

LANGUAGE MINORITIES AND DISASTERS:
THE ECOLOGICAL LITERACIES OF TRANSNATIONAL-MULTILINGUAL
MIGRANTS

by
Soyeon Lee

A dissertation submitted to the Department of English,
College of Liberal Arts and Social Sciences
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

in English

Co-Chair of Committee: Nathan Shepley, Ph.D.

Co-Chair of Committee: Chatwara Duran, Ph.D.

Committee Member: James Zebroski, Ph.D.

Committee Member: Paul Butler, Ph.D.

Committee Member: Kate Vieira, Ph.D.

University of Houston
May 2020

Copyright 2020, Soyeon Lee

ACKNOWLEDGMENTS

To begin, I would like to thank my research participants. I know that participating in this research is far less important for them than other urgent tasks in the wake of a disaster. My deepest gratitude goes to participants who allowed me to collect their stories and learn from them. I wish to thank my dissertation committee. My co-chairs, Dr. Nathan Shepley and Dr. Chatwara Duran, have provided tremendous help for this project. Dr. Nathan Shepley helped me to conceptualize ecological perspectives in writing studies, and Dr. Chatwara Duran has been an ideal model of scholarship by inspiring me to study the multilingual reality through ethnographic eyes. Dr. James Zebroski and Dr. Paul Butler have been outstanding mentors who always encouraged me to be a productive writer. Dr. Kate Vieira greatly supported my project throughout the draft process.

I thank Dr. Sally Connolly, Dr. James Kastely, and Dr. Jennifer Wingard for their support during my graduate life and professional development. My gratitude also goes to Dr. Hosam Aboul-ela, Dr. Karen Fang, Dr. David Mazella, and Dr. Lauren Zentz for their scholarship in Empire studies. I thank Dr. Aaron Duplantier for helping me start this study. I am grateful to Dr. Carl Lindahl for guiding me to set up ethical considerations in the early stage of this study. I thank Claire Anderson, archivist Dr. Teresa Tompkins-Walsh, and the librarians at the University of Houston Special Collections for their generous support for my pedagogical experiments with first-year college writers. I also thank the University of Houston Graduate School for financial support through the Graduate School Research Incentive Cullen Fund for this project.

Finally, I would like to thank my family, Jaehyuk, Seongho, and Jinho, for their love and support.

ABSTRACT

This dissertation explores the literate lives of transnational migrants in the US in the aftermath of an environmental disaster. While many scholars have examined the mobility of people, resources, and literate activities across borders, I propose that the ecological literacies of transnational migrants in local places and environmental disruptions should be further studied. By using the scalar analysis of data from four case studies and transcontextual analysis of participants' literacy networks and technologies, I argue that transnational-multilingual migrants, in the wake of Hurricane Harvey and the ensuing floods in 2017, have leveraged what I call transnational ecological literacies, that is, linguistic and semiotic resources across different systems, contexts, and modalities in a post-disaster context. Drawing from audio- or video-recorded interviews, observations, and written artifacts of twenty multilingual survivors and ten first responders and community workers, I illustrate how language minorities adopt rhetorical scaling to navigate the disaster recovery process and its monolingual-based norms and how they assemble heterogeneous language resources and technologies such as culturally specific social networking applications through rhetorical agency. Ultimately, this ethnographic case study contends that the recovery process and disaster-specific literate activities help transnational-multilingual survivors reshape their relationships to land, places, and environments and offer implications for transnational literacy studies, environmental communication studies, disaster management fields, and writing pedagogy.

TABLE OF CONTENTS

| | |
|--|------|
| ACKNOWLEDGMENTS..... | iii |
| ABSTRACT..... | iv |
| LIST OF TABLES..... | vii |
| LIST OF FIGURES..... | viii |
| Chapter 1 Global Environmental Changes and Immigrant Communities..... | 1 |
| Introduction..... | 1 |
| Background of the Research..... | 13 |
| Defining Key Terms..... | 18 |
| Theoretical Frameworks..... | 26 |
| Literature Review..... | 40 |
| Contributions to the Field..... | 47 |
| Chapter Organization..... | 49 |
| Chapter 2 Research Design and Methodology..... | 51 |
| An Ethnographic Case Study..... | 51 |
| Data Collection..... | 52 |
| Data Analysis..... | 56 |
| Participants and Focal Participant Selection..... | 60 |
| Researcher Positionality and Ethical Considerations..... | 67 |
| Chapter 3 Language Ideologies, Rhetorical Scaling, and Disaster literacy..... | 72 |
| Language Ideologies and Material Ecologies..... | 76 |
| Rhetorical Activities and Qualified Agency..... | 78 |
| Ideal Suburb and an Environmental Disruption..... | 83 |
| Racialized Spaces and Struggles for a Sense of Belonging..... | 86 |
| Multilingual Survivors' Rhetorical Scaling Practices..... | 89 |
| Minji Kim's Family: "If I were in Korea, I Could've Talked to Them More than a Hundred Times" | 90 |
| Dahee's Family: "I Cannot But Follow What They Decided." | 106 |
| Hajun's Family: "They, FEMA, Don't Believe in People." | 119 |
| Youmi's Family: "It is Not About Losing Your Face." | 130 |
| Chapter Conclusion..... | 135 |
| Chapter 4 Literacy Networks and Technologies in Disaster Recovery..... | 144 |
| Transcultural Spaces Mediated by Information Communication Technologies..... | 148 |
| Technological Literacies and Rhetorical Agency..... | 154 |
| Bounded Objects and Literate Infrastructures..... | 159 |
| Boundary Objects and Translation Activities..... | 168 |
| Bonding Objects and Social Media Interactions..... | 181 |
| Chapter Conclusion..... | 209 |
| Chapter 5 Conclusions and Implications..... | 216 |
| Rhetorical Scaling and Translocal Materiality..... | 225 |
| Emerging Digital Activism and a New Citizenship..... | 231 |
| Implications..... | 234 |
| Limitations of the Study..... | 247 |
| Final Thoughts..... | 248 |

| | |
|---|-----|
| Works Cited..... | 250 |
| APPENDICES | |
| A. Transcription Conventions..... | 271 |
| B. Application Form for FEMA Disaster Assistance..... | 272 |
| C. Interview Questions..... | 273 |

LIST OF TABLES

| | |
|---|-----|
| Table 1 Research Participants..... | 66 |
| Table 2 Participants' Media Ecologies..... | 156 |
| Table 3 Sujin's Writing Practices via Smartphone..... | 192 |

LIST OF FIGURES

| | |
|---|-----|
| Figure 1 Hurricane Harvey Storm Track in 2017..... | 9 |
| Figure 2 “New Construction Plan” | 9 |
| Figure 3 The City of Houston Disaster Recovery Information website..... | 170 |
| Figure 4 The advertisement of the “Harvey Recovery Survey” event..... | 172 |
| Figure 5 The Harvey Recovery Survey event..... | 178 |
| Figure 6 Social media channels of FEMA..... | 182 |
| Figure 7 Hajun’s use of plural instant messaging applications..... | 189 |
| Figure 8 Sujin’s digital artifacts..... | 199 |

Chapter 1

Global Environmental Changes and Immigrant Communities

Introduction

Recent environmental changes urge us to reflect on climate change and people's daily lives on a global scale. Researchers, experts, educators, activists, and laypeople have started to seek possible collective action as a response to both human-induced and natural disasters in the ecosystem. Over the past decades, climate change and its impacts on internal and international migration and displacement have been widely studied (Berlemann and Steinhardt). Mostly, these studies have investigated the movement of people who were forced to leave their country or land due to climate change. Environmental changes, such as rising sea levels, and natural disasters, including earthquakes, tornadoes, and hurricanes, have induced migration and often forced people to be disproportionately displaced. To indicate the populations who are more vulnerable to these situations and cross borders due to global and regional changes in the environment, scholars have started using the terms "environmental migrants" (International Organization for Migration 19). Given this reality, risk communication between professionals and laypeople has been foregrounded as a pressing issue. However, environmental communication and risk communication have not fully attended to a wide range of diverse populations in a global context.

Although environmental communication studies contribute to promoting social justice in disaster management on a global scale, less attention has been given to those who already have migrant experiences and often have linguistically and culturally diverse backgrounds in urban spaces. The global flow of goods, resources, and labor have brought about a number of migrants to the US and other countries. The lived experiences of migrant

populations dealing with environmental challenges have been underrepresented in environmental rhetorics and disaster management studies. This lack of attention should be addressed because migrant communities have increasingly faced a disproportionate burden during these environmental changes.

In this study, I draw on a literacy history interview approach to investigate thirty transnational-multilingual participants in the aftermath of Hurricane Harvey and the ensuing floods in the Houston Metropolitan area in 2017. Observing their literate activities, I argue that the participants leverage language resources and their digital media capital to navigate the disaster recovery process and social inequality while experiencing tensions with institutional literacies. Ultimately, I argue that this process leads them to reshaping their relationships to places and environments.

Many scholars across the fields have noted this disproportionate impact of environmental disasters. For instance, in his book *Environmental Communication*, Richard Cox explains the technological models of environmental risk, citing Ulrich Beck's notion of *risk society*:

Unlike risks from nature or from 19th-century factories that affected specific individuals or groups, Beck characterizes today's risk society according to the large-scale nature of risks and the potential for irreversible threats to human life from modernization itself. In Beck's risk society, rapid scientific and technological changes entail unknown and unintended consequences. In addition, exposure to risks is unevenly distributed across the population. That is because the burden of coping with the hazards of new technologies and environmental pollutants often falls on the most vulnerable elements of the population. (207)

While technical risk communication, defined as “the translation of technical data about environmental or health risks for public consumption with the goal of educating a target audience,” has been established (Cox 218), the cultural model of risk communication has only been recently recognized, as it “involves the affected public in assessing risk and designing risk communication campaigns, and [it] recognizes the cultural knowledge and the experience of local communities” (Cox 223-224).

This shift is also proposed in the field of professional communication. In their 1998 article, Jeffrey T. Grabill and W. Michele Simmons suggest a *critical rhetoric* of risk communication. Citing the Environmental Protection Agency’s (EPA) definition, they define “risk communication” as “the act of conveying or transmitting information between interested parties about levels of health or environmental risks; the significance or meaning of such risks; or decisions, actions or policies aimed at managing or controlling such risks” (418). Critiquing scholars’ separative approaches to risk assessment and risk communication, Grabill and Simmons argue that the notion of risk is socially constructed. Based on this social approach, they contend that these binaries between risk assessment and risk communication and between risk experts and common lay people should be reconfigured. Further, they pay attention to the two existing approaches in risk communication: technocratic and negotiated. Although the negotiated approaches revise the one-directional tendency of technocratic approaches, Grabill and Simmons point out that they still lack an understanding of the power relations in decision-making processes in risk communication. In the suggested critical rhetoric of risk communication, they state, “we have recourse to a [false] concept of ‘the public’ as a rhetorical counter to ‘experts,’ but we believe the concept of ‘the public’ to be largely fictional” (429). While critiquing the notion of public as a “coherent, unified, and

identifiable” collective, they argue that this notion lacks embracing localized contexts, situations, and differences in communities (429).

I nod to their suggestion of the critical rhetoric of risk communication as a pioneering work in debunking a Habermatian notion of the public, which is largely based on rational white male subjectivity, and contextualizing risk communication in the local context. Their argument is critical in “contextualizing risks” (429) by attending to the differences and heterogeneity of local communities and advocating for ethical approaches and social justice in risk communication. However, this critical approach to risk communication has yet to fully encompass geographical identities, language practices, and grassroots activities of local immigrant communities.

Drawing from disaster management studies and environmental risk communication studies, I started asking a question at the intersection of migration studies and environmental changes studies: What if this risk occurs in our multilingual reality in which differences in terms of language, culture, race, ethnicity, class, national origin, and other factors are enmeshed? Drawing from Mary Louise Pratt’s 1991 work, sociolinguist Mike Baynham states in his dialog with translation scholar Tong King Lee that “difference is threaded through the entire social fabric and incorporated into the repertoire” (9). Baynham’s point is that “rather than shared meanings and understandings,” difference is the norm in our everyday reality and communication (9). In this study, I ask: How can we situate difference in communication, particularly linguistic and cultural difference, in the wake of disasters?

Recently, rhetoric and composition and literacy education, among other fields, have emphasized the issues of globalization and rapid flow of people, resources, and goods. This discussion has hardly included the globe itself although such flow has a tremendous impact

on the planet and environment. As historian and subaltern studies scholar Dipesh Chakrabarty notes, “Now it is being claimed that humans are a force of nature in the geological sense” (207) because humans’ impacts on the planet became large-scale after Western countries underwent the Industrial Revolution. He points out that humans became “geological agents” beyond “biological agents” given the fact that “[h]umans now wield a geological force” (206). In turn, this Anthropocene period is experiencing “a figure of the universal that escapes our capacity to experience the world” (222). This environmental turn is important in understanding human agency in communications out of human-centered perspectives. Resonating with Chakrabarty’s theses, Alastair Pennycook in his 2018 article “Posthumanist Applied Linguistics” defines posthumanism as “a range of concerns, from a questioning of the centrality and exceptionalism of humans as actors on this planet, or the relationship to other inhabitants of the earth, to a reevaluation of the role of objects and space in relation to human thought and action, or the extension of human thinking and capacity through various forms of human enhancement” (445). He explains the implications of posthumanist approaches to language and writing: “Posthumanist thought also brings a different set of ethical and political concerns to the applied linguistic table, issues to do with human relations with the planet and its other inhabitants” (446). My study attends to these relations between human beings and the earth, particularly, communicative and literate activities of human beings and the floods enacted by human-induced climate change.

Indeed, a series of recent hurricanes in 2017 in the Gulf of Mexico in the United States and the ensuing floods were taken as the social and material consequences of natural disasters. As Hurricane Harvey was followed by Hurricane Irma and Hurricane Maria, the chains of these hurricanes devastated the southwestern areas of Texas, the Caribbean islands,

and Puerto Rico respectively and caused heavy casualties and destruction of the natural and built environments of the cities located near the Gulf of Mexico. The hurricanes affected multiple cities. However, the recovery process of each city has been different. Many studies point out the important fact that a region's recovery processes are related to the locale's political power. In her 2019 work, emergency management scholar Alessandra Jerolleman explains, citing a 2018 *Palm Beach Post*, "Unlike Texas, Puerto Rico lacks any voting power in the US Congress, having only one delegate without an official vote" (3). This lack of political power influenced the recovery process of Puerto Rico, which still struggles with devastated infrastructure and few resources. This case exemplifies the relationships between disaster mitigations and sociopolitical factors. In a similar way, multiple sociopolitical factors intervened in the recovery process within a city.

At the time of Hurricane Harvey, I had lived for six years as an international migrant and as a graduate student in Houston. Harvey was the first catastrophic storm that I directly experienced. On Sunday, August 27, 2017, the Houston, Texas, metropolitan area was hit by a devastating hurricane and heavy rainfall (see fig. 1). Hurricane Harvey and its flooding, often labeled a five hundred-year flood, resulted in more than 40,000 victims, and damaged 300,000 properties and 500,000 cars (Blake and Zelinsky 9). I was one of the insiders and residents who observed the beginning of this flood and the complicated process in the lives of survivors as they were my neighbors. My home was part of the subdivision which was devastated by the flood. On the very first day of Hurricane Harvey, my home became a temporary shelter center because it was one of the few units that was not flooded by the torrential rain during the storm's worst night. Garage areas in my building unit were flooded; my house on the ground was close to the floodwater yet standing safe. In my house, those

who walked through water to evacuate their flooded homes met other people over tea and some food. During their temporary evacuation, the survivors often spoke in person and texted on their phones, in languages other than English, such as Spanish, Bosnian, Russian, Chinese, and Korean, on the street and used English to check the weather and hurricane information and news from other families and neighbors, while spending many days checking their phones and sending messages to others. Mostly, they resisted evacuation until the last minute in the hope of keeping their houses safe.

Before Hurricane Harvey, Houston had already been affected by floods multiple times. Since the early 2000s, cities on the Gulf of Mexico have dealt with a series of large-scale floods. Jayajit Chakraborty et al., in the fields of sociology and anthropology, note that the metropolitan Houston area attracted significant attention from scholars in the field of risk management and disaster studies: “With regard to Tropical storms and hurricanes, Greater Houston has become one of the most vulnerable urban areas in the world, in part because of its proximity to the Gulf of Mexico. Even before Hurricane Harvey, Tropical Storm Allison (2001), and Hurricanes Rita (2005), Katrina (2005), and Ike (2008) all caused widespread flooding. More recently, the Memorial Day (2015) and Tax Day (2016) floods resulted in deaths and substantial property damage” (244). As they note, after this unprecedented hurricane hit, discourses of natural disasters and floods were more intricately enmeshed in the lives of residents, particularly newly arrived immigrants and residents of economically modest means.

The existing disaster studies, however, has had limited discussion about the ensuing technological disaster triggered by reservoir releases after Hurricane Harvey and language minorities in the recovery process. Evacuees and other neighbors, including myself, in this

temporary shelter did not foresee that the water would stay more than two weeks and the process would last more than several months and even multiple years. When the Addicks and Barker Reservoirs in west Houston, which exceeded their floodwater capacity, were released into Buffalo Bayou, the main waterway flowing through downtown, subdivisions around the reservoirs and towns close to the Bayou were more severely flooded (see fig. 2). Greenville (a fictitious name), in which many of the participants of this study resided, was one of these neighborhoods, one of the areas most severely affected by this release. For almost two weeks, water remained on the sidewalks and highways, and in buildings, houses, and parks. As Jerolleman notes, “These outcomes are not solely a result of the disaster itself but in fact largely stem from a history of disparities in health and well-being that serve to concentrate vulnerability within minority, working class, and poor communities” (2). Jerolleman’s point is that although the floods affected the city and its population comprehensively, the consequences of the disaster are intricately intertwined with social disparity. The survivors who temporarily sheltered in my house resonate with Jerolleman’s point. In my observation, foreign-born residents, who often speak languages other than English on their phones in my house, have experienced more convoluted procedures in the recovery process.

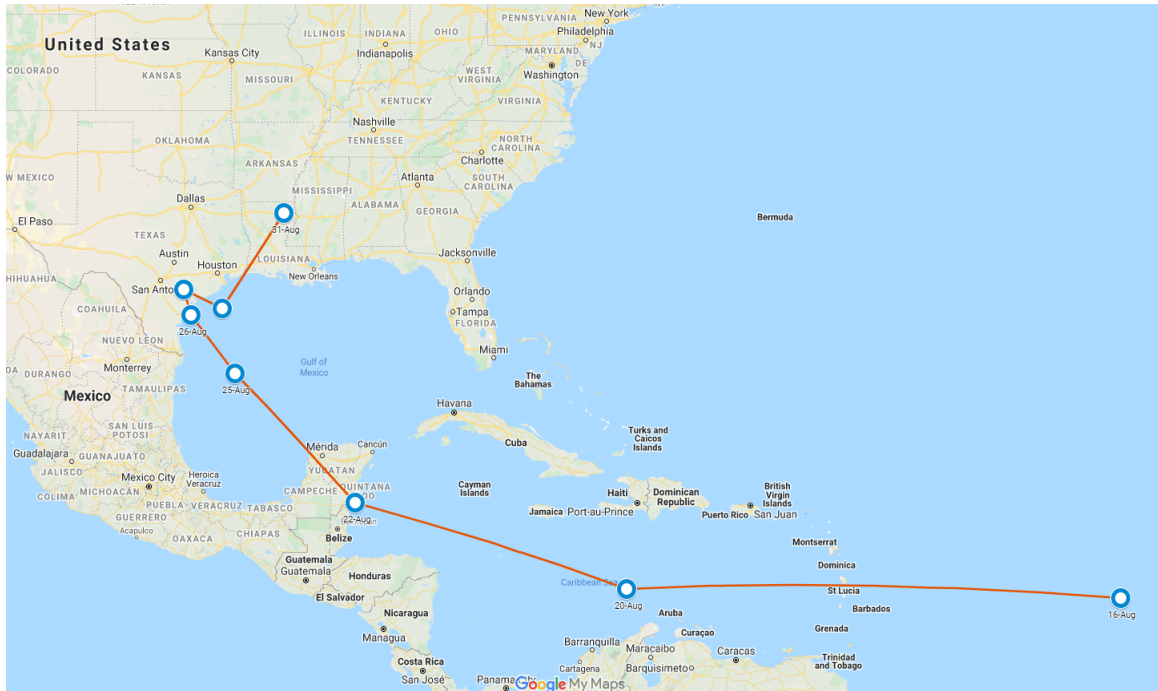


Fig. 1. Hurricane Harvey Storm Track in 2017 from August 16, 2017 to August 31, 2017. This track was drawn based on the data from National Hurricane Center's "Hurricane Harvey" at www.nhc.noaa.gov/data/tcr/index.php?season=2017&basin=atl

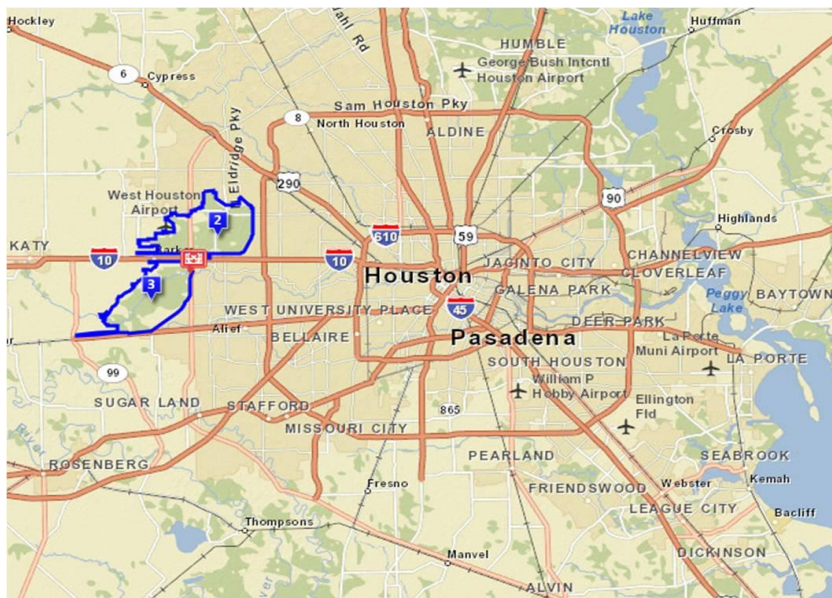


Fig. 2. "New Construction Plan." The blue lined areas indicate the Addicks and Barker Dams. Courtesy United States Army Corps of Engineers Galveston District at www.swg.usace.army.mil/Missions/Dam-Safety-Program/

By using an ethnographic approach, I make the case that minority communities, particularly language minorities, were affected not only by the floods of water but also by the floods of literate materials. As sociologist Dorothy E. Smith and professional communication scholar Catherine F. Schryer indicate, “documentary governance” and “written records of decision processes” are essential in institutions and organizations as they mediate social relations. In the wake of disasters, this documentary governing technique arises more significantly in the society. Disaster survivors are often burdened concurrently by physical displacement and bureaucratic discursive practices. Drawing from Max Weber’s analysis on organizations of government, Smith and Schryer stress the significance of documents and texts and the translocal agency of the textual, which “coordinate work and other activities across local sites” (115). Based on these analyses, they suggest the expression of “documentary society” and center “the materiality of the floating text” on organizations (119). Although Smith and Schryer do not discuss documentary governance in the context of disasters, their focus on documentary governance resonates with the discursive procedures in my study where language minority survivors have navigated in the aftermath of Hurricane Harvey. Mostly, each procedure of the recovery process is mediated through texts.

Taking up Smith and Schryer’s focus on the materiality of texts and its significance in the modern society and Beck’s notion of risk society, I extend these social analyses into a discussion of the literate activity (Prior) of language minority communities, a less attended population in environmental communication studies. The minority community survivors of Hurricane Harvey often demonstrated literate agency when they collaborated to gather information about FEMA applications and actively shared helpful information. However, at the same time, they were often paralyzed by the feeling of incompetence when handling

texts, an inability to communicate, what scholars call an “inability to exercise their expected level of agency” (qtd. in Jerolleman 47). Aligning my study with this social justice paradigm, I studied language minority survivors whom I call transnational-multilingual survivors¹ interchangeably, who often have immigration histories and have remained invisible in the discussion on disaster literacy.

Here, by disaster literacy, I do not mean a discrete set of languages that can be acquired. Rather, I mean networks of literacy. Gathering stories from my participants, I describe disaster literacy as transnational ecological literacies in which individuals engage in rhetorical scaling, leverage informal translocal knowledge, and shape other local or translocal improvised networks to contest unequal mitigation processes during and in the aftermath of a disaster, as will be explained. As I will demonstrate, language minority survivors’ translocal networks through digital platforms and translation activities play key roles in helping them regain agency in accessing resources and navigating institutional processes. Transnational ecological literacies including rhetorical scaling, informal literacies, and organized reconstruction work based on social networking smartphone applications guide them to reshape their relationships with places and environments and create a new citizenship beyond a political territory-bounded one.

With a lack of geographical knowledge and flood insurance awareness, these survivors are more likely to be uninsured or underinsured. To examine language minority communities and their disaster literacy, that is, their literate activity across languages and modes in the

¹ In this study, I use the term *transnational-multilingual* to describe immigrants who use languages other than English. This term emphasizes language minority survivors’ ability to use multiple languages and their border-crossing histories. This term is employed to avoid other labels, such as *nonnative English-speaking residents*, which might reflect negative connotations and the monolingual paradigm in which Standard American English is the norm. Also, it should be noted that not all transnationals are multilinguals if they come from English-speaking countries. In this sense, I connect transnational and multilingual with a hyphen.

disaster recovery process, I set up three research questions. These questions guided the analyses of empirical data collected from literacy history interviews (Brandt; Duffy; Vieira), observations, and literacy artifacts from them with a focus on their disaster recovery processes.

1. What languages, registers, and other communicative repertoires across modalities are used by transnational-multilingual communities who are often linguistically minoritized² in the context of an environmental disruption?
2. How do these communicative resources play a role in the existing material conditions of physical, social, and textual mobility? How are their language resources interconnected with their social factors or power relations in uneven social and economic realities?
3. How can this empirical finding from communities be connected to rhetors and writers in writing classrooms in and out of academia? Particularly, how can it be re-envisioned along with writing pedagogy sites?

These questions were shaped and modified after I conducted pilot observations on disaster-related community events in June 2018, one year after the Hurricane Harvey. Throughout the research process, these questions helped me to approach participants with some hypotheses and assumptions that I will explain in what follows. However, these questions and hypotheses have changed over the process of data collection and analysis. For example, the original hypotheses did not explicitly include gender differences, but over the process of

² I occasionally use the term linguistically minoritized groups on purpose to emphasize its non-intrinsic values attached to certain types of people and to differentiate this term from the term language minority groups. As scholars note (Duran 2; Flores and Rosa 169), the term “minoritized” points to the notion of a minority as a culturally, socially, and politically constructed category while the term minority is often used to refer to the numerical total of certain groups who use languages other than the dominant language (i.e., English).

interviewing my participants, gender roles and experiences in the aftermath of the Hurricane Harvey have arisen. Based on the discovery, I paid more attention to the participants' gender role in their families in the follow-up interviews and to the heterogeneity across participants. These reflections were incorporated into the recursive processes between research questions (O'Reilly).

Background of the Research

This research defines a migrant based on the recent Pew Research report in which the United Nations Population Division's definition of an international migrant was introduced as "someone who has been living for one year or longer in a country other than the one in which he or she was born" ("Origins and Destinations of the World's Migrants, 1990-2017"). In this definition, international students, refugees and their children, undocumented immigrants, and temporary workers are considered migrants if they have resided in their nonnative country for more than a year. The Pew research data shows that "[t]he foreign-born population residing in the US reached a record 44.4 million, or 13.6 percent of the US population, in 2017. This immigrant population has more than quadrupled since the 1960s. Though growth has begun to slow in recent years, the number of immigrants living in the United States is projected to almost double by 2065" (Radford and Noe-Bustamante).

In fact, immigration and disasters are interconnected in various ways. For example, in Greater Houston, construction workers have been in great demand after the flood and have had wage increases. In the wake of the Hurricane Harvey, more than 70 percent of these workers are unauthorized immigrants (Capps and Soto 6). However, more predominantly, an immigration status is one of the socially vulnerable factors as immigrants have faced a complex set of challenges (Capps and Soto 3). According to Capps and Soto's survey

conducted in December 2017, compared to US born residents, immigrants who had housing damage “were less likely to have home or flood insurance, or to apply for disaster assistance,” and about half of the survey participants reported their concerns that applications for assistance might reveal their unauthorized status (3).

In 2017, the number of immigrants living in Houston reached more than 1.6 million out of a total of seven million residents while Latino people outnumbered non-Hispanic whites (Capps and Soto 1). According to this report, United States Immigration and Customs Enforcement (ICE) controls became more regulatory in 2017. In Harris County, the second most diverse county only after Maricopa County in Arizona, a number of people were detained under ICE’s control at the time of Hurricane Harvey (3). These policy changes in 2016 and 2017 implemented by the Trump administration and its Zero Tolerance policy have started having an effect on Harvey immigrant survivors. Natural disasters that became almost an annual event and the unexpected and rapid policy changes caused multiple challenges including physical, financial, and emotional burdens, particularly for immigrants. During the interviews, many participants shared their concerns, anxieties, and distress. The current rule changes and pending policies have created a significant challenge to get a permanent residency card for migrants (3). As a result, in the context of environmental disasters, immigrants are likely to have greater difficulties in accessing disaster-related resources and benefits, which prioritize the needs of applicants who are US citizens or at least US permanent residents, and own a home.

Given that Houston is one of the most linguistically and culturally diverse cities in the US and has drawn a variety of migrant populations including skilled professionals, migrant workers, and refugees, studies on transnational-multilingual residents who have been affected

by Hurricane Harvey are increasingly needed. According to the US Census Bureau's 2018 report "Language Spoken at Home: 2011 & 2016," foreign-born populations make up almost 30 percent of the total residents of the city of Houston, and more than 48 percent of residents speak languages other than English. These statistics show that more than a third of Houston residents speak a language other than English, and it has been estimated that more than 145 languages are spoken in the city. These data emulate the statistics of the New York metro area, one of the most linguistically diverse cities in the US where 38 percent of the population speak a language other than English and 198 languages are spoken at home ("Census Bureau Reports at Least 350 Languages Spoken in US Homes"). Given this linguistic diversity and geological specificity, I heed the less attended discourses of transnational-multilingual groups who were affected by the 2017 flooding. I focus on their linguistic and other semiotic resources, rather than follow preexisting narratives or typical discourses on the victims, often imposed by news media, government agencies, or quantitative data-driven studies.

I started my study with three assumptions. First, environmental disasters create many rhetorical ecologies in which immigrant survivors need to urgently and intensively use the dominant language of their host communities and institutional and/or bureaucratic literacy. Compared to US-born residents, the immigrants were more constrained by a lack of literacy needed in this specific situation and of knowledge about their environment, so they had more difficulties in the recovery process. However, at the same time, in this recovery process, they rebuild their identities and relationships to places straddling national, cultural, and linguistic borders. In this context, I use the term *translingual subjects* to describe the transnational-multilingual participants who leverage a range of semiotic resources, following

Canagarajah's theorization in his 2018 article "Transnationalism and Translingualism," which emphasizes "a person who positions himself/herself in the liminal spaces between nation-states, develops a critical awareness of diverse languages and cultures, and treats identity construction as an ongoing process of hybridization" (45).³ Drawing from translingualism scholarship, I assumed that this disaster-specific rhetorical ecologies urged them to use their semiotic resources across languages and modes and to negotiate inequalities and ideologies of languages (Canagarajah, *Translingual Practice* 68).

Second, informed by recent materialist approaches to language and semiotic resources (Canagarajah, "Materializing"), I also assumed the participants leveraged multilingual and multimodal resources, tacit knowledge, and informal literacies to navigate the recovery process and address the need for institutional and/or bureaucratic literacy. Reflecting on the data collected in the pilot study that I conducted during the summer of 2018, I realized that my participants do not entirely fit bureaucratic labels or research terminology, such as limited English proficiency (LEP) individuals or resident/non-resident aliens. In my observation of the Disaster Preparedness Event in June 2018 organized by Houston's Chinese Community Center, immigrants and local residents often engaged in a collective effort to navigate information about Harvey relief and organized grassroots events in which community organizers, Hurricane Harvey survivors, and the officials from government agencies worked together. While community organizers and panelists in this event, including disaster management officials and police officers, used visual aids and translated words to

³ This definition is similar to Claire Kramsch's term "multilingual subject," meaning subjects in the process of identity reconstruction between constraining communities, languages, and imposed identities. Attending to this theoretical elaboration, I attempted to trace the emerging new relationships among language, identity, and place in the aftermath of a catastrophic disaster. As the prefix "trans" indicates, translingual practices include fluid and dynamic semiotic resources such as multiple modalities and different registers, that is, Englishes, Spanishes, and thus can be performed by both monolinguals and multilinguals, and diverse groups at several levels including race, gender, and socioeconomic status.

communicate with disaster-stricken residents who have linguistically diverse backgrounds, attendees actively took part in asking questions and leading discussions. For these attendees, literacy was a practice in which they reinterpreted the norm in a social context and resourcefully mediated the world even in distressful situations as in the aftermath of the floods. In addition, literacy serves as a material and technical infrastructure by which they can network with the social practices of others and acquire access to organizational and institutional support and resources.

However, I also noticed the language barriers between English-speaking officials who, as panelists, shared information about “disaster-preparedness” and non-English-speaking attendees. Although interpreting services were provided by the volunteers at the community center, the interpretation was not thoroughly delivered to the attendees. In many cases, attendees seemed to be left behind without getting clarification and full interpreted messages. Often, attendees, mostly Chinese-speaking elders, stopped panelists and asked questions in Chinese, but their questions were not clearly answered. In addition, some attendees did not seem to be comfortable with using government websites and social media channels, such as Facebook and Twitter, introduced during the presentation.

Third, informed by Keith Gilyard’s criticism of recent trends in translingualism, I do not flatten language differences or ignore the fact that transnational-multilingual survivors have uneven material conditions. As Gilyard notes, “[W]e don’t all differ from said standard in the same way” (286). While translingual orientations emphasize the fluidity of language boundaries and individuals’ dispositions to language differences, I am wary of what Gilyard calls a “sameness of difference model” (287) and of liberating premises that inequalities are always negotiable. In this disaster-specific context, literacy as resources and technical

affordances tends to be more constrained by power relations, language ideologies, media infrastructure, and policies by federal, governmental, and municipal agencies, which I will explain in the next section.

Defining Key Terms

Defining Disasters

In this section, I define key terms used in this dissertation. Disaster rhetorics have often included social conflicts such as civil wars, terrors, and gun incidents or natural disasters such as earthquakes, tornadoes, hurricanes, and floods. The notion of disasters has been contested. Mainly, the definition of disasters was much debated about whether it is part of realities or of discourses. For instance, risk management expert Claude Gilbert explains that the notion of disaster has been through foundational conceptual changes. He conceptualized disaster in three ways: a duplication of war, a consequence of social vulnerability, and a state of uncertainty (11). According to Gilbert, disasters started to be compared to wars when the US offered funds for research on the reaction of people in air raids during the Cold War period. It should be noted that he emphasizes an important shift in disaster studies from the external factor to “the crisis that develops within the community” (13) along with the internal communication crisis. In the initial concept, disasters are equivalent to wars while hurricanes, floods, earthquakes, and other natural disasters can be compared to bombs. Citing Quarantelli’s influential 1970 article, Gilbert points out that disaster studies take a more community-oriented approach with a focus on social factors while highlighting the “great autonomy in the reactions of people to trouble” (13). He argues, “they [researchers] were forced, in varying degrees, to recognize that disaster had to be studied within the human group involved in it, and not as the result of an exclusive external

factor” (13) and that they started to see disaster “as a social action taking place within societies” (14). Gilbert explains that researchers have advanced this social approach and elicited more “contextual grounds” which are related to “social vulnerability” (14). According to him, this paradigm has cultivated a new perspective that made people “mov[e] disaster as an effect to disaster as a result of the underlying logic of the community” and therefore “the result of the upsetting of human relations” (14) and the underlying crises and breakdowns of human relations (14).

It should be noted that risk, crisis, and disaster are all different categories. In their book *Effective Crisis Communication: Moving from Crisis to Opportunity*, communication scholars Robert R. Ulmer et al. provide a working definition of crisis. They include natural disasters as one of the five types of “unintentional crises” along with disease outbreaks, unforeseeable technical interactions, product failures, and downturns in the economy (11). While differentiating the notion of crisis from the definition of risk, they argue that risk is “a natural part of life” so that it is not avoidable. However, they suggest that crisis could be avoidable if effective ways of crisis communication are employed, by using multiple cases including industrial accidents, food-borne illness, terrorism, and natural disasters ranging from the 1997 Red River Valley floods to the 2011 Japan earthquake and tsunami to the 2003 San Diego County California fires. As they note, the word *crisis* contains two opposite roots together, “a danger” and “an opportunity” (Ulmer et al. 4). They point out that disasters contain negative roots that mean the displacement of stars. In their typology, risk and crisis are different categories as risk is a chronic situation while crisis, either intentional or unintentional, is a catastrophic event, which could have an opposite result.

In this study, I use this typology but in a different way, as I argue that the boundary

between risk and disaster became unclear. Risk and disaster are commonly part of natural phenomena while human induced factors are increasingly impacting the frequency of disasters. These definitions pose a question of what is meant by “natural” or “nature.”

Disasters are as chronic as risks are in this global climate change, and the notion of natural disaster is often correlated with technological disaster given the interventions of humans as geological agents as discussed in the previous section.

Similarly, drawing from J. Steven Picou’s 2009 article, sociologist Julia Flagg points out the significance of the notion of a “natural and technological” disaster. According to Picou’s definition, “natech” events are “disasters that begin with disruptions to the natural environment and are followed by failures in social systems’ responses to such events” (306). Flagg uses the term “natech” disaster to refer to the hybrid feature of Hurricane Katrina, combined with natural components in the destruction of the built environment and systemic failure in mitigating the disaster. She rightly explains that while natural disasters have a clear ending point (307), human-induced disasters or technological disasters entail long-term and corrosive processes often without closure, “due to distrust, stress, or ambiguity in the causes of and responsibility for addressing the problems wrought by the event” (308). As such, in this dissertation, extending Picou’s and Flagg’s discussions, I define Hurricane Harvey as a “natech” disaster, in which people experience physical and emotional distress often without a clear sense of closure and dismantled relationships between themselves and environments including government, organizations, technologies, and geographies.

Defining Community

The notion of community has also been contested. For instance, in the field of migration studies, Robert C. Smith critiques the concept of community, citing Glick-

Schiller's criticism in which he calls it a "bounded concept": "The concept of community... obscures processes of nation building, racial hierarchization, and global capitalism, which help create and organize transnational social fields" (201-202). However, Smith still believes that the notion of community has potential: "While these positions have merit, it is not necessary to either abandon the concept altogether, nor accept it as an unproblematic given. To use the concept of 'community' is not to thoughtlessly embrace *gemeinschaft*" (202). Complicating the notion of community, Grabill pays attention to the co-constructive feature of community in empirical research projects, arguing:

The concept and possibility of community itself must become a primary object of inquiry for any community-based study. Identifying and understanding—indeed, constructing—community are community-based researcher's primary obligations and, therefore, become issues of *stance* for one interested in conducting community-based inquiries. A researcher is under some obligation to construct the community as part of the project. (213)

This unstable, co-constructive definition of community highlights the potential to bring light to a minority community, particularly a community that has not shaped or gained political or institutional power due to unequal resources and social infrastructure. The definition of community hinges upon what Grabill terms *research stance*, in other words, researchers' ethical consideration and discursive construction with research participants. In this dissertation, I take up Grabill's notion of community, heeding the co-constructive definition of community, as participants in this study are often from less privileged populations and can be discursively described as a community in their relationships with my self-reflective stance.

Defining the Environmental Justice Community

Paying attention to this intricate notion of community, I use the term *environmental justice community* to describe those who are more vulnerable to natural and/or social disasters and who take action for their rights. In my study, the environmental justice community, which was originally proposed by sociologist Robert D. Bullard to raise awareness of unequal environmental decision-making processes, particularly refers to language minority groups. It should be noted that intersectionality ought to be considered as one of the major factors that affect people's approaches to disaster. What I mean by intersectionality is that residents' vulnerability is not decided by a sole factor. Indeed, the vulnerability of marginalized communities can be explained through the notion of intersectionality. West Houston areas were often perceived as areas occupied by upper middle-class whites, which were close to environmental benefits including green spaces and landscapes, while the low-lying areas to the east and south such as Kashmere Gardens and Pasadena were considered the most vulnerable areas adjacent to petrochemical industries. However, environmental vulnerability overlaps with multiple factors other than socioeconomic status and race, such as gender, able-bodiedness, and language resources. Particularly, my research focus is on language minority communities whose language interpretation services are limited. While their socioeconomic status varies, language minority communities are commonly excluded from environmental communications and ensuing decision-making processes. When this intersectionality is recognized, it is possible to consider each community with its specificity and difference within non-white groups. Mostly research that adopts a social justice paradigm has used the categories of Hispanics or African Americans. In this research discourse, Asians and Asian Americans have been overshadowed.

My participants, who mostly emigrated from Asian countries, present a variety of resettlement trajectories. Some of my participants are long-term residents who came to the US because they were invited by family members in the late 1970s and 1980s. Many are newly arrived immigrants, who are mostly skilled professionals and moved to the US since the 2000s. While news media and governments agencies have paid attention to lower income families, they have frequently paid less attention to the language minority communities, particularly undocumented groups, immigrants, and temporary sojourners who use languages other than English. Although diversity is one of the features that Houston has publicized based on its large volume of newcomers, less attention has been given to practical on-site language services and more meaningful support based on an understanding of the real needs of language minorities. Problematizing this uneven language access, I use the term environmental justice community to describe those who are historically marginalized not only by race, class, and socioeconomic status but also by ethnicity and linguistic affordance.

Defining Transnational Literacies and Translocal Materiality

In this study, the terms *transnational literacies* and *translocal literacies* are interchangeably used. However, I do not mean that these two terms are the same. I use the term transnational literacies to describe the literate activities of migrants across physical, cultural, and linguistic borders. I further extend and complicate this term by using translocal literacies in this review.

Recent discussions on transnational movement in various fields have emphasized the heterogeneity of and ties with local spaces and migrants' practices situated in their lived experiences. Overall, the term *translocality* (Appadurai; Smith "Transnational Localities") incorporates these attempts to study embodied practices in movement or situatedness in

mobility across locales and spaces. In the field of linguistic anthropology, the term translocal literacies are described as literacy practices that are “embodied, inscribed, contested, and/or transnational” (Warriner, “Transnational Literacies” 167). Drawing from Jay L. Lemke, Pierre Bourdieu, and Allan Luke, Doris S. Warriner defines translocal spaces as sites in which literacy practices might be “embodied physically, temporally, and spatially,” “inscribed through repetition and routine,” and “contested when individuals transform and/or replace them within specific contexts for particular purposes” (“Transnational Literacies” 167). According to Warriner, these translocal sites are “transnational in that they are inevitably implicated in global flows, processes, and relations, even while being realized (and particularized) locally” (“Transnational Literacies” 167).

Human geographers have also proposed the specific notion of translocality. Following Doreen Massey’s 2005 work, Katherine Brickell and Ayona Datta set the notion of “translocal geographies” to investigate migrants’ experiences beyond the national, defining it as studies that are “multi-sited and multi-scalar without subsuming these scales and sites within a hierarchy of the national or global” and as “a set of dispersed connections across spaces, places and scales which become meaningful only in their corporeality, texture, and materiality” (6). By engaging transnational migration with embodied practices and scalar approaches, these frameworks of translocality complicate the notion of transnationalism.

Echoing this call for grounded and situated transnationalism and particularly Brickwell and Datta’s notion of translocal geography, I define *translocal literacies* as literate practices across locales, spaces, places, geographies, social networks, economic exchanges, and physical localities including *environmental changes*. By adding the factor of environmental changes, I intend to define translocal literacies as a more complicated term

beyond a term referring to social practices across locales. This complexity is necessary because these literacy practices can be analyzed not only through multiple scales for social practices, such as home, neighbor, region, and nation, but also through an emergent ethical research agenda that studies embodied literacies in migrants' *disrupted* lives located in places across environmental changes.

Defining translocality, I also echo the discussions in rhetorical studies, particularly Jenny Edbauer's notion of "rhetorical ecologies" and Jenny Rice's concept of "regional rhetorics." Extending critical regionalism and its contribution to contesting abstract discussions on globalization, Rice proposes the notion of *regional rhetorics*, which is viewed as "interface, rather than as a mediatory term between global and local, or even between cosmopolitanism and local contexts" (204). Rice helps us to see the regional not as a mere context but as rhetorical performativity that "creat[es] topoi that both reflect[s] publics and build[s] publics" (212). Revising the Bitzerian rhetorical situation model, Edbauer argues that the city was not so much a container or "rhetorical situation" as an "affective ecology" which "recontextualizes rhetorics in their temporal, historical, and lived fluxes" (9). Citing cultural geographers Ash Amin and Nigel Thrift, she emphasizes that "we do city, rather than exist in the city" (11) by giving the example of the "weather system," in order to revise the concept of the rhetorical situation established by Lloyd Bitzer into a new notion of the "rhetorical ecologies" (11). In this sense, flooded Houston was similar to what Jenny Edbauer calls "affective movements and processes" or "amalgamations and transformations—the viral spread" (19), in which "the intensity, force, and circulatory range of a rhetoric are always expanding through the mutations and new exposures attached to that given rhetoric, much like a virus" (13).

In sum, I use the term *translocal literacies* to refer to the literacy practices incorporated in migrants' physical bodies, affects, languages, non-languages, and other semiotic resources and their agencies that constitute migrants' subjectivities often in the ongoing process. However, these literacy practices are also qualified by rapidly changing environmental material configurations including rising sea-levels, changes in waterways, water with sewage, moisture in the air, mold on surfaces, and the ensuing technology governing migrants' practices. In my study, when I need to emphasize rhetorical activities and material approaches, I use the term *translocal* to foreground these sensorial, environmental, and material changes incorporated in their literate activities, often interlocked with rhetorical ecologies and sociopolitical infrastructures.

In the following section, I explain key frameworks that were employed in collecting and analyzing the data. Through scalar analysis, I use two frameworks: discussions on *mobility* and *fixity* and *ecological* approaches to language and writing. Based on these two frameworks, I narrow down to an overarching notion, *translocal material ecologies*, as a synthesized framework.

Theoretical Frameworks

In the context of disaster recovery, transnational-multilingual communities often experience what Lorimer Leonard terms “the literacy game” (*Writing on the Move* 16), in other words, a process in which they engage in “guessing what their resources are worth [utilizing]” (*Writing on the Move* 16). This study examines how their literacy games played out in the recovery process in the aftermath of Hurricane Harvey. These natural and/or social disasters, whose boundaries are often unclear, affected discursive activities and literacy practices among families, local communities, and organizations in the context of uneven

socioeconomic realities. Indeed, scholars from different disciplines, primarily history, anthropology, and sociology, have examined the complicated social issues arising after Hurricane Harvey. Taking an interdisciplinary perspective, this study particularly examines the consequences of an environmental disaster with a focus on the literacy practices of immigrant residents in the aftermath of this catastrophe. Compared to the experiences of US-born residents, the experiences of migrant families should be approached through different scales and perspectives.

Mobility and Fixity

Over the past decades, scholars in anthropology (Basch et al.; Glick-Schiller), bilingual or multilingual education (Barton; Hornberger; Lam and Warriner), sociolinguistics (Blommaert; Canagarajah; Saxena), and transnational literacy studies (Duffy; Prendergast; Vieira; Lorimer Leonard; Young; Kang; Scenters-Zapico), have focused on people's physical movement and textual mobility in the globalized era. Scholars in various fields have examined the context of increasing global flow and sociocultural diversity in student populations in higher education institutions and the transnational mobility of people in various communities. By coining the term "super-diversity" in 2007, anthropologist Steven Vertovec highlighted a social structural change in the urban context. As a summary term, super-diversity refers not only to a wide range of ethnicities brought about by the increasing mobility of people and resources but also the "interplay" of the "effects of additional variables" including "differential immigration statutes and their concomitant entitlements and restrictions of rights, divergent labor market experiences, discrete gender and age profiles, patterns of spatial distribution, and mixed local area responses by service providers and residents" and their ensuing new reconfiguration of social structures, such as "new

hierarchical social positions, statuses, or stratifications” (Vertovec, “Talking” 126).

To accommodate this reality, writing scholars have attempted to explore the potential abilities of language users to work across national, cultural, and linguistic borders in communicative situations through a materialist approach. For instance, in their 2015 “Special Editor’s Instruction” of *Literacy in Composition Studies*, Lorimer Leonard et al. aim to examine the interconnections between writing and transnational mobility. As they note, literacy materially controls and governs the mobility of people. Vieira, for example, traces how bureaucratic documents inhibit the access and agency of people, while the mobility of people reshapes their languages, dialects, genres, and registers. By differentiating the term “transnational” from “international” or “global” (Canagarajah, “Transnationalism and Translingualism”; Lorimer Leonard, *Writing on the Move*; Lorimer Leonard et al.), they attempt to foreground their focus on the mobility of people and text beyond the nation-state boundaries while acknowledging that this mobility is bounded by national borders and textual governance. As mentioned, literacy, including immigration documents and papers, plays a role in “regulating global movement” (Vieira, “Undocumented” 458).

While a good deal of research focuses on migrants’ communicative resources across time and space, little research has investigated how the language resources of migrants interlink with the physical environment caused by a catastrophic natural and/or social disaster and with the stratified social structure of the host country. As sociologist Roger Waldinger aptly points out, “Methodologically, too much of the research has focused on concerted cross-border activities rather than on the more common and routine sort, and paid little attention to the processes that bind the immigrants to their new homes” (5). Indeed, scholars often illuminated migrants’ activities “between” the two lands, home countries and

host countries, rather than their everyday activities in local, regional, geographical, and other material conditions. For example, studies on transnational migration often re-see immigrants as “transmigrants” who “forge and sustain simultaneous multi-stranded social relations that link together their societies of origin and settlement” (Basch et al. 48). However, a focus on their everyday activities or experiences in their sense of lived place⁴ and located-ness has been less prominent after migration studies took this transnational turn.

While scholars have shifted their focus from the notion of uprootedness to the mobility of the text, capitals, and resources, promoted by technological advancement and people’s increasing border-crossing movement, some scholars have attended more to people’s experiences of migration with a focus on material disjunctions such as displacement experiences and on the relationships between people and their regions in the aftermath of catastrophic material and ecological changes. In rhetoric and composition, the notion of place or located-ness has become a critical subject for writing scholars and instructors. In the 2014 *CCC* special issue, “Locations of Writing,” Kathleen Yancey brought attention to diverse places of composition and the significance of our “located-ness” (5) in writing classrooms.

With a similar perspective, writing scholar Katrina Powell traces the narratives in cultural products about survivors of Hurricane Katrina and refugee groups, and examines the “moving identities” of distressed and traumatized people. Particularly, she pays attention to the survivors’ implicit resistance against the discursive construction imposed on the victims of natural disasters and wars, in relation to forced displacement and relocations, or what she refers to as “violent journeys” (301). After her family experienced Hurricane Katrina, Daisy

⁴ In using the term “place,” I refer to an embodied physical or imagined location. In many studies, the term space is referred to as a more abstract, socially constructed notion. However, as scholars point out, this boundary between space and place is not always clear, as the notion of space also reflects material inequalities as much as the notion of place is constructed by the material and ideological conditions (Sen and Silverman 3).

Pignetti, in her 2008 article in a special issue of *Reflections*, retells the trajectory of how she explored traumatic events through people's self-published writings on blogs, "more complete, longitudinal narratives detailing the processes of recovery" (181). In the same 2008 *Reflections* special issue, another writing scholar, Richard Louth, reflects on how his students told their experiences during and in the aftermath of Katrina in their undergraduate writing classrooms, which later came out as an anthology, and how these experiences changed the typical notion of academic writing.

The connections that migrants' (im)mobile literacies have to natural disasters and changes in the physical environment have the potential to be examined. Taking up this complex issue, this study primarily examines the language and literacy of transnational-multilingual migrants, whose first language is not English, at the intersection of transnational literacy studies and ecological approaches to literacy and writing.

Ecological Approaches to Language and Writing

The field of rhetoric and composition has developed an important strand of work that integrates an ecological approach which goes beyond the metaphorical use of the term ecological by adopting a more literal meaning of ecologies. Ecological approaches gained attention in 2001 when Derek Owens linked composition with the concept of sustainability in his work *Composition and Sustainability* and Sidney Dobrin and Christian Weisser coined the term ecocomposition in their 2002 *College English* article in order to refer to "the study of the relationships between environments (and by that we mean natural, constructed, and even imagined places) and discourse (speaking, writing, and thinking)" (572). In the strand of ecocomposition, an ecology defined as a physical place can be more fully integrated and examined because "ecocomposition is about relationships; it is about the coconstitutive

existence of writing and environment” (Weisser and Dobrin, “Breaking” 2). In his 2011 work *Postcomposition*, Dobrin revises his argument further to shift his focus of ecocomposition to an “ecological rhetoric/paradigm” by “moving beyond issues of language, dialectic, and social epistemic” (128).⁵

In this study, I follow both strands of ecological environments, that is, an environmental, physical factor-based ecological approach and a complex system-based ecological approach. I add that these strands should be resituated in the transnational and global context. While I acknowledge the tension between environmental ecocomposition and a complex ecology as shown in Dobrin’s revision, I would dwell on the literal meaning of ecology and resituate it in the context of transnational literacy studies, going back to its etymological root, i.e. “the Greek *oikos*, meaning ‘home’ or ‘house’” (Weisser and Dobrin, *Natural Discourse* 69), to explore transnational-multilingual residents’ sense of *place* and “embodied placemaking” (Sen and Silverman 5) processes.

This ecological approach goes back to Richard Coe’s 1975 article “Eco-Logic for the Composition Classroom,” in which he argues for context-based approaches in teaching. Beyond using the term ecology as an alternative term to context, Marilyn M. Cooper

⁵ In his 2011 book *Postcomposition*, Dobrin rehashes his own work on ecocomposition and critiques the “social epistemic” tradition embedded in ecocomposition, which often “claims that concepts like place or nature or environment should be included alongside the critical categories of race, class, culture, and gender as primary categories for examining factors that influence subject formation” (124). Aligning his ecological approach with interdisciplinary studies on complex systems and networked theory, he delineates his ecological approach by describing writing as a “posthumanist approach to subjectivity” (4). Though I value his radical revisionist approach on his own work, this posthumanistic claim might lose sight of individual agency. In my view, it is important to keep these two different strands together and sustain the tension between them, as writing instruction (ecocomposition) and theories of writing (ecological approaches, writing as complex systems) are separate yet ecologically connected. In this sense, I see a potential in the term “embodied individual agency” as suggested by Cooper in her 2011 *CCC* article “Rhetorical Agency as Emergent and Enacted.” She argues that “deeds are always done by someone, and replacing the doer of the action, the agent, with an amorphous force like [Carolyn Miller’s] kinetic energy leaves us with no basis for assigning responsibility for actions” (438). She theorizes embodied human agency by citing psychologist Daniel Wenger’s argument that “the conscious will is an illusion, but a necessary one” (439), and eventually argues for a “pedagogy of responsibility,” stating that “what we need is not a pedagogy of empowerment, but a pedagogy of responsibility” (443).

proposes in her influential 1986 article “An Ecological Model of Writing,” defining it as a model in which “writing is an activity through which a person is continually engaged with a variety of socially constituted systems” (367). As Cooper puts it, her proposal can be aligned with ecological approaches in sociolinguistics as proposed by William Labov and Shirley Brice Heath, which added the social aspects of writing to the cognitive process approach to reading and writing, which was prevalent, almost “universal” in the 1980s. For Cooper, writing is not so much a response to exigency as a constitutive social activity part of an ecological system that “postulates dynamic interlocking systems” (368).

Similarly, James Thomas Zebroski’s 1998 work “Toward a Theory of Theory in Composition Studies” proposes the term “ecology,” as Dobrin and Tony Scott both point out, in order to advocate “a philosophy of internal relations...in an ecology of practices” (Zebroski 37). According to him, using the term “ecological” is to eschew a “dialectic” approach, often suggested as an alternative in dismantling the dichotomy of teaching and researching, theory and practices, and is to embrace separate scenes. Overall, these ecological approaches taken up by Cooper and Zebroski within rhetoric and composition studies help us to envision writing in terms of relationships and complex systems beyond the individual writer-environment or text-context dyad.

In light of these critical approaches, I propose to network two scholarly areas, transnational literacy studies and material, ecological approaches to literacy and writing, to understand the transnational and multilingual practices of language minority groups in the context of the challenging ecological changes they have had to face. In the remainder, I suggest the framework of transnational ecological literacies as networked theoretical strands.

Synthesizing Mobility Scholarship and Ecological Approaches to Writing

Recently, several scholars have begun to reconfigure ecological approaches to literacy and writing in order to respond to the linguistically and culturally diverse academia and communities. Jay Jordan's 2015 *College English* article "Material Translingual Ecologies" calls for researchers and educators to apply the material ecological approach to linguistic diversity and translingual approaches in writing studies proposed by Horner et al. and Suresh Canagarajah. Drawing on Margaret Syverson's "complex adaptive system" and Jane Bennett's call for "sensory attentiveness to nonhuman forces" (qtd. in Jordan 376), Jordan highlights ontological complexities and materially grounded "communities and locations" (376) already existing in translingual practices or translanguaging⁶. By "reattuning" to the understudied "material contacts" within "an interaction between multilingual subjects," Jordan attempts to revise the preexisting focus on sociocultural factors or human-centric agency and embrace "the co-presence of various material actants" (378) in translingual activities, while reinterpreting Canagarajah's analysis of a transnational conversation. His work, however, limits itself to a theoretical proposal and analytical scope, that is, a proposed renewal of a conversation between two multilinguals about the cheese trade in Canagarajah's analysis.

Similarly, in his 2018 article, Canagarajah highlights a material orientation to reconfigure the notion of linguistic competence. He writes, "A material orientation encourages us to consider activity as embedded in physical life, with all its messy fluidity and complex unpredictability" (271). Reviewing Latour's actor network theory, Coole and

⁶ In this study, I use translingual practices and translanguaging interchangeably. However, this usage does not mean that these two terms are the same. These terms have their own theoretical lineages and strands. However, given the fact that these two theories view language systems as fluid, porous, and dynamic rather than fixed and compartmentalized, I heuristically use these two terms under the same category.

Frost's new materialism, Barad's intra-action approaches, and flat ontology theories (Marston et al.), he suggests that "[this] orientation would challenge linguistic exceptionalism (or logocentrism)" (271). Instead, drawing from Latour's and Deleuze and Guattari's perspectives, he pays attention to the notion of assemblage, in which "we focus on all semiotic resources working together, gaining equal importance, and generating different forms of synergy for meaning making," and the binary between text and context disintegrates. Taking up his approach, I apply this material orientation in analyzing multilingual transnational survivors' literate lives. Eventually, this approach reconstructs the notion of literacies, what I call transnational ecological literacies, by paying attention to material factors, which have often been disregarded.

With the demand for ecological perspectives, I turn to the fields of literacy education and sociolinguistics and to their ecological theories. In his 1994 work *Literacy: An Introduction to the Ecology of Written Language*, David Barton has proposed an ecological framework to study literacy, as "one which examines the social and mental embeddedness of human activities in a way which allows change. Instead of studying the separate skills which underlie reading and writing, it involves a shift to studying literacy, as a set of social practices associated with particularly symbolic systems and their related technologies" (32). To implement this, he suggests two ecological viewpoints in classrooms and in the context of global literacy. Beyond considering literacy as a skill set, what he terms "functional literacy," Barton emphasizes that literacy should be situated in relation to other human activities and to uneven realities, such as in developing countries with scarce resources.

While Barton uses ecological approaches to embrace international literacy including literacy programs in less developed countries, Doris Warriner and Leisy T. Wyman apply the

term *linguistic ecology* to the context of increased human mobility and migration. By using the term “linguistic ecology,” they promote more dynamic frameworks for “new understandings of the unstable, unpredictable, and dynamic associations between language practices, space, territory, and forms of cultural organization that have emerged in the field” (4). Their term “linguistic ecology” highlights the increased demand for renewed methodologies, echoing Canagarajah’s call for “mobility as method” (“Introduction” 5), in doing research on relations between language and place.

Taking up Canagarajah’s and Jordan’s calls for joining the translingual approaches and the ecological approach to writing and Warriner and Wyman’s call for attention to the diversified linguistic ecology and the need for a dynamic framework, this dissertation aims to present empirical data from the language and literacy practices of multilinguals in communities in the aftermath of Hurricane Harvey. By utilizing the two approaches, transnational literacy studies and ecological approaches to language writing, this dissertation investigates a series of questions about this gap between environmental or ecological approaches and transnational literacy studies. While bridging this gap, I focus on multilingual migrants who were displaced due to an environmental catastrophe.

Through this synthesized framework, this study traces the literate lives and transnational ecological literacies of multilingual migrant⁷ survivors in the wake of catastrophic changes in the local material environment, or floods in my research context. I

⁷ In this study, the term migrants is used to refer to persons who voluntarily cross geological, physical, and international borders. This “cross-border migration” includes various types of migrations from international student migration to labor migration to refugee migration (Faist, “Cross-Border” 325) and connotes a voluntary movement. Faist points out that the term mobility often connotes privileged people who can travel and use a flow of resources, whereas the term migrants implies less privileged and is connected to the discourse of “social integration, control, and the maintenance of national identity” (qtd. in Canagarajah “Introduction” 5). I use the term migration to refer to a wide range of voluntary cross-border migration, ranging from less privileged to privileged migration, with a focus on social inequalities. Often, I will use the term immigrants or immigration interchangeably with migrants or migration when I need to connote the perspective of the receiving country.

explore what Betsy Rymes refers to as “communicative repertoires” (529) across local, national, geographical, and cultural borders, which are leveraged to execute their semiotic, meaning-making practices during and after environmental changes. The term “environmental changes” is intended to indicate changes and events experienced in our material realities, including any traumatic natural or social disasters, and to embrace the contested divide between nature and culture. The term “literacies” here is mainly aligned with the New Literacy Studies (NLS) (Gee; Street; Barton and Hamilton) in which literacy is “a set of social practices” and is “historically situated” (Barton and Hamilton 8). With this approach, literacy not only includes explicit, formal reading and writing events, but also tacit, informal, non-text-based practices that are inevitably context-embedded and value-laden.

Drawing on Barton and Hamilton’s definition, I particularly attend to how power and knowledge differentially configure, sustain, and support types of literacies. As they note, “dominant literacy practices” are more supported and institutionalized than “vernacular literacies,” which refers to “literacies which exist in people’s everyday lives [and which] are less visible and less supported” (12). This study focuses on the vernacular literacies of transnational-multilingual victims in the aftermath of the local natural disaster, by documenting their literate activities including literacy events, that is, observable reading and writing activities, and literacy practices, a more abstract approach that includes “values, attitudes, feelings and social relationships” (Barton and Hamilton 7).

In this dissertation, expanding the scope of literacy delineated by the NLS, I also call for a refocused attention to the materiality⁸ of literacy, echoing the sociomaterial approaches

⁸ In using the term materiality, I echo scholars who view literacy as materiality and technology, such as Kate Vieira in her 2011 work on bureaucratic literacy and the materiality of national borders and Annette Vie in her 2017 work on coding literacy. For example, Vie adds a nuanced criticism on the NLS: “Barton and Hamilton

proposed by Deborah Brandt and Katie Clinton. In their influential 2002 article, Brandt and Clinton claim that scholars need to pay attention to the material aspects of literacy, particularly “the transcontextual aspects of literacy,” while avoiding the potential risk of “decontextualizing” it (343). Drawing on Bruno Latour’s theory that unsettles the binary between people (local human actors) and things (non-human actors), they write, “Figuring out what things are doing with people in a setting becomes as important as figuring out what people are doing with things in a setting” (348). Brandt and Clinton argue that the notion of “literacy-in-action” should be a renewed focus for analysis beyond the “anthrocentric” notion of a “literacy event” proposed by Shirley Brice Heath, which cannot be done without local human actors (348-349). While recognizing literacy as human actions in which “readers and writers mediate their social world through literate practice (i.e., literate action as part of our action),” they purposefully refer to literacy as “a social agent, as an independent mediator (i.e., literacy, itself, in action)” (349) and veer toward “its durability, its capacity to connect, mediate, represent, and hold together multiple interests” (355). As they note, this approach promotes a more materialist understanding of literacy as technology and a “transcontextualizing social agent” (351) and of “how they deliver meanings from other places and transform local actions into meanings bound for or relevant to other places” (349).

Following Brandt and Clinton’s notion of “literacy-in-action,” this study aims to trace local literacy practices of the transnational-multilingual migrants and transcend the “limits of the local” in doing research on their literate lives and extensively exploring its implications and (dis)connections for/with academic spaces. Indeed, bridging the gap

nod to the fact that literacies look different depending on their materiality, but their primary focus is on ‘situated literacies’ in social contexts...Thus, in their [The New London Group’s] emphasis on the sociocultural aspects of literacy, NLS researchers often downplayed the material or technological aspects of literacy” (32-33).

between academia and the community has been a major inquiry in civic engagement, community-based research, and critical pedagogy scholarship since the public turn in rhetoric and composition. In what follows, I trace the effects of environmental changes, a catastrophic hurricane and its ensuing floods and non-human actors, on human actors' literacy activities across different times and domains. In sum, combining the sociohistorical perspectives of the NLS and Brandt and Clinton's materialist frameworks, I trace ecological literacies outside academia by assuming that literacies are local yet global, and contextualized yet transcontextualized, and ultimately seek their implications for civic officials in the field of disaster management and writing pedagogy.

Scalar Analysis

To examine the sociohistorical and material aspects of the literate activities of language minority survivors, I adopt the notions of "scales" and "scaling practices" (Lemke; Blommaert, *Sociolinguistics*; Canagarajah, *Translingual*). These scalar perspectives are useful as tools to describe the language ideologies of migrant survivors in the stratified literacy regime and their unequal conditions not only in the context of distribution of resources but also in the context of what Tahseen Jafry et al. refer to as "climate injustice" (Jafry et al. 25). Their language ideologies mediate not only language and the social dimension, but also language and the environmental dimension in which climate injustice is aggravated.

To investigate the stratified language ideologies and semiotic resources or communicative repertoires of individual participants, a scalar approach is used in data analysis. Many scholars in the field of migration studies have begun to use the concept of scale as this concept is useful in investigating migrants' communicative practices in a power-

laden context. Sociologists Ayse Caglar and Nina Glick-Schiller advocate using “scale” as a tool as this notion “allows [them] to examine hierarchies of different forms of power, which include migrants as social actors who both are shaped by and participate in these forms of power” (Caglar and Glick-Schiller 7). Examining this power inequality in language practices and ideologies, linguists Jan Blommaert proposes the notion of scaling. Blommaert writes, “Power and inequality are features of scaling, of the asymmetrical capacity to invoke particular scale-levels in the interpretation of an act; scales provide contexts with possible regulations of access” (36). He argues that the notion of scale provides a spatial metaphor or “a vertical image of space” (33) in which communicative activities and language differences can be analyzed in a power-laden context. Canagarajah approaches scales in a more fluid and negotiable perspective through the notions of “re-scaling” or “scalar politics.” While he acknowledges that Blommaert’s metaphor of scales is critical to see “how the difference is turned into inequality,” Canagarajah emphasizes the notion of scales in a more negotiable manner (*Translingual Practice* 155) and in “rhizomatic relations,” that is, “nonlinear, unpredictable, layered, and multidirectional” (Canagarajah and De Costa 3).

This notion of scales has been debated over its contested definition and research scope. Scholars in applied linguistics and literacy education have adopted the notion of scales from cultural geography (Neil Smith) and political science, particularly, world-systems analysis (Wallerstein). As using scales is interdisciplinary and prevalent, debates have complicated its definitions and implications for society and educational sites. Some scholars even posit that scales should be abandoned in favor of a flatter and rhizomatic ontology (Marston et al.). I claim that the use of scales is beneficial to investigate unevenly connected worlds, social realities, and people’s epistemological spheres and to examine people’s

negotiations and remediation of scales. In this sense, I specifically follow the definition of scales, which configures scales not as predetermined hierarchies but as negotiable social constructs. Thus, as Canagarajah and De Costa note, my focus is not on scales but on “scaling practices” (3) or scaling performances in participant’s literate ecologies. However, my focus on scaling practices still foregrounds hierarchical social structures, often presented as monolingual paradigms, and participants’ struggles with these material systems.

Literature Review

In this section, I review relevant literature with a focus on three major strands in both theoretical and empirical research in the fields of disaster studies, community-based research in the fields of professional writing and technical communication, and digital media studies. Disaster studies have been conducted in various fields including anthropology, political science (public affairs), and sociology. Given this specificity, I reviewed literatures with transdisciplinary perspectives with a focus on empirical community-based studies. I briefly review anthropological and sociological approaches and then narrow down to a tradition of risk communication scholarship and digital media studies in the field of rhetoric and composition. Lastly, I point out the monolingual paradigm embedded in previous disaster studies.

Empirical Disaster Studies and Monolingual Assumptions

In his foundational work on the Buffalo Creek Flood in 1972, entitled *Everything in Its Path*, sociologist Kai T. Erikson examines the survivors’ lives in one of the hollows in Appalachia, sacrificed due to the collapse of the dam, which was built on the creek by a mining company, the Pittston Coal Company, and was destroyed after a heavy rain. As a consultant who investigated this incident for a law firm, he collected people’s testimonies

and suggested that environmental damages should be described by local residents, survivors, and family members of survivors. The description of his first encounter with one of the local residents guided me to reflect on the relationships between the researcher and the participants. In his description, an old man balked at his words that a *storm* would cool down the air in the middle of a heat wave. Erikson documented that the old man expressed a “fierce ‘Haw’” (10), and I understand that this reaction shows an example of the gap in understanding between researchers and disaster survivors. This first encounter emphasizes the challenge and complex process of ethnography, particularly of building rapport. He states that “in order to understand fully what an event like this means to the people who survived it, one needs to know something about who they were and where they came from, how they organized their lives and what they asked of the future” (48). Erikson’s investigation into people’s lived testimonies in the aftermath of the technological disaster, that is, a dam failure in West Virginia, beyond technical numbers and other quantitative data, sets up a constructive approach for disaster study which will provide practical help for the communities to solve local problems rather than limit its role to a description provider.

More recently, in her 2018 book *The Recovery Myth*, an outcome of a ten-year ethnography, Lucy Easthope demonstrates the intricate relationships among participants (survivors), emergency planners, and governmental council officers. As a disaster management expert who lived in a flooded city herself, Easthope traces the lives of residents who were affected by the unprecedented flood in the UK in 2007 with a focus on public documents, residents’ stories, and governing document technology in the process of post-disaster responses by establishing a ten-year ethnographic data collection project. Using the notion of “technologies of recovery” (1), Easthope identifies the kinds of perceptions and

technologies that governed the process of recovery and examines how the ideology of recovery controlled governmental discourses. As she argues, “People who have lost everything and have limited access to resources to communicate are traumatized and marginalized and have little chance to articulate their experiences” (9). In his book *Governing Affects*, by gathering ethnographic data analyses, Roberto Barrios also argues for attention to the affect and emotions of survivors, which have been less heeded and often considered peripheral by government agencies, and he critiques neoliberal ideologies embedded in discourses of developmental recovery narratives from government agencies. Citing Susanna Hoffman and Anthony Oliver-Smith (1999), Barrios emphasizes that “disasters are processes engendered by long standing human environment relationships that enhance a geophysical phenomenon’s materially destructive and socially disruptive capacities and unequally distribute a catastrophe’s effects along the fault lines of a society’s body politic (e.g., socially reproduced gender, race, ethnic, and class differences)” (18). I explicitly take up this critical approach and social justice lens in approaching disaster survivors.

Studies on Hurricane Katrina and survivors’ lived experiences also take this critical and social justice approach, and my study was influenced by many empirical findings from these studies on Katrina survivors. Carl Lindahl’s work on survivor-to-survivor storytelling emphasizes how disaster narratives from survivors serve as “an essential vernacular tool” (143) for marginalized communities, including low-income and ethnic minority communities, to voice their emotions and realities. His criticism of scholars and media coverage that have favored techno-scientific discourses from white professionals also echoed my stance to ethnic minorities and their vernacular narratives, which have seldom been

covered either in scholarly publications or in media coverage in the aftermath of Harvey. Between 2005 and 2017, government management systems changed in a significant way along with technological advancement, particularly with digital platforms. In the wake of a disaster, marginalized communities have often been discouraged from speaking up as shown in the studies of Katrina and other environmental disasters (Allen 103; Lindahl 143). Lindahl states that Katrina survivors have been disenfranchised from speaking about “their disasters” in media representations (143).

But more importantly, he notes that scholarly conversations in the wake of Katrina were also predominantly biased for discourses from whites rather than minority informants, including African American communities: “the white doctors’ reports were shoehorned into evidence while the black musician’s account was discredited” (144). Disparities and inequity in representation have not been addressed although more than one decade has passed. More importantly, he critiques researchers’ biases: “Researchers tend to treat Katrina survivors’ legends as delusions, media culture repudiates their voices or simply ignores them altogether, and interviewers unwilling to sacrifice their sense of safety blame them for the misfortunes they have suffered” (145). His critiquing of an “outside bias” and reflection on his own bias largely helped me set up a critical approach and constant reflections on my own researcher positionality.

Similarly, in her study on three environmentally vulnerable areas and public health in the aftermath of Katrina, Barbara L. Allen pays attention to media “silences” in which “while the plight of [New Orleans’] Lower Ninth Ward has received ample press, New Orleans East (as this neighborhood is called) has been invisible” (108). Using the lens of environmental justice, she examines returned community members in New Orleans and traces governmental

redevelopment processes and rebuilding plans, which have shown a difference between African American communities and white middle class communities. As shown in other environmental disasters aggravated by climate change, this inequitable reality has deepened. The disparity of media coverage between minority survivors' narratives and techno-scientific white experts' narratives has widened. As shown above in the section on intersectionality, Asian and Asian American communities have been invisible⁹, but this invisibility was also overlooked in disaster studies. Notably, language differences in disaster recovery have been under-researched as factors in this disparity.

Participatory Approaches and Community-based Research

In their 2008 article, Stuart Blythe, Jeffrey T. Grabill, and Kirk Riley describe the complexity of defining community problems and of navigating rhetorical strategies for/with community members. By employing findings from a three-year action research project, they explore ways of integrating social justice and ethical roles of research in facilitating professional communications between participants and other stakeholders including government agencies and the US Army Corps of Engineers in dealing with an environmental problem, a dredging project near a shipping channel in the Great Lakes area. Their findings are twofold. One is that the effectiveness of environmental communication or risk communication is slippery; the other is that the assumed role of researchers as liberators could be deceptive. It should be noted that they found that communities are composed of multiple factions and stakeholders and thus are hard to define. The relationships between

⁹ A few scholars have begun studying Asian or Asian American communities in the context of disaster recovery processes. In his 2017 book *Weathering Katrina*, Mark J. VanLandingham demonstrates how Vietnamese Americans, a group of the Asian American communities, survived in the aftermath of Katrina. Particularly focusing on their health and well-being, he suggests that Vietnamese Americans fared relatively well presumably because “a sense of common fate, an insular perspective, and a dominant religion and church all coalesced to make possible binding ‘ethnic capital’ within the Vietnamese community” (99) while he acknowledges some unknown factors behind this effective recovery process.

researchers and communities cannot be easily configured, and this creates the complexity of ethical relationships.

More specifically, empirical studies on relationships between immigrant communities and professional communications have appeared as transdisciplinary projects led by collectives of communication scholars, community organizers, and nonprofit organization workers. For example, in their article “Case Study Community-Based User Experience: Evaluating the Usability of Health Insurance Information with Immigrant Patients,” Emma J. Rose et al. investigate user experiences in health insurance guidebooks and suggest a new human-centered (user-centered) approach with a focus on immigrant patients. Based on twelve Cantonese-speaking and Vietnamese-speaking participants, they aim to enhance the effective communication of the guidebook. Although they do not deal with disaster literacy, their study suggests a much-needed change in the approaches to environmental communication and professional communication. However, their research does not emphasize how communicative practices between the researchers and their multilingual participants were conducted. In fact, Rose et al. employed research facilitators, who had a significant role mediating between multilingual participants and researchers. Moreover, their perspectives are limited as they approach them through a nonprofit organization to some extent, and their research purpose is to test usability and user experience. Ultimately, their focus is on a nonprofit organization’s communication. Thus, each participant’s specific stories are not attended to as these points are not their foci.

What I overviewed above in this section commonly assumes what Yasemin Yildiz refers to as a “monolingual paradigm” (2). As Yildiz notes, although multilingual practices have been studied over the past decades and multilingual realities are recognized, still the

monolingual paradigm has suppressed these practices in reality. This monolingual paradigm “constitutes a key structuring principle that organizes the entire range of modern social life, from the construction of individuals and their proper subjectivities to the formation of disciplines and institutions, as well as of imagined collectives such as cultures and nations” (2). This paradigm promoted “monolingualization” in which monolingual subjects, individuals who “are imagined to possess one ‘true’ language only, their ‘mother tongue,’ are constructed,” and “through this possession [the individuals are thought] to be organically linked to an exclusive, clearly demarcated ethnicity, culture, and nation” (2). Here, I do not mean that the assumptions of risk communication scholars are entirely monolingual and thus their studies should be criticized. In fact, my study was highly influenced by their longitudinal studies. These studies commonly have raised awareness of the significance of lay people’s perspectives and experiences. Based on these studies, I argue that everyday multilingual reality and multilingual communicators should be further factored into these studies. What I would call monolingual assumptions in disaster studies could be reconsidered given the increasing number of migrants and their vulnerable conditions.

Digital Communication and Social Media Writing

As shown in pilot observations, social media and mobile devices were significant factors in the disaster recovery process. Social media writing and online networking already have been studied in the fields of communication and rhetoric and composition. Drawing from multi-institutional studies, Stacey Pigg et al. highlight the notions of coordination and alignment as key terms for everyday writing in college students’ lives. More recently, in transnational literacy studies, digital literacies and online networking have been studied with a focus on research participants’ transnational and transmodal resources across countries and

contexts (Fraiberg and Cui; Lam; Wang). These studies have mostly focused on immigrant students or transnational-multilingual students in higher education institutions. More recently, in *Social Writing/Social Media*, Stephanie Vie and Douglas M. Walls explicitly argue for more attention to social media, which has often been disregarded as peripheral writing although it has become ubiquitous not only among youths but also older groups. In the context of disaster literacy, Liza Potts traces social web-based writing with a focus on six disasters and suggests participatory communication systems (19). Social media writing or other digital literacies are still understudied in natural disaster contexts or environmental changes although social media literacies are growing increasingly important in migrants' lives.

Contributions to the Field

In sum, I summarize my contribution to rhetoric and composition studies in two ways. First, my study is one of the few studies that focus on migrants' ecological literacies. Scholars who propose transnational approaches to language and writing and study textual mobility tend to focus on people's *everyday* literacy through the perspectives of a situated social practice (Street; Gee). While this approach can contribute to revealing how migrants as "everyday writers" practice their writing in daily life settings from the bottom up within social interactions (Lorimer Leonard et al.), there has been a paucity of works that illuminate *non-mundane*, unexpected *local* situations, and place-based material conditions, that is, literally top-down natural events including environmental disasters and ecological crises, which often cause traumatic, rhetorically intense affective situations. Since David Barton proposed the ecological framework to describe literacy practices in a correlated social activity system in his 1994 work, linguistic anthropologists have addressed migration

experiences in an ecological context, and the term “ecological” has been used in a metaphoric sense (Hornberger; Warriner and Wyman). Still, their studies have not literally dealt with local disasters or environmental crises, which often cause more intense emotional, economic, and social distress.

Building on these criticisms with a focus on a materialist view of literacy, this dissertation suggests a newly networked notion of transnational literacy studies and ecological approaches, what I call transnational ecological approaches, and contributes to the discipline by reorienting the translingual and transnational scholarship in writing studies not only to avoid the “sameness-as-difference model” (Gilyard 286) but also to generate more materialist yet still less bounded approaches to “translingual subjects” in non-academic communities.

There is a strong relationship between translingual subjects and their places, but such relationship has been insufficiently discussed and investigated. That is, translingual scholarship examines multilinguals’ cultural and linguistic repertoires in a transnational social space, but minimizes the role of translingual subjects *physical* place and habitat. In fact, place and habitat are “integral components in the development of their own unique identities” (Weisser, “Ecocomposition” 87). In a parallel way, ecological writing scholarship (Cooper; Grabill) have the potential to integrate translingual subjects. The literate practices of translingual subjects in higher education institutions and diverse suburban communities have not been viewed in relation to physical places.

To understand the connection of the physical environment *and* translingual practices of the multilingual participants, I primarily use two strands of guided theories in the next chapters: a) language ideologies (Silverstein; Woolard) with scalar perspectives (Blommaert;

Canagarajah); and b) material and ecological approaches to literacies proposed by Brandt and Clinton and Catherine Kell along with communicative ecology approaches to digital media (Tacchi et al.). Through these bifocal transnational/translingual and material/ecological lenses, this dissertation expands analyses of translingual practices in communities (Canagarajah, *Literacy as Translingual Practice*) with a focus on changes in the physical environment and to trace the tensions between community-based translingual practices and institutional discourses (bureaucratic literacy across different platforms). In all, this study contributes to a better understanding the relationship between minority communities' literate activity and their geographical environments, to rethinking the monolingual paradigm within the disaster discourses, and to advocating for the minority communities' right to their language and equal access to disaster recovery resources.

Chapter Organization

This chapter has overviewed the significance of this dissertation to the discipline and theoretical frameworks from two major strands, transnational literacy studies and ecological approaches to writing. Chapter 2 delineates my research methodology and methods, research sites, participants, data collection, and analytical methods. In Chapter 2, I explain my researcher positionality and legitimize why and how ethnographic case study help me pursue this inquiry and reflect on my position in research sites. In considering the methodological approaches that carry out my research agenda, I advocate focusing on not only textual documents on the move but also on the role of multimodal and changing technologies that influence everyday literate practices.

Chapter 3 identifies the language ideologies of multilingual migrants. This chapter sheds light on the language ideologies and scaling practices of four transnational-multilingual

families by analyzing literacy history interviews and situating their post-Harvey literate activities in their migration history. By mapping their anterior and posterior language ideologies, this chapter focuses on what counts as literacy in their perceptions and realities and how geological, sociopolitical, local, and global conditions interacted with these language ideologies. Chapter 4 focuses on transcontextual analysis on the participants' transliterate practices including oral, written, and other digital communicative practices during and in the aftermath of Harvey through literacy network-based perspectives.

Chapter 5 discusses the dissertation's implications for pedagogy in the academy and communicators in the field of disaster management. Rather than regarding in-school academic literacies and out-of-school non-academic literacies as separate entities, this final chapter highlights the ecological transcontextual continuum between out-of-school communities and college writing classrooms. I offer pedagogical suggestions for educators, administrators, and everyday workplace writers who seek new ways to reconfigure academic literacies as socially, culturally, and publicly responsive. Finally, this chapter identifies the limitations of the study and delineates the possibilities for future research.

Chapter 2

Research Design and Methodology

Given the fact that this research straddles disaster studies and literacy studies, I paid attention not only to the ethical considerations needed in qualitative research but also to the specifics of disaster studies. In this chapter, I discuss how I employed ethnographic methods to collect data, including the data analysis techniques. I also explain how my participants and I co-constituted the notion of community and created rapport through ethnographic approaches.

An Ethnographic Case Study

The main method of inquiry in this study is ethnographic case study. By ethnographic case study, I mean a combination of ethnographic methods, including literacy history interviews, discourse-based interviews, written artifacts from participants, observations, and accounts from my field notes. Based on this methodology, I provide findings from case studies of four focal transnational-multilingual families. In addition, in the disaster recovery process, my participants' experiences were largely engaged with digital platforms and public documents related to disaster recovery, provided by government agencies. Given this specificity, I combine my ethnographic case study with rhetorical analysis to examine textual and technical infrastructures through which my participants navigated institutional literacy and disaster recovery process. Chapter 4 examines findings that synthesize rhetorical analysis of public data and transcontextual analysis of written artifacts across participants.

Data Collection

Interviews

To explore the empirical findings grounded in the guiding questions, I conducted semi-structured interviews (see Appendix C) and participant observations. Through interviews and participant observations, I investigated how immigrant family members (twenty multilingual residents) and ten first responders and community workers in one of the most severely flooded suburban areas of Houston. I have construed their experiences and the role of literacy, including English, non-English languages, and other semiotic resources, in their recovery process after Hurricane Harvey.

When I circulated flyers in community events, I sometimes encountered frowns or “a fierce ‘Haw’” as Erikson had, which I introduced in Chapter 1. These negative reactions were understandable. At the time of the start of the study, only one year had passed and a number of survivors were still displaced, reconstructing their houses or waiting for the results of requests for financial assistance. Uncertainty and unpredictability aggravated their anxieties and irritations. Although interview participation was compensated with a gift card per interview and they recognized the potential contribution of this study, participation was not an easy decision. Given this reality, I adopted a snowball sampling approach, starting with one of my neighbors. Out of fourteen families, six families were already acquainted with me before I started this study. Eight other families were either introduced through the recruited family members or voluntarily contacted me after reading my flyer left at the community center.

Over the process of this study, I conducted two or three 45- or 60- minute semi-structured audio- or video-recorded interviews with participants and collected their literacy

artifacts. These artifacts included writings across modalities such as application materials for financial aid including Federal Emergency Management Agency (FEMA) Disaster Assistance, email communications with local agencies and other community members, formal or informal writing for social media, letter writing, journals, and blog postings relevant to the flooding or to their significant literacy history, in both English and languages other than English. During each interview session, I adopted literacy history interview methods (Vieira, “Doing”). In the first interview, participants were asked about their lived migration history and their experiences in the aftermath of Hurricane Harvey. In the second and third interviews, I asked more reflexive questions on their responses and conducted discourse-based interviews based on my collected texts and artifacts. I recorded interviews for more than eighty hours. In addition, I observed more than six literacy events, approximately fifteen hours in total. Four out of twenty participants allowed video-recording. Mostly, in the second interview, they allowed me to turn on a video-recorder along with a digital audio-recorder. I tried to capture their paralinguistic signs. If participants were not comfortable with audio-recording or video-recording, I adopted a note-taking method with their permission.

At the time of the research, one year had passed since the floods hit the area. I often asked myself if this research was started too early or too late. In some cases, my participants said they had already changed or updated their phones and had nothing to share. However, in some cases, participants said that it was too early to say anything. While nodding to this dilemma, I started asking about how language minority survivors navigated intricate recovery processes. My participants were in the middle of a very slow process in the wake of the disaster, and “Harvey” was one of the words that people were not comfortable using.

Some weeks later, I had dinner with one of my Korean-speaking neighbors and her family had been displaced for several weeks due to Harvey. When I very carefully asked about her experience during Harvey, she did not detail her experience. This may be because, in a humble manner, she thought that her damage was minor compared to other survivors. Then, she introduced to me Minji, who became a key informant in my research. I was told that Minji was not able to get FEMA assistance because of some “mistakes” she made.

Observations

In my pilot observation, I also encountered another group who had struggled with Harvey-related procedures. When I attended a Disaster Preparedness workshop in the summer of 2018, held by one of the community centers that predominantly work for Asian immigrants, I met an elderly person who wore a hearing aid and was sitting next to me. While breaking the ice, he said, “My friend was blamed. Someone said to him, “It is your fault!” You know what? His name was Harvey.” This joke was followed by his own reflection on the aftermath of Harvey on his home. However, once the workshop started, he became very quiet. Often, he stopped panelists and asked them to repeat their words. Another elderly person sitting next to me asked me in Chinese to switch her smartphone from vibration mode, which was accidentally turned on, to the sound mode while pointing to her phone. In my field notes, I revisited my reflections on that event:

In the Disaster Preparedness workshop, I was surprised about how limited my perspective was. Elderly residents were not being fully served and they often struggled with understanding materials in English. In many cases, staff workers intervened with some translations in the middle of explanations and bridged between mostly English-speaking officials and residents, including hearing-impaired English-

speaking seniors and Chinese-speaking residents. I regret that I did not prepare the flyers in Chinese. It was an Aha! moment for me. (Field notes, March 30, 2019).

This reflection was crucial for me to turning my scholarly agenda to a more explicit social justice frame. The experience in the pilot stage helped me be more prepared in working with community members. Through modification processes, I added more translated materials in a wide range of languages, including Chinese, Vietnamese, Spanish, and Arabic. After obtaining approval from the Institutional Review Board from my institution (June 18, 2018), I began a small-scale ethnographic study with the multilingual residents, predominantly Korean-speaking survivors, in my neighborhood, and the initial phase of this community-based study was done from June to August of 2018. Following the IRB protocol, I used two ways to recruit participants: through snowball sampling and through community centers. I contacted community centers in the west Houston area by email through non-profit organization headquarters and in-person visits to their public events. Based on the responses to my recruitment emails and flyers, during the fall semester between September and December 2018, I intensively interviewed two non-profit organization workers and ten multilingual survivors from different backgrounds and socioeconomic statuses. In the spring semester and summer of 2019, I continued first interviews with newly recruited survivors and follow-up interviews while continuing data analysis. During this process, I shared my transcriptions and interview interpretations in a form of the draft with focal participants and other participants who were willing to review my draft. Although their feedback was minimal, this process served as part of a member check and helped me maintain an ethical relationship with my participants.

Written Artifacts and Public Documents

Written artifacts were collected from participants upon their permission. These artifacts range from direct messages on their phones to journal entries to writings on social networking smartphone applications. In the process of multiple interviews, the primary public documents and digital interfaces with which my participants interacted emerged and categorized. This kind of data I collected, which were publicly accessible, includes local Korean news sources, press releases from civic agencies, government websites such as the FEMA Disaster Assistance website, the Harvey Homeowner Assistance Program (HoAP), and other non-profit organization websites. I often accessed those documents and digital platforms through my participants who were willing to share their application materials in order to explore the actual digital interfaces and discourses they have navigated behind the initial public interfaces of the online platforms.

Data Analysis

Mainly drawing from literacy history interviews and field notes taken from observations for triangulating interview data, this study collected participants' recollections of literacy practices during and in the aftermath of the flooding. In most cases, observations were limited to available resources as the participant families belong to different social groups and participants did not have any regular meetings or events. Several literacy events I observed, however, were organized by community centers, and if they participated in those events, I accompanied them.

While recruiting a wide range of research participants, I carried out further in-depth interviews with a focus on a high word frequency in the emerging codes, tracking terms such as racial identity, language ideologies, and sense of place. Although I focused on their

migration history and literate contexts in the first interview, in the follow-up interviews (second and third interviews) I attempted to focus on flood-related issues and their ensuing literate activities. To expand the scope of research, I included the spouses and children of already recruited participants, who had been mostly women. Data analysis started with transcription (see Appendix A for transcription symbols). After transcribing interview data, I translated them from Korean to English. If participants' first languages were not the languages I speak, such as Mandarin and Thai, interviews were conducted in English. For data analysis, I adopted a constructivist approach to grounded theory (Charmaz 32), codifying their meaning-making processes with labels such as home, school, work, and flood-related literacy events. By a constructivist approach, I used Charmaz's description that "a constructivist would emphasize eliciting the participant's definitions of terms, situations, and events and try to tap his or her assumptions, implicit meanings, and tacit rules" (32). By explaining the history of grounded theory methods from Barney G. Glaser and Anselm L. Strauss's 1967 work *The Discovery of Grounded Theory*, she defined the main features of grounded theory with seven components. In this study, I particularly used five components of the grounded theory methods she describes:

- Simultaneous involvement in data collection and analysis
- Constructing analytic codes and categories from data, not from preconceived logically deduced hypotheses
- Memo-writing to elaborate categories, specify their properties, define relationships between categories, and identify gaps
- Sampling aimed toward theory construction, not for population representativeness

- Conducting the literature review *after* developing an independent analysis (Charmaz 6)

This constructivist approach guided me to carefully listen to the participants' own words and pay attention to *in vivo* codes. As devised in grounded theory, I intentionally put off my literature review and paid attention to phenomenological understandings and cognition gained on site. This data collection and analyses led to memo-writing and constant comparative coding and categorizing processes. For example, I compared how people described "mold" repeatedly yet differently in each household situation. This code shed light on their linguistic and non-linguistic semiotic configurations. Another example of comparative approaches can be found in the process of analyzing the term "dam." I paid attention to how my participants described the dam release and what words they used as their descriptions about "when, where, why, who, how, and with what consequences," many of which were different. In the interview, often they described the dam release, and I used what Strauss and Corbin terms axial coding (Charmaz 60) to compare these different perspectives.

Interviews were conducted with twenty survivor individuals (fourteen families) and ten first responder or community organizer participants. Mostly, interviews were conducted in Korean while in some cases English was also used. I captured a set of codes with a scalar perspective, which led to "emerging categories" (Charmaz 181). This categorizing grounded on data and codes helped me move from concrete details to a more theoretical level and set up the "criterion of modifiability," that is, the abstraction through which new things in data can be noticed (181). Relying on Charmaz's grounded theory, my chapters analyzes findings from the initial open coding phase (Phase I), followed by the axial coding phase (Phase II) and the categorizing phase (Phase III). These three phases resulted from three different

category sets, which reflected research questions and arose from interview data, participant observations, and written artifacts.

Further exploring public documents and government discourses in which my participants were engaged, I used rhetorical analysis. Based on my research participants' experiences, I selected textual materials from government agencies. Given the fact that most of textual materials from government agencies are presented on digital interfaces and my participants often discussed their discursive experiences in these digital platforms, I used accessibility studies at the intersection of digital media and disability studies, heeding multiple occasions in which my participants elaborated on their experiences in using government websites, uploading documents, and appealing to agencies on digital platforms. To analyze public documents that my participants used, I particularly employed five categories of questions, which Elizabeth Ellcessor calls an "access kit" (17). In her 2016 work *Restricted Access*, she proposes this *kit* as "a set of analytic lenses" to replace the term tool or method. Her intention is to present a flexible approach rather than to limit her analysis to "abstracted representation" (18). She uses five categories: regulation, use, form, content, and experience: 1) regulation: "how is a medium, and access to it, defined?" 2) use: "How is it meant to be accessed and used, and by whom?" 3) form: "By what means does one access a medium in this case?" 4) content: "what is the information, meaning, or experience being pursued and why?" and 5) experience: "How is a medium experienced and defined by various groups or individuals?" (17). These five guiding questions helped me with data analysis in Chapter 4, where I present the public documents that the survivors used and their experiences with the documents along with interview excerpts and observation field notes. To summarize, an ethnographic case study served as my methodology in approaching the

vagaries of my participants' experiences primarily gathered from interviews, observation, and their written artifacts. To further explore institutional discourses from local, state, and federal agencies, with which my participants interacted, I used rhetorical analysis.

Participants and Focal Participant Selection

I define my research participants as transnational families (young adults and adults) who have multilingual backgrounds and have been affected by Harvey. To understand language and literacy in the recovery process further, I also included first responders and non-profit organization workers as interviewees in my participant pool. Residents who come from English-speaking countries such as the UK or the Commonwealth or countries in which English is one of the official languages, such as Canada, India, and Jamaica, are not included in this study. Although all of my voluntary participants were from Asian origins, they varied in terms of immigration status and proficiency in English. To make my recruitment materials more accessible, I translated consent forms, email recruitment materials, and other study materials from English to other languages, Korean, Spanish, Arabic, Chinese, and Vietnamese. While I was also introduced to government officials, they were often reluctant to be participants presumably for fear of any potential consequences and procedures of required communication with their companies.

As previously explained, I followed fourteen households (twenty individual survivors) and ten non-survivor participants (see table 1). Twelve households are Korean-speaking families while two households are speaking Mandarin and Thai respectively. Four focal participant families are Korean immigrants.¹⁰ The level of participation of each

¹⁰ According to Allison O'Connor and Jeanne Batalova from the Migration Information Source, particularly Korean immigrants, who make up my participant pool, have reached one million and account for about 2.4 percent of the 44.5 million immigrants in this country. While the Spanish-speaking population makes up 43

household varied. All couples were identified as heterosexual and mostly, women were interviewed first and their husbands and children were interviewed after obtaining their consent. Hence, women were often the key persons who talked about their family's migration history, literate lives, and their lives after Harvey. Each family's stories were filtered and mirrored by their perspectives. Women commonly took multiple roles as a major care provider for their children and household manager.

I included young adults or adolescents in the study, but not young children because my participants as parents might feel uncomfortable with interviewing their young children and more importantly mostly their young children were not directly involved in the recovery process. For participants under eighteen, I used a separate IRB-approved child assent form. I recruited four senior households. For senior participants, their adult children and other family members helped them as language brokers (Alvarez), who were informal translators and interpreters. In many cases, however, the senior participants were reluctant to connect me to those family members. The senior participants commonly said that they were very conscious of the additional burdens that they thought was placed on their children in the recovery process: "I don't want to be a burden to my children anymore." Also, they compared this disaster to their experiences in the Korean War in the 1950s in order to share their emotional distress followed by internal migration and loss of property. Out of fourteen households, only three households were insured. Mostly, the uninsured households had to rely on municipal or federal agencies for financial assistance and information about disaster management. Without

percent of immigrants, 6 percent and 5 percent of immigrants speak Hindi and Chinese, respectively. French and Vietnamese make up 3 percent and 3 percent, respectively. Korean-speaking people make up less than 1 percent and are part of the 18 percent of immigrants who speak languages other than these major non-English languages ("Facts on US Immigrants"). Korean immigrants are concentrated in major metropolitan areas including Los Angeles, New York, and Washington ("Facts on US Immigrants").

any insurance resources, limited information about natural disasters, lack of geographical understanding and local contexts led them into more intricate, chronic, corrosive, and distressful recovery processes.

Focal participants were selected based on their voluntary participation in the following interviews and permission for me to observe part of their literate activities and triangulate my data. While others stopped responding to my follow-up interview requests, some participants allowed me to observe their weekly faith-based small group activities and social gatherings. Based on this context, in the following section, I introduce four focal families using the participants' first names (pseudonyms).¹¹ These focal families helped me establish emerging main themes. They mostly used the Korean language in their social lives and occasionally the English language while taking responsibility for other tasks including managing finances, contacting schools, and applying for assistance. They participated multiple one-one-one interviews and group interviews with their family members, and/or allowed me to observe their everyday literacy practices. Individual participants will be introduced when needed in the following chapters.

Minji's Family

Minji's family had moved to the US thirteen years ago. After quitting her job, she followed her husband who got a job in the US. After I was introduced to Minji, I was able to recruit many more women survivors. Minji played a role as a key informant. In the beginning of the study, she contacted more than three neighbor women one by one through an instant

¹¹ To follow participants' first names (pseudonyms) is based on cultural and practical reasons. In Korea, women's surnames are not to be changed after marriage. Thus, in one household, the surnames of the spouses are mostly not identical. For this reason, rather than follow the convention of using the men's surnames as family names, I chose to use women's first names as representatives, if I interviewed more than one person in a family. In many interviews, women often shared stories that represented their whole family's experiences. In a few cases, I interviewed male participants first and then recruited other family members. In those cases, I used male participants' first names.

messaging application. She asked each individual if she was interested in participating in this study. Minji is a mother of two children and was very interested in her children's lives in school and their acquisition of the Korean language. She advised I teach the Korean language to my children myself. This is because she did not find sending her children to the language and culture school every Saturday as useful as she expected. After ending our interviews, she often talked about her children's academic performance. Coincidentally, the day of the second interview was a parent conference day. The interview started with a conversation about her children, and in the first interview, she shared concerns about her children's social lives in the majority-white neighborhood.

After settled down in the US, Minji had worked as an employee in a company run by Korean immigrants and often used business English with multinational clients. However, after she had her two children, she focused on household work. From paying bills to rearing children to navigating assistances and benefits in the wake of Harvey, she was the person who took the initiative in her household. Her role as a homemaker seemed to be more intensified in the process of disaster recovery. Although her husband had more experience in doing business, Minji was the person who was responsible for applying for assistance as her husband was frequently out of town due to business trips. While she emphasized Korean language learning, she was ambivalent about her environment where she mostly socialized with Korean speakers and those from Asian origins, which limited her opportunity to socialize with English speakers. She told me that when she saw her children had more friends in Pan-Asian groups, she felt comfortable, but at the same time uncomfortable as her local network consisted mostly of Korean-speaking or Pan-Asian people. She described her condominium complex as a place for immigrants. She explained, "Our building is shared by

eight households. They are all immigrants. They are not native English-speaking people.” As a neighbor, I often encountered her on the playground and saw her gathered with other Korean-speaking migrant parents. Based on interviews and observations, I see that her world seemed to be divided into two realms: the one of Korean-speaking culture and the one of English-speaking culture. Her loss of home in the aftermath of Harvey seemed to aggravate this divide and affect more than her well-being mentally and physically, as I will explain in Chapter 3.

Dahee’s Family

Dahee’s family is one of the closest neighbors of Minji’s family. At the time of the interview with Dahee, her family had settled in the US for six years. They moved to her current neighborhood because of a rent increase at her previous apartment. Dahee had worked as a professional in the field of education in Korea. After moving to the US as a dependent of her husband, who found a job as a researcher in the downtown area, she had been focusing on her child’s education. In the interview, she expressed her anxiety, concerns, and everyday distress due to her self-reported lack of English proficiency, the length of the green card application period since the Trump administration, and financial burdens. At the time of the flood, her family had lived in their house for only one and a half months. After the flood, she said that she had had constant vertigo and severe dizziness. Although she felt that her English proficiency was “limited”, Dahee said that she tried to do volunteer work at her child’s school. In her interview, however, she said that she stopped volunteering “naturally” since she was engaged in the recovery process after Harvey and at any rate she wanted to stop because “little kids asked me too many questions too many times [in English].”

Hajun's Family

Hajun, a Korean-speaking skilled professional migrant, who immigrated to the United States in 2015, has already experienced a wide range of geographical mobilities across countries including Taiwan, China, Ghana, Peru, and Britain, while working as an engineer in the oil and gas industry. He originally came to the US as a temporary skilled worker visa holder who worked for one of the major oil and gas companies in Korea. Hajun applied for this temporary position in the US because he thought the educational system in Korea was too competitive for his children to adjust. A better educational environment for his children was one of the major reasons for the migration of his family.

Youmi's Family

Youmi migrated to the US at the age of 17 with her family and currently volunteers at a Korean protestant church as a counselor, while her husband Steven came to the US with his family at the age of 26 after completing his BA to run a retail business. As relatively long-term immigrant residents, Youmi and Steve had more diverse experiences in working with other linguistically and culturally diverse residents across borders of economic status and varieties of English (African American English, white English, business English in sales, and so forth). Although Youmi and Steven left Korea thirty years ago, they kept a translocal tie through Korean protestant church and became more resourceful in using translocally networked resources than before in the aftermath of Hurricane Harvey.

Table 1

Research Participants

| Survivor Participants (Total 14 Households, 20 individuals) | | | | | | | | | |
|---|------------|--------|-----------------|----------|-----------------|-----------------|---------------|-----------------------|-----------------|
| Families | Pseudonyms | Gender | Locations Lived | Age | First Languages | Years in the US | Occupation | Types of Data | Flood Insurance |
| Minji's Family | Minji | Female | Korea, US | 35-44 | Korean | 13 | Homemaker | Video recording | Uninsured |
| Dahee's Family | Dahee | Female | Korea, US | 35-44 | Korean | 6 | Homemaker | Audio recording | Uninsured |
| | Jaewoo | Male | Korea | 35-44 | Korean | 6 | Researcher | Audio recording | |
| Hajun's Family | Hajun | Male | Korea | 45-54 | Korean | 4 | Engineer | Audio/Video recording | Uninsured |
| Youmi's Family | Youmi | Female | Korea | 55-64 | Korean | 38 | Homemaker | Audio recording | Uninsured |
| | Steven | Male | Korea | 55-64 | Korean | 30 | Business | Audio recording | |
| Sujin's Family | Sujin | Female | Korea, US | 45-54 | Korean | 6.5 | Homemaker | Video recording | Insured |
| | Charlie | Female | Korea | 18-24 | Korean, English | 7 | Student | Audio recording | |
| | Brian | Male | Korea | under 18 | Korean, English | 7 | Student | Audio recording | |
| Jiyun's Family | Jiyun | Female | Korea | 45-54 | Korean | 16 | Researcher | Audio recording | Insured |
| | Beomsoo | Male | Korea | 45-54 | Korean | 16 | Office worker | Audio recording | |
| Miyoung's Family | Jieun | Female | Korea | 45-54 | Korean | 17 | Homemaker | Audio recording | Uninsured |
| Anna's Family | Anna | Female | Korea | 35-44 | Korean | 12 | Homemaker | Audio recording | Insured |
| Miran's Family | Miran | Female | Korea | 35-44 | Korean | 2 | Homemaker | Audio recording | Uninsured |
| Mei's Family | Mei | Female | China | 35-44 | Mandarin | 30 | Bank manager | Audio recording | Uninsured |
| Boonsri's Family | Boonsri | Female | Thailand | 35-44 | Thai | 20 | Homemaker | Audio/Video recording | Uninsured |
| Senior Participants | | | | | | | | | |
| Kyunghee's Family | Kyunghee | Female | Korea | Over 64 | Korean | 34 | Homemaker | Note-taking | Uninsured |
| Taesuk's Family | Taesuk | Male | Korea | Over 64 | Korean | 43 | Retired | Audio recording | Uninsured |
| | Hyunmi | Female | Korea | Over 64 | Korean | 39 | Retired | Audio recording | |
| Jusun's Family | Jusun | Female | Korea | Over 64 | Korean | Unknown | Retired | Audio recording | Uninsured |

First Responders and Community Organizers (10 Individuals)

| | | | | | | | | | |
|--|----------|--------|------------------|---------|-----------------|----|---------------------|-----------------|--|
| | John | Male | Korea, Argentina | 45-54 | Korean, Spanish | 33 | Community worker | Audio recording | |
| | Martin | Male | Canada | 45-54 | English | 28 | Community worker | Audio recording | |
| | Insook | Female | Korea | Over 64 | Korean | 49 | Community worker | Audio recording | |
| | Daeho | Male | Korea | 55-64 | Korean | 16 | Newspaper editor | Audio recording | |
| | Wonjae | Male | Korea | 55-64 | Korean | 36 | Immigrant attorney | Audio recording | |
| | Bohee | Female | Korea | 45-54 | Korean | 18 | Newspaper editor | Audio recording | |
| | Hyejin | Female | Korea | 45-54 | Korean | 24 | Private teacher | Audio recording | |
| | Hyesun | Female | Korea | 45-54 | Korean, English | 19 | Community organizer | Audio recording | |
| | Jennifer | Female | Korea | 45-54 | Korean, English | 41 | Community Worker | Audio recording | |
| | Sunmi | Female | Korea | 45-54 | Korean | 33 | Community organizer | Audio recording | |

Researcher Positionality and Ethical Considerations

During the spring semester of 2019, I did fieldwork in the main sites, communities located in neighborhood areas around the dams, to collect data. Data collection was primarily done in the spring of 2019, and data analysis was concurrently executed until the fall semester of 2019. Actively integrating the environmental disaster as an actor (an actant in Bruno Latour's term) on migrants' literacies and communicative performance, I intended to offer empirical insights to the fields of literacy education and rhetoric and composition at the intersection of transnational literacy studies and ecological approaches to literacy and writing.

For interviews, I took well-informed approaches toward participants and carefully developed a rapport with them, as the interview process might evoke and repeat traumatic or unpleasant experiences. Given the specificity of disaster studies, I was more judicious about

my words, tones, and body gestures when I approached them. As previously explained, my approaches echo Grabill's emphasis on "relationships": "relationships may make projects literally impossible to initiate or complete" (214). It was extremely important, indeed, to build trustful relationships with them and set up a comfortable environment. In some interviews, I often stopped my audio-recorder when they asked me to do so or I asked if they wanted me to stop the recorder. When they felt emotionally overwhelmed while recalling certain moments or particular moments related to the use of English or to family members, I asked that question as a precaution. Attending to the emotional and affective dimension of the interview process, I took an empathetic approach toward participants and reminded them of the consent form in which they were able to discontinue their interview whenever they felt uncomfortable. In a way, the interview process itself might have been therapeutic for them, as it offered an outlet for their emotional distress after more than a year.

It should be noted that my positionality in research sites is complex. As a transnational multilingual myself, I had an advantage in accessing, communicating with participants, and noticing cues of emerging significant patterns. At the same time, however, I am aware of how I as a researcher from the local university might be viewed in the traditional ethnographic researcher/participants hierarchy *and* might complicate this hierarchy as a nonwhite insider. Keeping in mind Cushman's activist methodology and its tenet that "we show how people can and do act instead of how they cannot and do not act" (23), I set up a reciprocal, collaborative, and reflective relationship between participants and myself. When attendees of the Harvey-related events voluntarily left their contact information on the flyer and reached out to me, I approached them with more research materials. Some of them responded to my follow-up calls while others did not respond to my

contact. While observing my participants' literate lives in literacy events such as social gatherings and community center-based events, I tried to build a rapport with other survivors and community organizers. They often introduced me as a researcher or *Baksa* (a Korean term for a person who earned a Ph.D. degree) to other survivors or residents. Often this label represented power differentials between the participants and me. Although I have not earned a doctoral degree yet, this label implies that they regarded me as a person from the academy. But with this label, the power differentials were often flipped. Ironically, one of my community organizer participants used this term to imply that I was not fully updated with Korean community news: "Lee *Baksa* [Dr. Lee], if you would like to study this, you should have known about this. You had to read local newspapers every week." One of the male participants, who has lived in this area since the 1990s for more years than I have, often suggested that I needed to know more about this community. In his remark, the label *Baksa* indicates negative connotations in which academic knowledge about the local area is often constrained and even useless without local resources such as ethnic newspapers. My field notes documented his comment and my bewilderment as well. As such, while my position is mostly based on an insider perspective, it sometimes turns into an outsider's perspective. Given traditional Asian cultures that value aged male subjectivity, this comment illustrates some tensions between participants and the researcher.

My ambivalent position is not only related to gender and age but also related to the divide between the academy and the community, as shown above. While introducing myself to other people, a community organizer said, "You know, these people [researchers] always come with these kinds of gift cards." I interpreted her remark as her ambivalent feeling. Community workers and organizers are willing to help researchers from the academy.

However, her tone suggested that researchers (often co-national graduate student researchers) did not return with any outcomes other than small gift cards and implied that they often had just gone without tangible returns. This finding guided me to build a more reciprocal relationship although my research study was not explicitly started as participatory action research. I tried to reward my participants with practical help such as the flood-related information and by responding to community organizers' informal volunteering requests in public events.

To situate my interviews in their lives and triangulate interview data with other materials, I documented my observations by using ethnographic field notes after observing their literate lives in occasional social gatherings and Harvey-related meetings in community literacy sites, including local community centers and faith-based social events. Thursday or Friday evenings, I came to be part of their faith-based gathering as a newcomer to their faith. In many cases, I was part of their literacy events. Mostly, I did not record their words and interactions with others during the event. If I needed to document their words, I memorized them or quickly captured them temporarily in the notebook. My participants knew that I was there as a researcher. However, once I started taking notes, I sensed that some tension arose because they seemed to filter their words looking for the ones that they thought would be the right answer to my question. This tension might change my position into an outsider or a journalist rather than a participant observer. So, I stopped using paper and pencils and tried to be part of the informal helpers or participants in the events. Often, I helped them to set up tables and chairs or arrange food or clean up the room after the community center-based events I observed ended in order to be part of the event.

Mobile Outreach Survey events, which occurred at the Korean Community Center

based on self-sponsored requests for outreach help from the City of Houston, provided one of the major observation sites and helped me triangulate data across sites and modalities (speech activity, written documents, and their interview data). I further collected their artifacts, application materials, to-do lists, photos, writings, and letters prepared for insurance companies, federal agencies, municipal agencies, and non-profit agencies. While collecting their artifacts, I also came to know common major public documents, such as FEMA application forms and survey forms for the Homeowner Assistance Program for Harvey survivors.

Mostly, as an insider, I have gained a more nuanced understanding of survivors' uptakes of these events with an emic perspective. In the process, my positionality has changed from a participatory observer to more of an activist who attempted to find a solution to a local problem. They often recognized me as an unofficial communication assistant or an interpreter. Culturally specific factors also played a role in this power differential. They were mostly aged and more experienced in immigrant lives. Some (senior) survivor participants and community worker participants regarded my status, a younger woman who was less experienced in living in America at that time of the interview, as more unstable than theirs.

It should be noted that this reflective description does not necessarily guarantee an ethical approach in ethnographic work. As Horner aptly notes, "We need to recognize and confront the material differences at the research site among the researchers and researched rather than assume an ideal of shared interest among equal partners, and we need to recognize the labor all contribute, and factor in the values to be accrued through such labor and how such values are realized, in planning and taking up such inquiry" ("Critical" 22). What he points out here is that we should reflect on research processes and our positionality

as researchers, but it is more important to keep in mind the paradox of self-reflexivity that the statements of reflexivity do not entirely endorse an ethical approach. Despite its ethical and good intention, the reflexivity itself can “become a textually commodified guarantor of professional purity” (27). Being wary of this caveat, I included my reflections on research processes across different sites in a *critical* way, that is, in a way in which I am keenly conscious of the power differential and other social relations between myself and participants, in order to ethically represent research participants’ narratives and their literate lives in the aftermath of the environmental disaster.

As explained previously, Grabill sees community-based research as studies under action research or participatory action research, in which researchers “draw on the practice of working with people to answer questions and solve problems—as opposed to doing research ‘on’ people and their problems. By foregrounding action, research projects tend to move between capacity building, problem solving, and theorizing” (212). His point is that community-based research depends on researchers’ descriptions of their work and their relations to research participants. My research does not aim to make changes in policy in the timeline but to suggest implications for practices in the near future. Over the course of the chapters, I prioritize my participants’ experiences and their representation of those experiences and finally argue for their right to their own language and their right to equal access to material and discursive resources.

Chapter 3

Language Ideologies, Rhetorical Scaling, and Disaster literacy

Drastic environmental changes intensely visualize and materialize the places in which individuals are located and the communities with which they are affiliated. By focusing on analyzing their sense of place and the transnational material ecologies of migrant Harvey survivors, I track down how language ideologies have affected the migrant participants' perceptions of the disaster recovery process and their place-based identities. Based on my three-phase analysis, I make a case that they struggle with the lack of access to disaster literacy and resources and with little cultural-specific communication with government agencies. More importantly, I would argue that the participants' dispositions toward translingual practices and rhetorical scaling practices play major roles in facilitating the recovery process. Using the case studies of four families, I propose that in the aftermath of disasters, participants often assemble translocal ecological knowledge by leveraging spatial repertoires and often improvise *ad hoc* semiotic resources including linguistic, spatial, and sensorial resources. In the end, however, echoing sociomaterial critiques (Lorimer Leonard; Vieira), I will add that translingual practices and semiotic remediation practices in a newly composed translocal ecological knowledge system are contingent on material conditions such as immigration policies, constant threat of deportation, and bureaucratic literate technology.

This chapter traces the language ideologies and semiotic resources of migrant survivors of Hurricane Harvey within their regional and global networks by analyzing their literacy history interviews and written artifacts in order to situate their post-Harvey literate activities in their migration history and translocal material ecology. By mapping their anterior

and posterior language ideologies, this chapter focuses on how they have scaled symbolic and non-symbolic resources in rhetorical vertical strata and on how local, sociopolitical, geological, and global networks interacted with their language ideologies through what I call rhetorical scaling and transnational material ecology, respectively. By rhetorical scaling, I mainly mean that migrant survivors make critical interventions by engaging in scaling activities instead of passively accepting dominant scales or discourses of power in stratified language hierarchies, often regulated by institutional governing technology such as federal, state, and local language policies.

In this chapter, I situate the migration stories in sociocultural and geographical contexts; then, I present the narratives of four families with a focus on their language ideologies, bureaucratic literacy practices, and transactional writing, particularly their application form writing practices and communicative practices with local, state, and federal agencies. These practices emerged at the end of my multilayered coding and data analysis as the major writing practices in their post-Harvey recovery processes. While transnational literacy scholars in the field of rhetoric and composition have focused on diaries, personal writings, and correspondence as textual materials to explore migrant activities and mobilities across national borders (Vieira; Lorimer Leonard; Rounsaville), I investigate the language practices of migrants through the genre of institutional and bureaucratic writings, which are mostly ephemeral, improvised, time-constrained, and rhetorical. This shift of attention was prompted not by my research design but by participants, who mostly shared stories about how they were pressed to complete multiple forms for federal agencies, non-profit organizations, and insurance companies.

When I designed this study, I assumed that the level of English language proficiency

in language minority communities would affect their recovery despite their potential ability to leverage multiple resources. However, in the research process, I realized that they were more bound by their language *ideology* in homes, schools, and neighborhoods in the disaster recovery process than by their technical English language proficiency. My argument in this chapter is that it is not their technical level of English language proficiency that differentiated the paths of the migrant flood survivors' recovery. Rather, it was the migrants' translingual dispositions toward local literacies and their rhetorical scaling practices that assembled diverse semiotic resources to guide their disaster recovery process in the flood-stricken place. My findings suggest that migrant Harvey survivors navigated disaster literacy by adopting *rhetorical scales* through their translingual dispositions and assembling activities. However, their agencies and abilities to rhetorically scale are also qualified by their prior language ideologies, material objects, and sociopolitical governing technologies such as bureaucratic procedures, which in most cases are digitally automated (Eubanks). These material environments emerged in initial data analysis stages and thus became key foci of final analysis rounds.

In these practices, it is language ideology that is the epistemological practices of people's perceptions of the hierarchy of their semiotic resources in specific *locales*, among different varieties of English, among English and other languages, and among traditional literacy and multimodal literacies. Thus, it is important to note that language ideology does not simply refer to people's understanding of different languages or varieties of language. In his essay "Language Structure and Language Ideology," linguist Michael Silverstein defines language ideologies as "sets of beliefs about language articulated by users as a rationalization or justification of perceived language structure and use" (193). Linguistic anthropologist Paul

V. Kroskrity further extends this definition into a sociopolitical one by saying that language ideology functions “as a means of relating the models and practices shared by members of a speech community to their political-economic positions and interests” (3). For example, many people in the US believe a language ideology such as “Edited American English” is the only appropriate variety of English for written public discourse and “Standard American English” for verbal communication in schools and public areas. This one nation-one language narrative is a well-known example of language ideology, which is prevalent in the US. As linguistic anthropologists note, this one nation-one language myth has served the monolingual standard as language ideology. Anthropologists Richard Bauman and Charles L. Briggs further examine the theoretical foundations on which people advanced “ideologies of language that emphasized shared identity while at the same time generating means of creating hierarchical rankings of discourses and modes of producing and receiving them. These discursive hierarchies both reflected and helped create emergent forms of social hierarchy” (142). Their explanation of the difference between discursive hierarchies and social hierarchies contributes to the understanding of ideologies of language as social constructs. As noted in Bauman and Briggs’ argument, “scientific epistemologies” in the early modern era (148) have served as theoretical frameworks that promote the “ideology of a monoglot and monologic standard” (202), which will be used for “normalize[ing] and essentializ[ing]” one nation-one language constructs (202).

Language Ideologies and Material Ecologies

In these definitions of language ideologies, the link between language and society, particularly social inequality, is commonly foregrounded. I particularly extend the sociopolitical dimension of Kroskrity’s and Bauman and Briggs’ definitions that language

ideologies reflect social constructs, by proposing that language ideologies are social and at the same time material. Language ideologies are embodied experiences affected by environmental changes as well as social constructs. To present this idea, I turn to Volosinov's material approach to language ideology. In his book *Marxism and the Philosophy of Language*, he notes, "*consciousness itself can arise and become a viable fact only in the material embodiment of signs*" (emphasis in original) (11). It is important to notice that Volosinov suggests a social and materialist way of thinking about languages and signs. He emphasizes that rather than consciousness produces materials, material embodiment enables consciousness to emerge. Similarly, drawing from Althusser's discussion on ideologies, Warriner defines ideologies with a material orientation. She states that ideologies are not mere "representations that influence practices" but they "*are* practices, practices with material consequences" ("Here" 496). As Althusser notes, "an ideology always exists in an apparatus, and its practice, or practices. This existence is material" (qtd. in Warriner, "Here" 496). My point is that while language ideologies are beliefs and mindsets, accumulated by social relations, they are also embodied practices, material relations, and affects. These language ideologies are often pre-conscious as much as they are governed by materials, bodies, and affects. I extend the concept of language ideologies to situate them in material ecologies; language ideologies not only reveal the relationship between language and society but also the intricate relationships between languages and material practices. Thus, in my definition, language ideologies serve as the channels through which people navigate the nexus of their transnational physical mobility in the sociopolitical context and their embodied material experiences in the aftermath of an environmental disaster.

Particularly, the relationships between disasters and transnational literacy studies are

complex because environmental disasters often intensify the global and local flows of communications, discourses, technology, and money between sending countries and receiving countries or between different agencies and individuals. Thus, environmental disasters, including natural disasters and technological (human-induced) disasters¹² in climate change, call on scholars and researchers in migration studies to pay more attention to people's lived experiences in biophysical environments. In this context, this chapter specifically identifies flows and ideologies behind language and writing activities in the post-Harvey recovery process. I examine how language minority groups or linguistically and culturally minoritized communities perceive the recovery process in "regimes of language" (Kroskrity 3) in which language ideologies are tools for mediation by which people navigate language and writing activities in the context of social inequality and climate injustice.

Rhetorical Activities and Qualified Agency

Extending the sociopolitical dimension of language ideologies, I focus on language ideologies in the biophysical environment. As I discussed in Chapter 1, many literacy scholars have documented vernacular literate practices and their language perceptions of local communities (Heath) and linguistically minoritized groups (Duffy; Guerra; Cushman; Vieira; Heller; Kang). On the other hand, disaster scholars in the field of anthropology have attended to the relationships between disaster survivors and their comfort and kinships (Browne) or emotional and affective dimensions and neoliberal governmental technology (Barrios). The intersection of disaster studies and transnational literacy studies is important because it investigates "ideological effects" and their "convertible exchange value as forms

¹² This binary between natural disasters and technological disasters and its contested meaning can be found in J. Steven Picou's "Disaster Recovery as Translational Applied Sociology: Transforming Chronic Community Distress" ("Disaster Recovery" 130).

of capital” as Luke notes in Bourdieu’s words (333). Luke’s remark echoes the sociomaterialists’ perspectives in transnational literacy studies (Lorimer Leonard; Vieira). The question is not about how literacies are bound by language ideologies. Rather, the question is about the *consequences* of literacies: What is the role of language ideologies in the context of natural and technological disasters? What are the exchange values of language ideologies?

The literate activities and consequences of literacies can be seen as what Jody Shipka terms remediation processes, which consist of “the diverse ways that humans’ and nonhumans’ semiotic performances are represented and reused across modes, media and chains of activity” (64). These (re)mediation processes can be more critically examined in two aspects when scalar analysis is added because it shows: a) power differences in literate activities across time and locations and b) agentive practices of people who identify themselves as those who use less privileged varieties located at the lower scales. Drawing on this scalar analysis, I suggest that scaling analysis can be extended to more material dimensions, including humans’ interactions with the material environment and nonhumans’ forces (Bennett), which call attention to a new perspective on human agency. It is important to note that the performances of places and the material environment play an active role in semantic phenomena and limit human agency.

To examine disaster-affected migrants’ discursive and rhetorical activities across media and localities in this chapter, I particularly draw on the notions of “spatial repertoires” (Pennycook and Ostuji) and “rescaling practices” (Canagarajah, *Translingual Practices*; Canagarajah and De Costa) from sociolinguistics. These scholars reconfigure the context of communication as multilayered spaces beyond the binary lens into a macro level and a micro

level (Wortham and Rhodes), rather than as containers. Extending scalar analysis, in this study I use what I call rhetorical scaling. By rhetorical scaling, I mainly mean interlocutors' literate *tactics*¹³ of taking up this hierarchy, often improvised and devised by those who have less power (Canagarajah, "Shuttling between Scales" 49; Curry and Lillis). I came to devise the notion of *rhetorical scaling* as a broader term, which encompasses various scaling practices beyond rescaling practices (Canagarajah) and jumping scales (Blommaert). As I will detail in the following sections, my empirical findings suggest that while these scaling activities, including rescaling practices and jumping scales, are often adopted by professional multilinguals as observed in Canagarajah's studies on skilled African migrants, novice language users are likely to use different tactics. These tactics include stepping aside, disengaging, or withdrawing themselves from scaling practices in order to compensate for the lack of accessibility to language resources or other material resources. The notion of rhetorical scaling could be equivalent to Ellen Cushman's findings from the ventriloquism of African Americans in taking up the institutional language of eviction and Rice's term regional rhetoric or its adjacent identities (Rice 206).

My point is that rescaling practices or "scale making" (Caglar and Glick-Schiller 12) practices have often been overrated when scholars predominantly focus on select transnational groups such as educated students¹⁴ or skilled professionals in the academy. In this study, I focus on what I call rhetorical scaling practices, which is tactical and transnational-regional, and is often observed in less privileged people. In the field of rhetoric,

¹³ Here, the term *tactics* can be contrasted with the term strategies. While the term strategies refers to designed plans imposed by more powerful subjects, the term tactics indicates improvised navigation of a de facto linguistic hierarchy (Canagarajah "Shuttling between Scales," 49). This usage originally came from De Certeau and was adopted by multilingual scholarship (Canagarajah "Shuttling between Scales;" Curry and Lillis).

¹⁴ Multilingual students including immigrant students and international students, educated in higher education institutions in English-speaking countries.

this term is also highlighted when scholars attend to the literate activities of less privileged people. While I agree with the point of scholars that scalar analysis is useful to identify stratified linguistic and social hierarchies, I intend to extend this scalar analysis to those who are unable to easily jump, rescale, or newly create scales as “scale makers” (Caglar and Schiller 12), due to the lack of literacy sponsors, a self-reported incompetency in English proficiency, and material infrastructure, such as institutional prescriptions, language policies, and technologies governing immigrants.

Taking up Blommaert’s notion of scales and Canagarajah’s extended criticism of it, I synthesize these two views based on literacy history interviews from my participants through sociomaterialist approaches (Vee; Vieira). I would argue that for my participants scales are not always fixed or predetermined. Yet, scales are not always flexible or negotiable in sociopolitical contexts, particularly in the context of bureaucratic literacy (Lorimer Leonard; Vieira) and institutional languages (Cushman). What I would call *rhetorical scaling* attempts to capture this paradox and fluctuation of multilinguals’ literacy practices. While this rhetorical scaling is similar to rescaling practices in terms of the foregrounding of an interlocutor’s agency, it is diverted from rescaling practices because the interlocutor’s literate practices include not only flipping the order or norm but also conceding the norm, opting himself or herself out of bureaucracy or institutional literacy-related activities.

Put differently, I suggest the term rhetorical *scaling* practices to foreground the agentic negotiations of multilinguals. Yet, this *rhetorical scaling* is heavily contingent on material constraints and biophysical ecologies. Participants were aware of the parameters of the bureaucratic system and its literate requirements and navigated the process with a rhetorical sense of the material ecologies. My findings suggest that transnational multilingual

Harvey survivors navigated disaster literacy based on their *rhetorical scaling* through which they adopted translingual practices, assembled diverse semiotic resources, and, more importantly, often qualified their own agency while acknowledging power relations between language varieties and material infrastructures. My term rhetorical scaling attempts to capture this subtle movement in disaster-stricken people's lives and interviews. Thus, by the term rhetorical, I highlight not only multilinguals' agency and subjectivity in which they leverage semiotic resources and shuttle the norms beyond linguistic and physical borders, but also a materialist approach to subjectivity, what Jordan terms "permeable (trans)linguaging subjects" (375). In this material approach, their agency is attuned, qualified, and limited in material and biophysical environments and governed by the "textual regulation" of nation states (Vieira, *American* 119) and bureaucratic regimes as I will show in this chapter.

In rhetorical studies, scholars such as Cooper and Jordan suggest new approaches to human agency beyond an individual model with the notion of "rhetorical agency" (Cooper "Rhetorical") and "permeable (trans)lingual subjects" (Jordan). On the other hand, drawing on materialist orientations, applied linguists such as Canagarajah, Pennycook and Otsuji, suggest the notion of "spatial repertoires." While linguistic repertoires attend to "either language-to-language relations (bilingualism, code-switching, multilingualism, translanguaging) or language-to-person relations (competence, individual repertoires)," spatial repertoires refer to "the linguistic resources at people's disposal in a given *place*" (Pennycook and Otsuji 162). Although the notion of linguistic repertoires is useful as they reflect both formal and ephemeral literate experiences gathered across people's lived experiences (Pennycook and Otsuji 33), it is still centered in human agency. However, in the notion of spatial repertoires, places, spaces, objects, activities, and material environments are

more emphasized than human agency. While both notions go beyond individual linguistic competency, linguistic repertoires and spatial repertoires diverge from each other in terms of their approaches to the relationships between different agents.

Spatial repertoires and semiotic remediations in specific material environments are foregrounded in the disaster recovery process. Particularly, the disaster recovery process is an intensified time and space where the disaster-affected survivors need to communicate with multiple agencies including federal, state, and local. The process involves a wide range of communications in physical constraints and limitations, such as uninhabitable places with mold outgrowth, strictly designated time periods for financial assistance, and specific standardized forms with which they should comply.

Ideal Suburb and an Environmental Disruption

As described in the previous chapters, Greenville was one of the most severely affected areas impacted by Hurricane Harvey in 2017 in the greater Houston area. Since 2015, Houston has experienced five annual disasters, which were federally designated between 2015 and 2017 (“Fact Sheet” 1) and has garnered the attention of researchers in anthropology, geography, sociology, and other fields as a vulnerable area that is prone to undergo frequent and severe urban flooding and climate change-related disasters (Chakraborty et al. 2). In addition to natural disasters, the year 2017 brought drastic social changes, institutional deferrals, and repeals. In 2017, the new administration led by Donald Trump started implementing strict immigration policies on authorized and unauthorized migrants and terminated the Deferred Action for Childhood Arrivals (DACA). In Texas, Senate Bill 4 (commonly called the “sanctuary cities” bill) was signed by Texas Governor Greg Abbott despite the controversy.

However, the enactment of Senate Bill 4 was deferred to help the rescue and recovery process in the aftermath of Harvey. To help survivors, the US Department of Housing and Urban Development (HUD) promised to provide \$5 billion for Texas and \$1.15 billion for Houston (“City of Houston: Local Action Plan Summary” 4). These supportive actions, however, did not provide relief for every survivor. This money was particularly designed to support those who did not have flood insurance. According to the 2018 Summary Report of the City of Houston, 80 percent of flood victims had no flood insurance. People often had little knowledge about whether their house was located in a flood zone or what kind of potential flood risks they would be subject to when they purchased the house.

On August 28, 2017, the opening of the dam floodgates, which was done to stop the dam from breaking and flooding the entire city, and the ensuing water discharge aggravated the severity of the flooding disaster in West Houston including Greenville. My participants often used the term “sacrifice” while describing this experience and explained that this area was used as a “scapegoat” to save residents located in the downstream areas of the bayous. Before Harvey hit, this suburban area had been known for its competitive public school systems, well-established business sectors, and public park areas. Since the 2000s, this area has been one of the locations which has undergone drastic demographic changes because of a significant increase in linguistically and ethnically diverse groups. Among them, the Latino population has had the most rapid increase followed by Asians and Asian American groups. According to the 2016 report of the West Houston Organization, the Hispanic population accounts for 32.6% and the Asian population 12.7% (“West Houston’s Economic & Demographic Profile” 5). In the introduction entitled “Greater West Houston,” this report states that before the 1970s this area had been mainly used for ranching and for cultivating

rice, and had a population of about 180,000 people. However, by the 1990s, the population had grown to 700,000 due to “master-planned residential developments” made possible by “a less restrictive approach to land use policy” and “high-quality infrastructure especially in the areas of water, drainage, and transportation” (“West Houston’s Economic & Demographic Profile” in the “Great West Houston” section). Indeed, this area has hosted oil and gas industries and medical businesses, which have attracted transnational skilled laborers particularly since the 2000s, although recently this trend was affected by the changing immigration policies and regulations of the Trump administration and ICE.

Most of the participants in my study, who came from Korea, except for elderly participants, have emigrated to the US since this neoliberal global flow started. In fact, this course began with the enactment of the 1965 Immigration Law and the economic boom in Houston attracted Koreans and Asian Americans. Koreans began arriving in the 1970s and started small retail businesses and “be[came] entrepreneur[s] for a growing low-income neighborhood” (64). From the 1970s to the 1990s they started their hard-working lives in the city, providing cleaning services or acting as retail entrepreneurs who sold merchandise such as beauty supplies, clothes, and accessories to economically modest populations, largely made of the growing Latinos and African American groups (Kwon 61). These early migrants were followed by professionals who mostly worked in the biomedical fields or oil and gas industries. These migrants often resided in “transnational social fields” (Basch et al. 92), a space in which they kept ties with their home countries, languages, and cultures, largely supported by faith-based groups or ethnicity-based community centers or cultural organizations. More recently, the competitive public education systems in the West Houston area have attracted migrants who crossed borders to educate themselves or their children at

an early age, including early study abroad parents and children or young adults. These heterogeneous groups cut across the categories of different migrant groups. Families with members engaged in temporary work often extended their stay for their children's education, although one of the parents returns to Korea.

The commonly circulated narrative about this place through media coverage is that the dam release affected one of the most affluent areas in the city. For instance, the 2018 *New York Times* article, "How One Houston Suburb Ended Up in a Reservoir" refers to this area as the richest. As shown in the 2017 *Bloomberg* article "The US Flooded One of Houston's Richest Neighborhoods to Save Everyone Else," middle-class or upper middle-class survivors, mostly white residents, have been selected to show the catastrophic effect of the dam release. Transnational-multilingual survivors, particularly survivors from non-English speaking Asian countries, are often excluded from this media coverage. In what follows, I discuss their language ideologies and narratives about their geographical identities suggested from their literacy history interviews, in order to trace how they have perceived their language ecologies and how scaling practices shaped their literacy practices that are imposed by monolingual ideologies and power differentials.

Racialized Spaces and Struggles for a Sense of Belonging

My participants in Greenville have had a mixed relationship with this suburban area. During the interview conversation, one of my participants, Jiyun, a skilled professional migrant who was affected by Harvey and the reservoir release, explained how satisfied she was with the abundant parks and recreation areas in her subdivision before the flood. She also added comments on her own sense of this place, comparing her current location, suburban Greenville, to the previous location, a downtown area in which the children of

temporary international workers and researchers accounted for a large percentage of the student body in her child's school. She said:

This area [Greenville] is very American. I mean white American. **Here**, people are snobbish. This expression might sound, ((laughter)). **There** [a downtown area where she first lived after she moved to Houston from another state], people had some sensible manners, they understood that they should respect each other. But here, I'm considered more of a foreigner than I previously was. I know that that area [downtown] was a unique case, though.

Using spatial scales, she explained how the affective dimensions and emotional aspects are shaped by social relationships. Although she qualified her position that she knew that her previous downtown area's multilingual and multicultural sensitivities cannot be found in other places and suggested that she was careful not to hastily generalize it among all white residents by the laughter, she identified her affects through the term "snobbish." Jiyun added:

I chaperoned my kid's class field trip, so I was with other moms in a car. But they never addressed me. There were three, in the same car, they talked to each other. I did not greet them first, and then they never greeted me. It was too much. I talked to myself, "What is this situation?" "What is this?" But I thought that maybe it might be their own way of showing polite manners. They might not have any personal, negative feeling toward me, but you know, for them, I am just a foreigner.

This translocal scale across different areas ("here" and "there") within the same city and racial awareness of their physical appearance and language were prevalent in my other participants' comments. Another participant also recalled the time when she felt that other parents treated her as if she were invisible. For example, Minji told me about her everyday

experiences in her children's school:

Here, people are so cold-hearted. Although I am not good at English, they should be able to greet me. They definitely saw me and they knew me, but they pretended not to notice me. I often see those moms in the school. When I went to the school for meetings, there were some moms who didn't say hi to me. Yeah, it is true. (...) I don't know how to put it. I can't make sure that they look down on me because my race is different. No, I can't make sure, can't make sure. Maybe, we didn't get to know each other yet, or they just didn't like me. But how did they know if I was a good person or not without ever addressing me?

Minji and Jiyun commonly indicated that they struggled with the lack of interaction with others and their own emotional distress in building both formal and informal social networks, but often denied or suspended their articulation about their feelings by qualifying their positions. Both participants said that this kind of disrespect or lack of manners might be a general phenomenon beyond the racial category. Newly arrived migrant residents have tried to socialize with other long-term residents, particularly white upper-middle class residents, who are greater in number and are dominant in Greenville in terms of sociopolitical power, but often their attempts end up with the feelings of being treated as "foreigners" or "invisible" regardless of the duration of their residence. It is significant that they commented that they felt as if they were living in an area owned by others, although they had legal ownership of their places.

However, my participants told me that they endured these feelings due to this area's competitive school systems and convenient location to their or their spouses' workplaces including wholesale offices, the medical research center downtown, and energy industry

headquarters. They recounted that they sought suburban lives mainly because of educational quality, resources, and a commutable proximity to the downtown and other business sectors. In the remainder of the chapter, I will detail the stories of four migrant survivors and their literacy histories with a focus on language ideology and its stratified and layered configurations of language hierarchies. While collecting their flood-related stories and investigating their literate ecologies, what I realized was that their language ideologies before they were affected by Harvey played a significant role in navigating their recovery processes. In what follows, I examine their language ideologies through the lens of scalar analysis and then discuss how their rhetorical scaling practices intervened in these layered language ecologies.

Multilingual Survivors' Rhetorical Scaling Practices

This section describes the rhetorical scaling practices of the four families with a focus on language ideologies. Minji's stories show how her preexisting language ideologies and racial identity affected her literate activities in the post-disaster process. Then, through Dahee's experiences and narratives, I describe how rhetorical scaling intervened in the recovery process and particularly how the rhetorical scaling practice was helped by informal brokering and thwarted by the governing technology of the application process. Her case describes how citizenship discourses are related to translocal material ecologies of immigrant survivors and their recovery processes. This section suggests that although they have cross-cultural communication and translingual dispositions, those skills and tactics are calibrated to the parameters of the assumed citizenship and immigration policies they have accumulated through their experiences as immigrants.

Minji Kim's Family: "If I were in Korea, I Could've Talked to Them More than a Hundred Times"

In September of 2018, on a hot humid day, I met Minji at a coffeehouse early in the morning. Minji, a Korean-speaking migrant, had lived in the US for 13 years at the time of the interview. One of her husband's relatives settled in Houston several decades ago and runs a wholesale beauty supply business. Her husband joined this business after completing his college studies and she followed him. After her one-story home was submerged under the floodwater and sewage for about two weeks after the reservoir release a year before the time of the interview, Minji's family had temporarily lived in her uncle-in-law's house and then moved into a rented apartment. She had been waiting on the reconstruction of her damaged house to be completed and was expecting it to be finished before Thanksgiving.

At the time of the study, although media coverage and governmental support had started to dwindle, my participants were still in stressful situations physically and emotionally. After I ordered coffee and sat at the table with Minji, I noticed her eyes becoming red and watery. While struggling for self-control, she said, "I'm like this. I'm likely to be bothered by petty things like this, but feel calm about big things. I know it is funny" (Field notes, September 19, 2018). I imagined that she had envisioned talking about the flood and even that mere thought brought a burst of feeling and emotion. At that moment, my audio-recorder was not yet started, and I did not ask her a question or talk to her. For a while, I simply nodded and sat in silence instead of asking if it was okay to turn on the recorder, which was the usual next step in my research interview. Although I did not catch the first part of her interview on my audio-recorder, her unexpected affective responses and words were recorded in my field notes.

I noticed that her affective aspects played a significant role in her everyday life even though one year had passed since Hurricane Harvey. Her burst of feeling was an important cue in guiding my data analysis and directed me to attend to the affective dimension of the participants. It is because this emotional reaction suggested that her recovery was not just a one-shot process from a disaster, but a reprocessing of her holistic embodied experiences, complicated sense of place, and identity constructions. As disaster researcher and anthropologist Barrios notes, “affect and emotion [should] be taken as a space of critical examination and dialogue between assisting governments, aid agencies, and disaster survivors where reconstruction and mitigation projects that are meaningful to disaster survivors can be devised” (48). In media coverage and governmental documents, their affect and emotion were categorized as individual mental distress, which would eventually be overcome. However, her emotional and affective dimensions were the sites of uneasiness about her sense of place, racialized experiences, linguistic marginalization, and distress from a long-term adaptation process, which will be discussed in the next section.

Minji’s Language Ideologies

During the first interview, Minji shared multiple examples of where she attempted to socialize with neighbors in Greenville and other school parents for the first few years of her resettlement in this suburban area. She reported that when she moved to this area seven years ago, she attempted to create social networks by circulating group emails several times to invite her daughter’s classmates to her house and to get to know her neighbors. However, she realized that it would be hard to maintain those relationships and did not want to invest her time any further in socializing opportunities. This bitter memory, revealed in the interview, echoes the same racialized demarcation that was brought out in the conversation with the

aforementioned skilled professional. Jiyun and Minji commonly revealed the struggles that they have had since they settled in this area: feelings of disconnectedness, the lack of social networks, and racialized glances felt in the school, in the supermarket, and in public meetings. For Minji, Hurricane Harvey seemed to aggravate this sense of disconnectedness and alienation. In her interview, she articulated her sense of place, saying, “You know, we are living in the smallest house in this neighborhood.” It appeared that this disaster made her feel these specific spatial scales about her home more intensely.

In her interview, she emphasized how much time it took for her to arrive at a compromise before settling in the US. Her husband was encouraged to live with one of his relatives, and her father-in-law encouraged Minji and her husband to “live abroad and experience a bigger world.” This shared spatial scale in which America is considered as a “bigger world” and a more privileged place while Korea is regarded as a relatively small country overlaps with her linguistic scale, as will be shown. She persuaded herself to quit her job and follow her husband based on the rationale that at a minimum she might learn American English, one of the privileged varieties of English, despite an unknown future: “I thought, if I live in the US for about five years, I will at least learn English although I might lose everything.” She, however, swiftly added her thought, “But it was a silly idea.” After migration, she started working as a clerk at a local company and learned how to communicate with other staff and colleagues, but the language in her workplace was limited to a few terms about shipping, importing and exporting items, and simple greetings via phone calls. She continued:

I’ve had no chance to see foreigners except for the time in which I worked for the company (...) My kids play with Asian kids since you see lots of Asian people,

Korean kids around here. After moving to this place, I registered my child for the Pre-K class. But I was not good at maintaining it [social network]. I'm social, but couldn't take care of everything.¹⁵

She attributed her inability to socialize with other residents in her area to her personality and disposition, in which she is an "active" person but not really "social." She said she did not bother herself about investing her time and energy in socializing with neighbors or other parents. She mentioned frequently, "our appearance is like this." Her language ideologies are not consciousness- or mind-centered practices but they *are* practices and materials, that is, facial and bodily phenotypes. In her interview, it was clear that she contextualized the Standard American English in her children's school, teachers' languages, and the varieties of English of US-born speakers as privileged languages at the higher semiotic scale in the layered linguistic hierarchy.

Eight months later, in a follow-up interview, I sat down again with her at the same coffee house early in the morning. She moved back in her house after all renovations were completed, but she said that she was still suffering from a medical issue, indigestion problems, which started while she was displaced. She said that this health condition had worsened. At the time of the second interview, she was awaiting a response from the Homeowner Assistance Program (HoAP), which is an avenue for financial assistance. Minji felt pressured to make phone calls to proceed with this assistance program as she knew that if she kept waiting, her application that was submitted four months ago would not be reviewed within an appropriate timeframe:

¹⁵ With Korean-speaking residents, interviews were mostly done in Korean. The excerpts of the interview transcriptions were translated by the author and are mostly presented without original transcripts in Korean. However, in some cases, I provide original excerpts to illustrate their translingual practices or translanguaging in detail.

In the case of the utility assistance program, I think it doesn't matter. Now, well, if it was in Korean, I would not drag out the situation. But I can't give this up as it is about money. But I don't have the capability to do things quickly [*ppali-ppali*]. In my mind, I feel pressured to use English, I need to call them, I feel distressed. Haeri's dad [her husband] doesn't push me, you know. He thinks, if I can't do this, there is no other way to do it. I feel very distressed.

Here, what was clear is that she perceived that her time was compressed. She knew that if she contacted officials working at the HoAP, she would check the status regarding the submission of her application form. She knew that she was forced to work intensely and at a high speed. This compressed timescale (*[ppali-ppali]*) an equivalent term in Korean for "very quickly," literally "quick-quick") is combined with a prolonged temporal scale. For her, this flood had no clear ending or closure, which seemed to cause a deterioration in her physical and psychological health. In terms of the scale of linguistic ideologies, she frequently situates her first language, Korean, on the lower end of the scale while putting English and institutional languages on the top of her scales in her epistemology.¹⁶

Rhetorical Scaling of Emotion and Disaster Intensity

Minji's disaster literacy can be aligned with this language ideology in which a specific variety of English is viewed as privileged and non-negotiable. Minji's house, which

¹⁶ It should be noted that these scales are not empirical realities or predetermined scales. My use of the term lower and higher scales is different from Blommaert's 2010 notions of lower and higher scales. While I think that the social and material implications of the stratified or layered hierarchy he suggested can revise the recent "trans" oriented scholarly conversations and the potential dangers of "flatten[ing] language differences" (Gilyard 286), I do not assume that those scales are predetermined in empirical realities, but intend to indicate my participants' discursive construction. Scaling carries power relations and colonial histories in which select varieties of English or other languages owned by colonialists are imposed while other varieties of English or indigenous languages are suppressed. Thus, using the term scales, scaling, and scalar analysis should be used with careful and purposeful intentions. I mainly follow scalar analysis with the intention of making critical interventions and exploring postcolonial and resistant practices.

was close to one of the main bayous in Houston, was flooded on August 27 in 2017.

Unfortunately, her house, along with 200 other houses in her condominium complex, was flooded again the next day highly possibly due to the release of the water in the reservoir. On the first day, the water was clear as it came mostly from rain, but soon it became mixed with sewage. The water stayed for more than ten days. She had no idea how many days, months, or years she would have to deal with this flood. At the time of the interview, she was living in a displaced location, which was the third place. For twelve months, Minji and her family had stayed in different places--in a hotel room, in her friends' houses, in her in-law's house, and last in a rented apartment unit. She said the recovery process after Hurricane Harvey was challenging but it was not a "big" thing to her. In her interview, she said, "If we think it [the flood] is not a big thing [*byeolil*], it will not be a big thing. But if you think it is a big thing, it will really be a big thing." Throughout the interview, she often calibrated and rescaled the impact of the flood on her emotions and financial situation as well: "We thought it was not that difficult a situation. We didn't expect that it would last as long as this. We just thought, let's clean up and get back quickly. Rather, people around us felt more pity for us than we felt for ourselves." She seemed to attempt to rescale, control the intensity of her feeling of this "big" or "peculiar" thing, *byeolil* (an equivalent word for a big or peculiar thing in Korean), in the aftermath of the disaster, which totally damaged her one-story-condominium. In this conversation, she also attempted to keep her own agency by referring to this disaster as a little thing by downscaling it at a lower intensity, although her emotional burst at the beginning of the interview seemed to contradict her words or rescaling practices.

However, Minji's rhetorical scaling practices—that is, intentionally downplaying the intensity of her disaster experiences—did not seem to work effectively in her communication

with multiple institutional agencies, such as with the Homeowners Association (HOA) board members, who were not transparent in their post-Harvey management.

Minji: In fact, ((laughter)) if my English were better, I would have done a hundred times. Their [Homeowner Association] [post-Harvey] management work was horrible. They frequently sent us emails and posted something on Facebook, but I thought maybe someone other than me would complain about this. Just (.) they had lots of meetings, I visited them one or two times ((laughter)). In fact, I couldn't intervene in it. I have had no flood experiences in Korea, but if I were in Korea, I would stand and speak up a lot. ((laughter)) Looking at the situation, which made me mad, I thought, I cannot do anything but wait.

Soyeon: But in Korean, too, it would be hard to (.) to talk about this complicated situation anyway, and you know, the HOA doesn't exist in Korea.

Minji: Yeah, but it's not only about the language, but about the fact that we don't know very much about American systems.

Soyeon: For example? Do you mean the HOA system?

Minji: Anyway, our case is different from your case [case of the townhouse where I live]. The case for condominiums is different as they have lots of commonly shared areas. We should deal with it anyway, as we are the owners. Eventually, we will do that. But I felt very irritated. What are they doing now? They just had meetings over and over again, but actually I couldn't speak my thoughts there [in the HOA meetings], anyway I was not able to one hundred percent understand what they were saying.

In this interview, she clearly understood that she had ownership of her house ("as we are the

owners”) when dealing with the HOA. She demonstrated a keen consciousness of irony in which she was not able to practice her ownership. The decision-making process of the HOA was not fully accessible to her as most of the HOA meetings consisted of extemporaneous remarks from the committee members and improvised verbal interactions between them and other residents, often without any written handouts or slides. She attributed this stranded situation to her lack of language skills and the challenges she had with self-learning. At the end of her second interview, she said:

I am living here in a Korean way. American and Korean ways, they are different environments. Anyway, I don’t know about America. What I don’t know about America is that my English is not perfect, I have to really make an effort, but I’m not trying to do it. ((laughter)). And I don’t have any significant networks with Americans. Of course, I am sending my kids to school, but my main networks are with Koreans. I’ve never thought that I am American.

It appears that Minji’s way of linking languages, places, and identities is imbued with “discourses of individualism, meritocracy, and achievement” in which languages and literacies are forms of cultural capital (Bourdieu 243). According to Warriner, this discourse is “widely believed and argued that the user of English can, through effort and hard work, be transformed into a better form of human capital through increasing his/her formal or measurable competence in English” (495). Minji’s self-reported lack of ability to speak English is based on this neoliberal ideology in which language proficiency is a form of cultural capital that individuals acquire through self-governance and tenacious effort. Although she owned her house, she was unable to make complaints against the HOA management’s acts that she found unreasonable, such as their alleged misappropriations of

the HOA funds and delayed debris removal as a consequence, and the HOA's unclear communication with the residents. Instead, she just had to "wait" for almost one year to be informed about the reconstruction plan and had not been able to intervene in ongoing conversations because language services and culture-sensitive support were not available. As shown in the excerpt above, she frequently laughed bitterly whenever she felt this irony herself between her legal ownership of property and self-reported inability to express her ideas. She had a deep insight, however, that a series of challenges cannot be purely attributed to a deficit in the English language, but cultural differences should be taken into account as well ("We don't know much about American systems").

For her, cultural differences brought about a more significant consequence when she went through the FEMA application processes. During her initial FEMA registration, she misreported her insurance information. On the FEMA webpage, the status of the insurance of the owner is required. Although she had home insurance, she did not have flood insurance and thus did not have coverage for damages from floods. However, she checked the box "Yes," and this led to the denial of FEMA assistance, which prioritizes non-insured or underinsured residents. She described her situation, "My English is not working, my phone English is not working either. I applied for FEMA assistance through the Internet. I knew that we didn't have a flood insurance plan, but I don't know why I checked "Yes" there." At the time of the first interview, I was not so sure if it was her mistake, a typo due to distractions or other factors, or a misunderstanding at the lexical or semantic level, or due to cultural differences, that is, culturally specific knowledge about insurance terminology. She vaguely mentioned that she was still unclear why she marked "Yes." Due to this misrepresentation, she lost the opportunity to acquire monetary assistance, which she reported to be about

\$7,000 or \$8,000. In this remark, it appeared that she did not want to describe the process of the form in detail. In the first interview, to talk about the missed opportunity would be very distressful, and I saved follow-up questions for later and focused more on listening to her stories and took the direction in which she led. Thus, I was not aware of how much she tried to modify her application writing and did not ask additional questions about the FEMA application as I understood that this experience had triggered significant anxiety and bodily responses such as the chronic indigestion she reported. I did not want her to feel pressured or uncomfortable with specific questions. In the second interview, I carefully asked what happened after this misrepresentation on the FEMA application form.

Within this situation, she leveraged information and resources from neighboring migrants, mostly Korean-speaking residents, who had been flooded like her. Right after the flood, they made three or four physical visits as a group to the Disaster Recovery Center of FEMA to ask about their application and modification processes. She explained that they helped each other while waiting often more than four to six hours, to speak about their situations in English, and to collaboratively translate and contextualize responses that FEMA officials provided. In October in 2017, she visited the session held for Hurricane Harvey victims at an elementary school, in which FEMA officials presented a debriefing about their processes. This collaboration was often extended to instant chatting application platforms. When I asked about any language service she found in Harvey-related events or digital applications, she explained, “Many people translated those materials for others. Actually, the language service [on the FEMA website] didn’t help.” In the second interview, she recalled that many migrants who had more experience and knowledge about this type of government assistance system helped others by sharing translated explanations in a group chat room.

After they got responses, Minji and her neighbors often discussed and contextualized information for their individual cases, such as home ownership (homeowners or renters) and visa status (permanent residence card holders or non-permanent residence card holders) and shared their experiences in Korean by writing messages on the instant message application.

What I realized from her description is that she leveraged diverse resources and skills from webpages, phone calls, and in-person meetings with FEMA officials. But the FEMA official whom she met at the Disaster Recovery Center could not correct it as he or she claimed that it was not a typo such as a mistake in an address or email address but a complicated issue that could not be corrected with a PDA (Personal Digital Assistant) device. The officer directed her to the webpages where she could upload a letter from the insurance company proving that she did not have the flood coverage. Provided with this information, Minji asked her insurance company to send her the letter of evidence showing that she was not insured. However, it took another two months. She wrote an email and called the contact number, but these methods did not work. Using her tacit knowledge, she identified a specific name of a representative for the insurance company through its website and emailed him. For two months, between September and October 2017, while managing Harvey-related issues and parenting her children in a displaced location, she invested time trying to get that letter from her home insurance company and finally ended up uploading the letter to the FEMA page after making multiple emails and phone calls to the insurance company. However, although she uploaded the letter, she was not informed about any further steps. Again, she needed to communicate with FEMA officials.

In the interview, Minji told me that she went to a Small Business Administration (SBA) disaster center and met with a FEMA official. However, when she explained to them

that she had uploaded her insurance letter to the FEMA system, the official said that it was too late, and she had better go to the loan process. In the interview, she said that she was unsure whether or not she understood what the official said. Minji and her husband were encouraged by the official to start the loan application process instead of correcting the initial FEMA application. Given the time constraints, she was not able to ask more questions to clarify what the FEMA official said. They had already waited for more than four hours and felt pressured to leave rather than to take more time as they knew that other flood-affected people had been waiting after them. She did not attribute her withdrawal from the modification process to that FEMA official, but to herself and her husband. In the interview, she explained to me, “He [her husband] said, ‘We will not starve if we do not get this money. We did our best. So, let’s stop here.’” After this visit to the SBA office, she decided not to hold on to the hope of modification and gave up a significant amount of FEMA assistance, theoretically possible but practically impossible to obtain.

In the interview, she added that she was not fully able to understand what the official was saying. She was accompanied by her husband, but she added in a light tone, “He is not good at English either as he is working at a company run by Koreans.” Both of them struggled with institutional literacy, particularly spontaneous verbal communication in which they tried to understand the official’s explanations about bureaucratic and administrative procedures regarding high-stakes literate activities such as an application for benefits, modification of her submission, purchasing insurance plans to meet the requirements of the SBA, and increasing the maximum amount of the loan. While she showed confidence in writing electronic letters and other written communications, Minji confided her procrastination when it came to a phone call. Overall, beyond the long waiting period and

unresponsive procedures of the government agencies and insurance companies, she often attributed this failure to her lack of English proficiency. I can see that FEMA's denial of financial assistance (up to \$35,000 as described in their website), which would enable her to repair the house and compensate for the damage she had undergone due to the flood, significantly affected her disposition and agency in the following procedures. She visited the FEMA offices more than three times. In spite of these efforts, she was not able to modify her FEMA application. This irreversible error in the insurance description resulted in no support from FEMA for her home repair.

It is important to note that Minji often commented that she was not fully agentic in this process because of her "lack of English proficiency." What she encountered in the application process was not just the lack of language service. It was the monolingual paradigm of the FEMA application, which did not fully include translation or interpretation services. This monolingual paradigm was also reflected in the fact that the FEMA websites and application apps were not equipped with culturally sensitive materials and contextual information such as separate information about what they meant by "home insurance" or "flood insurance" for those who are not familiar with the boundary of home insurance, the geographical specificity of a flood-prone place and its soil, and, more importantly, flood insurance systems. In one of the interviews, she shuttled between self-deprecation (the low level of English proficiency) and self-defense (her outgoing disposition and social skills). At the end of the interview, Minji mentioned that she usually added one or two sentences about her use of English in her official emails or documents: "I am not good at English." Her self-deprecation suggested in her interview was triangulated with her written artifact that she shared with me. Indeed, at the end of her email to the SBA official, she added,

Hello,

I called you but you didn't get the phone.

I want to confirm about undisbursed balance.

For get that fund, I need summit Flood Insurance and Hazard Insurance, right? These are the only things? Please confirm for me.

I am not good at English, email communication is more easy for me. If you are fine, please email me. If not I will try by phone.

XXX XXX [her husband's name]

This inquiry email requesting that the loan be maximized beyond the limited amount was sent on February 26 in 2018 was responded to on April 13 in 2018, more than one and a half months later. In this email, she reveals that she is more comfortable with a specific mode of communication, written rather than verbal. She notes that she prefers written communication as she can navigate materials with more flexibility and has room for extra time and space compared to verbal communication, which requires spontaneous and extemporaneous responses. At the end of her email, she adds her husband's name. As a ghostwriter, she was representing her husband's agency on written documents as her husband was the main applicant. At face value, it seems that she acknowledges in this email her lack of English proficiency by revealing her ability to use English. Although she seemingly undervalues her communicative abilities, her response is a translingual, agentive, and rescaling practice as she attempts to reposition herself not as a mere recipient in a one-direction communication, but as an equal interlocutor. By adding the sentence indicating her preferred mode of communication, she attempted to cultivate a reciprocal meaning-making process.

However, after all, Minji gave up regaining her missed opportunities for FEMA

assistance for underinsured families and her original plan of increasing the loan maximum beyond \$20,000, which was the maximum amount of the loan they prescribed and was not enough to reconstruct her totally damaged house. She ended up with the designated amount after she realized that they required more evidence of insurance coverage which could start another long bureaucratic process. Although she contacted with other insurance plans following their instructions, the SBA officials' responses via email were too slow for her to accommodate the start date for her reconstruction. For this reason, she decided to give up this plan as well.

For Minji, translocal literate ecologies, as noted with other participants (in Jiyun's case, "here" and "there"), are multilayered and contradicting. She was often mixed with agentive negotiations and self-deprecation, with positive dispositions and frustrations, with crying and bitter laughter, due to a series of denials and lack of responses or delayed responses from the government agencies. It should be noted that although she did not obtain as much monetary compensation as was needed for her renovation, including modification of her FEMA application and an increase in the SBA loan, Minji navigated these whole processes through her own creative agency and strategies, even often ghostwriting. Gathering information from informal literacy, such as instant chat rooms, she maximized her understanding of this disaster recovery process at the level of federal, state, and municipal agencies, which in turn did not fully offer more direct and practical help as they had promised. She said communication with FEMA was acceptable, but it seemed that she intentionally or unintentionally preferred to forget her experiences in their systems and processes and tried to seal them as past things by distancing herself from the whole procedure. In the first and second interviews, she repeated a qualifier, "I can't remember

but.” This qualification ironically presents her self-consciousness about her disaster literacy and more importantly her own agency of getting a sense of closure, which was not fully doable in prolonged bureaucratic procedures and frequent distress following the reconstruction period with contractors.

Minji’s indication of forgetfulness echoes what Jordan refers to as “affordances and limits of human embodiment as well as bodies’ immersion in not only social but physical environs that can please, annoy, encourage, or distract” (376). In the middle of the first interview, she showed me photos that she took when she entered her house ten days after the water had drained. She briefly said, “I expected that a lot of it would be rotten, but when I actually looked at it, I felt a bit anyway (.) unpleasant.” Her sofa had green mold circles on it and the water was mixed with dark sewage in her photos. Pointing to her photo, she said, “If the dam had not been released, the water could have drained right away and would not have stayed for about nine or ten days.” Indeed, in her material ecologies, this disastrous event was a peculiar thing or “big thing” (*byeolil*) although she tried to scale down its intensity. It demonstrates not only her embodied reactions to the physical reality and sensorial semiotics including the water and mold but also her accumulated distress after experiencing bureaucratic materiality. The distress came from the material constraints in which the reality had not been worsened and her voice had not been heard although she enacted tactics in multilayered literate ecologies. The sewage water from the bayous stayed for many days. She hardly had a clue that this water would stay for a long time and thus she would lose every item in her one-story condominium, including her family photo albums.

Dahee's Family: "I Cannot But Follow What They Decided."

While Minji's stories show how withdrawal is used as a rhetorical scaling strategy, the case of Dahee and her husband instantiates how transnational-multilingual survivors are involved in a more multilayered rhetorical scaling in the post-disaster process, which is interlocked with material apparatuses governing immigration policies and textual mobility.

Mostly, Dahee and her husband seemed to build a mature understanding that communication is not a static process but a less-bounded negotiation process through calibrating the rhetorical scale. For Dahee, a sense of translocal literate and material ecologies is more multilayered and complex. Like Minji, she migrated from South Korea to the US in 2013 as a dependent of her husband, who relocated to Houston for his new job as a researcher. Dahee was a former pre-K teacher at a public institution, but she quit her job in Korea because of her husband's career plan and its ensuing relocation. After living for three years in an apartment unit located in one of the downtown areas, she moved to Greenville, mainly because of a competitive school for her child. But for her, there is another reason for this relocation: she sought linguistic affordance and ethnic enclaves located in Greenville as she was self-reportedly not comfortable with using English. She had been involved in faith-based supportive groups organized by her Korean protestant church. This church group, which has weekly meetings, is composed of several families and its members played a role as information, language, culture, and communication brokers and sometimes as literacy sponsors (Brandt) for newly arrived migrants. Dahee's faith-based group, whose members are mostly Koreans immigrants, shaped pseudo kinship-based cultural groups under a strong evangelical leadership. Interviewing with her, I found that the group members often helped newcomers to settle in America and reduced emotional distress by providing kinship for each

other. This group also helped newcomers become equipped with a geographical sense and offered contextualized local information about Houston. Based on my observation of this group to which Dahee and other participants belonged, senior members in this Korean protestant church group often helped newly arrived migrants to find housing, search for good schools, and navigate information about retail shops run by Koreans.

In her interview, however, Dahee had mixed feeling about this relationship. Like other members in church group, she was helped by this group when she bought her first house in Greenville. The reality is that one month after she bought the house through a realtor, who was one of the church group members, Hurricane Harvey hit and her condominium was flooded. At that time, their permanent resident card application was under review. Unlike Minji who was a permanent resident card holder, Dahee and her husband, Jaewoo, were more conscious of their legal visa status in the US. Although they had temporary worker visas, they seemed to feel more insecure. Jaewoo did not attribute the denial of financial aid from FEMA to their lack of linguistic agency. Jaewoo said that although they followed every instruction in application writing, they almost always failed to get financial support.

Dahee's Language Ideologies

When I asked about her English learning experiences, she told me about her experiences in church-based ESL courses. Because Dahee got mostly good scores when she took placement tests, she was often assigned to the advanced levels. However, she explained that she had struggles in the ESL classroom:

I was always good at taking tests. You know, foreigners [*oegukaedeul*, literally meaning “foreigners” and in this context any non-Koreans] are not good at this

[gesturing writing positions with one hand] but good at that [gesturing speaking while patting one hand on her lip]. They do speak whether it [speaking] works or not. [...] There [in the ESL classroom], I did not talk with foreigners [*oegukaedeul*], you know, they also came to the class simply because their English was not good. I couldn't understand the accent and pronunciation of students from each different country. When we were assigned to have conversations in small groups, for example, a Japanese student couldn't understand me, a European student couldn't understand me, and I couldn't understand their words, which were all strange to me.

In these excerpts, an important differentiation emerged in how Dahee used the term for other members in her ESL course. She uses the terms *oegukaedeul* (literally equivalent term meaning foreigner) to refer to non-Koreans who speak languages other than English. In this excerpt, she scaled them in a hierarchical structure. While she scaled up native English-speaking teachers and local English-speaking residents at the higher level of the linguistic hierarchy because they spoke privileged varieties of English and also understood other multilinguals' varieties of English, she scaled down other multilinguals or English language learners' varieties to the middle or lower level. She located her own variety of English that reflects the accent and pronunciation of a native Korean speaking immigrant at the lower scale. Her perception of her own variety of English also echoes what Blommaert terms *truncated multilingual repertoires*, which refers to the "considerable differences" in "the level of development of particular resources" (Blommaert 106). While explaining globalization processes, Blommaert explains that "truncated complexes of resources often derived from a variety of languages" and "parts of these multilingual repertoires will be fairly well developed, while others exist only at a very basic level" (Blommaert, *Sociolinguistics*

106). Her truncated multilingual repertoires have not been recognized by placement tests in faith-based ESL courses. As Blommaert notes, even within one language, repertoires across different modalities (reading, listening, speaking, and writing) should be heeded. As Blommaert dispels the possible negative connotation of the term truncated, that specific language still belongs to a person although a certain repertoire is not developed as much as other repertoires (106).

Although the level of her speaking and listening competencies are lower than her competencies for reading or writing, she clearly understood that her repertoires have “considerable differences” across modalities. Indeed, she and her ESL classmates navigated differences in speaking the same word through intercultural interactions. She explained:

One student said, jhat, blah-blah, jhat, blah-blah, I was totally unable to catch it. So, I said, “Sorry, can you spell it out?” Then I realized it was that. Japanese people say *that* like jhat. When I pronounce it as that, they also couldn’t catch it. But *woneomindeul* [native English speakers] are able to understand our pronunciations by rough guessing. It might not be perfectly correct, though. But students from all other countries are not able to understand each other. I was assigned to the most advanced level, a conversation class because my scores were good. But my speaking skills are really bad. Koreans are good at testing. You know, it is all a relative thing, so I was there, but I stopped attending classes after having a few class meetings.

Her experiences in the ESL classes suggested that she developed a sense of what Lorimer Leonard calls “rhetorical attunement,” defined as “an ear for, or a tuning toward, difference or multiplicity...a literate understanding that assumes multiplicity and invites the negotiation of meaning across difference” (“Multilingual Writing” 228) in the linguistically diverse

environment. As mentioned in her interview, people's different pronunciations of the word "that" were negotiated and people from different linguistic backgrounds came to understand the differences. However, this experience did not seem to motivate her to learn English further. Rather, her experiences show how this rhetorical attunement entails a process of emotional investment and multiple strategies such as spelling out words.

In the first interview with her, Dahee narrated multiple examples in which she was not well understood in everyday speaking practices due to her self-reported Korean-accented English:

In the first year, I was not scared. I went to the apartment office, and said, "light, change, light, change." But I felt bad in front of them. Basically, my personality is not bashful. But when I went to a grocery store, I felt bad again [...] Before I came to the US, I never had chances to be exposed to English. I thought once I come here, my English would be better [...] I don't know English very well, I use short sentences. I said to myself, why don't they understand my words? Even when I articulated a short word like water, they don't understand it. At the supermarket, I was not able to come up with even a simple word like *binukkwak* [soap dish in Korean] in English. So I looked up the word and said dish soap, dish soap [meaning "soap dish" in her words]. So, I described dish soap with my hands by making gestures. But the staff couldn't understand it. So, he called other people and several people came to surround me. I repeated my gestures, saying dish soap, dish soap [making a rectangle with her index fingers to refer to "soap dish"]. Then, I started feeling very bad about myself, and was reminded of the idea deep in my mind that I am not good at English.

In this excerpt, she explained how much she leveraged multiliterate semiotic resources, such as paralinguistic gestures describing “soap dish” and repeated linguistic components “dish” and “soap.” However, her multiliterate communication often did not work and was not acknowledged by others. Self-reportedly, she often felt ashamed for using gestures and became more attentive to how she would look to others. Her interview shows that in her literate scale, her Korean repertoires are located at the lower level while local English users’ repertoires are located at the higher level. It also suggests that it was not easy for her to jump scales. In other words, to move to upper scales of the value-laden order in the linguistic norm did not seem possible in her literate ecologies in which she did not have literacy sponsors and lived with people who were not attuned enough to her repertoires.

On the contrary, her husband, Jaewoo, who joined the second interview with Dahee, shows a different approach to scales. At that time, he had worked for four years as a temporary worker for a research institution. In this group interview, Jaewoo explains:

Jaewoo: Originally, I wrote everything beforehand for the lab meeting. On the PowerPoint slides, I wrote every script, how many hours I did treatment, what other things went on. My boss was really generous about English. He said that it is okay if you do not feel comfortable with English. He just said, Do your stuff [science research studies]. At the beginning, I spoke like I was writing. So, I was often awkward. But I came to realize that it is okay to say something in short phrases.

Soyeon: What do you mean by speaking like writing?

Dahee: You know, in Korean, if we say *Anyeong hasipnika* [honorific form of *Anyeong haseyo* (hi)], it sounds like reading a textbook.

Jaewoo: [before Dahee finishes, he starts to give his examples] Let’s say, how long

have you worked here? Then, previously I used to say, “It’s been three years since I came here” like this. But now, I would just say, “Three years.” Before, I thought it was not good if I spoke like this. Then, the other might ask, “How do you feel about working in this lab?” or “What are you working on?” I used to say, “Focusing on metabolism...” But now I just say, “Cancer.” Then the guy will ask me, “What metabolism?” If he wants to know more, he will keep asking. In the first few years, I wanted to explain everything from the beginning to the end. Then, in the middle of speaking, I always ended up saying, “Ah.... Sorry....” [wrapping his head with his hands and then shaking his head in a witty exaggeration]. I thought that I should speak full sentences like that. Then, you will be distancing yourself [from a more conversational style].

Dahee: ((laughter)) I am fine, thank you, and you? [mimicking a reading-aloud-tone of the English textbook excerpt] ((laughter))

In this excerpt, Jaewoo showed a stark difference from his wife in using English. He suggested that he gained communicative repertoires (Rymes) or spatial repertoires (Pennycook and Ostuji) with colleagues in his workplace. While describing imaginary situations as an example, he showed that he became more adaptive to conversational and spontaneous communications after he realized that transferring written communication styles in English would not efficiently serve the dialog process. Given the linguistically and culturally diverse environment in his workplace in which the majority of colleagues are Chinese-speaking professionals, he seemed to perform translingual practices across different registers and contexts and take different approaches to the norm beyond monolingual approaches. Rather than jump scaling or rescaling the linguistic hierarchy, his interview

shows that he understood how to make a different way of speaking by bypassing the linguistic norm (“But now I just say, “Cancer.”) and thus take initiative in communicating with other interlocutors from different language backgrounds or monolingual English-speaking people. Jaewoo’s explanation articulates how transnational-multilinguals, particularly skilled professionals, develop diverse rhetorical strategies other than jump scaling or rescaling to shape flexible spaces in spoken dialog in his workplaces and even official interview conversations.

Rhetorical Scaling and the Deportation Regime

Jaewoo’s ability to shape negotiable spaces in his workspaces overlapped with what he described about the Harvey recovery processes and, particularly, the FEMA application process. In the first interview, Dahee described her perception of the disaster recovery procedure as disenfranchised due to her lack of English proficiency. When I finished the first interview with Dahee, I thought Dahee’s family had encountered challenges due to their self-reported lack of English proficiency and thus, they did not make any appeal to the government agency. Like Minji, Dahee said that she couldn’t voice her complaints against the HOA: “I have complaints and there was something wrong. The culture is different. My English is like that, not being able to talk to them directly is a problem, but another thing is that I cannot go deeper with details. I ended up just following their directions. I know that people here [America] make the case with a smile, with a natural tone, don’t they?” In the first interview, she demonstrated her understanding of contextual knowledge about the way Americans make an argument, which should be based on reason with clear logic and composed attitudes, such as a “smiling face” and “a natural tone” instead of an emotion-laden argument. Here, she places a reason-based argument in English at the higher scale but

she situates an emotion-laden argument in Korean with anger and complaints. She seemed to rely on her husband particularly for bureaucratic literacy-related communication including disaster literacy. Overall, it appeared that she was disenfranchised in the disaster recovery process in terms of communication.

However, in the second interview with him, unlike Dahee, Jaewoo expressed to me how he reacted agentively to the bureaucratic demands in order to get assistance from government agencies. He said that he studied their requirements and information from the government webpages often by “staying up the whole night,” finished the applications early, and taught this process to other co-national neighbors. Jaewoo’s teaching entailed translating information from the government websites, correctly completing information, and explaining expected risks or glitches in this process to neighbors, who were mostly multilinguals and had less knowledge about the FEMA agency.

Despite his confidence in completing the application processes, Jaewoo applied for Harvey-related assistance opportunities, including completing FEMA applications and applying for SBA loans, but none of them was accepted. Both Dahee and Jaewoo said that the denials from FEMA and SBA were not due to the reason given in the denial letters or their lack of English proficiency in the application process, but probably due to their legal status. The officials were extremely considerate when they expanded on the denial results by adding hedging qualifiers, but they implied that whatever they did, the results would be the same due to their status as “alien” residents. On the FEMA website, it is stipulated that they do not ask applicants for their legal status and “qualified aliens” are also eligible to apply for the assistance. Given this stipulation, Jaewoo studied a thirty-page document about subcategories of “qualified aliens.” He was hopeful, but the application was denied. In

FEMA's denial letter that he showed me, it reads, "Ineligible-Insufficient Documents or No Documents Submitted: FEMA has determined you are not eligible [...] because you did not provide the required documents explained in a previous letter."

Jaewoo had to consider his legal status and go through a significant amount of distress when he thought about applying for the Disaster Supplemental Nutrition Assistance Program (D-SNAP), which was provided for Harvey-affected survivors regardless of their incomes to reduce their financial burden. However, they decided not to apply for this assistance. Dahee said,

At that time, we were not sure about how our permanent resident card application would go. What if we get food stamps and it makes a problem? It would be better not to receive them [D-SNAP]. Once this administration started, every procedure became being detailed.

Jaewoo quickly added, "If the [US Citizenship and Immigration Services (USCIS)] officer makes it a problem, it will be the end of everything." They were concerned about the unpredictable bureaucratic process; they worried that these food stamps for disaster survivors might be considered a public charge and thus affect the result of their permanent residence application. This concern echoes Dahee's emotions and affect in the shifting political climate and their status as "deportable members" under the "deportation regime" (De Genova 2) after the new administration began. By "being detailed," she meant that non-citizens were under more pressure and more micro-level surveillance.

Although this assistance program was intended to support low-income, more at-risk survivors, the story of Dahee and Jaewoo does demonstrate that material conditions, surveillance, and immigration policies affected their recovery process and rhetorical scaling

practices in terms of emotional and affective dimensions. They felt more threatened after the new administration and often the FEMA officers and other government agencies did not consider their legal status in the process. It might be an irony that FEMA (disaster control) and USCIS (border control) are under the same umbrella of Homeland Security. In reality, as Jaewoo claims, FEMA officials were not familiar with the cases of non-citizens and the wide range of visa statuses shown in their interview excerpts. Jaewoo said, “Although they [FEMA agents] put in my social security number, it didn’t work in the system.” This anecdote reveals that he acutely recognizes the technological aspects of the bureaucratic system, in which specific officials are not responsible for potential problems, but it is the interface of the system or technology itself that is responsible. In the interview, he said that the official was very nice to him, told him to make a manual application, and took time to listen to his story. But the applications he made mostly ended up rejected. His family had to struggle not only with the variability of the environmental disaster but also suffered from the uncertainty of the bureaucratic systems and a larger financial burden as they were isolated from these benefits. Their consideration before filling out Harvey-related assistance forms reflect their material ecologies in which immigration policies and disaster recovery technologies are intricately interlocked.

Their financial applications and communications with government agencies demonstrate that, for migrant survivors, disaster literacy entails rhetorical sensitivity and cultural understanding beyond technical translation. For example, Dahee and Jaewoo said that they did not check the box of the question of “Food?” (see Appendix B, Question 14C) on the FEMA form because they thought that in the displaced house, their family members were offered meals by the host, one of her fellow church members, who had provided

support that was close to that of kin relations. Their understanding of this question also suggests a translocal sense and knowledge. This food-sharing culture is not unique, as it exists in other cultures. However, in the post-disaster context of displaced families' adjustment phases, "the family unity stage," in which people are very strongly likely to stay together, reinforced their cultural bonds and offered "mutual survival" (Peek et al. 1377). In the post-Harvey situation, the boundaries between family units often became blurry. Particularly, Korean-speaking families strengthened their bond through food because they knew each other and mostly they did not have any relatives or direct family relations nearby. In this process, food played a critical role as an emotional and social symbol of cultural identity. Even in the aftermath of Harvey, it was common that Korean migrant neighbors provided survivors not only with shelter but also with hot meals. Food sharing was part of this bond construction right after the natural disaster. After several months, Dahee and Jaewoo realized that other Harvey-affected survivors had checked the question about "food" in the FEMA application form, as food was insecure in their situations due to restricted access to their original homes. They came to know that unlike them, those survivors received financial support for food. Dahee and Jaewoo were literate enough to understand the meaning of the question, but they had less cultural and tacit knowledge about how to respond to that type of question.

It should be noted that Dahee and Jaewoo did not consider applying for other benefit programs. They did not apply for other assistance programs and intended to prioritize the ongoing process of permanent residence by doing rhetorical scaling. The fear of failure in completing the permanent residence application process and the possibility of deportation orders from the USCIS significantly affected their post-disaster approach. As shown above,

there are no explicit descriptions for them beyond the words *qualified aliens*. Like Minji, who withdrew herself from the process to keep her agency in a sense of closure and stopped appealing to FEMA to modify her family's application and reconsider their case, Dahee and Jaewoo did rhetorical scaling by retreating from continuing the application process and disinvolving themselves from denial letters from FEMA, SBA, and related agencies. Their compliance was not based on their perception that they were unable to use privileged varieties of English or imposed norms. The literate activities of Dahee and Jaewoo seemed to be far from rescaling practices in which they would negotiate norms and discourses of power such as institutional regulations that were often based on monolingual ideologies. Rather, their decision was based on a rhetorical and material understanding that their application process for disaster assistance and potential status as benefit recipients might affect their residence application process, which was much more prioritized to them. As shown in their decision process above, a rather seemingly passive attitude of Dahee's family to the disaster assistance programs can be explained by nuanced scalar perspectives, that is, rhetorical scaling, because the value of their literate resources are contingent on power differentials (Lorimer Leonard, *Writing on the Move*) and textual regulations of local, state, and federal agencies (Vieira, *American*).

In the first interview, Dahee explained about her online business, in which she seemed to secure her agency out of the domestic sphere and out of the monolingual literacy regime. In the post-Harvey ecology, she seemed to have had fewer agentic experiences in addressing disaster aids. However, in this online business, she could use her prior knowledge about retail items and consumers' trends beyond borders and digital platforms which enable her to use translocal networks across the physical borders. When she introduced her business,

her tone was more active and engaged, which made a stark contrast to her way of speaking about the English language and the post-Harvey process. When I asked her for a follow-up interview later at the end of the first interview, she jokingly said, “Sure, I am a CEO, so I’m flexible.”

Hajun’s Family: “They, FEMA, Don’t Believe in People.”

Unlike Dahee and Jaewoo, Harvey hit Hajun’s home right after he secured legal status as a permanent resident. Also, unlike the women participants, Hajun has had more opportunities to work with multilingual professionals and is familiar with environmental disasters as his field of engineering has frequently been exposed to environmental and industrial risks such as oil spills, gas leaks, and plant explosions.

Hajun’s Language Ideologies

As compared to Minji, Dahee, and Jaewoo, Hajun has a wider range of multilingual repertoires. In fact, Hajun was exposed to conversational English before he started learning academic English in his middle school. In his literacy history interview, he explained that he became interested in speaking English when a Mormon from the US, who was able to speak Korean, knocked on the door of his house. During his middle school years, after a Mormon missionary visited his home in Pusan in Korea, he was introduced to local church people and other English-speaking missionaries.

Due to his engineering career, he also had experience in coping with various English varieties. While living in the UK with his family as a temporary worker, Hajun learned a British variety of English. He stated, “They [British people] use different words, they say ‘tube,’ not ‘subway.’ It is more similar to the German language, but the accent is different. I was really bothered by that accent at the beginning. When I managed to adapt myself to this

accent, I had to leave the UK again.” Describing his migrant trajectory, he often comparatively scaled British varieties and North American varieties of English, complaining about the attitude of speaking American varieties:

There [in Britain], people had more respect, sensible attitudes. Here, people have no sensible attitude toward seniors or people of color or minorities. Young people had no respect toward me, a senior engineer. They speak back right away if they have different ideas. But although people here have no respect, they don’t seem to discriminate among people. People here are very careful not to exhibit discrimination.

Here, he showed his rhetorical sensitivity in which he differentiates varieties of English and his uptake of those varieties and cultural dispositions. His multilingual sensibility appears when he described that his ability to speak the basic Spanish language, acquired while living in Peru, was beneficial in working with his El Salvadorian construction workers. He complained that even units of measure are all different: “We [Koreans] use the measurement that Napoleon made. Japanese do too. That is the trend, what we call SI. But the US only uses different measurement units. So, I need to change all units, which is difficult.” But his awareness of varieties of languages, registers, and measuring systems presents his rhetorical attunement abilities. He further shows the level of his rhetorical sensitivity ranging from nation-state scales to local scales:

Have you ever heard the term “boot hack”? It means something people give away in an unofficial and stealthy way. People here use a lot of local, southern local words, Texan southern local words. They don’t use this dialect in written documents, but use it a lot in conference meetings. We couldn’t catch it at the beginning. If we explain

it in our terms, it will be really complicated and not sound natural. Ah, it is not an officially given word, but one that came from one's social network. American English has a lot of these kinds of idioms.

In this excerpt, he scaled his repertoires not only at the level of languages but also at the level of dialects and registers. His understanding of informal dialects and registers shows his rhetorical awareness of polycentric norms and negotiable meaning-making processes of (non)-linguistic resources and repertoires. Furthermore, he does not downscale the Korean language but rescales it given its scarcity in the context of the US. Particularly in parenting, he regards the Korean language as an asset rather than devaluing it as a language at the lower scale. He approaches languages, dialects, and repertoires as assets and transmits this translocal language ideology to his children:

My children can understand Korean, but not really thoroughly. At home, I never respond to my children if they speak in English. I tell my children, this is an opportunity, if you don't know the Korean language, you will not do any Korea-related business. Your roots are in Korea. Speaking and writing are okay. They can express their ideas in Korean. [...] If they don't know their roots, they will live as foreigners forever. They should know their roots, to be connected. They speak Korean at home, which I think is very natural. Now I let them have Spanish private tutoring sessions. If you want to hire someone, you should learn Spanish. Then you can control Latin languages.

This rhetorical awareness of his language repertoires seemed to help him deploy and assemble different resources to navigate the recovery process. He sought help from Korean protestant church members via informal literacies and knowledge in Korean, which was used

for his FEMA applications, and from business English skills and a wide range of genre repertoires in his workplaces, genre repertoires which ranged from “local Texan English” to oral reports, to formal visual literacies such as charts and tables, to conference meetings and informal conversations.

This rhetorical awareness of genre repertoires and rhetorical attunement helped him to navigate the recovery process quickly by equipping him with rhetorical scales rather than fixing linguistic norms. In his translocal material ecologies, polycentric norms are prevalent equally and different resources are leveraged for specific tasks, like applying for FEMA and SBA assistance. Unlike Dahee’s family, Hajun’s case illustrates how dispositions toward assembling semiotic resources across modalities and resisters and rescaling practices affect the disaster recovery process.

For him, the flood of his house was not expected at all. In 2016, one year after he moved to Houston, his house was flooded, so he moved to one of the neighboring areas which had no record of flooding. However, in 2017, his new house was flooded and the flood water remained for nine days, and was presumably due to the reservoir release. His family was rescued by a boat in the early morning of August 27, and was displaced for about eight months. The family lived in the house of one of his church members and then in a temporary apartment unit. In his interview, he described the process of settling in his neighborhood:

For the first house, I didn’t know very much about the geographical information here, so I went to a Korean American realtor, got some recommendations, and selected one of them. In 2016, it rained heavily too, and my garage was flooded. So, I moved to another house. But this time Harvey hit my house. ((bitter laughter)). The first flood, my garage was flooded. At that time, my house itself was okay, but again

one year later, Hurricane Harvey hit and my house was entirely flooded.

Hajun's family liked the new house at the beginning because its proximity to a creek provided natural walk paths and green areas for the family. This house purchasing process was helped by members of ethnicity- and church-based kin groups. When I asked how he found a rescue boat, Hajun said:

It was my neighbor. He did a wonderful job. He did it by himself although he was not supported by government authorities. One of the local neighbors got a boat and came to our house, we all packed our bag individually (.) it was not a dream or movie. Isn't it funny? The previous street where we lived was okay during Harvey this time. ((bitter laughter))

Hajun leveraged his faith-based groups and local long-term residents' informal knowledge and safely evacuated his family. However, the overall intensity of the feeling or affect was hard to articulate. When asked how he felt about the process, he said, "I was too busy to feel something." As I explain in the next section, he had to deal with bureaucratic literacy practices within a designated timeline and arrange for reconstruction plans.

Rescaling Practices and Bureaucratic Literacies

As shown with other participants, what drained Hajun's energy most was the FEMA application process. He explained his experiences in filling out the required online form by saying, "It took so many hours, took so long, and was not easy to save. Once you put it, it is not reversible." At the moment of the first interview, Hajun explained in detail his experience in writing up the FEMA application and the onerous modification process. As a skilled professional, he uses business English in his workplace, which includes writing emails and doing oral reports in English. To fill out the FEMA form, however, did not work smoothly for

him. When asked about the application process, he opened a yellow paper envelope and brought out a six-page document in which he identified three types of data: a) a list of newly purchased items after Harvey including furniture and appliances in English (the columns are named “item/vendor/price” in English); b) a list of lost/damaged property (the columns are named “the damaged items, the number of the items, the purchase date, price, and etc.” in Korean) ; c) a list of the important events that signaled high-stakes literacy practices based on his memory, such as visits to Disaster Recovery Centers, FEMA officials, SBA, or other government agencies. It starts on August 24, the date when his family was first evacuated, and contains brief bullet point descriptions about the flood history, such as “removing” walls and floors, contacting construction workers, purchasing new items, attending church meetings, and visiting government agencies and insurance companies; and it ends on November 14, 2018. His logs had multiple entries with important dates and events: “9/13/2019 Visit FEMA, SBA, IRS at George Brown Center Downtown,” “10/6/2017 Upload appeal documents at FEMA site again, fax appeal document to FEMA again, removing floor alone 3 rows,” and so forth. He explained that this journal writing was intended to target a very specific audience and was executed to respond to an urgent exigency:

FEMA asked me for lots of documents. I didn’t want to bother myself again and again. So, I arranged them, it is based on the date. FEMA was (a sigh) [sharing with me a copy of the document]. Its website was (..) I didn’t know it well, but here, I’ve heard, Korean immigrants had a big hurricane about eight or ten years ago [alluding to Hurricane Ike]. I’ve heard, at that time, lots of trees fell down, electronic poles were knocked down too. And people got some money from FEMA. People who had

those experiences talked about FEMA a lot. But this info was not based on correct memory, I just managed to collect their ideas about the FEMA application process, but they were not really correct. So, anyway, I went to the church event that provided explanations, but the [FEMA] website was horrible.

This excerpt implied that he complied with the requirements of government agencies, but at the same time, he wanted to speak back to this requirement through this journal. By charting his literacy practices and events, he captured the first three months of his life in the aftermath of Harvey. When he bought the second house, he decided not to buy flood insurance and assured himself that it would be okay as his house was out of the flood zone, based on the history of the house, which showed no flood history although the house is close to the bayou.

I had no [flood] insurance. After it was constructed, it had had no floods since it was built. It had no flood record. The previous owner had no insurance, either. So, I bought that house. By the way, all residents who live in the Gulf Coast area seemed to have had those experiences, let's say, those who live in Mississippi, Alabama, well, Louisiana, all have had flood experiences at least once in their lifetime. They usually buy insurance for protection. In our neighborhood, several houses were insured. Other houses were not.

Although he had no insurance, he answered "yes" to the question about being insured. He made another typo in identifying the number of his family members. To modify these typos, he needed to call his insurance company. This involved waiting long hours to contact them via phone and to find fax machine numbers to send a letter to them and so forth. Like Minji, the question about insurance was a confusing area to Hajun as well, as it was not clear if it indicated home insurance or flood insurance. This new genre (FEMA application forms) and

its conventional rhetoric or discourses in questionnaires were not easy to translate and interpret, particularly in the post-disaster context. His interview suggested that he went through the same distress-laden process of modification as Minji. For both, the question asking whether they had insurance was not clear. In this genre-specific context (a flood disaster assistance form from FEMA), the term “insurance” probably means flood insurance as opposed to homeowners insurance that generally does not cover flooding. However, this question in a time-constrained setting cannot be properly answered by residents, particularly newly arrived migrants. His supplemental materials caused FEMA officials to reverse their previous decision and provide some amount of financial assistance for reconstruction.

Like other participants, he complied with FEMA, SBA, and other government agencies. However, he set up a new negotiable rhetorical scale even in high-stakes literacy practices with them, in which he flipped the hierarchy of linguistic norms. For example, he and his wife leveraged Spanish repertoires to better communicate with construction workers. Instead of privileging a standard variety of American English, he attended to other resources by breaking down hierarchical structures in his epistemological sphere. As shown in Minji’s and Dahee’s interviews, churches are the sites where disaster literacy has been generated, accumulated, and often transmitted through social gatherings or official events. In his interview, however, he put this information gathered from this cultural group on a lower scale (“They are not really correct.”) whereas he regarded localized information from one of his US-born local neighbors on a higher scale (“He said, it [the flood] would last longer than you think. So, I evacuated my family.”). This assemblage of multiple semiotic resources and repertoires played a significant role in his recovery process.

What makes his case different is that he showed a critical awareness of those

agencies, particularly the City of Houston, FEMA, and SBA. His literacy practices were compliant but resisting. He believed that his documentation had a strong resisting power and showed solid evidence for how FEMA assistance programs lacked a sensible modification process. He explained that technical and geolocation information was not shared very well with the public; the Addicks and Barker Reservoirs were commonly recognized as parks or plain green areas on local maps and signs. He explains, “Before Harvey, I didn’t know it. I just thought there may be canals. I didn’t know why people made reservoirs. Why, isn’t that the park? How can it be a reservoir? I didn’t know about it. After experiencing Harvey, I realized that there is something like that here.” By making tables and charts in his journal writing practices, he applied bureaucratic literacy practices to his observations and this transferred literate skill became a tool for him to resist the bureaucratic systems of FEMA. He transferred workplace literacies (documenting and writing a lab log) based on scientific epistemologies of disaster literacy. But still he painfully recalled his registration process, particularly the accidental typos and their ensuing modification procedures: “So later, I will appeal to FEMA, as their webpages are horrible. I will show them how many times I did make requests. My memory will fade. So, I made the documents.” Here, he prepared himself with “paper” in order to prove the inefficient interface design of FEMA application pages. To address bureaucratic red tape, he uses formal, practical, bureaucratic literacy itself. More interestingly, he became a bureaucratic agent for himself and adopted rigid formality as a tool of self-governance to resist FEMA’s literate regulations. Rather than being subject to bureaucratic demands, he becomes an agent himself by developing self-management systems. This is because he was well aware of its bureaucratic system: “They, FEMA, don’t believe in people.” He clearly understood that FEMA was not really interested in people;

rather, in his view, FEMA believed in technical correctness, written responses, and their own literate forms. Against this system, he attempted to use documentation as a tool.

To cope with this bureaucratic system, he also used informal literacy from his ethnicity groups and faith-based communities, but this informal literacy was filtered through rhetorical scaling. He attended the event held by his church, in which the experienced community members who got assistance from FEMA explained the application procedure and post-hurricane recovery process. The accumulated disaster literacy and bureaucratic literacies were generated, accumulated, and transmitted mainly through the church groups. In the first interview with him, Hajun said, “So, I learned the ways like this and that. Before, I learned by people’s hearsay [*guidongnyang*, meaning “begging for information or learning by ear” in Korean], just picking up what others say [*kadeora*, meaning “someone said,” a word used in indirect quotation clauses, in his home dialect] from them. But if you follow what others say, it does not always work.” Here I attend to his *in vivo* term *guidongnyang*. He assembled those unofficial informal literacies, including improvised conversations in which people share second-hand lived experiences, from his church- or ethnicity-based members, and combined them with formal literacies, transferred literacies from his workplaces and top-down institutional literacies.

Hajun did not fully acknowledge informal literacies as part of his translocal ecological knowledge. In his description, this informal literacy in church-based groups is placed at the lower level in his scale. He adopted informal literacy, particularly at the early stage of the recovery process, but rarely acknowledged its role in his overall procedures as self-reportedly they are “not really correct.” Language ideologies and dispositions intervene in this translocal ecological knowledge-making processes and inscribe stratified scales.

However, this stratification does not necessarily lead participants' repertoires to being structured as fixed or predetermined, such as in higher or lower scales. These vertical strata and scales are fluid and negotiable in regional flows and in locale-specific discourses. People tend to rescale these strata by rhetorically negotiating the norms as seen in Hajun's case.

Another emerging feature of his disaster literacy were sensorial dimensions in which the material environment is part of the translocal ecological literacies:

As I had to break it down, break it down quickly. That was because there would be mold. You know, this house is made of wood and it has insulation. If it remained wet, the house would smell terribly of mold and it could not be removed.

In this interview, he articulated the intensity, velocity of timescales, and olfactory sensorial details in the recovery process. His action of demolishing the wall was connected to his literate awareness of speed ("quickly"), space ("made of wood"), and olfactory sense ("mold"). His embodied sensorial literacies affected not only the knocking down of his house but also his attitude toward other environmental changes.

When he was asked about any changes he had in his life, he repeated the term "climate change" multiple times and shared concerns about the potential risks and disasters in near future. Originally, I was expecting his comments to be on the potential emotional distress after Harvey, but he showed his genuine concern about human-induced climate change and potential disasters, including floods, triggered by this climate change. He connected his expert knowledge in the oil and gas industry and its impacts on climate change that human beings make with his flood-affected life. "Do you know the world population now? It is more than seven billion," he said, describing his thoughts about the human-induced components of Hurricane Harvey, problems of the drainage system of the city, and

drastic changes in climate variability.

As Hajun explained, the flood, the mold, and physical changes poignantly accentuated his environmental consciousness and his emerging local identity as a resident of the coastal area and underscored his concerns about climate change and environmental changes.

Climate change is, climate change is not a joke. Maybe, it [the flood] may come again. Maybe within ten years. I would sell my house. When my children grow up, my house will be good in the market as it was well renovated, and here the school district is good. I don't know when my house may flood again. Climate change is really not a joke, you know. In the past, the Arctic Sea ice kept ships from passing through, but now, the ice melts for half a year, and the ships come and go through the Arctic Sea.

His interview shows how transnational-multilinguals, particularly skilled professionals, adopt workplace literacies and transfer rhetorical knowledge to shaping disaster literacy and how immigrants come to shape regional identity and environmental-conscious literacies in the aftermath of the disaster. However, it should be also noted that like Minji, Dahee, and Jaewoo, although he had multiliterate knowledge, the disaster recovery process entailed a series of denials, technical challenges, multiple physical visits to government agencies, delayed responses, and ensuing emotional distress.

Youmi's Family: "It is Not About Losing Your Face."

Youmi's and Steven's Language Ideologies

Like Hajun's translocal ecological literacies, the literate practices of Youmi's family illustrate another rescaling practices in the disaster-affected ecologies. Youmi and her

husband Steven explained how much they embraced new rhetorical situations and cut across different scales to leverage transnational or translocal ecological literacies. Youmi and her husband Steven are similar illustrations of how translingual material literacies become part of ecological knowledge in the aftermath of a disaster. Their house was located near one of the reservoirs and was flooded on the very first day. However, unlike other participants' houses, the water receded the next day right away. In the group interview with other participants, Steven explained how he came to acquire varieties of English here:

I quit the company run by Koreans after working for two years and started my own independent business. Then I began working with black people. My wife still can't understand what I am saying to black people ((laughter)). I speak Black English, but she speaks White English. Sometime, my wife can't understand what I am saying in Black English with them. I learned their accents by doing business with them. Why? I was at risk. I needed to survive. But some people seemed not to be able to deal with this kind of situation. To learn a language, I think one should face situations. To survive (.) I think people's characters play out a lot, for some people, adaptation could be very slow.

In this excerpt, he presents a nuanced understanding of wide varieties of English and emerging and collaborative meaning-making processes. Both Youmi and Steven, as long-term residents and Harvey survivors, have rhetorical scales in which they can understand that Black English and White English exist in linguistic ecologies. He added, "When I go to their shops, they [African American] help me to speak English in certain cases. Sometimes those people translated my words, 'What Steve wants to say is...' They often helped me to speak by translating my words on behalf of me, as they know my speech style." As shown in this

remark, he was well aware of the varieties of English in his region and the meaning making process that was contingent on interlocutors and their linguistic and cultural background.

What is interesting in these two participants is that they have strategically used diverse linguistic resources beyond privileged varieties of English, unlike Minji or Dahee, who believe that they lack knowledge of privileged varieties of English which they feel are dominant in the society. I observed that Steven reached out and was resourceful, asking about the process of the Homeowner Assistance Program (HoAP), applying for help from other non-profit organizations and nationwide Christian organizations, and collaborating with next-door neighbors to shape a better community. Also, he and his wife applied for the Disaster Supplemental Nutrition Assistance Program (D-SNAP) benefits distributed to Hurricane Harvey survivors. They got information about this benefit from their weekly Korean protestant church group gatherings. One of their church members became to know about this benefit from his Spanish-speaking coworker in his office, who also had been affected by the flood, and shared this information with Youmi. Thus, for Youmi, the important information about disaster assistance including D-SNAP was not only through official channels but also through informal local networks by which she was connected to other multilingual residents across race, language, and ethnicity and through negotiation processes between imposed constraints and diverse semiotic resources.

Rescaling Practices and Translingual Dispositions

Youmi particularly explained her negotiation process, which is similar to what Canagarajah calls rescaling practices, in terms of socioeconomic status. She said that for the first time in her life, she stood in line for food stamps. She explained, “Why am I going to get food stamps? I felt really awkward.” When she arrived at the parking lot at the Texas Health

and Human Services benefits office early in the morning, she stood in line with other ethnically and culturally diverse people. She stated that she learned a lot from those who stood with her. They mostly had had food stamps before Harvey. She had conversations with other economically modest individuals, including two African American women and one Hispanic young woman, who had more financial challenges after Harvey. Youmi said that she came to understand that she was privileged. “They didn’t choose their environments and backgrounds. [...] My clothes were different from theirs,” said she. She explained after listening to one of the ladies waiting in the line to apply for D-SNAP. The woman said that after Harvey, she was reminded of feelings about free lunch and yellow-colored dollar bill-looking food stamps when she was young and realized that her mother tried her best to raise her and four other siblings as a single parent. Youmi felt “deeply moved” by these stories. In the second interview with her, she connected this emotion to previous experiences, in which she went to Walmart to obtain Red Cross benefits. The first time, she felt humiliation, but she realized that the people were nice and considerate and there was no reason to be humiliated. Applying for D-SNAP, she felt less hesitance based on this beneficial experience and had experiences in mingling with people beyond her ethnic enclave and preexisting social circles. Furthermore, she said that her church introduced her to Samaritan’s Purse, a nationwide evangelical Christian organization, so she was helped in cleaning and gutting her house.

Based on her multilingual repertoires and social-religious networks including her weekly small group meetings with her church-based community members and nationwide Christian non-profit organizations, she recovered from Harvey relatively quickly despite the difficulties of living on the second floor and her financial burdens. She stated, “I know that my house was sacrificed to save all Houstonians [due to the reservoir release].” She added

that although the overall situation was challenging, she felt good that all Houstonians became more united with and caring toward each other and explained that this solidarity makes Harvey different from Katrina, after which Louisianans seldom returned. According to her, in Houston, people remained and were united. She described her place-based sense, saying that her family had a Texan pride and Houston became a good place in which to live despite this flood.

In the group interview with other church group members, Steven added that beyond languages it is more important not to be fearful that one might lose one's "face" or be afraid of humiliation in one's social networks. He explained that particularly, "Korean males are likely to hide their difficulties in learning English or navigating this kind of situation after disasters, [and] people should face the realities and ask for something." They shared their ideas that it is very important to learn that there are almost always resources and linguistic norms are mostly negotiable and re-scalable. For them, the most important resources were leveraged through networking with other multilingual communities and knowledge about other varieties of English beyond government information they could obtain through media or a direct call to government agencies. Steven mentioned that particularly male multilingual survivors were shier in asking for help: "If we are sincere, Americans will listen to US. Specifically, male survivors seemed to feel less comfortable in opening their minds than were women survivors. They think it [their speech] is their face [self-pride] more than women do. If their speaking is not perfect, they feel very humiliated. It is not about losing your face." So many people in the group interview concluded that "language is a necessary condition, not a satisfactory condition" as one of the participants in the group interview also stated. For Youmi and Steven, the primary resources of the disaster recovery are what scholars call

“translingual dispositions,” which refers to “the disposition to openness and inquiry” (Horner et al., “Opinion” 311) rather than what people think of as “perfect” English or privileged varieties of English.

Chapter Conclusion

Mobilities, Disasters, and Bureaucratic Regulation

Findings highlighted that the participants, Korean-speaking Harvey survivors, are not only socially marginalized as they note in their interviews in which they self-reported multiple cases of feeling disregarded but also environmentally marginalized. This environmental inequality can be attributed to the lack of disaster literacy that ranges from a geographical sense to kinship-based or other types of social networks to region-based accumulated information of natural or technological disasters (hurricanes, heavy rain-induced floods, flash floods, and the entailing technological issues such as mold infestation or industrial toxic waste). More significantly, they have not been fully exposed to region-specific institutional knowledge such as the HOA and the federal, state, and municipal levels of bureaucratic systems that regulate the social consequences of natural or technological disasters.

Through the notions of scales and translocal ecological knowledge, I have traced four participants’ sociomaterial and disaster literacy with a focus on their language ideologies and bureaucratic literacies, particularly through their written artifacts, application forms, and official institutional letters (to insurance companies and to government agencies). As Cushman notes, “filling out forms is rhetorical” (77) and part of the “linguistic forms of agency residents use in their daily living” (3). For all participants, filling out the forms has involved a series of rhetorical considerations and decisions. Sometimes, they needed to

evaluate which decision is more beneficial to them and to be less stressed about the results of certain types of applications. These stories from my focal participants demonstrate that their application decisions are rhetorical also because these decisions are made by their qualified agency constrained by social and material factors (i.e., restricted time period for applications, displaced conditions, mold, order from debris, health conditions, and so forth). In their press releases, FEMA states, “Disaster recovery assistance is available without regard to race, color, religion, nationality, sex, age, disability, English proficiency, or economic status” (“Hurricane Harvey Survivors”). However, my observations and interviews with Minji, Dahee, Hajun, and Youmi show that race, ethnicity, migration history, immigration status, and language ideologies affect their application decisions and made significant differences in their post-Harvey recovery process and sense of closure. These findings revise dominant monolingualism-based explanations for immigrant survivors’ disaster-related literacy, in which they are represented as survivors who has limited English proficiency.

Interestingly, a scalar view of their language ideologies suggests that disaster literacy as transnational literacy ecologies is closely related to informal literacies, particularly religious literacies, practiced in protestant Korean church-based groups. Faith-based pseudo kinship and literate activities from this co-national religious network are often regarded as crucial resources, as shown in Dahee’s family who were sheltered by a church-based group family. Some survivors place their religious literacies at the higher scale, as they can be connected to the mainstream culture and resources in the US through religious literacies (as shown in Youmi’s connection to an evangelical Christianity-based disaster relief organization Samaritan’s Purse).

However, mostly, these church-based literacies are likely to end up being disparaged in

the disaster recovery process as shown in Hajun's comments ("It [informal literacies in church-based group members] does not always work"). Disaster-specific informal literacies from these faith-based groups often shuttle between lower levels and higher levels in participants' linguistic hierarchy. Thus, disaster literacy illustrates the polarized aspects of faith-based literacies: While formal religious rhetorics enable them to be networked with US-based universal Christianity, that is, a culture of power in their host country, informal literacies from faith-based groups lead them to being networked with co-nationals or ethnic members who often serve as empathetic yet not fully reliable literacy networks. Overall, participants often emphasized that informal literacies from co-national or ethnicity church-based groups were crucially helpful yet often misleading. Interestingly, official religious rhetorics, such as the Bible, sermons, prayers, and chants, were barely mentioned in the interviews. Rather, participants showed ambivalent and even conflicting attitudes to their church-based networks and literacies.

In sum, participants' disaster literacy, what is referred to as transnational ecological literacies, vary in terms of race, gender, class, religion, and economic status, but have three common features:

1. Disaster literacy target a specific type of audience, that is, a specific government, corporate, or non-profit organization. Also, they should be completed within a strict timeline (as shown in Minji's case, where she was pushed into the loan process instead of being able to get the modification to the FEMA application).
2. Disaster literacy are connected to cultural-specific meaning-making processes. This culturally specific and community-based meaning-making processes are exemplified in the emerging emotional fear of "losing face" described in Youmi's and Steven's

interviews and disparaging the intensity of the material effect of the flood in Minji's case and Dahee and Jaewoo's case.

3. Disaster literacy are often ephemeral, informal, and improvised in need, but primarily high-stakes literacy acts, severely distress-laden. This is because applicants had to scale their eligibility for financial assistance and benefits. This rhetorical process affects migrants' emotions, sense of place, and translocal identities.

Based on these findings, I have argued that rhetorical scaling and rescaling practices are emerging literate activities in their transnational ecological literacies, particularly in a post-disaster context. My interviewees' language ideologies prior to the disaster are often mirrored in their disaster literacy and newly emerging translocal ecological knowledge. Often Minji's and Dahee's language ideologies, which had been perceived as fixed norms, do not configure disaster literate ecology or material ecologies as negotiable and flexible spaces. Despite their multiliterate communication skills, the bureaucratic regulation of immigrant policies and Minji's and Dahee's self-deprecation of their repertoires and resources due to the accumulated experiences of being treated as less competent or even invisible in their suburban neighborhood led them to feel more frustration. However, my scalar analysis shows that their rhetorical decision is part of agentive uptakes, albeit qualified, as demonstrated in Minji's withdrawal of the modification process of the FEMA application and Dahee's non-participation in the disaster nutrition assistance program. This scaling is a rhetorical act textured by their embodied knowledge of institutional regulations and textual governance of migrants' mobility and linguistic resources.

The first two cases shown in Minji's and Dahee's families show a contrast to Hajun's and Youmi's cases in that Hajun and Youmi leveraged literate resources and preexisting

repertoires including their competence in heterogeneous varieties of English and languages other than English. Unlike Minji's and Dahee's rhetorical scaling or stepping out of the institutional bureaucracy and hierarchical systems, Hajun's and Youmi's rhetorical attunement and dynamic rescaling practices across cultures, repertoires, and institutions facilitated their building of translocal ecological knowledge and let them feel a sense of closure for the Harvey disaster.

These heterogeneous disaster recovery processes and literate activities cannot be reduced merely to the technical level of English language proficiency. Rather, these differences could be attributed to the multilayered factors of their rescaling and translingual dispositions, material constraints, and rhetorical scaling. Often, in this ecological knowledge system, non-human material things and embodiments of sensorial awareness triggered by environments such as water, mold, rotten food, broken china in the cabinet, floating laminate flooring, and piles of items played as actants and "ontological" or "material diversity" as much as human beings and their "symbolic diversity" (Jordan 372), as my participants described in their interviews and writings. It should be noted, however, that transnational literacies and their abilities to shape translocal ecological knowledge are often regulated by the nation-state's governing technologies and unpredictable political and bureaucratic immigration policies and by material constraints such as visa status and citizenship. As shown in Dahee's and Jaewoo's case, documentary identities that are granted by bureaucratic policies and agencies (Vieira, "Undocumented" 448) can have material effects on participants' bodies, emotions, and their writing practices in the disaster recovery process.

Assembling Semiotic Resources and Emerging Translocal Identities

For participants, writing was a tool to gain disaster-related benefits after Harvey

affected their lives. However, their writing is bureaucratically scaled and subsumed to their legal status. This rhetorical act is contingent on a writer's material status whatever their writing is. It echoes Vieira's notion of sociomateriality and Lorimer Leonard's description of fixity. As Hajun notes, "They [FEMA] don't believe in people." Government agencies believe in *paper* and state material literacy objects. Gathering four families' stories, I see that the social migration histories of the participants came face-to-face with unpredictable climate variability, which requires a different manner of literacy assemblage. Thus, my participants were more urgently required to build translocal ecological literacies.

As shown in the beginning of this chapter, my participants mostly have "thinned-out" experiences (Casey 684) as immigrant language minorities in networking with local residents, by encountering racialization and their racialized bodies ("our appearance is like this" in Minji's interview excerpt). Their translocal identities are not one-directional but multifaceted. They are likely to have functional relations with the local place due to lack of political power, emotional bonds, and agency in decision making processes. Ironically, Harvey deepened their sense of locations and of "locations of writing" (Yancey 5). My participants wrote in a shelter, in their gutted house, in a temporary apartment unit, and in others' houses. The lack of geographical information was often compensated by *translocal* ecological knowledge of transnational migrants and by transmitting local knowledge through transnational social groups including faith- and ethnicity-based communities. While working with local, municipal, and federal officers, they demonstrated their ability to shape *translocal* ecologies in which they leveraged grassroots support for disaster survivors often through faith-based communities and via information and communication technology including messaging applications.

Newly arrived migrants and long-term migrant residents often reported that they have never thought before about the bayous, floods, or reservoirs in Houston. Particularly, newly arrived migrants mostly told me that they had never heard of the FEMA organization. Some participants who resided in Houston more than ten years do have a more geographic-specific sense due to multiple experiences with hurricanes and tropical storms and awareness of the weather's social consequences such as internal migration, for example, Katrina survivors' migration from New Orleans to Houston and several evacuation experiences due to blackouts and floods during Hurricanes Allison (2001), Rita (2005), and Ike (2008), and the recent, almost annual floods.

Indeed, the catastrophic case of post-Hurricane Harvey led scholars to investigate spaces, people's everyday practices in a different sense. Beyond a container model, in which people reside as independent subjects or agents in the environment envisioned as a neutral container, civic communities in and out of academia started sensing strong geographical underpinnings and a sense of place in a broad range of ways. Blommaert adds a spatiotemporal scale in the global flow of literacy and underscores power and inequality in the scaled space whereas Canagarajah argues that this scale is negotiable in transnational spaces configured by migrants. In this space, Canagarajah argues that migrants negotiate, reconfigure, and rescale the stratified and power-laden scale while disparaging the high-prestige literacy and the effect of "place." For Blommaert, "translocal" is a neutral, high-prestige, preestablished normative space where prestigious literacies are the norms. In his concept, "trans" means transcendental. However, for Canagarajah, "translocal" is a co-constitutional, multi-directional, and malleable space. In his discussion, "trans" is not so much transcendental, but rather an in-between, post-structural, performative space. However,

my research subjects in the process of disaster recovery, particularly newly arrived migrants, did not limit their scaling to upscaling or negotiating the scale. Rather, they frequently stepped aside from the scale itself or self-decidedly opt out of this governmental post-disaster system. Even in some cases, they seemed to be not aware of the possibilities to negotiate the language or cultural differences due to multiple factors such as temporary visa status, self-reported incompetence in English, or institutional languages. Places, geographical ecologies, and the sensorial environment in this context played a significant role in migrants' literate scaling activities.

Migrants live in physical places and translocal spaces. But this binary of place and space does not work well with migrants as they tenaciously engage with all aspects of the physical, geographical, transnational, translocal environment. In this chapter, I have shown how my research subjects not only upscale or downscale but also step aside from the scale in these translocal material ecologies. In these ecologies, transnational-multilingual survivors rhetorically scale both vertical-horizontal and adjacent directions, negotiate their discursive strategies, and leverage their prior and newly gained ecological knowledge as adaptive skills in "ecosocial systems" (Lemke). The terms *translocal* and ecological emphasize groundedness in local and regional material environments, but these terms also capture transnational ties implicated in *translocal*. These ecologies are multilayered in terms of material conditions.

Another finding is that for some migrants, a deficit model of language serves as a proxy, reductive reason into which migrants flatten their complicated realities. In reality, as shown in Hajun's case or Youmi's and Steven's interview excerpts, their language ideologies and translanguaging dispositions may play a more important role because these dispositions

toward semiotic (symbolic) resources and affect-laden (non-symbolic) materiality will let them rhetorically access resources. Although some participants often attribute their application results and hardship to their self-reported lack of English proficiency (“My English is not working” in Minji’s interview), other participants are also aware enough of the complicated material conditions to make rhetorical decisions (“Although they [FEMA agents] put in my social security number, it didn’t work in the system” in Jaewoo’s interviews). This embodied sense of materiality is the reason they pursued local networks and tacit knowledge from informal lived experiences and information from faith- or ethnicity-based groups, not from official one-directional information from government agencies.

In this chapter, I have examined the power-laden vertical dimension of the language ideologies of the participants and their heterogeneous literate activities ranging from rhetorical scaling (as shown in Minji’s and Dahee’s cases) to rescaling practices (as shown in Hajun’s and Youmi’s cases). In the next chapter, drawing from Brandt and Clinton and Actor Network Theory, I will move to the semiotic networks of disaster responses, including the participants’ digital literacies and examining activities of each actor/actant, including human beings (survivors, responders, and other media and institutional discourses) and non-human beings (particularly media infrastructures and social media platforms).

Chapter 4

Literacy Networks and Technologies in Disaster Recovery

In Chapter 3, I traced the rhetorical scaling processes of language minority survivors by investigating participants' language ideologies and analyzing the interrelationships of their language ideologies and disaster recovery processes. In this chapter, rather than studying individual participants, I adopt a transcontextual analysis on texts and people in flux to situate their semiotic activities, particularly disaster literacy in networked technologies. Drawing from a well-known critique of Brandt and Clinton on New Literacy Studies, and Catherine Kell's methodology of transcontextual analysis, I examine the trajectories of texts as things and examine their meaning-making processes, as things can "make people happen" (Kell, "Make People Happen" 424). Brandt and Clinton raise questions about the New Literacy Studies' revisionist approach to traditional literacy studies. Kell takes a more methodological approach and delineates the definition and significance of transcontextual analysis. In her transcontextual analysis, she highlights that "material things" should be equally "enlisted in human-meaning making" to study language and "mobility and complexity" (424). By using this emerging materialist theoretical strand, this chapter explores how texts and people move not only by human agency but also by material objects. Particularly, the disaster recovery process has more rhetorical constraints compared to other everyday communicative literate ecologies. This chapter argues that objects *and* people as actors/actants (Latour 54) have rhetorical agency in locally and globally networked spaces and that human beings' agency is qualified due to what Gabriele Budach et al. call "bounded objects" ("Objects and Language" 393). This argument will be demonstrated by my observation that transnational-multilingual survivors in this study used localized and

culturally specific social media channels and interacted with materiality and technologies.

To trace the meaning-making process of things and human beings in mobility, this chapter particularly examines how texts as things¹⁷ enacted people's mobility and fixity through what Kell calls "joins" ("Literacy Practices" 92). Drawing on Dorothy E. Smith's notion, Kell underscores how texts across different modes can "bec[o]me decontextualized, and therefore more mobile" ("Literacy Practices" 92). Aligning my study with Smith's discussion on textual management systems, Brandt and Clinton's notion of literacy as things, and Kell's study on texts as things, I intend to foreground the materiality and powerfulness of literacy. Smith notes that texts can be viewed as "constituents of social relations" (121) and that their "active"-ness and "operative" power (122) seemed to be almost invisible or unnoticeable only because "[b]ureaucracy, professional and scientific discourse, objective forms of management are in various ways dependent upon textual communications" (122). Smith helps us to recognize literacy as things, as texts constitute and mediate our material and social environments, which are often governed by institutional organization establishments.

Similarly, Brandt and Clinton view literacy as things or objects. As they note, "Things hold you [people] in place" (344), and thus literacy as things/objects in action "holds it [a context] in place" and "[orients] participants to here-and-now meanings that enable communication" (351). However, it should be noted that this focus on the "thing status" does not necessarily mean that literacy should be viewed as technology disassociated with

¹⁷ In Chapter 4, I use the term *thing* and the term *object* interchangeably. However, it does not mean that these two terms are the same. Although I acknowledge that these two terms have their own theoretical lineages from Actor-Network Theory (Latour), posthumanism/new materialism (Barad; Braidotti; Bennett; Coole and Frost), feminist sociology (Dorothy Smith), and literacy studies that apply materialist approaches (Brandt and Clinton; Luke; Pahl and Rowsell; Potts; Vieira), I heuristically use these two terms in this study in order to emphasize the materiality of literacy or what Brandt and Clinton refer to as the "thing status" of literacy (337).

sociopolitical contexts. Rather, as Brandt and Clinton argue, “literacy as a something does not make it an ideologically neutral technology. Rather, its status as a something is what has made controlling literacy so alluring to the powerful” (355). Their discussion on literacy as things/objects orients us to see textual flows between government agencies and multilingual survivors in the aftermath of the disaster. Here, by seeing literacy as things/objects, I intend to capture three things from my participants’ lived experiences: 1) the power of the institutional and government texts as technology governing environmental disruptions; 2) the collective agency of the texts improvised and invented by multilingual survivors, often enacted by their translation and translanguaging practices; and 3) the material technology of literacy such as smartphones and mobile applications and the participants’ artifacts such as their photos that captured a sofa with mold, a refrigerator floating in the floodwater, or other sensorial components that provoked their communicative action. For example, mold on the wall as sensorial and olfactory semiotics pushed Minji and Hajun to move to the next step in their disaster recovery.

This textual flow experiences the recontextualizing process, which is affected by the “social conditions at the point of joining” (Kell, “Literacy Practices” 92). I see that in the *joins*, survivors’ experiences are either “reified” or “naturalized” (Kell “Literacy Practices,” 92). While tracing multilingual-transnational survivors and their recovery process, I attended to emerging joins, that is, significant texts in the process of semiotic transformation. For example, in the trajectories of joins such as the FEMA disaster assistance form, meaning is fixed and reified (or alienating the relationships between participants and their experiences and between experience and the representation of experience in written materials). As will be explained, however, in some other joins such as translated survey texts, people’s experiences

are “naturalized” (Kell “Literacy Practices,” 92). The survey texts were decontextualized when they were translated from the original meaning and recontextualized in participants’ literacy networks. To better understand these literacy networks (Brandt and Clinton) or networked literacy (Pigg et al.), I highlight how these joins make multilingual-transnational survivors “happen” and what sociotechnical systems (Potts) shape these meaning-making processes. To trace their networked literacies, I pay attention to three emerging texts in the recovery process of my participants and situate them in media infrastructure and participants’ lived experiences. By *media infrastructure*, I refer to networks or the material ecology through which people, resources, and communication flows (Larkin; Parks).

Taking a hint from media ecology studies and from linguistic anthropologist Miyako Inoue’s method called “ethnographically grounded network analysis” (219), this chapter aims to trace the transcontextual relations between human beings and non-human actors and their translocal movement. While actor-network theory flattens actors’ layered and stratified differences, ethnographically grounded network analysis foregrounds actors’ perspectives and their differences implicated in social inequality. As Inoue notes, this approach is helpful to “reconceptualize” specific literate activities, particularly activities that have been considered neutral, faithful, and prosaic, as culturally, socially, and politically intricate and strategic activities. While Chapter 3 renders vertical hierarchies in people’s language ideologies, linguistic ecologies, and contested stratification, Chapter 4 maps media ecologies and adds a transcontextual configuration of associations between human beings and non-human beings (textual artifacts and non-textual environments).

Transcultural Spaces Mediated by Information Communication Technologies

As shown in participants' interviews in Chapter 3, damages aggravated by reservoir releases were as chronic and corrosive as other *natech* disasters. In this flood-affected long-term disaster situation, information communication technologies (ICTs) including mobile devices and social media became important media through which survivors navigated the discursive and material process in the aftermath of the disaster. As Douglas M. Walls and Stephanie Vie note in their 2017 edited book *Social Writing/Social Media: Publics, Presentations, and Pedagogies*, "Social media technologies have become nearly ubiquitous in our culture" (3). Walls and Vie ask researchers in writing studies to see a wide range of questions including not only the implications of "social media technologies in our pedagogy" but also "the future of activism and community-based efforts connected to social media" (5). Indeed, all thirty participants enrolled in my study across ages had their own smartphones and informed varied activities through social media.

As media scholar Henry Jenkins points out, the mobile phone can be compared to the "Swiss army knife for the 21st century" (qtd. in Madianou 669). The participants commonly explained that they used mobile phones as essential devices and tried to keep Internet access on cell phones as stable as possible for the first few days when Hurricane Harvey hit their homes. For them, high-speed Internet access was one of the most challenging things in the aftermath of the flood. Within the first few months after Hurricane Harvey, many of my participants changed their data plan by updating their contract to a higher speed or changed their telecommunications company despite its higher cost. In many cases, the participants updated their smartphone device at least once during the recovery process. They reported that they used smartphones more frequently than laptops as a chosen device during Hurricane

Harvey and in the recovery process. Smartphones as new media are important tools that enacted their recovery processes.

In addition, my participants suggested preferences for specific media and thoughts and beliefs about each medium, that is, notions about which mediating channel is efficient not only in the technical dimension but also in social and cultural dimensions. These beliefs are similar to what Gershon refers to as “media ideologies” (283). The use of specific media, tools, and technologies is intricately connected to their translocal lives, indeed. For example, one of my participants, Miyoung, showed me her smartphone when she was asked about her daily use of English. She showed me one of her mobile digital applications, Papago, a translation cloud service devised by Naver Corporation, one of the major Information Technology companies in South Korea. She explained, “My friends recommended it. Papago is much better than Google as it gives me an accurate translation.” Miyoung added she had used this app for the times when the need for translation between Korean and English and English and Korean arises, such as email communication with her children’s teachers and announcement flyers from schools and local or government agencies. She said that she usually checked her email writing by using both directions, Korean-English and English-Korean, that is, putting translated messages in English in translation and confirming that the result is the same as the original message in Korean. This example demonstrates how transnational-multilingual migrants, particularly those who are self-reportedly less proficient in English, localize the use of technologies for their own rhetorical purposes.

Recent media studies have examined the media environment of individuals with the notion of “media ecologies” (Horst et al. 31) or “communicative ecologies” (Tacchi et al. 15). As Heather A. Horst et al. note, “the metaphor of ecology” is helpful “to emphasize the

characteristics of an overall technical, social, cultural, and place-based system, in which the components are not decomposable or separable” (31). More recently, communication mediated by computers and mobile devices has been studied in *globally* networked media environments (Bell; Lim and Pham; Sun; Potts). It is important to see literacy networks beyond the rhetorical situation model that assumes discrete entities, audiences, speakers, and texts. Rather, the participants’ literate activities across multiple platforms, languages, modes, and spatiotemporal differences should be highlighted through holistic and materialist perspectives (Tacchi et al.; Madianou). Drawing on actor-network theory devised by Bruno Latour, Michel Callon, John Law, and other scholars in science technology studies, Potts has analyzed in her 2014 book *Social Media in Disaster Response* how things and resources are being circulated in what she calls “sociotechnical systems” (37) in urgent communicative ecologies, such as natural disasters and terrorist incidents. Potts traces three disasters with a focus on web-based tools and the process of knowledge-making from data to information to knowledge. To examine this process, she draws on sociotechnical systems theory and user-centered design. Conducting case studies of Chinese participants and American participants, Huatong Sun notes that cultural differences and what she calls “user localization” affect technical communication.

Extending Huatong Sun’s culture- and locale-specific approaches and Potts’ sociotechnical approaches in disaster communication, I question how transcontextual movements occur among things and people in disaster communicative situations while looking into the network of their local and global writing activities. Particularly, I intend to explore things and people at the tension-filled intersection of official government agencies, in which English monolingualism is still prevalent, and technical media affordance, through

which migrant communities keep translocal ties.

Interestingly, many of my participants reported that they had no “writing” regarding this disaster when I carefully asked them to share any written materials from that period. They sometimes even evidenced fraught reactions. For participants, writings and reflections or even quick recalling could have been their lowest priority due to the upcoming literate tasks they needed to complete and financial burdens they needed to handle. For example, Hajun, a participant, responded to my request: “You know, I am not a writer.” For my participants, everyday writing, mostly on mobile devices, which they considered transactional and functional, is not real “writing.” This perception gap offers a snapshot in which people connect to writing something about an individual who does a creative work, based on subjectivity in modern philosophy. However, when Hajun and other participants shared their laptop screens and relevant file folders to explain their literate processes after experiencing the floods, I started noticing emerging patterns in which they had mostly developed systemic ways to replicate, store, categorize, organize, and archive application-related materials, which could be equivalent to what Pigg et al. refer to as activities laden with “transactional value” or as “coordination” defined as “the role texts play in bringing people and organizations into alignment” (101). In many cases, my participants preserved application materials and documents they submitted to agencies with their own rhetorical agency. This preservation was part of the sociopolitical literate activities in which my participants transformed ephemeral texts into solid and strong documents. In this chapter, by *text*, I mean data-, information-, or knowledge-related texts¹⁸, and any artifacts demonstrating their literate activities.

¹⁸ Here, I follow the definitions of data, information, and knowledge (Potts 24).

In this literate process, many participants reported that they had some cross-cultural communications with other local resident survivors. As Filipp Sapienza notes, “both immigrants and non-immigrants...share in a newly created transcultural ethos” (193). Information communication technologies empower this “transcultural ethos” in the disaster context. The story of Miran, a transnational multilingual survivor who moved to the US two years ago as a temporary sojourner from Korea due to his spouse’s job, exemplifies this transcultural space shaped by ICTs: “We [co-national mothers with children in the same school] had KaTalks [the abbreviated term of KakaoTalk, an instant messaging smartphone application widely used among Koreans] and got regular emails from the Bellevue people [her townhouse management company]. School moms [long-term residents, including US-born or other transnational immigrant mothers] were matched with each other through a survey on the school communication system. Local moms [in the same school district] gave us gift cards and babysat our kids.” She also added that when her house started to be flooded, she searched Nextdoor.com, a social networking website for neighborhoods, to see how other local US-born residents or long-term residents, who are likely to have experienced these geography-specific disasters, reacted to this disaster situation. Quickly, she realized that this flood would last longer than several days and that her family needed to evacuate and find an apartment unit, although she did not get any official evacuation guidelines.

Hayun’s experience of Hurricane Harvey in 2017 stands in stark contrast to Hyejin’s experience of Hurricane Katrina in 2005. Hyejin came to the US with her spouse for graduate studies and settled in New Orleans. When Hurricane Katrina hit Hyejin’s residential area and the city’s levees broke open, she was not aware of the importance of preparedness and did not have procedural knowledge about how to evacuate or how to mitigate the damages. She

recalled the time of her early-morning evacuation. The only available information and communication technology at that time was the radio. She said, “At that time, everything was different as we didn’t have anything like smartphones. I turned on the radio and opened a [physical] map. For one hour, I listened to the radio news that delivered information from callers who were actually on the road, then I created my own map of evacuation routes. We drove [from New Orleans] to Waco. I clearly remember there were many people and we were all nervous on the road. It felt like situations in the Korean War.” Although she was not experiencing the Korean War directly, she related this evacuation planning and actual evacuation experience to a war situation that she had presumably heard about from her parents or history books or other mass media. She, as one of the internal migrants who moved from New Orleans to Texas in the aftermath of Hurricane Katrina, had to restart her Ph.D. degree coursework at a different institution due to this internal migration and resettle with her children in Houston. Her husband’s company helped her family financially, but she navigated the long processes of FEMA applications and school transfers for her children and herself. However, this previous experience in Hurricane Katrina helped her be more prepared in terms of disaster literacy. Her family stayed alert when Hurricane Harvey hit her area and was able to protect her property and vehicles. She said, “This time, we moved our cars way before Hurricane Harvey hit our area and evacuated to a relative’s home in College Station until early September.” This drastic change of media ecologies (mobile applications, email communications observed in Miran’s experiences vs. traditional mass communication [radio] systems observed in Hyejin’s experiences) suggests the significance of scholarly attention to materiality and technologies.

However, overall, Miran and Hyejin are generally proficient in using English and

demonstrated that they were already users of the English language in their academic and professional lives, one as a former employee of a multinational company in which email communications were in English and the other as an international student who was taught by English-speaking teachers in Korea, respectively. However, for those who are less proficient in using English, the use of information communication technologies takes different forms.

Technological Literacies and Rhetorical Agency

Given these snapshots of my participants' everyday use of technologies, I define the term *technological literacy* in culture- and locale-specific practices and align it with what Cynthia Selfe refers to as "socially and culturally situated" literacy (11). Many transnational-multilingual survivors demonstrate varied levels of skill-based computer literacy. However, they dealt with the recovery process by using socially and culturally situated technological and digital writing practices. Cushman's participants in *The Struggle and the Tools: Oral and Literate Strategies in an Inner City Community* employ "individuals' language tools across contexts" to deal with "their daily burdens of working with the legal system, finding better housing, gaining entrance into college, and getting off welfare" (20). Like her participants, my participants have navigated available tools, mediating channels, and literacy technologies in order to address discursive and material processes relevant to them.

These processes include a wide range of "coordination," what Pigg et al. describe as "a practice that is rather mundane but that...has cultural, technological, and literate significance in managing day-to-day lives" (93). For the multilingual survivors who were affected by an unexpected disaster, this coordination includes enlisting themselves as "victims" in the FEMA system, applying for food stamps, interacting with other survivors, and communicating with governmental officials, case managers, and local agencies.

However, unlike the college students' coordination in Pigg et al.'s study, the multilingual survivors' coordination necessitated their getting out of their comfort zones—that is, home with their family members, ethnic workplaces, and social sites with co-nationals, in which they were not necessarily required to use English. To explore their coordination, I use the notion of rhetorical agency, taking hints from Cushman's idea of "linguistic agency." She explains that "instead of assuming that individuals lack language strategies because they believe in the terms of their oppression," she sees that "individuals have many complex forms of linguistic agency nurtured in subversive ideologies" (24). Aligning my study with Cushman's viewpoint, I expand the concept of individuals' "linguistic agency" (24) into the notion of rhetorical agency in the context of "sociotechnical" systems (Potts). By rhetorical agency, thus, I mainly mean individuals' agency in the material environment across physical and digital platforms and in using their creative, improvised maneuvering of resources.

Rhetorical agency is often present and strongly required in their social media writing in the wake of a disaster. For example, my participants often shared updated news and information with other survivors and organized events to help each other, particularly those who had limited access to information and resources. But it should be noted at the same time that the materiality of the texts they used enabled them to enact rhetorical activities. I suggest that participants' rhetorical agency, that is, what they can do with language and rhetorical activities through their media ecologies (see table 2), social networks, and mobile disaster literacy, should be situated in "subversive ideologies" (Cushman 24) beyond language deficiency models. Yet, at the same time, their rhetorical agency should be studied within horizontal relations, that is, in networked mobile technologies that enlist texts and things as objects. This chapter, therefore, finally argues that multilingual survivors' agency, which is

permeated by things, does not always let the survivors cross borders. As explored in Chapter 3, one's agency is limited and qualified. As Kell notes, a person's agency is not "an unbridled sense of agency" (96). This is because "[people] are also acted upon and positioned by texts in literacy events" (Kell 96). To illustrate how individuals can be limited by texts, she takes an example: "answering yes to the question in an official form 'Have you had any criminal convictions?' when you have had criminal convictions" (96). Kell's example shows us that texts not only "make people happen" but also constrain people's agency.

Table 2

Participants' Media Ecologies

| Types | Traditional Mediation | Transcultural (Re)Mediation |
|--------------------------|---|---|
| Mass Media | TV, Radio (NPR) Nationwide or local news | Non-English-speaking news through YouTube channels, Locale-based Korean newspaper |
| Web-based Infrastructure | Websites and smartphone applications of government agencies and non- government agencies (FEMA, Red Cross, NOAA) | Websites and online discussion forums of faith-based websites, associations of transnational community centers (e.g., webpages of the Korean American Community Center) |
| Social Networking Tools | Facebook, Twitter, Instagram Nextdoor.com | Line, KakaoTalk, Kakao Story |

Drawing from Latour's insight, Budach et al. offer three ways for relationships to form between objects and language and between objects and humans. While acknowledging the strength of New Literacy Studies, Budach et al. intend to revise New Literacy Studies by foregrounding the power of "carry[ing] meanings across time, space, and scale" (391) and demonstrating a "trans-contextual perspective," which traces "text trajectories" (393). According to Budach et al., "the notion of trajectory for transcontextual analysis can allow for very careful analysis of the relation between the social interactions and the objects that move along the trajectory" (392). To trace the mobility and complexity of objects, Budach et

al. offer a “typology” (393) of objects:

1. Bounded objects: Budach et al. define “bounded objects” as fixed, immutable objects, “firmly emplaced, mostly immobile, and part of specific, highly scripted, or abstract spaces” (393).
2. Boundary objects: Extending Star’s notion, Budach et al. define “boundary objects” as “flexible, in order to adopt different meanings in different contexts, and allow for communication across contexts” (393). According to Budach et al., boundary objects allow researchers to see the continuities and discontinuities of the movement of the text.
3. Bonding objects: This type of object is the most flexible object that has “the highest potential of trans-contextuality, their access into new contexts and participant frameworks being the least regulated” (349).

These three types of objects are helpful in exploring different forms of texts and to see them as objects that not only come out as products but also participate in literate flows. Applying Budach et al.’s perspectives, I foreground the materiality of literacy and “thing status” (Brandt and Clinton) and see textual artifacts as objects. In scholarly conversations, this thing status of literacy and its materiality has been differentiated from material objects discussed in new materialism or object-oriented ontology (Bennett; Coole and Frost). Traditionally, it is assumed that texts/discourses and things/material objects are divided; discourses are created by humans and objects are inert non-human things. However, Budach et al. explain, “it is also important to note that with the materiality of writing itself and of text artefacts, written texts can become objects that produce meanings and move across contexts” (“Introduction” 392). Synthesizing Kell’s and Brandt and Clinton’s arguments, I see objects as any kind of

materials beyond the binary between people and things and between “literacy materials” (Brandt and Clinton 348) and material objects, in order to “show the various hybrids, alliances, and multiple agents and agencies that simultaneously occupy acts of reading and writing” (Brandt and Clinton 347). As Budach et al. attend to “text trajectories,” Brandt and Clinton argue for “more complicated analytical frames—a ‘continual progression of inquiry’ (Latour, 1993, p. 121) at sites of reading, writing, and print that can follow the threads of networks both into and out of local context and other contexts” (348). In this chapter, by textual objects, I mean things including textual artifacts from people and the apparatus of literacy across institutional and organizational infrastructures that not only resemiotize meanings but also actively mediate by “imbuing, resisting, recrafting” (Brandt and Clinton 346).

From the collected data gathered by observations and interviews, I found out significant points of literacy-in-action and remediation processes as analysis units, or what Kell refers to as “joins” (“Literacy Practices” 92), in the recovery process timeline:

1. FEMA application (right after the hurricane, between August and September of 2017) and appeal processes to FEMA in the declined cases (mostly observed between October and December of 2017)
2. Homeowner Assistance Program Survey Events (observed from March 2019 to August 2019)
3. KaTalk interactions (observed after interviews were conducted from September 2018 to August 2019)

In the remainder of this chapter, I examine governmental discourses that the participants faced during the recovery process and trace these three joins through the theoretical lens of

typology objects with a focus on those who are self-reportedly less proficient in terms of disaster literacy, including elderly groups and female participants who do not use English in their everyday lives and who usually live and work in ethnic and linguistic enclaves after migration. They were mostly middle-class professionals, but after migration they became workers in other professions and often homemakers in the cases of female participants. Following these three types of objects made by Kell, the sections are organized by three different textual objects with a focus on the materiality of the text and literacy networks.

Bounded Objects and Literate Infrastructures

Application Texts for FEMA Disaster Assistance

Throughout the research process, I collected the participants' artifacts including FEMA applications, appeal letters to FEMA, photos, videos, and participants' collected local news articles. The FEMA website provides twenty languages other than English. However, my participants were mostly not aware of this language service. Although a few participants have used translation or interpretation services for insurance claims and medical services, mostly the participants were not interested in these services. Furthermore, this language service was provided neither for the inspection services nor actual transactional procedures for FEMA application and appeal processes to FEMA. As shown in Chapter 3, many participants reported that they had more difficulties in communicating with FEMA and SBA loan officials. For example, when I asked Minji if she had used this language service on websites, she laughed and said, "I can read English. Reading is not a problem, I can read fast. But this kind of basic thing [speaking in English] is hard. Actually, I am supposed to call them [for checking the HoAP application status], I should call them." More high-stakes tasks, such as writing an appeal letter, calling officials, and explaining their situations in person,

were often described as the most challenging literate tasks.

These literate tasks were often interlocked with the fixity of the institutional forms my participants addressed. According to them, once the initial form was filled out, it was almost impossible to fix. This fixity or boundedness caused financial burdens (as shown in the cases of Minji, Dahee, and Jaewoo) and emotional disenfranchisement. In my field notes of August 10, 2019, I reflected on the time I conducted an interview with another survivor, one of the senior participants, who struggled due to the fixity and boundedness of the text:

In Taesuk's case, he was more alienated as his condominium was located on the second floor, so FEMA declined his application for reconstruction assistance. His condo was not directly flooded, but the first floor was in water for more than a week, thus the foundation was distorted and his home was tilted. The doors were not working properly as the frames and the doors no longer matched. They [Taesuk and his wife] were locked out of their own house. The mold was severe when they returned from their travel and the ceiling had cracks in more than five areas.

Although he applied for FEMA rental assistance, Taesuk's application was denied because that he used credit cards for the hotel in which he and his wife stayed for several weeks without submitting the form first. Without any knowledge in the beginning, they used their credit card, and the charge was not considered legitimate. They relied on their in-laws "Americans" (in his words) to go through this process. They requested help from their daughter's parents-in-law, who wrote letters on their behalf. However, despite all these onerous activities, their appeals were denied, and they did not get any money for their displacement and damaged house.

This FEMA application form as a bounded object was not easily resemiotized (Shipka). The

problem with this application form as an immutable object was not so much lack of English proficiency or English literacy-related matters but matters of intimacy, cultural literacy, and media infrastructure. Of course, this fixity helps officials screen out fraudulent applications and work for a fair distribution of the financial resources. It should be noted that this communication involves not just a technical interpretation from one language to another language, but also emotional investment. As disability studies scholar Mia Mingus points out,

Access intimacy is that elusive, hard to describe feeling when someone else “gets” your access needs. The kind of eerie comfort that your disabled self feels with someone on a purely access level. Sometimes it can happen with complete strangers, disabled or not, or sometimes it can be built over years. It could also be the way your body relaxes and opens up with someone when all your access needs are being met.

This access intimacy is not limited to disabled bodies, but any bodies who have the experience of being excluded at an intuitive level (Price and Busby). Many of my participants said that they had not even heard of FEMA and still were unable to articulate what organization it was. This lack of cultural knowledge or access intimacy at the institutional level can be observed in almost every participant, but more evidently in senior participants.

An elderly resident, Kyunghee, in her seventies, navigated this process through her daughter-in-law, a Korean-English second generation bilingual. Although she was not able to connect me to her daughter-in-law and share her materials created by her daughter-in-law, I observed that using digitally automated systems (Eubanks) including the FEMA website or FEMA mobile app via smartphone imposed a double burden beyond dealing with financial damage. Creating a FEMA account, reading the questions, and answering them online are all

rhetorical activities entailing computer-functional literacy and sociotechnical literacy. FEMA accepts a phone call application for non-online applicants, but this option is also challenging to immigrant survivors.

Proxy Writing and Rhetorical agency

In many cases, the assumed user of FEMA application websites or the mobile app is not congruent with my participants. Even starting an application on the designated websites and registering for a new portal were almost impossible tasks, particularly for my senior participants who self-reportedly lacked computer literacy or were culturally distant groups. They were often forced to be silent or to use personal networks for translation in many cases. As described above, Taesuk, in his seventies, managed to find support from his daughter-in-law's mother in order to write an appeal letter regarding FEMA's denial decision. In the group interview, Taesuk said:

An American helped me, I mean my daughter's mother in-law. But FEMA didn't respond, I had no letters from them. It was in 2017. I even attached a photo that captured mold on the ceiling. But no response. In fact, after I filed with FEMA right after the flood, FEMA people came [for an inspection]. But they told us to move back to our [condominium] unit. At that time, there was no water and no electricity [in condominiums]. But FEMA said that we should move back in.

In this interview, his wife, Hyunmi, also added more details about her distressing experiences:

We were forced to move out of the hotel. They said that we should move out. So, we moved out. But we had stomachaches as we still had a water outage. At that time, there was no one who had moved back to our apartment [condominium] yet. We

brought water for the bathrooms from outside. There was a faucet outside, we could get water from there.

These excerpts show that FEMA hardly considered the status of multilingual survivors, particularly elderly survivors who often lacked communication tools and local networks. Like many of their neighbors, their home was not insured as they were told that the flood would be a “500-year or 1000-year” event¹⁹ and the house had no history of flood damage when they purchased it. They were not supported fully by FEMA as their condominium was located on the second floor and was not literally damaged by the floodwater. But after all their condominium units were flooded due to the rainwater and reservoir release, and the road was not accessible for more than ten days. Even after the water receded, they still had problems because there was no water and no electricity. However, they were not fully reimbursed for their displacement charges including hotel fees, and the FEMA inspection did not reflect their damages specific to their condominium structures, including growing mold from the first floor unit, door malfunctions caused by the floodwater in the first floor unit, and the structural damage to the entire building: “The door was distorted. Literally we couldn’t open the door due to the damage our whole building had.” Taesuk showed me documents included in his manila folder. In the folder, he had several documents and printed copies of photos of his home.

In his folder, Taesuk kept the FEMA inspector’s notice, FEMA’s decision letter, and his appeal letters with attached evidence. His letter asked for reimbursement on September 28,

¹⁹ The number of year does not necessarily mean that the flood is likely to occur one time during those years. A 500-year flood does not mean that the flood is prone to occur only one time for 500 years. Rather, it refers to probability. Thus, this 500-year flood can occur with a probability of 0.2 percent for two or more consecutive years. This terminology often creates an information gap between experts and lay publics and misrecognition of the potential environmental risk.

2017. The FEMA inspector's visit resulted in the assistance disapproval letter (October 7, 2017). To appeal FEMA's decision, Taesuk and his wife relied on their daughter's mother-in-law, the only reliable English-speaking person close to their location at that time. On their behalf, their daughter's mother-in-law attended their HOA Meetings with them, which was often held at the local elementary school, to track the HOA-level issues and helped them to write an appeal letter. The FEMA denial letter explained the reason for the rejection as follows:

ASSISTANCE NOT APPROVED:

You are not eligible because: Ineligible—"Home is Safe to Occupy (IID-HA)"

FEMA has determined you are not eligible for Housing Assistance because the damage caused by the disaster has not made your home unsafe to occupy. If you decide to appeal this decision, please provide a written explanation and a copy of documents indicating the damage to your home was caused by the disaster and has made your home unsafe to occupy. Acceptable documents may include a written statement from a local building official or contractor estimates.

Given this rejection, Taesuk and Hyunmi wrote an appeal letter. In this letter, they explained that their home was not ready to move into because of mold and the potential mold infestation from the first floor unit and that their home was still without water and electricity.

October 10, 2017

We are appealing your decision letter of October 7, 2017, for "Home is Safe to Occupy" (IID-HA). Our home was without electricity and water until late yesterday afternoon, October 9, 2017. Under protest and because of your denial of further housing assistance, we are moving back in the home today although complete MOLD remediation has not

taken place. We are attaching photographs of the mold that was visible in our home. We tried home remedies to get rid of the mold, which covered the dark spots up but we have not had our condominium complex get the mold fully remediated. [...]

Please reconsider your decision. We are in our seventies and have been told that living in a mold-infested home will be dangerous to our health. We also could not move back without electricity and water.

Thank you for your consideration.

Sincerely,

Taesuk and Hyunmi Cho

In this process, the FEMA letter became reified, less flexible, and congealed as a bounded object. Taesuk and Hyunmi attempted to make the FEMA Letter “Home is Safe to Occupy” a flexible object by resemiotizing and complicating it through the appeal letter, but this communication was discontinued as their appeal letter did not get any response. This bounded object stalled them although they leveraged linguistic and cultural networks to get assistance. They had rhetorical agency when they organized, replicated, and archived documents and worked with their proxy writer—that is, their daughter’s mother-in-law—when they wrote the appeal letter. This letter writing is what Brandt refers to as “ghostwriting” (31), described as “taking on substantial parts of a composing process for which someone else, not you, will be credited—whether by byline, signature, institutional title, or oral delivery, or in some other way” (31). Brandt notes that this writing “as a form of labor” shows “the rising role of writing in economic and communicative competition” and dismantles the “conceptions of authorship that have shaped literacy practices over time” (13). Brandt’s attention to this type of writing is significant as it debunks the myth of authorship,

that is, the assumption that one dominant author exists behind the text and suggests a new framework with which to see a composing process.

While Brandt mainly discusses writers who work for government agencies and do ghostwriting, I pay more attention to those who managed to seek ghostwriters. Mostly, ghostwriting occurs when more privileged persons in higher ranks, who lack time and attention, such as politicians, business leaders, or supervisors in organizations, hire less privileged employees who are paid for their writing labor and are provided writing tools and spaces. But in the post-disaster case, this type of letter writing reveals the opposite power dynamics. As Brandt briefly notes through the case of a volunteer ghostwriter who helped an Asian immigrant with his official written communication with government agencies, in some cases ghostwriters can lend their advanced skills in language proficiency and knowledge about institutions and bureaucratic systems to those who are less skilled. This ghostwriting can lead to “redistribut[ing] power,” in her terms “the potential subversiveness of ghostwriting when it is used to redistribute power, when it harnesses the status of writing to disrupt the social order” (41). Taesuk’s case echoes Brandt’s volunteer ghostwriter and his fellow Asian immigrant who was denied unemployment benefits and tried to write an appeal letter to reverse that decision. What Taesuk’s letter shows is that this volunteer ghostwriting is part of the different forms of writing and authorship that can reconfigure the power relations between institutions and everyday writers who lack time and, particularly in many immigrants’ cases, skills and tacit knowledge about government bureaucracy. What Taesuk’s case shows is that this type of writing illustrates not only different forms of writing and authorship but also different forms of agency, what I call rhetorical agency. As I explained earlier, survivors’ rhetorical agency is “multisourced” (351) by multiple mediators, such as

sponsors (ghostwriters) who have more access to institutional conventions in written communication and knowledge about bureaucratic systems.

However, more importantly, their rhetorical agency was mediated by the agency of the bounded object because multilingual survivors' agency in which they outsourced their writing to the volunteer ghostwriters was conflicted by the still imposing power of the bounded object that was embedded in governments' textual and technological infrastructures. In other words, Taesuk's resources were under the material conditions in which automated application systems and bureaucratic processes were being operated. Lorimer Leonard notes, "Sometimes in enthusiasm for supporting multilingual writers, scholars miss the fixity inherent in any literate movement" (12). The experience of Taesuk's family echoes this type of fixity. Their literate activity leveraged by personal networks turned out to be less effective than they expected because this process was firmly fixed in the transactional structure in which once a decision is made, it is hard to get it revoked.

Before I move to the second point, I want to discuss the specific imposition of bounded objects on senior participants. It should be noted that as scholars from indigenous communities point out, traditionally elders played a pivotal role in predicting and mitigating disasters, such as drought, flooding, and hail. Elders did so by observing movements and changes in ecosystems around them, such as "animal behavior, birds' behavior, insects' movements, the process of vegetation and magnitude and extent of winds, water, and air temperatures, and clouds appearances" (Khetran et al. 19). However, in the digital age and specifically in urban areas, the experience and translocal knowledge of the long-time immigrant residents who left their land are not transferable and often do not benefit their communities or themselves anymore. Particularly, as shown in senior participants including

Kyunghee, Taesuk, Hyunmi, and Jusun, the elders in this transnational community mostly migrated in the 1980s after being invited by their family members, who had become citizens in the US earlier. These elders are hardly recognized as “custodians of forecasting information” (19) by other younger generations in ethnicity-based communities, who came to the US after the 1990s and are mostly educated as skilled professionals. My observation and their interview transcripts suggest that these senior participants seemed unrecognized as transmitters of local and geographical knowledge and seemed to be more alienated and excluded from the mainstream disaster recovery process, which is mostly operated by digitally automated systems.

Boundary Objects and Translation Activities

Survey Texts for the Homeowner Assistance Program

The second object that was strongly identifiable across contexts was the text around the pre-application survey event announcement and the Homeowner Assistance Program (HoAP) Recovery Survey. The analysis and discussion in this section are concerned with two texts: The first is an announcement flyer about the survey event for the HoAP. The second is the survey form that is supposed to be completed online to check one’s eligibility to receive federal funds. In this section, I briefly introduce the HoAP pre-application survey and the participants’ experiences in completing and submitting this survey. Then, drawing from accessibility studies and translation studies, I trace how the document was circulated, how it participated in the flow as an actor, how the participants negotiated meaning-making processes around such governmental documents, and finally how community organizers and volunteers in nonprofit organizations were involved in this negotiation process by collaborating with participants around this document. I will use the notion of infrastructures

when I discuss documents from government agencies. At the end of this section, I highlight the agency of textual objects as literate infrastructures and the role of collaborative translation and translingual works on governmental documents.

Like the assistance programs from FEMA, HoAP is based on federal funds from the US Housing and Urban Development Department (HUD) and aims to mitigate the recovery process, particularly housing repair processes, of homeowners who were affected by Hurricane Harvey. This program claims that they provide reimbursement support for those who repaired their home with out-of-pocket payments. If they provide evidence such as receipts or contracts with construction companies, survivors who already spent their money could get support from the city program HoAP, a federally funded reimbursement program. According to the Texas General Land Office's (GLO) introduction to this HOAP program, it is administered by the City of Houston and Harris County. The GLO says, "The City of Houston will receive an allocation of \$1.155 billion from the State's allocation of \$5.024 billion at the direction of HUD" ("City of Houston—Direct Allocation"). Given this allocation, the City of Houston was trying to distribute these resources over a long-term period to compensate those who were not fully supported by financial assistance from FEMA after the flood. At the time of this research, the City of Houston tried to circulate this information among immigrant communities through more accessible channels such as community centers, ethnic newspapers, and mobile teams. The Housing and Community Development Department (HCDD) of the City of Houston also formed mobile teams called "One City Move Forward" and tried to reach neighborhoods by visiting community centers, churches, or other public places, and encouraged flood-affected residents to apply for these funds, regardless of their language, race, or ethnicity.

Most government websites provide citizens and residents with language assistance services by hiring an “Agency Language Access Coordinator.” For example, the section of the GLO’s Disaster Assistance Information of the website of the Texas Department of Housing and Community Affairs states that they provide services in twenty-five languages as shown on their homepage. Also, the City of Houston website provides language translation services in six different languages: Spanish, Vietnamese, Chinese, Arabic, French, and American Sign Language (see fig. 3). Information for other language minority groups is not visible on this first page. While this website reflects the city’s inclusive approaches to survivors, still other language users have no instructions about available language services and thus might feel excluded. Of course, it might be practically impossible to provide language services to all language minorities due to budget limits and lack of translators. However, for people who do not belong to one of those language groups, this website does not equally provide reliable infrastructures.

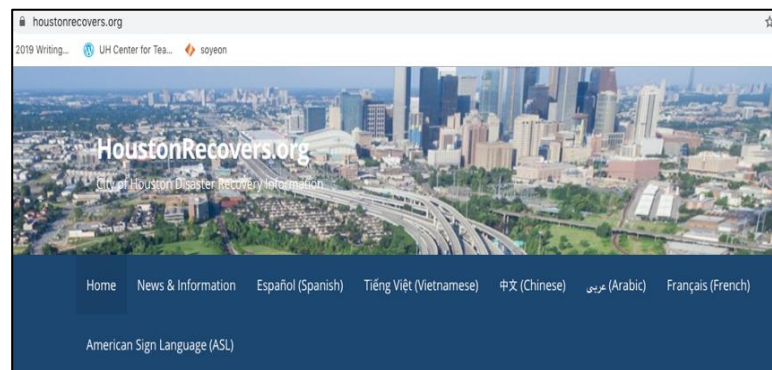


Fig. 3. A screenshot of the City of Houston Disaster Recovery Information website, which provides language in English, Spanish, Vietnamese, Chinese, Arabic, French, and American Sign Language. This website can be found at houstonrecovers.org

Like the Texas GLO’s Hurricane Harvey Disaster Assistance Information, the City of Houston’s introduction to the HoAP program (recovery.houstontx.gov) provides language

services selectively for non-English speaking residents including those who use Chinese (simplified), French, Spanish, and Vietnamese, as shown in the top menu section. Although it provides translated versions, this interface is not consistent in the survey process. For example, the Chinese version of “Harvey Recovery Survey” pages asks survivors to add their zip code to check their eligibility in the Chinese language. However, this screen page directs users to the survey form in English again. This inconsistency can be found with other languages, regardless of whether it is Spanish, Chinese, or American Sign Language. Beyond the technical translation of the first main page, actual survey processes online are operated in English. This suggests that this whole process assumes the user as an English-speaking and technologically literate individual.

In this local context, the Spanish language has more power to help applicants to access resources compared to other languages, as at least Spanish services were provided in almost every case in written documents. However, languages other than English, Spanish, French, and some major Asian languages such as Chinese and Vietnamese are not provided in translation. This lack of language services and translated materials aggravated the hardship and emotional alienation of survivors who are self-reportedly less proficient in English.

Translation Activities and Cultural Accessibility

The survey texts for the HoAP program were circulated and augmented as accessibility forms beyond the fixated infrastructure through informal translation practices. In March and August in 2019, I observed the survey events relevant to this HoAP program two times while tracing my participants’ literate lives. This survey event was held at the Korean Community Center in order to accommodate Korean-speaking residents and the City of Houston, which tried to publicize this program to communities. In the group interview

held in January, Steven, one of my participants introduced in Chapter 3, showed me a text message via his smartphone. The text message contained an announcement in English and Korean with the event time and the venue: “Harvey Relief Funds Are Here! Step One: Survey” (하비피해 한인 동포를 위한 이동 지원 행사. 첫 단계로 ‘설문조사’에 신청하세요) (see fig. 4). This event, as a community outreach program led by the City of Houston, offered access to survivors in distant communities to help these survivors better navigate the online survey process.

In the early morning around 8 a.m. in March, 2019, at the Korean Community Center, the One City Move Forward Mobile Team set up a table and opened individual sessions with survivors. I followed Steven and observed his activities and met other

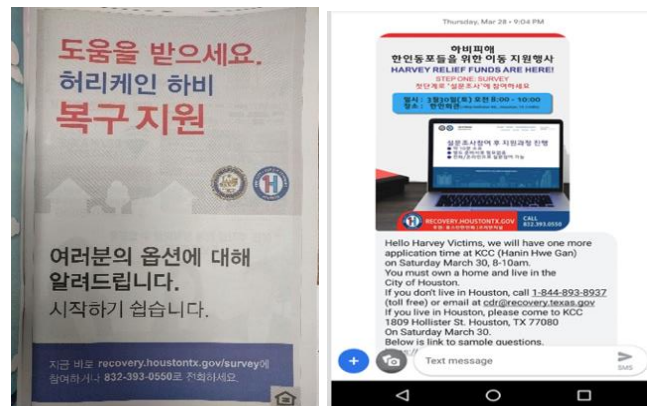


Fig. 4. The advertisement of the “Harvey Recovery Survey” event translated by Bohee (left) on a Korean newspaper and the mobile message “Harvey Recovery Survey” that Steven received, which was designed by Bohee and distributed by the Korean Community Center (right).

volunteers and community workers at this event. In this observation, I encountered Bohee, a journalist who works for a Houston-based Korean newspaper, and came to know that she played a major role in organizing this event and distributed various information about disaster assistance programs by coordinating the City of Houston and Korean-speaking residents. Contacting the officials at the Housing and Community Development Department

(HCDD) at the City of Houston, she, as an immigrant herself, voluntarily took on a role as a community organizer in requesting that this survey event should take place in Korean communities, thereby acting as an informal cultural broker between Korean communities and the government agencies in coordinating institutional agencies and survivors. This information about the Harvey Recovery Survey event was translated and designed by Bohee herself (see fig. 4). Bohee attempted to narrow the information gap between the City of Houston and Korean-speaking Harvey survivors by working as a volunteer liaison. In her interview, Bohee states, “If Harvey occurred in a different state, such as in California or New York, which have numerous organizations relevant to Korean communities, things could have been very different. Here, a lack of information and sensitivity definitely exists.” In this interview, she explained that although Hurricane Harvey affected particular areas where Koreans predominantly reside, their voices were not fully heard.

In her interview, she also revealed that she created flyers about the HoAP program from official government pages and announcement messages about the survey event. These translations were distributed through a local Korean newspaper and text messages by one of the staff members of the Korean Community Center. Bohee’s translation of the flyer about the survey event led by the City of Houston mobile team was part of her own critical awareness of the unequal reality in which language minority groups, including Korean-speaking communities, were left behind in this recovery process. This translated flyer is a strong example of agentive objects. Translation as a resemiotization process enables this object to be more agentive. This flyer was distributed among Korean immigrant communities through the local Korean newspaper and particularly among Korean-speaking survivors who were listed as victims at the Korean Community Center through text messages.

While working as a researcher following my participants, I paid attention to how my participants as actors navigated these transactional literate activities, that is, how they attended this survey event and how they interacted with this translated information. In tracing research questions, particularly my question about the intersection of translingual practices and the materiality of objects such as literate technologies, the concept of translation emerged as a dominant theme. In doing interviews with survivor participants, local nonprofit workers, and government officials who got involved in this HoAP program, the term “translation”²⁰ emerged as a central code. In my coding analysis, I attended to how they used the term *translation* and how this term played a role in their activities of crossing different languages, registers, modes, and material factors including the technology of the text and sensorial components in the environment. In their 2015 article on technical communication, Laura Gonzales and Rebecca Zantjer use the term *translation* “to refer to how individuals who speak more than one language convey the meaning of specific words across languages” (273). They suggest that the scope of translation goes beyond literal translation, that is, “to replicate the meaning of a word from one language to another language.” Instead, according to Gonzales and Zantjer, it refers to the “contextualization process of the multilinguals who speak English as a second or third language” (273). Extending this definition of translation, Gonzales proposes in her 2018 book “a revised rhetoric of translation” and describe translation as a multilingual and multimodal communicative activity, rather than as a “automated, mechanical activity” (60). According to this model, translation is a collaborative work in which communities achieve their goals through linguistic, cultural, and rhetorical

²⁰ Many participants use the term *translation* as an exchangeable term with *interpretation* in English when they refer to language-crossing activities. In a similar way, they use the term translator or language volunteer instead of interpreter. This usage suggests that they assumed that crossing languages entails a more complex process rather than literal or functional conversion.

contextualization (58).

This contextualization was observed in the form of informal translation in the Survey Event held at the Korean Community Center for Hurricane Harvey survivors. For example, when I attended the Harvey Recovery Survey Event for the HoAP program in March of 2019, I observed many times where interpreters volunteered to facilitate communication between the officials and Harvey-affected residents. At the table, two city officials faced survey participants. Between them, two translators, Hyesun and Jennifer, facilitated messages. The interpreter-volunteers, bilinguals who speak Korean and English, often asked each survivor who was about to start his or her conversation with mobile team workers: “Do you happen to need help with English interpretation?” Upon their request, these volunteers worked as a temporary literacy sponsor and interpreter/translator. In the following-up observation of the Harvey Recovery Survey for the HoAP program event held in the Korean Community Center, survivors at the consultation table often asked about the ongoing procedure regarding this program. The most frequently asked question was about administrative divisions. Some residents realized that they were considered non-residents as they did not belong to the City of Houston, but to Harris County. This realization frustrated them as several months had already passed without knowing this misunderstanding. The volunteers often explained to attendees why these two different divisions operated the programs separately. For multilingual survivors, the administrative division units, such as district, county, and city, are not familiar concepts. As the federally funded assistance was allotted to specific counties and cities, it is important for survivors to understand where they belong in the administrative systems, based on their zip codes. Often, their survey responses were directed not to the correct agency as the administrative borderline between Harris

County and the City of Houston. I met Taesuk introduced above in this event and he realized that he applied for the City of Houston, which was incorrect, to waste several months while waiting for nothing. Although he was guided to make a new survey response to the Harris County webpage by one of the Mobile Outreach Team staffs, Taesuk and his wife Hyunmi seemed to be distressed to recognize this institutional regulation.

Translation work by the observed volunteer interpreters including Bohee, Hyesun, and Jennifer not only offered literal interpretation between English and Korean but also rhetorically contextualized information and knowledge across cultures and different bureaucratic systems. For example, Hyesun, a volunteer interpreter, often called senior female survivors “mother” (어머니), following cultural conventions in which Korean co-nationals respect older people by using family-related honorifics despite having no relationship by blood. Also, by using honorifics, they softened the institutional official tone, and thus it seemed that this addressing offered an emotionally comfortable mood and affective environment to those who came to this event to seek help while navigating exhausting long-term recovery processes.

Through this process, I would argue that the HoAP survey form became a boundary object. Going back to Budach et al.’s definition, boundary objects are “flexible, in order to adopt different meanings in different contexts, and allow for communication across contexts” (393). Extending Star’s notion, Budach et al. explain that “boundary objects” enable researchers to see the movement of the text. As Bowker and Star note, “Boundary objects are those objects that both inhabit several communities of practice and satisfy the informational requirements of each of them” (297). They highlight the liminal feature of boundary objects: “Boundary objects are thus both plastic enough to adapt to local needs and constraints of the

several parties employing them, yet robust enough to maintain a common identity across sites. They are weakly structured in common use and become strongly structured in individual site use” (Bowker and Star 297). The form of the Harvey Recovery Survey became malleable when translations were integrated into this process and came to serve local needs through translation support. Like participants in Rachel Bloom-Pojar’s study on healthcare workers and patients in Spanish-speaking Caribbean regions, the attendees of this survey event often preferred this cultural-specific, locale-specific, individual case-specific translation and interpretation support to technical language services provided by government websites or request-based over-the-phone interpreting services. The translators I met at this event played significant roles in bringing together the City of Houston and flood-affected residents whose primary language is not English against the imposed norms and monolingual discourses from local, state, and federal agencies (as shown in the original survey form for the HoAP on the digital platform, which was not culturally accessible).

In my observation, I took notice of a wide range of informal translation activities around the survey events and texts, often organized by Korean-speaking community organizers and volunteers who helped survivors as shown above (see fig. 5). This translation was further observed from the government outreach team. In my second observation of the survey event in August of 2019, one of the Mobile Team staffs, Sunmi, provided localized and contextualized information across languages. In a conversation with a Korean-speaking survivor, she revealed that her home was flooded as well and that her family was displaced for four weeks like other survivors in the Korean language. A significant difference was observed between the two survey events. While all of the officials in the first survey event were English-speaking persons, officials in the second survey event included one Korean-

speaking official, Sunmi. Sunmi was a generation 1.5 who migrated to the US with her parents in her late teens in the late 1980s. To survivors who attended this event, she often explained why this actual survey took several months, up to January 2019, to be initiated although the City of Houston was assigned this budget in 2018. She also added that it would take a longer period of time to reimburse people than many expected.

In my observation, I noticed that Sunmi described the administrative processes behind the survey and application processes in detail and in Korean, so survivors were enabled to be more culturally aware of this process and its logistics. In her conversation with



Fig. 5. The Harvey Recovery Survey event at the Korean Community Center, in which copies of the translated version of the fliers, survey procedure information handout, and survey questionnaires in Korean were provided by volunteers.

survivors, Sunmi said in Korean, “Until 2025, this money will be distributed. So, they [city officials] will not be in a hurry. For you, there is no option other than waiting.” This explanation sounds hopeless, but it was helpful to not give listeners a false promise. A more informal and conversational tone was observed compared to other sessions led by English-speaking mobile team officials.

Largely, this event seemed not only to provide information about assistance programs but also to offer an emotional outlet for attendees who are mostly seniors. For

example, I met Kyunghee, who had resided in Houston for more than 50 years, but reported that she barely used English in her everyday life. She ran a business in which she worked with Korean-speaking workers. In her interview, she emphasized her attitude toward English: “I was walled off from English. I really didn’t like English. I didn’t like to do English, which was almost like the devil for me.” Kyunghee added, “Before Harvey, I haven’t experienced difficulties with English. Anyway, we managed our lives without English. But Harvey made me experience challenges. To write a form was so hard.” Mostly senior residents, who came to the US at the request of relatives or intimate family members and became the first generation as immigrants, said that they barely use English and that they were very scared and desperate in these rhetorical situations. Jusun, a 79-year-old survivor, whose house was flooded, also shared her painful emotions. She said, “I am desperate” twice in her interview. Jusun explained, “As I don’t have any income, I cannot get any loans.” She also added that she had felt extremely nervous when phone calls came from government agencies as she was not able to describe her situation due to the fear that she might make mistakes while answering their questions. Jusun opened her black business bags and showed me her manila folder in which she clipped news articles about Harvey from a Korean newspaper. In her collection, the advertising news article about this Survey Event was also included.

The volunteer translators did not limit their roles to literal translation but took roles as cultural brokers. In my observation, I saw that these volunteer translators guided survivors including Taesuk, Hyunmi, Kyunghee, and Jusun, who might feel unfamiliar with this space and welcomed them. Through this process, the survey form became flexible enough to be contextualized, entextualized, and recontextualized in survivors’ literate activities. Particularly, Jennifer, one of the Generation 1.5 bilingual interpreters and community

workers, voluntarily prepared translated copies of the survey questionnaires in Korean. In the first interview with her, Jennifer in her office explained how she translated the survey questions, sharing her computer screen to show me that Google Translate provided affordable tools: “I just imagined some scenarios in the event ahead of time. It struck me that if I interpreted the survey questions for each person, I would be pressed for time. With this idea, I started to translate the survey form. If I pre-translate these questions, they can read and answer them by themselves.” This agentic shuttling between Korean and English and between interpretation and translation, was a carefully devised rhetorical activity. Although she used an automated translator, Jennifer detailed that she reviewed the translated sentences and revised them for appropriate meaning. Their interpretation and translation activities diversified the rhetorical ecologies of the bureaucratic literate system by helping survivors with translingual activities. Like Pott’s studies on assemblage-relations in disaster contexts, my analysis also suggests that translation could change the relationships of assemblages of relations between actors (texts and people) and facilitate textual mobilities. More importantly, this materiality of translated texts and interpreted conversations around the Harvey Recovery Survey as boundary objects “made people happen.” Based on these informal translation activities provided by volunteers, these objects agentially helped multilingual survivors to understand this process, to leverage resources over the long-term process, and to keep them networked with government agencies. These survey texts illustrate examples of boundary objects that are flexible and mobile infrastructures to some extent.

Bonding Objects and Social Media Interactions

Grassroots Community Literacy through KaTalk

In her article “Mobile Theories and Frameworks,” Yi-Fan Chen theorizes a wide

range of roles of mobile media. Particularly, by overviewing numerous mobile media studies, she describes the potential of social change and civic engagement that mobile media has: “Mobile media provide tools for people who have less power to engage in civic activities, although they have less formal organizational structure” (78). It should be noted that the flood recovery process is part of civic activities and risk communication that entail intricate interactions between government agencies and people across age, gender, ethnicity, class, economic status, and other social factors. My participants mostly do not have voting rights as they are not eligible due to their legal status although they have been long-time residents in some cases. Often, they had a more time-pressed life due to resettlement and multiple responsibilities and thus voluntarily and involuntarily alienated themselves from political or social engagements. Or they simply were not aware of how to navigate the voting process. Their contact with government agencies has been limited except for visa or citizenship applications, which is the top-priority bureaucratic process for them. Federal, state, and local agencies often assume an ideal user as an individual who is well versed in business English and computer literate across digital devices, understands administrative terminology, and has procedural knowledge. In the digitally networked era, government and non-government agencies have attempted to broaden communication by diversifying communication channels including social media. They also assume well-established media infrastructures, that is, high-quality broadband environments. Harvey survivors that I encountered were emotionally overwhelmed and explained that during the flood, they often relied on temporary mobile devices and unstable Internet connections and struggled with the government websites’ interfaces and mobile applications. Although those digital environments were touted as facilitators of the recovery process, users have shared their everyday struggles.

Notably, government agencies and nonprofit organizations have used social media accounts to update local news and decision-making processes at the levels of institution and subdivision. For example, FEMA and the City of Houston use three major social media channels, Facebook, Twitter, and Instagram (see fig. 6). However, except for YouTube, my participants often confided that they have never used Facebook or Twitter or Instagram. Although they had accounts, transnational-multilingual survivors often said that they did *not like* or would not use Facebook. This distance gap between governmental social media channels and my participants' social media use pattern is very significant in terms of the lived experiences of users.

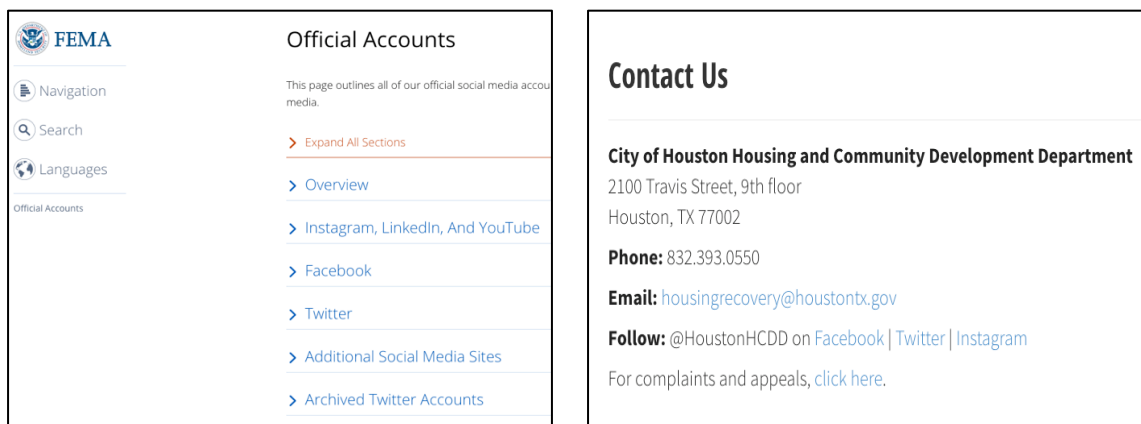


Fig. 6. Screenshots of the contact information pages from the websites of FEMA and the City of Houston. FEMA, directing applicants to Instagram, LinkedIn, YouTube, Facebook, and Twitter accounts (left), and the City of Houston Housing and Community Development Department, introducing Facebook, Twitter, and Instagram accounts (right).

When I started this research, I assumed that I could gather a good deal of survivors' writings about their experiences via computers or mobile devices, including posts on social media or posts on their personal blog. However, my participants often reacted with some tension to my questions about their writing practices. Many of my participants told me that they didn't write anything or that they have changed their phones (at least one in almost all

cases) since Hurricane Harvey hit in 2017. When I carefully approached their collected written artifacts, I realized that they barely did any personal or self-sponsored writing about Hurricane Harvey via smartphone. Rather, in many cases, the participants engaged in transactional, instrumental, functional, ephemeral, and bureaucratic writing, such as FEMA applications, statements to FEMA, or applications for the city program or for other local agencies. They did not consider those writings as “writings.” Many of my participants did use smartphones to use governmental services and to share important local news or data by sending text messages and taking and sharing photos. They did not consider these practices as writing activities as they often assumed writing activities should be done as an individual, creative task beyond mundane and transactional work. They often regarded personal journal writing as a luxury as they struggled with everyday chronic challenges such as application processes, reconstruction, and legal actions, due to a long-term recovery process.

However, to deal with these chronic challenges, they engaged in social writing through mobile networking services. My participants, that is, mostly Korean-speaking transnationals and other Asian Americans, used their own ethnicity-based social networking sites to update themselves about local news and information and preferred preexisting networks for sharing information to using the official social media in the recovery process. It was often the social networking site they have already used and their digital writing practices on mobile platforms that helped them stay updated about local and nationwide news and informed about the recovery process.

Boonsri, a Thailand-born immigrant resident who lost two vehicles and a one-story house because of Hurricane Harvey and the ensuing reservoir release reported that she had not used US mainstream social media platforms such as Facebook or Instagram or Twitter.

Rather, she had used the social media application Line,²¹ as her family members and friends were using that application. Although she had lived in the US for almost twenty years, she was more closely connected to transcultural social media rather than US-based social media such as Facebook or Twitter, as she needed to communicate with left-behind family members. She used Line, an instant messaging application, to send photos and audio- or video-call her family members in Thailand to let them know that her family, which included her son and husband and herself in Houston, was okay and that they were evacuated from their flooded home. She also kept pace with rapidly changing media environments in Thailand, rather than ones in the US. Describing her everyday social media use, she stated:

Previously, I would use Facebook and FaceTime. But now, everybody in Thailand is using Line, everyone is using that app. My family, my friends, they don't use Facebook. [...] My husband uses Facebook, because he needs to get into the Community page book, Facebook, he does not have a Facebook account, but he uses Facebook, there is my name, but supposedly it is he.

This interview excerpt suggests that she had only kept a *functional* connection with Facebook, a mainstream social networking site in the US context. She notes that her husband, a US-born citizen, has used her account as a real user to be updated about their Homeowner Association Facebook page. She states that although she had a Facebook account, she herself has barely used Facebook. Rather, her husband, as a representative of her family, has used her Facebook account to access information about their HOA and local news. She used to

²¹ Line is an instant messaging application that has become prevalent in the Japanese and Southeast Asian market since the late 2010s. The Line application can be viewed as a significant example that shows intricate connections between disasters and social media applications. Line came out in 2011 after the Great East Japan Earthquake of 2011, in order to facilitate sending messages between people in urgent situations in the wake of a disaster.

utilize Facebook before, but then her family members and friends in her home county started using Line. In the interview, Boonsri said: “I use my phone to take pictures and check emails, mostly. During Hurricane Harvey, you didn’t have Internet access. I think a smartphone was way more important than a laptop.” As media scholar Sun Sun Lim notes, people selectively use media platforms and “carv[e] up their lives into multiple discrete social networks, and deploy different media platforms for communicating with each network,” which can be described as “compartmentaliz[ed]” (2181). As her Indonesian participants select Line and Vietnamese participants use Facebook for more “intimate communication” (2181), my participants have used media in compartmentalized ways. In her recovery process, for example, Boonsri was helped by her mother-in-law and by local networks that she built while working as an employee in a food business. Boonsri mostly used Facetime and a short message service (SMS) as major media platforms to communicate with her husband and in-laws located in another state while she used Line discretely to communicate with her left-behind family members in Thailand. This context-based choice of media echoes what Chen finds from her studies: “They develop strategies to control their availability via their mobile devices” (Chen 77). This selective, compartmentalized use of media by Boonsri is also found in other Hurricane Harvey survivors’ communication practices.

Like Boonsri, Hajun, a Korean-speaking Harvey survivor who came to the US three years before the time of the interview as introduced in Chapter 3, utilized different media platforms. In his interview, he detailed his everyday media use, which offered snapshots of discrete applications ranging from US-based mainstream platforms to ethnicity-based social media platforms, including Facebook, SMS, Whatsapp, and KaTalk. His media use reflected his social networks in his professional workplace, which is culturally diverse as

his colleagues came from Venezuela, Columbia, Chile, and other countries, and reflected his everyday social writing practices with his co-nationals in the US and left-behind family in Korea. Hajun explains his different awareness and media ideologies of each platform:

I don't know much about other people, but here [in my workplace] we use Whatsapp.

I think people in my office are mostly immigrants, so maybe that's why people use Whatsapp. [...] I use Whatsapp with my current colleagues or former colleagues, and use KaTalk with Koreans.

His media ideologies are based on material realities and changing digital technologies.

Hajun's case shows a telling example of media convergence, which refers to the observed reality in which users of smartphones, a "highly mobile and social medium," are able to "simultaneously engage in different media forms" (Yoon 228), or what Madianou terms "polymedia" (135-137). Although an affordable medium-rich environment is a precondition of the notion of polymedia, Madianou notes that technical affordances are not the only factor, but part of various factors: "The reason why people choose one medium rather than another, even the affordances they perceive a particular medium as possessing, come much more from the wider social context of their communication rather than the narrower issues of technology and function" (Madianou 137). Citing Madianou's studies, Yoon explains, "The tendency of media convergence exercised by the smartphone shows that a particular communication app is not necessarily exclusive, as switching from one to another is no longer difficult. In this regard, media use has become a transmedia process, which may be better observed in transnational contexts in which users engage with different cultural user communities and technologies" (228). This "transmedia process" was shown in Hajun's use of multiple digital technologies for communication. He has used Whatsapp with his transnational colleagues to

send images and texts. For example, Hajun talked about popular restaurants in his everyday small Whatsapp talk with his colleagues by sending Yelp pages and shared warm wishes and greetings for New Year's Day by sending a Zodiac animal character of the year 2019 to other international colleagues: "We use it for sharing news or pictures or restaurant reviews." He used Whatsapp to send his New Year's Day greetings with a comic pig image, which was the 2019 zodiac animal.

On the other hand, for the co-nationals and members of his church group, Hajun has used KaTalk as shown in the smartphone he shared with me. Like other participants, he had multiple group chat rooms and one-on-one chats. As Yoon notes, there seemed to be no difficulty in shuttling between two platforms. Aligned with Yoon's study, Hajun's case would suggest that transnational-multilingual survivors developed a keen rhetorical sensitivity toward the culturally specific features of each mobile application. As shown in cases of Boonsri and other participants I will describe later, I would argue that rhetorical attunement is enacted not only across different languages, registers, and dialects, but also across different media and information communication technologies (ICTs). This everyday transmedia process mediated by rhetorical sensitivity seemed to be transferred to disaster-related communications. When Hurricane Harvey hit his home that he had just moved into, Hajun actively used his social media applications with keen rhetorical sensitivity. In his Whatsapp, he sent urgent written messages to one of his colleagues in his workplace and let him know about his evacuation status: "My 1st floor was flooded early this morning. [...] We took a boat to a safe friend's house. Now dry." His colleague who already evacuated to Dallas before the storm advised him not to hide in the attic without an axe that can break the roof. Whatsapp enabled Hajun to be connected to other US-born or transnational colleagues. He

said that he came to know that other US-born colleagues or long-term residents were more likely to move quickly to different cities or locations, such as Dallas, Austin, or any other inland cities in Texas, and rely on relatives or rent hotel rooms in advance, earlier than other immigrants like him.

However, it was KaTalk that enabled him to keep conversing about the recovery process post-Harvey and information about possible assistance with his co-national neighbors and church group members through the KaTalk platform. For Hajun, KaTalk messages in KaTalk Group Talks are close to *bonding objects*, which enable him to negotiate his limited agency as an immigrant survivor who might lack local knowledge and networks compared to other American citizens, to resemiotize his resources, and to transform haphazard and spontaneous *data* and *information* into practical *knowledge*. As Budach et al. propose, bonding objects as a third category entail “an emotional involvement” and show “the highest potential of trans-contextuality, their access into new contexts and participant frameworks being the least regulated” (394). While his Whatsapp messages with his colleague were informative yet detached objects, Hajun’s KaTalk messages with his other Korean-speaking neighbors were more enmeshed in empathetic processes (as shown from KaTalk messages such as “So don’t worry about it [the application result] too much” and “I wish you the best of luck [for the inspection result]” from other co-national neighbors and church-based group members). These Katalink messages seemed to create the agentive creations of new contexts in which he and other Korean-speaking neighbors share tactics by emphasizing that “documents” are highly regulated objects by inspectors from nonprofit agencies. (“They [Red Cross] required us to prepare documents, so we are working on them, too”) (see fig. 7).

These KaTalk messages as bonding objects instantiate network-based knowledge making processes that Potts describes. According to Potts, data is an “initial form of content” such as “words, phrases, images, symbols” whereas information is “validated data” created by links between data. On the contrary, knowledge is “information that is shared within the network,” which people used for “repurposing and distribution” (24). Hajun’s KaTalk messages as bonding objects not only transform data into information but also build empathy-invested meaning-making processes while navigating built infrastructures as bounded objects and regulating governing technology embedded in financial assistance programs.

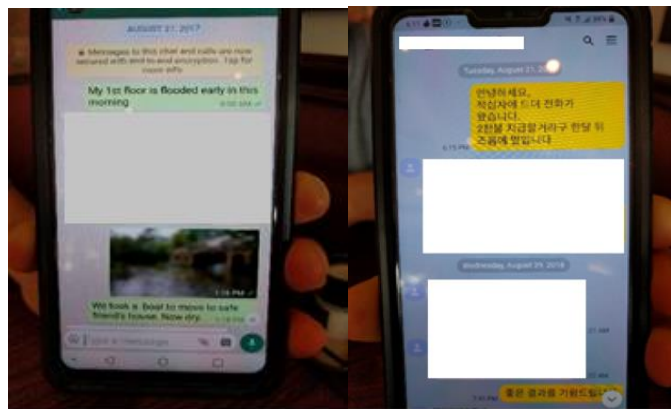


Fig. 7. Hajun’s use of plural instant messaging applications: Whatsapp (left) and KaTalk (Right)

Rescaling Media Ideologies and KaTalkbang Activities

As Hajun’s case shows, social networking sites helped immigrant survivors enact meaning-making processes and facilitate the emergence of bonding objects. Sujin’s family, another Korean-speaking family that was affected by Hurricane Harvey and reservoir releases, also instantiates the role of social networking sites and its connection to bonding objects in the process of disaster recovery. At the time of the interview, Sujin had been living in the US for six years and was waiting anxiously for the result of her permanent resident

application. Due to Hurricane Harvey, her family lost two cars and had the first floor of their house entirely damaged. Although her house had flood insurance, due to the requirement imposed by her HOA after townhouses had frequent hurricanes and floods that occurred before Harvey, this damage created long-term emotional and physical distress in the process of using bureaucratic technology. Particularly for her family, preparations for hurricanes were not in their minds as they had not been exposed to this geographically specific information or to hurricane preparedness discourses. When I sat with her, she turned her opened laptop to me and showed me her folders. Sujin's folders mostly contained her photos, many taken with her smartphone. When she opened her folders, she shared well-organized subfolders containing information from each family member's smartphone. In her laptop, there were four folders named after each family member and each folder contained photos and screenshots from each family member's smartphone, that is, mom's phone, dad's phone, Charlie's phone, Brian's phone, and so forth. In her photo folders, she collected copies of code enforcements, claim records, photos of disaster recovery center signposts, snapshots of the walls taken to prove the floodwater level, and pictures of duct taped or temporarily sandbagged door frames to block water and seal the doors.

Particularly, Sujin and her family members collected many photos to prepare themselves for future insurance claims. In her article "Records as Genre," Catherine F. Schryer states, "The genre of record keeping has a host of textual, cognitive, and social consequences both for the discourse community that uses it and for those who interact with or are influenced by that community" (206). Sujin's archived folders demonstrate this genre of records for adapting to the complicated modern governing technologies of government agencies (FEMA, SBA, etc.) and corporate entities (home insurance, house insurance

companies, etc.). This record shows part of adaptive rhetorical activities shaped by interactions with the discourse community, that is, rhetorical activities of replicating, storing, categorizing, and archiving in the process of adapting to diverse sets of textual objects, including disasters, insurance, and institutional discourses.

Beyond communication tools, smartphones were used for various rhetorical purposes. As Genevieve Bell notes, “They [smartphones] are more than just technologies; they are sites of cultural production” (44). This statement and Sujin’s performance through KaTalk echo Selfe’s definition of technological literacy again. For my participants, smartphones were not considered simply as a functional tool. Rather, they were recognized as an important *sociotechnical* literate tool for capturing, sharing, and archiving information, accumulating knowledge, and shaping bonds with other survivors. In the aftermath of Harvey, these sociotechnical roles were more intensively extended into collective grassroots activities for their post-flood survival, which should be based on local, geographical, and cultural specificity. Of course, smartphones functioned significantly as an instrumental tool, “a technological hybrid between a mobile phone and computer with Internet capabilities” (Platt et al. 2211). As Bell notes, however, “The mobile nature of cell phones creates new opportunities for location-based services” (49). The interview with her suggested that KaTalk served as a news channel, blurring borders between formal news and informal local channels. Sujin shared the main page of the KaTalk app. Then, she shared her first writing on Harvey. Four days after the flood occurred, she started documenting the daily situations and flood damages she faced.

Table 3

Sujin's Writing Practices via Smartphone

| | |
|------------------------------|---|
| On Friday, Aug. 25, 2017 | First KaTalk message about Hurricane Harvey was delivered from one of her co-nationals. |
| On Sunday, Aug. 27, 2017 | First KaTalk message about flooding was delivered from one of her Korean-speaking neighbors |
| On Thursday, Aug. 31, 2017 | In Korean, she wrote a journal entry by using a Naver (a Korean-based online platform) Memo application: "Saturday night. It rained heavily and on Sunday about at 10 a.m., the first flood started: water came up to the height of the top side of the foot. On Sunday night, it rained again. Flooded again. But the water drained away in the next morning." A photo was attached to this entry. |
| On Thursday, Aug. 31, 2017 | On her screenshot, she kept a Google Map, which showed available apartments and their pinned-down locations. |
| On Thursday, Aug. 31, 2017 | She screenshot Korean newspaper pages (KaTalk edition pages) which covered the rescue by volunteers of Korean community members |
| On Thursday, Aug. 31, 2017 | The NOAA satellite image that overviewed her townhouse complex. She circled her house with red ink by using the image editing tool and sent it to her left-behind family members to inform them of her situation. |
| On Thursday, Aug. 31, 2017 | She screenshot another Korean newspaper page, entitled "Dams will be released until September 20." |
| On Friday, September 1, 2017 | She collected news articles on reservoir releases by the Army Corps of Engineers through KaTalk. |
| On Sunday, September 3, 2017 | She captured a KaTalk message that included a Facebook posting by a FEMA inspector. |

While pointing out a screenshot that she shared with neighbors, Sujin explained how she checked on the water height of the reservoirs through mobile applications. After she learned that the reservoirs would be released, she started to use that application to document water levels from the graphs. In her screenshots, she preserved National Oceanic and Atmospheric Administration (NOAA) photos, satellite images, and water levels from applications. In her interview, she opened her "Flood Damages" folder and explained the

transactional values of those photos for evidence-based insurance claim procedures. All in all, she seemed to value informal, contextualized, personalized data from KaTalk messages rather than formal, institutional information directly drawn from the websites:

We used smartphones a lot. [Pointing to a screenshot of the Facebook post entitled “I am a FEMA Inspector”] This is about FEMA. An official who worked for FEMA posted to Facebook, saying that he was a FEMA inspector and recommend that those who were affected by Hurricane Harvey could follow this way, this step, etc.

Someone shared his Facebook posting. At that moment, nobody knew what to do, how to do anything, so we just shared this kind of information.

Here, I noticed that through culturally specific social media, that is, KaTalk, she contacted Facebook postings. The KaTalk message from one of the group chat rooms, which were improvised post-Harvey by Korean migrant communities, let her resemiotize the procedure of the FEMA organization and a local insider’s perspective.

Particularly, I paid attention to the screenshot records from Sujin’s KaTalk. While looking at her archived screenshots and KaTalk messages, I noticed that she had used smartphones and mobile applications for various purposes. Her remarks about her emotional and physical attachment to the smartphone suggest that her smartphone played a role of nonhuman actor, “having qualities well beyond their technological functionality, that they are in some sense imbued with an agentic, positive presence by their ‘owners’” (Gourlay 496). She sent photos from satellite images by NOAA and other websites to her left-behind family to show what situations she was experiencing at that moment (see table 3). Pointing out the photos she took by smartphones, which showed the water height in her living room and cars with car insurance documents, Sujin explained, “Mostly, I took photos of my cases for

insurance companies and later FEMA. Smartphones are good at saving and sending something.” Smartphones as highly mobile devices were beneficial for her to arrange and coordinate things and resources:

When we first got out of our house, we did not bring our laptop, we used smartphones. When we were being displaced, we used smartphones. When we got out of our house, we just brought smartphones, chargers, passports, and underwear, well, these are all the items we brought. As smartphones and chargers are essentials, we brought them with us ((laughter)). They were equal to passports, ((laughter)), equal to something like underwear... If we have a blackout, we would not be able to charge our smartphones, so we ordered the kids not to play with YouTube or with other stuff...It [a smartphone] was so important... in the most urgent situation, we thought what we would really need was smartphones as we could do anything like listening to the radio, contacting others, taking photos, etc.

Particularly, it was a series of numerous KaTalk messages that emerged in Sujin’s digital artifacts. She stated that she was informed that the hurricane was coming by KaTalk messages from one of the co-nationals. In her interview, she described her media ecologies: “We don’t watch TV news, because we don’t have TVs. We just check on [news on the Internet], but do not watch TV. My husband listens to NPR when he drives to his office, though.” She further elaborated on how much KaTalk was useful when her family needed to decide whether they should evacuate or not:

We’ve heard that a hurricane was coming. But we didn’t check the news on TV, you know. Someone gave us a KaTalk, saying “Hurricane is coming. I am buying water.” So, we checked the news and then we realized that a hurricane is coming. So, we

came to know that not through news media, but through a KaTalk message from a Korean neighbor. We thought, do we really need to buy something? But when we went to a grocery store, the water had already run out. Anyway, we tried to prepare ourselves. But Friday, there was no rain, so we thought that news was wrong. But on Sunday, water came into my friend's house, so they started to evacuate. At that time, our home was okay, so we told them [her friend's family] to come to our house. But at 7 [a.m.], the floodwater started to come in. At 11 [a.m.], the water came in again and drained away. The water drained, we wiped the house out and dried it out. But the third flood was so severe.

After the third flood affected her home, her family came to rely more on news media. Her husband believed only official sources about the evacuation process. Her husband, who was checking radio news updates, claimed that they would be fine as their neighborhood was not included in mandatory evacuation areas according to FEMA or other government agencies. She explained:

You know, people in other neighborhoods were already evacuated. But a news article said that our area was not under mandatory evacuation orders. If we knew that we were in an area that was to be flooded, we would have moved our cars at least. But we just looked at that news story and thought that it might be more dangerous to get out of the house as we'd just heard about a woman who drowned on Brompton Road [a fictitious name] due to the flood. So, we decided to stay on the second floor.

As she explained, Sujin's family was very scared by news about a person who had drowned on a neighboring street due to a flash flood. Because of this concern, her family decided to remain at home and kept themselves on the second floor for more than four days after the

water came in on Sunday. In her interview, Sujin strongly suggested that it was an irony. Her husband spoke English fluently and firmly relied on news including NPR and local TV news, but she suggested that information from news channels led them into more serious dangers and loss of property. Because this main news told them that other areas were under mandatory evacuation but their area was not included in that mandatory order, Sujin's family believed that they would be safe despite a reservoir release. In her interview, Sujin said that the reservoir release was not reported on the news:

We listened to the news, you know, my husband speaks English fluently. While listening to the news in English, we decided to stay inside. No news media [in English] told about it [reservoir release], but an acquaintance who belonged to Cross Life Church [a fictitious name] told us about *Kongbyeongdan* [a translated term in Korean, equivalent term to the Army Corps of Engineers]. Did you know that *Kongbyeongdan* had supervised the dams until then? Anyway, the news said that now they were going to open an uncontrolled release, but they didn't tell us how much the bayou water would go up or down.

Instead, she came to know about the reservoir release through KaTalk interactions with her friend who belonged to a Korean church.

But she [her friend on the KaTalk] said that one of the Cross Life Church people where she belonged informed that he checked on the Army Corps of Engineers' website and was told that serious reservoir water was being released. So, she told me that he [a member of her Cross Life Church] checked the Army Corps of Engineers' website and advised that we should evacuate right away. So, we managed to get out with just our passports and underwear! The news was not all perfect. The news

didn't say that we had to evacuate. Later on, we were told that our neighborhood should be evacuated. We did not want to leave the house, but white people in a boat were coming to US We intended to stay inside, but when the boat came to us, we went outside.

For Sujin, the information about the upcoming hurricane was not delivered by news channels in English. Rather, it was conveyed through KaTalk. For her and other participants, KaTalk played the role of translator and mediator. KaTalk messages from other co-nationals in her neighborhood were the most important channels where they noticed local problems, that is, reservoir releases and the need for urgent evacuation, and discussed regional problems such as natural disasters and ensuing decision-making processes in their built environment. In her interview, she described her KaTalk communication as more effective and beneficial for them than other official or mainstream media channels such as NPR or news stories, which her husband used. She further explained how she used a wide range of communication technologies in the aftermath of Harvey:

The funny thing is that it was mostly women told me that really worked. It was faster than the [mass media] news. Those women used Korean and people helped each other. Yes, that is why we are supposed to live together in a society. I hardly use other SNS, but use KaTalk. Or I got some information from the Korean newspapers. Or my husband listened to something and got some information from radio news. Sometimes his company gave him information. I know I should read newspapers [in English] more, but I hardly read them.

Here, she foregrounded contrasts between official news channels and news through informal-local-cultural mobile media applications. Although she acknowledges the importance of

traditional media news channels in English, saying “I should read [English] newspapers,” she demonstrated her embodied experience in which informal channels such as KaTalk and local newspapers in *Korean* were faster and more crucial. She even slightly made fun of her husband’s media ideology in which he believed official news in English was superior to other local word-of-mouth news. Sujin explained that after some experiences, she had more agency in assigning her husband to certain tasks, such as applying for various financial assistance, after she gathered information by using her local informal co-national network often obtained through KaTalk. She seemed to acknowledge that formal and governmental information is important, but the most effective way of *approaching* this information is not through news channels in English but through news in Korean. She had a positive attitude toward her agency in shaping informal knowledge by collecting this word-of-mouth data, not validated yet. For example, information about the *Kongbeongdan* and official information about financial assistance such as FEMA and SBA were gathered by herself through KaTalk, and then she helped her husband, who is more fluent in English, to initiate application processes.

Even she distrusted government officials as she said that their decision-making processes are not congruent and depended on cases and contexts. Sujin explained that local Korean news was also delivered through KaTalk, rather than through paper editions: “In my KaTalk, I have a news app. Every week I look through KaTalk, I read it at my convenience...I don’t read various sources of newspapers, but this Korean newspaper is useful as it has pages with telephone numbers [of stores run by Koreans or other ethnicity-oriented websites].” Her KaTalk messages and the artifacts she archived supported what she said in her interviews. She kept multiple images that she had exchanged with her neighbors and friends: a home photo from above by the NOAA satellite, added with her editing tools

(red circles to point out her home location in the image) and shared with her left-behind family members; a Korean newspaper featuring the reservoir release news; and the Bayou water level graph, provided by NOAA apps and captured and shared by her friend through KaTalk (see fig. 8).

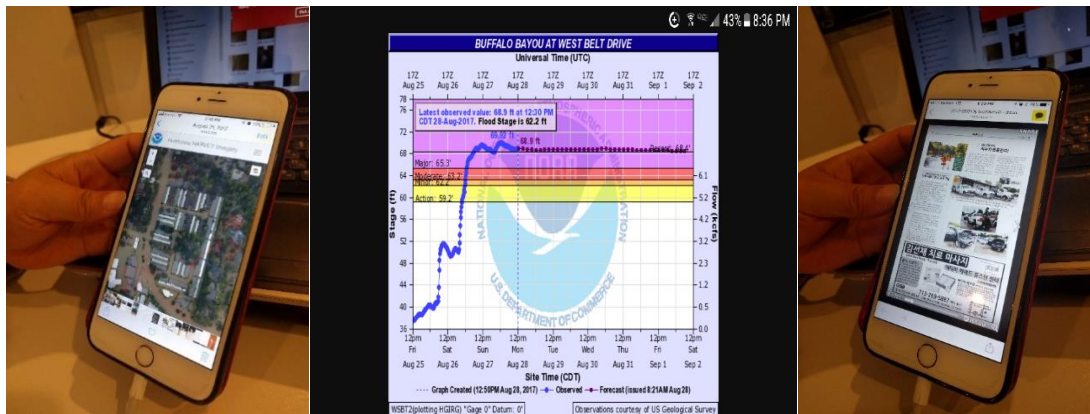


Fig. 8. Sujin’s digital artifacts show her use of KaTalk and other apps. NOAA images shared through KaTalk (left and middle) and Korean ethnic newspaper in KaTalk edition (right).

Going back to Budach et al.’s typology of objects, the KaTalk messages can be interpreted as bonding objects as they are flexible, transcontextual, and mutable for resemiotization. While some data were disregarded as fake news circulated on SMS or KaTalk, other data were often validated as information and knowledge in group KaTalk windows. In the context of post-disaster recovery, KaTalk applications provided group chatting functions in which Harvey survivors who speak Korean as their primary language or home language or second language share information, experiences, emotions, and expertise. These group chat rooms were called *KaTalkbangs* or *DanTalkbangs*. In Korean, the term *bang* means a room and the term *dan* is an abbreviation of the word *danche* that means a “group.” Almost all the Korean-speaking participants in my study used KaTalkbang (DanTalkbang). While the elderly participants Jusun, Taesuk, and Hyunmi, except for

Kyunghee, said that they did not use KaTalkbang to check for flood-related local information, younger participants preferred Instagram, a more US-based platform to KaTalk²², other adult participants pointed out that their own KaTalkbangs created by other Korean-speaking co-nationals were crucially helpful right after Hurricane Harvey hit, and they felt confused about all the disaster-related terminology and systems. These KaTalkbangs are created in cultural layers, in which those who have common subcultures, beliefs, and attitudes share information. Interestingly, this group chatting room, that is, KaTalkbang, was not limited to first-generation immigrants. Often, those who have transnational ties, such as second generations, participated in sharing their information and in answering people's questions. My participants said that those second generations often translated and added explanations about unfamiliar words and systems:

We had a KaTalkbang. You know, we didn't know at about anything at all [about how to deal with this hurricane]. How do we get *Ramen* or other food from the community center? How about mold treatments? How about other assistance, like from the Realtor's Association, Red Cross, Korean communities, church communities? In our [KaTalkbang] group, we had some construction workers who spoke English, and people like second generations responded to questions from people [in KaTalkbang]. Koreans who belong to the Cross Life Church and speak English fluently also helped people.

In this group, I observed grassroots translation practices among people who have different

²² In his interview, Brian, Sujin's son, an 11th grader at the time of the interview, a generation 1.5 who came to the US with his parents at the age of 9, said, "For me, KaTalk is too hard! I don't know why." His main social media platform was self-reportedly Instagram, because for him it is was easy to edit and share photos, and more importantly it did not archive photos or messages when he posted them on Instagram Stories, so that he didn't have to worry about the potential risk of revealing his identity.

English proficiencies and immigration histories across generations. In her interview, Sujin frequently mentioned that her social networking significantly affected the whole procedure. Interestingly, she described how they collectively gathered Hurricane Harvey-related information through KaTalkbang and how KaTalkbangs as digital platforms facilitated translation practices.

KaTalks as Knowledge-Making Processes and Bonding Objects

Like Sujin, Beomsoo, an immigrant who migrated to the US about 15 years before the time of the interview, significantly employed instant messaging applications to navigate the recovery process. While conducting a follow-up interview with him, Beomsoo shared his smartphone pages, which include more than fifty applications. His smartphones pages are very well-organized, demonstrating his everyday activities, from e-Bible to driving to travel to other platforms, and social media ecologies. Self-reportedly, he had created an account for almost all social networking services (SNS) to test out their user experiences for leisure, including Facebook, Band, Twitter, and Instagram. Although he self-reportedly used Facebook, Beomsoo showed distrust about this major platform in the US:

I had a Facebook account, or other SNS accounts that American people have had, but basically Facebook is designed to show off, saying “I am this kind of person.” “I am happy-happy”! Real information on Facebook is usually set up to be shown only to the owner himself in the privacy setting.

This remark echoes the term “Facebook fatigue” (Yoon 224) or “digital fatigue (qtd. in Yoon 224). Many of my participants including Sujin and Beomsoo explained that they are not “social media persons” anymore or identified Facebook as a space to show off oneself to others. These remarks echo the perspectives of one of the participants in Yoon’s study: “On

Facebook, I am supposed to promote myself in public. Sometimes, I think that is childish, though” (224). Yoon explains that his participants see Facebook “as a space for narcissistic selves, passive lurkers and insignificant acquaintances” in which communications “might not necessarily facilitate genuine human relationships, but might rather promote shallow relationships” (Yoon 225). Like Yoon’s participant, Beomsoo points out that a “happy-happy” person shown in Facebook’s posts does not reflect people’s own reality. Overall, scholars in media studies and technical communication indicate that social websites and digital application tools have contributed to knowledge-making processes. For example, a *Telegraph* news article in 2008 draws on Leysia Palen’s statement: “Instead of rumor mongering, we see socially produced accuracy” (qtd. in Bloxham). As shown in many social media studies, scholarly attention has been limited to Facebook or Twitter, US-based platforms that are often considered by my participants to be inauthentic or and non-applicable to them. The cultural, social, and materialist approach of the use of social media reveals that my participants rely more on their own language-specific, culturally specific social media rather than traditional media sources or even mainstream social media platforms. It is noteworthy that disaster survivors, particularly those who use a minority language, demonstrate rhetorical strategies to consciously adopt an effective or appropriate medium in rhetorical ecologies, reflecting what Gershon refers to as “media ideologies” as explained in Hajun’s and Sujin’s cases.

Beomsoo and his family have experienced hurricanes multiple times. Although his home was not directly damaged by the flood except for damage to the roof and garage, Hurricane Harvey led his family to different experiences, including providing shelter for other displaced families and being displaced for more than two weeks themselves. While

KaTalk helped Sujin's family to decide whether they needed to evacuate or not and to get information about financial assistance, messaging through KaTalk was more important for Beomsoo's family in order to get information about the road situations in his neighborhood area and to secure resources for the families they were hosting during Hurricane Harvey. For about one week, he hosted four families, eight adults, including a pregnant woman, and six children. As a host, he wanted to buy some essential food items such as milk for the children that were sheltered in his house, but the main news media did not provide local information. He wanted to check on whether a neighboring road was opened or blocked due to the flood. He noted:

To get some milk, I wanted to know whether a store was open and if it had some milk or not. TV [news] channels delivered limited information. What I really wanted to know was what was going on in this area. To be honest, other areas were out of my scope, as I was in need of information about which areas in my neighborhood were flooded. My church group was here. Information about this local area, which I was looking for, was not on TV news, I had limited information.

Soyeon: Why do you think you felt limited in terms of information?

Beomsoo: We don't have access to that kind of information.

Like other participants in Chapter 3, Beomsoo had difficulties in negotiating his identity in the new environment after quitting his job in Korea. In the first interview, he said that originally he had no background information about Houston or American life. He wanted to join local, English-speaking groups of US-born residents in Houston (for this reason, he had avoided joining any Korean ethnicity-based groups for the first ten years) but did not find enough opportunities. His first home in the US was located in one of the eastern states, and

he said that he did not consider Houston as a home. For him, this city was just a temporary location for his spouse's professional career. He said that he was not well aware of geographical or cultural information about Houston and felt isolated: "It turned out that I had nothing after living for ten years. I was not able to make any meaningful communities for my kid. So that's why I approached Korean communities. However, after joining a church group which was based on the House Church system, a small family group of faith, in which he took a role as the leader of multiple families, Beomsoo started to build his professional identity and ethnicity-based cultural community.

If they are rich, well-informed people, they can just fly away. But for me, I just stayed here. Speaking of that, I was tied due to my social relations with the church group [...] Limited sources was the problem. The channels through which I got information were limited, so I cannot trust all the information from them... When it started raining and we were not so sure whether we could go to the grocery store, we could not get any information until we actually tried it out. What if we go into the water, drown, and are lost? We have limited sources, so it is quite right that we should stay together. The shelter, the big convention center, was not an option due to the rumors... something like sexual harassment. Some people who were staying in the center avoided going to the restroom due to this kind of situation. We couldn't trust police enforcement.

As shown in this interview excerpt, Beomsoo repeatedly pointed out social inequalities in resources. According to him, some affluent people have personal resources to avoid this situation. On the contrary, less privileged are more exposed to the potential dangers in the disaster recovery process, as represented in his concern about "sexual harassment" issues,

although he acknowledges that it should be untrue. According to him, local news media was also biased in reporting the reality, favoring downstream areas and other economically modest areas or other ethnic communities. His areas were not covered in the news media. He stated:

You know, Hurricane Harvey affected not just specific areas, but Houston as an entire city. Our damage was upstream, but at that time damages were more serious in other areas. Thus, the media focused on those areas, so this area was alienated from news coverage. After a few days, water had drained from those areas but had risen in this area. But still the media didn't cover this area.

This critical awareness in media coverage was a more developed narrative. He shared what he heard from his church community. He further shared a rumor that Greenville was sacrificed to protect a more affluent area located downstream.

Many people said, Greenville [fictitious name] was a scapegoat. It [reservoir release] was done to protect big mansions downstream. I know it is a conspiracy, definitely. Bayous flow to the downtown, you know. There are three channels for release, they didn't open the channel that flows to the downtown. Instead, they opened the second channel to this area, that's why people initiated a lawsuit [against the Army Corps of Engineers].

Beomsoo's experiences explained that social networking services, particularly an instant messaging application, KaTalk, and group chat room tools helped them to make the decision to evacuate, and to find information about financial assistance, as shown in Hajun's and Suin's cases. However, what his case shows is that this mobile application helped them to check the context of the reservoir release beyond the technical reasons or what Lindahl refers

to as the “urban legend” (141) around reservoir releases. Beomsoo stated:

While moving to my displaced location, I noticed that where the water overflowed a lot, the state military put sandbags. I’d heard people say that while passing reservoirs, so our doubts were growing. But the media didn’t talk about it at all, so we had more doubt.

This “doubt” helped his church community to be more keenly networked and united to help each other. Beomsoo explained how KaTalk and messages through this platform served as bonding objects for him:

We had our own original *KaTalkbang*. In this *bang*, we share the content of prayers. We are supposed to get together every week, so we set up a time. We are close to a quasi-family, we call them *bang*. Also, we have [KaTalk]*bang* for group leaders. There are 190 individuals in total. But this number is too big to communicate with each other [...] So five or six leaders (couples) are grouped together. There are several of those *bang*. One person in one of those *bang* said, “I returned from the grocery store!” Then it became information on this social media platform. So, people started to say, “We can share our eggs and milk.”

It is noteworthy that Beomsoo and other people used already established media platforms, that is, KaTalkbangs. By using one of these KaTalkbangs, which were previously created in their everyday faith-based lives, they shared local Hurricane Harvey-related information that was not covered in mainstream media, information such as details about the reservoir release and resources such as essential food items. By organizing collective and translocal networks across the city, their KaTalkbang served as a platform that filled the information gap. More importantly, in this KaTalk-mediated communication, they not only shared data or

information but also produced knowledge and enacted faith-based grassroots reconstruction activities. This informal network was utilized through localized technologies, that is, KaTalk, an instant messaging app. Through this process, various KaTalk messages served as knowledge-producing components and rhetorical actions that created on-site and impromptu organized actions. These themes strongly emerged in Beomsoo's interview:

At that time, we had a [KaTalk]*bang* maximum for 500 people. If someone notified us that an area needed recovery, [the church group] people rushed to that area. As a small group of 30 or up to in 100 people, people just worked together in turn at damaged houses. In the beginning, people didn't know how to gut the house, but after having one house done, people started bringing appropriate tools, yes, we did..., and after several days, we accumulated some knowhow and we became professionals! We did work for each house, and later on people from other churches and from other areas came to join US

Beomsoo continued describing the messages created in this *KaTalkbang*: "To this address, please come to at something something p.m. Prepare yourself with something something [some items including food and tools for reconstruction]!" According to him, this message caused various people, including female church group leaders who were living in unflooded places, to bring snacks and food such as Gimbop, sandwiches, and other Korean food. He attributed this well-organized series of actions to the pre-existing group network and leadership that firmly supported this informal network: "Actually, we had nothing to do as the floodwater didn't recede right away. We had lots of people. We already had a helping mind as we had very ingrained devotion to our faith." This KaTalk-mediated grassroots activity suggests that transnational-multilingual survivors are rhetorically sensitive and have

developed locale- and culturally specific communication tools and media infrastructures. Contrary to the Hurricane Harvey-related media coverage, which often portrayed survivors as powerless people who disengaged themselves in the recovery process, these object-based approaches highlight how transnational-multilingual survivors interacted with KaTalk as bonding objects. Budach et al. note that bonding objects have the ability to “flow freely across contexts” and move across different contexts, while “reinforcing the stability of meaning of the mobile object” (Budach et al. 394). As a bonding object layered with sedimented meaning, *KaTalkbang* messages seemed to help the “horizontal social relations” between actors tighten with affective and emotional engagement and ease social disparity in the disaster recovery process through literate grassroots activities.

Extending Budach et al.’s transcontextual analysis notions, I would argue that bonding objects make people act. Their shared information, that is, translation-mediated information, let them understand their places locally and culturally. In this case, as described in other disaster studies, transnational-multilingual survivors do use social media writing extensively, but not because of language deficiency or lack of media platforms. Rather, they rhetorically chose application platforms and transform the already existing semiotic spaces (hierarchical organization for facilitating faith-based meeting from the pastor to the church group leaders to laymen) into local information-rich places and finally knowledge-producing sites, such as how to gut houses, how to take out sheetrock, how to prepare items for reconstruction work, and how to protect oneself from mold. In this site, objects move across “joins” in the trajectories, making people move and become *naturalized* rather than *reified* (Kell 92), in contrast to FEMA application objects.

Chapter Conclusion

My participants, people who were linguistically and culturally distant from traditional mass media and mainstream social media, seemed to be often excluded from government-to-citizen communications. This chapter has focused on network relations with special attention to the mobility and circulation of textual objects. The textual objects that the participants addressed often alienated them from circulation. When the textual objects were immutable, fixed infrastructures, participants had fewer choices to remediate and resemiotize them across modes, languages, and registers and had often been confined to specific modes and genres. As a result, participants were often excluded from receiving information, and from participating in decision-making processes.

As I wrote this chapter, I was constantly contacted by Tweets from AlertHouston, about regional thunderstorms and hurricanes through my smartphone. One of the messages said, “Cameras outside the @Space-Station captured views of #HurricaneDorian at 11:28 am ET as it churned over the Atlantic Ocean. With winds of 145 mph, the storm may approach Category 5 hurricane status, according to the National Hurricane Center” (August 31, 2018, at 1:18 p.m. on my smartphone). This message was helpful in updating me about the potential disaster and its hazard. However, this common Emergency Alerts technology administered by the City of Houston might not be *natural* for some groups, such as multilingual survivors or senior survivors who may have difficulties in subscribing to the alert system and checking it through websites and emails. As shown in the interviews, in many cases, language minority communities do not often see the value of maintaining Facebook or they have never used Facebook. Although many studies have focused on social media writing practices (Madianou; Pigg et al.), this emphasis might not be applicable to

people from other cultures. Unlike Pigg et al.'s participants, my interviews with transnational multilingual survivors did not demonstrate this "ease of use" architecture. My participants did not see affordable connections between Facebook or other mainstream social networking sites and disaster recovery. Rather, the information distributed through those sites was often resemiotized or remediated through their own culturally specific instant messaging mobile applications as shown in Sujin's case.

As Lauren Marshall Bowen rightly notes, digital literacy scholarship has been biased to majorly focus on adolescents, college students, and young adults. However, this chapter shows how elders interplayed between different media such as print and digital literacy (the FEMA application form completed on the FEMA website and a typed, printout appeal letter to FEMA as shown in Taesuk's case). Although this chapter resonates with Bowen's argument that scholarly attention to elders' literacies is much needed, it might qualify her argument as my elderly participants were more confined by limited time, a language difference, insecure legal status, and gaps in social media channels in the context of the disaster, as opposed to Bowen's participant, the eighty-one-year-old woman who graduated from college and acquired literate experiences as a typist in business workplaces in the US. My elder participants' literacies were often not transferrable to the US and particularly in the environment of the recovery process. While it does make sense that "some youth find little difference between mobile and face-to-face communication" (Madanmohan 3), Korean-speaking and other transnational families still often doubt the value of mainstream social networking sites. My participants were mostly not active Twitter or Facebook users, and the challenges they faced were barely foregrounded among other citizen survivors or not included even in media coverage of other immigrant groups or undocumented survivors. This

fact encourages us to see the discrepancies with Madianou's participants, migrant Filipino domestic workers located in the UK, who are "always on" the digital platforms such as Facebook via smartphones which "make accessing the web an integral part of everyday life which doesn't even register as a distinct state" (Madianou 674), or from other digital studies which mostly have focused on middle-class adolescents or young adults.

In her networking between diverse circulation studies within writing and rhetoric studies, Laurie E. Gries argues, "As we address such infrastructural concerns with how information flows via the Internet, we must pay attention to the institutions, systems, and structures that made data circulation possible" (20). This chapter's materialist perspectives have demonstrated that literate infrastructure and technology that enabled textual objects to circulate undergirded the recovery process and that these textual objects had three different types across participants' cases.

1. Bounded objects (as shown in FEMA website applications/ghostwriting): The participants did not move to new ICTs or "domesticate" or "tam[e] the wild" (Haddon 312) new technologies in the recovery process. Rather, they brought their own everyday ICT infrastructures such as mobile applications for disaster-related communications. However, their preexisting ICT infrastructures, such as culturally specific or linguistically specific applications, had not been recognized as official social media platforms, while Facebook, Twitter, and Instagram were used as official social media communication tools.
2. Boundary objects (as shown in translation materials by community organizers): Immigrant residents' ICT infrastructures were often not congruent with what government agencies had provided and publicized, which means that multilingual

survivors have less accessibility compared to those whose social media tools had fewer gaps from mainstream social media such as Facebook, Twitter, and Instagram. Their use of social media is compartmentalized (Lim). What my analyses demonstrate is that although their media are plural, multilingual survivors' media use are very selective in the context of their culture.

3. Bonding objects (grassroots activities organized by smartphones and participants' mobile application KaTalk): My participants used social media, but they often kept ambivalent attitudes. Their KaTalk activities were often scaled down as "word-of-mouth" or non-validated data and scaled up as accurate information and localized, contextualized knowledge, which would not be accessible through mainstream media. It reminds us of the young adults' "micro-coordination" (103) or "practices of coordination" (108) in Pigg et al.'s study of ubiquitous digital literacies, in which college student participants often not only arrange things and materials in social interaction and social formation but also "organiz[e] 'things' that matter to them within the contexts of the goals, identities, and domains that are meaningful to them" (108). These bonding textual objects made them access information and shape local knowledge via collective remediation of data about recovery assistance from government agencies and of multimodal images such as maps and weather graphs. These objects rhetorically called to action to enact people's grassroots recovery support by employing the already existing social media spaces, that is, KaTalkbang and inviting new members beyond the established members.

Disaster communication scholars have paid attention to circulation studies and network analysis, with a focus on social media ecologies such as Twitter and Facebook (Potts).

However, my participants, whose first language is not English, have not regularly used Twitter or Facebook for everyday information technologies. In the beginning of this research, I assumed that they relied mostly on social media and messaging apps. Many participants, however, said that they sometimes went offline for in-person communications when they needed to hire construction workers and to share information with local co-national neighbors. My transcontextual analysis of the digital textual artifacts from the participants shows that their media infrastructures were often compartmentalized. My participants often suggested that they did not like Facebook or Twitter as those channels reflect non-authentic things. Mostly, it was observed that my participants contacted their co-nationals through faith-based group *KaTalkbangs* or other group KaTalks and shared local news, particularly news about financial assistance programs and disaster-related resources, in the post-Harvey recovery process.

It should be noted that the FEMA application materials as bounded objects illuminate understudied phenomenon such as proxy writing or collaborative writing, in which language minority survivors leverage resources and cooperate with other English-speaking residents by using personal networks. In the context of the disaster recovery, a proxy (a ghostwriter) can be a grown child, grandchild, neighbor, child's in-law, community center worker or official, or any ad-hoc co-national person who can listen, speak, read on behalf of them, and even offer tacit knowledge and practically fill out the form, considering their specific situations. As shown in Kyunghee's and Taesuk's cases, transnational-multilingual survivors have often engaged in collaborative or proxy writing processes in which their ethos is not an individual one but a collective one. Their proxy writers, her daughter-in-law and the mother-in-law of her daughter respectively, demonstrate that their writing materiality and

technologies, which are linguistically, culturally, and technologically distant from mainstream ones, are not fully envisioned in governing technologies devised by government agencies.

Commonly, for them, taking photos, screencapturing documents, and collecting others' photos and writings are activities of recontextualization and resemiotization. Copying, faxing, archiving, taking photos, moving files from smartphones to computers, and organizing photos from each family member's perspective are examples of textual mobilities and resemiotization processes to meet requirements from government agencies. They were well aware of the fact that these ephemeral documents would be required as literate evidence for the bureaucratic procedures. These senses were strongly embedded in their mundane lives as they have often navigated other application systems, such as applications for food stamps, healthcare insurance, and permanent residency cards. This resemiotization occurred when they transformed ephemeral literate fragments into strong literate "documents." Today's "documentary society" (Smith) requires participants to be more efficient organizers, mediators, and coordinators of improvised and emerging networks. Through these bounded objects, multilingual survivors' agency was qualified and limited, and texts were often immutable in many cases.

Participants, however, devised rhetorical activities through social media and transcultural texts (boundary objects and bonding objects). This affect-laden disaster experience was mediated through transcultural instant messaging applications, which helped them compensate for gaps between their lives and governmental news and geographically specific knowledge. This gap can be called the *recovery divide*, as those who are already familiar with digital literacies and social media are more advantaged, compared to those who

are not familiar with these media ecologies or environments. Participants navigated chasms between water ecologies and media ecologies. However, this textual flow does not treat people equally. Textual objects, infrastructures, and local networks facilitated their flows or slowed down the flows. This argument attempts to dismantle dominant narratives that language minority communities are powerless, so that they remained less agentic victims in the recovery process. While breaking down this typical assumption, this chapter, instead, has shown how transnational families have leveraged their grassroots translation activities and social media platform to enhance their recovery processes while it also foregrounds that material and textual objects including bounded objects, boundary objects, and bonding objects circulate. These flows of objects and things disrupt and facilitate their movement at the same time. The digital divide or information gaps are compensated and negotiated, but it is also worth noting that some participants had more cultural, financial, and emotional challenges due to unequal support distribution. This recovery divide should be also noted. Through this culturally specific digital application, multilingual survivors dismantled typical media ideologies and shaped grassroots activities for their recovery process by employing translated materials as boundary objects and using existing social media platforms as bonding objects.

Chapter 5

Conclusions and Implications

In March 2019, after one and a half years passed since Hurricane Harvey, Mei, one of my participants, invited me to a family event she organized. For this event, people were supposed to have light food and cheer the kayakers when they paddled by her house on the nearby bayou's edge. For her, the bayou was one of the main attractions for buying this house, located at the edge of a downstream bayou. It indicated that her house was close to *nature*, nature in the midst of an *urban* landscape. However, this attraction also brought unexpected damage; her four-story house was submerged for more than a week and she lost her newly renovated house. When I visited her for an interview for the first time a month ago in February 2019, I hardly saw any traces of the flood inside her home. Instead, her living room quietly overlooked the bayou through large glass walls. After a while, I realized that the bayou across the glass was still muddy and messy with flood remnants. At the end of the interview, she invited me to an event for watching kayakers row bayou streams and told me that she also invited not only friends and other parents from her child's school (including me) but also her neighbors, who were also stricken by Hurricane Harvey, to her house.

Mei's story was different from the stories of my Greenville participants I described in Chapter 2 and 3, that is, from people who lived in a one-story house or condominium close to upstream bayous and reservoirs. I interpreted this invitation as her attempt to reclaim her right to the landscape and make a closure of the taxing recovery process she experienced after Hurricane Harvey. Mei also attempted to transform this event into a social one in which she tried to restore the vibrancy of her neighborhood, which was affected by Hurricane Harvey. Although her house was not insured for flooding, Mei managed to navigate the

process by using her knowledge about institutional languages and transactional processes and returned to her house after a three-month reconstruction. Mei's experiences while living for thirty years as a member of Generation 1.5 in the US and working as a professional seemed to help her with this process. In some cases, my participants returned to their normalcy within about a year as in Mei's case. In many other cases, however, the process was prolonged and lacked a sense of closure, which triggered affective responses like forgetfulness, avoidance, silence, pauses, laughter, and a burst of tears. Focusing on a marginalized community as framed by disaster management studies, urban studies, and new media, this study reveals the *complexities* in a suburban area where incoming immigrants shape communities under textual and scientific governance.

Overall, my empirical findings let me argue that in a documentary society, in Dorothy Smith's term, a textual scientific management works as a technological apparatus in the recovery process of disaster. I argue that in this scientific management-driven recovery system, immigrant survivors, particularly for whom English is not the first language, have been marginalized in the recovery process. In this chapter, I will overview and synthesize my findings with two foci: a) rhetorical scaling, rescaling practices, and translocal materiality; b) digital writing practices that facilitated their grassroots translingual practices and translation activities. Based on these findings, I will suggest implications in terms of theory, praxis, and pedagogy.

In Chapter 1, I focused on new environmental threats to immigrants, which are rapidly growing due to global flows of people and goods, human geographical agency and footprints, and the growing complexity of environmental risk management. Accordingly, I argue, literacy scholars should address not only their social networks, economic changes, and

affinity groups, which have been important as responses to the rapidly increasing trend of migration, but also their environmental responses and lived experiences in their physical and geographical reality, particularly in the context of literacy networks and what Smith and Schryer refer to as “documentary governance.” Chapter 1, thus, starts with questions about how texts flow among various sites in the aftermath of a natural and technological disaster and how people navigate, shape, and reconstruct literacy networks. Chapter 2 illustrates methods and my positionality that is constructive with the notion of the community in this study. Chapter 3 focuses on transnational-multilingual families’ lived experiences, language ideologies, and translanguing practices. Chapter 4 illustrates the networks through institutional languages and the participants’ texts with a focus on textual movements: bounded, boundary, and bonding objects.

My research shows that transnational communities deal with very local, geographical problems through translocal networks and collective transactions, which are not fully recognized by government agency and policy makers. Social media writing facilitated creating bonding objects and suggested emotional, affective, mutable, and flexible processes, in which transnational-multilingual survivors could navigate temporary shelters, tacit information, and organize grassroots translanguing practices and *ad hoc* translation and physical support to deal with situational challenges to each family in the aftermath of a disaster. These bonding objects such as instant messages on applications facilitated by culturally specific social media make a stark contrast with bounded objects, with which the participants had struggled. The FEMA forms might be considered transcontextual documents as they can travel beyond the original site. However, those forms were embedded and fixed in the online platform and it was not easy to translate them in culturally specific situations.

Some important information was only accessible through the mainstream social media including Facebook, Twitter, and Instagram, which were rarely used by the participants in this study. Unlike these forms, bonding objects were shaped through translingual and often grassroots translation activities. Also, these bonding objects promoted activist agendas in which people across different locations, religions, and situations gathered their participatory actions for rescuing, gutting, and asking about assistant information and emotional mental health. Thus, these objects play multiples roles including functional and emotional ones. What these three objects clarify is the translocal materiality and circulation of transnational ecological literacies.

I demonstrate this argument through stories from thirty participants who have been entangled in struggles due to unequal social systems and textual infrastructure often based on the monolingual paradigm. However, they also enacted various tactics including ghostwriting, improvised local networks, solidarity, social media writing, and mobile applications to contest this English monolingual paradigm in their disaster mitigation. I highlight how immigrants' language ideologies have affected their geographical identities and move my research foci to digital platforms and immigrants' digital literate practices including grassroots translation activities and social media application-based communications. This argument, however, does not intend to add another type of literacy. Rather, this study offers a nuanced understanding of communications in the context of the disaster recovery process, which is heavily controlled by environmental and material conditions. Based on this understanding, this study suggests implications of how human agency needs to be reconfigured. I explored migrant survivors' agentive activities in doing translingual practices and tactics. However, their agency was qualified not only in social

constraints, such as limited application time and bounded textual objects, but also in material constraints. For example, as shown in participants' interviews, moldy walls as material constraints often urged them to negotiate and compromise between their situations and an ideal recovery procedure.

Indeed, this flood was a *natech* disaster that hit one of the most diverse transnational and neoliberal cities. Its relief system was embedded in the preexisting neoliberal agenda. The mayor's media release on August 25, 2018, published one year after the hurricane, entitled "Mayor's Interactive Message to the Public on the 1-Year Anniversary of the Hurricane Harvey Floods" demonstrates this nexus between neoliberalism and disaster. After Hurricane Harvey, civic planning and drainage projects, such as the ReBuild Houston program, propelled by neoliberal urban planning, were proposed. In this media release, the mayor states,

Immediately after the storm, I said that we were going to **build forward**, not just build back. That is a mantra our municipal departments have taken seriously, and is seen clearly in the work that has been done to update our building codes and floodplain management regulations...The first changes take effect next week because in April, the City Council approved my plan to change the way new and reconstructed homes must be built in the floodplain. Moving away from the 100-year floodplain as a guide, future and other structures must be built at least two feet higher than the 500-year flood plain to make them better protected from rising waters.

The "ReBuilding" or "building forward" movement does not revise the overall technological facets in this disaster, which are the ecological considerations subsumed under economic profits. The recent Climate Action Plan created by the City of Houston is not the exception. It

is implied in the corporate advertising of their greenwashing projects. In another media release on September 13, 2018, “City of Houston Launches Climate Action Plan, Mayor Turner to Address Global Climate Action Summit,” the mayor states: “After three 500-year floods in as many years culminating with the largest rain event in North American history, climate change is an unprecedented challenge for Houston. Sustainability and resiliency go hand-in-hand and this plan is essential to the health and *economic vitality* of Houston’s future. The time for bold action is now” (emphasis mine). According to this media release, the Climate Action Plan devised in 2018 and implemented in 2020 will enable Houston to be a city of “sustainability and resiliency.” Again, these statements reveal that this type of “climate action” serves the “economic vitality” rather than political reconfiguration, environmental justice, and ecological approaches that reconsider the relationships among different actors: human beings, nonhuman beings, linguistically and racially stigmatized groups, economically modest families, seniors, and other minoritized communities. All in all, these statements reflect the fact that government agencies consider this disaster an opportunity for another development, rather than a chance to reconfigure social and material relations, particularly inequality, in an age of rapidly growing environmental disruptions.

Government agencies, including the Army Corps of Engineers, the county, and state agencies, have ping-ponged their responsibilities and accountabilities about the delay of assistance and unmet timelines of the homeowner reimbursement program HoAP. Particularly, in 2019, when the tension between survivors and civic agencies increased due to the delay of HoAP assistance, the state agency, the City of Houston, and consulting companies started to blame other agencies for the delay and unmet needs of survivors. The developers and realtors who prevented local, state, and federal laws from protecting buyers

from floods and other environmental risks have obscured their responsibilities in this ping-pong game. For example, although Youmi's house was located on the fringe of the flood plain, she was not aware of it at the time of purchase and did not buy flood insurance. Rather, her subdivision was touted as a desirable area close to a park (the Addicks and Barker reservoir areas are mostly marked as parks on maps) in which residents could maintain a healthy lifestyle while balancing urban and green lives. However, what my participants shared suggested that this ping-pong game held off their recovery process and overburdened survivors with distress.

Many technocratic and governmental discourses assume that this mitigation process gradually dwindles away, and at the same time those discourses attempt to publicize the city as a city of sustainability as shown in the media release statements. In my observation, I can see the repetition of these discourses from civic agents, such as in the phrase "One City Build It Forward" on local officials' badges and uniforms. Those phrases repeat in different words the mayor's point of "moving forward." However, my research shows that for some survivor groups, the impact of the disaster remained intact without losing its density, intense feeling, bodily reactions, and other material effects. My study suggests that the participants had ingrained language ideologies and English perfectionism, and this English perfectionism and hierarchical language ideologies are often propelled and fed by the notion of an ideal neoliberal subject, a socially constructed self-governing subject whose well-being is often "sacrificed" to the economic market-based growth (Brown 83). Often, my participants considered perfect English a tool or technology in governing themselves to pursue an ideal migrant subject as shown by Minji, Dahee, and Sujin in Chapter 3. This English perfectionism ideology was also extended to their recovery process as shown in these

participants' interviews when the participants often described lacking "perfect" English as the most significant factor in the aftermath of the flood.

My study thus reveals that they were embedded in social structures and neoliberal ideologies in which well-oiled disaster mitigation or development-based risk reduction discourses are presumed. These post-disaster discourses forced them to "move forward" without getting appropriate support. The development discourses, such as "ReBuild" projects or "build forward" in the media release of the civic agency, and resilience discourses, such as "Houston Strong" in corporations-sponsored advertisements, have compelled them to be resilient and move forward, and this force does not account for marginalized communities. In my field notes, I wrote about a moment in which Sunmi, who worked as a part-time mobile team member of the community outreach department for HoAP survey events, helped me grasp this gap between civic and corporate discourses and the reality of a migrant survivor:

For me, it seemed that this multilayered organization demonstrates a good example of the neoliberal system of the modern bureaucratic process. When I talked a bit about the complexity of the FEMA organization, Sunmi nodded, suggesting that I repeated what was already too evident, and said, "It is designed not to be legible." This is a convoluted structure in which government agency such as the city and the county administration hired a consulting company, then this consulting company hired disaster management company workers. The participants were forced to be patient until the officials contacted them without a clear timeline or clue. Although they [my participants] came to understand this structure, there was no other option for them to take. Only waiting for the call. They were also struggling to understand the administrative division. Some residents applied for this homeowner program, but

sometimes they were redirected to go to Harris County as they belong to Harris County not to the City of Houston. This administrative division frustrated them, wasted their time, and as a result, they became more resistant to applying for other assistance opportunities. For example, Taesuk said, he didn't know until then that his home belonged to Harris County not to the City of Houston although he visited this event three times (Field notes, August 10, 2019).

This observation also shows how techno-scientific management is combined with neoliberal governance, that is, prioritizing technologies of cost-effectiveness such as standardizing contingent labor in the recovery process of disaster. In these management systems, the political and ecological agendas, that is, rethinking relationships between human and nonhuman beings, are upstaged by the economic gains of a few privileged groups. My participants said that the officials that they met at the Disaster Recovery Center or even the Outreach Mobile team were mostly part-time temporary employees under a contract and worked on a digitally automated assembly line. Many times, the participants who met FEMA officials and inspectors were directed to the same automated digital platforms. That organizational structure, digitized systems, and the officials (including *outreach* teams) were not able to offer practical help to the flood-stricken people because their jobs forced them to standardize without using local knowledge and flexible thinking processes, which is similar to what Brown et al. describe as digital Taylorism (65).

My participants were also aware of this neoliberal force and reacted to it in strategic ways. Beomsoo stated that he came to realize that the FEMA inspector who visited his damaged house came from California and that he tried to serve her well as she was a part-time worker with a heavy workload at that time: "I waited for her [the FEMA worker]

patiently. How can she be here on time when she has traffic? I served her a glass of cold water when she finally came and did my best to genuinely treat her as a guest. In a way, they came to this place, the place troubled by a disaster.” This open space between these governmental contingent workers and my participants suggest new approaches to disaster mitigation in the multilingual reality. Indeed, the state and municipal organizations demonstrated inclusive reformations as shown in their website pages in multiple languages (five language translations) and outreach programs. However, these organizations were not fully aware of the translocal materiality, the materiality of many language minorities’ translocal lives. Their lives still remain invisible in media releases, civic discourses, and the city’s rebuilding through urban planning.

Rhetorical Scaling and Translocal Materiality

My research contributes to rethinking stereotypical narratives, bifurcated between victimization discourses and resilience discourses, which often mystify the lives of migrant communities. What I call transnational ecological literacies in translocal materiality refers to grassroots discourses, culturally specific, empathetic, bottom-up vernacular tactics, which are often overshadowed between these two narratives as a response to unequal reality in the disaster recovery process. In this dissertation, I heed two material specificities of this flood disaster.

First, this study attended to the linguistic diversity of the city: Hurricane Harvey marked a critical turning point in disaster mitigation in terms of communication and language and the writing of everyday people. It not only provoked a wide range of different genres and forms, including ghostwriting, but also shed light upon automated technology in disaster literacy. Lacking local networks and culturally specific information, transnational-

multilingual survivors navigated their processes through informal aids and informal literacies. Enduring inequality in which their minoritized language was not valued as a resource, my participants shaped communities of practices across age, gender, religion, and socioeconomic factors. My research shows how they leveraged their resources across sites, languages, modalities, and national and cultural borders as translingual subjects. They exhibited mixed language ideologies toward informal literacies as shown in Hajun's word *guidongnyang* (begging for information or learning by ear). This informal literacy was gathered from co-nationals from his faith-based group and from his neighbors with other linguistic and cultural backgrounds. In their rhetorical scaling, however, Minji, Dahee and her husband Jaewoo, as well as Hajun, Youmi, and Steven, demonstrated their own rhetorical scaling to contest the monolingual paradigm. These practices led them to shaping translocal or adjacent identities. For Minji, rhetorical scaling was shown as a voluntary withdrawal to quickly move back to normalcy by refusing the state power and by accepting the forceful flow of the documentary process from FEMA assistance to the SBA loan process. At the surface, it might seem that they succumbed to or complied with the bureaucratic procedures. However, after completing the interviews and coding processes, I came to realize that Minji's withdrawal of her FEMA application was a demarcation of her agency, although it was qualified by the institutional force and the force of her physical displacement.

The FEMA news release of January 18, 2018, states that "[s]torms don't discriminate and neither does FEMA," saying "our promise is to treat everybody equally" ("No Discrimination"). However, the disaster often imposed a boundary between immigrants and US-born citizens (Remes 57), which foregrounds legal statuses ranging from citizenship to permanent residency to undocumented statuses to refugees to temporary workers, or other

symbolic markers such as being deportable or not. This was implied in Dahee and Jaewoo's case. Dahee and Jaewoo did not prioritize their FEMA application because obtaining a sustainable legal status was more important to them. Based on their experiences in applying for permanent residency, Dahee and Jaewoo suggested that they thought that the legal status process might be affected if they pursued governmental aid or financial assistance. What I discussed in Chapter 3 adds the point that government documents are often blind to the specificity of those who lack legal citizenship. Often, the disaster recovery forms, including the FEMA form, were not fully sensitive to culturally different conventions and knowledge about other legal statuses. Some might say that these technical documents should be succinct and clear. In many of the cases I studied, however, succinctness created uncertainty, complexity, and anxiety rather than clarity or affordance, as shown in Jaewoo's case with his FEMA form. To answer the questions on the governmental form or document, Dahee and Jaewoo needed to sacrifice the complicated trajectories of their evacuation and details of their situations. This sacrifice of situated details is also commonly shown in other participants' stories.

Hajun's rhetorical scaling is complicated because while he values informal information, he disregards its legitimacy. Rather, he uses transactional writing (charting, logging, and archiving), which is one of his repertoires in his workplace, to contest the misrecognition of his FEMA document. Mostly, Minji, Dahee and Jaewoo, Hajun, and their families place Standard American English as the highest and most privileged form (as they acknowledge that Standard American English is not easily adaptable or mutable) although they heavily relied on other survivors or information from informal community-based networks. As Hajun acutely notes, FEMA officials and other civic officials do not believe

survivors, that is, their narratives and even the reality observed by them. Rather, they believe *documents*. My participants already understood this digital Taylorism embedded in the process based on their previous experiences in processing documents, including permanent residency and job-seeking applications, and based on encounters with officials in the aftermath of the flood. This recognition led them to rhetorical scaling and shaping what Rice terms adjacent identities rather than expecting a full recovery or emotional belongingness. Unlike Minji, Dahee, and Jawoo, Youmi and her husband Steven showed sensitivity to what Lorimer Leonard calls rhetorical attunement by using interracial relationships, informal support, and rhetorical sensitivity to other ethnic groups such as Spanish-speaking communities. This was illustrated when Youmi lined up to apply for food stamps and Steven explained that “Black English” is a more crucial resource in his everyday life. For skilled professionals or those who came to the US in their teens or had worked in an interracial environment, multilingual resources seemed to be equally valued.

Second, digital literacies and social media writing emerged as significant practices in the recovery process. What Smith and Schryer describe as a “documentary society” became more multilayered and complicated with technological changes, particularly changes brought by mobile devices. I chose three *joins*, in which I observed textual mobility and fixity at the same time and traced those textual objects to show the materiality of literacy. The data discussed in Chapter 4 shows rhetorical agency, in which participants choose appropriate cultural brokers, use rhetorical strategies such as ghostwriting, and adopt media platforms. The elders, including Kyunghee, Taesuk, Hyunmi, and Jusun, showed that they relied on ghostwriting or other culture and communication brokers. Using my field notes and interviews with these senior survivors, I point out how the lack of language access and digital

access affected their rhetorical activities and how they mobilized tactics to address the boundedness of the text. Through the notion of boundary texts, I analyzed pre-application survey texts and government web sites and contrasted technical translations and what Ellcessor refers to as “cultural accessibility” enacted by grassroots and ad-hoc translation activities of community workers. Minji’s reactions to the translated materials on the website indicate that these technical translations are not so useful but are superficial masks behind which the government agencies tout their multicultural approaches or comply with the federal law for equal rights. In her interview, Sujin also shrugged off the potential possibility of language interpretation services as not helpful, sharing her experience in dealing with insurance companies:

It is not really comfortable. I had a car accident. When I made a claim and asked for a language service, as I felt that although my English is not really bad, it might be helpful, so I told them over the phone, “I speak Korean.” Later on, a language interpreter called me, but they really looked down on people. For example, when I described the moment when I had the car accident in some detail, like something something, they cut in and said, “Hey, it is not what they asked, just answer what they asked only” [...] So I told myself, which side are they on? My answer was, they are on the side of those who give money to them [the insurance company].

However, we can see how transnational-multilingual survivors’ unmet needs led them into rhetorical scaling (Chapter 3) and digital literacy (Chapter 4) in which they create grassroots translation activities and shape flexible networks for rescuing, what I consider a form of digital activism. Smartphones as mediating objects, or as what Madianou calls “polymedia,” enabled them to shape social networks. Based on these social networks and media ecologies,

they created a dense solidarity within preexisting social groups but also across ages, genders, religions, and socio-economic statuses. By using grassroots translations and using smartphone applications with other co-nationals, they navigated transactional writing and other coordinating tasks. Although the government websites provided translation services and information about language services, they lacked what disability scholars refer to as “cultural accessibility” or “access intimacy.” Often information on the official website was translated when people volunteered in creating announcement flyers in Korean as shown in Bohee’s case. This grassroots translation activity created boundary objects through which people were more informed about the next possible disaster assistance and related events where people could access the pre-application survey texts. These translation activities were more culturally sensitive to these immigrant survivors. Often they interpreted tacit knowledge about the process, as shown in Sunmi’s case in which she, as a part-time civic worker, explained the complicated process behind the bureaucratic language.

Unlike the elders, Sujin, Hajun, Jiyun, and Beomsoo actively use social media, particularly mobile application-based communications: Sujin’s one-on-one communication with her co-nationals through KaTalk, an instant messaging application; Hajun’s versatile skills across different applications such as Whatsapp and Katakalk; and Beomsoo’s solidarity and local networks shaped by group chats called KaTalkbang show all these features. Hajun, a skilled professional, used multiple applications and different media platforms between the US-centered Whatsapp and the Korean language and culturally specific Katakalk. For Jiyun and Beomsoo, KaTalkbangs, preexisting faith-based group chats, enabled their community members to organize ad-hoc groups that helped other survivors with the recovery process. These transmedia processes and adaptations of culturally specific social media writing

guided them to shape activism and a new concept of citizenship as I will explain.

Emerging Digital Activism and a New Citizenship

This emerging digital activism, that is, an activist movement enacted through digital platforms, was demonstrated in this study in the form of grassroots translation activities and improvised volunteer work for the disaster recovery process of transnational-multilinguals through social media. These social media-based digital practices suggest a new notion of citizenship and environmental or geographical identities. In his 2016 work on working-class disaster survivors in the progressive era in the early twentieth century, historian Jacob A.C. Remes explains:

Where the state emphasized managerial and technocratic knowledge, working-class disaster survivors shared what they had learned informally. Where the state increasingly thickened borders, survivors built transnational and diasporic politics. Where the state centralized and built hierarchy, survivors preferred solidarity and mutual aid. They were not always, or even often successful, but working-class survivors subtly created a new form of citizenship for a new era of governance. (20)

Based on this finding, Remes defines “disaster citizenship” not as a “program” but as “a set of themes expressed in a series of contestations, negotiations, and compromises” (196), based on “networks of solidarity and obligation” (4). While my research participants vary in terms of their class and ethnicity compared to subjects in Remes’ study, I see that this new notion of citizenship, what he called disaster citizenship, emerged in my participants. This process is aligned with participants’ emerging disaster literacy.

After this disaster, many participants tried to readjust their relationships with locales or reinforce their preexisting beliefs about the environment. For example, Hajun took up a

reflective stance, in which he demonstrated his concern about climate change at the planetary level. On the other hand, Minji demarcated her identity in her locale; she said that she would never be an American even after this disaster and seemed to be concerned about her children and about the invisible segregation lines between white residents and children of other immigrant communities (“I am okay as I can’t catch the nuanced discrimination by others. But my kids can do that [as her kids who were born in the U.S. and use English as their primary language can understand those nuances]”). Although they take different approaches toward local identity, citizenship, and environmental agendas, my participants, as an environmental justice community, commonly shared their critical awareness of the vulnerability they felt every day, regarding racially micro-aggressive environments, and of their unequal situations in the era of growing environmental changes.

One of my observations instantiates this notion of new citizenship as less bounded by legal status and more contingent on people’s *practices*. I was invited to a “Candidate Meet and Greet” event at the Korean Community Center organized by Hyesun before the municipal election in October of 2019. This event was organized for the first time and seemed to address the invisibility of this ethnic community as a language minority group. Although two years had passed, Hurricane Harvey was an active topic of the candidates’ speech. In the speeches of five district candidates and twelve mayoral candidates, Harvey was mentioned to attract Korean Americans’ attention and emphasize their sympathy. At this event, I observed the civic engagement of my participants, Hyesun and Sunmi, who are community workers. They were trying to make Koreans or Korean Americans visible in this political event and shape a collective identity with power. Almost all candidates running for the positions of mayor or council members were trying to appear as if they had genuinely

invested effort in designing better infrastructure to prevent floods in the future. Some candidates started their speech with greetings in Korean while others emphasized that they well understood the severe damages Koreans and Korean Americans had suffered in this area. One candidate emphasized that he himself was a Hurricane Harvey survivor. In a way, Korean community members tactically leveraged this disaster to make interventions in managerial organizations and municipal decision making. Hyesun strategically used this opportunity to bring candidates to the community center and maximized this opportunity to use their voices as a flood-stricken community to influence an election.

In their 2017 article, Rachel Meyer and Janice Fine propose “grassroots citizenship” by doing case studies of DREAMers in which undocumented immigrants act like citizens even though they lack formal political rights” (323). They argue for a new approach to the notion of citizenship by “prioritiz[ing] substantive citizenship over formal rights,” for “citizenship is very much a *practice*” (323). They add, “The active citizenship of the most marginalized, perhaps ironically, presents as more robust than the usual weak political participation of the average citizen” (Meyer and Fine 329). Similarly, in the article “Remaking Urban Citizenship,” Michael Peter Smith and Michael McQuarrie refer to a new approach to urban citizenship, perceiving it as “a growing movement that specifically claims a ‘right to the city’” and this claim aims at “mobiliz[ing] people on the basis of propinquity and membership in a more legally amorphous community than the nation-state” and “tends to privilege multiple modes of belonging beyond legal citizenship and place of birth—such as work, residence, and civic responsibility—as the bases of claims to rights and citizens” (3).

As mentioned in Chapters 1 and 4, my participants are likely to have less political power and have been limited in participating in decision-making processes due to their non-

citizenship legal status or their lack of knowledge about voting processes or due to emotional resistance because they think their votes will not be able to make visible differences as they are minorities even when they have citizenship. However, these community workers' grassroots activities seemed to bring out a new notion of citizenship. And disaster literacy in the recovery process seemed to enable this community to reclaim the right to the city and the right to language.

In other words, in my observation, my participants started to speak up about their right to sustain well-being and to make informed choices about their local environment. This right to the city ranges from renting or buying houses with an informed situation to not being discriminated against because of their race or difference in citizenship or language during and in the aftermath of a disaster. Also, this right extends to the right to communicate with civic officials without being affected by discriminatory management. These findings suggest that institutional scientific management systems should protect the right of those who have non-English languages or so-called limited English proficiency in their institutional terms to effectively communicate with officials. Although it was agonizing, this disaster helped Korean-speaking communities create a critical turning point to leveraging their resources and voicing political power, albeit limited, that is, lacking grant funding and limited translation or interpretation support beyond my improvised volunteering.

Implications

Implications for Transnational Literacy Studies and Disaster Communication

Based on interview and observations, my participants are presented in this study as multilingual survivors who enact translingual practices across languages and modalities, negotiate meaning-making processes, and keep reconstructing their identities (Canagarajah,

“Transnationalism and Translingualism” 45). At the same time, they are engaged in everyday transactional writings in the local context and these exigencies push them into struggles, particularly for non-skilled professionals or those who had less experiences in working in a professional setting and lacked local networks.

Based on these findings, I suggest implications for scholars in migration literacy studies and environmental communication and professionals in organizations in disaster or risk management. My study suggests that migration studies, particularly transnational literacy studies, should think more about the “materiality of place” (Miraftab 217). As regional planning scholar Faranak Miraftab argues in her ethnography on a county located in the Midwest and their transnational migrants working for meat-processing companies, “In stressing the social construction of space and the formation of cities in relation to the broader structures of capitalism, that emergent urban scholarship has paid little attention to the materiality of its subject matter” (217). Transnational approaches to community-based literacy studies have helped to broaden the understanding of social spaces and their literate practices in social inequality. However, this social turn might have been overly stressed and have overshadowed the materiality of place. Scholars in transnational literacy studies should focus on what the meaning of dwelling in the place or living in the locale is for migrants in the context of day-to-day transactional communicative activities and how migrant populations deal with local problems. Migration studies have investigated the emerging networks across national and cultural borders and currently are pressed to further adopt materialist and ecological approaches to the local environment.

Another theoretical implication of this study is related to the relationship between translingual practices and translation. As shown in the four case studies in Chapter 3,

transnational-multilingual survivors' everyday translingual practices were often misrecognized and even unnoticed by institutional agencies. My participants, in fact, are competent in translingual practices and leveraged informal literacies including translocal networks across different contexts, languages, and modalities, although the degree of these movements varies from participant to participant. However, they were often represented as limited English Proficiency and English language learners particularly as shown in Minji's and Dahee's cases, rather than as agentive users with diverse resources. The institutional approach to these language minorities are often based on monolingual ideologies. This view is reflected on government websites in which literal, neutral, and decontextualized translation is provided. As I discussed in Chapter 4, transnational-multilingual survivors' translingual practices across languages and modalities on a daily basis are distinctively separated from translation service provided government agencies.

In analyzing multilingual writers' translingual practices, the field of rhetoric and composition has begun emphasizing the importance of paying attention to power differentials and structurally stratified systems (Gilyard). This study extends current criticism on translingualism by foregrounding the imposed constraints and monolingual norms in the disaster recovery system and a traditional view of translation, which is neutral and culture-blind, observed in institutional agencies, particularly in government websites. My participants' creative and agentive communicative activities in the disaster recovery process including translingual practices, rhetorical scaling, rescaling practices demonstrates a "pushback on translation" and tension-filled relationships with translation that "exerts a centripetal force which manages polyphonic voices, mitigates differences, and enforces semiotic order" (Baynham and Lee 42). My findings in this study suggest that translingual

practices or translanguaging should be more meaningfully integrated in translation materials provided by local, state, and federal agencies. As Baynham and Lee states, “translation encompasses substantive and nonsubstantive translation, with intermediate gradation,” and “whereas substantive translation may (but need not) preclude translanguaging, nonsubstantive translation is largely coextensive with, and at times undifferential from, translanguaging” (45).

Extending current scholarship that has explored the relationship between translanguaging and translation, my study further implies that more contextualized approaches to translation are needed in power-laden discourses such as bureaucratic literacy and disaster recovery resources. Translingual scholars should also examine the creative ways of materializing translingual practices into outcome-oriented translation works, particularly, outside of the academy because “translation [...] is also an institution, or perhaps a set of institutions with the discourses, regulatory mechanisms, ideologies, and practices that go along with being an institution” (Baynham and Lee 33). For example, I wonder, how disaster preparedness discourses, disaster recovery information, and bureaucracy-based application forms mandated by institutions can be better translated if we “giv[e] translation a translanguaging turn” (Baynham and Lee 35). It is worth imagining how the FEMA website and its application form for disaster assistance programs can be translated into more culturally sensitive discourses with a understanding of translingual practice or translanguaging or with a revised rhetoric of translation (Gonzales). Concrete ways of bringing the dynamic, creative, and fluid features of translingual practices or translanguaging into translation should be more examined, particularly in high-stakes literacy such as translation in disaster risk communication.

In addition, civic professionals in environmental communication, disaster management, and health communication should also adopt a more culturally sensitive way of communicating beyond providing technical interpretation or translation service and offer more channels of communication. My participants often informed me of the fact that they did not know about the presence of this type of language service on government websites or they did not often use this service although they knew about it. Whenever they were repeatedly directed to other web-based platforms, survivors seemed to have more distress and be traumatized as shown in Minji's and Hajun's cases in which their misrepresented information about the flood insurance recursively entangled them in the onerous bureaucratic burden.

In a more long-term perspective, government agencies could transform their program and service into a more sustainable one. For instance, they should hire more linguistically and culturally diverse workers under a more sustainable contract. The FEMA inspectors, officials in other government agencies, and nonprofit organizations with multilingual and racially diverse backgrounds should be more accessible. Also, digitally automated or digitized systems (Eubanks) might discriminate against those who are not familiar with this online platform, including senior survivors. Other application channels for financial aid should be provided for the survivors who might struggle with Internet Access or who are not competent in using a digital platform including emails, FEMA websites. As I discussed in Chapter 4 with my participants' stories, disaster relief application processes should be more approachable and be helped in-person by professional agents equipped with a more diverse, multilingual, and inclusive perspective. In a similar way, social media channels should be more diversified beyond mainstream platforms including Facebook, Instagram, and Twitter.

My findings from transnational-multilingual survivors' narratives can offer

implications for various fields: technical communication after the recent social justice turn (Walton et al.), scholarships of the rhetoric of health and medicine (see Hannah and Arduser for the history of this emerging scholarship) and online health communication in communication studies (Koerber and Still), and disaster studies, particularly disaster risk communication with a focus on social media platforms in other scientific fields (Shittu et al.). The ongoing conversations in the aforementioned fields tend to expand to a more ethical and sustainable paradigm in terms of usability and organization design and have the potential to consider translation activities and translanguing practices in disaster survivors' daily lives and their communication with public authorities and officials.

Implication for Writing Classrooms

These findings from transnational-multilingual communities led me to envisioning new perspectives on college student writing in the era of rapid environmental change and to suggesting implications for rhetoric and writing teachers and scholars. It should be noted that undergraduate students have been excluded from environmental rhetorics or disaster discourses as much as many transnational-multilingual community members have been. Like language minority groups, young adults in secondary education and post-secondary education are facing more environmental changes at the levels of locale and planet but lack political power in decision-making processes. Practically, college students have the right to experience the process of making new policies and reforming preexisting policies to keep pace with climate change, and this lack of agency of undergraduate students, particularly young adult students, should be attended. In this sense, students in education sites also constitute an environmental justice community. Teachers and scholars in place-based education and ecocomposition pedagogy have focused on networking classrooms and

communities and enacting students' agency. In the remainder of this chapter, I will present examples that this study can imply for higher education to better integrate translocal materiality and transnational ecological literacies. I suggest implications for the teaching of composition and rhetoric in higher education, migration studies, and disaster communications.

By using his own experimental example Nebraska Writing Project Rural Institutes, Robert Brooke explains that beyond decontextualized general skills for academic writing, writing instructors should further develop place-conscious writing. However, what differentiates his approach from other place-based writing pedagogies is that he tries to embrace the complexity of diverse communities with growing international students and others who might feel (dis)connections with places not felt by native-born students. As he states, "Very few of us [writing instructors] now live and work in our community of origin" (148). Questioning a tendency toward delocalized and decontextualized identities in higher education, Brooke states, "Throughout this century, American education has functioned to create a migratory personal identity, an identity not linked to a specific place, community or region, but instead to an identity of the skilled laborer, equipped with the general cultural and disciplinary knowledge that will enable the person to work wherever those skills are required" (147). Taking up Brooke's critique and synthesizing my findings from the literate practices of language minorities in communities, I suggest that we need to build more materiality and locality-focused pedagogy while serving heterogeneous groups of students in terms of race, nationality, ethnicity, and class. In other words, we should build more nuanced public writing assignments in the era of globalization and growing multilingual communities.

Heeding this change in student demographics, I offer pedagogical revision examples

taken in three forms: research-based writing in first-year writing courses, advanced-level courses or professional writing and technical communication courses, and curricula across the disciplines.

1) Research-based Writing in First-Year Writing courses

If we accept the notion of rhetorical agency suggested by Cooper and Cushman's notion of linguistic agency, shown earlier in Chapter 3 in my analysis of rhetorical scaling, we can re-envision writing curricula for public writing or service-learning projects with a different understanding of human agency. Nonhuman actors including textual objects and material things can be more broadly and meaningfully integrated. As many important works with a posthumanist orientation and materialist approaches emerge, we can design a theoretically informed writing curriculum in which students can make interventions in the circulation of textual objects and things. If we take Brandt and Clinton's model and sociomaterialist approaches, we can situate our classrooms in an extant literacy network, an interlocking system in which classrooms are rhetorically connected with other places through multiple material devices, such as computers and mobile devices, and through institutional or community-based resources, such as archives located in special collections and government websites. Particularly after a disaster hits, the physical and geographical situations and rhetorical ecologies will be transformed into a different literacy network. While heeding student survivors' emotional or affective dimensions, writing teachers can integrate an environmental justice paradigm. Thus, students can connect environmental disruptions, including geographical and material factor-driven disruptions such as floods, earthquakes, draughts, wildfires, and other industrial and technological disasters, to their writing projects. Citing Latour's words in his *Reassembling*, Cooper explains a new pedagogical approach:

“The student’s goal is perhaps ethnographic: to ‘deploy the content with all its connections’ so as to exhibit, not explain, the context (Latour, *RS* 147)” (Cooper, “How Bruno Latour Teaches Writing” 198). This descriptive rendition or exhibition of the *connections* gives students opportunities for a new kind of embodied learning and community engagement. Rather than hastily creating a thesis statement, students should be encouraged to describe their places and arrange this rendering activity to build their argument. This ethnographic writing matters particularly because students can understand how classrooms and other sites are connected through literacy network or literacy-in-action.

My course design can be an example of this attempt. As a teacher-researcher in a region which was severely hit by the massive floods after Hurricane Harvey, I revised my pre-existing second sequence of a first-year composition design to rhetorically respond to the needs of local communities in the aftermath of a disaster and created an archival research study with my students. I encouraged students to encounter this “dis-aster” as a disjointed material condition through an archival project and to find out feasible and actionable solutions to this environmental community problem. In this project, by using the archival materials located in Special Collections on campus, students were guided to trace and describe the complicated literacy networks that were related to the floods in the local environment and suggest plans for problem-solving. For instance, my students in the second sequence of first-year writing were guided to explore and select specific box and folders to navigate literacy networks relevant to their keywords such as *floods*, *waterways*, and *bayous*. As a response to this archival study, my students explored and analyzed texts ranging from board meeting records and news letters from nonprofit organizations such as “The Park People” and “Bayou Preservation Association” to the feasibility report about Buffalo Bayou

and Tributaries by Army Corps of Engineers in the 1980s. Against superficial top-down rhetorics, such as the resilience discourse, which assigns all recovery process to an individual's personality and disposition, this fieldwork through archives led students into a series of embodied performances, in which they entered the material and rhetorical site, viewed artifacts around the keywords, and configured the complexity and literacy networks and power dynamics among stakeholders and communicators. As Wendy Hayden notes, through this archival research, students were encouraged to "learn about the process of refining a research question and taking creative risks, rather than sticking to a particular thesis" (415) and to be "invite[d] into the scholarly community, where they have much to contribute" (418). More importantly, students were able to see that while selected groups and their voice and writing (e.g., mostly upper-middle-class community organizers or founding members of environmental organizations) were kept in archives, other marginalized groups and their rhetorical activities were excluded and remained invisible. As suggested in my pedagogical experimental with first-year students, this type of archival studies in undergraduate writing classrooms can help students build not only their research abilities but also their writerly ethos and archival literacy, that is, an understanding of the "rhetoricity of archives" (Enoch and VanHaitsma 218).

Transcontextual approaches can illuminate possible textual objects that connect different sites such as the academy, the community, corporations, government agencies, and non-profit organizations. For example, as shown in my students' projects, archival materials in special collections located on the campus can be transcontextual sites on which students can navigate translocal materiality. Oral history projects can also promote students' engagement in the community with a focus on environmental changes. My students in oral

history projects and archival research studies can instantiate this approach. For example, oral history projects that I have assigned enabled first-year students with diverse backgrounds to go to communities outside the academy, use their translocal networks, and explore new ways of understanding ecological and social problems at the kairotic moment. In this place-based project, migrant students were actively involved in meaning-making processes and voiced their opinions about local problems. These opportunities also enabled them to complicate their migratory identity and fold their regional sense into their evolving identity.

My point is that we need a more nuanced approach to cultivating civic engagement in a globally networked learning environment in which teachers and students often have migratory and fluid identities, rather than rooted or fixed identities to one place. At the same time, we can have students enmeshed into embodied ecologies by revitalizing their dynamic connections and translocal affiliations to lived places. For example, an international student in my first-year writing class, whom I call Zhang²³, actively described his personal experiences related to the Pearl River in his home town in China, compared them to floods, bayous, and his lives in current places, and finally attempted to suggest solutions to local communities in his advocacy promotional video essay. Zhang's rhetorical activities, that is, exploring archival materials and gaining the right to participate in civic discourses regardless of legal citizenship suggest a sophisticated pedagogical way of integrating students' linguistically, culturally, and geographically diverse experiences into writing ecologies within local communities.

²³ This example comes from a larger study that focuses on students' rhetorical activities in the aftermath of Hurricane Harvey. This study is IRB-approved and the name of the student is pseudonym.

2) *Advanced Composition Courses*

Beyond first-year writing courses, professional writing and technical communication can be revised with this ecological agenda. We can envision writing for specific purposes courses or advanced writing courses, such as writing for social change, environmental writing courses, with concrete ideas about new kinds of literacy, that is, public health literacy, disaster management literacy, ranging from insurance to financial aid to the housing act to environmental laws and regulations at the local and global levels. In these advanced-level writing courses, these literacies could be studied with a social or environmental justice paradigm and translingual approaches rather than with a goal to acquire a discrete entity of literacy. Through this process, students can contribute to addressing the challenges of marginalized and minoritized groups in climate change and local environmental disruptions through writing.

These new types of classes could be designed in a partnership with community-based environmental organizations with some precautions. In his 2007 work *Because We Live Here*, Eli Goldblatt asks, “Who serves whom in community-based composition courses?” (121). Dismantling the binary between the academy and the community also suggests an important question about the discourse of empowerment. We should be wary of the pitfall that this social justice paradigm tends to benefit the academy only and does not practically promote gain for community or community-based organizations. Also, in these advanced courses, we need to take a more sophisticated approach to community engagement assignments with translocal perspectives. Place-based pedagogy should further recognize the growing populations of migrant students. Using diverse modalities and genres for writing assignments could be a way of integrating migrant students’ diverse linguistic resources and agency in

community-based literacy or place-based writing courses. Beyond the binary between the community and the academy, we should put both in what Brandt and Clinton term literacy-in-action, in the perspective of textual mobility and the movement of textual objects and material things.

3) *Writing Across the Curriculum Courses*

These new types of classes could generate cross-collaboration with other disciplines and changes in Writing across the Curriculum and Writing in the Disciplines. As Michele Simmons notes in her 2010 article, these community engagement projects should be reconsidered from perspective of “sustainable extended community writing projects” (par. 2) rather than the one-class-one-semester model. This argument is growing to be important as environmental disruptions and climate change are more consistently threatening the reality of the community and the academy. Echoing Simmons’ argument, I would call for a more sustainable model for the teaching of community-based writing. Students could be encouraged to extend their writing experiences in first-year or advanced-writing courses to their discipline-specific courses by connecting their writing experiences with their own majors and workplace literacies. Writing-intensive credit-bearing courses in English or courses in other disciplines, which are related to these types of literacy, will benefit students who have been excluded from decision-making processes and have had limited access to environmental discourses.

In sum, I summarize implications and caveats for writing pedagogy based on this study: First, we need to be more informed about the growing diverse student populations and their engagement not only with alternative or virtual spaces but also with physical places. Translingual approaches have encouraged students to leverage their resources across

languages, registers, and different locations. However, these approaches might have overlooked students' everyday lives in their local physical place and their relationships with geography and material environment including air, land, and water. In this sense, teachers and scholars should additionally develop a curriculum that enables students to critically engage with their (trans)local material ecologies. More attention is needed to see how non-traditional students including adult learners and refugee or immigrant or international students navigate place-based or local environmental issues. For example, oral history projects done by the first-year students in my writing course in the aftermath of Hurricane Harvey enabled students with diverse backgrounds to go to communities outside the academy, use their translocal networks, and explore new ways of understanding ecological and social problems in the kairotic moment. In this place-based project, migrant students were actively involved in meaning-making processes and voiced their opinions about local problems. These opportunities also enabled them to complicate their migratory identity and fold their regional sense into their evolving identity.

Limitations of the Study

This study has its unavoidable limitations. For instance, I was unable to conduct interviews with government agents, such as FEMA officials and inspectors, or with civic officials, due to the time frame and challenges of recruitment. In reality, it was almost impossible for me to approach the FEMA inspectors, who are mostly contingent workers hired temporarily and located in different states. Although some of my participants directed me to some officials working in the City of Houston, it was a very careful and sensitive decision for them to share their experiences. Thus, recruitment processes were often stopped. It was also important for me to acknowledge that my research might not benefit all

stakeholders unlike many ideal statements from community-based research, as shown in Goldblatt's description about "student- and faculty-based outreach into underserved communities" (122).

Another limit in research participants is that they were mostly survivors and community workers from Asian communities, and the study did not include other language minority groups, including Spanish-speaking communities or Arabic-speaking communities. My findings might not be generalized across different language minority groups. Furthermore, observations were only limited to the events that occurred one year after the hurricane. I was able to observe their HoAP events, but other than that, things were already done right after the disaster and not repeatable. Instead, dense semi-structured interviews and observations of their faith-based gatherings and community center-based civic events compensated for this lack of observations. Future research studies in disaster scholarship and literacy studies have the potential to investigate language minority groups and their specific lived experiences in social and material contexts.

Final Thoughts

This study does not intend to suggest that literacy learning will solve the environmental injustice problem. I am reminded of Harvey J. Graff's influential work *The Literacy Myth*. Literacy is not a panacea that enables the disaster-stricken migrants to reduce the problems. As shown with my participants, their advanced literacy or English proficiency is not explicitly connected to the ease of the disaster recovery process, unlike people's assumptions. As Dahee and Jaewoo's case shows, in many instances their advanced English proficiency in reading and writing did not help them with FEMA application processes. If government agencies hold this myth and keep technical and decontextualized approaches to

language services, it leads to disregarding numerous translocal materiality and social factors such as legal status and social networks in the lives of migrant survivors. Although it is an important resource, a technical translation or interpretation service is not the antidote that addresses the challenges of transnational-immigrant survivors. More attention to culturally specific channels for disaster assistance and linguistically diverse communication platforms beyond monolingual paradigms are needed. Teachers, scholars, and policy makers should further attend to nonhuman environmental beings, such as land and water, and language minorities' transnational ecological literacies in a disaster context as part of migrant survivors' attempts to reclaim power and agency in limited interlocking material systems in climate change.

Works Cited

- Alvarez, Steven. "Brokering Literacies: Child Language Brokering in Mexican Immigrant Families." *Community Literacy Journal*, vol. 11, no. 2, 2017, pp. 1-15.
- Appadurai, Arjun. *Modernity at Large: Cultural Dimensions of Globalisation*. U of Minnesota P, 1996.
- Barad, Karen. *Meeting the Universe Halfway: Quantum Physics and the Entanglement of Matter and Meaning*. Duke UP, 2007.
- Barbara, L. Allen. "Environmental Justice and Expert Knowledge in the Wake of a Disaster." *Social Studies of Science*, vol. 37, no. 1, 2007, pp. 103-10.
- Barrios, Roberto E. *Governing Affect: Neoliberalism and Disaster Reconstruction*. U of Nebraska P, 2017.
- Barton, David. *Literacy: An introduction to the Ecology of Written Language*. Blackwell, 1994.
- Barton, David, and Mary Hamilton. "Literacy Practices." *Situated Literacies: Reading and Writing in Context*, edited by Roz Ivanic, Mary Hamilton, and David Barton, Routledge, 2000, pp. 7-15.
- Basch, Linda G, et al. *Nations Unbound: Transnational Projects, Postcolonial Predicaments, and Deterritorialized Nation-states*. Gordon and Breach, 1994.
- Bauman, Richard and Charles L. Briggs, "Language Philosophy as Language Ideology: John Locke and Johann Gottfried Herder." *Regimes of Language: Ideologies, Politics, and Identities*, edited by Paul V. Kroskrity, School of American Research P, 2000, pp. 139-204.
- Baynham, Mike, and Tong King Lee. *Translation and Translanguaging*. Routledge, 2019.

- Bell, Genevieve. "The Age of the Thumb: A Cultural Reading of Mobile Technologies from Asia Knowledge." *Technology & Policy*, vol. 19, no. 2, 2006, pp. 41-57.
- Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Duke UP, 2010.
- Berkes, Fikret, et al. "Rediscovery of Traditional Ecological Knowledge as Adaptive Management." *Ecological Applications*, vol. 10, no. 5, 2000, pp. 1251-262.
- Berlemaun, Michael, and Max Friedrich Steinhardt, "Climate Change, Natural Disasters, and Migration—a Survey of the Empirical Evidence." *CESifo Economic Studies*, vol. 63, no. 4, 2017, pp. 353-85.
- Blake, Eric S. and David A. Zelinsky, "National Hurricane Center Tropical Cyclone Report Hurricane Harvey: 17 August-1 September 2017." *National Hurricane Center*. 9 May 2018.
- Blommaert, Jan. *The Sociolinguistics of Globalization*. Cambridge UP, 2010.
- Bloom-Pojar, Rachel. *Translanguaging outside the Academy: Negotiating Rhetoric and Healthcare in the Spanish Caribbean*. National Council of Teachers of English, 2018.
- Bloxham, Andy. "Facebook 'More Effective than Emergency Services in a Disaster.'" *The Telegraph*, 30 Apr. 2008. www.telegraph.co.uk/news/1914750/Facebook-more-effective-than-emergency-services-in-a-disaster.html.
- Blythe, Stuart, et al. "Action Research and Wicked Environmental Problems: Exploring Appropriate Roles for Researchers in Professional Communication." *Journal of Business and Technical Communication*, vol. 22, 2008, pp. 272-98.
- Bourdieu, Pierre. "The Forms of Capital." *Handbook of Theory and Research for the Sociology of Education*, edited by J. G. Richardson, Greenwood, 1986, pp. 241-58.

- Bowen, Lauren Marshall. "Resisting Age Bias in Digital Literacy Research." *College Composition and Communication*, vol. 62, no. 4, 2011, pp. 586-607.
- Bowker, Geoffrey C, and Susan Leigh Star. *Sorting Things out: Classification and its Consequences*. MIT Press, 1999.
- Braidotti, Rosi. *The Posthuman*. Polity, 2013.
- Brandt, Deborah. *The Rise of Writing: Redefining Mass Literacy*. Cambridge UP, 2015.
- Brandt, Deborah, and Katie Clinton. "Limits of the Local: Explaining Perspectives on Literacy as a Social Practice." *Journal of Literacy Research*, vol. 34, no. 3, 2002, pp. 337-56.
- Brickell, Katherine, and Ayona Datta. "Introduction to Translocal Geographies." *Translocal Geographies: Spaces, Places, Connections*. Ashgate, 2011, pp. 23-38.
- Brooke, Robert. "Migratory and Regional Identity." *Identity Papers: Literacy and Power in Higher Education*, 2006, Utah State UP. pp.141-53.
- Brown, Phillip, et al. *The Global Auction: The Broken Promises of Education, Jobs, and Incomes*. Oxford UP. 2010
- Browne, Katherine E. *Standing in the Need: Culture, Comfort, and Coming Home After Katrina*. U of Texas P, 2015.
- Budach, Gabriele, et al. "Objects and Language in Transcontextual Communication." *Social Semiotics*, vol. 25, no. 4, 2015, pp. 387-400.
- Budach, Gabriele, et al. "'Talk around Objects': Designing Trajectories of Belonging in an Urban Inuit Community." *Social Semiotics*, vol. 25, no. 4, 2015, pp. 446-64.
- Bullard, Robert D. "Environmental Justice: It's More than Waste Facility Siting." *Social Science Quarterly*, vol. 77, no. 3, 1996, pp. 493-99.

Canagarajah, Suresh. "Introduction: The Nexus of Migration and Language: The Emergence of a Disciplinary Space." *The Routledge Handbook of Migration and Language*.

Routledge, 2017, pp. 1-28.

---. *Literacy as Translingual Practice: Between Communities and Classrooms*.

Routledge, 2013.

---. "Materializing 'Competence': Perspectives from International STEM Scholars." vol. 102, no. 2, 2018, pp. 268-91.

---. "Shuttling between Scales in the Workplace: Reexamining Policies and Pedagogies for Migrant Professionals." *Linguistic Education*, vol. 34, 2016, pp. 47-57.

---. *Translingual Practice*. Routledge, 2012.

---. "Translingual Practice as Spatial Repertoires: Expanding the Paradigm beyond Structuralist Orientations." *Applied Linguistics*, vol. 39, no. 1, 2018, pp. 31-54.

---. "Translingualism and Translingualism." *Transnational Writing Education: Theory, History, and Practice*, edited by Xiaoye You, Routledge, 2018. pp. 41-60.

Canagarajah, Suresh, and Peter De Costa. "Introduction: Scales Analysis, and Its Uses and Prospects in Educational Linguistics." *Linguistics and Education*, vol. 34, 2016, pp. 1-10.

Capps, Randy, and Ariel Ruiz Soto, "A Profile of Houston's Diverse Immigrant Population in a Rapidly Changing Policy Landscape." *Migration Policy*, Sept. 2018.

migrationpolicy.org/research/profile-houston-immigrant-population-changing-policy-landscape.

Caglar, Ayse, and Nina Glick-Schiller, "Introduction: Migrants and Cities." *Locating Migration: Rescaling Cities and Migrants*, edited by Nina Glick-Schiller and Ayse

- Caglar, Cornell UP, 2010, pp. 1-19.
- Casey, Edward S. "Between Geography and Philosophy: What Does It Mean to Be in the Place-World?" *Annals of the Association of American Geographers*, vol. 91, no. 4, 2001, pp. 683-93.
- "Census Bureau Reports at Least 350 Languages Spoken in US Homes." *United Census Bureau*, 3 Nov. 2015, [census.gov/newsroom/press-releases/2015/cb15-185.html](https://www.census.gov/newsroom/press-releases/2015/cb15-185.html)
- Chakrabarty, Dipesh. "The Climate of History: Four Theses" *Critical Inquiry*, vol. 35, no. 2, 2009, pp. 197-222.
- Chakraborty, Jayajit, et al. "Exploring the Environmental Justice Implications of Hurricane Harvey Flooding in Greater Houston, Texas." *American Journal of Public Health*, vol. 109, no. 2, 2019, pp. 244-50.
- Charmaz, Kathy. *Constructing Grounded Theory*. Sage Publications, 2006.
- Chen, Yi-Fan. "Mobile Theories and Frameworks." *Global Mobile: Applications and Innovations for the Worldwide Mobile Ecosystem*, Information Today, 2013. pp. 73-92.
- "City of Houston—Direct Allocation." Texas General Land office, [recovery.texas.gov/individuals/programs/homeowner-assistance/houston/index.html](https://www.recovery.texas.gov/individuals/programs/homeowner-assistance/houston/index.html).
- "City of Houston Launches Climate Action Plan, Mayor Turner to Address Global Climate Action Summit." Mayor's Office Press Releases, *The City of Houston*, 13 Sept. 2018. [houstontx.gov/mayor/press/climate-action-summit.html](https://www.houstontx.gov/mayor/press/climate-action-summit.html).
- Coe, Richard M. "Eco-Logic for the Composition Classroom." *College Composition and Communication*, vol. 26, no. 3, 1975, pp. 232-37.

Coole, Diana H., and Samantha Frost, *New Materialisms: Ontology, Agency, and Politics*.

Duke UP, 2010.

Cooper, Marilyn M. "How Bruno Latour Teaches Writing." *Thinking with Bruno Latour in*

Rhetoric and Composition, edited by Paul Lynch and Nathaniel Rivers, Southern

Illinois UP, 2015, pp. 185-201.

---. "The Ecology of Writing." *College English*, vol. 48, no. 4, 1986, pp. 364-75.

---. "Rhetorical Agency as Emergent and Enacted." *College Composition and*

Communication, 2011, vol. 62, no. 3, pp. 420-49.

Cox, Richard. *Environmental Communication and the Public Sphere*. Sage Publications,

2016.

Curry, Mary J., and Theresa M. Lillis, "Strategies and Tactics in Academic

Knowledge Production by Multilingual Scholars." *Education Policy Analysis*

Archives, vol. 22, no. 32, 2014.

Cushman, Ellen. *The Struggle and the Tools: Oral and Literate Strategies in an Inner City*

Community. State U of New York P, 1998.

De Certeau, Michel. *The Practice of Everyday Life*. U of California P, 1984.

De Genova, Nicholas. "Theoretical Overview—The Deportation Regime: Sovereignty,

Space, and the Freedom of Movement." *The Deportation Regime: Sovereignty,*

Space, and the Freedom of Movement, edited by Nicholas De Genova and Nathalie

Peutz, Duke UP, 2010, pp. 33-65.

Dobrin, Sidney I., and Christian R. Weisser. *Natural Discourse: Toward Ecocomposition*.

State U of New York P, 2002.

Dobrin, Sidney I. *Postcomposition*. Southern Illinois UP, 2011.

- Duffy, John M. *Writing from These Roots: The Historical Development of Literacy in a Hmong American Community*. U of Hawaii P, 2007.
- Duran, Chatwara. *Language and Literacy in Refugee Families*. Palgrave Macmillan. 2017.
- Easthope, Lucy. *The Recovery Myth: The Plans and Situated Realities of Post-Disaster Response*. Palgrave Macmillan, 2018.
- Edbauer, Jenny. "Unframing Models of Public Distribution: From Rhetorical Situation to Rhetorical Ecologies." *Rhetoric Society Quarterly*, vol. 35, no. 4, 2005, pp. 5-24.
- Ellcessor, Elizabeth. *Restricted Access: Media, Disability, and the Politics of Participation*, NYU Press, 2016.
- Enoch, Jessica, and Pamela VanHaitsma. "Archival Literacy: Reading the Rhetoric of Digital Archives in the Undergraduate Classroom." *College Composition and Communication*, vol. 67, no. 2, 2015, pp. 216-42.
- Eubanks, Virginia. *Automating Inequality: How High-Tech Tools Profile, Police, and Punish the Poor*. St. Martin's Press, 2018.
- "Fact Sheet: City of Houston Releases Updated Needs Assessment for Hurricane Harvey." *Local Housing Needs Assessment Fact Sheet, HUD Requirements and Reports, The City of Houston*, Nov. 2018, houstontx.gov/housing/Fact_Sheet_Needs_Assessment.pdf.
- Faist, Thomas. "Cross-Border Migration and Social Inequalities." *Annual Review of Sociology*, vol. 42, 2016, pp. 323-46.
- Faist, Thomas, and Margit Fauser. *Transnational Migration*. Polity, 2013.
- Flagg, Julia A. "The Social Consequences of a Natural/Technological Disaster: Evidence from Louisiana and Mississippi." *Local Environment*, 2017, vol. 22, no. 3, pp. 306-

Flores, Nelson, and Jonathan Rosa. "Undoing Appropriateness: Raciolinguistic Ideologies and Language Diversity in Education." *Harvard Educational Review*, vol. 85, no. 2, 2015, pp. 149-71.

Fraiberg, Steven, and Cui Xiaowei. "Weaving Relationship Webs: Tracing how IMing Practices Mediate the Trajectories of Chinese International Students." *Computers and Composition*, vol. 39, 2016, pp. 83-103.

Gee, James Paul. *Social Linguistics and Literacies: Ideology in Discourse*. Falmer, 1990.

Gershon, Ilana. "Media Ideologies: An Introduction." *Journal of Linguistic Anthropology*, Dec. 2010, vol. 20, no. 2, pp. 283-93.

Gilbert, Claude. "Studying Disaster: Changes in the Main Conceptual Tool." *What is a Disaster?: A Dozen Perspectives on the Question*, edited by E.L. Quarantelli, Routledge, 1998, pp. 11-18.

Gilyard, Keith. "The Rhetoric of Translingualism." *College English*, vol. 78, no. 3, 2016, pp. 283-88.

Glick-Schiller, Nina. "Transnational Social Fields and Imperialism: Bringing a Theory of Power to Transnational Studies." *Anthropological Theory*, vol. 5, no. 4, pp. 439-61, 2005.

Goldblatt, Eli. *Because We Live Here: Sponsoring Literacy Beyond the College Curriculum*, Hampton Press, 2007.

Gonzales, Laura. *Sites of Translation: What Multilinguals Can Teach Us about Digital Writing and Rhetoric*. U of Michigan P, 2018.

Gonzales, Laura, and Zantjer, Rebecca. "Translation as a User-Localization Practice."

- Technical Communication*, vol. 62, no. 4, 2015, pp. 271-84.
- Gourlay, Lesley. "Posthuman Texts: Nonhuman Actors, Mediators and the Digital University." *Social Semiotics*, vol. 25, no. 4, 2015, pp. 484-500.
- Grabill, Jeffrey. "Community-Based Research and the Importance of a Research Stance." *Writing Studies Research in Practice*, edited by Lee Nickoson and Mary P. Sheridan, Southern Illinois UP, 2012, pp. 210-19.
- Grabill, Jeffrey T. and W. Michele Simmons, "Toward a Critical Rhetoric of Risk Communication: Producing Citizens and the Role of Technical Communicators." *Technical Communication Quarterly*. vol. 7, no. 4, 1998, pp. 415-41.
- Graff, Harvey J. *The Literacy Myth: Literacy and Social Structure in the Nineteenth-Century City*, Academic Press, 1979.
- Gries, Laurie E. "Introduction: Circulation as an Emergent Threshold Concept." *Circulation, Writing, and Rhetoric*, edited by Laurie E. Gries and Collin Gifford Brooke, 2018, pp. 2-24.
- Guarnizo, Luis Eduardo, and Michael Peter Smith. "The Locations of Transnationalism." *Transnationalism from Below*, edited by Michael Peter Smith and Luis Eduardo Guarnizo, Transaction Publishers, 1998, pp. 3-31.
- Guerra, Juan C. *Language, Culture, Identity and Citizenship in College Classrooms and Communities*. Routledge, 2015
- Haddon, Leslie. "Domestication Analysis, Objects of Study, and the Centrality of Technologies in Everyday Life. *Canadian Journal of Communication*, vol. 36, no. 2, 2012, pp. 311-32.
- Hannah, Mark A, and Lora Arduser. "Mapping the Terrain: Examining the Conditions for

- Alignment Between the Rhetoric of Health and Medicine and the Medical Humanities.” *Technical Communication Quarterly*, vol. 27, no. 1, 2018. pp. 33-49.
- Hayden, Wendy. “‘Gifts’ of the Archives: A Pedagogy for Undergraduate Research.” *College Composition and Communication*, vol. 66, no. 3, 2015, pp. 402-26.
- Heath, Shirley Brice. *Ways with Words: Language, Life and Work in Communities and Classrooms*. Cambridge UP, 1983.
- Heller, Monica. *Linguistic Minorities and Modernity: A Sociolinguistic Ethnography*. 2nd ed., Continuum, 2007.
- Hornberger, Nancy H. “The Continua of Biliteracy and the Bilingual Educator: Educational Linguistics in Practice.” *International Journal of Bilingual Education and Bilingualism*, vol. 7, no. 2 and 3, pp. 155-71.
- Horner, Bruce. “Critical Ethnography, Ethics, and Work: Rearticulating Labor.” *Ethnography Unbound: From Theory Shock to Critical Praxis*, edited by Stephen Gilbert Brown, Sidney I. Dobrin, State U of New York P, 2004. pp. 13-34.
- Horner, Bruce, et al. “Opinion: Language Difference in Writing: Toward a Translingual Approach.” *College English*, vol. 73, no. 3, 2011, pp. 303-21.
- Horst, Heather A. et al. “Media Ecologies.” *Hanging Out, Messing Around, and Geeking Out*. Massachusetts Institute of Technology, 2010, pp. 29-31.
- “Hurricane Harvey Survivors May Apply for Federal Assistance if Affected by Imelda.” *FEMA*, 13 Nov. 2019, www.fema.gov/news-release/2019/11/13/4466/hurricane-harvey-survivors-may-apply-federal-assistance-if-affected-imelda.
- Inoue, Miyako. “Word for Word: Verbatim as Political Technologies.” *The Annual Review of*

- Anthropology*, vol. 47, 2018, pp. 217-32.
- International Organization for Migration (IOM). *Migration, Environment and Climate Change: Assessing the Evidence*. 2009.
- Jafry, Tahseen, et al. "Introduction: Justice in the Era of Climate Change." *Routledge Handbook of Climate Justice*, edited by Tahseen Jafry, Routledge, 2019, pp. 24-33.
- Jerolleman, Alessandra. *Disaster Recovery Through the Lens of Justice*. Springer, 2019.
- Jordan, Jay. "Material Translingual Ecologies." *College English*. vol. 77, no. 4, 2015, pp. 364-82.
- Kell, Catherine. "Literacy Practices, Text/s and Meaning Making Across Time and Space." *The Future of Literacy Studies*, edited by Mike Baynham and Mastin Prinsloo, Palgrave Macmillan, 2009, pp. 75-99.
- . "'Making People Happen': Materiality and Movement in Meaning-Making Trajectories." *Social Semiotics*, vol. 25, no. 4, 2015, pp. 423-45.
- Khetran, Rahim Bakhsh, et al. "Indigenous Knowledge, Early Warning System and Disaster Management: A Case Study of Khetran Community in Balochistan, Pakistan." *Journal of Gender and Social Issues*, vol.11, no. 1, 2012, pp. 1-11.
- Knobel, Michele, and Colin Lankshear. "Digital Literacies and Participation in Online Social Networking Spaces." *Digital Literacies: Concepts, Policies, and Practices*, 2008, pp. 249-78.
- Koerber, Amy, and Brian Still. "Guest Editors' Introduction: Online Health Communication." *Technical Communication Quarterly*. vol. 17, no. 3, 2008. pp. 259-63.
- Kramsch, Claire. *The Multilingual Subject*. Oxford UP, 2010.
- Kroskrity, Paul V. "Regimenting Languages: Language Ideological Perspectives." *Regimes of*

- Language: Ideologies, Politics, and Identities*, edited by Paul V. Kroskrity, School of American Research P, 2000, pp. 1-35.
- Kwon, Victoria Hyonchu. *Entrepreneurship and Religion: Korean Immigrants in Houston, Texas*. Routledge, 2015.
- Lam, Wan Shun Eva. "Literacy and Capital in Immigrant Youths' Online Networks Across Countries." *Learning, Media and Technology*. vol. 39, no. 4, 2014, pp. 488-506.
- Lam, Wan Shun Eva, and Doris S. Warriner. "Transnationalism and Literacy: Investigating the Mobility of People, Languages, Texts, and Practices in Contexts of Migration." *Reading Research Quarterly*, vol. 47, no. 2, 2012, pp. 191-215.
- "Language Assistance." *Texas Department of Housing and Community Affair*,
www.tdhca.state.tx.us/lap.htm.
- "Language Spoken at Home: 2011 & 2016." *Planning and Development: Demographics, City of Houston Website*, Sept. 2018,
www.houstontx.gov/planning/Demographics/.
- Larkin, Brian. "The Politics and Poetics of Infrastructure." *Annual Review of Anthropology*, vol. 42, 2015, pp. 327-43.
- Latour, Bruno. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford, 2007.
- Lemke, Jay L. "Across the Scales of Time: Artifacts, Activities, and Meanings in Ecosocial Systems." *Mind, Culture, and Activity*, vol. 7, no. 4, 2009, pp. 273-90.
- Lim, Sun Sun, and Becky Pham. "'If You are a Foreigner in a Foreign country, You Stick Together': Technologically Mediated Communication and Acculturation of Migrant Students." *New Media & Society*, vol.18, no. 10, 2016, pp. 2171-188.

- Lindahl, Carl. "Legends of Hurricane Katrina: The Right to Be Wrong, Survivor-to-Survivor Storytelling, and Healing." *Journal of American Folklore*, vol. 125, no. 496, 2012, pp.139-76.
- Lorimer Leonard, Rebecca. "Multilingual Writing as Rhetorical Attunement." *College English*, vol. 76, no. 3, 2014. pp. 227-47.
- . *Writing on the Move: Migrant Women and the Value of Literacy*. U of Pittsburgh, 2018.
- . "Writing through Bureaucracy: Migrant Correspondence and Managed Mobility." *Written Communication*, vol. 32, no. 1, 2015, pp. 87–113.
- Lorimer Leonard, Rebecca, et al. Special Editors' Introduction, *Literacy in Composition Studies*. vol. 3, no. 3, 2015.
- Louth, Richard. "Katrina in Words: Collecting, Creating, and Publishing Writing on the Storm." *Reflections: A Journal of Writing, Service-Learning, and Community Literacy*. vol. 7, no. 1, 2008, pp. 26-40.
- Luke, Allan. "On the Material Consequences of Literacy." *Language and Education*, vol.18, no. 4, 2004, pp. 331-35.
- Madanmohan, Rao. "Introduction: A World Gone Mobile." *Global Mobile: Applications and Innovations for the Worldwide Mobile Ecosystem*, edited by Peter A. Bruck and Rao Madanmohan, Information Today, 2013, pp. 1-28.
- Madianou, Mirca. "Smartphones as Polymedia." *Journal of Computer-Mediated Communication*, vol. 19, no. 3, 2015, pp. 667-80.
- Madianou, Mirca, and Daniel Miller. *Migration and New Media: Transnational Families and Polymedia*. Routledge, 2012.

- Marston, Sallie A. et al. "Human Geography Without Scale." *Transactions of the Institute of British Geographers*, vol. 30, no. 4, 2005, pp. 416-32.
- Massey, Doreen. *For Space*. Sage, 2005.
- Mathieu, Paula. *Tactics of Hope: The Public Turn in English Composition*. Boynton/Cook Publishers, 2005.
- "Mayor's Interactive Message to the Public on the 1-Year Anniversary of the Hurricane Harvey Floods." *Mayor's Office Press Releases, The City of Houston*, 25 Aug. 2018, houstontx.gov/mayor/press/one-year-harvey-anniversary.html.
- Meyer, Rachel, and Janice Fine. "Grassroots Citizenship at Multiple Scales: Rethinking Immigrant Civic Participation." *International Journal of Politics Culture and Society*, vol. 30, 2017, pp. 323-48.
- Mingus, Mia. "Access Intimacy: The Missing Link." *Leaving Evidence*, 2011, leavingevidence.wordpress.com/2011/05/05/access-intimacy-the-missing-link/.
- Miraftab, Faranak, *Global Heartland Displaced Labor, Transnational Lives, and Local Placemaking*, Indiana UP, 2016.
- "No Discrimination in FEMA Disaster Assistance." *FEMA*, 18 Jan. 2013, www.fema.gov/news-release/2013/01/18/no-discrimination-fema-disaster-assistance.
- O'Connor, Allison, and Jeanne Batalova. "Korean Immigrants in the United States." *Migration Policy Institute*, 10 Apr. 2019. www.migrationpolicy.org/article/korean-immigrants-united-states.
- O'Reilly, Karen. *Ethnographic Methods*. Routledge, 2012.
- "Origins and Destinations of the World's Migrants, 1990-2017." *Pew Research Center*,

- 28 Feb. 2018, www.pewresearch.org/global/interactives/global-migrant-stocks-map/.
- Owens, Derek. *Composition and Sustainability: Teaching for a Threatened Generation*. National Council of Teachers of English, 2001.
- Pahl, Kate, and Jennifer Rowsell. *Artifactual Literacies: Every Object Tells a Story*. Teachers College Press, 2010.
- Parks, Lisa. "Water, Energy, Access: Materializing the Internet in Rural Zambia." *Signal Traffic: Critical Studies of Media Infrastructures*, edited by Lisa Parks and Nicole Starosielski. U of Illinois P, 2015, pp. 115-36.
- Peek, Lori, et al. "Disaster Hits Home: A Model of Displaced Family Adjustment After Hurricane Katrina." *Journal of Family Issues*, vol. 32, no. 10, 2011, pp. 1371-396.
- Pennycook, Alastair. "Posthumanist Applied Linguistics." *Applied Linguistics*, vol. 39, no. 4, 2018, pp. 445-61.
- Pennycook, Alastair, and Emi Otsuji. "Metrolingual Multitasking and Spatial Repertoires: 'Pizza Mo Two Minutes Coming.'" *Journal of Sociolinguistics*, vol. 18, no. 2, 2014, pp. 161-84.
- Picou, J. Steven. "Disaster Recovery as Translational Applied Sociology: Transforming Chronic Community Distress." *Humboldt Journal of Social Relations*, vol. 32, no. 1, 2009, pp. 123-57.
- . "Katrina as a Natchez Disaster: Toxic Contamination and Long-Term Risks for Residents of New Orleans." *Journal of Applied Social Science*, vol. 3, no. 2, 2009, pp. 39-55.
- Pigg, Stacey, et al. "Ubiquitous Writing, Technologies, and the Social Practice of Literacies

- of Coordination.” *Written Communication*, vol. 31, no. 1, 2014. pp. 91-117.
- Pignetti, Daisy. “Writing the Wrong: Choosing to Research and Teach the Trauma of Hurricane Katrina.” *Reflections: A Journal of Writing, Service-Learning, and Community Literacy*. vol. 7, no. 1, 2008, pp. 180-86.
- Potts, Liza. *Social Media in Disaster Response: How Experience Architects Can Build for Participation*. Routledge, 2013.
- Powell, Katrina M. “Rhetorics of Displacement: Constructions of Identity in Forced Relocations.” *College English*, vol. 74, no. 4, 2012, pp. 297-322.
- Prendergast, Catherine. *Buying into English: Language and Investment in the New Capitalist World*, U of Pittsburgh P, 2008.
- Prior, Paul. *Writing/Disciplinarity: A Sociohistoric Account of Literate Activity in the Academy*. Lawrence Erlbaum. 1998.
- Radford, Ynnah, and Luis Noe-Bustamante. “Facts on US Immigrants.” *Pew Research Center*, 2019. www.pewresearch.org/hispanic/2019/06/03/facts-on-u-s-immigrants/.
- Rice, Jenny. “From Architectonic to Tectonics: Introducing Regional Rhetorics.” *Rhetoric Society Quarterly*, vol. 42, no. 3, 2012, pp. 201-13.
- Rivers, Nathaniel A., and Ryan P. Weber. “Ecological, Pedagogical, Public Rhetoric.” *College Composition and Communication*, vol. 63, 2011, pp. 187-218.
- Rose, Emma J. et al. “Case Study Community-Based User Experience: Evaluating the Usability of Health Insurance Information with Immigrant Patients.” *IEEE Transactions on Professional Communication*, vol. 60, no. 2, pp. 1-18.
- Rounsaville, Angela. “Situating Transnational Genre Knowledge: A Genre Trajectory Analysis of One Student’s Personal and Private Writing.” *Written Communication*,

- vol. 31. no. 3, 2014, pp. 332-64.
- Rymes, Betsy. "Classroom Discourse Analysis: A Focus on Communicative Repertoires." *Sociolinguistics and Language Education*, edited by Nancy H. Hornberger and Sandra Lee McKay, Channel View Publications, 2010, pp. 528-46.
- Sapienza, Filipp. "Transcultural Rhetoric and Cyberspace." *The Rhetorical Emergence of Culture*, edited by Christian Meyer and Felix Girke, Berghahn Books, 2011, pp. 191-209.
- Saxena, Mukul. "Taking account of history and culture in community-based research on multilingual literacy." *Multilingual Literacies: Reading and Writing Different Worlds*, edited by Marilyn Martin-Jones and Kathryn E. Jones, John Benjamins Publishing Company, 2000, pp. 275-98.
- Scenters-Zapico, John. *Generaciones' Narratives: The Pursuit and Practice of Traditional and Electronic Literacies on the US-Mexico Borderlands*. Computers and Composition Digital Press/Utah State UP, 2010.
- Schryer, Catherine F. "Records as Genre." *Written Communication*, vol. 10, no. 2, 1993, pp. 200-34.
- Scott, Tony. "The Cart, the Horse, and the Road They Are Driving Down: Thinking Ecologically about a New Writing Major." *Composition Studies*, vol. 35, no. 1, 2007, pp. 81-93.
- Selfe, Cynthia L. *Technology and Literacy in the 21st Century: The Importance of Paying Attention*, 1999.
- Sen, Arijit, and Lisa Silverman, *Making Place Space and Embodiment in the City*. Indiana UP, 2014.

- Shipka, Jody. *Toward a Composition Made Whole*. U of Pittsburgh P, 2011.
- Shittu, Ekundayo, et al. "Improving Communication Resilience for Effective Disaster Relief Operations" *Environment Systems & Decisions*, vol. 38, no. 3, 2018, pp. 379-97.
- Silverstein, Michael. "Language Structure and Linguistic Ideology." *The Elements: A Parasection on Linguistic Units and Levels*, edited by Paul R. Cline, William F. Hanks, and Carol Hofbauer, Chicago Linguistic Society, 1979, pp. 193-247.
- Simmons, Michele. "Encouraging Civic Engagement through Extended Community Writing Projects: Rewriting the Curriculum." *Writing Instructor*, May 2010.
- Smith, Dorothy E. *Texts, Facts, and Femininity*. Routledge, 1990.
- Smith, Dorothy E., and Catherine F. Schryer, "On Documentary Society." *Handbook of Research on Writing*, edited by Charles Bazerman, Routledge, 2007, pp. 113-27.
- Smith, Michael Peter. *Transnational Urbanism: Locating Globalization*. Wiley-Blackwell, 2000.
- Smith, Michael Peter, and Michael McQuarrie. "Remaking Urban Citizenship." *Remaking Urban Citizenship: Organizations, Institutions, and the Right to the City*, edited by Michael Peter Smith and Michael McQuarrie, Transaction Publishers, 2012, pp. 3-10.
- Smith, Neil. *Uneven Development: Nature, Capital, and the Production of Space*. U of Georgia P. 2010
- Smith, Robert C. "Transnational Localities: Community, Technology and the Politics of Membership within the Context of Mexico and US Migration." *Transnationalism from Below: Comparative Urban and Community Research*, edited by Michael Peter Smith and Luis Eduardo Guarnizo, Routledge, 1998. pp. 196-240.

- Street, Brian. *Literacy in Theory and Practice*, Cambridge UP, 1984.
- Sun, Huatong. "Toward a Rhetoric of Locale: Localizing Mobile Messaging Technology into Everyday Life." *Journal of Technical Writing and Communication*, vol. 39, no. 3, 2009, pp. 245-61.
- Tacchi, Jo, et al. *Ethnographic Action Research Manual*. Unesco, 2003.
- Ulmer, Robert R. et al. *Effective Crisis Communication: Moving From Crisis to Opportunity*. Sage Publications, 2010.
- VanLandingham, Mark J. *Weathering Katrina: Culture and Recovery among Vietnamese Americans*. Russell Sage Foundation, 2017.
- Vee, Annette. *Coding Literacy: How Computer Programming Is Changing Writing*, The MIT P, 2017.
- Vertovec, Stephen. "Super-diversity and its Implications." *Ethnic and Racial Studies*, vol. 30, no. 6, 2007, pp. 1024-054.
- . "Talking around super-diversity, Ethnic and Racial Studies." *Ethnic and Racial Studies*, vol. 42, no. 1, 2019, pp. 125-39.
- Vieira, Kate. *American by Paper*. U of Minnesota P, 2016.
- . "Doing Transnational Writing Studies: A Case for the Literacy History Interview." *Composition Studies*, vol. 44, no. 1, 2016, pp. 138-40.
- . "Undocumented in a Documentary Society: Textual Borders and Transnational Religious Literacies." *Writing in a Global Context*, special issue of *Written Communication*, vol. 28, no. 4, 2011, pp. 436-61.
- Volosinov, V. N. *Marxism and the Philosophy of Language*. Translated by Ladislav Matejka and I. R. Titunik, Harvard UP, 1986.

- Wallerstein, Immanuel. *World-Systems Analysis: An Introduction*. Duke UP, 2004.
- Walls, Douglas M. and Stephanie Vie, “Social Writing and Social Media: An Introduction.” *Social Writing/Social Media: Publics, Presentations, and Pedagogies*, edited by Douglas M. Walls and Stephanie Vie, The WAC Clearinghouse, UP of Colorado. 2018, pp. 3-13.
- Walton, Rebecca, et al. *Technical Communication after the Social Justice Turn: Building Coalitions for Action*. Routledge, 2019.
- Wang, Xiqiao, “Tracing Connections and Disconnects: Reading, Writing, and Digital Literacies across Contexts.” *College Composition and Communication*, 2019, vol. 70, no. 4, pp. 560-89.
- Warriner, Doris. “‘Here, Without English, You are Dead’: Ideologies of Language and Discourses of Neoliberalism in Adult English Language Learning.” *Journal of Multilingual and Multicultural Development*, vol. 37, no. 5, 2016. pp. 495-508.
- . “Transnational Literacies: Examining Global Flows through the Lens of Social Practice.” *The Future of Literacy Studies*, edited by Mike Baynham and Mastin Prinsloo, Palgrave Macmillan, 2009. pp. 160-80.
- Warriner, Doris, and Leisy T. Wyman. “Experiences of Simultaneity in Complex Linguistic Ecologies: Implications for Theory, Method, and Practice.” *International Multilingual Research Journal*, vol. 7, no. 1, 2013, pp. 1-14.
- Weisser, Christian R., and Sidney I. Dobrin. “Breaking New Ground in Ecocomposition: An Introduction.” *Ecocomposition: Theoretical and Pedagogical Approaches*, edited by Christian R. Weisser and Sidney I. Dobrin, State U of New York P, 2001. pp. 1-9.
- Weisser, Christian R. “Ecocomposition and the Greening of Identity.” *Ecocomposition*:

- Theoretical and Pedagogical Approaches*, edited by Christian R. Weisser and Sidney I. Dobrin, State U of New York P, 2001, pp. 81-96.
- “West Houston’s Economic & Demographic Profile: 2016 Report.” *West Houston Association*, westhouston.org/population-economic-profile/.
- Wortham, Stanton, and Catherine Rhodes. “The Production of Relevant Scales: Social Identification of Migrants during Rapid Demographic Change in One American Town.” *Applied Linguistics Review*, vol. 3, no. 1, 2012, pp. 75-99.
- Yancey, Kathleen Blake. “From the Editor: Locations of Writing.” *College Composition and Communication*, vol. 66, no. 1, 2014, pp. 5-11.
- Yoon, Kyong. “The Media Practice of ‘KaTalk’ in the Face of Facebook: Young Koreans’ Use of Mobile App Platforms in a Transnational Context.” *Critical Arts: South-North Cultural and Media Studies*, vol. 30, no. 2, 2016. pp. 217-32.
- Young, Morris. *Minor Re/Visions: Asian American Literacy Narratives as a Rhetoric of Citizenship*. South Illinois UP, 2004.
- Yu-Kyung Kang, “Tensions of Local and Global: South Korean Students Navigating and Maximizing US College Life.” *Literacy in Composition Studies*, vol. 3, no. 3, 2015.
- Zebroski, James Thomas. “Toward a Theory of Theory for Composition Studies.” *Under Construction*, edited by Christine Farris and Chris M. Anson, Utah State UP, 1998. pp. 30-48.

Appendix A

Transcription Conventions

| | |
|------------------|---|
| , | Continuous utterances, a very short interval |
| CAPITALS | Increased volume |
| Bold | Researcher's emphasis |
| <u>Dish soap</u> | English words used in sentences spoken in a language other than English |
| <i>Anyeong</i> | Romanized Korean words ²⁴ . |
| (.) | Short pause |
| (..) | Long pause |
| [...] | Omitted sentences or phrases |
| [] | Inserted comments by the researcher |
| ((laughter)) | Comments on paralinguistic components |

²⁴ This transcription follows the Revised Romanization of Korean system found at National Institute of Korean Language at www.korean.go.kr/front_eng/roman/roman_01.do

Appendix B

Application Form for FEMA Disaster Assistance

| DEPARTMENT OF HOMELAND SECURITY FEDERAL EMERGENCY MANAGEMENT AGENCY APPLICATION/REGISTRATION FOR DISASTER ASSISTANCE | | | Registration ID | O.M.B. No. 1660-0002 | DR # | | |
|--|--|--|---|--------------------------------|-------------------|---------------------|------------|
| 1. Name (Last, First, MI) | | 2. Language | 3. Social Security Number | 4. Date of Birth | 5. Date of loss | 6. Application Date | |
| 7A. Damaged phone # | | 7B. Alt Damaged phone # | 7C. Current phone # | 7D. Alt Contact phone # | 7E. Email address | | |
| 8. Address of Damaged Property Street Address | | City | State | Zip+4 | County | | |
| 9. Current Mailing Address | | | | | | | |
| 10. What is your current location? | | | | | | | |
| 11. Do you own or rent your home? | | | 12. Is the address listed in #8 your primary residence? | | | | |
| 13. Type of residence: | | | | | | | |
| 14A. Was your home damaged by the disaster? | | | 14B. Personal property damaged? | | | | |
| 14C. Was the access to your home restricted? | | | | | | | |
| Emergency Needs? | | Food ? | Clothing ? | Shelter ? | | | |
| 15. Cause of Damage: | | | | | | | |
| 16. Other Expenses: | | | | | | | |
| 17. Disaster related expenses (for uninsured or underinsured) | | | | | | | |
| Medical (including medication): | | | Dental: | Funeral: | | | |
| 18. Home/Personal Property Insurance: | | | | | | | |
| Insurance Type | | | Insurance Name | | | | |
| | | | | | | | |
| 19. Vehicle Damage due to Disaster | | | | | | | |
| Vehicle Information (Year, Make, Model) | | | Damaged | Drivable | Comp | Liability | Registered |
| | | | | | | | |
| | | | | | | | |
| 20. Special Needs: Did you, your spouse, or any dependents have help or support doing things like walking, seeing, hearing, or taking care of yourself before the disaster and have you lost that help or support because of the disaster? | | | | | | | |
| Mobility: | | | | | | | |
| Cognitive/Developmental Disabilities/Mental Health: | | | | | | | |
| Hearing or Speech: | | | | | | | |
| Vision: | | | | | | | |
| Other: | | | | | | | |
| 21. Occupants living in primary residence at time of disaster: | | | | | | | |
| Last, First MI | | Relationship | Social Security Number | Age | Dependent | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| 22. BUSINESS DAMAGES: Self Employment is primary income? | | | | | | | |
| Own/Represent a business or rental property affected by disaster? | | | | | | | |
| 23. Number of claimed dependents: | | Combined family pre-disaster gross income: | | 24. Electronic Funds Transfer: | | | |
| 25. You have been referred to the following sources for Disaster Aid. | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| If you have any questions or feel our information is incorrect, please call the Disaster Helpline at 1-800-621-FEMA, or for the speech or hearing impaired only, call 1-800-462-7585 | | | | | | | |

Appendix C

Interview Questions

Interview Questions for Adults in Transnational Families²⁵

Interview I (Lived History)

How long have you lived in the area?

Can you describe how you came to the US?

How did you choose to live in this neighborhood?

What kind of languages do you use?

What kind of writing activities have you been involved in prior to Hurricane Harvey?

Interview II (Details of Experiences)

How would you describe your experience during or in the aftermath of Harvey?

How was your family or your life affected by Harvey?

How would you describe the role of your communities you are involved in the aftermath of Harvey?

How would you describe the role of your language and literacy skills in the aftermath of Harvey?

How did you communicate with other families who were affected by Harvey?

Interview III (Reflection)

Is there anything you would like to add in the previous interviews?

In the previous interviews, you mentioned... Can you elaborate a little bit more about that?

Is there anything I missed to ask you in the previous interviews?

²⁵ This interview question design is drawn from Irving Seidman's three-phase interviewing in his 2006 work *Interviewing as Qualitative Research*.

Is there anyone else in particular that you think I should talk to for my research?

Interview Questions for Children in Transnational Families

How long have you lived in the area?

Can you describe how you came to the US?

How would you describe your living in your area?

How would you describe your school life?

What kind of languages do you use?

Can you describe where you were when Hurricane Harvey came?

Group Interview Questions for Transnational Families

How would you describe your lived experiences as local residents in your areas or in Houston?

How would you describe your experiences of Hurricane Harvey?

Looking back your experiences, what were the most challenging tasks to you?

Looking back your experiences, what were the aspects you want to improve to protect your family from natural disasters?

What kind of devices or technology did you use to communicate with others?

Interview Questions for First Responders/Community Workers/Agency Workers

How would you describe your experiences of Hurricane Harvey?

Looking back your experiences, what were the most challenging tasks to you?

Looking back your experiences, what were the aspects you want to improve to protect communities from natural disasters?

What kind of digital technology or devices did you use to communicate with other community members or activists?