for individuals (Serpe, 1987; Stets & Burke, 2000; Stryker, 1968), as time allotment previously dedicated towards non-work environments and activities is being repurposed due to conditions created in the wake of Cyclone Idai. For example, a participant complained, "Epá, I don't have free time, only on Sundays do I go to Church." (MeGaP3). Many participants expressed a negative sentiment towards such change, especially with time and relational shifts away from home. One participant explained, "The interaction with the family... It reduced a bit because now I have to be more focused on finding a livelihood for the family...I spend more time out of the house than at home." (MeGaP4). Another similarly adds in reference to their children, "It has

changed because we had almost all the time together, but now, we are already separated; we meet at the end of the day. And there too, I had more time at home and took care of the house alone.” (MeGaP1). Participant MeGaP1 laid out that their commute and working hours last from 4 am to 6 pm, stating then that “when I leave here, I go home, when I get home, I don't have much relationship with people at home. Many people I have a relationship with, are here in the market”. What comes out of this is an epidemic of object-relational change in terms of time allowances for interaction. Multiple interviews stipulated that mothers and fathers were spending more time out of the house and away from their children than before the cyclone.

4.1.5 Additional Discussion

The “self is built almost entirely, if not entirely, in relationship to others” (Kelley, 1962, p. 9). Symbolic interactionism conceptualizes everything outside of the individual (real or imagined) as objects available for interaction by the individual (Mead, 1934). Given these bounds of understanding identity as the cumulative, yet selective, meaning derived from interactions with the objects, the above themes begin to explicate the meaning that individuals derive from various interactions and how opportunities for interaction have been altered since Cyclone Idai. More simply, the above themes demonstrate how individuals derive meaning from their object interactions and environments, and how changes have occurred.

Theme 1.1 and 1.2 are used in this thesis study to explore individuals' awareness of identities as well as how individuals understand the importance of their livelihood activities, indicating salient organization. In general, individuals exhibited an understanding that their livelihood activities are significant to their identities. Livelihood activities provide spaces for iterative interaction that is seen as providing roles and value to the individual. As is demonstrated in theme 1.2, the loss of livelihood activities can then be drawn equivalent to the loss of

opportunities for iterative interaction that previously provided roles and value. Theme 2 is similarly an exercise in demonstrating the importance of social relationships as valued and iterative interaction, and the large extent to which individuals recognized that their social relationships had been altered by Cyclone Idai. Finally, Theme 3 takes a temporal approach to opportunity for interaction by demonstrating that individuals are now spending more time in work settings than previous to Cyclone Idai, meaning that there is likely to be a shift in the salience of meanings from pre-existing object relations. As these cumulative changes occur, the built-self changes (Serpe, 1987).

4.2 Agency & Recovery

RQ2: Following rapid environmental transitions, how do impacts to agency affect recovery processes in contexts of environmental identity loss among individuals who experienced livelihood challenges following Cyclone Idai in Beira, Mozambique?

This section presents results and discussion for RQ2. As section 4.1 worked to establish an understanding of identity loss occurrence among individuals who faced livelihood challenges following Cyclone Idai, the following section will explore the implications of such loss for an individual within the recovery phase of disaster management. This thesis research will do so through the analysis of themes: 1) Emotional Impacts of Continuity Challenges, 2) Aimed Trajectory – Return to Normal, 3) Goal Obtainment, and 4) Doubt, Hope, & Trust in God.

4.2.1 Theme 4: Emotional Impacts of Continuity Challenges

Up to this point, a narrative exploration of identity has been used to establish both explicit and implicit connections between individuals, their object environments, and the formation of self through internalized meaning of interaction. What else has been deduced from such exploration is that the landfall of Cyclone Idai marks a specific event and point in time

wherein an unknown but significant number of Beira's population likely faced challenges to their identity continuity. Over time, individuals had established patterns of interaction and expectations with their object environments, which fell into varying forms of disarray during and after Cyclone Idai. These interruptions have manifested as conscious identity dispossession, network dissipation, and time opportunity costs.

While conducting this research in the informal markets of Beira, participants were asked about their experiences of livelihood disruption as they were temporarily out of work following Cyclone Idai. Participants were prompted to recall feelings of loss and isolation. One participant stated, "I ended up isolating myself, you know, being unemployed while you used to work is complicated." (MeGaP6), while another shared, "I usually feel it (isolation), but since I'm someone who wasn't doing anything, someone who didn't have anything, wasn't working, I stayed like that with children, wife, family, [I] didn't have a way." (MeCeP1). Both participants begin to show the emotional intricacy during periods of direct continuity challenges. Prolonged self-isolation may operate in a feedback loop that leads to self-degradation (Martin et al., 2023; Neff, 2011). There may also be feelings arising around loss of sense of place and purpose. Participant MeChP3 explained, "I felt very alone because even now, those people who laughed with me, don't laugh with me anymore.", emphasizing the permanence of loss within their social network that stemmed from this period and the extended experience that is still occurring. A last participant summarizes, "I didn't feel normal or secure, felt like a person without a fixed place. I felt alone and isolated. I questioned how I would live like that and wanted to feel happiness with my family. My life wasn't normal." (MeCH4). This feeling of abnormality is key in connecting identity challenges to participants' experiences, as it identifies a break in established patterns as

expectations go unactualized. MeChP4 aptly conveys that this abnormality manifested as insecurity, loss of place, loneliness, and doubts about how to carry on living in such a state.

Conversations about emotive responses and experiences of isolation were followed up again with questions of self-worth. Similar to reported results from Theme 1.2, participants expressed a devaluation of self as they compared who they were during their period of livelihood disruption to their previously productive selves. Two participants expressed devaluation due to losing the ability to support loved ones, stating “Epá, inferior and despised, exactly because I was no longer able to support the family, so I felt like a very inferior person because I could no longer do what I used to do.” (MeGaP4) and “I felt bad. You imagine when a child says, mom I want to take a bath, I want a pen to go to school and you tell the child I don’t have, how will you feel?” (MeMuP3). These two responses illustrate a change in interaction patterns with the people (objects) that they are expected to provide for. Of course, there is a hidden continuity break in terms of livelihoods disruption, but this rupture leaks outward into all facets of the individual’s existence. Another participant stated, “I described myself as humiliated, right? Like a person who doesn’t have, [...], it’s like a paper without a program because I had nothing, I thought, I reached, and nothing I hit.” (PrNoP2). Humiliation presents a socialized understanding of self in comparison to others or expectation of self (Klein, 1991; Silver et al., 1986), represented by participant PrNoP2’s reduction of securities as also being a failure within society or of self-expectation. In a relative manner, a final participant shares, “You know when you have nothing, not everyone wants you, right?...Many people despise you, many speak ill of you, that one, that one, while it’s not really what you are.” (MeMuP1), assumptively perceiving other people’s observation of themselves negatively due to a lack of productivity. Although MeMuP1 explained

that that period and people's perception was not who they were, how long would it take for the adoption of that state to become defining?

Although the above remarks do not directly relate to recovery processes, they represent the emotional states of individuals in the process of recovery. Such negatively associated emotional states allude to the demoralization of the individual and their perceived failures directly following Cyclone Idai. Following Snyder (1996; 2002), these external stressors brought on by the cyclone's damages may be internalized and potentially affect the individuals' perceptions of action ability (self-efficacy), thus representing inklings of agency loss following Cyclone Idai.

4.2.2 Theme 5: Aimed Trajectory – Return to Normal

The continuity challenges that individuals faced following Cyclone Idai are equated to a breaking of normalcy and similarly demonstrate a lack of iteration deemed necessary by Emirbayer & Mische (1998). 'Normal' is subjectively defined by the individual based on their experiences. Such expressions for 'normal' are commonplace in disaster literature (See Platt, 2018; Rivera, 2020 for recent cases). For this thesis research, normalcy is the representation and understanding of the accrued patterns of interaction and expectation that have been formed by, and for, the individual. During interviews with participants in Beira's informal markets, a deeply seated dissatisfaction with their perception of their current states was repeatedly expressed. The observable displays of insecurities (subject to the observer) that characterized the interviewees and surrounding populations within the study sites were often paired with the articulation of desiring a return to 'normal' in reference to a pre-cyclone state.

Multiple participants expressed an association of 'normal' and positive states of being regarding pre-cyclone conditions. A first participant stated in response to what they want in their

future, “Yes, a normal life, a stable life.” (MeGaP6), associating normality with stability. A second participant, in response to how they dealt with negative emotions following Cyclone Idai, stated, “I just thought I have to find someone to give me some money and I continue doing my business, so at least my children feel a little normal.” (MeMup3), insinuating that they desired their children not to experience feelings associated with ‘non-normal’ states of insecurity. A third participant summarized their pre- and post-cyclone states, saying “I was an employee, ahhh, lived a normal life and managed to support my family in a normal way. But after Cyclone Idai things became a bit more complicated, and even today supporting the family is not easy.” (MeGaP4), suggesting that the ‘more complicated’ and ‘not easy’ conditions that were experienced are not normal in comparison to before Cyclone Idai. Similarly, some participants were asked to describe what a normal day was like for them pre-cyclone. Responses included, “There are days you wake up in a good mood, there are days you don't wake up in a good mood, you see? Not all days are the same, no, but the days were good before cyclone Idai, they were good.” (MeMuP1), “With that little stand of mine, I was feeling good because I could buy food, feed my children, and get school uniforms, it was a bit different.” (MeMuP3), and “Before Cyclone Idai, it was a joy, because for each day that business was done, you could see the income and here everything was ready, I had my house and everything else, they were always happy days.” (MeMbP1). These three responses, in combination with the preceding associations of ‘normal’ with goodness, likely reflect participants’ understanding of their pre-cyclone conditions and existences as comparatively stable, happier, and/or more secure.

Given the positive associations with the past and relative damages that continue to haunt Beira’s populations, it is not surprising that there also exists a desire to return to previous conditions. In various ways, participants expressed a desire to ‘return’ to previous practices and

conditions that existed before Cyclone Idai. Two participants conveyed a desire to return to university and secondary school, stating, “Yes, my house, which until today, leaks when it rains and I haven't managed to complete the roofing sheets, and I lost my place at the university. But I deferred, but haven't managed to get the funds to return yet, and business is like that too.” (MeCh2), and “I would like to go back to studying because at school, after my father passed away in 2021, everything changed, there was no way to pay the tuition, even today, I can't pay the tuition, I need to work to support the house, but next year I will go back to studying.” (MeChP1). Both participants explain the goals of returning to education but are hampered by their poor financial conditions. Participant MeChP1 later added, “It's not normal, right? Seeing your classmates going to school and you sitting there.”, suggesting a feeling of abnormality and otherness derived from missing out on the shared experiences with their peers. Two other participants conveyed desires to return to their previous business practices, stating “Yes, they said, why did you stop? I said, I know what I am doing, I will return.” (PrNoP1), and “Plans I have, if I had money, I would renew my stand at home again, sit there, wake up, look for goods and go home to sit and sell.” (MeMuP3). This last response also insinuates a desire to spend more time at home, away from the market, and resume a role more akin to caretaker. A final participant directly suggests a trajectory to how things were pre-cyclone Idai, saying “Yes, because in my way of seeing, I always thought about changing my life, I am trying, for example, to seek funding, and if I get it, I think within this time, within the next five years, I have to change. I have to go back almost to how it was before, or a bit better.” (MeMbP1). This participant specifically references a need to change as well as a need to go back, suggesting cognitive dissonance in understanding recovery. In contrast to the above quotations, one participant aptly stated, “In fact, there was no feeling of remorse, fear, no. I simply realized

within myself that there was no longer an opportunity there, so there was no reason to keep waiting for something that I knew could no longer return. So, as they say, just get up, take a good bath and move on.” (PrNoP4). Although this participant describes a lack of livelihood-based identity, their response demonstrates the desired attitude of disaster management, open and willing to forget what was and move to the next.

Recovery implies a directional aim within the process. With respect given to the macro-level prescription of recovery in disaster management to improve previous conditions and reduce future disaster risk (UNDRR, 2017), the micro-level subjectivity of individual agents demonstrates a misalignment in this impetus to move forward. In relation to place attachment, “home is a place of rest from which we move outward and return [...] a place of security within an insecure world, a place of certainty within doubt, a familiar place in a strange world...’ (Dovey, 1985, p. 45-46 via Giuliani, 2003). The call for normalcy elicited across participants’ responses is for security, certainty, and familiarity associated with past interactions. Yet, a return to previous object-interaction continuity within the altered environment reality is an impossibility, further complicating the recovery process across micro and macro scales.

4.2.3 Theme 6.1: Goal Attainment

Insofar as the previous theme explored the presence of past-based orientations (Emirbayer & Mische, 1998) in terms of (re-)establishing ‘normal’, human existence is linearly locked into experiencing the upcoming future. Understanding future outlooks of individuals who face continuity challenges is pertinent to understanding the potential for recovery as defined in disaster management contexts. Much of this section utilizes Bandura’s (1989, 2001, 2006, 2018) principles of intentionality, forethought, self-reactiveness (Self-regulation), and self-reflectiveness (Self-efficacy) to informally assess responses.

When asked how participants see themselves in five years, or what their plans are, a few responded as expected, citing plausible or imagined positive states. These responses included “In five years, I see myself as a different [name], with a bigger stand, because my goal is to open a boutique and a salon at the same time” (MeGaP1), “In my expectation as I have been saying here, I am already changing my life, I have already got my heavy vehicle license, just need to get the others to get involved in the truck life and change my life. So, looking at my vision in five years I see good things.” (MeGaP4), and “In five years, I see myself with a completed education that can sustain me.” (MeMaP9). Such responses reflected a future-oriented vision with some imagined path that the participants believed could be actualized. These three responses begin to demonstrate the practice of forethought, while MeGaP4’s response demonstrated intentionality, self-regulation, and self-efficacy, pointing towards higher levels of agency (Bandura, 2001).

However, responses exemplifying normal levels of human agency through Bandura’s core principles were in the minority of participants’ expressions. Many more participants expressed goals without the ability to achieve them, or no goals at all. Two participants explained, “I have many plans, perhaps due to lack of how to realize these plans, the value in this case, this can put a limit on me, yes.” (MeMaP7), and “Changing is very difficult with the economy, with the salary we earn, it doesn't help us much to change...Yes, we have plans, but a plan without money is not a plan.” (MeMbP2). Both participants reference having plans while citing or alluding to economic barriers to achieving such plans. These responses reflect the respondents’ doubt in being able to achieve their goals and lack of willingness to shift goals into more actionable states, representing voids in self-regulation and self-efficacy. Regarding efficacy, Bandura (2001) offers that “Unless people believe they can produce desired results and forestall detrimental ones by their actions, they have little incentive to act or to persevere in the

face of difficulties” (p.10). Bandura further describes “the ability to give shape to appropriate courses of action and to motivate and regulate their execution” (2001, p. 10) as regulation.

Although a lack of financial security should not be quickly dismissed as a barrier to goal achievement, the emphasis on a resource-based barrier demonstrates low levels of agency and the self-perpetuation of ‘stuckness’²⁰. The lack of self-action reflection and/or the unwillingness to shift goals towards a domain which the individual has capabilities for creates a self-defeating scenario wherein goal attainment loses plausibility. Although physical capital, resources, and/or assets are important in disaster recovery, they do not necessitate higher levels of human agency.

Participants with no goals often cited their current conditions and day-to-day existences. Two participants explained, “Naturally, because thought is not planned, it comes suddenly...I'm not going to say I'll do this because I don't know where I'll go.” (MeChP5), and “For now, I still don't know how my life will be in five years, but I'm trying, I'm struggling to improve my life. I have no prediction.” (MeMaP2). Participant MeChP5’s response likely reflects the reactionary behaviour that they have had to adopt due to a lack of securities and stability. In tandem, these two responses reflect through their lack of securities, stability in which accurate predictions can be drawn. If an individual does not experience continuity in their experiences, they will lack the ability to create valid expectations for the future. In other words, they are unequipped to deal with future challenges, which will only sustain the volatile nature of such challenges. Another participant echoes this by saying, “What plan? If I don't have a plan, when a person has nothing, they have no plan, the plan is when you have something. When you have something, you achieve something, you start thinking like this, in five years, in fifteen years, ten years, I will do this. So, if you have nothing, you have no plan.” (MeCeP2). Participant MeCeP2 also alludes to needing

²⁰ State-based interpretation of Jefferson et al.’s (2019) and Turner & Jensen’s (2020) work on stuckness.

‘something’ instead of ‘nothing’, drawing on a desire for physical capital to then be able to develop a plan. Similarly to previous responses that referenced a need for financial capital to achieve plans, participant MeCeP2 references a need for ‘something’ in order to achieve ‘something’. One interpretation of this could be that all four of Bandura’s (2001) elements of human agency (intentionality, forethought, self-regulation, and self-efficacy) require a physical capital component, as even forethought and intentionality are tied to having ‘something’. An alternative yet similar interpretation could follow Maslow’s (1943) hierarchy of needs theory, reflecting a need for a base level of physical securities that would create the stability required to build out agency (specifically forethought and intentionality) from. Both interpretations miss the mark as they infer agency as resource-based instead of as the actionability²¹. It is just more likely that human agency is associated with physical securities, as high levels of agency likely result in the affordance of such securities, as opposed to a causal relationship wherein agency is dependent on the securities. The outwardly expressed call for such securities by participants is thereby signalling low levels of human agency. Such low levels of human agency have likely resulted in a stunting effect regarding their subjective interpretation of recovery, perpetuating their liminal state between what was and what is desired.

4.2.4 Theme 6.2 Doubt, Hope, & Trust in God

Carrying on with discussions of agency in relation to outlook, three alternative yet interlinked narratives emerged among participants in response to questions interrogating how they envision change occurring. The first is the presentation of doubt in terms of positive outcomes and the ability to achieve such outcomes. Two participants similarly expressed in

²¹ Under these two proposed interpretations, physical resources create a base from which agency can be developed. Although agency requires material inputs to act upon, higher levels of resources does not equate to higher agency.

response to being asked about their five-year outlooks, “Well, just sensing with this question, you can see that things are not well, in five years things can get worse...Yes, some things may improve, and other things may get worse, and some things may turn around and improve, but saying everything will improve, I don't believe so.” (MeChP2), and “I don't know, maybe at the bottom of the pit, I don't know, I don't know because it's not easy, things are not easy, my son, life is not easy, it's very difficult.” (MeMaP6). There likely exists an association here between the iterative experiences of interaction with generally poor conditions and low-level securities, and these participants’ expressions of a pessimistic or doubtful sentiment towards their future courses. These participants are engaging in bouts of reflection but demonstrate little in the way of reacting with adaptation to their negative predictions (Bandura, 2001), reflecting potentially low levels of human agency. Further interpretation may also suggest that their reflections of their situation and ability to address it may or may not be accurate, but due to the assumed repetitive failure of goal achievement, reinforces the self-doubting perception that they have little power over their scenario (Snyder, 2002).

In a similar fashion to expressions of doubt, hope was regularly expressed in future-oriented inquiries during interviews with participants. Two participants summarize, “So, in five years, I believe and hope that things improve, the tendency is to always look for a better tomorrow, so if today we are in a normal state, the idea is to be in a better state tomorrow.” (MeMaP5) and “But hope is that which says, let the better times come” (MeMaP6), implicating ‘hope’ with a positive association of the imagined achievement of something, closely in relation to wanting or desiring. Another participant clarifies this, stating, “And you have to hold on to this work to support your family...Yes, so I also cannot lose hope and give up this type of work.” (MeChP4), expressing hope as a motivator, as the potential of losing hope would result in

‘giving up’. Similarly, another participant mirrors the necessity of hope, stating “Yes, when it's these kinds of cases, it's necessary to have hope that one day things will get better, of course, we were in a chaotic situation, but hope is the last to die.” (MeMaP5). The extensive discourse and attention given to hope in research exemplifies its complexity, as McGeer (2005) describes it as “a special kind of cognitive attitude” (p.101). The issue within this thesis work, and that is discernible from the literature, is that hope has a close relation with agency, but is not agency itself. McGeer (2005) summarizes an important distinction for this thesis research, contending that “Hope signifies our recognition that what we desire is beyond our current (or sole) capacity to bring about... We hope for something that could not be in any way affected by our efforts to bring it about.” (p. 103). To simplify, hope is presented as an understanding of something unattainable under an agent’s power, yet desired. When expressed, there is a perceived recognition by the agent that the desire of whatever is hoped for is beyond their direct agentic capacity to attain it. Thus, there is a reliance on objects, agents, or unidentified structures’ interference (or lack of obstacle interference) to attain what is hoped for. Although Snyder (1995) correlates high hope with success, it does not exist as causation. Concerning interview participants relaying various ‘hopes’, it likely reflects their perceived inability to obtain outlined desires. This implies that in direct or indirect relation to the hope for ‘improvement’, participants perceive that they currently do not have the ability as an agent to achieve it. What is important in this thesis research is that hope relies on the subjective perception of the agent’s action ability (self-efficacy) and its assessment against the desire. Self-efficacy can be inaccurate. The hopeful expressions of individuals in this thesis research demonstrate a perceptual gap between the agent and desired outcome, wherein the space between may only be filled by something outside of the

agent's capacity. This is to say that regarding such expressions, participants may see such desires for recovery as within reach but beyond their individual capacity to attain.

During participant interviews, a majority of participants made direct reference to 'God', indicating the presence of religious sentiment in many of the conversations. According to data collected in 2020, more than 85% of Mozambique's population was reported to follow an Abrahamic religion (USDS, 2022). Without taking up a religious discourse, it is important to recognize and understand its roles among disaster-affected individuals, especially within explorations of agency and identity. Although it may be an extreme generalization, to many, 'God' exists as a controlling agent. This is not to insinuate an assumed determinist worldview, but that the perceived value of agency may be lessened due to this belief of the environment and individuals' lives being out of their control. To initially exhibit this, two participants stated at different points in their interviews "I came to terms with it, tried to do some calculations. It got blocked, reaching that point was very difficult, I didn't know if I would make it but I handed it over to God and He helped me." (MeCeP1) and "But inside my heart, I'm just praying that God will just open a door for me so that I would do something in my life than what I am doing right now." (MeMuP2). Both participants communicated a reliance on God to help or provide an opportunity. Further interpretation, however, would relate this desired assistance to hope in the way that there may be a recognition that the desired goal of the individual is beyond their perceived capability (McGeer, 2005). This understanding does not go far enough, based on other references to God in this thesis study's interviews.

In response to questions on future change, two respondents similarly stated "Only I will put it in God's hands. Because everything comes from God's hands." (MeCeP3) and "Yes, I am in prayer, and if God provides, my prayer is to improve in the future and not lose...I am putting

everything in God's hands.” (MeChP2). This sentiment that “everything comes from god’s hands” and “I am putting everything in God’s hands” reflects a relinquishing of control over one’s outcome. It simultaneously conveys a rhetoric that individuals have a lessened (either never existed or relinquished) power over themselves and their environment in which they interact. Another participant echoes this, stating, “I don't know either, what God will do, if God blesses me, I will change, if God doesn't bless me, I will remain the same person.” (MeCeP2). Again, this idea that without God’s blessing participant (MeCeP2) will remain unchanged as a person, essentially renouncing their own self-development.

If goal attainment is achieved by the individual based on their own capabilities, they may attribute such successes to God rather than themselves, essentially displaying low levels of self-reflection and action-ability comprehension. Supporting this interpretation further, the expression of “only god knows” was iteratively stated by five participants following questioning about future outlook. This response may be interpreted as exemplifying a lack of Bandura’s (2001) intentionality and forethought tenets. A final participant adds in response to assessing future risk, “Hiii, I am praying to God that these things won't happen again, because I don't have any way to stop, yes, I am praying, a lot, a lot, it can't happen again.” (MeCh3). As evidenced through observations and discourse with participants, very few interviewees displayed stability or agency, reflecting participant MeCh3’s fears as well-founded.

For many, God provides comfort in the likely perpetuated states of vulnerability and volatile environments. However, God may also represent the reliance on an external agent to the self, to achieve the desired outcomes as expressed by hopeful participants. This may be problematic in recovery processes as this reliance on a powerful interfering agent may further cloud individuals’ self-efficacy, leading to diminished agency.

4.2.5 Additional Discussion

If an individual's identity is formed and stabilized through iterative interaction with objects in their environment, and those objects disappear en masse, how is individual agency affected? And what are the implications of this within the context of disaster recovery? Disaster management is a highly complex, subjective, and contextual process (Blaikie et al., 2014; Tierney & Oliver-Smith, 2012) wherein the individuals are the ones who experience the impacts and who must ultimately recover. With this, the preceding themes in this section explore the cascading effects and relationships proposed in the theoretical framework in section 2.

Theme 4 first outlines the emotional experiences of individuals as they navigated damages and losses associated with Cyclone Idai. Much work has been done on mental health in disaster (see Goldmann & Galea, 2014; North & Pfefferbaum, 2013), and findings from Theme 4 on the recollection of negatively associated emotions following Cyclone Idai generally reinforce these. Theme 5, however, explores the proposed concept that individuals who experienced identity loss may emphasize a desire to return to a previous state in which continuity was stabilized. As such, participants generally reported this desire, revealing a potential dichotomy in the concept of 'recovery' as it is deployed in disaster management. Results in Theme 5 were not conclusive that the 'normal' that individuals desired was associated with identity, as most spoke of physical conditions and activities instead. Themes 6.1 and 6.2 then worked to assess individuals' ability to achieve their desired trajectories of 'recovery', reporting levels of low agency across most participants. However, as the theoretical framework proposed a loss of agency, results were inconclusive as there is no comparative state to which levels of agency can be assessed against. It is also pertinent to understand that there likely exists a relationship between agency and exhibited vulnerability, meaning that as participants used for this thesis

study were generally observed as being vulnerable, they likely carried low levels of agency before Cyclone Idai.

5 Conclusions

This study investigated the occurrence of identity loss among agents and its implications for disaster recovery processes. For this case study, Cyclone Idai (2019) was considered a driver of environmental transition, while Beira, Mozambique and a five-year post-cyclone period provided the spatial and temporal context in which the recovery process was²² taking place. To gain insight into the occurrence and effects of psychosocial impacts within disaster scenarios, this research sought to apply symbolic interactionism and uncover the relationships between identity, agency, recovery, and environmental transitions. These efforts were attempted through the collection and analysis of semi-structured interviews with a sampled population that experienced changes in their livelihood activities following Cyclone Idai.

The proposed theoretical framework was successful in the partial uncovering of the propositional identity loss and cascading relational impacts on agency and recovery. To summarize, this theoretical framework posits that through a symbolic interactionist approach, mass environmental transitions brought on by disasters can be associated with identity loss through continuity ruptures. This loss of identity can have implications for agency based on failed goal attainment, recovery orientations toward the past, and the possible perpetuation of a liminal recovery-state process. The use of symbolic interactionism provided new insights into identity challenges as interviews uncovered mass change in participants' object environments, suggesting a continuity break in interaction patterns. Additionally, negative emotional responses were associated with these pattern breakages. Tensions in disaster management were also uncovered as participants exhibited desires and aims to 'recover' backwards towards their pre-

²² Recovery is an ongoing process.

cyclone realities. Finally, despite wanting to return to a pre-cyclone era, participants displayed low levels of human agency, suggesting a state of perpetual liminality.

5.1 Summarized Findings

5.1.1 RQ1

Using a symbolic interactionist lens, how does identity loss occur during rapid environmental transitions among individuals who experienced livelihood challenges following Cyclone Idai in Beira, Mozambique?

Cyclone Idai made landfall in Beira, Mozambique, in March of 2019, causing mass infrastructural damage and loss of securities as households' access to services, food, water, and energy decreased significantly (Williamson et al., 2023). From a symbolic interactionist approach, which focuses on object interaction, damage that characterizes disasters would signal extensive object change. This study aimed to qualify the significance of individuals' object environment changes. To start, most interview participants affirmed that their livelihood activities were substantial to their self-definitions, and further that following the loss of livelihood activities in the wake of Cyclone Idai, they felt like they had lost value or were a different person. These responses signal that those with high salience (important-to-identity) livelihood activities experienced challenges to their identity. In addition to livelihood activity changes, participants also reported notable changes in their social networks and activity time allocations. These three major changes (livelihoods, social networks, and time spent) spotlight a narrative of significant shifts in object interactions, leading to assumptions of identity continuity challenges. Further, this significance was qualified as participants expressed negative emotions of isolation and loss associated with these losses, aligning with Conroy & O'leary-Kelly (2014)'s

work-based identity transitions. These combined findings justify the use of symbolic interactionism and identity-based research within disaster settings.

5.1.2 RQ2

How do impacts to identity affect recovery processes in contexts of environmental identity loss among individuals who experienced livelihood challenges following Cyclone Idai in Beira, Mozambique?

In relation to Cyclone Idai and Beira, Mozambique, work has been done that communicates shortcomings in disaster preparedness, response, and recovery efforts (Judyn, 2024; Sunu, 2024). This thesis work aims to contribute to the growing body of research in Beira, but also to introduce overlooked micro-level psychosocial factors that may hamper the success of disaster management processes. Given the establishment of likely identity loss by way of continuity breakages in object interactions, results point toward relationships existing between the effects of identity loss, low agency, and recovery trajectories. Theoretically, Snyder (2002) contends that emotions associated with failed goal attainment may lead to decreased agency. As patterned interactions create expectations of continuation, these can be drawn equivalent to goal objects. Meaning that the negative emotions relayed by participants in relation to livelihood challenges may be contended with as emotions associated with failed goal attainment and continuity ruptures. Therefore, this study has evidence of the partial process of agency loss in relation to identity loss. Such findings qualify Snyder's (1996) work on goal obtainment and build the connection between goals and future interaction expectations. This thesis research also reports that participants evidenced low human agency by analyzing future-outlook responses using Bandura's (2001) principles of human agency. Specifically, participants demonstrated a lack of forethought and intentionality, as few had plans for the future, and of those who did, there

was self-defeating reflection occurring. This finding qualifies Snyder's (2002) work on agency loss. The final finding of this research is that due to identity loss, recovery trajectories of individuals may be aimed towards the past rather than the future, as participants expressed a desire for normalcy associated with pre-cyclone conditions. Such orientations towards the past are demonstrated as obstacles to future-centric recovery and adaptation.

5.2 Contributions and Considerations for Future Research

With consideration given to this study's findings, this work contributes to the growing body of disaster research and may have practical policy implications. In practice, the integration of psychosocial interventions that address identity loss and emotional impacts may improve recovery outcomes. By recognizing the detrimental effects of social network and livelihood losses on the recovery process, practical restoration efforts may emerge to mend the continuity ruptures people face. Similarly, shifting aid efforts toward agency development and guiding future-oriented recovery may produce improved adaptive capacity among agents. Such improvements will not only increase rates of successful recovery but imbue populations with the capacity to face future shocks.

For research, the general form of the theoretical framework should be further developed and refined with intensive investigations into the more minutely related observations, events, and mechanisms (and structures). For environmental transitions and identity loss, more research should be conducted to better categorize object changes within agents' environments and connect specific meaning associations with those objects and changes. With this call for further research, the symbolic interactionist lens provided new insights into identity loss in disaster scenarios, but more attention needs to be paid to continuity and other identity challenges (i.e. Self-Esteem, Distinctiveness, and Self-Efficacy) (via Breakwell, 1987). For agency loss, further research

should be conducted on the specific impacts of identity losses regarding emotional states and goal attainment. Besides relations to identity loss, human agency formation and reduction need to be further theorized to understand external processes that affect it. Lastly, understanding micro-level recovery trajectories will help to reveal obstacles of system recovery in disaster scenarios. Overall, there is a demonstrated need to continue pushing the boundaries of interdisciplinary work, as complex issues will not find solutions in a single space.

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Appendices

Appendix A: Qualitative Data Collection Tools – Interview Protocol

Interview Guide – Informal Market Vendor – Beira, Mozambique

Introduction (allow 5 minutes for introductions)

- Introduce yourself and the Research Assistant
- Review the overall study research objective
- Review the topic, structure and duration of the interview
- Provide a copy of the informed consent form and allow the respondent time to read and ask questions about the form before signing.
- Ask if the respondent has any further questions before beginning the interview.

1. Identity – General – Social Categorization

“We all have identities that we use to introduce ourselves to others, just to get an idea of who you are, ...,”

- Q1. Could you introduce yourself to us and tell us about how you define yourself?
 - Interests, family, where you live, etc., (also introduce ourselves more personally)
- Q2. Could you describe who you were before Cyclone Idai?
 - How do you think you have changed as an individual over the past few years?

Network - General

- Q3. Who did you tend to spend your time with before Cyclone Idai?
 - Family, Friends, Co-workers
 - Has that network of people changed?
 - Have you moved since Cyclone Idai? (Maybe intuitive)
 - Have many of your friends and family have moved barrios since cyclone Idai?

2.0 Previous Livelihood - General

- Q4. In detail, could you please describe what you did for a living before Cyclone Idai?
 - Responsibilities. How long they engaged in this work. Location of work. Hours per week.

“Often times our livelihoods depend upon resources. For example, a fisher depends on fish, a farmer depends on land, seeds, and water...,”

- Q5. What resources did your work depend on before cyclone idai?
- Q6. How did you initially get involved with that work?
 - Previous connections to the work
 - Who gave you this job?
 - How were you allowed into this space?
 - Other family/friends in this work.
 - Are those connections still relevant?
 - Current involvement.
 - Where are they now?

2.1 Previous Livelihood - Network

- Q7. How would you describe the community of practitioners in your previous work?
 - Competitive or supportive, did different people have different levels of control and power? How many practitioners? Groupings/cliques. Magic use
- Q8. Can you describe your relationships with your closest peers in your previous work?
 - Did you spend much time with them outside of work hours and locations?
- Q9. Are you still involved with those friends/peers?
 - To what extent?

2.2 Previous Livelihood - Identity

- Q10&11. What value do you think you brought to your place of work? To your closest group of work peers?
 - How did you contribute?

3.0 Current Livelihood - General

- Q12. In detail, could you please describe what you do for a living?
 - Responsibilities. How long they engaged in this work. Location of work. Hours per week.
- Q13. What resources does your work depend on?
- Q14. How did you initially get involved with this work?
 - Previous connections to the work
 - Who gave you this job?
 - How were you allowed into this space?
 - Other family/friends in this work.
 - How important are those relationships with the people who let you into this space to you?

3.1 Current Livelihood - Network

- Q15. How would you describe the community of practitioners in your work?
 - Competitive or supportive, do different people have different levels of control and power? How many practitioners? Groupings/cliques? Magic use?
- Q16. Can you describe your relationships with your closest work peers?
 - Do you spend much time with them outside of work hours and locations?

3.2 Current Livelihood - Identity

- Q17&18. What value do you think you bring to the general work network? To your closest group of work peers?
 - How do you currently see yourself fitting in and contributing to these systems and people?

4.0 Transition - Livelihood

- Q19. Can you please describe why you no longer practice your previous work?
 - Cyclone Impacts? Were there other issues occurring?
 - E.g., resource/financial limitations
- Q20. Can you walk us through leaving your previous work up until establishing your current practice?
 - Timeline.
 - Activity during the transition.

4.1 Transition - Network

- Q21. When you changed your line of work, who were your biggest supports?
 - What did they do to help?
- Q22. How did your social network change after your previous work was disrupted?

4.2 Transition - Identity

- Q23. During the period that you were in between secure work, how did you feel about yourself?
 - How did you cope with negative emotions?
 - Did you feel judged by your peers, friends, family?
 - Did you experience feelings of isolation or loneliness?
- Q24. Do you feel that your work defines who you are in society?
 - Do you think you had less value in society when you weren't working?
- Q25. During the time that you were in between secure work, how would you describe yourself?

5.0 Current Market

- Q26. Do you know of anyone who has taken up the work that you left?
 - Do you consider them to have taken your job?
 - Do you blame anyone for the loss of your work?
- Q27. Overall, how do you think your previous field of work has changed since Cyclone Idai?
 - How have the people changed?
- Q28. Do you think that you are in danger of losing your livelihood again?
 - Why? Are you worried?

6.0 Future

- Q29. In five years from now, what do you think your life will be like?

Conclusion (allow 5 minutes for wrap up)

- Ask if there is anything that the respondent would like to add that was not covered in the interview so far.
- Thank the respondent for their time and discuss the approximate timeline for:
 - Receiving any notes or transcripts from the interview
- Ask if the respondent has any remaining questions about the study or the interview process

ALTERNATIVE Interview Guide – Informal Market Vendor – Beira, Mozambique

Introduction (allow 5 minutes for introductions)

- Introduce yourself and the Research Assistant
- Review the overall study research objective
- Review the topic, structure and duration of the interview
- Provide a copy of the informed consent form and allow the respondent time to read and ask questions about the form before signing.
- Ask if the respondent has any further questions before beginning the interview.

1. Identity – General – Social Categorization

“We all have identities that we use to introduce ourselves to others, just to get an idea of who you are, ...,”

- Q1. Could you introduce yourself and tell us three things about yourself using “I am...” statements?
 - ***AFTER***(Introduce ourselves more personally)
- Q2. Similarly, could you introduce yourself as you would have before Cyclone Idai using three “I was...” statements?
 - *How do you think you have changed as an individual over the past few years?*

Network - General

- Q3. Who did you tend to spend your time with before Cyclone Idai?
 - Family, Friends, Co-workers
 - Has that network of people changed?
 - Have you moved since Cyclone Idai? (Maybe intuitive)
 - Have many of your friends and family have moved barrios since cyclone Idai?

2.0 Previous Livelihood - General

- Q4. In detail, could you please describe what you did for a living before Cyclone Idai?
 - Responsibilities. How long they engaged in this work. Location of work. Hours per week.
- X
- Q6. How did you initially get involved with that work?
 - Previous connections to the work
 - Who gave you this job?
 - X
 - Other family/friends in this work.
 - Are those connections still relevant?
 - Current involvement.
 - Where are they now?

2.1 Previous Livelihood - Network

- Q7. How would you describe the community of practitioners in your previous work?
 - Competitive or supportive, did different people have different levels of control and power? How many practitioners? Groupings/cliques. Magic use
- Q8. Can you describe your relationships with your closest peers in your previous work?
 - Did you spend much time with them outside of work hours and locations?
- Q9. Are you still involved with those friends/peers?

- To what extent?

2.2 Previous Livelihood - Identity

- Q10&11. What value do you think you brought to your place of work? To your closest group of work peers?
 - How did you contribute?

3.0 Current Livelihood - General

- Q12. In detail, could you please describe what you do for a living?
 - Responsibilities. How long they engaged in this work. Location of work. Hours per week.
- Q13. What resources does your work depend on?
- Q14. How did you initially get involved with this work?
 - Previous connections to the work
 - Who gave you this job?
 - X
 - Other family/friends in this work.
 - How important are those relationships with the people who let you into this space to you?

3.1 Current Livelihood - Network

- Q15. How would you describe the community of practitioners in your work?
 - Competitive or supportive, do different people have different levels of control and power? How many practitioners? Groupings/cliques? Magic use?
- Q16. Can you describe your relationships with your closest work peers?
 - Do you spend much time with them outside of work hours and locations?

3.2 Current Livelihood - Identity

- Q17&18. What value do you think you bring to the general work network? To your closest group of work peers?
 - How do you currently see yourself fitting in and contributing to these systems and people?

4.0 Transition - Livelihood

- Q19. Can you please describe why you no longer practice your previous work?
 - Cyclone Impacts? Were there other issues occurring?
 - E.g., resource/financial limitations
- Q20. Can you walk us through leaving your previous work up until establishing your current practice?
 - Timeline.
 - Activity during the transition.

4.1 Transition - Network

- Q21. When you changed your line of work, who were your biggest supports?
 - What did they do to help?
- Q22. How did your social network change after your previous work was disrupted?

4.2 Transition - Identity

- Q23. During the period that you were in between secure work, how did you feel about yourself? **(Do not lead unless they are quiet)**
 - How did you cope with negative emotions?
 - Did you feel judged by your peers, friends, family?
 - Did you experience feelings of isolation or loneliness?
- Q24. Do you feel that your work defines who you are in society?
 - X

- Q25. During the time that you were in between secure work, how would you define yourself?
 - Do you think you had less value in society when you weren't working?

5.0 Current Market

- Q26. Do you know of anyone who has taken up the work that you left?
 - Do you consider them to have taken your job?
 - Do you blame anyone for the loss of your work?
- Q27. Overall, how do you think your previous field of work has changed since Cyclone Idai?
 - How have the people changed?
- Q28. Do you think that you are in danger of losing your livelihood again?
 - Why? Are you worried?

6.0 Future

- Q29. In five years from now, what do you think your life will be like?

Conclusion (allow 5 minutes for wrap up)

- Ask if there is anything that the respondent would like to add that was not covered in the interview so far.
- Thank the respondent for their time and discuss the approximate timeline for:
 - Receiving any notes or transcripts from the interview
- Ask if the respondent has any remaining questions about the study or the interview process

Appendix B: Qualitative Data Collection Tools – Informed Consent Forms

Informed Consent

Hello, my name is Duncan Willis. I am a graduate student at the University of Waterloo in Canada. I am wondering if I can speak with you today about your experiences with business challenges and job changes following Cyclone Idai.

General Information about Research

The impacts of cyclones can create several challenges for business owners and workers as local markets react and adapt to the disaster. My research looks at how the identity of business owners and workers changes in response to disasters. This research looks into the way that the loss of jobs or businesses might have changed people's identity after Cyclone Idai. This interview will look into this issue by trying to understand the experiences of business or job loss and how their relationships with others have changed since Cyclone Idai. This study will help guide disaster recovery efforts. This research project is being funded by the Social Sciences and Humanities Research Council of Canada.

The purpose of this study is to answer the following question:

1. How does business or job loss impact a person's identity after the Cyclone Idai disaster in Beira, Mozambique?

Procedures

I am interviewing people who lost their job during or within one month of Cyclone Idai. If you are eligible and willing to participate, this in-person interview will last between 30 and 60 minutes. I would like to hear about your experience of business or job loss and recovery, and how you and your relationships with others changed during this process. My research assistant will translate this interview. A voice recorder will be used during this interview. This interview will then be transcribed and translated. This voice recorder is needed so that I can accurately translate your responses. Notes and transcriptions from this interview may be shared with you within two months of your participation for you to review and clarify. If you are interested in taking part in this follow up conversation, please provide us with your phone number down below. All data will be retained for at least six years. Your decision to participate will not in any way affect your current or future participation in activities with the University of Waterloo. To withdraw from the study, please contact Duncan Willis at the University of Waterloo (d3willis@uwaterloo.ca) to request withdrawal from the study. Please note that you may only withdraw from the study before any publications of these research findings (by September 1st, 2024).

Benefits/Risks of the study

Please note that you will not be paid for taking part in this study and your participation in this interview is voluntary. However, the information provided will help us understand the impacts of cyclones and inform future disaster recovery approaches. You may feel stress at the recollection of stressful events. You can skip any questions that you are not comfortable answering. You may also stop the interview at any time and/or withdraw from the entire study. If you decide to

withdraw from the study, all notes, transcripts and recordings of your interview will be permanently deleted.

Anonymity and Confidentiality

Unless you choose to provide anonymous quotes in this interview, your contributions to this study will only be noted in paraphrased form in any reports derived from this interview (no information will be directly associated with your name in any report or paper derived from this study). For translation purposes, an anonymous version of your interview transcript may be shared via an encrypted file transfer with a research assistant to verify any translation of your responses (the interview transcript will not be linked to you when shared for translation verification). All completed interviews will be stored on a secure, password-protected, and encrypted hard drive.

Contact for Additional Information

If you would like further information on this study, please contact Duncan Willis at the University of Waterloo (d3willis@uwaterloo.ca). Duncan Willis is under the supervision of Dr. Cameron McCordic (c2mccord@uwaterloo.ca).

This study has been reviewed and received ethics clearance through a University of Waterloo Research Ethics Board (REB #46344). If you have questions for the Board, contact the Office of Research Ethics, toll-free at 1-833-643-2379 (Canada and USA), 1-519-888-4440, or reb@uwaterloo.ca.

By providing your consent, you are not waiving your legal rights or releasing the investigator(s) or involved institution(s) from their legal and professional responsibilities.

I acknowledge that I have understood the information and consent form.

☐ Agree

☐ Disagree

I understand the purpose of this interview and I agree to participate.

☐ Agree

☐ Disagree

I agree to the use of anonymous quotations based on the information collected in this interview. (your name and title will not be attached to the quotation).

☐ Agree

☐ Disagree

Participant Code: _____ Date and Time: _____

If we have any questions after reviewing your transcript, would it be ok if we got in touch with you? (so that we can confirm that we have correctly understood you.)

☐ Agree

☐ Disagree

How is the best way to contact you? Contact Details for future contact: _____

Contact information will only be kept until the publication of the report (September 1, 2024) in order to confirm the interpretation of the information collected in these interviews. After this date, these contact details will be removed from the signed informed consent and destroyed.

Reminder to Participant: Please feel free to photograph this page or record these details.