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A "THEORY OF CHANGE" FOR GLOBAL TECHNICAL COMMUNICATION

Early Western models of communication depict the exchange of ideas and information as a simple, linear process. For example, Claude Shannon and Warren Weaver's (1949) transmission model of communication consisted of five elements: a source of information, a transmitter, a channel, a receiver, and a destination. Such linear models have been widely contested, both within and beyond the field of technical communication.

In "The Technical Communicator as Author: Meaning, Power, Authority," Jennifer Daryl Slack, David James Miller, and Jeffrey Doak (1993) argued that different models of the communication process help define the role of the technical communicator, as a transmitter, translator, or articulator (i.e., author) of meaning, and that through these models, "the place of the technical communicator—and of technical discourse itself—shifts in different relations of power" (14). In other words, the way the field of technical communication perceives the process of communication inherently influences the way the field defines the role of the technical communicator themselves—as a mere transmitter of information from one source to another, as a "translator" of information from technical and scientific audiences to "lay" audiences, or as an "articulator" who not only transmits or translates but also authors meaning. Slack, Miller, and Doak's model has also been extended and revised in technical communication research, particularly through the field's recent social justice turn, which brings more attention to the way non-Western communities have always embraced complex communication models that account for issues of power, privilege, and positionality and their role in all communication acts (Jones 2016; Jones, Moore, and Walton 2016).

While the field of technical communication continues to rightfully expand its perception of the role and power technical communicators have in facilitating communication practices and influencing the

material realities of people and communities, much of the narrative influencing the field's definitions of communication is still rooted in a monolingual ideology, or "the notion that communication only happens through and by one language at a time" (Pérez-Quiñones and Carr Salas 2021, 66). Through this perspective, when technical communication researchers discuss the "translation" work technical communicators do, the emphasis sometimes remains on translating technical or scientific information to non-technical audiences, shifting language from one form of standardized white American English to another. Of course, many technical communication researchers do engage in conversations about translation and localization, pointing to the ways multilingual users in global contexts localize information across languages for and with their communities (Dorpenyo 2020; Sun 2012). Yet when it comes to discussing the labor of language transformation and translation specifically in general technical communication projects, some technical communication researchers revert to the (over)simplified, linear transmission models of communication the field has long contested.

For example, when we think about translation work in technical communication and related fields, we can revert to thinking of a source language uttered by an English speaker as a transmitter of information that then gets decoded by either a human interpreter or a digital translation tool before reaching its destination. While seemingly accurate, this model of multilingual communication reduces the role of the translator and of translation itself to a mere conduit of information, much in the same way early models positioned technical communicators as powerless transmitters without agency. Through this limited view of translation, one can easily ignore the experience and labor that are embedded in multilingual communication, the influence the process of translation can have on the parties tasked with this labor, and the influence of translation on the results of the communicative act as a whole. As Manuel Pérez-Quiñones and Consuelo Carr Salas (2021) clarify, "The ideology of monolingualism within the design and implementation of user interfaces not only neglects to account for the large portion of the population that is bilingual and multilingual, but by building monolingual interfaces, designers disregard the nuances of linguistic diversity and ignore the bilingual individual as a user class" (66).

Countering such oversimplification, what I present in this book is a "theory of change" (Tuck 2009) for the way the field of technical communication perceives translation and multilingual communication. When hearing the word *multilingual*, rather than thinking of a linear, automated translation process, I want to push technical communicators

to recognize the entire multilingual experience, which includes not only the languages present in a communicative act but also those that are excluded and the impact these exclusions can have on all research interactions. A multilingual experience expands beyond words on paper or sentences in multiple languages, instead accounting for the emotions, histories, and embodied realities of the communicators engaged in multilingual interactions. Designing multilingual experiences, then, requires a trans-disciplinary theory of change in the way technical communicators understand the potential of language to impact their work and the responsibility we have to honor, recognize, and engage in the languages and language histories of the communities we are privileged to work with.

A THEORY OF CHANGE

> *Theories of change are implicit in all social science research, and maybe all research. The implicit theory of change will have implications for the way in which a project unfolds, what we see as the start or end of a project, who is our audience, who is our "us," how we think things are known, and how others can or need to be convinced. A theory of change helps to operationalize the ethical stance of a project, what are considered data, what constitutes evidence, how a finding is identified, and what is made public or kept private or sacred.*
>
> —Eve Tuck, "Suspending Damage:
> A Letter to Communities," 413

Unangax̂ scholar Eve Tuck (2009) urges researchers to move away from what she calls "damage-based research," or "research that operates, even benevolently, from a theory of change that establishes harm or injury in order to achieve reparation" (413). Citing studies in education that sought to increase resources for marginalized youths by documenting the "illiteracies" of Indigenous youths and youths of color, Tuck (2009) explains that damage-based research is a popular mechanism by which "pain and loss are documented in order to obtain particular political or material gains" (413). While damage-based studies have proven successful in attaining political or material gains in the form of funding, attention, and increased awareness related to the struggles of marginalized communities, Tuck (2009) points researchers to the ongoing violence damage-based research inflicts on marginalized communities, even under benevolent or perceivably beneficial circumstances. Among the many issues associated with damage-based research

are the underlying assumptions this type of work makes and sustains about marginalized people; namely, that marginalized communities lack communication, civility, intellect, desires, assets, innovation, and ethics (along with much more).

To move away from damage-centered research, Tuck (2009) explains that researchers need to reorient our underlying "theories of change" regarding how we approach working within community contexts. In other words, researchers should move away from highlighting what a community is lacking or how a community has failed in the face of colonization or oppression, moving instead toward recognizing the multifaceted elements that continually (re)define a particular community as well as its knowledges and practices. As Tuck (2009) warns, if researchers only use a community's failure or oppression to justify its existence and needs for support, then these damage-based frameworks will ultimately define an entire community, consequently ignoring the multifaceted qualities all communities possess and sustain across space and time. In *Race after Technology: Abolitionist Tools for the New Jim Code*, Ruha Benjamin (2019) further explains that damage-based ideologies regarding communities of color perpetuate "coded inequity" masked as "technological benevolence" through the design of surveillance technologies that code Black, poor, immigrant, disabled communities as "unwanted," "second-class," "criminals" (9).

As a bilingual (Spanish-English) technical communication scholar who works with immigrant and transnational communities, I find the discussion of damage-based research and the push toward new theories of change relevant to contemporary research practices within and beyond the field of technical communication. In my own experiences, I have seen how multilingual communities, or communities that identify with heritage languages other than English in the US and with non-colonial languages across the world, are frequently positioned as deficient in technical and professional communication contexts. Conversations about multilingual communities are often defined around terms such as "*limited* English proficiency," directly pointing to a community's limitations in a particular language (i.e., English) without any recognition of the multiple other languages and communicative practices a community might possess.

Issues of language "proficiency" are further intensified in research related to multilingual communities of color, which are often described through their limited access to resources such as information, education, and healthcare. When talking and writing about multilingual communities of color, researchers within and beyond technical communication

sometimes embrace damage-based approaches that highlight a community's struggles and even use those struggles to define that community's existence and merits. As Jeffrey T. Grabill (2007) argues, "We—as researchers, teachers, citizens—have failed to understand rhetorical work in communities as *work*," and, I would add, we consistently fail to recognize this community work as culturally responsive to long-standing histories of oppression and colonialism (2, original emphasis). This damage-based approach to multilingual research does not have to be intentional; indeed, as Tuck (2009) clarifies, damage-based approaches are often undertaken benevolently, particularly by researchers who truly do want to improve conditions and shift conversations about oppression and discrimination. The problem is that good intentions are not always paired with a recognition of the ways privilege and power shape research interactions and how these power relationships are then embedded into design. Thus, benevolent orientations to damage-based work can have dangerous consequences for communities that are "overresearched yet ironically, made invisible" (411–12). As Donnie Johnson Sackey (2020) elaborates, "There is a long history of conducting research on poor communities of color with little concern for participants' ability to control what happens with their data and whether they and their communities benefit from that data" (38). In these situations, technical communicators have an opportunity and a responsibility to move "beyond critiques of technology or user documentation in favor of designing systems that can save lives" (34).

As the field of technical communication continues to embrace its critical and groundbreaking "social justice turn"—a turn that pushes technical communication researchers to work intentionally to redress injustices and oppression (Jones, Moore, and Walton 2016; Haas and Eble 2018)—I argue that it's critical for the field to move away from damage-based orientations to multilingual research, particularly in global contexts. To do so, I suggest that we embrace, expand, and even complicate asset-based frameworks for doing community-based research in technical communication (Agboka 2013; Grabill 2007; Durá, Singhal, and Elias 2013; Haas 2012; Dorpenyo and Agboka 2018; Sun 2012; Simmons 2008; Walwema 2021) and that we apply these extended frameworks as we design multilingual experiences in, for, and with global communities (Cardinal 2019; Rose et al. 2017; Sackey 2020). As I demonstrate in this chapter, technical communicators are particularly well positioned to counter damage-based approaches to multilingual technical communication research, not simply by replacing "damages" with "assets" but rather by rejecting the notion that communication

can be reduced to binaries and single-identity categories altogether. By leveraging technical communication's long-standing emphasis on making information accessible across difference, there is an opportunity for this field to further embrace complexity in working toward justice within global communication practice. As Victor Del Hierro (2019) explains, culturally and linguistically diverse communities build "complex relationships" with local technical communicators (e.g., DJs) to "create localized and accessible content" that draws on local expertise while also having global impact (28). As researchers across fields continue to acknowledge the importance and relevance of multilingualism in contemporary global contexts and as technical communicators continue to expand notions of accessibility by centering the expertise of disabled communities, I argue that technical communicators can continue to broaden what it means to create accessible communication. This type of justice-driven disciplinary expansion can only happen in collaboration with communities that have long been advocating for access and inclusion in both local and global contexts.

EXPANDING LANGUAGE ACCESS FRAMEWORKS IN GLOBAL TECHNICAL COMMUNICATION

In their groundbreaking article "Disrupting the Past to Disrupt the Future: An Antenarrative of Technical Communication," Natasha N. Jones, Kristen R. Moore, and Rebecca Walton (2016) ask the pivotal question: "If we accept that inclusivity is an integral part of our field's history, how can or should we proceed" (212). By historicizing various movements and efforts within technical communication that push our field to further engage with and work against systems of oppression in everyday tools, technologies, and infrastructures, Jones, Moore, and Walton (2016) invite technical communication scholars to "re-envision the field" through a "larger tapestry" that not only draws on but perhaps also centralizes interdisciplinary research that expands beyond what some people may consider "traditional," "true," or "viable" technical communication work (223). To continue working toward inclusion, as many technical communication researchers have shown, it's important that we expand our disciplinary grounding, incorporating research from fields outside technical communication that have been engaged in efforts for justice and inclusion for many decades (Williams 2013). For example, Jones (2016) frames the potential of social justice in technical communication by citing scholarship across fields and disciplines, primarily by feminists of color—including work in

decoloniality (hooks 1994; Smith 1999), narrative inquiry (Perkins and Blyler 1999), Black feminist thought (Collins 1999), Chicana feminism (García 1989), and Asian feminism (Bow 2011), among many others. African scholars Josephine Walwema (2021), Godwin Y. Agboka (2013), and Isidore Dorpenyo (2020) provide models for technical communicators to engage in international, multilingual research through decolonial perspectives that foster reciprocity and push toward social justice in the Global South.

In the collection *Key Theoretical Frameworks: Teaching Technical Communication in the Twenty-First Century*, Angela M. Haas and Michelle F. Eble's (2018) contributors further illustrate the importance of centralizing interdisciplinary research when imagining possibilities for social justice in technical communication, highlighting research on feminism (Frost 2018), Indigenous rhetorics (Agboka 2018), hip hop (Del Hierro 2018), and queer theory (Cox 2018) to offer new possibilities for the ways technical communication as a field can continue to expand its boundaries in its efforts toward justice and inclusion. As Haas (2012) explains in her discussion of how she developed a course on race, rhetoric, and technology in 2009, at a time when the field of technical communication was not yet as "enriched by the recent conversations about race and ethnicity emerging in the discipline today," she opted to "piece together a curriculum I could believe in by weaving together the scant threads of inquiry on race, rhetoric, and technology in our field with some of the existing strands in cultural, critical race, rhetorical, and feminist studies" (278). This inter- and trans-disciplinary framing within the context of technical communication pedagogy, Haas (2012) elaborates, "provided me and my students with multiple places to stand in the field at connected but different intellectual intersections" (278). These intersections, I argue, are critical to the growth and sustainability of social justice–driven initiatives within and beyond technical communication, particularly as our field continues to work with and in global contexts.

As a language and translation scholar in the field of technical communication, I also blend and expand disciplinary groundings to establish "multiple places to stand in the field" (Haas 2012, 278). As technical communication scholars continue to engage in global research with marginalized communities, I suggest that we expand the field's model of communication to re-imagine what it means to provide language access, leveraging interdisciplinary conversations across language and disability studies to envision new futures for designing accessible content alongside communities.

(RE)SITUATING LANGUAGE DIVERSITY AND
MULTILINGUALISM IN TECHNICAL COMMUNICATION

Technical communication researchers understand that tools, technologies, and systems can no longer be designed in standardized white English alone, and we are working to recognize that designing in multiple languages should be a common practice that takes place throughout, rather than after, our initial design and prototyping processes (Batova 2018; Cardinal 2019; Rose et al. 2017). In addition, technical communicators are increasingly acknowledging the value and importance of working with translators and interpreters to make information accessible not only to English speakers (Batova 2010, 2018; Walton, Zraly, and Mugengana 2015), and we largely understand the value (both materially and ideologically) that comes with our efforts to engage in multilingual communication. Our field has also begun paying more attention to the way technical communication work happens with Indigenous, transnational, and immigrant communities and other historically marginalized groups with expertise in multilingual communication within and beyond the US. In this work, some researchers emphasize the important role of social justice in working with linguistically and ethnically diverse communities, highlighting the ways globalization efforts can render colonizing violence (Agboka 2013; Haas 2012) when human dignity and human rights (Walton 2016) are ignored (Jones and Williams 2018; Williams and Pimentel 2014). In short, as a profession that has historically been described through translation metaphors and as the experts and partners in engineering who "translate" techno-scientific information for lay audiences (Slack, Miller, and Doak 1993), technical communicators are well poised to recognize and value the importance of language diversity in relation to information access and technical content creation, particularly in the context of globalization (Batova 2018; Haas and Eble 2018; Walwema 2016, 2021).

Working from an understanding that technical communication as a field *already* recognizes the value and importance of globalization (in terms of both language and design), my goal in this book is to help our field further connect issues of globalization and language access to the bodies, communities, and lands through which globalization, translation, and internationalization happen (Agboka 2013, 2018; Durá, Singhal, and Elias 2013; Haas 2012; Dorpenyo and Agboka 2018; Sun 2012; Walwema 2021). As Tatiana Batova (2018) explains, in current global contexts, "while technical translation is included under the umbrella definition of TC [technical communication], relations between the professionals in these two fields are most often those of contractors and clients, and

the communication between these groups is far from perfect" (79). In other words, while technical communication as a field acknowledges the value of globalization and the importance of translation in fostering global reach, the roles, expertise, and experiences of translators could be further highlighted within technical communication scholarship and practice. As Haas and Eble (2018) further clarify, "Globalization—and the complex and culturally-rich material and information flows that come with it—has forever changed who we think of as technical communicators, the work that technical communicators do, and where and how we understand technical communication happens" (3). My goal in this book, then, is to also illustrate not only how globalization has changed us as technical communicators but also how we as technical communicators, through language-driven relations specifically, change the communities we inhabit and could further support the good work and technological change that is already taking place in the world (Durá, Singhal, and Elias 2013; Grabill and Simmons 1998; Grabill 2007; Shivers-McNair and San Diego 2017; Walton and Hopton 2018). As Haas and Eble (2018) continue, "While technical communicators may appreciate the international, professional, and economic gains afforded to us by globalization, we must also interrogate how we may be complicit in, implicated by, and/or transgress the oppressive colonial and capitalistic influences and effects of globalization" (4).

In working toward "transgress[ing] the oppressive colonial and capitalistic influences and effects of globalization" (Haas and Eble 2018, 4), I argue that technical communication researchers should acknowledge the intersectional identities of global communities in situated contexts and expand our notions of language access accordingly. As Allison Hitt (2018) argues, technical and professional communicators should develop programs, spaces, and pedagogies "that acknowledge the rhetorical situatedness of accessibility" and that recognize how centering disability in design can benefit both disabled and non-disabled audiences (53). While the field of technical communication has long understood the complexities and necessities of designing information in languages other than English for and with international and transnational audiences (Batova 2010; Maylath and St.Amant 2019; Rose et al. 2017; Williams and Pimentel 2014), we have a lot of work to do in expanding how we understand the intersecting identities of these audiences and how we recognize the often invisible and embodied labor encompassed within a seemingly simple concept like translation. For this reason, as technical communication researchers continue to innovate new methodologies for navigating the "messy," "complex" nature of conducting

technical communication work in multilingual contexts (Walton, Zraly, and Mugengana 2015) and as our field continues to pay more attention to the development of technical tools and documents that are accessible in languages other than English (Rose et al. 2017; Walton and Hopton 2018; Walwema 2021), I argue that we should continue to expand our understandings of language access to further centralize the bodyminds (Price 2011; Schalk 2018) of multilingual communities and that we should recognize the identities and methods of participation of global audiences beyond single-identity categories and binaries. To this end, this book positions language diversity and translation specifically as critical components of technical communication, urging researchers in the field to recognize the embodied nature of language and the complex process of language transformation as part of a broader multilingual experience.

When understood through what I call an *intersectional and interdependent* orientation, a methodology that draws from both critical race studies and disability studies, language diversity can be used as a point of analysis, intervention, and collaboration in technical communication—allowing researchers to continue to develop critical frameworks for designing and sharing tools, technologies, platforms, pedagogies, and projects that work toward language access. At the same time, I argue that accomplishing language access is just one component of designing a successful multilingual experience and that technical communication researchers should continue to acknowledge their own positionalities when working with communities that do not communicate predominantly in standardized white English (Jones and Williams 2018). By pairing an emphasis on translation with a broader understanding of multilingualism that is contextualized through interdisciplinary frameworks, the central aim of this book is to help our field reframe and rethink the methodologies, practices, and ideological commitments we often associate with language diversity.

NEW APPROACHES TO ESTABLISHED FRAMEWORKS IN MULTILINGUAL TECHNICAL COMMUNICATION

In her foundational work *Cross-Cultural Technology Design*, Huatong Sun (2012) explains that when cross-cultural work is approached through positivist orientations that value efficiency over depth, researchers can (sometimes unintentionally) address only the "tip of the iceberg" in cross-cultural interactions. That is, when cross-cultural design research relies on practical checklists and standardized protocols, researchers can adopt or even reproduce cultural stereotypes (Ding 2020; Jones

and Williams 2018) instead of localizing technologies and designs successfully across cultures and contexts. Similar arguments have been made by disability studies scholars who argue that access in technical communication design should not be reduced to simple checklists and protocols, since notions of access should be rhetorically situated and localized (Hitt 2018; Yergeau et al. 2013; Zdenek 2015). Sun (2012) proposes "user-localization" as an approach to cross-cultural technology design that values local community knowledge and emphasizes the role of local expertise in localization practices. Other researchers, such as Huiling Ding (2020), explain that "participatory, user-centered design can play important roles in user-empowerment and ethical engagement with users in civic, educational, and industrial settings" (145). Walwema (2021) further emphasizes the importance of paying attention to not only how information is designed but also how it is distributed in transnational contexts through the use of social media strategies that serve "the rhetorical circulatory function of rallying the public" (130). While this research focuses on the importance of intercultural communication and accessibility in technology design and dissemination, I argue that in many technical communication projects, translation and multilingualism are sometimes treated through similar reductive, positivist orientations that dismiss the role race and embodied difference play in multilingual technical communication practice (Gonzales 2018; Batova 2010).

Let me give you some examples.

When engaging in technical communication research, many US-based technical communicators are already in the practice of collaborating with language interpreters, or individuals who translate verbal information across languages. US-based technical communication researchers may employ professional interpreters when conducting research abroad, relying on these professionals to translate information among researchers, participants, and other stakeholders. As some scholars have noted, working with language interpreters adds a layer of richness and complexity to technical communication research while also allowing US-based researchers to navigate intercultural issues when working with transnational or international communities (Batova 2010; Hopton and Walton 2019; Walton 2016; Walton and Hopton 2018; Rose et al. 2017). In some cases, research teams already include bilingual or multilingual members who can facilitate communication between participants and researchers who do not speak the same language(s), providing additional insight and expertise in projects that take place in multilingual contexts. In other cases, as has been the case with my own research with Spanish-speaking communities (Gonzales 2018), bilingual

or multilingual technical communication researchers engage in work with their own heritage language communities, translating interactions for English-based audiences in presentations and publications while conducting most of our work in languages other than English.

Perhaps less ideally, technical communication researchers sometimes rely on English-speaking members of their participants' communities to translate information for the duration of a study, even when the participants do not have training in professional interpretation and, in some cases, when community members are not paid for their interpretation work. As part of the realities and contexts in which contemporary multilingual technical communication work currently happens, technical communicators may give the responsibility of translation to a participant, a friend, or, frankly, anyone who can help facilitate communication so the research can continue and the research team can maintain focus on the "real" purpose of the project (e.g., conducting an interview or focus group). While I am not saying that these practices are always unethical or unsuccessful, I do argue that in any of the aforementioned frameworks, when language diversity is viewed as a methodological issue or problem to be solved rather than being conceptualized as a central component of the interactions that frame an entire project or study, technical communication researchers may (perhaps unintentionally) miss important perspectives or elements involved in a project that can significantly impact both the results of a research project and the impact our field has on already marginalized and misrepresented or unrepresented communities. As disability studies scholars have long advocated, ignoring the invisible, embodied elements embedded in all research methodologies can erase rather than highlight important experiences in research (Price and Kerschbaum 2016).

In many ways, the general concepts, methodologies, and ideas presented in this text are nothing new to technical communication, as they can all easily fall under areas of study already common in technical communication research—including, for example, participatory design, human-centered design, international or intercultural technical communication, action-based research, user experience, civic engagement, service learning, and perhaps even less apparent areas such as risk communication, medical rhetorics, and disability studies. However, through grounded case studies of multilingual technical communication, I argue that when we consider and engage with the presence of language diversity in all these areas of study through our work as technical communicators, we can better account for how our work is positioning and being positioned by our various stakeholders and participants.

This book illustrates how a focus on language in technical communication research can help researchers in the field better understand our work and its impacts on the people we seek to communicate with and through. In the cases of technical communication researchers who work in multilingual communities in collaboration with language interpreters, the case studies presented in the following chapters can help researchers answer general questions such as:

- (How) does the fact that my communication with research participants is taking place through an interpreter influence the potential findings of this study?
- (How) does or can my presence as a researcher who does not speak the same languages as my participants influence my participants' comfort with and trust in our interactions?
- (How) can I collaborate more successfully with both my multilingual participants and my interpreter(s) so I contribute more directly to the language labor of this project?

Furthermore, for researchers interested in designing multilingual tools and technologies alongside multilingual communities, the case studies presented in this book can provide some possibilities for questions such as:

- How can tools and technologies be designed as inherently multilingual rather than being retrofitted for language access purposes?
- How can researchers engage in collaborative design activities to generate ideas with multilingual communities in culturally supportive and sustaining ways?
- What does it mean to conduct research in English with communities for which English is tied to long-standing histories of oppression and colonialism?

In addition to providing some possible answers to these questions, the case studies presented in this book also collectively illustrate the fact that interpretation (i.e., the verbal transformation of information across languages) and translation (i.e., the written transformation of information across languages) are perhaps the most visible and recognized aspects of multilingual technical communication experiences, but they are not the only elements involved in successful language access. That is, while much research has highlighted the importance of translation and interpretation in technical communication work (Walton, Zraly, and Mugengana 2015; Maylath and St.Amant 2019), I argue that more attention should be paid to other elements of multilingual technical communication experiences, including the connections between language and race, the influence of language on researcher and participant

positionality, and the connections among language, power, land, and materiality in collaborative technical communication research. In the sections that follow, I provide an outline of the chapters in this book while also highlighting the interdisciplinary theoretical and methodological frameworks that influence these projects.

STRUCTURE OF THIS BOOK

To define what I mean by "multilingual experiences in technical communication," I begin by threading together theoretical and methodological frameworks within and beyond the field of technical communication. To this end, in chapter 2, "An Intersectional, Interdependent Approach to Language Accessibility in Techinical Communication," I present what I call an intersectional, interdependent approach to accessibility in technical communication, where I bring together scholarship in racial and linguistic diversity with scholarship in disability studies to argue that when working in multilingual environments, technical communication researchers should consider language and translation through an intersectional perspective that considers access beyond their own positionalities as researchers. As social justice and disability studies scholars have taught us, accessibility in any environment is a shared responsibility. As such, relying on translators, interpreters, participants, and community members to "handle" or "take care of" all language-access work renders an oppressive power dynamic among researchers, communities, and language professionals. As I demonstrate in chapter 2, orienting to multilingual technical communication work through intersectional, interdependent frameworks can allow technical communication researchers to gain important insights into their work while also taking more responsibility for the impact our work has on our communities and surrounding lands and environments (Agboka 2018; Sackey 2020).

Based on the introduction of this intersectional, interdependent framework, chapter 3, "Research Design," sets up the research design for this project, where I outline the specific methods I co-selected with my collaborators and participants to study what it means to conduct technical communication research in multilingual contexts. In this chapter, I connect my project to ongoing work in technical communication in areas such as human-centered design, user experience, participatory design, and localization. I also introduce the research questions this book seeks to answer, which predominantly consist of: what does technical communication look like in multilingual contexts, and how can technical communicators design multilingual experiences that benefit (rather than ignore or harm) the

multifaceted identities and experiences of linguistically and ethnically diverse communities? By asking these questions, I argue that technical communication researchers can continue working to design multilingual technical communication experiences in our research and professional spaces as well as in our classrooms. In this chapter, I also begin to introduce readers to my various research participants and collaborators, which include health-related organizations in the borderland city of El Paso, Texas, a research center and community organization in Kathmandu, Nepal, and a legal services and activism organization developed for and by Indigenous language interpreters and translators in Oaxaca City, Oaxaca, Mexico.

Professional translators and interpreters often receive training in one or more of the following areas: (1) medical translation and interpretation, which can encompass the written translation of medical documents such as patient medical history forms, medical terminology documents, and health campaign documents and/or the verbal interpretation between healthcare providers (e.g., doctors, nurses, medical personnel) and patients who speak various non-dominant languages; (2) legal translation and interpretation, which can encompass the written translation of legal documents such as court proceedings and decrees and/or the verbal interpretation between legal staff (e.g., lawyers, judges) and members of the public who speak various non-dominant languages; and (3) community translation and interpretation, which can encompass the written translation of any document used in community interactions (e.g., flyers for and information on community events, business plans, annual reports) and the verbal interpretation between community members and various business personnel or organization employees who serve the public (e.g., local library staff, social workers, teachers). These three areas are identified by professional translation and interpretation organizations as the places where linguistic movements mitigate human activity, and, as such, the case studies I present in this book are structured around these same areas. By presenting case studies in medical, legal, and community contexts, I seek to illustrate how technical communicators and professional interpreters and translators share common ground, interests, and responsibilities in the creation and sustainability of multilingual experiences for a wide range of stakeholders.

I begin my case studies with chapter 4, "Language Fluidity in Health Contexts on the Mexico/US Borderland." In this chapter, I illustrate how language ideologies shape the way people experience health and healthcare, particularly in a borderland community that moves fluidly across many variations of Spanish and English in everyday interactions across contexts. In this community, providing translations of medical information

in standardized English or standardized Spanish is an ineffective strategy that will not reach community members who prefer using both Spanishes and Englishes to communicate in verbal and written forms. In collaboration with organizations in El Paso, Texas, that seek to provide access to healthcare for binational and bilingual community members in both El Paso and the neighboring city of Ciudad Juárez, Chihuahua, Mexico, this chapter provides insights into the complexities of designing multilingual experiences around technical medical documents and information that does not easily fall into a single linguistic category. The chapter introduces scenarios, conflicts, and possible strategies for designing language access experiences around issues of health and wellness in contemporary contexts where language categories are fluid and constantly evolving.

Moving from the borderland community of El Paso and Ciudad Juárez to a research organization in South Asia, chapter 5, "User Experience and Participatory Design in Kathmandu," presents findings and narratives from a participatory design workshop series I co-facilitated at the South Asian Foundation for Academic Research (SAFAR), an independent research center located in the city of Kathmandu. In collaboration with an interdisciplinary team of researchers and students in both the US and Nepal, this project sought to illustrate what participatory design can entail in a South Asian context, particularly with students and professionals committed to shifting representations of their own languages and cultures in online spaces. By introducing an ongoing collaboration with this research center and its various academic, industry, and community stakeholders, this chapter illustrates how common participatory design and user experience methods and methodologies (e.g., usability testing, journey mapping, affinity diagramming, prototyping) can be adapted in communities that span widely across linguistic, cultural, and national boundaries. Multilingual experiences in participatory design projects, as this chapter demonstrates, should be grounded in community expertise and community values to render results that are localized and effective rather than merely performative.

Extending from a community-based participatory design project to multilingual experiences in legal realms, chapter 6, "Linguistic and Legal Advocacy with and for Indigenous Language Interpreters in Oaxaca," details a collaboration with the Centro Profesional Indígena de Asesoría, Defensa, y Traducción (CEPIADET), an organization developed, led, and sustained by Indigenous language interpreters who specifically advocate for the representation of Indigenous languages and Indigenous language interpreters in legal processes within and beyond Mexico. By introducing ongoing work with this organization, including

the design and development of an international gathering that brought together 370 Indigenous language interpreters and translators from Mexico, Peru, and the US in Oaxaca, this chapter illustrates ongoing efforts by interpreters of Indigenous languages who work in legal settings and who navigate legal communication in Spanish and various Indigenous languages—including variants of Mixe, Mixteco, Zapoteco, Nahuatl, and Quechua. Through a discussion of interviews, community events, and collaboratively designed documents stemming from an organized gathering of legal interpreters, this chapter provides strategies for designing multilingual technical communication experiences in languages that stem beyond Western notions of communication and that encompass continual relationships with community members as well as their surrounding lands and environments. In this chapter, I argue that multilingual technical communication experiences, when designed through collaborative, justice-driven models, can have impacts not only on individual people but also on the preservation of intergenerational knowledge and environmental sustainability.

The ultimate goal of putting these projects together is to illustrate that multilingual experiences in technical communication can span languages, cultures, contexts, and communities while still being grounded in participatory methodologies that center the expertise of linguistically and ethnically diverse communicators. By focusing on linguistic movements (i.e., translation, interpretation) in the analysis of disparate projects across different areas, including medical, legal, and community contexts, I illustrate how multilingual experiences are critical to the work of contemporary technical communicators across various areas of specialization. In chapter 7, "Implications for Designing Multilingual Experiences in Technical Communication," I draw from the case study data presented in previous chapters to share practical strategies technical communication researchers can enact in their work with linguistically and ethnically diverse communities. Specifically, I argue that centralizing multilingualism as a critical component of contemporary technical communication can help researchers in the field continue to recognize how language shapes and influences the impact our work can and should have in particular communities and environments. In this chapter, I conclude by arguing that technical communicators should continue to recognize language diversity not only as an issue that needs to be navigated to do the work of technical communication but also as an asset that can help technical communicators expand the ways through which we can mitigate communication and make information accessible across cultural, linguistic, and national borders. While the

work of technical communication has always encompassed language diversity, paying closer attention to how our language is shaped and transformed across linguistic, racial, and cultural contexts can help technical communicators continue to work toward justice and equity in our research, pedagogical, and professional practices.

Attuning to language difference through justice-driven frameworks requires added attention to relationality (Collins 2019)—between languages and cultures, bodies and spaces, communities and practices, dis/abilities and design. In chapter 2, I illustrate how technical communicators can embrace the possibilities of language diversity and its role in our field through multiple perspectives that expand a single axis of identity. To do so, I suggest that technical communicators thread together methodological practices from both critical race studies and critical disability studies to embrace a methodology for designing multilingual experiences that center difference as the core of successful and accessible design. Through an intersectional, interdependent methodology, multilingual technical communication positions difference not as a problem to solve or as a possibility for tapping into new markets but as an opportunity to seek new collaborations, understandings, and innovations by designing with and for culturally and linguistically diverse communities.

As I further demonstrate in chapter 2, intersectionality (Combahee River Collective 1977; Crenshaw 1989) allows researchers to centralize race while accounting for the intertwining layers of experience, history, power, and positionality that take place as individuals navigate communication across communities and languages. Interdependency, through an emphasis on access and inclusion, provides "an ethic for intellectual work" in which participants, researchers, and other stakeholders involved in a project can take an active role in making communication accessible for all those involved (Jung 2014, 101). Thus, orienting to language diversity through intersectional, interdependent approaches can provide an avenue to move away from damage-based perspectives that position language difference as deficit. Intersectional, interdependent methodologies can also, and perhaps more importantly, provide technical communicators and other researchers with a methodology for listening to the people, bodies, communities, and lands that make multilingual communication possible and accessible across contexts. As you read about an intersectional, interdependent approach to multilingual technical communication, I encourage researchers and practitioners to think about the multiple intersecting identities of technical communication audiences in global contexts, considering how global audiences and communities can more directly shape future directions in our collective work.