Language maintenance and shift across generations in Inner Mongolia

Sarala Puthuval

A dissertation
submitted in partial fulfillment of the
requirements for the degree of

Doctor of Philosophy

University of Washington

2017

Reading Committee:

Sharon Hargus, Chair

Stevan Harrell

Richard Wright

Betsy Evans

Program Authorized to Offer Degree:
Linguistics

University of Washington

Abstract

Language maintenance and shift across generations in Inner Mongolia

Sarala Puthuval

Chair of the Supervisory Committee:
Professor Sharon Hargus
Linguistics

Language shift happens when a group of people stops using one language in favor of another, such that subsequent generations no longer acquire the original language. Research on the sociolinguistics of language shift has tended to focus on languages in advanced states of endangerment, where most or all children in the community have already stopped acquiring the language. Less work has been done on the long-term processes that can turn a moderately threatened language into a critically endangered or moribund language. A better understanding of the long-term dynamics of language shift would improve not only our understanding of the current language endangerment crisis, but also our understanding of language ecology and language contact at earlier periods in human history. To this end, the present study takes Fishman's concept of language maintenance versus shift as different outcomes of intergenerational mother tongue transmission, and formalizes it for quantitative research.

Mongolian in China can be considered a moderately-threatened language. Though it is the national language of Mongolia, more than half the world's Mongolian speakers live in China, and most major dialect branches are spoken only in China. Within China, Mongolian speakers are a small minority even in the Inner Mongolia Autonomous Region (IMAR), where they are most concentrated. Contact between Mongolian and Chinese speakers has gone on in southern Inner Mongolia since at least the 1700s, but during the 20th century it intensified and expanded to the rest of IMAR, especially after the founding of the People's Republic of China in 1949. Previous

research has established that some portion of ethnic Mongol children in the IMAR are no longer acquiring Mongolian, while most adult speakers are bilingual with Chinese. Mongolian has overt prestige as a cultural symbol, but is seen as backward and less useful than Chinese.

This thesis presents results from a field survey of over 600 ethnic Mongols born between 1920 and 2007 in the IMAR. It investigates two processes, the spread of Chinese among Mongolian speakers (i.e. the growth of bilingualism), and the maintenance versus loss of Mongolian among children in bilingual communities. It also demonstrates a new method for the quantitative study of language shift and intergenerational language transmission in language communities that are too large to be observable through ethnography alone. The unit of analysis is the intergenerational dyad rather than the individual speaker. Results are analyzed over time, based on speakers' age, and across space, based on speakers' location of residence and how urban that location was. The analysis shows that Chinese proficiency spread rapidly through the Mongolian-speaking population during the mid to late twentieth century, reaching a saturation point among Mongolian speakers born in the 1980s and later, nearly all of whom are proficient in Chinese. Surprisingly, given claims in previous literature, the loss of Mongolian has been much more gradual, and there is no identifiable "shifting generation'' or "transitional generation'' in this sample. Instead, the rate of shift among children raised by Mongolian-Chinese bilingual parents remains the same for all age cohorts born in the latter half of the twentieth century. Urban versus rural residence, however, plays an important role. The proportion of shifting individuals is much higher among children raised in large cities than among those raised in medium-size towns or rural areas, regardless of birth year. As China's population becomes more urbanized, shift from Mongolian to Chinese may accelerate in the near future. Even if the rate of shift stays the same, a steady proportional decline in each generation will still have a cumulative effect, resulting in an exponential decline in the population of Mongolian speakers. This observation helps to explain how language shift can proceed in a gradual manner for many decades and even centuries, then (apparently suddenly) overtake the remaining speakers in a single generation.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

ACKNOWLEDGMENTS

DEDICATION

To Hasuntuya Bayagud, mentor and friend.

Chapter 1

A SOCIAL HISTORY OF LANGUAGE CONTACT IN INNER MONGOLIA

Inner Mongolia is a border region between China and Mongolia. It is currently an autonomous region of the People's Republic of China, which was founded in 1949. Its ethnic Mongolian population is about 5 million, greater than the total population of Mongolia, but forming only 17 percent of the total population of Inner Mongolia, the rest being mainly Han Chinese. Not surprisingly, language shift from Mongolian to Chinese is happening: many of the 5 million ethnic Mongols are bilingual in Mongolian and Chinese, and many others do not speak Mongolian at all.[1]

The phenomenon of language shift in Inner Mongolia has attracted the attention of anthropologists interested in the complexities of ethnic identity in China, and is acknowledged by all linguists working on Mongolian, but has been little studied from the perspective of sociolinguistic theory, and is rarely mentioned in the international linguistics literature. When it is mentioned, it is not considered in depth.

To my knowledge, the only published treatment of Inner Mongolia that explicitly employs mainstream sociolinguistic theories of language shift is a two-page case study in the 2016 book *Languages in Contact* (Lim & Ansaldo, 2016). Written by two Hong-Kong-based linguists, the book is distinguished by its integration of sociolinguistic theories, mostly developed in the U.S. and Europe, with Asian and particularly East Asian case studies.

In this chapter, I will begin by using Lim & Ansaldo's work as a simple introduction to the sociolinguistic situation in Inner Mongolia (see 1.1). In subsequent sections I critique certain

---

[1]*Language shift* happens when a group of people stops using one language in favor of another, such that subsequent generations no longer acquire the original language. More detailed discussion of this and other linguistics terms (which may crop up in this chapter) can be found in Chapters Two and Three.

omissions and oversimplifications in their account, ultimately questioning their conclusions. Section 1.2 explains how Mongols became a demographic minority in Inner Mongolia long before 1949. Section 1.3 describes the geographic distribution of Mongol and Han populations and its effect on language contact. Section 1.4 presents two pre-1949 case studies of language shift and language maintenance respectively. Section 1.5 discusses Mongols as an *ethnic/national* minority in China, with a focus on the anachronistic vision of Mongolian ethnicity promoted by official ideology.

Two major themes introduced in this chapter will continue throughout the document: inevitability and scale. The idea that sociopolitically weaker minority languages will inevitably be abandoned in favor of sociopolitically stronger majority languages has been questioned by Fishman (1991); Nettle & Romaine (2000); Hale et al. (1992); and Bradley (2010), among others (see 2.2 for further discussion). Fishman (1991) has gone so far as to declare it a value judgment —weaker languages "ought" to make way for the stronger—rather than a scientific principle.

By scale I mean the different temporal and spatial scales across which language shift can take place. Scale as a theme manifests itself in questions of speech community size and speaker population; in questions of geographic scale (how large of an area are speakers scattered over?); and in questions of temporal or historical scale (how long did it take from the time Chinese was first introduced to the time Mongolian was lost? How many years, generations or lifetimes?) There is also the question of linguistic scale (do we look at shift in terms of language acquisition, language use, lexical change, etc.)

Lim & Ansaldo (2016) conclude that language shift in Inner Mongolia is basically inevitable. I find this conclusion unconvincing, and will argue in this chapter that its weaknesses are not the fault of the theory nor of inaccurate information, but rather the fault of incomplete information and inadequate attention to scale.

1.1 A textbook case of language shift?

The Mongols of Inner Mongolia feature prominently in Lim & Ansaldo's (2016) chapter on language shift, being the first of a half-dozen Asian case studies preceded by a summary of Gal's

(1979) foundational work on language shift in Austria (Gal's study is discussed in more detail in the next chapter, in 2.5). According to Lim & Ansaldo, the situation of the Mongols in Inner Mongolia "exemplifies many of the textbook factors that lead to shift" (Lim & Ansaldo, 2016, 135).

To summarize their two-page narrative even more briefly: after Inner Mongolia became part of the People's Republic of China in 1947[2], Mongolian became a minority language in a society dominated by Standard Chinese (Putonghua) and later also English. Demographic factors changed due to an influx of Han Chinese into Inner Mongolia. Industrialization and urbanization brought about increased inter-ethnic contact. Mongols lost their traditional nomadic pastoral lifestyle. Young Mongols now hold positive attitudes toward Standard Chinese and English, and the use of Mongolian is decreasing even in the home domain. Language shift is "the almost inevitable consequence" (136) of this constellation of factors (see Lim & Ansaldo, 2016, 135-137).[3]

The way Lim & Ansaldo explain it, the Inner Mongolian language shift appears to be the self-evident consequence of the post-1949 social and political changes in China. It is true that those changes have had a great influence. However, as I will argue in this chapter and throughout this dissertation, what is interesting about the Inner Mongolian case is that the Mongolian language is still fairly strong even though many of the "textbook factors that lead to shift" have been present for a long period of time, in fact nearly four centuries rather than the seven decades since 1949.

While Lim & Ansaldo portray language shift in Inner Mongolia as something imminent and inevitable, their account rests on two over-simplifying assumptions. One is that 1947-1949 was the main historical turning point when Mongolian became a minority language. The other is that "the Mongol community of Inner Mongolia" (137) is a cohesive social group that can be

---

[2]The year 1947 is quoted from Lim & Ansaldo (2016), but generally I will use the year 1949 to stand for the beginning of China Communist Party rule in Inner Mongolia. The People's Republic of China itself was not founded until 1949. The Inner Mongolia Autonomous Government was established by Mongol Communists in 1947 and (with a change of capital city and different boundaries) incorporated into the PRC over the several years following 1949.

[3]The original sources for the case study are an unpublished masters thesis (Wu, 2008) and a related conference talk (Lim et al., 2009).

directly compared with "Gal's Oberwart community" (135), which was a single village.

The remainder of this chapter is devoted to complicating the picture of Inner Mongolia, paying special attention to scale – temporal, spatial and demographic. I hope to show that Inner Mongolia is indeed a textbook-worthy case of language shift, precisely because it is so complex and gradual.

1.2   How the Mongols became a minority

Autonomous Regions of China generally have a high concentration of the minority group after which the region is named. In the case of Inner Mongolia, "high concentration" is relative: the regional population is nearly 80% Han Chinese and only 17% ethnically Mongol (National Bureau of Statistics, 2010).

Lim & Ansaldo imply that this demographic shift dates from 1947:

> "...in 1947, when Inner Mongolia became an autonomous region of the People's Republic of China, we see how the population's position as a minority in a society with a dominant language impacted on its language maintenance. As in numerous other contexts where industrialisation in minority-language areas has led to massive in-migration of dominant-language speakers... so it happened in Inner Mongolia." (Lim & Ansaldo, 2016, 135-136)

However, they do not mention that Inner Mongolia was already politically incorporated into China under the previous two regimes, the Great Qing empire (1644-1912) and the Republic of China (1912-1949), nor that large-scale in-migration of Chinese speakers was going on throughout the 18th, 19th and early 20th centuries, making Mongols an absolute minority by around 1900.[4]

During the Qing dynasty, both Inner Mongolia and Outer Mongolia were part of the empire. (The names *Inner* and *Outer* date from this period.) The Qing rulers were not Han Chinese but Manchu, a people from outside China's northern frontier, like the Mongols. The Manchus considered the various Mongolian tribes to be potential military allies and vassals, rather than

---

[4]For a detailed history of this process and how it affected the political status of Mongols vis-à-vis the China Communist Party, see Bulag (2002, 105-135) and references therein; see also Han (2011).

simply subjects like the Han Chinese. The Inner Mongolian princes in particular were closely tied to the Qing court.[5]

By the first half of the 18th century, Chinese settlement in Inner Mongolia was happening already on a scale large enough to attract government attention:

> "As increasing numbers of Chinese migrated to Inner Mongolia to reclaim pasture for farmland, in 1749 Emperor Qianlong ordered closure of the Mongolian border to Chinese immigrants in an effort to maintain Mongol purity and prowess. ...However, the policy was not—perhaps could not have been—strictly enforced" (Bulag, 2002, 108).

The lack of enforcement was reflected in the gradual administrative changes that occurred during this period. For example, the territorial administration of Inner Mongolia evolved to include *xiàn* (县, counties with a Han government) as well as the original *qí* (旗, counties with a Mongol government). The increasing numbers of *xiàn*-type units showed the regime dealing with the fact of Han settlement.

Nominally the closed-border policy remained in place until 1902, when the Qing decided to "officially reclaim Mongol lands to pay for the Boxer Indemnity... .[6] This policy abolished the earlier policy of immigration restraint, and a flood of Chinese peasants rushed into Inner Mongolia." (Bulag, 2002, 108). As of 1912 the population of Inner Mongolia was more than half Han, and by 1949 it was over 80 percent Han, according to census bureau publications (Song et al., 1987, cited in Bulag, 2002, 108, 109). The Han-to-Mongol ratio has, if anything, *decreased* since the 1940s.

The changing proportion of Han to Mongols in the Inner Mongolian population from 1912-2007 is shown in Figure 1.1, based on official census figures collected in Song et al. (1987) and Zhao & Yang (2009). The Han ratio barely rose between 1949 and 1980, and has been declining since 1980. Zhao & Yang (2009) attribute the relative decline to three factors: planned-birth policies starting around 1980 restricted the number of children in a family but allowed minorities

---

[5]See Lattimore 1962, 78-97 for more on this vassal relationship.

[6]The Boxer Indemnity was a monetary penalty extracted by the alliance of eight foreign powers that had intervened to put down the Boxer Rebellion in China.

Figure 1.1: Han and Mongol populations of Inner Mongolia, 1912-2007

**Proportion and absolute population
of Mongols and Han in Inner Mongolia, 1912–2007**
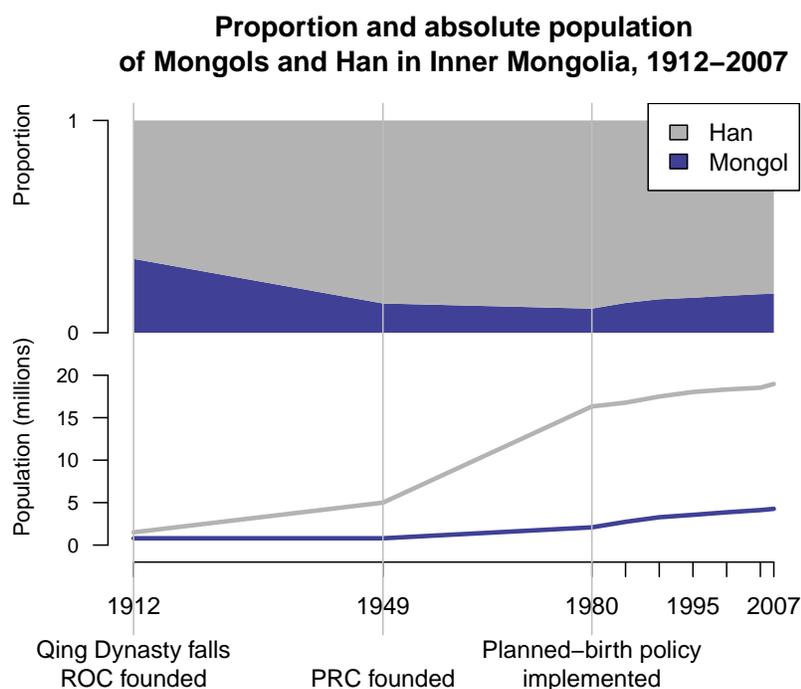
to have more children than Han; more inter-ethnic couples started choosing minority ethnicity for their children around the same time (perhaps because of the planned-birth policy and other new policies favoring minorities); and during the period 1982-1989 it was legal for adults who claimed they were mis-classified to change their ethnic registration. Thus migration had little to do with it, and the relative increase in the Mongol population is partly artificial, culturally and linguistically speaking. (See 1.5.1 for more detail on how ethnicity is classified in the census.)

Clearly, Han demographic dominance in Inner Mongolia was largely established before 1949. Yet Lim & Ansaldo are hardly alone in assuming that Inner Mongolia in the pre-Communist period was primarily inhabited by Mongols. Bulag (2002) attributes the very same assumption to Mao Zedong and the wartime China Communist Party (CCP) leadership, who reached out to the Inner Mongolian Mongols as early as 1935 in an attempt to gain their allegiance in the civil war against the Nationalist Party (who were ideologically opposed to recognizing national

minorities).

> "The Mongols and other peoples were understood [by the Chinese communists] as oppressed and colonized nations, and they were promised self-determination as a way of achieving equality with the Chinese people... . But there was a naïve conviction that Mongolian nationalist demands could be satisfied by simply dismantling the administrative structures—*rooted, perhaps, in a lack of awareness of the social demographics. The overwhelming Chinese majority in Inner Mongolia was not addressed at all.*" (Bulag, 2002, 111, emphasis added)

As Bulag (2002) later shows, once the CCP was actually governing Inner Mongolia and attempting to carry out land reform, they were obliged to appease the Han residents as well as the Mongols (and there was never any attempt to remove non-Mongol residents).

But the idealized view of Inner Mongolia as a land of pure nomadic Mongolian culture has proven very persistent in China, influencing both public policy and the popular imagination, as will be discussed in Section 1.5. This may seem bizarre until we consider that Bulag's "overwhelming Chinese majority" was actually concentrated in a relatively small land area. The majority of Inner Mongolia's land area was inhabited almost exclusively by Mongols; the Han-dominated areas simply had a higher population density.

The implication for language contact is that, while some Mongol communities were experiencing intensive contact with Chinese during the Qing and Nationalist eras, others experienced essentially no contact during that time. Some consideration of geography is indispensable here.

1.3 The geography of pre-1949 language contact

Mongolian and Han Chinese culture were each adapted to a particular economic way of life, which tended to thrive in a particular ecological environment. Pastoral nomadism is adapted to arid grasslands and semi-desert landscapes, while agriculture requires richer soils and more rainfall. As a result, the political frontier between Mongolia and China has historically been shaped by geography, ecology, and evolving human technology. An important factor for a long time has been overpopulation in Chinese territory, providing a constant pressure on the Chinese

Figure 1.2: Overlap between pastoral and agricultural economies (Lattimore, 1962, 52)
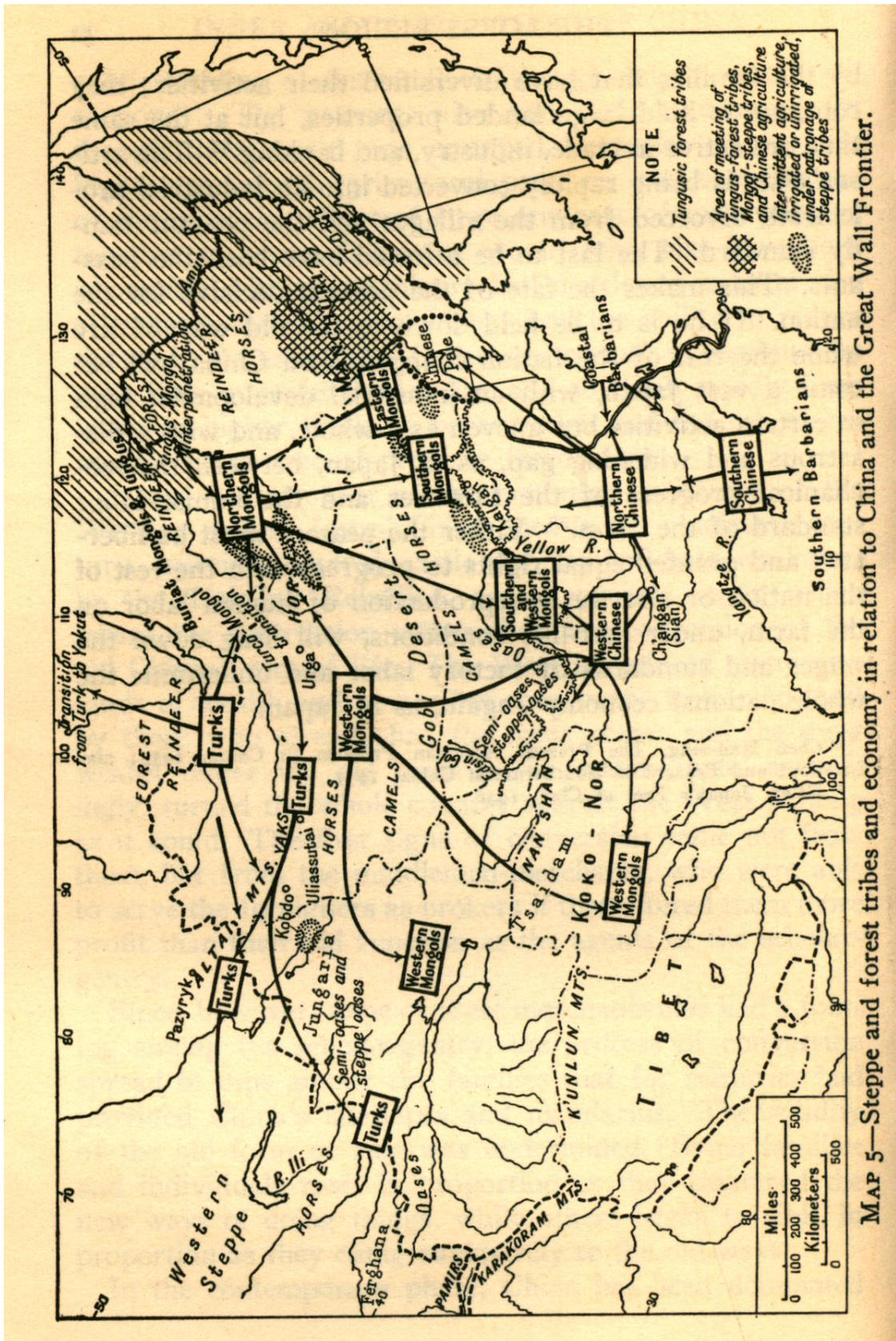
MAP 5—Steppe and forest tribes and economy in relation to China and the Great Wall Frontier.

Figure 1.3: Overlap between Mongolic and Sinitic languages, circa 1980s (Wurm et al., 1988)

ACASIAN – DIGITAL LANGUAGE ATLAS OF CHINA

map: Merrick Lex Berman

data src: http://dvn.iq.harvard.edu/dvn/dv/acasian

Major Language Areas

<all other values>
Austronesian Languages
Han Chinese Languages
Indo-European Languages
Kam-Tai Languages
Kam-Tai and Han Chinese Languages
Korean and Han Chinese Languages
Miao-Yao Languages
Miao-Yao and Han Chinese Languages
Mongolian Languages
Mongolian and Han Chinese Languages
Mongolian and Tibeto-Burman Languages
Mongolian and Turkic Languages
Mongolian, Turkic, and Han Chinese Languages
None (Uninhabited)
Tibeto-Burman Languages
Tibeto-Burman and Han Chinese Languages
Turkic Languages
Turkic and Han Chinese Languages

to expand northward whenever possible.[7]

Before 1900, Han settlement in what is now Inner Mongolia was concentrated in areas that were ecologically most suited to farming, "along the southern borders of Inner Mongolia and on the east in Manchurian Mongolia" (Lattimore, 1962, 97).[8] Lattimore argues that this historic pattern of settlement reflects Inner Mongolia's place at the intersection of three ecological-economic-cultural zones: the steppe pastoral zone inhabited by the Mongols, the agricultural zone inhabited by Han Chinese, and the mountainous forests inhabited by Tungusic hunter-gatherers.

The ecological frontier described and mapped by Lattimore is remarkably similar to the linguistic frontier shown in the *Language Atlas of China* (Wurm et al., 1988). Lattimore's map is reproduced in Figure 1.2 on page 8 (Lattimore, 1962, 52) and the Language Atlas map in Figure 1.3 on page 9 (from Wurm et al., 1988, as digitized by Crissman, 2002).

On the Language Atlas map, large swathes of southern and eastern Inner Mongolia are shown as Chinese-speaking (yellow) or as containing both Mongolian and Chinese speakers (peach) (Figure 1.3). These correspond to patches on Lattimore's map that are crosshatched to indicate "intermittent agriculture" or the "area of meeting" of all three economies in Manchuria (Figure 1.2; look near the boxes labeled "Southern and Western Mongols", "Southern Mongols", and "Eastern Mongols").

Taking the two maps together, we can see that the parts of Inner Mongolia with the most Chinese speakers in recent times tended also to have a longer history of contact, due to their intermediate ecology that was hospitable to both herding and farming.

---

[7]On the ancient and medieval history of Inner Asian pastoral nomadism, see Christian (1998); for a twentieth-century view, see Humphrey & Sneath (1999).

[8]Manchuria generally refers to the homeland of the Manchu people in the northeast of present-day China, bordering on Korea, Russia and Mongolia. At the time Lattimore wrote (the late 1930s), most of Manchuria had been taken over by Japan to form the puppet state called Manchukuo. Today, the Chinese refer to the area as simply "the Northeast" (*dōngběi* 东北). See Elliott (2000) for a history of Manchuria as a geographic entity.

1.4 Case studies of pre-1949 language contact

In this section I will compare two cases of pre-1949 cultural and linguistic contact: the Western Tümed Mongols and the Horchin Mongols. Both groups adopted an agricultural way of life, but only one lost the Mongolian language in the process.

The Language Atlas map in Figure 1.3 showed a Chinese-speaking area in west central Inner Mongolia around the city of Hohhot, and also a Mongolian-plus-Chinese area in the southeast corner, around the city of Tongliao. These are areas traditionally inhabited by the Tümed and Horchin tribes respectively.

The Western Tümed underwent language shift well before 1949, while the Horchin have maintained Mongolian up to the present, albeit with increasing Mongolian-Chinese bilingualism. The two cases are discussed in more detail below.

1.4.1 The Tümed language shift

In the late Qing era, the western[9] branch of the Tümed Mongols were living on the Hetao Plain near the city of Guihua (now called Hohhot), a center for trade between Chinese and Mongols. Beginning in the 18th century, an influx of Han peasants moved in from neighboring Shanxi, Shaanxi and Hebei provinces. The city itself had always had a large Han merchant population, but the surrounding Hetao Plain had been majority Mongol until this wave of settlement (Wang, 2000).

By the 1840s there were already many monolingual Chinese speakers among the Tümed, as observed by a French missionary traveling through (Huc, 1850). Starting in 1905, the Qing government reluctantly permitted Tümed Mongols to take the imperial civil service exams in Chinese instead of Mongolian (Wang, 2000, 35). A report from the 1940s found that only a few older adults and monks still knew Mongolian (Wang, 2000, 34). Though the Tümed retained a strong sense of Mongolian identity, they had become linguistically indistinguishable from the local Han (see Puthuval & Wang, 2016).

---

[9] The Eastern Tümed stayed in eastern Inner Mongolia in the region known as Ulaanhad or Chifeng.

Some Mongolian influence is found in the local variety of Jin Chinese (*Jìn fāngyán* 晋方言) spoken by both Han and Mongols. This dialect, called *Cǐdìhuà* (此地话), has also absorbed loan-words and place names from Mongolian, for instance /tʰiɛ̃³¹liŋ³¹kɐɹ⁴³⁵/ 'head' from Mongolian *tologai*. Some are loan-blends, like /tsei³¹xuəʔ⁴³la⁴³⁵/ 'a thief or liar' (Chinese *zéi* 贼 'thief' combined with Mongolian *xulagaici* 'thief') (examples from Lu & Dorji, 1995, cited in Puthuval & Wang, 2016).

Though the Tümed language shift happened long ago, the Tümed Mongols are an important group to consider even for present-day studies of language shift. For one thing, the Tümed are generally considered (by themselves, other Mongols, and the government) to be legitimate members of the Mongolian population, despite being culturally Sinicized. Therefore, estimates of the percentage of Mongols who do not speak Mongolian will generally include the Tümed (e.g. Wurm et al., 1988). On the other hand, if what we are interested in is the present-day transmission of Mongolian from parents to children, then the Tümed can be excluded, because the Tümed parents and grandparents are not in a position to transmit Mongolian in the first place.

Either way, failing to account appropriately for the Tümed and their history will distort estimates of the vitality of Mongolian. Such distortion is especially noticeable in studies of urban Mongols, since the Tümed region contains Inner Mongolia's two biggest modern cities, Hohhot and Baotou. Among studies of Hohhot Mongols, Borchigud (1995) carefully maintains a distinction between the local Tümed and more recent arrivals, but Wang (2000) and Jankowiak (1993, 2013) do not, while Erdenituyaga (2013) focuses exclusively on Mongolian-speaking Mongols.

1.4.2 Horchin language maintenance

The Horchin Mongols live in the easternmost part of Inner Mongolia (mostly Tongliao and Hinggan) as well as some adjoining areas in Jilin, Liaoning and Heilongjiang provinces. Like the Tümed, they converted from pastoralism to agriculture following the migration of Han farmers into their region, but it probably happened somewhat later.

Khan (1996, 153) dates the Han influx and subsequent lifestyle shift in Hinggan to the early

twentieth century, after the Qing ban on migration was lifted. Even though the ban was not strictly enforced and migration could have been happening earlier (see Section 1.2), there are other reasons to think the Horchin adopted agriculture relatively late and/or gradually: Khan notes that during his fieldwork in the 1990s there was still a generational difference among informants, with older people being more familiar with grazing animals such as sheep, and younger people preferring to raise pigs (1996, 140-141). This contrasts with Huc's (1850) eyewitness description of the Tümed as practicing a fully Chinese-like form of agriculture in the 1840s.

Today, the Horchin dialect of Mongolian shows significant influence from Northeast Mandarin Chinese, including lexical borrowings (Hasierdun et al., 2012, 24-25, Brosig, 2014, 29-30, Puthuval, 2013), a convergence toward Mandarin in the phoneme inventory and syllable structure (Bayancogtu, 2002; Puthuval, 2013), the adoption of Mandarin modal and aspectual particles such as *ba* and *le* (Brosig, 2014, 31-33), and the partial loss of typical Altaic features like vowel harmony (Bayancogtu, 2002) and evidentiality marking (Brosig, 2014). The Horchin lexicon has a richer vocabulary for vegetables, farm implements etc. than other Mongolian dialects; some of it was borrowed from Chinese and some developed internally (Hasierdun et al., 2012). Many of these Chinese-influenced features are present in other dialects of Inner Mongolia, but usually to a lesser extent.

Like the Tümed, the Horchin must be appropriately accounted for in studies of language transmission. First, since the degree of linguistic influence suggests long-term bilingualism of at least some portion of the population, the prevalence of bilingualism among the Horchin today should not be taken as evidence for imminent language shift. Second, as Hasierdun et al. (2012) explain, large numbers of Horchin monolinguals do still exist, and thus the Horchin dialect (a stable code with some borrowed elements) should not be confused with active code-mixing or with linguistic assimilation. Such confusion does happen—the Chinese influence, or "impurity", of Horchin Mongolian has led some observers to count the Horchin among those Mongols who have lost their language (e.g. Bulag, 2003, 756, who dismisses the dialect as "pidgin Mongol"; see 3.2.3 and 5.3.1 for further discussion). Finally, the Horchin case demonstrates that language shift is not the inevitable result of lifestyle shift; Mongols can adopt an agricultural way of life while

remaining linguistically distinct from Han.

As the Horchin and Tümed cases illustrate, certain groups of Mongolian speakers experienced significant contact with Chinese speakers starting as early as the eighteenth century. Lim & Ansaldo portray intensive contact as a post-1949 phenomenon, but this is only true for the most isolated parts of Inner Mongolia. Furthermore, the Horchin case shows that intensive contact has not inevitably produced language shift.

1.5   Ideologies of language and ethnicity in Inner Mongolia since 1949

The relationship between Mongolian language and ethnic identity is an extremely complex and contentious issue for Inner Mongolian Mongols. There are several reasons for this. Mongolian ethnicity is part of the Chinese government's system of ethnic classification (1.5.1), which also shapes language policy (1.5.2). Despite the pervasive official classification system, individual Mongols hold diverse views about what makes up their personal ethnic identity (1.5.3). At the same time, official ethnicity policy has successfully promoted an idealized image of what it means to be a Mongol, which is accepted by most people as the norm, even though it does not match the multiple realities of Mongolian life (1.5.4).

1.5.1   How ethnic classification works in China

Ethnic classification is a bureaucratic fact of life in contemporary China. Every citizen has an official ethnic identity which is recorded on their ID documents, residency papers (*hùkǒuběn* 户口本) and other official documents. Ethnic identity is assigned at birth and cannot be freely altered. Official ethnic identities are drawn from a fixed list of 56 ethnic groups, including the majority Han and 55 minorities. Dual identities are not recognized; children of mixed marriages must choose the ethnicity of one parent or the other.[10]

The present 56-group classification system was developed in the 1940s and 1950s by social scientists working for the PRC government. During the classification process, citizens were as-

---

[10] The parents choose at first, and children have one chance to change it when they turn 18. See also Section 1.2, page 6 above.

signed to ethnic groups based on various criteria such as culture, language, and descent, but once the process was complete, descent became the only criterion for membership. Some ethnic categories, including Mongol, were carried over from previous governments.[11]

The Standard Chinese term translated here as "ethnic/ethnicity" is *minzu* (*mínzú* 民族; noun and adjective). A more common translation used to be "national/nationality", though "ethnicity" has gained ground since the 1990s and is more or less standard today. Meanwhile, scholars writing for a China-specialist audience often use *minzu* directly instead of translating (e.g. Khan, 1996; Harrell, 2001; Mullaney, 2011).

Translating *minzu* into Mongolian is likewise problematic. The standard translation in Inner Mongolia is *ündüsüten*. However, the usage of Mongolian terms for "state" and "people" has become different in Inner Mongolia versus in Mongolia proper. According to Atwood (1994), Inner Mongolian usage reflects Chinese political discourse in its "radical dissociation" (37) between ethnicity (*mínzú/ündüsüten*) and nationhood (*guójiā/ulus*). In Mongolia, usage tends toward a "unitary fusion of ethnicity and nationhood" (42) in words like *ündüsü* "nation", which refers to the state and the civic community, but is etymologically and semantically close to *ündüsüten*.[12]

I will continue to use "ethnic/ethnicity" for *minzu* throughout this document.

1.5.2 Language policy as ethnicity policy

Language policy and linguistics research in China are filtered through the ethnic classification system.[13] There is exactly one language (*yǔyán* 语言) recognized as the proper "ethnic language" for each of the 55 minority ethnic groups. Midcentury PRC field linguists documented and classified languages accordingly:

> "....merely recording and listing varieties was insufficient; these languages were those
> of the fifty-five minority *minzu*, after all, and each *minzu* needed to have its own lan-

---

[11]See Mullaney (2011) for a history of the classification process.

[12] Communist ideology per se does not explain the divergence, since Mongolia was also communist for most of the twentieth century. See Bulag (1998) on how Mongolian nationalism has affected relations between Mongols in Inner and (ex-)Outer Mongolia.

[13] The influence of linguistics and ethnology was mutual: there is evidence that PRC social scientists used comparative/historical linguistics to simplify and control the ethnic classification process in ultra-diverse Yunnan Province (Mullaney, 2011, Chapter 2, 42-68); Mullaney argues that this was closer to British colonial practice than to Soviet ethnology.

guage classified and related to those of other *minzu*. A standard *Stammbaum* classification was worked out by the 1980s (Guojia Minwei 1981: 585-86) that conveniently correlated, on a nearly one- to-one basis, *minzu* and their languages. In addition, the varieties spoken by each *minzu* were further broken down into dialects (*fangyan*), and sometimes subdialects (*ci fangyan*) and local vernaculars (*tuyu*) (Bradley 1990, 2001). Only when the varieties spoken by members of a *minzu* cut across language families could a *minzu* have two languages; otherwise any variation was termed dialectal." (Harrell, 2001, 46)

To reconstruct the history of language contact and language shift, we would like to know how closely ethnic classification reflects language use. In Section 1.2, I presented the argument, from Zhao & Yang (2009), among others, that the incentives built into ethnicity policy have tended to artificially swell the population of minority groups, incorporating more and more people who do not necessarily speak the language, practice the culture, or identify with the group in question.[14] Knowing this, we can assume with Wurm et al. (1988) that the population of ethnic Mongols in census reports is significantly higher than the number of actual Mongolian speakers, though how much higher is not known.[15]

To understand the present status of Mongolian or another minority language, we would also like to know how well language policy is reflected in practice. Officially, the recognized ethnic languages benefit from language documentation, language planning, and educational support. For many of the languages, such support is patchy and *pro forma* (Dwyer, 1998b). Mongolian is perhaps the best-supported minority language, since Mongolian-medium instructional tracks exist from the elementary level up through the postgraduate level.[16] However, Mongolian education is currently being weakened by an ever-increasing emphasis on Putonghua and English in the curriculum (Tsung, 2014, 59-89). A detailed study of the implementation of language policy

---

[14] In Inner Mongolia, such people are stigmatized as "fake Mongols" (*jiǎde měngzú*, 假的蒙族) or "changeover Mongols" (*gǎide měngzú* 改的蒙族). But the label "fake" also gets applied to Mongols-by-descent who do not speak Mongolian, as per my fieldwork and Jankowiak's (Jankowiak, 1993, 47).

[15] Recent editions of the Ethnologue (Lewis, 2009; Lewis et al., 2013, 2015) continue to use census figures for the population of Mongolian speakers in China; this is reasonable given the absence of other data, though not very useful for accurately assessing language vitality.

[16] Lim & Ansaldo (2016, 136) state that Mongolian-medium education ended in 1965 during the Cultural Revolution, but they omit to mention that it was reinstated after the Cultural Revolution ended, and persists to this day.

is beyond the scope of this dissertation; the point here is to keep in mind that policies toward Mongolian are generally more favorable on the books than in practice.

1.5.3   Mongols' different orientations toward language and ethnicity

In an ethnographic study of 1980s Hohhot (the Inner Mongolian capital), anthropologist William Jankowiak describes four different "life orientations" that he observed among ethnic Mongols: the Traditionalist, the Revisionist, the Cosmopolitan and the Assimilationist (Jankowiak, 1993, 40-48). As far as language is concerned, Jankowiak's typology usefully captures three dimensions of variation: practical Mongolian language ability, attachment to Mongolness as part of one's identity, and beliefs about the relationship between language ability and Mongolness.

Traditionalists speak Mongolian natively and consider language as an essential, unproblematic and self-evident component of Mongolness; they do not consider others to be fully Mongol unless they speak Mongolian. *Revisionists* are native Chinese speakers but wish they spoke Mongolian (and sometimes study it as a second language). They consider language shift to be a regrettable result of political oppression. *Cosmopolitans* may or may not speak Mongolian. They believe that one can be a proud Mongol without speaking the language, and they value integration into broader Chinese society. *Assimilationists* do not speak Mongolian, nor do they want to. Mongolness is not important to their identity and they may even consider it a handicap.

Jankowiak encountered all four types during his fieldwork in Hohhot, but urban Mongols mainly fell into the Cosmopolitan or Revisionist category, while Assimilationists were the rarest (1993, 48). Both Cosmopolitans and Revisionists showed "an inclination to form and maintain ethnic friendship networks" (43), though Revisionists were more overt about it. Meanwhile, urban Traditionalists typically participated less in city life, and maintained strong ties to their rural areas of origin.

1.5.4 Language, ethnicity and the civilizing center

To illustrate the mismatch between idealized ethnic culture and the realities of everyday life, I offer the following anecdote: as a college English teacher in Inner Mongolia, I once assigned a class of Mongol students to write about cultural differences between Mongols and Han. I remember receiving statements like "Mongols live in yurts. Han live in apartments." Yet I knew quite well, from personal experience and from other assignments where students described their family homes, that Mongols in present-day Inner Mongolia hardly ever live in yurts.[17] Neither is the apartment building the traditional dwelling of age-old Han culture. It seems my students were simply equating Mongolness with (Mongolian) tradition and Hanness with (generic, quasi-Western) modernity.

These students were not unusual. When people in China talk about *minzu*, it is implicitly understood that non-Han cultures are backward and must be abandoned in order to truly modernize. Sometimes, this is made explicit, as in the guiding theory of ethnology in Communist China:

> "...the five-stage theory of history [was] derived from the work of Morgan and Engels and canonized by the political and scholarly establishment of Stalinist Russia. According to this theory, all peoples pass through the primitive, slave, feudal and capitalist modes of production along the road to socialism; in China at the time of the Communist takeover, different minzu stood at different places along this road. ... the Han had a duty to cooperate with minority peoples to help bring them along the road of social development." (Harrell, 1993, 112)

Harrell (1995) coined the phrase "civilizing project" to describe the Chinese state's view of its role as a civilizing center gradually converting a barbarian periphery. As part of the "civilizing project" discourse, differences between Han and other ethnic groups are exaggerated, which serves to reinforce Han identity and Han sense of superiority, and also serves to present a multiculturalist image. Thus, quaint and colorful features of ethnic minority culture are heavily emphasized (Chu, 2015), whether the portrayal is in state-sponsored media, school textbooks

---

[17]This is different from Mongolia proper, where yurts (*ger*) are still a common dwelling in the countryside and in the poorer districts of Ulaanbaatar.

(e.g. the cover image shown in Figure 1.4), or tourist promotional materials. Over time, each of the 55 minority groups has acquired a canonical image that is replicated in all these media and comes to be taken for granted. For example Mongols are defined by their herds of animals; their diet rich in meat and dairy; their traditional sports such as wrestling, horse racing and archery; and their supposed love of singing and dancing.

Language is one of these canonical ethnic attributes. Therefore, Mongols who speak Mongolian are the best, most authentic Mongols. But at the same time, Chinese is a more civilized and advanced language than Mongolian can ever be; therefore, Mongols who speak perfect Putonghua are civilized, while Mongols whose dominant language is Mongolian are backward.

This paradox built into the prevailing ideology of language and ethnicity is pointed out by Dwyer (1998b), Bulag (2003), and Harrell (1993), among others. In terms of Jankowiak's four types of Mongol worldview (see 1.5.3), the Traditionalists and Revisionists hold more strongly to the first idea. The Cosmopolitans and Assimilationists hold more strongly to the second.

1.6   Revisiting the textbook case

Returning to Lim & Ansaldo (2016), I want to review their interpretation of the Inner Mongolian case in more detail, in light of the context I have provided in this chapter. I will point out some ways in which their analysis suffers from inadequate attention to the time scale of events.

The social changes that have led to language shift in Inner Mongolia all originate around the year 1949, in Lim & Ansaldo's account.[18] Even if 1949 were the most important timepoint (which, I have argued, it is not), it would still be strange that Lim & Ansaldo support their claims by comparing language use data across two generations *who were both born well after 1949*. Their data come from a survey of university students, via Wu (2008) and Lim et al. (2009): the younger generation are the undergraduate-aged survey respondents (presumably born in the late 1980s) and the older generation are the respondents' parents (presumably born in the 1960s).

---

[18] Even social changes which occurred rather later, such as the spread of English instruction, they date to 1949: "...English, which entered the picture in particular with globalisation and education reform in China in 1949." (Lim & Ansaldo, 2016, 136).
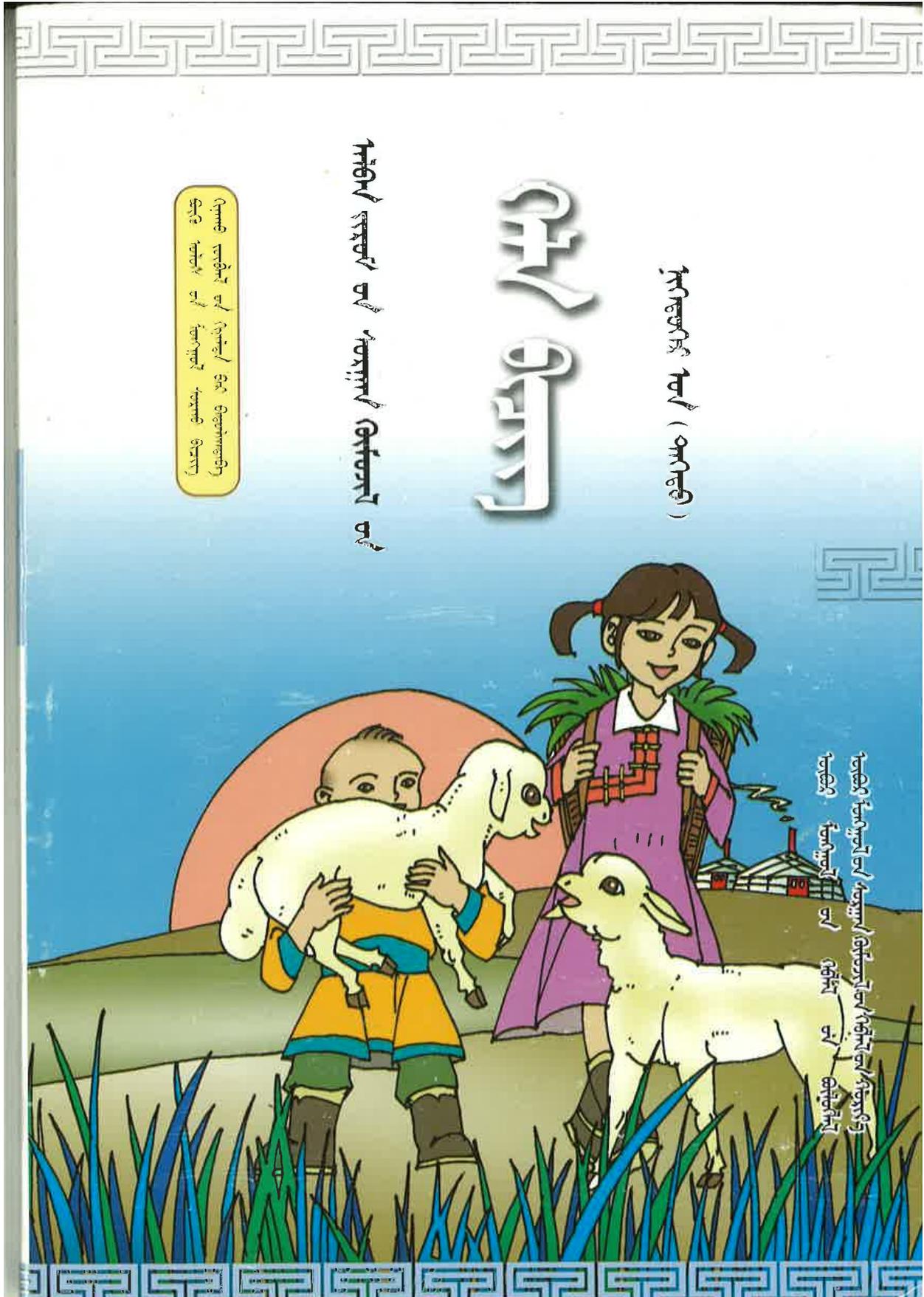
The 1980s generation and the 1960s generation may differ somewhat in their language use, but no evidence is presented that the two generations differ in terms of the social variables invoked to explain the change, since these are all said to date from 1949.

The survey finds increased use of Chinese in the home environment and radically increased use of English in education and media. A decline in use of Mongolian is not mentioned. Respondents displayed positive attitudes towards all three languages (Mongolian, Putonghua, and English). The reason for the generational difference, according to the authors, is that "Younger-generation Mongols have grown up in a society dominated by Han Chinese and their language, Putonghua" (Lim & Ansaldo, 2016, 136). But given the historical context reviewed in this chapter, the same must have been true of their parents and even their grandparents, if not in quite the same way or to the same extent.

Another time-scale difficulty arises when Lim & Ansaldo begin their case study with a description of Mongolian culture that hews closely to the normative image promoted by state-sponsored media and school textbooks in China:

> "Known as the 'horse-back tribe', the Mongols of Inner Mongolia clearly have a distinct culture: living a nomadic pastoral life involving hunting and herding, with a diet distinct from agricultural people, they have their own ethnic history and cultural traditions including traditional dress, music and poetry, and of course the Mongol language." (Lim & Ansaldo, 2016, 135)

Here, they implicitly set up the canonical portrait of Mongolian culture (cf. 1.5.4) as their reference point for how Inner Mongolia used to be before 1949. It should be clear by now that this portrayal is quite anachronistic. Anthropologist Almaz Khan (1996) has chronicled the persistence of such romantic, "ahistorical" images in Chinese writings about Mongolia over the past thousand years, and their uptake in the PRC era:

> "Despite such hard facts to the contrary, (Nei) Menggu [(Inner) Mongolia] continues to be perceived the way it has always been: as an exotic and wild region where all is boundless blue sky, grassland, herds and nomads. ... This archaic image of the pastoral Menggu [Mongolia] has been reinforced and propagated to an unprecedented extent since the founding of the PRC, largely through the spread of state-controlled modern means of mass communication, arts, literature, and popular entertainment. ... In the domain of education, the same theme is emphasized." (Khan, 1996, 132-33)

Given how pervasive these images are, perhaps it is not surprising that Lim & Ansaldo should invoke them.[19] But when it comes to language shift, misrepresenting the time scale of events can seriously distort our interpretation. Comparing the lifestyle and language use practices of today's young people against an idealized traditional Mongolian culture—instead of against the actual practices of their parents—will exaggerate the suddenness of the change. At the same time, the anachronistic reference point also underestimates the depth of some cultural and linguistic changes that have taken place, such as the grammatical and lexical changes in Horchin Mongolian (Section 1.4.2).

In their case study, Lim & Ansaldo compare today's "younger-generation Mongols" against three different baselines more or less indiscriminately: their parents born in the 1960s; the Mongols alive before 1949; and the "horse-back tribe" of some unspecified time period. As shown in Sections 1.2-1.5, these three baselines imply quite different sociolinguistic environments. For future studies of language shift in Inner Mongolia, establishing a clearer baseline for comparison is an indispensable step.

1.7   Summary

In this chapter I presented a simple overview of Inner Mongolia as a classic case of language shift, courtesy of Lim & Ansaldo (2016). I then introduced three counterpoints to Lim & Ansaldo's argument about the causes and inevitability of language shift in Inner Mongolia.

One, although Lim & Ansaldo treat the founding of the People's Republic of China in 1949 as the main turning point for Inner Mongolia's language ecology, I have shown in 1.2 that inter-ethnic contact in Inner Mongolia was already well advanced by 1949. Studies of language shift need to consider historical evidence and establish proper baselines for inferring change over time.

Two, parallels they draw between Inner Mongolia and Gal's Austrian research are flawed due to geographic and demographic scale: Gal's field site was one small village, while Inner Mongolia is a territory of a million square kilometers, within which different local areas have

---

[19] On stereotypes of Inner Mongolia, see also Borchigud (1996); Jankowiak (2013).

different histories of inter-ethnic contact and language contact (see 1.3 and 1.4). We should not necessarily expect the whole Mongolian population to follow the same language shift trajectory in the future, any more than they have in the past.

Three, anthropological work since 1980 has clearly demonstrated that Inner Mongolian Mongols vary widely in their attitudes to language, particularly their beliefs about the link between Mongolian language and ethnic identity. At the same time, these attitudes coexist with a highly structured government policy that promotes a restricted set of ethnic identities and a normative language-ethnicity link (see 1.5). This again calls into question the attempt to predict a collective ethnolinguistic future for them.

In sum, I find that the main problem with Lim & Ansaldo's analysis is that it anachronistically collapses centuries of social change into a few decades, making language shift appear more rapid than it is, and confusing the interpretation of intergenerational differences (see 1.6). Any account of change since 1949 is flawed if it assumes a preexisting linguistic and cultural purity.

Lim & Ansaldo's case study, while oversimplified, certainly serves to establish that the Mongolian language in Inner Mongolia is threatened to some degree. As they point out, the social, economic, demographic, and attitudinal factors known to promote language shift are indeed present; the use of other languages such as Chinese (Putonghua) and English is indeed becoming more widespread.

What we cannot learn from such an analysis is just how serious the threat is, or how quickly (if ever) the language is likely to disappear from the region. This dissertation project seeks a better answer for these questions. Having presented the problem in its Inner Mongolian context, in the next chapter I will review some of the linguistics literature on language shift.

Chapter 2

APPROACHES TO THE STUDY OF LANGUAGE MAINTENANCE AND LANGUAGE SHIFT

Language shift happens when a group of people stops using one language in favor of another, such that subsequent generations no longer acquire the original language. Its opposite is *language maintenance*, when a group continues using its own language alongside the other language.

Shift was originally identified as an object of study by some of the pioneering scholars in sociolinguistics. Weinreich (1953, 68) defined language shift simply as "the change from the habitual use of one language to that of another." The quote is from his book *Languages in Contact*, which treats contact from three angles: as an influence on language change; as a phenomenon in the individual brain; and as a process conditioned by the social environment.

Because shift has relatively little impact on language change, Weinreich paid it relatively little attention. Another early sociolinguist, Joshua Fishman, was more interested in the relationship between society and language, and he developed the concepts of language shift and language maintenance further. In Fishman's words from one of his early writings on the topic:

> "The study of language maintenance and language shift is concerned with the relationship between change or stability in habitual language use, on the one hand, and ongoing psychological, social or cultural processes, on the other hand, when populations differing in language are in contact with each other." (Fishman, 1964, 32)

The basic concepts for the current study are all contained in the above quote. In Inner Mongolia, populations differing in language (Sinitic and Mongolic) have come in closer and closer contact with each other over the past three centuries, and especially over the past 70 years. Ongoing processes of social and economic change are restructuring people's way of life and requir-

ing them to adopt new linguistic behaviors. Psychologically and culturally, their worldview, way of thinking, and manner of education are changing as well. Naturally, there have been changes in habitual language use, including increased use of Standard Chinese and complete loss of some Mongolian dialects. As I argued in Chapter One, while the broad trend of more Chinese and less Mongolian is known, many details of the language use situation are unknown, and in particular we have difficulty telling whether the situation has stabilized or is still changing.

The goal of the present study is to assess the extent of language shift in Inner Mongolia and, using the geographic variability in Inner Mongolia, to explore factors in the social environment that affect language shift. Since the paper quoted above (Fishman, 1964) was published, theories and methods for the study of language shift and maintenance have evolved in several different subfields of linguistics. The present study draws on theories and methods from five subfields, which I will review in this chapter, as follows.

First I will situate language shift in the broader context of language contact (2.1). In the sub-field of contact linguistics, the goal of research is to reconstruct how historical contact between speakers of two or more languages may have influenced language change. Contact linguists have done a particularly thorough job of identifying different stages and degrees of language contact, and of enumerating the full set of possible outcomes of language contact. The present study will draw on this work.

Next, I will expand on Fishman's conception of language shift and its development in the subfield of endangered-languages research (2.2), which I take to include language description, documentation and revitalization. Here the goal of research is both scientific (describing languages before they disappear) and social (advocating for small speech communities whose linguistic and cultural survival is threatened). These twin goals evolved in response to the language endangerment crisis, that is, the sudden decline in human linguistic diversity brought about by industrialization and globalization. Within this subfield, language shift is usually studied in the context of a *language status assessment*, which seeks to evaluate how endangered or how threatened a language is. Research on language endangerment has established *intergenerational mother tongue transmission* as the single most important factor in maintaining a minority lan-

guage long-term. Intergenerational transmission of Mongolian will be the focus of the current study.

The reasons why intergenerational transmission is so important are partly social and partly cognitive. In 2.3, I review some concepts and empirical findings from the subfield of psycholinguistics, specifically the psycholinguistics of bilingualism. Here, researchers are interested in how language works in the brain, and how bilinguals differ from monolinguals. Psycholinguists have found that situations of language shift tend to produce different types of bilingual speakers in each generation as *dominance* shifts from the minority (or heritage) language toward the majority language. The current study will classify Mongolian-Chinese bilinguals according to principles established in psycholinguistics, insofar as this is possible for a field (not laboratory) study.

In sociolinguistics, there are two major methodological approaches to language shift. One is through the social psychology of language vitality, or *ethnolinguistic vitality* (2.4), which mainly concerns how the power dynamic between speakers of two different languages may influence individuals' attitudes and beliefs about the languages, and ultimately may also shape their choice of which language to use. In 2.4 I review some foundational and recent literature on ethnolinguistic vitality, and explain why this approach is tangential to the goals of the present study.

The other sociolinguistic approach is through the variationist research paradigm (2.5), which is designed to study linguistic change as it arises from synchronic variation in the speech community. As applied to language shift, variation is usually said to occur in language choice, that is, which language speakers choose to use in their daily interactions. I will review Susan Gal's (1979) seminal study done in Austria, which takes this approach, and which was referenced by Lim & Ansaldo (2016) as a potential parallel case to Inner Mongolia (see 1.1). I will argue that variation can also be observed in language acquisition, that is, which language(s) speakers end up acquiring in the course of their lifetimes. The present study has some methodological affinity with Gal's, but it should not be considered a variationist sociolinguistic study in the usual sense, since it is not directly concerned with language change.

For a complete explanation of the current study's aims, design and methodology, please refer

to Chapter Three.

2.1 Shift as one possible outcome of language contact

In this section I will introduce three key concepts for the current study: language spread, language maintenance, and language shift.

When two groups of people speaking different languages come into contact with each other, language shift is only one among several possible outcomes. If both languages continue to be spoken, this is called language maintenance. Maintenance requires some degree of bilingualism, but who becomes bilingual and how often they use each language may vary. The case of the Tümed Mongols in Chapter One (1.4.1) was an example of language shift, while the case of the Horchin Mongols (1.4.2) was an example of language maintenance.

Contact may also result in the formation of a new speech variety such as a creole or a mixed language. In such cases, the new language may replace both the original languages after a generation or two. Finally, another possible outcome of contact is language death through war or genocide. Languages have disappeared because their speakers were all killed, or because the remaining speakers had to leave their homes and scatter.

For historical linguists, knowing the social circumstances of contact helps to determine if similarities between two languages can legitimately be explained as the result of contact. Thus, while traditional, genealogically-focused historical linguistics (by which I mean the Comparative Method, see Campbell 2004) is based on linguistic data almost exclusively, contact linguistics needs to incorporate social and demographic data, and to build on historical and anthropological research. Arends (2008) makes this case for pidgin and creole studies, as Thomason & Kaufman (1988) made it for historical linguistics generally. According to the influential proposals of Thomason & Kaufman (1988), almost any kind of contact-induced change is possible, given the right social circumstances. In other words, no structural constraint on borrowing is absolute.

The distinction between maintenance and shift is key to Thomason and Kaufman's theory of contact. Besides shift and maintenance, another term not treated by Thomason & Kaufman (1988), but current among contact linguists generally, is *language spread* (Cooper, 1982). Spread

simply refers to what happens when some language gains speakers and/or spreads to new territory. Spread is a necessary precursor to both shift and maintenance. In Inner Mongolia, Chinese can be said to be spreading at the expense of Mongolian, and Standard Chinese is also spreading at the expense of other Chinese dialects.

The interplay between language spread, maintenance and shift is an important topic in the study of language diversity and human (pre)history. Linguists interested in explaining why language diversity is high in some parts of the world and low in others use the term *spread zones* for areas of low linguistic diversity, where human populations tended to come in contact with each other easily. *Residual zones* or *accretion zones* are areas of high linguistic diversity, where populations remained separate and did not migrate as much (Nichols, 1997).[1]

Inner Mongolia lies at one edge of the Eurasian Spread Zone, which is centered around the Mongolian steppe (Nichols, 1999, 2011). The Eurasian Spread Zone was created by low population density, nomadic lifestyles, and the ability to move quickly over long distances on horseback. It saw the successive spreads of the Indo-European, Turkic and Mongolic families. Note that Nichols is talking about a much earlier time period than concerns the present study. The Eurasian Spread Zone explains the large geographical extent of Mongolian and Mongolic; it has little to do with the contemporary spread of Chinese. It is, however, related to the moving ecological frontier between Mongolic and Sinitic speakers (see 1.3).

There is also a large and growing body of literature on contact between Mongolic and Sinitic languages in Northeast and Northwest China (Manchuria, Inner Mongolia, Gansu, Ningxia, Qinghai and Xinjiang). Local Sinitic dialects of these areas often show significant influence from Mongolic and vice versa; Tungusic, Turkic and Tibetan languages are involved as well.[2]

In our time, language contact has taken on a highly asymmetrical character, with a handful of powerful languages spreading at the expense of nearly everything else (Nettle & Romaine,

---

[1]On prehistoric spreads, see also Nichols (1992) and Hammarström (2010), among others.

[2] For more information on language contact in Northeast and Northwest China, some representative works are: Li (1984); Hashimoto (1986); Chen (1988); Dwyer (1992); Zhu et al. (1997); Dwyer (1998a); Dede (1999); Luo (2004); Slater (2005); Dede (2007); Janhunen et al. (2008); Sandman & Simon (2016). This bibliography was compiled with help from Nathan Loggins.

2000). This circumstance is best understood through the lens of language endangerment and revitalization, as described in the next section, 2.2.

2.2 Shift as a stage in language endangerment

The present study draws on endangered-languages research as its main theoretical basis. The field of endangered-languages research, also known as language documentation and revitalization, is distinguished by an emphasis on practical action to promote the continued use of small, threatened, and unwritten languages—in other words, to promote language maintenance in the face of pressure to shift. Language shift, in this context, is a precursor to endangerment, and is often used as a diagnostic of impending endangerment.

Many linguists in the field of documentation and revitalization are primarily working on core areas of linguistics (phonology, syntax, etc.). For them, sociolinguistics is a secondary activity, but an extremely important one due to the language endangerment crisis. They have developed a variety of scales to classify degrees of endangerment. These scales are sometimes called *language status assessments* or *sociolinguistic assessments*. The purpose of assessing the sociolinguistic situation of a language is to help decide what actions can and should be undertaken on behalf of that language.

For instance, the appropriate strategies are very different when a language is still vigorous within its community despite being weak in the broader society, versus when a language is no longer vigorously used or transmitted to children in its community. In the first case, the language could be strengthened by measures like making it a medium of instruction in local schools; introducing a writing system; getting legal recognition for the language; etc. In the second case, none of those measures would have much effect; the first priority would be to get children learning the language again, or, if that were impossible, to focus on documenting the language and encouraging the existing speakers to use the language more.[3]

---

[3] Such assessments may appear less than scientific compared to the more theoretically-motivated research typical of sociolinguistics proper. On the other hand, I would point out that, when linguists or community activists intentionally try to change speakers' behavior, this is as close as we can get to experimental research on language shift, and it could significantly advance our scientific understanding. Every time we learn about what works and

In early attempts at criteria for identifying endangered languages, the main factors were speaker population and speaker age distribution, particularly the age of the youngest speakers (Krauss, 1992; Wurm, 1998). Later, more fine-grained assessments incorporated other factors like language policy, domains of use, attitudes and status. Considering population alone, Mongolian is not an endangered language, even within China, since it has several million speakers there. Though exact figures are not available, this estimate is certainly accurate within an order of magnitude (Puthuval, 2017a). However, endangerment is understood to be a gradual, multi-stage process. Research on languages like Mongolian, which are in the early stages of endangerment or, perhaps, at the stage *before* endangerment begins, can provide insight into how a language becomes endangered in the first place.

For a comprehensive review of endangerment scales, see Bradley & Bradley (2017). Here, I will just discuss a few, and I will focus on the most consistent recurring factor in all the scales: intergenerational transmission, meaning that children in the speech community continue acquiring that language as their first language. Krauss (1992) declared that languages no longer being learned by children had gone "beyond mere endangerment" and into a state he preferred to call "moribund". While others might disagree on the label, there is general agreement that loss of transmission is a turning point in language endangerment.

In the present study, endangerment scales will not be used directly for assessment, but rather as a theoretical representation of the stages a language may pass through as it becomes more endangered and perhaps dies out. I will argue that some factors on the existing scales are valid indicators of language shift, while other factors are not indicators but rather causes (or presumed causes) of shift. This conflation of cause and effect makes it impossible to use the scales for investigating cause and effect relationships in language shift.

Section 2.2.1 presents the Graded Intergenerational Disruption Scale; Section 2.2.2 presents the Ethnologue adaptation of that scale; and Section 2.2.3 presents a scale promoted by UNESCO;

---

does not work to reverse language shift, we have also learned something about what causes language shift. Furthermore, the people carrying out applied assessments have a strong motivation to get their predictions right. Therefore, basic research on language shift (such as the present study) ought to pay attention to the findings of applied research on language endangerment.

I also apply each scale to Mongolian in Inner Mongolia. In Section 2.2.4 I review some discussions in the literature about the difficulty of predicting language shift even though the causes are well known. In Section 2.2.5, I argue that a quantitative approach to language endangerment research can better capture the variable and gradual nature of language shift.

2.2.1   Stages of endangerment: the GIDS scale

One highly influential scale is the Graded Intergenerational Disruption Scale (GIDS), first introduced by Fishman (1991). The GIDS has been used directly as a framework by some researchers: two collections of case studies can be found in McCarty et al. (1999) and Fishman (2001). The GIDS has also inspired two other widely-used scales: the EGIDS scale in 2.2.2 (Lewis & Simons, 2010) and one of UNESCO's scales in 2.2.3 (UNESCO Ad Hoc Expert Group on Endangered Languages, 2003).

As the "Intergenerational Disruption" in the name implies, intergenerational transmission is a main factor in GIDS, along with domains of use of the language. Fishman's original GIDS scheme is shown in Table 2.1. It has eight stages, where Stage 8 is the most endangered and Stage 1 is the safest. The language being evaluated is referred to as "X-ish", and the majority language to which speakers are shifting is called "Y-ish". "X-men" and "Y-men" are the respective ethnic groups.

Table 2.1: Graded Intergenerational Disruption Scale (GIDS)

Stage	Criteria
Stage 8	Most vestigial users of X-ish are socially isolated old folks and X-ish needs to be re-assembled from their mouths and memories and taught to demographically unconcentrated adults.
Stage 7	Most users of X-ish are a socially integrated and ethnolinguistically active population but they are beyond child-bearing age.
Stage 6	The attainment of intergenerational informal oralcy and its demographic concentration and institutional reinforcement.
Stage 5	X-ish literacy in home, school and community, but without taking on extra-communal reinforcement of such literacy.
Stage 4	X-ish in lower education (types a and b) that meets the requirements of compulsory education laws.
Stage 3	Use of X-ish in the lower work sphere (outside of the X-ish neighborhood/community) involving interaction between X-men and Y-men.
Stage 2	X-ish in lower governmental services and mass media but not in the higher spheres of either.
Stage 1	Some use of X-ish in higher level educational, occupational, governmental and media efforts (but without the additional safety provided by political independence).

Criteria in this table are quoted from Fishman (1991, 87-109).

The GIDS is intended to be used by language revitalization activists, and to be applied as a Guttman scale (implicational scale). For example, if a language seems to be at Stage 7 "Most users of X-ish are a socially integrated and ethnolinguistically active population but they are beyond child-bearing age", then activists should focus on getting it to Stage 6 "The attainment of intergenerational informal oralcy and its demographic concentration and institutional reinforcement." At the same time, they should not put too much effort into Stage 5 (X-ish literacy), Stage 4 (X-ish in lower education), etc. until Stage 6 is solidified. According to Fishman, language revitalization activists should never aim too high, beyond the actual linguistic resources of their community, or the result will be (at best) a superficial presence of the language in prestigious spheres, but without reviving the language in people's daily life.

The Guttman scale aspect of GIDS has proven somewhat problematic in practice, especially when it is taken to be descriptive rather than prescriptive, as I will discuss in 2.2.2.

Language activists since the publication of GIDS (Fishman, 1991) have taken seriously the call to focus on mother tongue transmission. One interesting implementation has been the "language nest", from the Māori *te kōhanga reo* (King, 2001, 121). A language nest is an intentionally-created environment for very young children where they will be exposed exclusively to the minority language. The Māori language revitalization project in New Zealand has conducted perhaps the most extensive language nest project in the world, involving tens of thousands of children (King, 2001). The *kōhanga reo* "language nests" are preschools staffed by Māori-speaking teachers. At the time the program began, transmission of Māori to children had almost ceased, and most of the fluent speakers were over 40. Originally, the idea was that older speakers, even if they lacked teaching skills, could participate in the *kōhanga reo* simply by talking to the children and providing linguistic input. However, the older speakers were not necessarily willing or confident in doing this, so it became more common for the *kōhanga reo* to be staffed by younger teachers who were L2 speakers of Māori. As of 2001, the project had succeeded in creating many new Māori speakers. On the other hand attaining full fluency was still rare, and Māori had not yet regained its footing as the everyday language of home and community. Instead, the domains of use for Māori remained confined to ceremonies, church, some schools, and of course the language nests themselves.

The experience of the Māori language revitalization project shows how effortful it is to reestablish intergenerational transmission once it has been interrupted. For languages like Māori, Cherokee or Amis (all of which are currently operating programs to help transmission "skip a generation" by putting elders in touch with young children), this effortful path is the only option.[4] For languages like Mongolian, where intergenerational transmission continues uninterrupted in many communities, there is an easier way: encourage and reinforce the existing practice of inter-

---

[4] My source for Cherokee is a talk given at UW several years ago by a technologist for the Cherokee Nation. My source for Amis is personal communications with Sifo Lakaw, the president of Hualien Tribal College in Hualien, Taiwan.

generational transmission, and continue to use Mongolian as the everyday language for family and in-group interactions.

The GIDS scale embodies two important insights: the central role of transmission, and the way that community and society-wide language use practices can reinforce or undermine transmission. Later endangerment scales have usually tried to preserve these insights while addressing some of the disadvantages of GIDS. Ethnologue's scale (see 2.2.2) seeks to make GIDS universally applicable to all languages, with more levels and broader criteria. UNESCO's scale (see 2.2.3) tries to provide more complex and nuanced evaluation, where the transmission factor, the language use factor, and other factors are each considered separately.

2.2.2 Expanding the GIDS: A more fine-grained scale

The Ethnologue database, maintained by SIL International at `www.ethnologue.com`, is an online database of information about the world's languages. Recently, the Ethnologue editors created their own version of GIDS called the "Expanded GIDS" (EGIDS) (Lewis & Simons, 2010) (sometimes "Extended GIDS"). It has thirteen levels to GIDS's eight, in order to accommodate a greater variety of language situations, including extinct languages and non-threatened languages. EGIDS evaluations for every language were added to the Ethnologue database as of the 17th edition (Lewis et al., 2013).

Ethnologue's EGIDS is shown in Table 2.2. The scale intentionally preserves the same numbering scheme as Fishman's GIDS. Some differences between EGIDS and GIDS are:

- EGIDS has additional stages 0, 6a/6b, 8a/8b, 9, and 10. (It splits Fishman's Stages 6 and 8 into two.)

- EGIDS names each stage as well as numbering them.

- The criteria for each stage are slightly different from GIDS.

- EGIDS is usually printed in the reverse order to GIDS, with the most-endangered stages at the bottom.

Table 2.2: Expanded GIDS (EGIDS)

	Label	Description
0	International	The language is widely used between nations in trade, knowledge exchange, and policy.
1	National	The language is used in education, work, mass media, and government at the national level.
2	Provincial	The language is used in education, work, mass media, and government within major administrative subdivisions of a nation.
3	Wider Communication	Used in work and mass media without official status to transcend language differences across a region.
4	Educational	The language is in vigorous use, with standardization and literature being sustained through a widespread system of institutionally supported education.
5	Developing	The language is in vigorous use, with literature in a standardized form being used by some though this is not yet widespread or sustainable.
6a	Vigorous	The language is used for face-to-face communication by all generations and the situation is sustainable.
6b	Threatened	The language is used for face-to-face communication within all generations, but losing users.
7	Shifting	The child-bearing generation can use the language among themselves, but it is not being transmitted to children.
8a	Moribund	The only remaining active users of the language are members of the grandparent generation and older.
8b	Nearly Extinct	The only remaining users of the language are members of the grandparent generation or older who have little opportunity to use the language.
9	Dormant	The language serves as a reminder of heritage identity for an ethnic community, but no one has more than symbolic proficiency.
10	Extinct	The language is no longer used and no one retains a sense of ethnic identity associated with the language.

Criteria are quoted from Lewis et al. (2016).

In practice, EGIDS is applied as a Guttman scale wherever possible (Lewis & Simons, 2010). However, the shortage of data about intergenerational transmission is a constant problem in the study of language endangerment. For some languages in the Ethnologue database, the editors

did not have specific data about transmission, but they did have evidence of institutional support (education, etc.). In such cases they might take institutional support as evidence that the intergenerational transmission situation was stable (I will give an example below).

The one-dimensional, Guttman scale aspect of both GIDS and EGIDS has attracted criticism, and is the main reason why some researchers reject these two scales. As Bradley & Bradley (2017) put it, "Levels 1 to 4 [of GIDS] are actually incommensurable with Levels 5 to 8." Stages 6, 7 and 8 are indeed mutually exclusive with each other, and more or less sequential, because they concern which generations speak the language. However, Stages 5 through 1 each concern a different domain of language use; they are not necessarily sequential, and they can co-occur with each other and with Stage 6, 7, or 8.[5]

The problem is that a language can be simultaneously at several different stages on the GIDS, because the GIDS collapses multiple factors into a single scale. To take an example from Mongolian: the 2013 edition of the Ethnologue (Lewis et al., 2013) rated Mongolian in China ("Peripheral Mongolian", ISO 639-3: mvf) at Stage 2 because Mongolian is the co-official language of Inner Mongolia and therefore has some use in government. In early 2016, I personally suggested to the Ethnologue editors that this evaluation was over-optimistic because intergenerational transmission of Mongolian was known to be declining. Subsequently, Ethnologue changed its evaluation of "Peripheral Mongolian" to Stage 6a (between Stages 6 and 7) in the 2016 edition (Lewis et al., 2016). The new evaluation, however, fails to reflect that Mongolian-medium education streams exist (Stage 4), and that Mongolian is actually used sometimes in mass media and government in Inner Mongolia (Stage 2). From a descriptive point of view, GIDS and EGIDS provide no right answer for Mongolian in China.

I contend that GIDS is a valid Guttman scale only if we take it to be a policy recommendation rather than an observational tool. GIDS expresses the idea that the best strategy for revitalization activists is to pursue the stages in order, not skipping any. This strategic recommendation grew out of Fishman's extensive experience and insight into the practical and ideological battles

---

[5] Bradley groups Stage 5 with stages 6-8, but in my view Stage 5 is more like stages 4-1, so I have argued it that way. The argument is essentially the same.

faced by language revitalization projects, and it should not be taken lightly. Nonetheless, in a descriptive sense, GIDS fails as a Guttman scale. EGIDS inherits the same weakness. Neither is a suitable tool for the present study.

2.2.3 Exploding the GIDS: Multidimensional scales

As discussed in the previous section, language endangerment situations cannot satisfactorily be arrayed along a one-dimensional scale from most to least endangered. There are always exceptions and inconsistencies. To address this, some researchers have proposed multi-dimensional evaluations. As an example, I will discuss one of the most widely used, the "Guidelines for assessing language vitality and endangerment" published by UNESCO. For other examples, see Edwards (1992); Grenoble & Whaley (1998) or Bradley & Bradley (2017).

In 2002, a UNESCO-convened panel of language endangerment experts established guidelines for assessing language vitality that included a GIDS-derived scale (UNESCO Ad Hoc Expert Group on Endangered Languages, 2003); these guidelines are used by UNESCO's endangered languages projects and by individual researchers.

UNESCO's assessment guidelines are comprised of nine different scales addressing the following nine factors:

1. Intergenerational Language Transmission

2. Absolute Number of Speakers

3. Proportion of Speakers within the Total Population

4. Shifts in Domains of Language Use

5. Response to New Domains and Media

6. Availability of Materials for Language Education and Literacy

7. Governmental & Institutional Language Attitudes and Policies Including Official Status & Use

8. Community Members' Attitudes towards Their Own Language

9. Type and Quality of Documentation

Each factor is evaluated on a scale of 0 to 5, with 5 being the safest (the opposite direction to GIDS/EGIDS numbering). According to the authors of the guidelines, the scale that most directly references Fishman's GIDS is Factor 1, intergenerational language transmission. The Factor 1 scale is shown in Table 2.3.

Table 2.3: UNESCO scale, Factor 1, Intergenerational Language Transmission

Degree of endangerment	Grade	Speaker Population
safe	5	The language is used by all ages, from children up.
unsafe	4	The language is used by some children in all domains; it is used by all children in limited domains.
definitively endangered	3	The language is used mostly by the parental generation and up.
severely endangered	2	The language is used mostly by the grandparental generation and up.
critically endangered	1	The language is used by very few speakers, mostly of great-grandparental generation.
extinct	0	There are no speakers.

Reproduced from UNESCO Ad Hoc Expert Group on Endangered Languages (2003)

However, elements of GIDS occur in other scales as well. For example, Factor 4 concerns shifts in domains of language use, as shown in Table 2.4. On the GIDS, domains of use serve to distinguish between the less-endangered levels such as level 3 and level 2. On the UNESCO scale, domains can be criteria for all levels of endangerment. Other GIDS-like criteria occur in UNESCO's Factor 6 (literacy) and Factor 7 (policy).

Table 2.4: UNESCO scale, Factor 4, Shifts in Domains of Language Use

Degree of endangerment	Grade	Domains and functions
universal use	5	The language is used in all domains and for all functions.
multilingual parity	4	Two or more languages may be used in most social domains and for most functions.
dwindling domains	3	The language is used in home domains and for many functions, but the dominant language begins to penetrate even home domains.
limited or formal domains	2	The language is used in limited social domains and for several functions.
highly limited domains	1	The language is used only in a very restricted number of domains and for very few functions.
extinct	0	The language is not used in any domain for any function.

Reproduced from UNESCO Ad Hoc Expert Group on Endangered Languages (2003)

The authors of the guidelines emphasize that scores for the nine factors should *not* be averaged together into a one-dimensional result like GIDS or EGIDS. Instead, each factor's score should be considered separately. Thus, the total evaluation of a language by the UNESCO method is necessarily holistic and qualitative.

The UNESCO 9-factor analysis has been applied to some endangered and threatened minority languages in China, e.g. Mongghul (Limusishiden & Dede, 2012), Horchin Mongolian (Brosig, unpublished field notes, 2010-2012) and the Inner Mongolian dialects (Puthuval, 2017a). When applying it to the Inner Mongolian dialects, I found that the greatest difficulty lay in accounting for regional variation, that is, the kind of diversity described in Chapter One, that arises from each region's specific history of language contact. I adapted the methodology by assigning a range of scores for most of the factors, rather than picking a single score.

An advantage of the UNESCO scale is that, unlike GIDS and EGIDS, it allows us to conceptually separate cause and effect in language shift. This is not the intended use of the method, but it is possible to isolate one particular factor as the main indicator of language vitality, e.g. inter-

generational transmission, and to investigate the relationship between that factor and potential influencing factors (either from UNESCO's other eight factors or elsewhere).

2.2.4   Variability and unpredictability in language shift

Language shift is ultimately caused by broad changes in the social environment. However, language shift is not monolithic or inevitable. Communities do not all follow the expected trajectory as depicted in GIDS-like scales, and the timing of shift is difficult to predict. Though the causes may be well known, we do not fully understand the process linking the causes and the result:

> "The fundamental cause for the disappearance of a human language is well known. Speakers abandon their native tongue in adaptation to an environment where use of that language is no longer advantageous to them. This much about language death is simple and uncontroversial. The more complex, and thus obscure, issue is 'What brings about the decreased efficacy of a language in a community?' " (Grenoble & Whaley, 1998, 22)

The unpredictability problem led Grenoble & Whaley to advocate a multi-dimensional assessments in order to capture as many influencing factors as possible. Sociolinguist Gal, who rejected the multi-dimensional approach, tried to solve the same problem by taking an ethnographic approach to language shift (see 2.5.1 below). Writing very recently, SIL linguists Decker & Grummitt remain agnostic when it comes to predicting the timing of language shift in a given community:

> "In the process of shifting to the L2 from heritage language maintenance, there is a tipping point. It does not occur at the same point in time for everyone in the speech community; it is an individual and, probably, imperceptible change in attitudes and identification." (Decker & Grummitt, 2012, 73)

Decker & Grummitt give three reasons why the tipping point is so difficult to identify. First, heritage language transmission takes place in the privacy of the home, and thus is difficult for researchers to observe. Second, proficiency in the L2 (and, I would add, the L1) has to be tested to be observed accurately. Third, we cannot be sure if the attitudes people express toward the

L2 are "sufficient motivation to signify their true allegiance or commitment". They recommend triangulating across different types of evidence, such as "multilingual proficiencies, reports of language attitudes, and observed language use behavior" (2012). Triangulation also formed part of Gal's approach (see 2.5.1.)

As Decker & Grummitt (2012) pointed out in the quote above, part of the unpredictability comes from the differing behavior of individuals within the same speech community. To better predict the behavior of individuals, some approaches to language shift research focus on speaker psychology, attitudes, and choices. The Ethnolinguistic Vitality theory of language shift (see 2.4 below) provides one of the best-known methods for formally analyzing the role of ethnic identity in language choice. Less formally, the link between language shift, language attitudes, and identity is widely recognized. For example, Fishman states that language maintenance is threatened when some members of an ethnic minority community come to believe that they can live out their cultural identity even through the majority language. He calls this the "Xmen-via-Yish" view (Fishman, 1991, 16). Jankowiak (1993), writing about urban Inner Mongolia, called this kind of worldview "Cosmopolitan" (see 1.5.3).

At the same time, even though speakers may shift voluntarily on the face of it, their choices are not free. Amid economic and political pressures, their heritage language may no longer be a viable option, and their attitudes toward it may shift as a result. This interplay between macro-social factors, psychology and individual behavior is treated at length by Nettle & Romaine (2000).

For the present study, it is important to note that another part of the unpredictability comes from the fact that language shift is often a gradual process taking many generations to complete. Krauss (1992) cites Breton and Navajo as examples of gradual decline under steady pressure. Bradley & Bradley (2017) emphasize that, in most endangered language situations, the difference from maintenance to shift is "scalar" rather than either-or. Problematically, the existing endangerment scales treat it as an either-or distinction (GIDS) or at best distinguish between "all children" and "some children" acquiring the language (EGIDS, UNESCO scale). Inner Mongolia, based on the material reviewed in Chapter One, seems like a classic case of gradual decline, with ups and downs due to changing inter-ethnic politics and policies. A simple all/some/none

distinction is hardly informative.

2.2.5 The need for quantitative research in shifting communities

My proposal is a quantitative analysis of variation in the tipping point. As Decker & Grummitt say, the tipping point is different for each individual. I propose that one external manifestation of the tipping point is when there is a difference in multilingual proficiency (language repertoire) between two generations in the same family.

While subtle differences in proficiency would indeed require rigorous testing to observe them accurately, gross differences in proficiency (such as children being completely unable to communicate in their heritage language) can be observed with blunter instruments. This way of observing the tipping point is relatively reliable and does not require as much triangulation.

This approach is particularly appropriate for a case like Inner Mongolia, where language shift is at an early, pre-endangerment stage. Furthermore, the situation in Inner Mongolia would be hard to capture by another approach, because of its temporal and geographic scale. As I established in Chapter One, the process of contact between Mongolian and Chinese speakers in Inner Mongolia has been going on for over a century. To understand this process, it is desirable to observe it over a relatively long time frame, ideally many decades.

This can be accomplished by using intergenerational transmission, rather than habitual language use, as the main indicator of language shift. Intergenerational transmission is a suitably slow process, taking many years to complete and occurring only once in an individual's lifetime. Yet it does not necessarily have to be observed longitudinally, because its traces are preserved in each individual's language competence, which is fairly (though not perfectly) stable over the lifespan.

The present study will focus on intergenerational language transmission, observed via individuals' competence in Mongolian and Chinese. The choice of intergenerational language transmission as the dependent variable is motivated by the endangered-languages research reviewed in this section. In the next section, I discuss some principles for evaluating bilingual competence in a language shift context, based on the psycholinguistics and language acquisition literature.

2.3 Shift as incomplete acquisition of an L1

Intergenerational mother tongue transmission is well established as a key indicator of language vitality and endangerment (see previous section). Following that precedent, the present study will focus on language acquisition and bilingual competence among Inner Mongolian Mongols. This requires some attention to the literature on language acquisition and bilingual competence in general.

From the psycholinguistic point of view, a community undergoing language shift is composed of individuals who exhibit various levels of proficiency in each of the languages involved. Although the present study will not adopt experimental psycholinguistic methods, it will use notions of bilingual competence grounded in recent research on first and second language acquisition. In Section 2.3.1 I review some basic terms and definitions. In Section 2.3.2, I discuss the so-called Heritage Language research paradigm, a subfield that grew out of research on language shift in immigrant communities in North America, whose findings complicate our understanding of concepts like "native speaker" and "critical period".

2.3.1 Characterizing bilinguals

The word "bilingual" can mean different things. What springs to mind for many people is an idealized bilingual who has two native languages: both languages are L1s, they acquired them naturally during the critical period for language acquisition, and they speak both equally fluently. Mere second language learners do not count as true bilinguals. However, this is not the only possible definition, nor is it the most relevant for language shift research. Psycholinguistic researchers have established principled ways of distinguishing among different types or levels of bilingualism.

First, bilinguals may be distinguished by the age and order of acquisition. *Early bilinguals* acquired both languages in childhood, before puberty. *Late bilinguals* acquired one language in childhood and another in adulthood, after puberty. Within *early bilinguals*, some are *simultaneous bilinguals* who acquired two languages at the same time (operationally, this is often defined

as being exposed to both languages before age 3), and others are *sequential bilinguals* who acquired the basic grammar of one language before starting to acquire the other (operationally, this means being exposed to the second language from age 4 or later) (Montrul, 2008). All *late bilinguals* are also *sequential bilinguals*. Only *simultaneous bilinguals* are said to have two L1s; however, child L2 acquisition (*early sequential bilingualism*) is different from adult L2 acquisition (*late sequential bilingualism*) (Meisel, 2008).

Second, bilinguals may be distinguished by their level of competence and proficiency in each language. Most bilinguals have a stronger language and a weaker language. The stronger language is said to be *dominant*. Late bilinguals are almost always *dominant* in their L1. For early bilinguals, *dominance* may shift back and forth during development; the L1 in early sequential bilingualism is not guaranteed to end up as the dominant language.

Even highly fluent, relatively balanced bilinguals almost never perform at the level of monolinguals in either of their languages. Instead, *complementary competence* is the rule. For example, bilinguals have larger lexicons than monolinguals, but not twice as large — in some semantic domains they are stronger in one language than the other. As Serratrice (2013, 96) puts it, "A 100% overlap between a bilingual's vocabularies is almost unthinkable and the partial overlap that is typically found is a natural consequence of the distributed characteristic of the bilingual experience". This is usually known as the *complementarity principle*, after Grosjean (Grosjean, 1998, inter alia).

For minority language situations, the complementarity principle has special relevance because it is likely that the majority language will have exclusive control over certain domains, like education, modern technology, scientific discourse, government and administration, etc. A commonplace example is the borrowing of technology terms. A curious example I have observed in Inner Mongolia is that Mongol-run restaurants serving Mongolian food generally print their menus in Chinese only, and Mongolian-speaking customers will use the Chinese names of some Mongolian dishes when ordering, even if the conversation with the server takes place mainly in Mongolian. These examples of complementarity are relatively mild, but if the majority language takes over enough domains, minority language speakers may have difficulty develop-

ing full grammatical competence and proficiency *in their L1*. Instead, some minority language speakers are *dominant in their L2*. The program of research on these so-called "heritage language speakers", carried out by Montrul, Kagan, Silva-Corvalán and others, is the focus of the next section.

2.3.2   Heritage language research: the psycholinguistics of language shift

Language shift research in psycholinguistics has mostly been done among immigrant populations in North America, especially Spanish-speaking populations, but also speakers of Russian, Korean and many other languages. The topic is sometimes referred to as *heritage speaker* or *heritage language* research.

In heritage language research, language shift is framed in terms of language acquisition by successive generations after immigration. The first generation, the adult immigrants, are fluent native speakers of their home country's language. English (if in the U.S. or Anglophone Canada) is their second language. Their children will be bilingual from a fairly young age and probably speak both languages equally well, though they may be literate only in English. The third generation will have English as their first and dominant language, and may not speak their grandparents' language at all. The fourth generation will almost certainly be monolingual in English. The canonical three generations in immigrant language shift are shown in Table 2.5, reproduced from Montrul (2013, 171).

Table 2.5: Linguistic characteristics of heritage speakers (Montrul, 2013, 171)

Generation	*Range of possible language characteristics*	
	From:	*To:*
First generation (parents)	Monolingual in the heritage language	Incipient L2 learner of the majority language
Second generation (children)	Dominant in the heritage language	Dominant in the majority language
Third generation (grandchildren)	Dominant in the majority language	Monolingual in the majority language

Shift from language A to language B can thus be observed through the transition from A-dominant bilingualism, to balanced bilingualism, to B-dominant bilingualism, to B-monolingualism, across approximately three successive generations in an immigrant family. The prototypical heritage speakers are those in the second or third generation who are *dominant in the majority language.*

A major finding of heritage language research has been to complicate our understanding of what an L1 or "native language" means. Heritage speakers acquire their heritage language from birth, in a natural setting. This should make them "native speakers", even if they have more exposure to the majority language from their environment. However, psycholinguistic studies have consistently found non-native-like performance in adult and adolescent heritage speakers. First language *attrition*, where an aspect of grammar or lexicon is acquired and then lost, certainly plays a role. However, there is plenty of evidence that *incomplete acquisition*, where input is interrupted before the grammar is fully acquired, also plays a role in explaining the non-native-like performance of heritage speakers (Montrul, 2008). Language development continues throughout childhood and even into adolescence; exposure during the critical period, though necessary, *is not sufficient* for full fluency in a language. The mature state of language acquisition, known as *ultimate attainment*, stabilizes only after adolescence. Ultimate attainment in bilinguals is shaped by the amount of input from each language that is available throughout childhood and adolescence, not just during the critical period up to age four.

The implication for minority language maintenance is that intergenerational transmission in early childhood is not enough by itself. Language use practices among adults and older children, both in schools and in the community, are almost equally important. For research on transmission, looking at young children may not be enough: we also have to consider ultimate attainment, i.e. the relatively stable state of proficiency that emerges after adolescence.

2.3.3 Language acquisition and the present study

Li Wei remarks that "...at the moment, there is very little systematic research linking the process of language contact with the outcome of bilingualism or multilingualism at the individual level"

(Li, 2013, 31). I hope the present study will help to fill this gap.[6]

Can the findings of heritage language research be applied to minority language groups that are indigenous or long-term residents, such as the Mongols of Inner Mongolia? North American researchers caution that the term "heritage language" has acquired specific meanings in the education policy of Canada and the United States (Nagy, 2016; Montrul, 2013). For example, in Canada, indigenous and heritage languages are distinct from each other. Still, these political considerations do not necessarily restrict the term's use outside of those countries. The label "heritage" has sometimes been applied to indigenous minority languages in China, for instance (see e.g. Bradley, 2007), and to endangered languages generally, as in some of the material from Decker & Grummitt (2012) quoted in Section 2.2. Montrul explicitly acknowledges non-immigrant minority communities as a type of heritage language community, while noting that as yet there is almost no psycholinguistic heritage language research being practiced in Asia (Montrul, 2016, 31).

A special challenge in relating heritage language research to non-immigrant populations is the three-generation pattern shown in Table 2.5 above. The structure of the table would seem to imply that bilingualism is inevitably followed by language shift. This is true for the specific social environment in twentieth-century Canada and the United States, where language shift has been notoriously rapid. However, it is not necessarily true for the rest of the world. Fortunately, Montrul's table allows for a range of language competence within each generation, implying that the process might actually take four or more generations before the heritage language is completely lost. Loosening the three-generation assumption is all that is required for the findings to be applied more widely.

On the whole, I conclude that for at least some Mongols in Inner Mongolia, their language acquisition environment is sufficiently similar to the North American minority language environments that they can be considered heritage speakers. This is especially true for people raised

---

[6] An ongoing debate which I will not be able to address here is the difference between bilingual and multilingual. I will simply acknowledge that the Inner Mongolian environment is multilingual, if we consider the presence of two major Sinitic dialects (Mandarin and Jin), about five major Mongolic dialect groups (Halha, Horchin, Ordos, Hamnigan, and Oirat, as per Janhunen's (2012) classification), English, etc.

by Mongolian-speaking parents but educated in Chinese-medium schools. At the same time, other Mongols in Inner Mongolia are raised in majority-Mongol communities and educated in Mongolian-medium schools. They are unlikely to show the same pattern of incomplete acquisition as is found among North American heritage speakers. Studies of language shift in Inner Mongolia should expect to encounter Mongolian speakers at all levels of proficiency; Chinese speakers at all levels of proficiency; bilinguals with either Mongolian or Chinese as their L1; and bilinguals who are dominant in either language. See Chapters Three and Four (3.6.1, 4.2 and 4.3.1) for details on how language acquisition, bilingual proficiency, and ultimate attainment are treated in the present study.

2.4   Shift as a sign of weakening group identity

Within sociolinguistics, one common approach to language shift focuses on social psychology, especially attitudes to language. The most influential framework for such research is known as Ethnolinguistic Vitality (Giles et al., 1977; Bourhis et al., 1981). The ethnolinguistic vitality framework is derived from social psychologist Henri Tajfel's theorizing about the psychology of inter-group dynamics and group boundary maintenance. Linguists Giles and Bourhis introduced the framework in collaboration with the psychologist Taylor, based on Tajfel's work and on Giles' theory of speech accommodation (Giles et al., 1977, 318-321).

Ethnolinguistic vitality was originally defined as follows:

> The vitality of an ethnolinguistic group is that which makes a group likely to behave as a distinctive and active collective entity in intergroup situations. From this, it is argued that ethnolinguistic minorities that have little or no group vitality would eventually cease to exist as distinctive groups. (Giles et al., 1977, 308)

Speakers of endangered languages, then, would be "minorities that have little or no group vitality". The definition does leave open the possibility that an ethnic group might survive without its own language (e.g. with religion as the boundary instead.) Some ethnolinguistic vitality researchers are primarily focused on language, interpreting vitality as the likelihood that a particular language will continue to be spoken within a particular group. However, others have

applied the paradigm to inter-ethnic relations more generally.

Giles, Bourhis, & Taylor singled out familiar social factors that lead to language shift, such as the total speaker population, the proportion within the population, the institutional support for the language, and speaker attitudes toward the language (see Figure 2.1). These are much the same factors as in GIDS or in the UNESCO language vitality assessment framework (see 2.2).

Figure 2.1: Variables affecting Ethnolinguistic Vitality (Giles et al., 1977, 309)
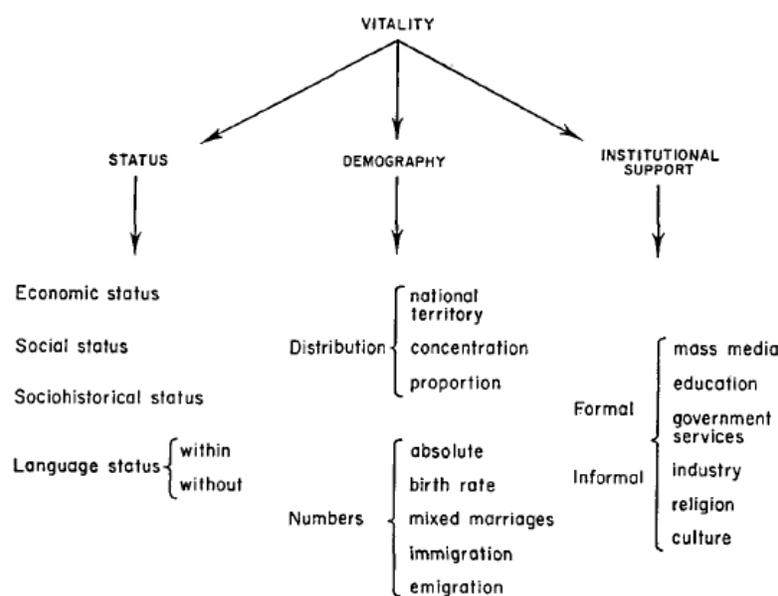
Fig. 1

A taxonomy of the structural variables affecting ethnolinguistic vitality.

In ethnolinguistic vitality research, the goal is generally to quantify all the factors and synthesize them together to produce a vitality estimate, usually on a simple scale such as Low-Medium-High or 0-to-1. In the original version as per Giles et al. (1977), the factors were to be measured objectively. However, researchers soon realized that it was also interesting, and perhaps more valuable, to measure the factors *subjectively*, that is, to measure speakers' beliefs rather than external facts. The reasoning is that individual speakers' actions are proximately determined by their beliefs, not by an externally verifiable reality.

This realization led to the *Subjective Vitality Questionnaire* technique (Bourhis et al., 1981), which has been the model for much subsequent research on ethnolinguistic vitality. Abrams et al. (2009) found that Subjective Vitality Questionnaire data does not match up well with the three-factor structure that theoretically underlies ethnolinguistic vitality, as shown in Figure 2.1. Questionnaire items "essentially provided a unidimensional measure of overall vitality perceptions" (Abrams et al., 2009, 98), rather than reflecting three discrete variables. They conclude that the three-factor structure can be retained for *objective* vitality assessments, but not for *subjective* ones.

2.4.1 Ethnolinguistic Vitality and endangered-languages research

The ethnolinguistic vitality framework, despite sharing the label 'vitality', is a distinct line of research from the endangered-languages work described in Section 2.2. Ethnolinguistic vitality research thus far seems to be concentrated on developed countries, urban settings, and relatively large languages. This may be partly a consequence of the questionnaire-based methodology which more or less requires literate subjects.

The framework has been especially productive and widely applied in Francophone Canada, Wales, the United States, Australia and Europe. Examining the reference lists of the two recent reviews cited above, I found that Abrams et al. (2009) cited 24 case studies of which 18 were based in the U.S., Canada, Australia, or Europe (including Russia and Turkey); for the rest, three were based in Israel, one in Hong Kong and one in Morocco. Similarly, Yagmur & Ehala (2011) cited 13 case studies of which 11 were based in the U.S., Canada, Australia, or Europe (again, including Russia and Turkey); one was based in the Central African Republic (and was published by SIL), and another was based on the Israeli diaspora worldwide.

Fishman (1991) praised the ethnolinguistic vitality research program but considered it to have different scientific aims than his own framework for endangered-languages research:

> "...it is more social psychological than sociological, more oriented toward measuring and describing individual behavior than toward measuring, describing and activating social processes on behalf of RLS [Reversing Language Shift]." (Fishman, 1991, 116)

The ethnolinguistic vitality construct has nonetheless occasionally been applied to endangered minority languages, for example Jungar Tuvan in China by Mawkanuli, who has employed both the objective and subjective versions (Mawkanuli, 2001, 2015, respectively). The term "ethnolinguistic vitality" is also sometimes used to describe language vitality generally, even where the framework of Giles et al. (1977) is not used; see e.g. Lewis & Simons (2010).

Mongolian in China would be a fruitful subject for ethnolinguistic vitality research. Borchigud's (1994) dissertation on Mongolian language education, for example, raised some fascinating questions around intra-Mongol conflicts over the prestige and utility of Mongolian. Erdenituyaga's (2013) dissertation on language attitudes of urban Mongols, while it did not explicitly draw on the vitality framework, did collect a variety of questionnaire data about language attitudes, language use practices, and their relationship to the social environment of Inner Mongolian cities. For other previous research on language and identity in Inner Mongolia, see 1.5 and 1.6.

2.4.2   Ethnolinguistic Vitality and the present study

The current study resembles the ethnolinguistic vitality tradition in that it attempts to predict future trends in language vitality. However, there is a key difference in emphasis. The ethnolinguistic vitality model is designed to forecast the future, not to build a model of the present and past. As such, the ethnolinguistic vitality model is not set up to interrogate the roles of individual socio-structural factors (e.g. urbanization). Instead, their roles are subsumed within the three-factor structure (see discussion of Abrams et al. (2009), above). In their recent review of ethnolinguistic vitality research to date, Yagmur & Ehala (2011) lament that the theory has not developed much during its lifetime, perhaps due to "methodological difficulties which have not made possible systematic falsification of hypotheses and the comparison of different models" (Yagmur & Ehala, 2011, 106). I agree with this criticism in principle.

The major difficulty, as I see it, is that the framework conflates cause and effect. Because its output is a single statistic that synthesizes macro-social factors, attitudinal factors, *and also the number of speakers*, none of those factors are available to predict or be predicted in a hypothesis-

testing study design.[7] Instead, the role of each factor is assumed, built *a priori* into the framework.

A goal of the current study is to develop a methodology that can define the outcome variable, language shift, in isolation from the potential causes of language shift. Once there is a good method for observing and quantifying language shift, this opens the door to all kinds of research on the social factors that influence it. For example, by adopting the present study's method of defining the outcome variable, researchers interested in vitality would be able to study the impact of either subjective or objective ethnolinguistic vitality on language shift outcomes in a given community.

2.5   Shift as variation and change in bilingual behavior

Beside ethnolinguistic vitality, the other major sociolinguistic approach to language shift is the variationist one. Variationist sociolinguistics is a general methodological approach to the study of language change and the relationship between synchronic variation and diachronic change. It is not specially concerned with language shift, and can be applied to monolingual communities. Usually variation is observed at the level of linguistic structure, for example, the phonetic quality of a vowel, the presence or absence of [ɹ], or the use of a zero copula. The element that varies is called a *linguistic variable*. The study of variation can reveal a linguistic change in progress if the frequency of use of a particular variant goes up over time (in a longitudinal study design) or else differs across age-groups or other subgroups (in an apparent-time study design).

For applying variationist methodology to the study of language shift, Gal (1979) set the precedent with a study design where the variable was *the choice of which language to use* rather than an individual element of linguistic structure. The study was carried out in an Austrian village called Oberwart, among a group of Hungarian-German bilinguals who were shifting toward German. In Section 2.5.1 I will discuss some relevant aspects of Gal's study design.[8] As described in 2.2.5

---

[7] The same property is shared by the endangerment scales reviewed in 2.2, which I have also chosen not to use directly.

[8] I will not attempt to summarize Gal's results in their entirety, since such summaries are already plentiful in the

above, the present study will treat intergenerational language transmission as its outcome variable, rather than language choice as in Gal's Oberwart study. In 2.5.2 I will discuss similarities and differences between Gal's design and the present study.

2.5.1   The Oberwart study

Oberwart (a pseudonym) is a village in Austria with a substantial and longstanding population of Hungarian-German bilinguals (its Hungarian pseudonym is Felsöör). It is located near the border with Hungary, and ended up in Austria as a result of shifting borders after the fall of the Austro-Hungarian Empire. Oberwart is described as a Hungarian-speaking island in the midst of a mostly German-speaking countryside. In Chapter One, I mentioned that Lim & Ansaldo (2016) drew parallels between Inner Mongolia and Oberwart. One parallel was that the minority language speakers in both cases were not immigrants, but longtime residents who ended up as national minorities after borders changed.

At the time of Gal's fieldwork in the 1970s, Hungarian was beginning to decline in Oberwart. Most ethnic Hungarians were bilingual in Hungarian and German, and had been for many generations, while most ethnic German residents only spoke German. Bilingualism among Hungarians had been stable through the 18th and 19th centuries, but was turning towards language shift in the 1970s. In fact, Gal specifically selected this field site, rather than some other village in the region, because Oberwart was in the midst of shift. Some other villages in the area had already shifted, and others had shown no signs of shifting.

Gal justified using bilingual language choice as a linguistic variable on the grounds that, for a bilingual speech community, different languages form part of the linguistic repertoire, just as different speech styles are part of the monolingual repertoire. Therefore, as we see style-shifting and variation in register among monolinguals, so we should expect to see code-switching and variation in code choice among bilinguals.

Gal's language choice data were collected in various ways, including participant observation,

---

literature: see Gal (1978) or introductions to sociolinguistics such as Chambers (2003); Lim & Ansaldo (2016).

audio recording, interviews and self-report questionnaires. For quantitative analysis, she mainly used the questionnaire data, after establishing that the correlation between self-reports and observed behavior was fairly close (about 80%). The unit of analysis was *habitual language use in a particular domain*. Some domains were defined by an interlocutor, e.g. "with grandparents", while others were defined by a situation, e.g. "when dealing on the black market". In the community as a whole, Hungarian dominated in certain domains and German prevailed in others, but there was no absolute diglossia. Instead, Gal was able to classify individuals along a continuum based on whether they habitually used more Hungarian or more German.

Variation in the use of Hungarian versus German revealed differences by age, gender, profession and, most interestingly, how closely connected the individual was to the "peasant" versus "industrial worker" social networks. In the twentieth century, with industrialization and attendant social changes, occupations and identities other than peasant became available. The Hungarian language became associated exclusively with peasant-ness, and as a result, those who aspired to a modern urban lifestyle (and/or had fewer peasants in their social network) tended to use Hungarian less and German more. Young women were particularly drawn to the urban lifestyle of industrial workers because it meant a much more comfortable life compared to the wife of a farmer. Young women, likewise, were found to be the most advanced in shifting from Hungarian to German. Furthermore, by preferring to marry factory workers even if it meant marrying a German speaker, they contributed to a rising rate of intermarriage, making German-monolingual children even more likely (Gal, 1978).

Through this analysis, Gal was able to elucidate the relationship between language choice and ongoing social changes in twentieth-century Oberwart, and thus to forecast the progress of language shift from Hungarian to German.

2.5.2 *Methodological contributions of the Oberwart study*

The methodology used in the Oberwart study was an attempt to solve the problem of variability and unpredictability in language shift, which I discussed in 2.2.4. Like the authors mentioned in that section, Gal acknowledges a relationship between broad social circumstances and language

shift, but points out that the relationship is very noisy, and there are probably some other medi-ating factors that must be known in order to understand and predict language shift. According to Gal, these mediating factors are not at the macro-sociological level. She continues, "…in my view it is not, as some have suggested, a larger or more complex combination of factors which will yield a satisfactory solution" (Gal, 1979, 3). Instead, a closer look at the process of language shift on an interpersonal level is needed.

The solution adopted in the Oberwart study was an ethnographic analysis of the social sig-nificance that different languages had acquired *for the community in question*. The social mean-ing that emerged as relevant in Oberwart was the opposition between *peasant*, associated with Hungarian, and more modern occupations such as *factory worker*, associated with German. Even though German was obviously the socially dominant language in 1970s Oberwart, the exact tim-ing of language shift, as well as its propagation through certain groups (such as young women) earlier than others, could not be explained except by knowing the particular circumstances of change in Oberwart society, and the lifestyle and identity options that were available to the bilingual speakers.

Despite the Oberwart study being widely admired and widely cited,[9] its exact methodology has not been widely adopted. I have no explanation for this. Some of the closest analogs (and they are not very close) may be the work of Li Wei on Cantonese in the United Kingdom (Li, 1995; Milroy & Li, 1995) and the work of Ravindranath on Garifuna in Belize (Ravindranath, 2009); see also the studies reviewed in Milroy (2001).

The present study, likewise, does not directly adopt Gal's methodology. One reason is that I am trying to trace the progress of language shift over a large territory rather than a single speech community (in the sense of a group of people who might actually have face-to-face contact with each other). The ethnographic approach is not suitable for this scale. Another reason is that, following the precedent of most language endangerment assessments, I have selected intergen-erational language transmission as the main variable of interest, rather than language use by

---

[9] Gal (1979) had been cited 1,196 times according to Google Scholar on October 20, 2016. Fishman (1991) had been cited 3,156 times.

domain as in the Oberwart study.

2.6 Summary of various approaches to language shift

In the various subfields treated in this chapter, language shift is observed at different time scales and at different levels of linguistic structure. In contact linguistics, language shift is observed after the fact, sometimes at a distance of hundreds or thousands of years. Its effects are observed at all levels of linguistic structure. Shift is contrasted with other processes like language spread and language maintenance (2.1). In psycholinguistics, language shift is observed at the time scale of one generation. Individuals whose linguistic proficiency has been affected by language shift are tested at various levels of linguistic structure, such as phonology, syntactic processing, or mastery of morphological paradigms (2.3).

The present study resembles Gal's and other variationist sociolinguistic work in some of its methodology, in that it will follow a quantitative correlational design and investigate the relationship between (synchronic) variation and (diachronic) change. However, the theoretical and empirical questions motivating the research arise not from variationist sociolinguistics but out of previous work on language endangerment and revitalization, especially Fishman's Reversing Language Shift framework (2.2.1).

The consensus in the endangered-languages field is that intergenerational transmission of a minority language is the single most important factor in how likely the language is to continue being used in the future (2.2). Many other factors are also held to influence language shift, and thus are incorporated into language vitality assessments. I have argued that, of these factors, only intergenerational transmission and domains of use should be considered as indicators of whether language shift is happening. The other factors proposed are not indicators, but rather causes of language shift or else influences on the rate of language shift (2.2.5). Investigating cause and effect relationships in language shift requires placing transmission and/or domains of use on one side of the equation, and potential causes or influences on the other side.

I have also argued for a quantitative approach to language shift in order to better account for individual variation. Existing methods for assessing language endangerment represent the

transmission factor in terms of *whether or not* the language is being transmitted to children in a community. Some scales add an intermediate level where the language is being transmitted to *some* children in a community. However, many thoughtful observers have pointed out that transmission often declines gradually over several generations, and the "tipping point" when transmission stops can be different for each individual (2.2.4). Thus, variation in language acquisition (when multiple languages are available for speakers to acquire over their lifetimes) can lead to change in language acquisition (some language may decline or disappear from the speech community, and no longer be available to acquire).

I have proposed that one external manifestation of the tipping point is when there is a difference in multilingual proficiency (language repertoire) between two generations in the same family. The present study will take intergenerational transmission as the dependent variable. Rather than asking *whether or not* Mongolian is being transmitted to children, it will ask *at what rate* it is being transmitted. The methodology and research questions are explained in the next chapter.

Chapter 3

AIMS AND METHODS

In Chapter One, I established that Mongolian can be considered a threatened language within China; that there is disagreement in the literature about the exact degree of the threat; and that some of the disagreement might be due to the narrowness of the case studies used as evidence. In Chapter Two, I presented some developments in sociolinguistic theorizing about language vitality, language maintenance, language shift, and bilingualism, paying special attention to the subfield of language documentation and revitalization and to Fishman's writings on language shift.

In this chapter, which is a direct continuation of 2.6 above, I connect material from Chapters One and Two to explain the goals of the present study, which are both empirical and methodological. The methodological goal is to develop and implement a research design that unites the theoretical insights of Fishman's Reversing Language Shift framework with a quantitative correlational approach. This is presented in 3.1. The empirical goal is to arrive at a better understanding of the social history of language shift in twentieth- and twenty-first-century Inner Mongolia. Research questions and hypotheses are laid out in 3.2 and 3.3 respectively.

The remainder of the chapter explains the field methods. Sections 3.4-3.7 describe the basic field methods, including the target population (3.5), the interview materials (3.6), and the interview procedure (3.7). Sections 3.8-3.11 describe the field methods in more depth, introducing the eleven fieldworkers (3.8), describing the process by which the sample of participants was selected (3.10), and finally explaining how the data was stored and processed (3.11).

3.1 Modeling language shift

This section explains the conceptual model on which the analysis is based. This model has its roots in Fishman's conception of language shift, which has become standard in the field of language documentation and revitalization (see 2.2). Here, I adapt Fishman's definition to a quantitative analysis where language shift is the outcome variable. To my knowledge this is the first study to extend Fishman's theory in this way (see 2.6).

> "The most commonly used factor in evaluating the vitality of a language is whether or not it is being transmitted from one generation to the next (Fishman 1991). Endangerment can be ranked on a continuum from stability to extinction." (UNESCO Ad Hoc Expert Group on Endangered Languages, 2003)

But by simply asking *whether or not*, we gloss over variation within a community. "Language shift is often a slow and cumulative process" (Fishman, 1991, pg. 40). Assuming that families are not all behaving the same, it would be more informative to ask *at what rate* a minority language is being transmitted or lost. That is, what proportion of young children are learning the minority language as their L1? How is this proportion changing over time?[1]

Key elements in the model are:

- In a multilingual social setting, language shift is one among several possible outcomes in intergenerational language transmission.

- Intergenerational language transmission can be modeled as a transition probability matrix.

- Language transmission, thus modeled, can be used as the outcome variable in a regression analysis correlating social factors with language shift.

The parent-child dyad analysis is represented graphically in Figure 3.1 on page 60. In this simplified model of Inner Mongolia, parents may speak Chinese, Mongolian, or both, and chil-

---

[1] Another way to approach the question of *at what rate* would be in terms of *how well* the shifting language is being acquired. In this case, the acquisition of individual linguistic features would be the unit of analysis. This is the approach taken in psycholinguistic research on so-called heritage languages (see 2.3.2). It is not adopted here because this project is about the timing of shift across generations and decades, not about language development in the individual brain across one lifespan.

Figure 3.1: Schematic of intergenerational language transmission

Intergenerational Language Transmission:
Possible outcomes in a contact setting

Sarala Puthuval, 2016
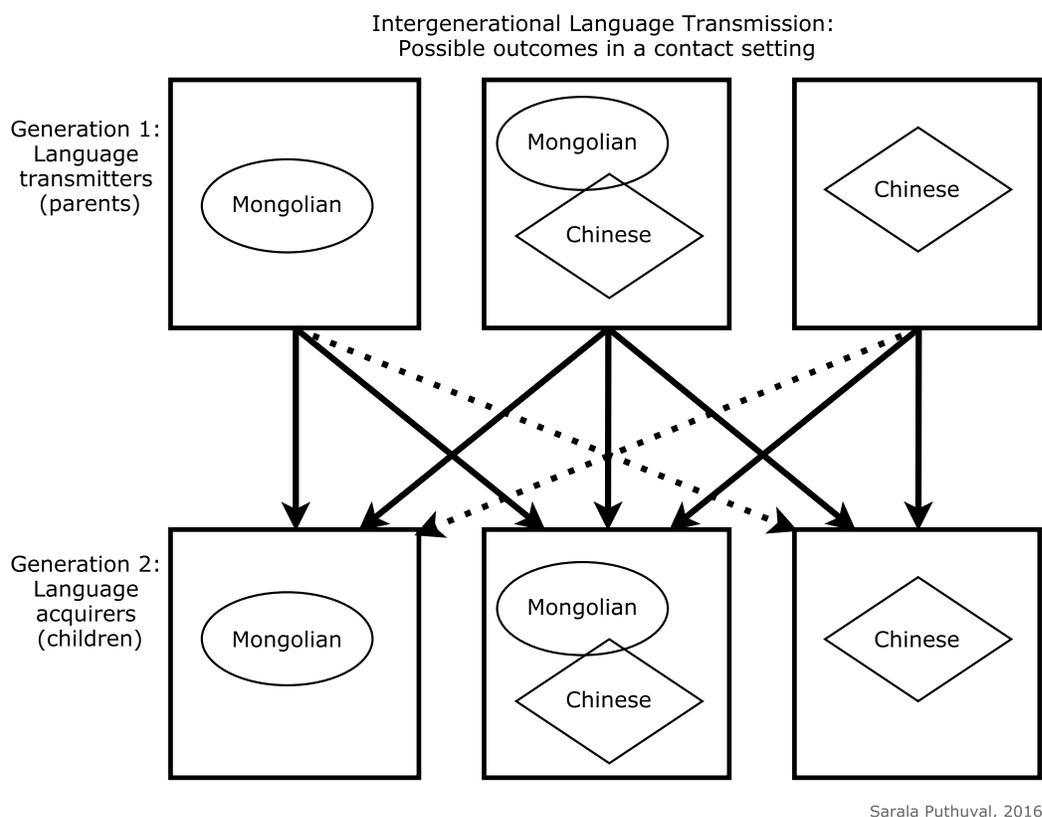
dren's eventual linguistic repertoire may be the same as or different from their parents'.[2] The diagram summarizes the full set of possible outcomes for language contact, as understood in the language contact, language ecology and sociolinguistic literatures (see Chapter 2). It assumes that, where children differ from their parents, it is the result of the sociolinguistic environment outside the home. Dotted arrows indicate outcomes that are highly unlikely because they would result in parents and children having no common language with which to communicate.

---

[2] I would like to acknowledge Darryl Holman of the University of Washington Anthropology Department for coming up with the idea of using a transition probability matrix to model language shift, as represented in Figure 3.1.

Figure 3.2: Language shift, maintenance and spread within the transition model

Intergenerational Language Transmission:
Possible outcomes in a contact setting

Generation 1:
Language
transmitters
(parents)

Mongolian

Mongolian
Chinese

Chinese

spread of
Chinese

maintenance
of Mongolian

shift away from
Mongolian

Generation 2:
Language
acquirers
(children)

Mongolian

Mongolian
Chinese

Chinese

Sarala Puthuval, 2016
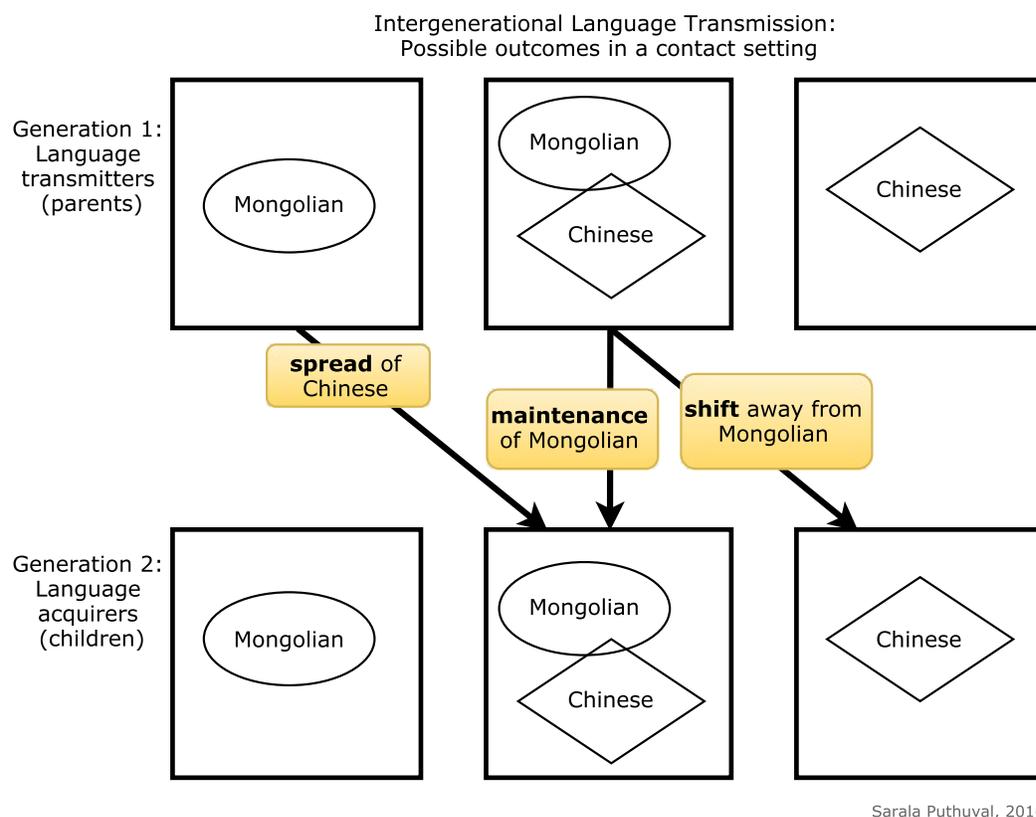
Language shift under this model, using examples from the present study, is the case where parents speak both Chinese and Mongolian, but children speak only Chinese. Where parents speak only Mongolian but children speak both Mongolian and Chinese, this corresponds to the notion of *language spread* because Chinese has spread further through the population. Where parents are bilingual and children are also bilingual, we call this *language maintenance* or *bilingual maintenance*. These are not new definitions, but rather a formalization of existing definitions (see 2.1). Shift, spread and maintenance each correspond to a particular arrow in the transition model diagram, as highlighted in Figure 3.2 on page 61.

The arrow labels in Figure 3.2 reflect the sociopolitical power dynamic between Mongolian speakers and Chinese speakers. If Mongolian were the majority language, we would see spread of Mongolian and shift away from Chinese. The same diagram could be redrawn for any two languages in contact.

The advantage of this conceptual model is that it allows us to count cases of language shift directly, rather than inferring language shift from the linguistic repertoires of people of different ages. It further allows us to situate cases of language shift in time, if we assume that language transmission takes place during childhood and thus can be linked to each individual's year of birth.

3.2 Research questions for studying the relationship between social change and language shift in Inner Mongolia

Based on the model of language transmission in the previous section, this study will answer some empirical questions leading to a better understanding of the relationship between social change and language shift in Inner Mongolia. The central question for this project, put broadly, is: how seriously threatened is the Mongolian language in Inner Mongolia, given recent and ongoing social changes in China?

As shown in Chapter 1, we know that Mongolian-Chinese bilingualism is presently very widespread among ethnic Mongols, and that there is a tendency for ethnic Mongol families to shift to speaking Chinese, especially in urban areas or in rural areas with overwhelming ethnic Han majorities. But we also know that many children are still learning Mongolian as their first language, despite widespread bilingualism among parents. Therefore, there is still a possibility that the Mongolian-speaking community will adapt to modern life through multilingualism rather than language loss.

Given all this, the question can be reframed as: is the newly widespread bilingualism a stable state, or a transitional stage on the way to complete language shift? The project is designed to approach this question from several angles, as described below.

3.2.1 Reconstructing the recent history and geography of language shift

"The distinction [between stable and unstable bilingual communities] depends, in many cases, on the duration of observation..." (Gal, 1979, pg. 3). In that spirit, I propose to reconstruct the history of the spread of Chinese and loss of Mongolian as it unfolded across the entire 20th century, not just the most recent two generations, and to identify regional differences in the timing of these events. As argued in Chapter One, the history of contact between Chinese and Mongolian is long and varied, and often not fully taken into account by scholars making dire prophecies about the imminent loss of Mongolian. The present study will collect a body of questionnaire and interview data from a broad sample of speakers in Inner Mongolia. Based on that sample, I will attempt a partial reconstruction of these two long-term language contact processes—the spread of Chinese and the maintenance or loss of Mongolian—as they have taken place within living memory.

3.2.2 Estimating the velocity and acceleration of language shift

Fishman has defined language shift, demographically speaking, as "the process of outflow [of speakers] exceeding inflow [of speakers] for three generations or more" (Fishman, 1991, pg. 1). Knowing the magnitude of the difference between inflow and outflow tells us the speed (a.k.a. velocity) at which language shift is taking place, and if we also know the size of the speaker population, we can make an educated guess about when in the future the language might become critically endangered.

Of course, the velocity may not be constant: "...even formerly stable bilingual communities such as Oberwart, may abandon one language in the course of social change" (Gal, 1979, pg.3). This is why ecologically-minded linguists apply metaphors of tipping points and sudden collapses to language shift (see e.g. Bradley, 2010; Whaley, 2015). Therefore, it is also useful to observe acceleration (changes in velocity).

This study will collect data about intergenerational language transmission from a broad sample of Inner Mongolians. It will use that data to estimate the rate of language shift for the population as a whole (velocity), and to see whether language shift is speeding up over time

(acceleration).

However, the rate of language shift is unlikely to be the same everywhere in Inner Mongolia (see 1.3 and 1.5.3). Therefore, this study will also consider the interaction between change over time and variation across space, as follows.

3.2.3 Evaluating the role of cities and the "reservoir is drying up" hypothesis

The main geographic question is, what role does the increasing urbanization of the population play in language shift from Mongolian to Chinese?

Urbanization is probably the most important social change affecting language shift in Inner Mongolia, for three reasons. First, urbanization is one of the most profound changes taking place in Chinese society right now, involving most of the population in one way or another (for a good overview, see Miller, 2012). Second, city life might be able to predict the future of rural life. In China over the past century, urban residents have generally been the first to experience modernizing changes, such as mass education and access to modern technology, that have only slowly trickled down to rural residents (there is a vast literature on urban-rural inequality in China, e.g. Chan (2009) and references therein).

Third, urbanization in any society tends to change the structure and composition of people's social networks. Sociolinguists studying modern urban bilingual communities have found that "...variation in the structure of different individuals' personal social networks will systematically affect both the vitality of the community language and the speech community's vulnerability to language shift" (Milroy, 2001, pg. 43).

Given all of the above, examining the language transmission behavior of urban residents is of special interest in assessing the stability of any minority language group in China. With respect to Inner Mongolia, many observers have pointed out that cities are hotbeds of language shift (see Chapter 1). But Mongolian is still spoken in cities, as Erdenituyaga 2013 demonstrated. How is this maintained? Bulag (2003) explains it this way: rural Inner Mongolia has served as a "reservoir" of Mongolian speakers for the past several decades, as successive generations of rural-born Mongols relocate to cities and then their children undergo language shift. Bulag

pessimistically predicts that the reservoir is finally going to dry up as the rural Mongolian lifestyle is practiced by fewer and fewer people.

> "Dwindling pastoral areas are now seen as the last bastion of Mongol culture in which Mongols speak 'pure' Mongolian, and Mongol pastoral herders are imagined to be a reservoir from which agriculturalized and urbanized Mongols might tap their linguistic spirit.
> But this reservoir is drying up. This language revitalization effort is occurring in a social environment in which Mongols have become an absolute minority in Inner Mongolia, despite their purported political and geographic 'autonomy'." (Bulag, 2003, pg. 753)

Translated into linguistic terms, Bulag's thesis is that bilingualism in Inner Mongolia is transitional, not stable; if it has appeared stable, that was because the locus of language shift used to be limited, but now that locus is expanding enough to drain the monolingual "reservoir".

This study will evaluate Bulag's proposal, and also the following counter-proposal: that stable bilingualism might in fact be taking hold in some rural areas. Bulag, being preoccupied with the fate of traditional Mongolian culture, focused on rural *pastoral nomadic* areas, ignoring rural *agricultural* Mongols as a possible linguistic reservoir. But the agricultural regions in eastern Inner Mongolia actually have the highest concentration of ethnic Mongols in the Autonomous Region, including in towns and cities, and Mongolian is widely spoken there (see case study of Horchin Mongols in 1.4.2).

Answering the urbanization question requires comparing the velocity of language shift in cities, towns and the countryside, and secondarily between eastern (agricultural) and western (pastoral) Inner Mongolia.

3.2.4   Summary of research questions

The central question is *how seriously threatened is the Mongolian language in Inner Mongolia, given recent and ongoing social changes in China?* I have broken it down into three more specific questions: (a) how has the language transmission situation evolved over the past century? (3.2.1); (b) how fast is language shift happening, and is it speeding up or slowing down? (3.2.2); and (c) how is the current wave of urbanization likely to affect language transmission? (3.2.3).

The historical-reconstruction portion of the project (3.2.1) is purely descriptive. The other two portions (3.2.2, 3.2.3) lend themselves to hypothesis testing, as detailed in 3.3 below.

3.3   Hypotheses

The outcome variable in all the hypothesis tests will be the *probability of language shift*, defined as the probability of a child's growing up as a monolingual Chinese speaker, *given Mongolian-Chinese bilingual parents or caregivers* (see 3.1).

Research question (b) was, how fast is language shift happening, and is it speeding up or slowing down? (See 3.2.2.) The answer to the first half is also descriptive. For the second half, the hypothesis to be tested is that language shift is becoming more prevalent with time, i.e. those born later are more likely to experience language shift. This is what we expect if Mongolian is indeed headed towards a sudden mass language shift.

Stated more formally: There is an effect of birthyear on the probability of language shift. The effect is positive (shift increases over time.) These are the predictions to be tested for research question (b). Birthyears will be binned into decades for the analysis.

Research question (c) was, how is the current wave of urbanization likely to affect language transmission? (See 3.2.3.) Here, we must compare people living in more-urban and more-rural environments. Since people may relocate during their lifetime, we will use their early childhood residence for this variable. The hypothesis to be tested is that people raised in more urban environments are more likely to experience language shift. This is strongly expected, given the previous literature on Inner Mongolia and on language shift elsewhere in the world.

Stated more formally: There is an effect of urbanization on language shift. The effect is positive (shift increases the more urban the environment.)

Related to research question (c) is the question of how urban-rural differences may have changed over time. (See 3.2.3.) Bulag (2003) has predicted that a rural reservoir of Mongolian speakers is drying up. I have interpreted this to mean that, while language shift has always been prevalent among urban children, the rate of shift among small-town and rural children used to be low and is now starting to rise.

Stated more formally: There is an effect of birthyear on the probability of language shift in rural areas. The effect is positive (shift in rural areas increases for later birthyears.) The positive effect of time is greater in rural areas than in urban areas (shift in more-rural areas is increasing faster than in more-urban areas.)

In 3.2.3, I offered a counter-proposal that the rural reservoir still exists, especially in agricultural areas with a high population density and high proportion of Mongols in the population. Mongolian maintenance in those areas is discounted by Bulag because their Mongolian dialects show so much linguistic influence from Chinese. We can test Bulag's proposal against my counter-proposal by grouping rural agricultural areas with urban areas and contrasting them with rural pastoral areas.

Stated more formally: There is an effect of birthyear on the probability of language shift in rural *pastoral* areas. The effect is positive (shift in rural *pastoral* areas increases for later birthyears.) The positive effect of time is greater in rural pastoral areas than in rural agricultural areas or in urban areas.

The reservoir question is complex, so regardless of which hypotheses are confirmed, the answer will require post hoc interpretation.

3.4   Overview of field methods

The main source of data comes from a short structured interview based around a questionnaire. Over 600 interviews/questionnaires were collected between October 2014 and July 2015. A subset of the interviews were audio-recorded, allowing for some open-ended responses and metalinguistic commentary to be analyzed. Supplementary data comes from field notes, official census reports, and publicly available geospatial data.

3.5   Target population

Any large-scale study of language shift faces a problem in locating group boundaries. The population of interest necessarily includes individuals who no longer speak the language and may

not identify with the ethnolinguistic group in question. In effect, we are trying to sample from among the descendants of a historic speech community rather than a community that exists presently. The longer the time period since shift began, the more difficult it becomes to locate the group boundaries.

The ideal target population for this survey is "Mongols of Inner Mongolia", a simple concept that was difficult to work out in practice.

For this study, I planned to make use of the fact that in present-day China, an objective and non-linguistic definition of ethnicity is available: citizens are officially assigned an ethnicity which appears on their ID documents from birth onwards. This official ethnicity (also called "nationality") must be inherited from one or both parents, making it independent of actual language ability.

When selecting participants, the other fieldworkers and I (see 3.8 below) used "ethnic Mongol" as a proxy for "descended from Mongolian speakers".[3] We advertised the survey by word of mouth, saying we were looking for "ethnic Mongols, regardless of whether they speak Mongolian" and "non-Mongols who speak Mongolian". We described the theme of the project as relating to urbanization and the Mongolian language.

The target sample structure was as shown in Table 3.1. For the cells shaded in dark gray, which concern ethnic Mongols, we tried to fill each one equally. This meant seeking equal numbers of Mongolian speakers and non-Mongolian-speakers, and also seeking equal numbers of urban, town and rural residents within each group. (Criteria for Mongolian speakers versus non-speakers are defined in 3.6.1, and criteria for urban, town and rural residences are defined in 3.6.2.) The cells shaded in light gray concern people who speak Mongolian but are not ethnically Mongol; for example, they might be Han, Manchu or Evenki.[4] Such cases are quite rare, and we

---

[3] It is not a perfect proxy. For situations where ethnic Mongols might not actually be descended from Mongolian speakers, see 1.5, 3.10.2 and 5.4.

[4] For readers familiar with Northeast China: of course Evenki people frequently speak or understand Mongolian, but the total population of Evenki is quite small, so the chance of coming across them during this study was quite low. As it happens we did interview a handful of Mongolian-speaking Evenki in Hulunbuir League, although they told us that their ancestry was Hamnigan Mongol and they had been mis-classified as Evenki.

opportunistically interviewed any such people that we came across. It was interesting for quali-
tative purposes to discover the circumstances under which they learned Mongolian. Finally, the
blank white cells concern people who are neither ethnically Mongol nor Mongolian speakers (i.e.
about 82% of Inner Mongolia's population). We did not attempt to interview any such people,
although some occur in the sample as family members of interviewees.

Table 3.1: Categories to sample from

	speaks Mongolian			doesn't speak Mongolian		
	urban	town	rural	urban	town	rural
ethnic Mongol	X	X	X	X	X	X
non-Mongol	(X)	(X)	(X)	-	-	-

In practice, official ethnicity turned out to be a helpful, but ultimately inadequate tool for
the purpose of recruiting a representative sample of "Mongols of Inner Mongolia". Though it
is common knowledge that a large number of non-Mongolian-speaking Mongols exist, it was
surprisingly difficult for the research team to locate such people and convince them to be inter-
viewed. In contrast, those who spoke fluent Mongolian were easy to find and eager to participate.
The reasons for this, and the resulting bias in the sample, are discussed further in 3.10.2.

3.6   Questionnaire content

The questionnaire design was built on the family of questionnaires known variously as language
use surveys (Xu & Dong, 2006), sociolinguistic surveys (Decker & Grummitt, 2012), or language
censuses (Holmes, 1997). It was also influenced by questionnaires designed to screen bilinguals
for psycholinguistic research, such as LEAP-Q (Marian et al., 2007).

I produced this questionnaire with the assistance of Professor Badma-Odsar and two grad-
uate students in sociolinguistics, Sacural and Ürele, all of Inner Mongolia University. We de-
veloped Chinese and Mongolian versions simultaneously and made the translations as closely
equivalent as possible. Questionnaires were typeset using Microsoft Word 2013. We had the

final versions proofread by three outside readers, all highly educated native speakers of Chinese or Mongolian.[5]

An English translation of the complete questionnaire is shown in Figures 3.3 and 3.4 on pages 71 and 72. The Mongolian and Chinese versions are found in Appendix C. There are five sections: (1) demographic information; (2) language ability; (3) caregivers' language ability; (4) language use in childhood and at school; and (5) interview metadata.

For the research questions, the most important pieces of data are language ability and locations of residence. I will elaborate on the structure of each of these data types and how it was collected in 3.6.1 and 3.6.2 respectively.

3.6.1 Language ability data

Language ability was evaluated on a four-point scale ranging from fluent to zero knowledge. The scale is shown in Table 3.2. Four language ability data points were recorded for each individual: spoken Mongolian, written Mongolian, spoken Chinese and written Chinese. *Spoken* encompassed both speaking and listening, and *written* encompassed both reading and writing.

Evaluations along the four-point scale were discussed between the interviewer and respondent. Initially, interviewers would ask about language ability in an open-ended way, for example, "how is your Chinese?", "did both your parents speak Mongolian", etc. Interviewers would then follow up with more detailed questions to narrow it down to some point on the scale. This method of evaluation was inspired by the methods used by Dubois & Melançon (1997) and LEAP-Q (Marian et al., 2007), which both employ task-based self-evaluation.

On the Mongolian and Chinese editions of the questionnaire, the labels for each level on the four-point scale were as shown in Table 3.3.

Sometimes it was desirable to reduce the four-point scale to a binary classification. For instance, as the surveys accumulated, we periodically made a rough tally of the number of Mongo-

---

Figure 3.3: English translation of the questionnaire, page 1 of 2

Urbanization and the Mongolian Language
Language History Survey

1. Interviewee's general info

Year of birth:
Gender: M, F
Ethnicity: Mongol, Han, Other
Occupation:
Current place of residence
    Which prefecture:

    Which county:

    Which township:

Number of years lived here:
Education level: no education, elementary school, lower middle school, upper middle school, vocational middle school, vocational college, university, postgraduate
Subject code:

2. Current level in Mongolian and Chinese (standard or dialect)

    Mongolian (spoken): fluent, medium, a little, none
    Mongolian (written): fluent, medium, a little, none
    Chinese (spoken): fluent, medium, a little, none
    Chinese (written): fluent, medium, a little, none
The first language you learned to speak:
Your second language: How old you were when you started learning the second language:

3. Childhood language environment

Place of residence from birth to age seven, or before starting school
    Which prefecture:

    Which county:

    Which township:

How many children in your family: Your rank in age among your siblings:
Who were the adults taking care of you during this time? How well did they know Mongolian and Chinese? (please list from one to four people, such as your mother, father, nanny etc.)

Adult one
    Relationship to you:
    Year of birth:
    Ethnicity: Mongol, Han, Other
    Mongolian (spoken): fluent, medium, a little, none
    Mongolian (written): fluent, medium, a little, none
    Chinese (spoken): fluent, medium, a little, none
    Chinese (written): fluent, medium, a little, none
Adult two
    Relationship to you:
    Year of birth:
    Ethnicity: Mongol, Han, Other

Figure 3.4: English translation of the questionnaire, page 2 of 2

Mongolian (spoken): fluent, medium, a little, none
Mongolian (written): fluent, medium, a little, none
Chinese (spoken): fluent, medium, a little, none
Chinese (written): fluent, medium, a little, none
Adult three
Relationship to you:
Year of birth:
Ethnicity: Mongol, Han, Other
Mongolian (spoken): fluent, medium, a little, none
Mongolian (written): fluent, medium, a little, none
Chinese (spoken): fluent, medium, a little, none
Chinese (written): fluent, medium, a little, none
Adult four
Relationship to you:
Year of birth:
Ethnicity: Mongol, Han, Other
Mongolian (spoken): fluent, medium, a little, none
Mongolian (written): fluent, medium, a little, none
Chinese (spoken): fluent, medium, a little, none
Chinese (written): fluent, medium, a little, none

4. Language use in the past

Language use up til age seven or up til starting school
With elders at home：① ② ③ ④ ⑤ ⑥
With people your age at home: ① ② ③ ④ ⑤ ⑥
With friends and playmates: ① ② ③ ④ ⑤ ⑥
Language used in class at your schools
Elementary: ① ② ③ ④ ⑤ ⑥
Lower middle: ① ② ③ ④ ⑤ ⑥
Upper middle: ① ② ③ ④ ⑤ ⑥
College/university: ① ② ③ ④ ⑤ ⑥
Postgraduate: ① ② ③ ④ ⑤ ⑥
①Mongolian only ②Mainly Mongolian ③Half and half ④ Mainly Chinese ⑤Chinese only
⑥Other language(s)

Thank you!

5. Interview summary (to be filled out by researcher)
Date:
Location:
Interviewer:
Language use in interview: ① ② ③ ④ ⑤ ⑥
Recording:
Subject codes of immediate relatives interviewed, if any:

Table 3.2: Criteria for evaluating language ability

	Label	Criteria for speaking/listening	Criteria for reading/writing
1	Fluent	Can express thoughts easily, including complex ideas. Can understand and keep up with a fast-paced conversation among native speakers. Slight accent or no accent.	Can easily read books, newspapers, articles etc. Can write anything they can say (whether by hand or typing).
2	Moderate	Can easily hold a conversation about everyday matters. Some topics are difficult to discuss due to lack of vocabulary. May have a strong accent.	Can easily read simple materials like text messages, letters. Can read books, newspapers or articles, but only with effort. Can write/type well enough to compose text messages or letters.
3	A little	Can say a few words or short phrases, e.g. numbers, greetings. Or, can understand but not speak.	Knows the alphabet (Mongolian) or knows some characters (Chinese). Can read some very simple things like street signs.
4	None	No ability whatsoever. May know a few borrowed words.	Never learned to read in that language, or learned a little and forgot.

lian speakers versus non-Mongolian-speakers in order to track our progress toward the balanced sample as shown in Table 3.1 on page 69. For the purpose of these tallies, we placed a cutoff line between levels 2 and 3, so that anyone at the Fluent or Moderate level was considered a speaker.

The language ability scale does not distinguish between native speakers and fluent speakers. This is intentional. For this particular study, making such a distinction is not worth the effort it would cost, and could even cloud the results. In our target population, most of the speakers had complex language acquisition histories—some learned their second language as adults, but outside the context of formal education; others acquired their first language incompletely because they were immersed in a second language partway through childhood ("heritage speak-

Table 3.3: Labels for language ability levels

	Translation	Mongolian	Chinese
1	Fluent	*bolbasuranggui*	熟练
2	Moderate	*yerü-yin*	一般
3	A little	*jagaxan medexü*	略懂
4	None	*medexü ügei*	不会

ers"); others were exposed to two languages from birth ("bilingual first language acquisition"); and so on (for more about the various paths to bilingualism, see 2.3). To consistently classify all interviewees (and their parents, grandparents, etc.) as "native speakers" or not would require a detailed language acquisition history[6] and thorough behavioral testing (problematic when the parents or grandparents were deceased before the interview), and in the end the data would not even be used: all we really need to know for the transmission analysis is whether an individual speaks some language (Mongolian or Chinese) *well enough to communicate with their children.*

This stance on native speakers is consistent with Fishman's usage of "intergenerational mother tongue transmission", in that Fishman explicitly extends the term to situations of "reversing language shift" where (for instance) parents might learn their ethnic language as an L2 and then intentionally use it at home so it can become children's L1 (Fishman, 1991). It is also consistent with recent literature on bi- and multilingualism, which emphasizes that speakers tend to have complementary competence in different languages, rather than having a full monolingual-like repertoire in each individual language (see 2.3.1; also Bhatia & Ritchie (2013)).

3.6.2 Location data

For each person interviewed, we noted two locations of residence: where they lived at the time of the interview (section 1 of questionnaire), and where they lived from birth to age seven (section 3).

---

[6]We did collect moderately detailed language acquisition histories for the interviewees themselves, though not their parents or caregivers.

On the questionnaire form, for each residence interviewers wrote down the names of the prefecture (*méng* 盟、*shì* 市; *aimag, xota*), county (*qí* 旗、*xiàn* 县、*qū* 区; *xosigu, siyan, togurig*) and township (*zhèn* 镇、*sūmù* 苏木; *balgasu, sumu*). Prefecture, county and township are territorial administrative units of decreasing size. Inner Mongolia contains thirteen prefectures, each of which contains about ten counties, each of which contains about ten townships.

During data entry, the placenames were matched up with a fixed list of prefecture, county and township names derived from those listed in the 2000 China Census reports. Placenames not listed in the census reports were added to the database as needed (usually this happened because township boundaries had been redrawn). Formatting location data in this way allowed the survey data to be mapped fairly precisely, but not so precisely as to compromise anonymity.

We discovered in pilot testing that, to get precise location responses, it was important to specifically ask about all three levels (prefecture, county, and township). This is because cities, as the administrative centers of prefectures or counties, are typically referred to by the same name as the larger unit they administer. For example, the city of Tongliao and the prefecture of Tongliao can both be referred to as Tongliao or even Tongliao City. If someone simply says they lived in Tongliao City, it could mean the urban center of half a million, or it could mean any village in Tongliao's prefecture. To minimize the chance of ambiguous responses, each location level gets its own line on the questionnaire.

The survey database includes records for each location as well as for each interviewee. This way, data about locations (such as their population, the ethnic ratio in the population, etc.) can be maintained and added to using all manner of sources. Survey data can be grouped for analysis at the township, county, or prefecture level as needed.

Locations were classified as urban or rural based initially on the designations published in China Census reports. The reports distinguish three levels of urbanness: city, town, and rural (*chéng* 城、*zhèn* 镇、*xiāng* 乡). Each placename in the census report has a suffix indicating its type. We used the 2000 census placename suffixes to classify locations as city, town or rural. However, we reclassified all those officially town-type locations as rural that were not the administrative center of a county-level unit or higher. This choice was strongly recommended by the team of

local interviewers as a more accurate reflection of what local residents consider "rural". Though more accurate overall, it certainly introduced some errors in the opposite direction, since there are still some non-county-seat "towns" that are big enough for local residents to consider them proper towns. Ideally we would have developed some principled way to classify case-by-case, but there were 221 locations to be classified and no geography experts in our group.

3.7   Interview procedure

The questionnaire was designed to be the basis for an oral interview in which a fieldworker would formulate the questions in their own words and write down the responses. Interviews typically lasted between five and fifteen minutes. In practice, oral interviews accounted for half to two-thirds of the questionnaires. The others were administered as written surveys filled out by the respondents themselves, with one or more fieldworkers in the room to give instructions and answer questions.

We fell back on the written option in situations where we found ourselves with many more participants than fieldworkers (most commonly, a classroom full of students) and not enough time or space to do one-on-one interviews. The manner of administering the questionnaire (oral/face-to-face or written/large-group) is recorded in the database. It is not included in the metadata section of the questionnaire form because the situation was not anticipated when the questionnaire was designed.

A subset of the oral interviews were audio recorded. In this case, respondents signed a consent form allowing the recorded material to be used for research.

The language used during the interviews was not fixed; fieldworkers used whichever language(s) seemed best for communication and appropriate for the social situation. The socially appropriate language between two bilingual interlocutors usually seemed to be Mongolian. Interview language use is included in the interview metadata (section 5 of questionnaire).

Questionnaires were filled out on paper. Rather than producing a combined bilingual version, we opted to print two monolingual versions so that the forms would appear simpler and less onerous to potential participants. This was Professor Badma-Odsar's recommendation based on

previous experience.[7]

Fieldworkers chose the Chinese or Mongolian version of the written questionnaire according to the interviewee's preference. However, we did not end up with reliable data about the choice of version, because on some occasions we ran out of copies of one or the other version and were not able to offer a choice. Fieldworkers wrote the responses in the same language as the questionnaire for the most part, but were not strict about it. Questionnaire language is recorded in the database.

3.8   Interviewers

Interviews were carried out by a team of eleven fieldworkers: myself plus eight master's students and two professors at Inner Mongolia University. All the interviewers except me were ethnic Mongols born, raised and educated in Inner Mongolia. They were all highly proficient in both Mongolian and Chinese. A few considered themselves balanced bilinguals; others considered themselves dominant in Mongolian, and one or two considered themselves dominant in Chinese. All were biliterate but had received the majority of their education in Mongolian-medium schools. They had grown up in different places: Hulunbuir, Tongliao, Chifeng, Hohhot, Ordos and Bayannuur were all represented.[8]

The ten Inner Mongolian interviewers combined accounted for about 67% of the questionnaires collected, and the other 33% were done by me. My language abilities are as follows: I started learning Chinese and Mongolian as an adult. At the time the research began, I had been studying Standard Chinese for 12 years and Standard (Chahar) Mongolian for 8 years, including several years living in Inner Mongolia. I was born and raised in the United States and my native language is English. My physical appearance makes me immediately recognizable as a foreigner

---

[7]Keeping the Chinese and Mongolian versions separate also saved paper and made typesetting easier, since the Mongolian script is written vertically top to bottom while Chinese characters nowadays are usually written horizontally from left to right.

[8]I would like to thank Prof. Hasuntuya, Prof. Yurong, Ürele, Sacural, Liling, Örlög, Uyanga, Subud, Nargil and Narsu for volunteering their time. I would also like to thank Dr. Janet Upton and Tricia Yang of the Fulbright program for sparking the idea of collecting this team.

in Inner Mongolia, so anyone interviewed by me was fully aware that they were speaking to an outsider.

The Inner Mongolian fieldworkers also played a key role in recruiting and selecting participants for the research. Therefore, the composition of their social networks is likely to be reflected in the sample. Although they all lived in Hohhot at the time of the study, several of them traveled back to their home regions and collected interviews there too. Their regions of origin thus shaped the geographic distribution of the sample. See 3.10.2 and 4.1 for further discussion of how the interviewers influenced the sample.

3.9 On the validity of self-reported language ability data

This study relies mostly on self-reported language ability data, which is less accurate than behavioral tests of language proficiency, for various reasons. For one thing, speakers may perceive their own proficiency inaccurately, or they may knowingly misrepresent it. They may over- or under-state it if knowledge of a particular language is socially desirable or undesirable. Or they may under-state it for the sake of modesty, if that is the cultural norm. In communities undergoing language shift, there may be many "semi-speakers" or "understanders". Even the yes/no question "do you speak this language" may be problematic for them to answer. For another thing, the wording of questionnaires may be interpreted differently by different people. For example, non-linguists typically think of language proficiency in terms of how languages are taught in school: reading and writing, correct (prescriptive) grammar, and standard pronunciation. Speakers who cannot read the language, or who speak a stigmatized dialect, may report themselves as low-proficiency even if linguists would consider them fluent in their dialect. Another example is "native language". Linguists understand it according to a technical definition based on the critical period for language acquisition, but of course "native language" also has a common meaning among non-linguists which is quite different, and which varies across cultures.

Despite the known difficulties with self-reports, there were several reasons for choosing self-report over behavioral testing for this study. First, there are a large number of dialects involved. The research questions concern all dialects of Chinese and Mongolian spoken in Inner Mongolia,

but to the best of my knowledge, proficiency tests only exist for Putonghua and Standard Mongolian. Developing tests for all of the dialects was not feasible. Second, the existing tests are partly tests of literacy, but the research questions require non-written tests. Some of the older speakers targeted by the study are likely to be functionally illiterate, and the bilingual speakers are not necessarily literate in both languages. Third, this study's design requires a very large sample compared to most sociolinguistic field studies, which means it was important to keep the interview time per speaker quite short. Fourth, the intergenerational transmission approach requires parallel language proficiency data about two generations of the same family, and in this particular study, that data comes from an interview with a member of the second generation. The members of the older generation are not interviewed and therefore could not be tested; in some cases they were not even alive at the time of the interview.

We took several steps to maximize the validity of this data. I have mentioned most of them already in this chapter, and I highlight them again here. First, we made it difficult for people to claim Mongolian proficiency they did not possess. All of the interviewers were proficient in Mongolian, and interviews were carried out in Mongolian by default. Out of 629 people interviewed, 249 were interviewed entirely in Mongolian, 70 mostly in Mongolian, and 36 using half Mongolian and half Chinese.[9] Among 84 people interviewed entirely in Chinese, only 12 claimed to be able to speak Mongolian. (The remaining 164 were interviewed mostly in Chinese, with some Mongolian used.) Ideally, we would always have tried out both languages when interviewing people who claimed bilingual competence. Unfortunately, switching to Chinese once Mongolian had been established in the conversation proved to be too socially awkward to sustain. Overall, we successfully countered the tendency to spuriously claim Mongolian competence, though it is possible that some people exaggerated their Chinese competence. Fortunately, exaggerating one's Chinese competence is less likely in the context of this particular project (see 3.10.2).

Second, we interviewed orally and one-on-one whenever possible, so that the interviewer could discuss and clarify each response with the interviewee (see 3.7. Where oral interviews

---

[9] This information was recorded by interviewers in Section 5 of the questionnaire form.

were not possible, we tagged this in the database. Third, we sidestepped literacy-based notions of proficiency by collecting separate responses for written and spoken proficiency and then analyzing only the oral proficiency responses. Fourth, we stated on the questionnaire that both standard and dialects were included under "Mongolian" and "Chinese", and we emphasized the point during interviews as well (see 3.6). Fifth, we insisted during interviews that respondents choose "fluent" rather than "moderate" for at least one spoken language. This helped to clarify that the "fluent" level corresponded to an ordinary person's communicative ability. Otherwise some people were tempted to choose "moderate", which they interpreted as "average, ordinary"— a reasonable interpretation given the wording of the questionnaires in Mongolian and Chinese (see Table 3.3). Sometimes, when respondents were filling out questionnaires with insufficient supervision, we still got "moderate" responses for both languages; those data points were excluded from the analysis.

Sixth, we avoided the loaded expression "mother tongue/native language". In Inner Mongolia, the equivalent phrases in Chinese (*mǔyǔ* 母语) and Mongolian (*exe xele*) translate to "mother tongue" and are strongly associated with ethnic groups, such that ethnic Mongols who have never spoken Mongolian in their lives can still be considered to have "lost their mother tongue". Instead, the questionnaire asked "which language did you learn/speak first?", "from what age did you begin learning/speaking your second language?", and followed with several questions about which language(s) were spoken with parents, siblings and friends in early childhood (see 3.6). This series of questions successfully disambiguated an L1 in the linguistic sense from a mother tongue claimed for purely ethnic reasons. (However, some problems remained with identifying the exact age at which speakers began to acquire a second language, as discussed in 4.2.3).

Seventh, we were conservative in our interpretation of the data, so as not to read too much into the responses. We started out with a very simple scale for language proficiency, with only four levels on the questionnaire. It seems reasonable that ordinary people would be able to tell the difference between the four levels, both for themselves and for people they knew well. At the analysis stage, I further simplified the scale to two levels, classing "fluent" and "moderate" together and "a little" and "none" as the other level (see 4.3.1).

There are some special epistemological limitations for the third-party-reported data, i.e. part 3 of the questionnaire where we asked interviewees to evaluate their parents' and caregivers' language ability.

If interviewees spoke only one language themselves, we must question whether they could properly evaluate a parent's competence in the other language. We mitigated this by asking for indirect evidence: maybe a monolingual speaker observed their parent having long conversations in the other language, or maybe they knew their parent had been educated in the other language.

Even for the three-quarters of interviewees who spoke both languages, they sometimes felt uncertain about their parents' or other caregivers' language ability because they had not had enough opportunity to observe them using one or the other language. For example, in one audio-recorded interview, Speaker KQ061401 and the interviewer Sacural had a discussion to establish how well KQ061401's grandmother could speak Chinese. Speaker KQ061401 thought her grandmother *could* speak Chinese, but the problem was she hardly ever *did* speak it. When she initially responded "medium" for her grandmother's Chinese, the interviewer pressed her to explain further, apparently suspecting that "fluent" might be more appropriate. Speaker KQ061401 insisted that her grandmother's Chinese level should not be called fluent, "because normally she doesn't speak it at all. Just once in awhile, when she meets visitors or something like that, then she'll speak it." With "speak/doesn't speak", she used the suffix *-dag*, which marks habitual aspect in Mongolian: *"Uchir n yerdöö yaridaggüi shdee. Jarimdaa geed jochin mochin engeed taarval saya yaridag aa."* After this explanation, the interviewer agreed that "medium" was indeed appropriate. Given this kind of uncertainty, we should assume that the data about interviewees' parents and grandparents is slightly less reliable than the data about the interviewees themselves.

Through care in data collection, caution in interpretation, and attention to the qualitative side of fieldwork, the present study's methodology mitigates the known problems with self-reported language ability data.

3.10 Sampling procedure

Table 3.1 on page 69 showed the main categories of interest. Our goal was to balance those categories: to have roughly equal numbers of Mongolian-speaking Mongols and non-Mongolian-speaking Mongols, and to have them evenly distributed over urban, town and rural locations.

Knowing that the language maintenance situation was likely to vary in different regions, we tried to avoid confounding urban/town/rural groups with regional groups. To this end, we simultaneously pursued a deep sample and a broad sample. The deep sample was focused on the prefecture of Tongliao in eastern Inner Mongolia. Within Tongliao, we did interviews in Tongliao City, in several county towns, and in many villages in different counties. Tongliao accounted for about one-third of the total interviews. The broad sample, meanwhile, was an attempt to get at least a small sample from every prefecture. The broad sample was only possible because of the large team of interviewers from different regions.

We tried to obtain balanced numbers from different age groups based on decade of birth. I had permission from University of Washington Human Subjects Division to interview people age seven and up.[10] We did not make a special effort to balance for gender.

Within each group, the basic sampling procedure was convenience: we recruited by word of mouth and interviewed anyone we could find who fit the criteria mentioned in this section. In variationist sociolinguistic research this practice is known as judgment sampling: "Choosing subjects from predetermined social classes or, for that matter, by any other predetermined social criterion constitutes a judgment sample." (Chambers, 2003, pg. 44).

We contacted potential participants through the following channels:

- friends, family, colleagues etc. of interviewers

- second-order connections (friends-of-friends) of interviewers

- students in classes where I or another interviewer knew the teacher

---

[10]Inner Mongolia University did not conduct a formal review, since this type of project does not normally require ethics review there.

- site visits organized by local government officials (offices, schools)

Among these channels, obviously some are formal and official, while others relied on informal social networks.

The sample we eventually obtained did not perfectly fulfill the ideal structure laid out in Table 3.1. The composition of the actual sample is summarized in Chapter Four. In this methodology chapter, I will just comment on some aspects of the sampling *procedure* that did not work out as expected. In 3.10.1 I discuss how closely the sample did or did not reflect the interviewers' social networks. In 3.10.2 I explain why it was difficult to reach Mongols who did not speak Mongolian.

3.10.1   Network characteristics of the sample

The intended sampling method was a snowball sample, but in practice this was not the case. In an ideal snowball sample, participants are recruited in successive waves. Each participant is asked to name someone or several people they know to participate next (or as is often done, to forward a survey to someone). The randomness of the sample is a function of the *number of iterations* of the snowball process (Goodman, 1961).

In the present study, we did not manage to strictly follow the snowball procedure. Although the sample does extend as far as five network degrees away from me (implying five iterations), there are many gaps. For example, many times we interviewed first- and second-order connections of ours ("friends" and "friends of friends") but then did not follow up with third-order or fourth-order connections. Likewise, when we interviewed a more distantly-connected person, we did not necessarily interview the closely-connected person who introduced them. Ultimately, there are enough gaps and enough clusters in the sample that it would be foolish to treat it as a representative snowball sample.

3.10.2   Bias toward Mongolian speakers in the sample

Although we attempted to select equal numbers of Mongolian speakers and non-Mongolian-speakers, as per Table 3.1 on page 69, we ended up interviewing far more Mongolian speakers

(counting monolinguals and bilinguals), even though Mongols who do not speak Mongolian are quite common in the population. I believe this was a result of our methodology and could be corrected in a future study of Inner Mongolia. The same lessons would also apply to other communities at a similar stage of language shift.

The main issue was that language ability is important to Inner Mongolians' perception of their own and others' ethnic identity, regardless of official documents. Our recruitment depended on people voluntarily self-identifying as Mongol (or as a non-Mongol who spoke Mongolian). Even though, in my experience, Inner Mongolians are not normally reluctant to disclose their (official) ethnicity when asked, it turns out that voluntary self-identification is another matter.

Non-Mongolian-speakers sometimes identified less strongly with the Mongolian ethnic group and therefore found the research less interesting and were less likely to volunteer. At the same time, the Inner Mongolian interviewers, and other Mongolian-speaking individuals who helped us, tended to neglect or even actively prevent the recruitment of non-Mongolian-speaking participants. I believe their reasons were ideological: they considered Mongolian language ability as a requirement for authentic Mongol ethnicity (see 5.4 for further discussion).

Besides ethnicity and ideology, we also encountered a more mundane issue: problems communicating the purpose of the research. Most people who heard about the project considered it "Mongolian language research". It was naturally difficult for them to see how someone who didn't speak Mongolian could be relevant. For example, one young woman volunteered to participate when the research was first described to her as "something to do with urban Mongols". She even offered to wear Mongolian ethnic costume for the interview. But when I let her know the questions were mostly about language, she backed out, with the excuse that her family had already been "Hanified" (*bèi hànhuà* 被汉化).

For future research, Mongolian speakers and non-Mongolian-speakers should be treated as distinct populations to be recruited through separate channels. Or, to generalize, language shift researchers need to come up with a special strategy for recruiting from the post-language-shift portion of the community (see 5.4 for some ideas).

Fortunately, the bias toward Mongolian speakers in the sample does not make the results uninterpretable. Thanks to the intergenerational transmission data structure (Section 3.1), we can identify each individual case as language shift or not, and so our conclusions do not depend on having accurate proportions of Mongolian vs. Chinese speakers. In other words, the conditional probabilities in a language transition matrix should be unaffected by this bias, even though the marginal probabilities are affected. (Recall that the target sample was 50% Mongolian speakers, a number arbitrarily chosen by me.) The real problem is that the raw number of non-Mongolian-speakers is small enough that it limits the scope for statistical analysis.

3.11 Data storage and technical information

Questionnaire data was transcribed into a relational database built in Microsoft Access. Location-related data were imported from China Census reports, published electronically in Chinese by the China National Bureau of Statistics. The database model was designed by Prescott Klassen for this project.[11]

Data cleaning and analysis were done in the R statistical programming language, using RStudio for Windows (RStudio Team, 2015). Some of the analysis scripts can be viewed at `https://github.com/saralakumari`. All figures in the Results and Discussion sections were created with R except for the maps, which were made using the open source cartography program QGIS. Base maps came from files provided by the Global Administrative Areas collection at `www.gadm.org` and from the Fundamental GIS Digital Chart of China (via NASA's Socioeconomic Data and Applications Center) at `http://sedac.ciesin.org/data/set/cddc-china-dcw-gis`.[12]

Audio-recorded interviews were made using a Zoom H4N hand-held recorder with built-in microphones. They are stored in .wav format. Time-aligned annotations indicating the topic of

---

[11] I would like to thank Prescott Klassen for volunteering his time and expertise to both build a database and also teach me about data structure and database design. I would also like to thank Dan McCloy and Steve Moran for help maintaining and using the database.

[12] Thanks to Matthew Dunbar of the UW Center for Studies in Demography and Ecology and to Luke Bergmann and Kam Wing Chan of the UW Geography department, both for technical assistance with GIS and for teaching me how to think about spatial data and urbanization.

discussion, in English, were made for each recording. Portions of the interviews have been fully transcribed at the orthographic level and are quoted in this document.

Some participants gave permission for the recording to be used in this project only, while others gave permission to share with other researchers. I intend to make the shareable ones available through a linguistic archive after this project is complete.

3.12   Summary

In this chapter, I have described the methodological and empirical goals of the study and explained how they were implemented in the field methods. The primary methodological goal of this study is to formalize Fishman's theoretical model of language shift in such a way that it can be used for quantitative field research. Language contact research has already established definitions of the possible outcomes of language contact in the speech community as a whole, and Fishman has identified intergenerational language transmission as the time point where language shift takes place. All that remains for this study to do is to map Fishman's individual-level (or family-level) view onto the outcome space existing within the speech community. The mapping was explained in 3.1. The implementation in field research was explained in 3.5, 3.6, and 3.10.

The empirical goal of this study is to understand the relationship between social change and language shift in Inner Mongolia during the twentieth and early twenty-first centuries.

The field methods were extensively discussed in sections 3.4-3.11.

Chapter 4

RESULTS

This chapter presents the fieldwork findings, beginning with the most descriptive and progressing toward the more analytical.

Section 4.1 summarizes the data available: a sample of over 600 surveys and 22 audio-recorded interviews, widely but unevenly distributed across age groups and geographic locations. To give an idea of the types of bilingual in the sample, Section 4.2 presents a few bilingual individuals' "linguistic autobiographies", the story of how they came to learn both Mongolian and Chinese.

Section 4.3 examines the distribution of language abilities (Mongolian, Chinese and bilingual) across different age cohorts in the sample. This traditional apparent-time analysis clearly reveals the spread of Chinese-bilingualism among Mongolian speakers, but it conveys little information about language shift. Section 4.4 examines the geographic distribution of language abilities in the sample. The Chinese-monolingual speakers are concentrated in areas where language shift occurred prior to 1949, confirming that we may have to turn to intergenerational data to learn about more recent language shifts.

Section 4.5 demonstrates how the intergenerational transmission model from Chapter 3 is applied to this dataset. It gives the calculations behind the transition probability matrices that are the basis for the following analyses. It also discusses some differences between mothers, fathers, and grandparents in intergenerational language transmission.

Based on transition probability matrices, Section 4.6 analyzes the relative rates of language spread, bilingual transmission and language shift over time ("velocity" and "acceleration" as per 3.2.2). Section 4.7 analyzes transition probability data across space instead of time. Section 4.8 uses logistic regression to evaluate the hypotheses about language shift from Section 3.3.

The findings are summarized in Section 4.9 and their implications will be discussed in the

next chapter.

4.1 Summary of data available from surveys and audio-recorded interviews

The survey resulted in a sample of 629 questionnaires. The sampling categories previously described in 3.5, now with the actual number of survey responses from each category, are shown in Table 4.1 below (cf. Table 3.1 in Chapter 3). Ethnic Mongols, shown in the first row, are the main sample of interest and the basis for the quantitative analysis. A small number of non-Mongols, shown in the second row, ended up being interviewed for various reasons, and are listed here for completeness.

Table 4.1: N of interviewees per sampling category, grouped by early childhood residence

childhood residence	speaks Mongolian			doesn't speak Mongolian			
	rural	town	urban	rural	town	urban	
ethnic Mongol	350	82	40	29	20	73	
non-Mongol	12	2	1	1	1	3	
Total							615*
Childhood residence's urban/rural status is unknown for 14 of 629 respondents							

The rural, town and urban groups in Table 4.1 reflect the interviewee's residence between birth and age seven. If grouped according to current residence, as in Table 4.2, the rural group becomes smaller and the urban group larger.

Table 4.2: N of interviewees per sampling category, grouped by current residence

current residence	speaks Mongolian			doesn't speak Mongolian			
	rural	town	urban	rural	town	urban	
ethnic Mongol	96	167	212	10	10	105	
non-Mongol	7	5	3	1	0	6	
Total							626*
Current residence's urban/rural status is unknown for 3 of 629 respondents							

Since the research questions concern first language acquisition, childhood is the more relevant time period, and so I will define the urban/rural variable according to childhood residence in most of the analyses. However, the current residence data is sometimes useful for comparison.

As discussed in Chapter 3, our original intent when collecting the data was to include equal numbers of Mongolian-speaking Mongols and non-Mongolian-speaking Mongols, but we ended up with more Mongolian speakers (see 3.10.2). In the end, about 78% of interviewees spoke Mongolian at the Fluent or Medium level. While not what we intended, this proportion is actually quite similar to some published estimates of the proportion of Mongolian speakers in the ethnic Mongol population. For example, IMAR Local Annals Office (2013) estimates the Inner Mongolian dialects to have a total of four million speakers, as against a population of five million ethnic Mongols.[1]

Ideally we would also have interviewed equal numbers of rural, town and urban residents (by childhood residence), but at least the overwhelmingly rural origin of the interviewees is quite representative of the ethnic Mongol population overall (see e.g. Jiu Yue, 2007). As described in Chapter 3, locations were classified as urban, town or rural based on the Chinese administrative classifications *chéng* 城 (urban), *zhèn* 镇 (town) and *xiāng* 乡 (rural), with one modification: we required "towns" to be the administrative center of a county-level unit or higher. All other towns were reclassified as rural. Though well motivated, the reclassification was somewhat crude. A better-informed town vs. rural classification might result in our sample being more evenly balanced across the two categories (see discussion in 3.6.2).

Geographically, interviewees were scattered widely around Inner Mongolia, though not evenly distributed. The distribution reflects the broad and deep samples mentioned in 3.10. The broad sample covered as much of Inner Mongolia as possible, and reflects the opportunistic nature of the sampling process. The deep sample focused on Tongliao City and Tongliao Prefecture, covering urban, rural and town residents.[2]

---

[1] On the other hand, Janhunen is considerably more pessimistic, stating that "at least half" of Mongols in China (including IMAR) have lost their language (Janhunen, 2012, 11).

[2] Tongliao Prefecture's official name in Chinese and Mongolian is actually also "Tongliao City". To avoid hope-

Figure 4.1: Geographic distribution of survey sample
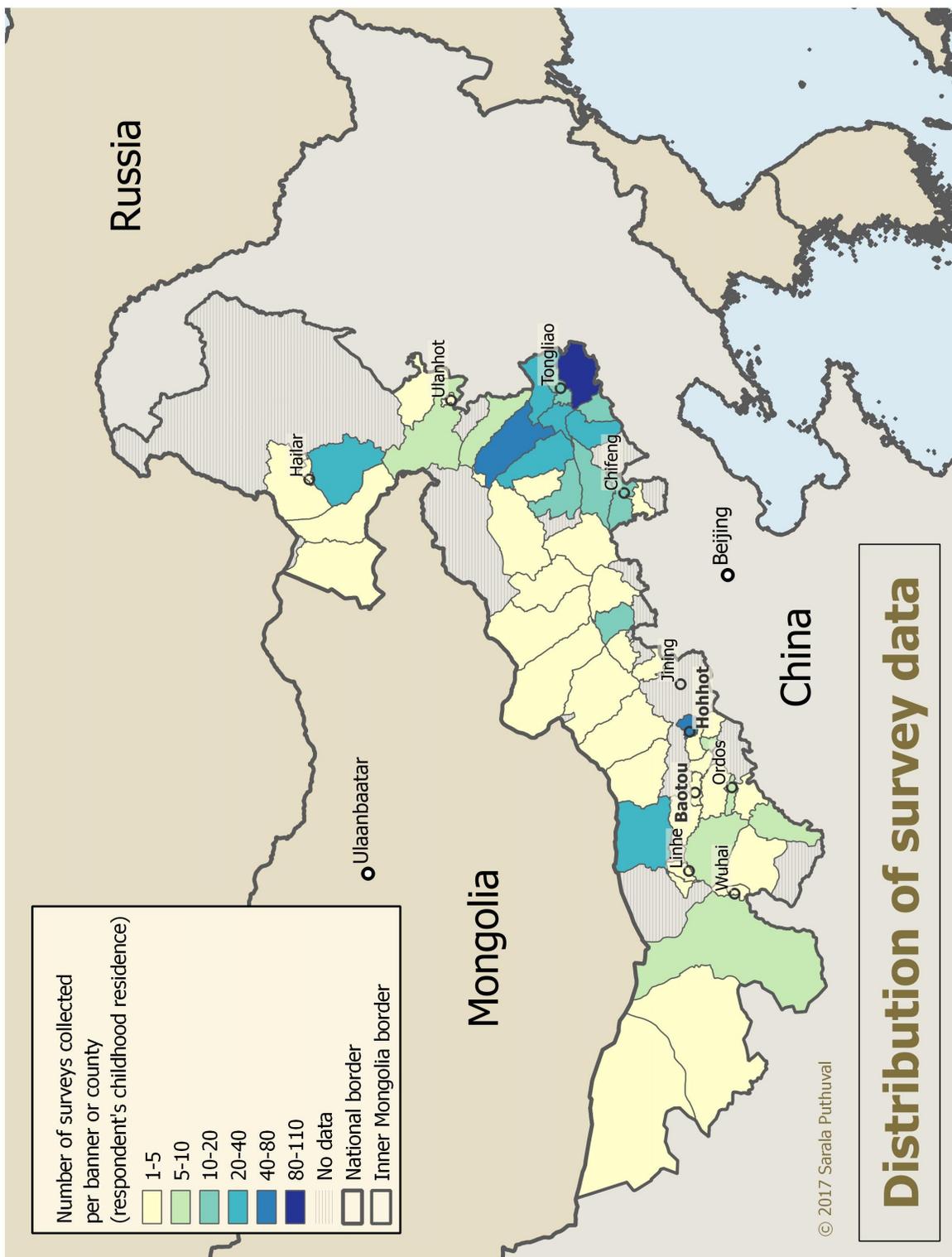
Figure 4.1 shows a map of the interviewees' childhood residences, grouped by county.[3] Interviewees from outside Inner Mongolia (i.e. from Heilongjiang, Jilin, Liaoning or Hebei Provinces) are not shown on the map.

Twenty-two of the interviews were audio-recorded. These interviews followed the same schedule of questions as the written questionnaire (see 3.4), but the recordings capture extra material that the questionnaire left no space for, such as the interviewees' personal stories about learning Chinese and Mongolian, the negotiations between interviewer and interviewee as they try to determine the appropriate language skill evaluation for each person in the family, and so on. Throughout this chapter, I will use anecdotes from the recordings to illustrate points from the numerical results. Additionally, Section 4.2 consists entirely of linguistic autobiographies drawn from the recordings.

4.2   Examples: becoming bilingual

In this section I try to give a sense of the different types of bilinguals that we encountered. These anecdotes are drawn from the 22 audio-recorded interviews, based on interviewees' descriptions of the process of acquiring and/or losing Mongolian and Chinese over their lifetime (their "linguistic autobiography").

Most bilinguals in the survey indicated Mongolian as their first language, sequentially if not dominance-wise. If someone's only first language was Chinese, it was rare for them to become fluent in Mongolian. Many of these sequential bilinguals were first exposed to Chinese after starting school, and they clearly remember a time in their life when they did not understand Chinese (see 4.2.1). Other sequential bilinguals reported being exposed to Chinese from early childhood on, and there were a few cases of simultaneous bilinguals who had been exposed to

---

less confusion about the meaning of "City" among English-speaking readers, I will be using "Prefecture" for all prefecture-level units, regardless of whether they are officially Cities (*shì* 市, *xota*), Leagues (*méng* 盟, *aimag*) or Prefectures (*zhōu* 州, there are none of this category in Inner Mongolia. I will reserve "City" for the urban centers, designated in the Chinese administration as *chéngqū* 城区 or *shìxiáqū* 市辖区.)

[3] "County" refers to any county-level territorial administrative unit (*qí* 旗、*xiàn* 县、*qū* 区; *xosigu, siyan, togurig*). For the cities of Hohhot and Baotou which contain multiple county-level units even within the urbanized zone (an innovation as of the post-2000 censuses), the urban county-level units have been collapsed into one unit.

both languages in their home from birth (see 4.2.2).

4.2.1 Rural bilinguals: Chinese as a second language

Speaker KQ043030 (born 1978), who I will call Mören,[4] grew up in Ordos Prefecture, partly in the countryside, partly in a county town. Until starting elementary school he lived in the country with his grandmother, a herder. He knew no Chinese. "At the time, I'd never even seen a Han *person*. How would I speak the Han language?" he said, laughing. (In Mongolian: *"Ene üyed ee, bi xyatad xün üjej öngöröögüi. Bi yaad xyatad üg yarix yum?"*) Then he corrected himself, saying that his grandmother would sometimes point out certain villagers as Han, but he didn't learn any Chinese from those people because they spoke to him in Mongolian. From Mören's account we can infer that, in the early 1980s in that part of rural Ordos, the local people moved in a primarily Mongol and Mongolian-speaking world, to the point where even the local Han spoke Mongolian.

Speaker AS012660, who I will call Secen, told a similar story. As a young child, she spoke no Chinese and didn't know any Chinese-speaking children. She recalled, "Back when I lived at home I couldn't speak Chinese. Chinese [the language] scared me. Yeah, I would even run away." (In Mongolian: *"Gertee baixad xyatad üg yarij diilxgui baisan aa. Xyatad ügnees aidag baijee. Tiim ee, dutaadag baisan bas."*) Born in 1996, she is eighteen years younger than Mören, and grew up just a few hundred kilometers to the west of him, in rural Alashan League. Like Mören, she first became exposed to Chinese as an elementary school student.

In the same time period at the other end of Inner Mongolia, similar stories were taking place. Speaker KQ061081, who I will call Lianhua, is a woman in her early twenties from Hinggan League in the northeast. She evaluated both herself and her parents as Mongolian-dominant bilinguals (fluent in Mongolian, medium-level in Chinese). Her grandparents she evaluated as even weaker in Chinese. She remembered using exclusively Mongolian in the home in early childhood. She said she started learning Chinese "only in the third year of elementary school,

---

[4] All of the speaker names given here are pseudonyms chosen to resemble typical Inner Mongolian names. Some are Mongolian names and some are Chinese names popular among Mongols.

starting with A B C". (In Mongolian: *"Gurbadugaar onoos saya A B C-gii surjee."*) [5] As mentioned above, when people say they started learning Chinese in elementary school it does not mean they were never exposed to it before; however, Lianhua stated clearly that she spoke only Mongolian before starting school, even when playing with other children. Her exposure to Chinese was probably minimal.

Lianhua's story, like Secen's, suggests that rural children circa 2000 were still experiencing a fully Mongolian-speaking environment up until they started school. (Secen was born in 1996 and Lianhua in 1993.) A handful of questionnaires collected from children born 2000 and later show them as speaking only "a little" Chinese (see 4.3.2). All this shows that intergenerational L1 transmission of Mongolian, probably supported by community use of Mongolian, is still going strong in some places, especially in rural areas with a high concentration of Mongols.

There were also a number of late bilinguals in the survey, who acquired Chinese as teenagers or adults, after the typical critical period for L1 acquisition is over. Most of these people were born in the 1970s or earlier. One such case was Speaker TL061604, who I will call Wcir, who was 65 at the time of the interview. A resident of urban Tongliao City, he grew up in rural Tongliao, in Hüriye Banner (Kulun Qi). Though he claims to speak Chinese fluently now, he was educated in Mongolian-medium schools and did not begin learning Chinese until he entered university at age 30.[6] As a child, he spoke only Mongolian with his parents, his siblings and his friends, because they lived in a remote and "sandy" (Mongolian: *"els manxandax"*) place with no Han around.

Based on survey data, having one's first contact with Chinese at age 15 or later is not un-common among people of Wcir's generation: 22 out of 82 interviewees born between 1940 and 1970 began learning Chinese at age 15 or older.

---

[5] The ABC comment may seem peculiar because the letters A B C are not really part of the Chinese writing system. From the context, it is clear that she was referring to Chinese and not English. The interviewer laughed, so it was probably a joke. Maybe "A B C" has crossed over to Mongolian as a metaphor.

[6] Wcir's education may have been delayed due to the Cultural Revolution, as he was born in 1960, or simply due to living in a remote rural area.

4.2.2   Urban bilinguals: early bilingualism followed by maintenance or shift

Speaker KQ121932, who I will call Buyan, grew up in the city of Hohhot. He was in his mid-twenties at the time of the interview. His parents grew up in rural Shilin Gol League. They both speak Mongolian as their first language and, according to him, their Chinese is not as good as their Mongolian.

Buyan himself has been able to speak Chinese for as long as he can remember. He describes himself as equally comfortable in Mongolian and Chinese, speaking Chinese "as well as a Han person" (in Mongolian: *"xyatad xüntei adilxan yarij chadna"*).

However, his home language environment was strictly Mongolian. Mongolian is the first language he learned, and even now he speaks exclusively Mongolian with his parents. In a conversation after the interview, he and some of his friends said their parents considered it disrespectful to address them in Chinese. Despite growing up in a city with a 90% Han population, he says his Chinese ability did not reach equal parity with Mongolian until he was in high school.

Buyan was educated exclusively in Mongolian-medium schools. He gave a detailed description for each school of not only the classroom language use (which was on the questionnaire), but also the language used among the students outside of class. In his elementary and lower middle schools,[7] most of the students were from the city and, even though classes were taught in Mongolian, "we always spoke Chinese outside of class" (in Mongolian: *"xicheel buuval, lavtai xyatadaar yarina."*) But, when he got to upper middle school, "there were some students from the countryside. Then … some people were usually speaking Mongolian. Of course we spoke Mongolian with them." (In Mongolian: *"jarim xödönöös irex suragch baina. Ter üyesd … jarim xun mongolooroo yaridag baina. Tednüüstei bol mongolooroo yarchixna uu?"*)

Buyan's story shows that, even in the heavily Chinese-dominated environment of Hohhot, children and adolescents may experience a sufficiently Mongolian-rich linguistic input that they acquire Mongolian before Chinese. His story corresponds to the general pattern in research findings on the development of balanced bilingualism, where one language may lag behind the other

---

[7] Elementary school covers the first six grades, lower middle school is the next three grades, and upper middle school is the last three grades.

at certain points in time, but (given sufficient input) the ultimate attainment in both languages is close to equal. Buyan is representative of a generation of Hohhot-raised children whose parents very intentionally created a Mongolian-rich environment, first by establishing a norm of Mongolian usage in the home, then by choosing to send their children to the handful of Mongolian-medium schools in the city.

However, other parents in the same time period were making other choices. Speaker KQ111784, who I will call Öljei, is six years older than Buyan (born 1986 and 1992 respectively) and also grew up in Hohhot. Öljei's parents are both Mongol, but only his mother is bilingual; his father does not speak Mongolian at all. As a young child Öljei learned Mongolian and Chinese simultaneously — he could not recall having learned one before the other. The main reason he learned Mongolian was his maternal grandparents, who often took care of him and his cousin. At the time, the grandparents had just moved to the city and did not speak Chinese, although they later learned it quite well. Öljei reports using about half Chinese and half Mongolian as a child, but he attended exclusively Chinese schools and eventually lost the ability to speak Mongolian.

Öljei's grandparents are an interesting case. The fact that they were monolingual Mongolian speakers when Öljei was a child probably played a big role in his acquiring Mongolian at that time, and their later acquisition of Chinese probably facilitated his loss of Mongolian. This example reveals a level of detail that could not be captured in the questionnaire data. On the questionnaire form we had to choose one or the other, so we evaluated the grandparents based on the language proficiency they eventually attained.

Öljei is now a television announcer on a Chinese channel in Inner Mongolia. With a graduate degree in broadcast communications (*bōyīnzhǔchí* 播音主持), his professional qualifications include perfect standard Putonghua. He informed me that he is certified at the highest level in the nationwide Putonghua ranking system.

4.2.3   Problems pinpointing the age when L2 acquisition began

The questionnaire included the item "at what age did you learn to speak your second language?" The responses to this question pose some problems of interpretation. The intent of the question

was to find out at what age people began acquiring some kind of communicative competence in their second language, regardless of whether it was through formal instruction or everyday interaction. Even though we carefully worded the question to highlight speaking and avoid the implication of studying or formal instruction, nonetheless, there seemed to be a bias toward formal instruction in the responses.

For people who attended Mongolian-medium schools, the responses for Chinese as a second language are clustered around age 10 (mean age = 9.79; 32% fall between ages 9 and 11; 86% between ages 3 and 15). From interview notes and audio recordings, we know that many interviewees initially answered "third grade" (*sānniánjí* 三年级 or *gurbadugar on*) rather than stating an exact age. What they were referring to is the year when Chinese language classes began in their school curriculum.[8] The problem is, the age when they were first taught Chinese in a classroom does not necessarily correspond to the age when they started acquiring practical competence in Chinese. It may err in either direction.

4.3   Apparent-time analysis: a decline in Mongolian-monolingualism

In this section I analyze change over time in the proportion of Mongolian-only(M), Bilingual (B) and Chinese-only (C) speakers in the sample, based on speakers' year of birth. By including both the interviewees and their caregivers, the sample covers the entire 20th century, with the period 1930-1999 especially well represented. The distribution of birthyears is shown in Figure 4.2.[9]

---

[8] Third grade seems to have been the most common for those born in the 1980s and 1990s in our sample, though some people said first grade, and some born in the 1960s-1980s did not start Chinese until middle school.

[9] There are two caveats regarding the dataset plotted in Figure 4.2. First, a few of the elders are duplicated in the data because several siblings from the same family were interviewed; duplicates account for approximately 4.1% of the elders. For the intergenerational transmission analysis (which is the main analysis), the duplication is unimportant because the unit of analysis is an elder-child dyad. If the apparent-time analysis were the main analysis, ideally the duplicates would be removed. Second, this dataset shows some "elders" born as late as the 1990s. This is because some interviewees listed older siblings or cousins among their elders, which is consistent with the meaning of the Mongolian term *axamad* used on the survey. In the intergenerational transmission analysis in 4.6 and 4.7, "elders" less than 10 years older than the interviewee will be excluded.

Figure 4.2: Birthyear distribution of all speakers in the sample
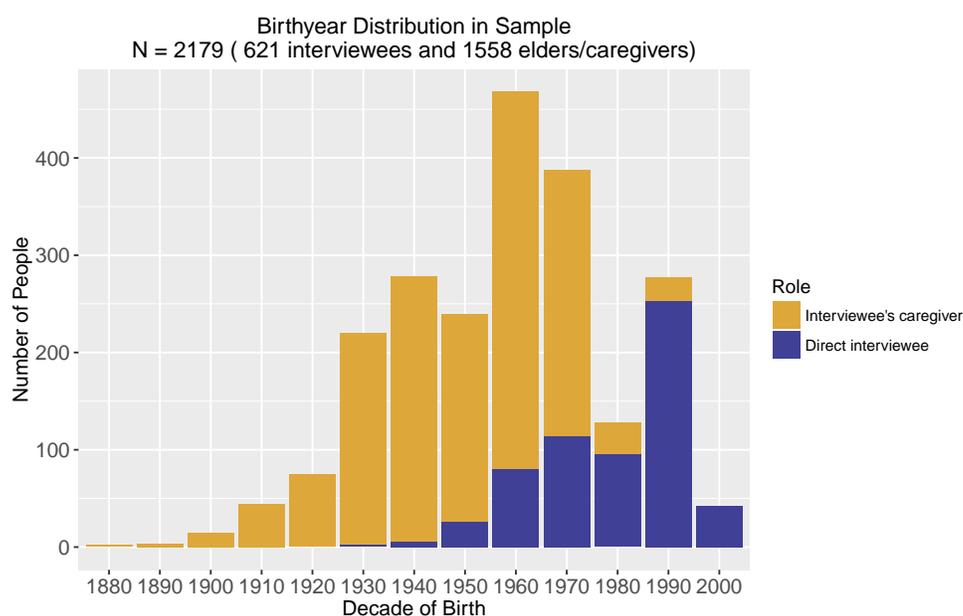
Note that Figure 4.2 shows almost three times as many elders and caregivers as there are direct interviewees. This is because most interviewees named two to three people (parents, grandparents etc.) as their early-childhood caregivers. People born in the 1990s are the largest group of direct interviewees because they were university age at the time of the research (see 3.10); their parents born in the 1960s and 1970s are the largest group of elders.

As expected, the apparent-time analysis described below will be able to show us when and how widely Mongolian-Chinese bilingualism spread among Mongolian speakers, but it does not reveal much about language shift. This result confirms the need for an intergenerational study design.

4.3.1   Classifying speakers as (M), (B) or (C)

The survey recorded language ability data on a four-point scale: Fluent, Moderate, A little, and None. Written and Spoken ability were evaluated separately (see 3.6.1). For all of the analysis in this dissertation, I have included *spoken ability only* and have reduced the four-point scale to a

binary classification between *speakers* and *non-speakers*.

Anyone at the Fluent or Moderate level is considered a speaker, and anyone at the A Little or None levels is a non-speaker. The idea behind this cutoff is that the Moderate level is sufficient for everyday communication, and therefore a Moderate speaker would be capable of transmitting the language to children. For further study of the same data, it would of course be possible to choose a different cutoff or to keep all four levels.

Given two languages, the binary classification yields three types of speaker: Mongolian only, Mongolian plus Chinese (bilingual), and Chinese only. I label these (M), (B) and (C) respectively. Of course, a so-called Mongolian-only speaker may know some third language (examples from our data include Russian and Tibetan), as might a Chinese-only speaker (the most common example from our data being English).[10] Thus when I refer to (M) or (C) speakers as "monolingual", it is not strictly true, but only a convenient way of contrasting them with Mongolian-Chinese bilinguals (B).

4.3.2 Proportion of (M), (B) and (C) speakers in each age cohort

The apparent-time analysis finds three trends in our sample: bilingualism has increased among Mongolian speakers, to the point where almost all born 1980 and later are bilingual; this increase has been gradual rather than sudden; and the proportion of Chinese-monolingual speakers does not seem to have increased or decreased much at all—this last is somewhat surprising.

These trends are summarized in Figure 4.3, which plots the relative proportion of Mongolian-only (M) speakers, bilingual (B) speakers, and Chinese-only (C) speakers in each age cohort, grouped by decade of birth.[11] Error bars around each plotted point show the standard error for that point, which is inversely related to the number of speakers in the age cohort; for speakers

---

[10] Logically there is a fourth type, speaking neither Chinese nor Mongolian. Given that we defined "Chinese" and "Mongolian" to include all dialects, this type is very rare in the language ecology of Inner Mongolia. We did encounter some "Neither" cases where we were told the person was Deaf. A few Neither cases came with no explanation, and might indicate some misunderstanding about the questionnaire. I have dropped all "Neither" cases from the analysis.

[11] Binning by decade is a matter of convenience; I make no claim that these are socially meaningful groupings.

born before 1920 there is not enough data for the proportions to be interpretable, but for the 1920s-2000s there is enough.

Figure 4.3: Language repertoires of different age groups in the sample
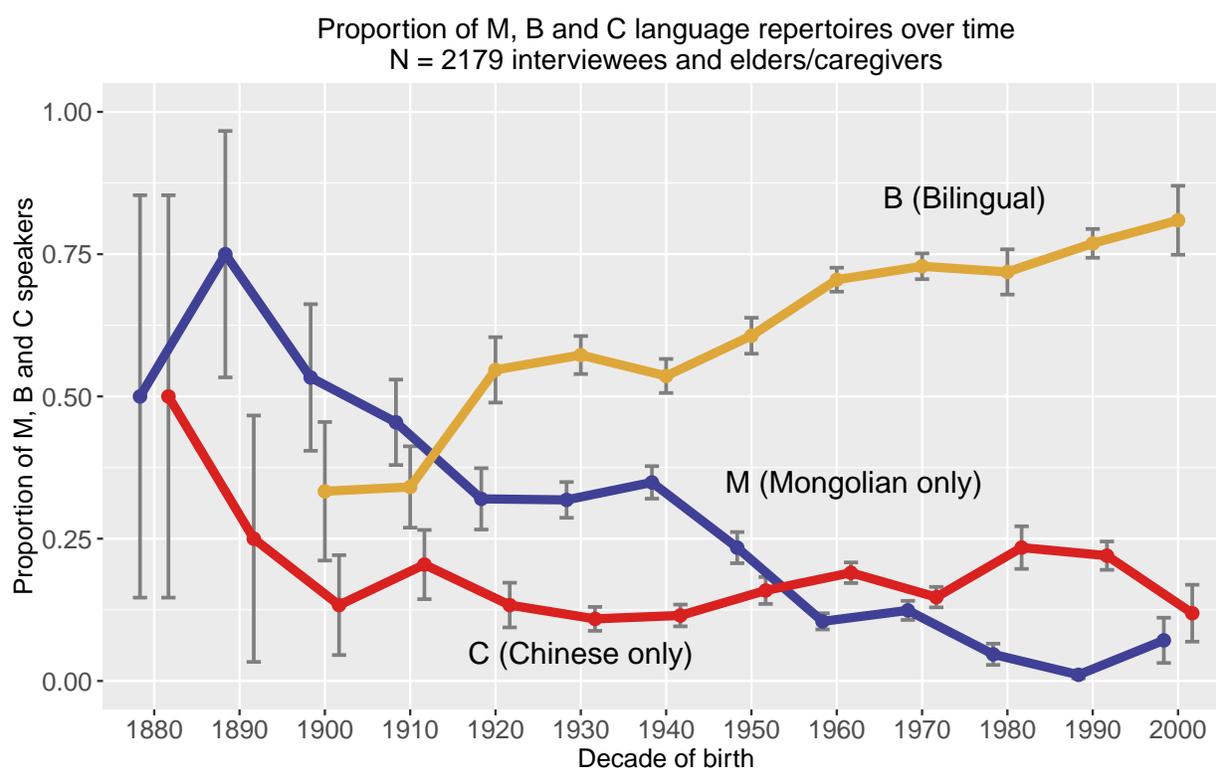
The decline in monolingualism among Mongolian speakers can be seen more clearly in Figure 4.4, which pulls out just the Mongolian-speaking individuals, showing the proportion of mono-linguals to bilinguals within that group. Here, some possible historical stages emerge. The first "children of the revolution", born in the 1940s and 1950s, show a rate of bilingualism similar to earlier generations. It is only among the 1960s generation and later that monolingualism really drops off, dwindling to almost nothing in the 1990s generation.

Figure 4.4: Decline in monolingualism among Mongolian speakers

Proportion of monolinguals among Mongolian speakers
N = 1820 (interviewees plus parents/caregivers)
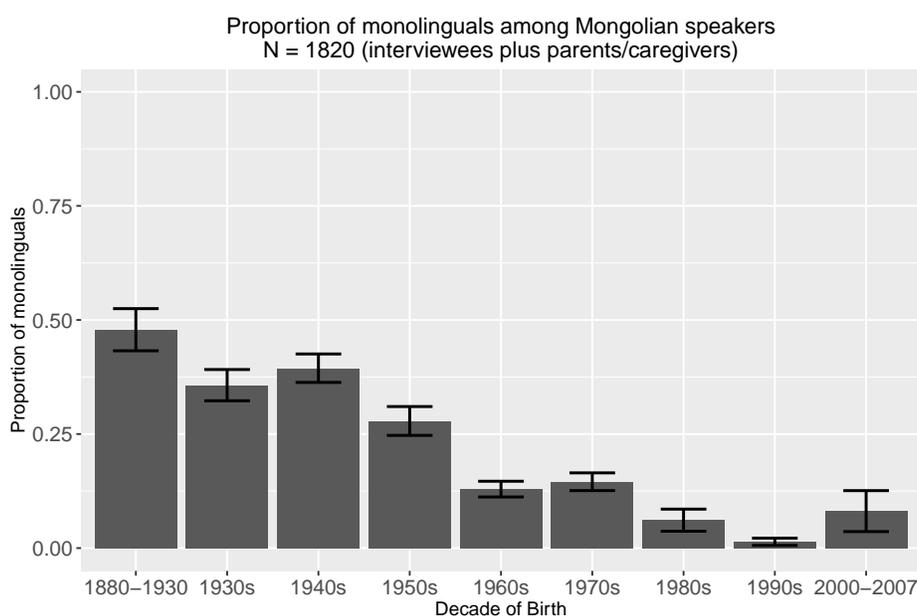
Nonetheless, there are a few reported Mongolian-monolinguals even in the 1990s and post-2000 age groups: a total of four individuals out of 230 (1.7%), to be precise. None were purely monolingual; all four reported having "a little" competence in Chinese. Their birthyears were 1993, 2002, 2006 and 2007 respectively. All four lived in rural Tongliao Prefecture. The oldest one was a 22-year-old female farmer with an elementary school education. The three younger ones were still in elementary or middle school. Given what we know about the school system and the work force, these three will probably master Chinese eventually. Even so, the presence of young near-monolinguals shows that some children are still growing up in a Mongolian-dominated environment.

4.3.3 Summary of apparent-time results

The spread of Chinese-Mongolian bilingualism through the Mongolian-speaking population seems to be an accomplished fact in present-day China. Though bilingualism is by no means new (being quite common even among people born before 1930), the difference is that Mongolian monolin-

gualism has basically disappeared among people born 1980 and later.

As for language shift (the loss of Mongolian), it is unclear whether it is happening at all, since the proportion of Chinese-only speakers does not rise across time in our sample. The intergenerational transmission analysis will be able to clarify.

4.4   Geographic distribution of (M), (B) and (C) speakers

Now I turn to the spatial patterns in the survey sample. There are two noteworthy patterns: first, Chinese-only speakers are more common in cities than in towns or rural areas, especially if we look at where people lived in early childhood rather than where they live as adults (see 4.4.1). Second, rural Chinese-only speakers are concentrated in just a few geographic areas, which also happen to be the areas that experienced major language shift before 1949 (see 4.4.2).

4.4.1   Urbanization and urban-rural differences

In keeping with the general trend of rural-to-urban movement in China, many of the interviewees appear to have relocated to a more urban area during their lifetime. The majority had spent their early childhood in a rural place, but by the time of the interviews, the majority were living in towns and cities (Figure 4.5).[12]

---

[12] Data from elders is not shown here because we only recorded one place of residence for them and it is the same as the interviewees' childhood residence.

Figure 4.5: Rural to urban migration in the sample

Rural, town and urban residents in the sample
N = 612 interviewees
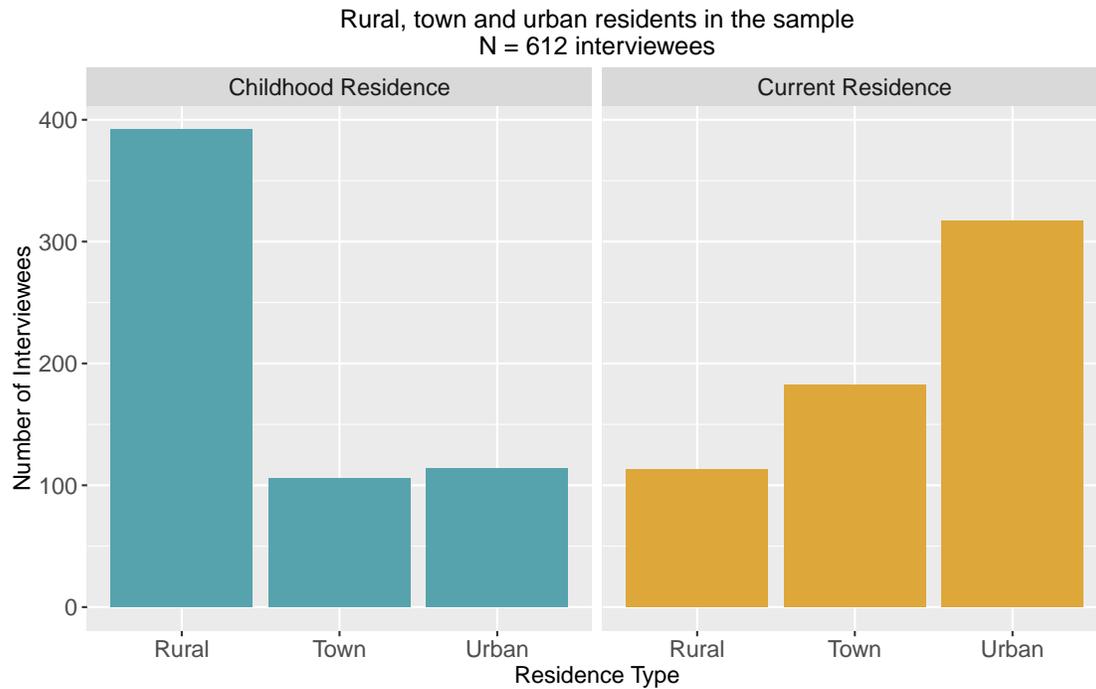
The trend is perhaps less extreme than it appears: high school and university students in the sample might be living in a large city temporarily, and might move somewhere else when they find a job after graduation.[13] Still, it underscores the difficulty of classifying individual speakers as urban or rural in themselves.

The relationship between residence and language repertoire is shown in Figure 4.6, which summarizes the proportion of Mongolian-only (M), bilingual (B), and Chinese-only (C) speakers in the rural, town and urban groups respectively. Error bars around each plotted point show the standard error for that point, which is inversely related to the number of speakers in that subgroup. The proportion of (C) speakers is highest in urban places, though low in the data overall. Strikingly, the only group for which there are *more* (C) than (B) speakers is people who spent their early childhood in a large city.

[13] Anecdotally, many of the Mongol graduates I know have settled in a less urban location than the place where they attended university, though a few have stayed in large cities.

Figure 4.6: Language Repertoire by Residence Type
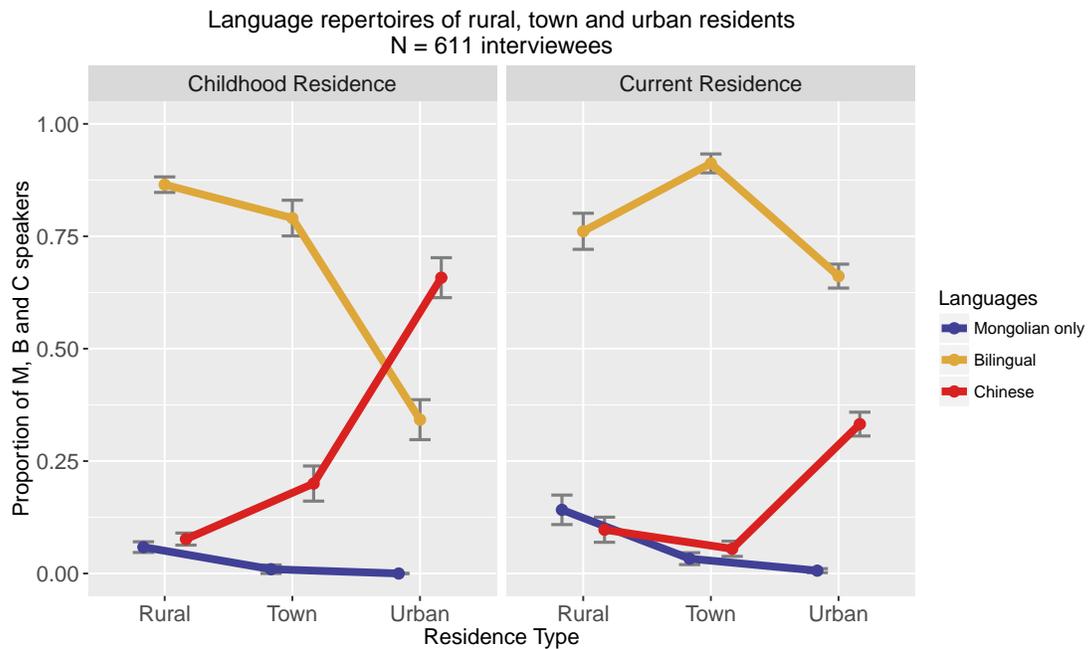
The plots in Figure 4.6 show many Mongolian-speaking adults living in cities, but relatively few Mongolian-speaking children being raised in cities. Combined with the information from Figure 4.5 that many people in the sample have relocated to a town or city during their lifetime, this is strongly suggestive of language shift happening in urban areas, even prior to an intergenerational transmission analysis. It lends some support to Bulag's "rural reservoir" hypothesis (3.2.3).

Incidentally, comparing the two subplots in Figure 4.6 also helps to reconcile some of the conflicting claims about urban Mongolian speakers made in previous literature, especially the anthropological literature. Depending on whether scholars define "urban Mongols" as current urban residents or as those who were born and raised in cities, they will certainly reach different conclusions about the vitality of Mongolian among urban Mongols (see also 5.3).

4.4.2 Regional differences

The map in Figure 4.7 shows the relative proportion of Chinese-only speakers $(C)/(M+B+C)$ in our sample for each county-level unit of Inner Mongolia. (Counties for which we have no data are crosshatched.) The effect of urbanization is visible here too, and there is also some variation across different rural regions.

The ten largest cities in Inner Mongolia are labeled. Among these, the five cities of Hailar, Tongliao, Linhe, Wuhai and Ordos all show higher rates of (C) speakers compared to the surrounding area. But interestingly, the cities of Hohhot, Chifeng and Baotou actually show a *lower* rate of (C) speakers compared to at least some adjacent rural counties, and the city of Ulaanhot looks the same as the surrounding countryside. (For the city of Jining we have no data.)

In the case of Hohhot and Chifeng, the cities are much like other cities, but the surrounding rural areas have exceptionally high concentrations of (C) speakers. This is related to known historical cases of language shift prior to 1949. The Tümed language shift (see 1.4.1) explains the lack of Mongolian speakers in the rural counties between the cities of Hohhot and Baotou. Likewise, the area around and to the south of Chifeng was affected by another Qing-era case of language shift, the Harachin Mongols (not to be confused with the Horchin Mongols from 1.4.2). Language shift took place somewhat later among the Harachin than among the Tümed, and is still not 100% complete: Mongolian is still spoken in a few villages by older people, according to what people from the area have told me, and Caodaobateer (2007, 35-39) estimates that 4%-10% of ethnic Mongols in Harachin areas still use the language. The Harachin shift is thus mostly, though not entirely, a pre-PRC language shift. Despite the prevalence of (C) speakers in the surrounding rural areas, it is not surprising that urban centers like Hohhot and Chifeng still contain Mongolian speakers, because they are large enough cities to draw their population from all over Inner Mongolia, not just the adjacent counties. The ratio of (C) to (B) speakers need not reflect the rate in the immediately surrounding countryside.

As for the cities of Baotou, Wuhai and Ulanhot, we have relatively little data from them or their surrounding areas (see Figure 4.1), so I hesitate to interpret the ratios shown in Figure 4.7.

Figure 4.7: Proportion of (C) speakers by county-level unit

Chinese-only speakers in the sample

Proportion of respondents who
speak Chinese but not Mongolian
(mapped by childhood residence)

0–20%
20–40%
40–60%
60–80%
80–100%
No data
National border
Inner Mongolia border

Russia

Mongolia

China

Ulaanbaatar

Hailar
Ulanhot
Tongliao
Chifeng
Beijing
Jining
Hohhot
Ordos
Linhe
Baotou
Wuhai

© 2017 Sarala Puthuval
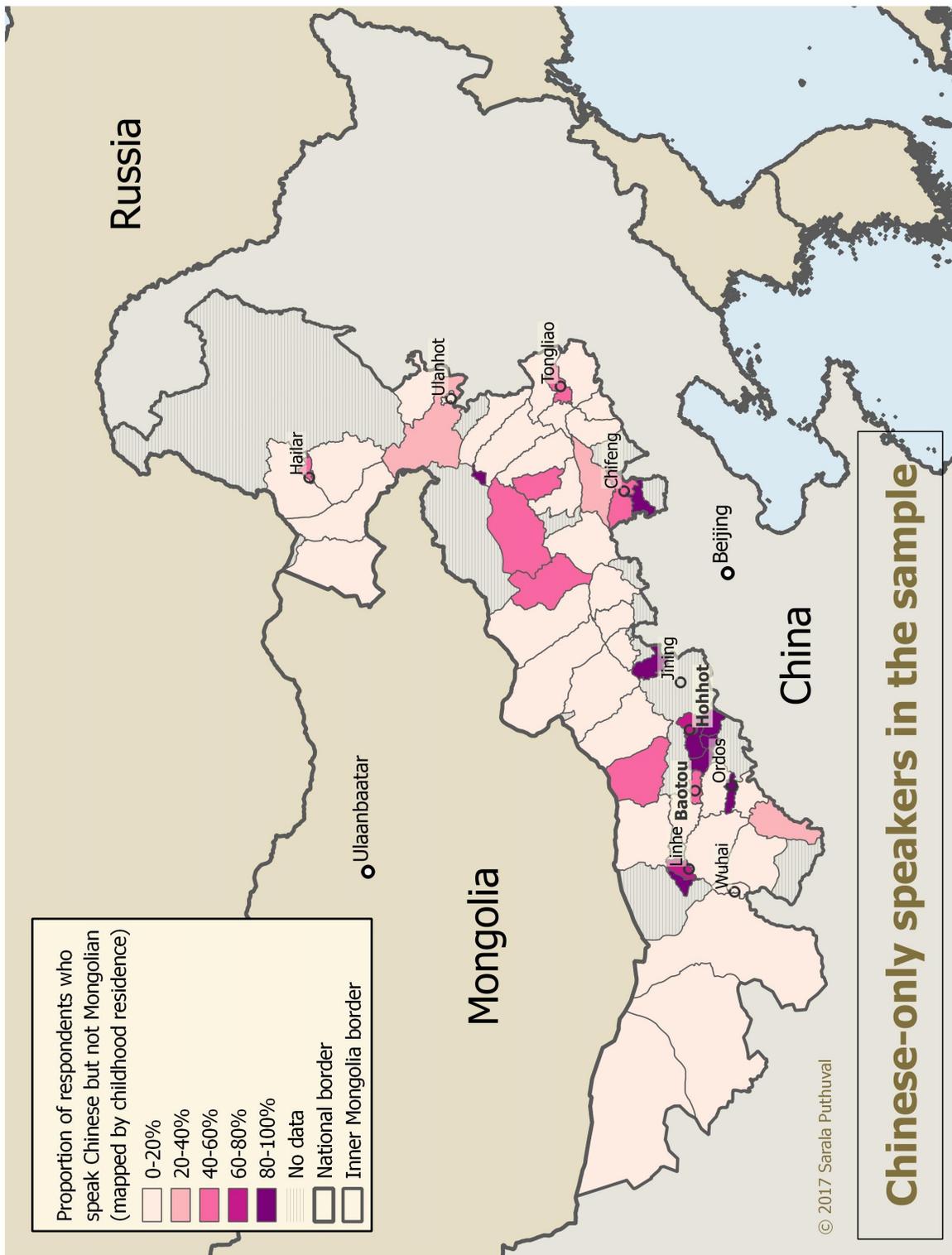
Likewise, the darker pink counties to the north and east of Chifeng are intriguing since they fall in supposedly traditional pastoral areas; however, as Figure 4.1 showed, there is too little data from those areas to go on.

4.4.3 Summary of geographic differences

Mapping the regional distribution of (M), (B) and (C) speakers confirms some historical language shifts that were already known, and corroborates the urban-rural differences discussed in the previous section. No other clear geographic patterns emerge.

4.5 Applying the intergenerational transmission model

In this section I will walk through the steps required to apply the intergenerational transmission model to the data. The transmission analysis uses the same classification of speaker language repertoires (M, B, and C) as in the preceding sections. However, the unit of analysis is now the transition between parent and child rather than a single individual's language repertoire.

Conceptually, I represent this as in Figure 4.8, repeated from Chapter 3.

Figure 4.8: Schematic of intergenerational language transmission
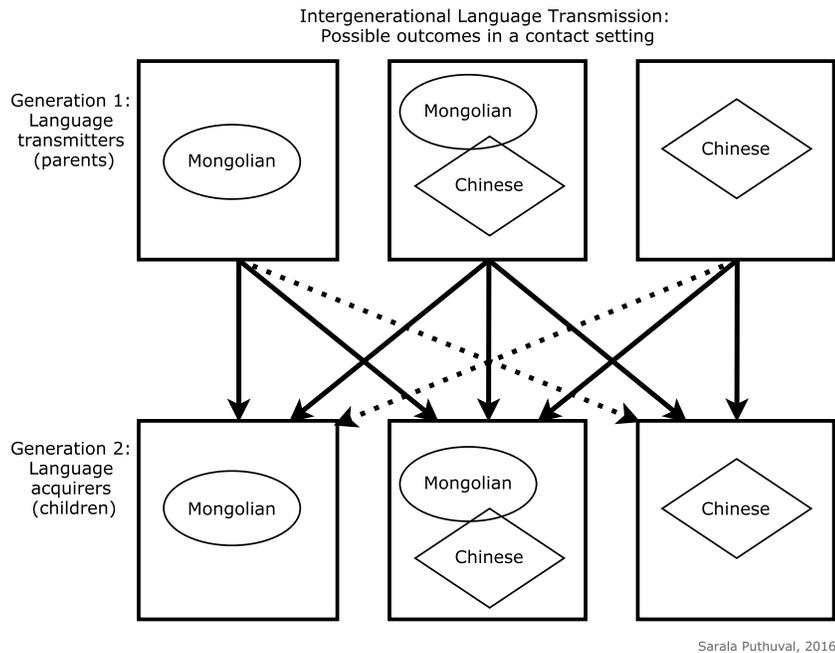
For numerical analysis, the same data structure can be arranged as a matrix or table, with one generation as the row and the other as the column. Each cell represents a particular transition between Generation One's language ability and Generation Two's language ability. In other words, each of the nine cells in Table 4.3 maps to one of the nine arrows on the diagram. Language shift is the (B to C) cell, bilingual maintenance is the (B to B) cell, spread of Chinese is the (M to B cell), and so on.

Table 4.3: Transition matrix for intergenerational language transmission

| | | Generation 1 | | |
		Mongolian only (M)	Both lgs. (B)	Chinese only (C)
	Mongolian only (M)	M to M	B to M	C to M
Gen. 2	Both lgs. (B)	M to B	B to B	C to B
	Chinese only (C)	M to C	B to C	C to C

Generally, I will use the above matrix format to present numerical data and analyses, rather than the diagram format.

In the rest of this section I show how the data is processed from individual (M, B, C) values into intergenerational transition probabilities. First, I arrange language repertoires of interviewees (Generation Two) and their elders (Generation One) into transition matrices like Table 4.3 in order to count the number of instances of each transition (see 4.5.1). Next, the various elders making up each household are averaged into a single (M, B, C) classification (see 4.5.2.) An example family from the audio-recorded interviews is presented in 4.5.3. Finally, I show how the transition counts can be scaled as conditional probabilities (see 4.5.4).

4.5.1   Raw counts of intergenerational transmission

Interviewees named between one and four relatives who lived with them and cared for them as children. Besides mothers and fathers, some people mentioned grandparents, aunts, uncles, and older siblings or cousins.[14] In this section I summarize the raw counts for language transmission from mothers to children, fathers to children, and grandparents to children. These were the most commonly-seen types of relative.

Mother-to-child transitions are shown in Table 4.4. There is a general drift from Mongolian toward Chinese: most children of (M) mothers are bilingual; very few children of (C) mothers are bilingual; and there are more (B to C) cases than (B to M) cases. At the same time, Mongolian language maintenance appears quite strong: there are 298 (B to B) transitions versus 50 (B to C) transitions.

---

[14] Where older siblings or cousins were listed as caregivers, I have included in the intergenerational transmission analysis only those who were more than 10 years older than the interviewee.

Table 4.4: Mother-to-child transitions

	(M) mother	(B) mother	(C) mother	Total mothers
(M) child	21	2	0	23
(B) child	135	298	13	446
(C) child	0	50	76	126
Total children	156	350	89	595

Notice that there are two zero values in the mother-to-child table, for the transitions (M to C) and (C to M). These zeroes are strongly expected, indeed predetermined by my data coding choices (a "structural zero" in statistics terms). Given that the cutoff between speakers and non-speakers was at the level of everyday communicative competence rather than native-like fluency, an (M) caregiver and a (C) child would not be able to communicate, so the transitions (M to C) and (C to M) are extremely unlikely.

However, they are not quite impossible. The structural zeroes hold true for mother-to-child transitions, but father-to-child transitions show one exception, and grandparent-to-grandchild transitions show many exceptions. Father-to-child transitions are shown in Table 4.5 below. Overall the patterns for mothers and fathers are quite similar. One interesting difference is that, among the (M) and (B) speakers, fathers are slightly more likely to be bilingual than mothers: the ratio of (B) to (M) among fathers is 413:85, while the ratio among mothers is 350:156. This suggests a gender bias in the spread of Chinese among Mongolian speakers, with men leading in the adoption of Chinese.

Table 4.5: Father-to-child transitions

	(M) father	(B) father	(C) father	Total fathers
(M) child	11	7	0	18
(B) child	73	352	13	438
(C) child	1	54	74	129
Total children	85	413	87	585

The grandparent-to-grandchild transitions, shown in Table 4.6, look quite different from the parent-to-child tables. First of all, all the numbers are smaller, since less than half the interviewees mentioned grandparents.[15] More importantly, the drift from Mongolian toward Chinese is much stronger here. Even the highly-unexpected (M to C) transition occurs 14 times.

Table 4.6: Grandparent-to-grandchild transitions

	(M) grandpar.	(B) grandpar.	(C) grandpar.	Total grandpar.
(M) child	4	0	0	4
(B) child	81	102	3	186
(C) child	14	36	36	86
Total children	99	138	39	276

The fact that the supposed structural zeroes (M-to-C and C-to-M transitions) do not hold for grandparents can be traced back to another built-in property of the data: interviewees are asked about their own *current* language ability, not their ability at age seven. Therefore, it is possible that they were bilingual in early childhood but their Mongolian ability stopped developing or disappeared altogether. (Several speakers described this process in audio-recorded interviews, see e.g. 4.2.2, 4.5.3, 4.6.4.) It is also possible that, after age seven, they no longer maintained a close relationship with their grandparents, or the grandparents may have passed away (which could happen with mothers and fathers too, of course). Although the exact circumstances are not captured in the data, we can still see the relatively tenuous nature of grandparent-child language transmission compared to parent-child language transmission.

We also see an asymmetry where M-to-C occurs but C-to-M does not occur. This is in keeping with Mongolian's status as a minority language in a Chinese-dominated society.

---

[15] I have counted one transition per grandparent, so the same grandchild may occur in more than one pair, if they reported more than one grandparent in their household. The question did not arise for mothers or fathers.

4.5.2 Averaging elder-generation language repertoires together

Given that our mathematical model only accounts for one parent and one child, there is a choice between considering each parent separately (which I have just done), and somehow averaging the parents and caregivers together (which I will do from now on). In reality, each child has more than one "linguistic parent", and all of them contribute to his or her language development. Compared to using a single parent's language ability, an average of all the main caregivers is a more accurate representation of the child's language environment, and should be able to explain more of the outcomes. Averaging also allows us to compare families on an equal footing regardless of which or how many family members made up the household (in this dataset, each interviewee lists anywhere from one to four caregivers).[16]

Averages are calculated as follows. First, each elder's spoken Mongolian and spoken Chinese ability on the four-point scale are transformed into the classes M, B and C for Mongolian-only, Bilingual, and Chinese-only. As usual, anyone at the Fluent or Moderate level on the 4-level scale is considered a speaker.

Second, I define two conditions under which the household ought to be classified as bilingual (B). One is where at least half of the caregivers were bilingual (one out of two, two out of three, or two out of four). The other is where any two of the caregivers were monolingual *in different languages*, so that the child would presumably need both languages to communicate.[17] Households meeting either of the above two conditions should be classified as (B), and otherwise they should be classified as either Mongolian-only (M) or Chinese-only (C).

---

[16] The average described here is only one of several possible ways to approximate the home language environment. The "average elder language repertoire" represents the languages in which the child's caregivers *were capable of communicating*, and as such is not intended to represent the *actual language use pattern* in the home. For example, it cannot distinguish a case where two bilingual parents code-switch at home from a case where two bilingual parents speak exclusively Mongolian at home. The purpose of using the "average elder language repertoire" instead of language use reports is that, for the intergenerational transmission matrix, we need to use the same type of information (language ability, a.k.a. linguistic repertoire) for both generations. With this methodology, we are not attempting to observe the mechanism of transmission; instead we observe the potential languages that could be transmitted, and which ones were in fact transmitted.

[17] A plausible example of this kind of family is a (C) speaker married to a (B) speaker, with an (M) grandparent living with them.

Third, the conditions are implemented arithmetically by first mapping the values (M, B, C) for each individual to (1, 0.5, 0), taking the mean of the caregivers in a given household, and mapping the mean back to (M, B, C) as shown below.

For each individual caregiver:

$$M \to 1$$
$$B \to 0.5$$
$$C \to 0$$

For the mean of all caregivers x:

$$\text{if } 0.75 < x \le 1 \text{ then } \quad x \to M$$
$$\text{if } 0.25 \le x \le .75 \text{ then } x \to B$$
$$\text{if } 0 \le x < .25 \text{ then } x \to C$$

By this procedure I obtain a classification of (M, B or C) for each household of elders. I will call this data point the "average elder language repertoire".

The transitions from average-elder to child for the whole dataset are shown in Table 4.7, in the same format as the mother-to-child, father-to-child, and grandparent-to-grandchild transitions shown earlier.[18] The average-elder data look fairly similar to the mother data. The main difference is that the (B) category is larger for average-elders, presumably because some of the monolingual (M) or (C) mothers were accompanied by bilingual fathers (or other relatives) to form a (B) household overall. As a result of the (B) elder group being larger, more of the (C) children now appear to have undergone language shift (B to C) as opposed to being raised by Chinese-monolingual elders (C to C). If we analyzed only one elder at a time, we would have missed these cases of language shift; at the same time, it is not surprising that having one (C)-monolingual parent would promote language shift even if the other parent is bilingual.

---

[18] There is one data point for each interviewee. Some average-elders may occur more than once, if siblings from the same family were interviewed, as happened a few times.

Table 4.7: Average-elder to child transitions

	(M) elders	(B) elders	(C) elders	Total households
(M) child	17	7	0	24
(B) child	77	370	10	457
(C) child	0	75	55	130
Total children	94	452	65	611

From here on, I will use the "average elder language repertoire" data instead of individual caregiver data in all of the quantitative analysis.

4.5.3   Example: shift vs. maintenance in children of a mixed marriage

Here is an autobiographical example illustrating how the M, B, C categories and the "average elder language repertoire" are determined.

Subject ID AS012864, who I will call Öndör, represents one classic type of non-Mongolian-speaking Mongol: the early bilingual who later lost his Mongolian ability. Öndör's older sister, who was not interviewed, retained her bilingual abilities.

Öndör is a civil servant in his late twenties. He lives in Bayanhot, the capital city of Alashan League, the westernmost prefecture of Inner Mongolia. Although Bayanhot is a prefectural-level city, it has a population of only 63,000 (2000 census) making it more like a medium-sized town. Alashan, likewise, is the most sparsely populated area of Inner Mongolia. Bayanhot is within two or three hours' drive of two larger cities, the Inner Mongolian coal-mining city of Wuhai and the capital of Ningxia province. Öndör was born and raised in Bayanhot. He has a university degree, which means he must have lived somewhere else for a few years, but now he is back in Bayanhot.

His mother is ethnic Mongol and his father is Han. Both parents are educated and literate. Öndör describes his mother as a "pure Mongol" (in Chinese: "*chúncuìde měnggǔzú*"). She was educated in Mongolian-medium schools and she spoke Mongolian to Öndör and his sister when they were growing up. The father cannot speak Mongolian, so he spoke Chinese with the children. As a result, Öndör seems to have acquired Mongolian and Chinese simultaneously – he

considers both to be his first language.

Öndör's mother clearly made an effort to raise Mongolian-speaking children. According to Öndör, the reason he lost some Mongolian ability is because he didn't have enough exposure to Mongolian later in childhood, the school environment being dominated exclusively by Chinese. His Mongolian declined quickly after entering elementary school, and today he says he can understand Mongolian pretty well, but cannot speak. In contrast, Öndör's older sister attended Mongolian-medium school, with the result that her Mongolian is "all right" (in Chinese: *kěyǐ*).

Bayanhot, and Alashan as a whole, have a relatively high proportion of ethnic Mongols in the population. The proportion in rural Alashan was about 49% as of the 2000 census, and the proportion in Bayanhot was 21%, compared to the average of 17% for Inner Mongolia. Öndör's Han Chinese father, who also grew up in the region, actually has some passive comprehension of Mongolian that he picked up from being around Mongolian-speaking colleagues at work.

Comparing Öndör, Öndör's father and Öndör's sister, we can generalize that on a macro level, there is a lot of Mongolian linguistic input available in Bayanhot, but on the micro level, in daily interaction, not every child has access to sufficient input to maintain language development throughout childhood and adolescence. The medium of instruction at school can be the deciding factor for some children.

In our data, Öndör is categorized as C (Chinese-monolingual, despite his passive Mongolian); his mother is classified as B (Bilingual, albeit Mongolian-dominant); his father is categorized as C (Chinese-monolingual, though he knows a little Mongolian); and his sister would be classified as B, though actually she is not included in the data because she was not interviewed. In terms of intergenerational transmission, the "average elder language repertoire" is B, because out of two caregivers (the parents), at least one was bilingual. Therefore, Öndör is a case of language shift (B to C) and his sister, if included, would be a case of bilingual maintenance (B to B).

4.5.4   Transition probabilities for intergenerational transmission

The final step in applying the intergenerational transmission analysis is to transform raw counts into probabilities (a.k.a. proportions). In 4.5.1 and 4.5.2 above, I made some rough comparisons

between the contingency tables for mothers, fathers, grandparents, and averaged elders, but since each row and column contained a different total number of speakers, comparing them required some mental arithmetic. Here, I formalize that arithmetic by scaling the raw counts as probabilities (proportions).

With contingency tables there are two ways to calculate the proportions: by row and by column. When proportions are calculated against column totals, the result is the conditional probability of the child's language repertoire, given the elders' language repertoire. Data is grouped by Generation One first, and then within these groups, the proportion of each outcome for Generation Two is calculated. This approach answers questions like "what kind of children do bilingual households tend to produce?"

Conditional probabilities by column are shown in Table 4.8, based on the raw counts for averaged elders (Table 4.7). Interpreting the numbers in the table, the probability of language shift (B to C) is approximately 0.165; the probability of bilingual maintenance (B to B) is approximately 0.818; and the probability of language spread (M to B) is approximately 0.819.

Table 4.8: Probability of child's being (M, B or C), given elders of type (M, B or C)

	(M) elders	(B) elders	(C) elders
(M) child	0.180	0.015	0.000
(B) child	0.819	0.818	0.153
(C) child	0.000	0.165	0.846
Total prob.	1	1	1

Alternatively, proportions can be calculated against row totals, giving the conditional probability of the elders' language repertoire, given the child's. Data are grouped by Generation Two first and then, within these groups, the proportion of each language repertoire in Generation One is calculated. This answers questions like "what kind of households do bilingual children tend to come from?"

Conditional probabilities by row are shown in Table 4.9 below. They are derived from the

same raw counts as the previous table. Here, the probability of language shift having happened (B to C) is approximately 0.576; the probability of bilingual maintenance having happened (B to B) is approximately 0.809; and the probability of language spread having happened (M to B) is approximately 0.168.

Table 4.9: Probability that elders were (M, B or C), given a child of type (M, B or C)

	(M) elders	(B) elders	(C) elders	Total prob.
(M) child	0.708	0.291	0.000	1
(B) child	0.168	0.809	0.021	1
(C) child	0.000	0.576	0.423	1

The preceding two tables are based on the same underlying data, yet the conditional probabilities by row versus by column are quite different. One might ask which is the real probability of (B to C) language shift, 0.165 (Table 4.8) or 0.576 (Table 4.9). The answer is that both are real and relevant, but each one reflects a different aspect of reality. If we know that the elders in a family (in our dataset) are bilingual, then the probability of their child undergoing language shift is 0.165. It represents the proportion of (B to C) transitions among all (B to X) transitions. If we know that some interviewee from our dataset is a Chinese-monolingual ethnic Mongol, then the probability that they themselves are a product of language shift is 0.576. It represents the proportion of (B to C) transitions among all (X to C) transitions.

The second version (Table 4.9) is possibly more valid given how the sample was constructed: the elders' language abilities were unknown until after the interview, but the language abilities of interviewees were taken into account when selecting participants (because we were trying to balance Mongolian speakers and non-Mongolian speakers, as described in 3.10). Nonetheless, the first version (Table 4.8) is more useful and interpretable. See 5.2 for further discussion.

These transition probability matrices form the basis for the rest of my analysis. Each matrix can be calculated for any given subset of the data, such as an age cohort or a geographic region. In this way, we can use the matrices to observe how social, historical and geographic factors

modulate the outcome variable, intergenerational language transmission.

In Section 4.6 I will look at change over time. In Section 4.7, I will look at geographic factors: urban vs. rural as well as regional effects.

4.6 The chronology of intergenerational language transmission

In this section I analyze how the spread of Chinese and loss of Mongolian have progressed over time during the twentieth century, based on intergenerational transmission matrices for each age cohort in the dataset.

A note on the plots in this section and the next section: each plotted line represents the probability of one of the nine transitions as it varies according to some predictor variable, either the interviewee's birthyear or their childhood residence. Each plot shows three lines whose probabilities add up to 1, and it represents a particular slice of the data, e.g. Mongolian-monolingual caregivers and their (M), (B) or (C) children. Caregiver-based plots have solid lines and child-based plots have dotted lines. Across all the plots, language shift (B to C) is a red line, language spread (M to B) is a yellow line, and language maintenance (B to B) is a dark blue line. All other intergenerational transitions are shown as gray lines. Error bars around each plotted point show the standard error for that point.

4.6.1 Bilingualism after 1980 reflects maintenance, not spread

I begin with the subset of data where the elders (averaged together) were Mongolian-monolingual. Figure 4.9 plots spread of Chinese (M to B) against continued monolingualism (M to M); the structural zero (M to C) is also shown for the sake of completeness.

A major change seems to have taken place in the mid-20th century, between the 1940s and 1960s age cohorts. Among interviewees born 1940-1949, the (M to M) transition was more common than the (M to B) transition. Among those born 1960-1969, and for every decade thereafter, the (M to B) transition was by far the most common. The data from before the 1940s are too noisy to interpret, but if we suppose they were similar to the 1940s, then we can conclude that,

although bilingualism was by no means uncommon before 1940 (as seen in Figure 4.4), something happened after 1940 to rapidly advance the spread of Chinese. The founding of the PRC and attendant social changes are the obvious catalyst. It is interesting that the spread of Chinese was basically completed by the 1960s generation.

Figure 4.9: Spread of bilingualism among Mongols by age cohort
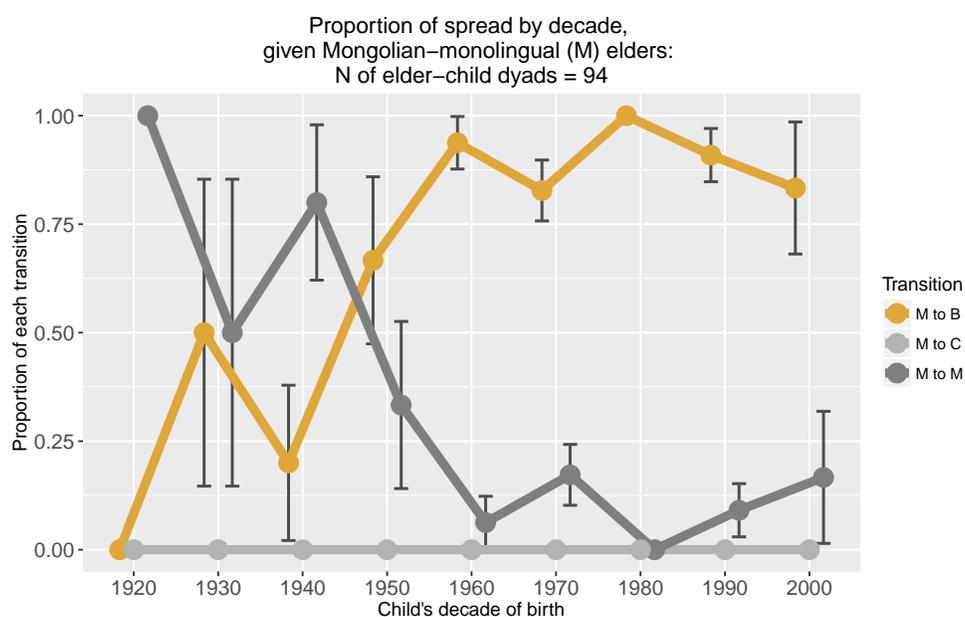
Next, I look at the subset of data where interviewees were bilingual. In Figure 4.10, spread of Chinese (M to B) is now plotted against *bilingual maintenance* (B to B) and, for the sake of completeness, reverse language shift (C to B), which is close to zero.

Similar to the subset with Mongolian-monolingual parents in the previous figure, the trend lines in Figure 4.10 cross midcentury. However, I hesitate to read too much meaning into this, because the subset shown in Figure 4.10 has insufficient data from before the 1950s. Since the 1950s, 1960s and 1970s cohorts all show a similar pattern, it seems unlikely that the 1940s would appear radically different if we had more data.

The more significant trend, I think, is the stepwise difference that emerges between the periods 1950-1979 and 1980-2007. At first glance, this might reflect some sociolinguistic difference

between the Maoist era (from the Revolution until the late 1970s) and the Reform era (from the late 1970s to the present). Alternatively, it might reflect a demographic consequence of the spread of Chinese: once the adult Mongolian-speaking population became almost entirely bilingual, naturally the vast majority of bilingual youth would have bilingual parents rather than (M) monolingual parents (given, as usual, that Chinese is the sociopolitically dominant language in this situation, and C-to-B transitions are thus extremely rare.) In support of the second explanation, the turning point in Figure 4.10 (circa 1980) lags twenty years behind the turning point in Figure 4.9 (circa 1960), or about one generation.[19]

Figure 4.10: Bilingual maintenance taking hold
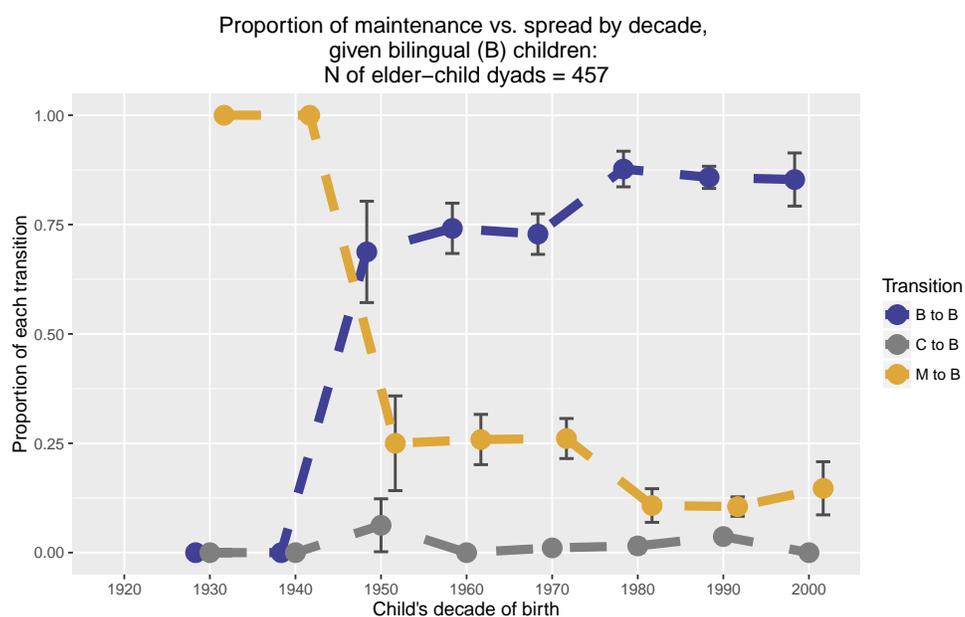
Figures 4.9 and 4.10 together reveal the chronology of the spread of Chinese through the Mongolian-speaking population during the mid-to-late twentieth century. Figure 4.9 shows that Chinese bilingualism, while already expanding before 1940, spread especially rapidly during the period 1940-1959 (or rather, among people born during that period), and leveled off after the

---

[19] The first explanation is hard to rule out though, since so many things about Chinese society *did* change between the Maoist and Reform eras.

1960s generation, perhaps reaching its saturation point. Figure 4.10 additionally shows that, even as bilingualism has spread, it has frequently been maintained for at least two generations.

4.6.2   Example: A monolingual Mongolian speaker and her bilingual descendants

Speaker AS012868, who I will call Gerel, is the only Mongolian monolingual among the audio-recorded interviewees. An eighty-year-old woman from Alashan League in the far west, Gerel spent most of her life herding camels and goats near the Mongolian border. At the time of the interview she had recently retired to the league capital of Bayanhot, where she lived with her daughter's family in a large and well-furnished modern apartment.

Gerel emphasized the poverty and isolation of her youth, mentioning several times during the interview that she had no opportunity to get an education at all, let alone learn Chinese. "People like us had no way of going to school, no money, no opportunity. … Back then, if we'd wanted to go to school, we didn't even know where a school was," she said. (In Mongolian: *"Manuus shig yum surguult orox tiim yuu baixgui, mönggö zoos yuu baixgui. Surguult suux tiim javshaan baixgui yum aa. …Manuus ter üyed surguult suuval – suuy geed surguul ch xaa baidag yum medexgüi."*) She felt that things had gotten much better since the Liberation (1949): "Now it's much better. Kids, right from when they're little, when they're just learning to talk, they're already in school," she said. (In Mongolian: *"Odoo bol saixan baina aa, ayaa. Xüüxed chuxam bagaasaa, xelt oroxoosoo mön surguult suugaad irj baina."*) There were no Chinese people in her area when she was growing up. She estimated that they began showing up when she was about 30 years old, which would have been in the 1960s.

I also met several of Gerel's children and grandchildren. They too had grown up in rural Alashan, but unlike Gerel all of them were literate, some with college degrees. They could all speak and read Chinese as well as Mongolian, and some had studied foreign languages. All of Gerel's children, and those of her grandchildren who I encountered, spoke Mongolian as their first and dominant language. In Chinese, they controlled Putonghua and/or Jin dialect (the Han vernacular of western Inner Mongolia) to varying degrees. It remains to be seen what will happen with the great-grandchildren.

4.6.3   Some shift in every generation, but no clear "shifting generation"

Next, we can examine the potential transition from bilingual caregivers to Chinese-monolingual children, in order to find out which is more common, language shift or language maintenance. As in the previous section, this requires looking at two subsets of the data, the subset with bilingual (B) parents, and the subset of (C) monolingual children.

The subset with bilingual (B) caregivers is shown in Figure 4.11, which plots language shift (B to C) against bilingual maintenance (B to B) and loss of Chinese (B to M).

Maintenance (B to B) is much more common than shift (B to C) for every age cohort in our sample. Loss of Chinese (B to M) is rare but not always zero. The rate of maintenance vs. shift shows no strong trend over time, but instead seems to fluctuate continually. For example, maintenance (B to B) goes up in the 1960s, down in the 1970s, up higher in the 1980s, and back down again for the 1990s. This implies that, while Mongolian is indeed losing some speakers in every generation, there is no particular age cohort in this 57-year span that we can pinpoint as the "shifting generation".

Figure 4.11: Language transmission for the subset with bilingual parents
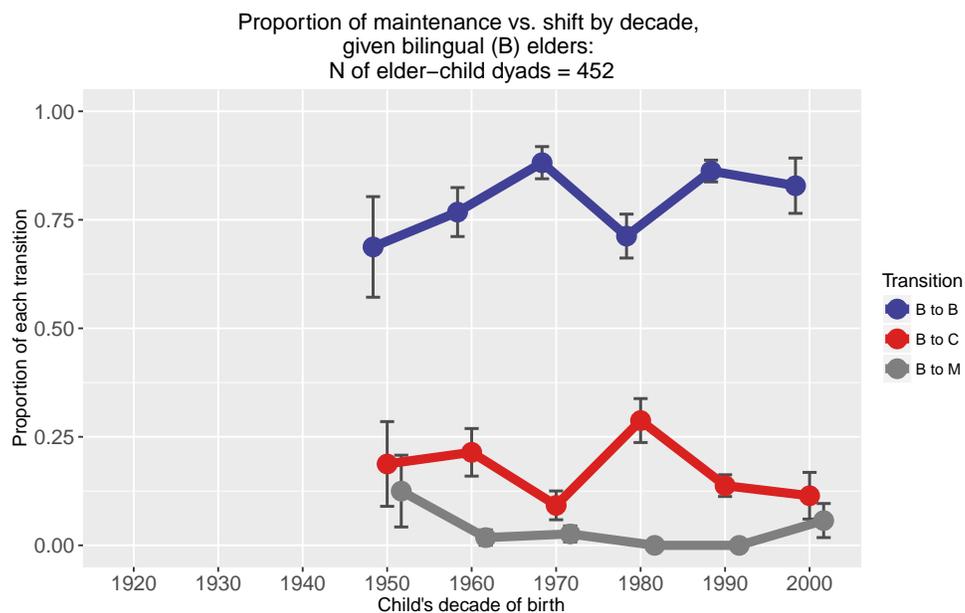
The fluctuation, with peaks in the 1960s and 1980s, is clearer in Figure 4.12, which plots a simplified view of the same data showing only the rate of language shift (B to C) by cohort.

Figure 4.12: Rate of shift to Chinese over time
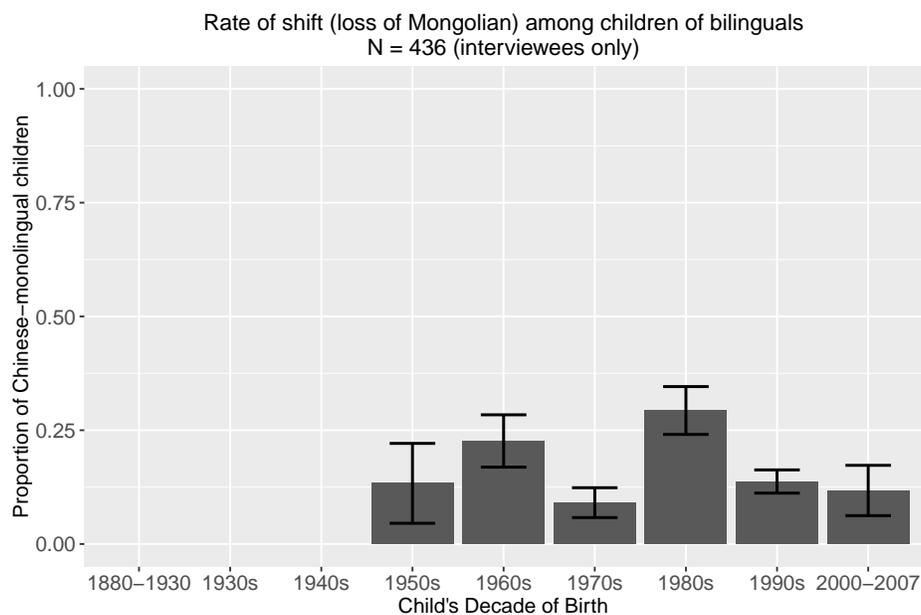
The flip side of language shift, based on the subset of (C) monolingual interviewees, is shown in Figure 4.13, which plots language shift (B to C) against continued monolingualism (C to C); the structural zero (M to C) is also shown for the sake of completeness.

In most of the age cohorts, about half the (C)-monolinguals represent cases of language shift, while about half never had the opportunity to learn Mongolian because their caregivers were also Chinese-monolingual. As with the data in Figure 4.11, there is no sign of a linear trend over time, although the data here are too noisy to capture smaller fluctuations.

Figure 4.13: Language transmission for the subset of C-monolingual children
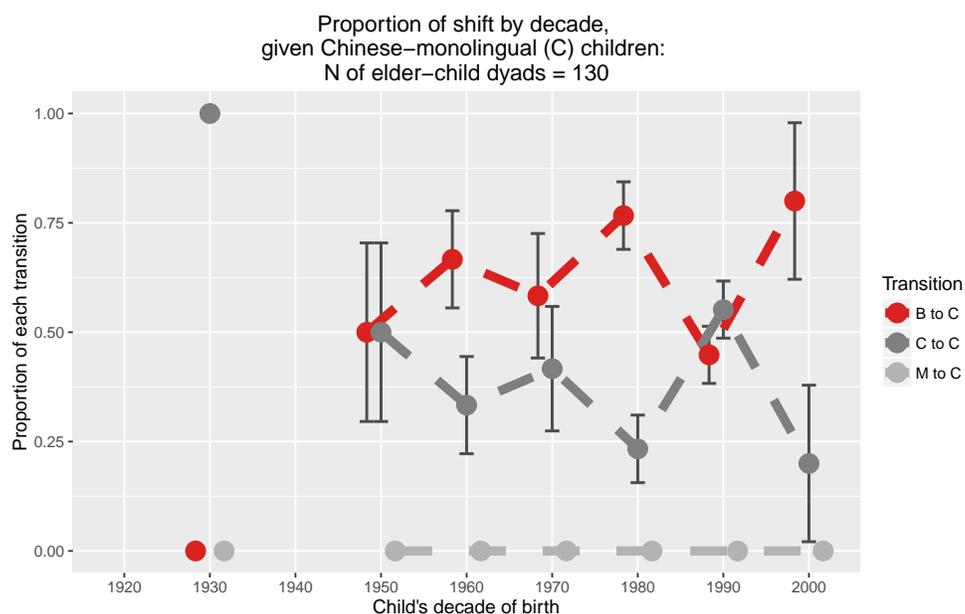
Based on the subset of interviewees with bilingual (B) parents and the subset of interviewees who were themselves Chinese-monolingual (C) speakers, I have been able to examine changes in the relative rate of language shift over time for birthyears from the 1950s through the early 2000s. Throughout this period, there is no sign of an abrupt language shift overtaking an entire generation. Instead, there is some language shift happening in every decade. Furthermore, the rate of language shift appears to fluctuate rather than steadily rising or falling. However, as will be shown in 4.8 below, a regression analysis finds no statistically significant rise, fall, *or* fluctuation from decade to decade.

4.6.4   Example: shift and maintenance coexisting in Jarud Banner, Tongliao

The analyses above suggest that there is no obvious trend over time in the rate of language shift. The following pair of linguistic autobiographies, from two people who grew up in the same town eight years apart, bears that out.

Speakers TL061635, who I will call Dabhur, and TL062117, who I will call Tana, were both born

and raised in Lubei, the county seat of Jarud Banner in Tongliao Prefecture. Though both were raised by bilingual Mongol parents, Dabhur is a fluent, Mongolian-dominant bilingual, while Tana is a Chinese speaker with a weak passive comprehension of Mongolian. We might expect Dabhur to represent an older generation, but actually he was born in 1986, making him eight years *younger* than Tana, born in 1978.

Most of Tongliao is agricultural today, but Jarud Banner is an exception, being a mostly pastoral landscape and economy. A recent significant event in Jarud was that a large area was designated as a national park and the herders who had lived there were made to resettle in towns, many of them in Lubei. However, Dabhur and Tana were not directly affected by this; they grew up in town, not on the grassland, and both are college-educated civil servants.

Dabhur described himself as fluent in both Mongolian and Chinese, although he is slightly better in Mongolian and uses it more often (he stated, for instance, that most of his reading material is Mongolian). Tana claimed to be perfectly fluent in Chinese and to understand Mongolian but not be able to speak it. In fact, I tried asking her some of the interview questions in Mongolian, but she misunderstood them, confidently answering "right here in Lubei" in response to the question "what year were you born?". (This was an ongoing theme with people who claimed passive bilingualism or passive comprehension of Mongolian – when suddenly addressed in Mongolian by a stranger, they did not understand, cf. Dorian (1982).)

When they were interviewed, both of them emphasized the role of the environment in shaping their language abilities, particularly their Chinese ability. In these cases, school played a role but was not the only factor. Both of them spoke Mongolian at home in early childhood. However, Dabhur stated that he always spoke Mongolian with his parents, and usually spoke it with his younger sibling. He described Mongolian as his first language, saying he did not know Chinese until he was old enough to start playing with other children, perhaps five or six years of age. Tana, in contrast, describes herself as bilingual from the beginning. Dabhur is the older of two children, while Tana is the youngest of four.[20] Tana stated that her older siblings' Mongolian

---

[20] The Planned-Birth Policy restricting Mongol families to two or three children took effect in the early 1980s, so Tana's family was not affected but Dabhur's was. See 1.2.

is better than hers.

Dabhur was a sequential bilingual, the oldest child, and educated in Mongolian. Tana was a simultaneous bilingual, the youngest child, and educated in Chinese. According to Dabhur, the environment of Lubei was responsible for his Chinese being so good. According to Tana, the environment of Lubei is responsible for her Mongolian being lost. Dabhur said, "I had a lot of Han friends in the neighborhood, too. From interacting with them, my Chinese got pretty good." (In Mongolian: *"Orchin toironii xyatad and bas arvin baina. Engeed tedentei xarilchsanaas xyatad xel bas bolchixno."*) Tana said, "From about the time I started school, or anyway since I learned Chinese, I gradually forgot Mongolian. Everyone I came in contact with, classmates and so on, was Han." (In Chinese: *"Shàngxué yǐhòu chàbuduō, kěndìng xué hànyǔ yǐhòu ba, měngyǔ jiù mànrmànr jiù dōu wàng le. Jiēchù de dōu shì hànzú de nèige, tóngxué shá de."*) She also pointed to the fact that all the Mongolian speakers around there could speak Chinese. Obviously Tana's explanation is not quite the whole story, since Dabhur (and apparently Tana's older siblings) provide counterexamples. Still, Dabhur and Tana both agree on Lubei being a Chinese-dominated environment.

As in the case of Öndör in Bayanhot, the micro-environment may differ while the macro-environment remains the same. But what determines the micro-environment? Why does one child attend Mongolian school and another child attend Chinese school, when both types are available?

Perhaps the choice of school is related to differences in ethnic consciousness. Dabhur works for the local government as an enforcer of Mongolian language policy. Tana also works for the local government, but as an accountant. Based on their job descriptions, we might expect Dabhur to have a stronger commitment to ethnic culture than Tana. If his parents felt the same way, that might explain why he was sent to Mongolian schools; perhaps Tana's parents felt less strongly.

Another factor shaping the micro-environment might be birth order. In minority language communities undergoing shift, older siblings tend to be more fluent in the minority language than younger siblings. This can happen because the older siblings become bilingual at a young age and then use the majority language with their younger siblings while continuing to use the

minority language with their parents. The younger siblings are exposed more to the majority language and less to the minority language even in their own home.

This in turn could influence school choice — parents may be more likely to send their firstborn to Mongolian school and their youngest to Chinese school simply because the younger sibling shows weaker Mongolian skills in childhood due to the older sibling's influence. As far as I can tell, Dabhur's younger sibling speaks Mongolian well (they still speak Mongolian together, unlike Öndör and his sister), although Dabhur did not explicitly state that his brother went to Mongolian school.

The quantitative analysis in the previous section found that the rate of language shift did not show a strong trend over time. The cases of Dabhur and Tana are suggestive: even within the same smallish town, a younger person might have better Mongolian knowledge than an older person.

4.6.5   Summary of time trends

In this section I have examined the twentieth-century chronology of two language contact processes: the spread of Chinese into the Mongolian-speaking population, and the subsequent loss of Mongolian among some ethnic Mongols.

The spread of Chinese, i.e. the (M to B) transition, was most active in the mid-twentieth century, among people born 1940-1959.[21] By the 1960s generation and later, Chinese had reached most Mongol adults but continued to spread slowly among the remaining (M) monolinguals. Spread of Chinese (M to B) seems usually to have been followed by bilingual maintenance (B to B).

Shift away from Mongolian, i.e. the (B to C) transition, has been occurring at a relatively low rate in every age cohort for which we have data, from the 1950s to the 2000s. Thus, Mongolian is constantly losing speakers, yet no abrupt or comprehensive language shift seems to have taken place (at least on the scale of Inner Mongolia as a whole), and no generation can be identified as

---

[21] They may have learned Chinese later in life, so the spread of Chinese might well have been active into the 1980s or later.

the "shifting generation". In this last respect Mongolian in Inner Mongolia differs from all the well-known case studies of language shift in sociolinguistics and psycholinguistics, and shows itself problematic for most language vitality assessment scales. See 5.1 and 5.2.3 for further discussion.

4.7   The geography of intergenerational language transmission

In this section I discuss intergenerational language transmission as it varies across geographic space, first along the rural-urban dimension, and next along the east-west dimension. We have already seen in Section 4.4 that monolingual Chinese (C) speakers were most common among those who grew up in large cities or else in the rural Tümed and Harachin areas, that is, areas that experienced language shift prior to 1949. However, (C) speakers were also found in other rural areas in the prefectures of Tongliao, Shilin Gol, Hinggan, Ordos, and Chifeng, though in smaller proportions.

The question remaining for intergenerational transmission data to answer is, were those urban-born (C) speakers products of language shift (B to C), or were they raised by Chinese-monolingual parents (C to C)? And do large cities differ from rural areas in the prevalence of maintenance vs. shift, as well as in the prevalence of (C) monolingual speakers?

A second question is, we would like to see if the intergenerational transmission data confirm what we already expect, that any Tümed and Harachin speakers in our data were not the products of language shift, but rather their parents were (C) speakers as well. Thirdly, for areas where a major historical language shift is *not* reported, we need the intergenerational transmission data in order to see how many of the (C) speakers in our sample are products of language shift.

The plots in this section use the same analysis method and color coding as in the previous section. The only difference is that the X-axis shows geographic variables instead of birthyear. As a reminder, caregiver-based plots have solid lines and child-based plots have dotted lines.

4.7.1   Urban-rural differences

Both shift away from Mongolian and spread of Chinese behave differently in urban vs. rural areas.

Mongolian language maintenance is relatively strong in rural areas and relatively weak in urban areas, with towns being intermediate. The rate of language shift steadily increases from rural to small-town to urban locations, regardless of whether we focus on parents or children.

Focusing on parents, Figure 4.17 displays the subset of interviewees whose caregivers were bilingual (B). Here, the rate of language shift is dramatically higher among city children than among either town or rural children. Furthermore, cities are the only place where shift is more common than maintenance.

Figure 4.14: Reduced language maintenance among urban children
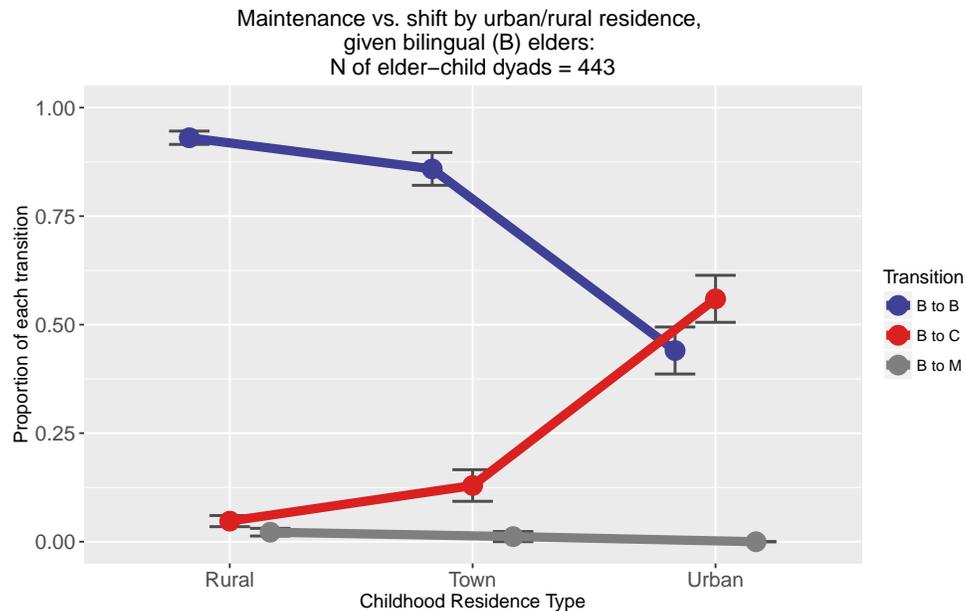
Looking in the other direction, at the subset of interviewees who were themselves (C) speakers, we find the trend in the same direction, although the magnitude of the urban-rural difference is less dramatic, as seen in Figure 4.15.

Figure 4.15: Historical (C to C) vs. recent (B to C) language shift, from rural to urban
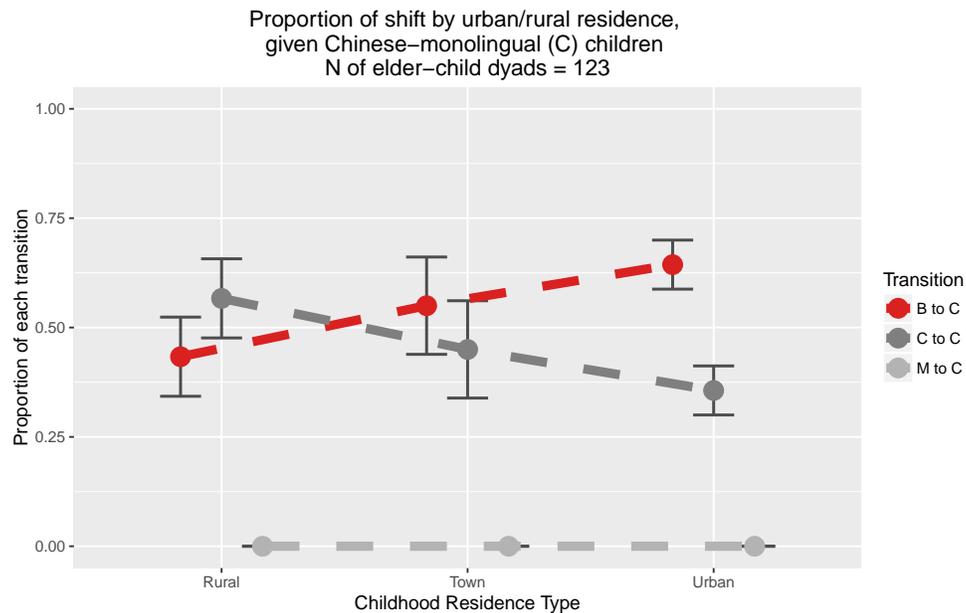
It is obvious from the data in the preceding two figures (4.14 and 4.15.) that the current process of language shift is relatively more active in urban areas. Nonetheless, historical language shift events (that is, the C-to-C transitions shown in Figure 4.15) cannot explain all of the rural and small-town (C) speakers. Language shift must still be going on in some rural areas as well. Since the (B to C) transition rate in Figure 4.14 is barely above zero, perhaps language shift is concentrated in some rural areas and not others (see below for further evidence).

As for the spread of Chinese (the M-to-B transition), results show that, just as Chinese has spread more widely over time, it has also spread more comprehensively among urban and town dwellers than among rural dwellers. Figure 4.16 shows the subset with (M) caregivers. The rate of (M to B) is 100 percent in towns, and in cities there are not even any households of (M) elders to begin with.

Figure 4.16: Spread of Chinese among town dwellers
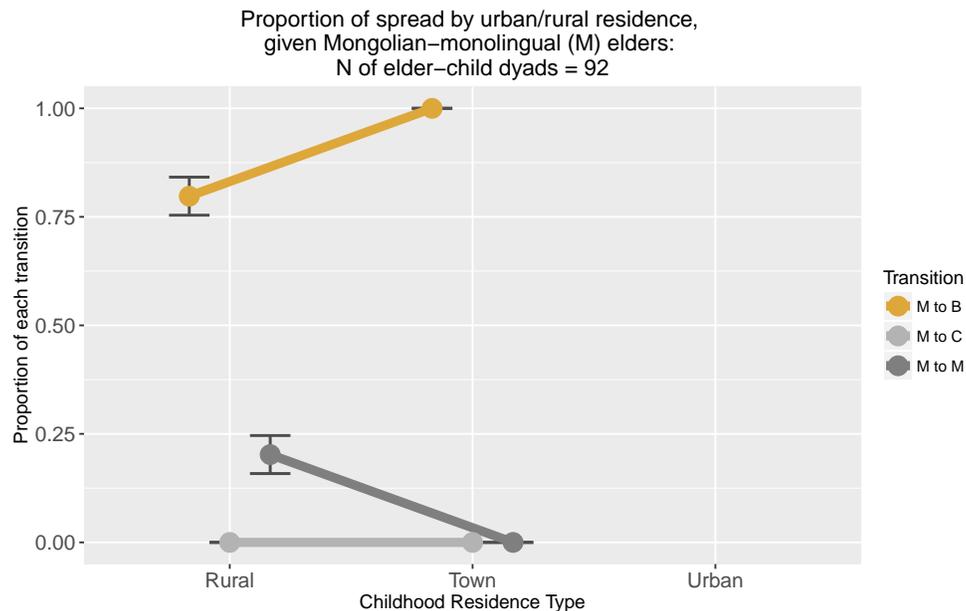
In effect, Chinese competence appears to be a prerequisite for living in a city. While our data contain some M-monolingual *individuals* who live in cities as adults (Figure 4.6), there are no *households* (averaged elders) classified as (M). This implies that any Mongolian-monolingual adults living in cities formed part of a household with at least one or two bilingual (B) adults in it. More concretely, they are likely to be elderly people living with their adult children, like Gerel in 4.6.2.

Looking at the subset of interviewees who were themselves bilingual (Figure 4.17), the trends are consistent: the more urbanized the location, the less likely that language spread has taken place in the current generation, and the more likely that the caregivers' generation were already bilingual. It follows from the data in the previous figure that there are zero cases of the (M-to-B) transition in large cities. But interestingly, the rate of (B to B) in cities is less than 100 percent. Instead, there are a few cases of (C to B), a.k.a. reversing language shift.

Figure 4.17: Urban bilinguals are second-generation bilinguals
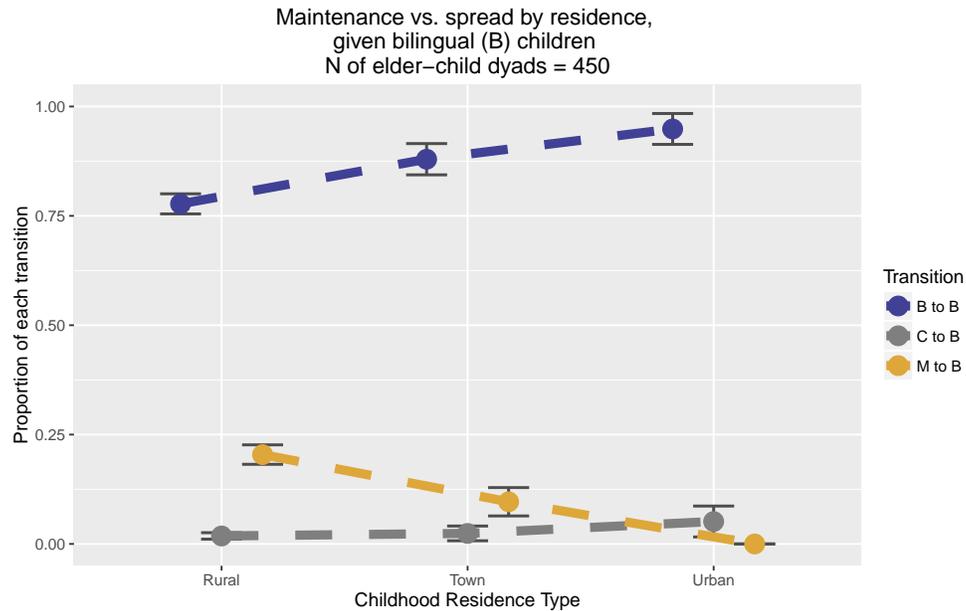
The spread of Chinese among Mongolian speakers, while well advanced everywhere in Inner Mongolia, is more advanced the more urban the location.

4.7.2   Regional and east-west differences

Mapping the subset of (C) speaking interviewees confirms what we already expected about historical language shifts in the Tümed (Hohhot) and Harachin (Chifeng) areas, but also reveals that partial historical language shifts seem to have taken place in other areas as well. Mapping the subset with (B) speaking elders, meanwhile, does not reveal any strong regional hotspots of present-day shift.

The map in Figure 4.18 displays the ratio of (C to C) versus (B to C) or (M to C) transitions in each county-level unit for which we have data. As expected, the (C to C) cases are most prevalent in the Tümed area (surrounding Hohhot) and the Harachin area (south of Chifeng), and can be explained as results of historical language shifts.

Outside of the Tümed and Harachin areas, (C to C) transitions probably indicate a fairly re-

Figure 4.18: Proportion of (C to C) transitions, given (C) children, by county
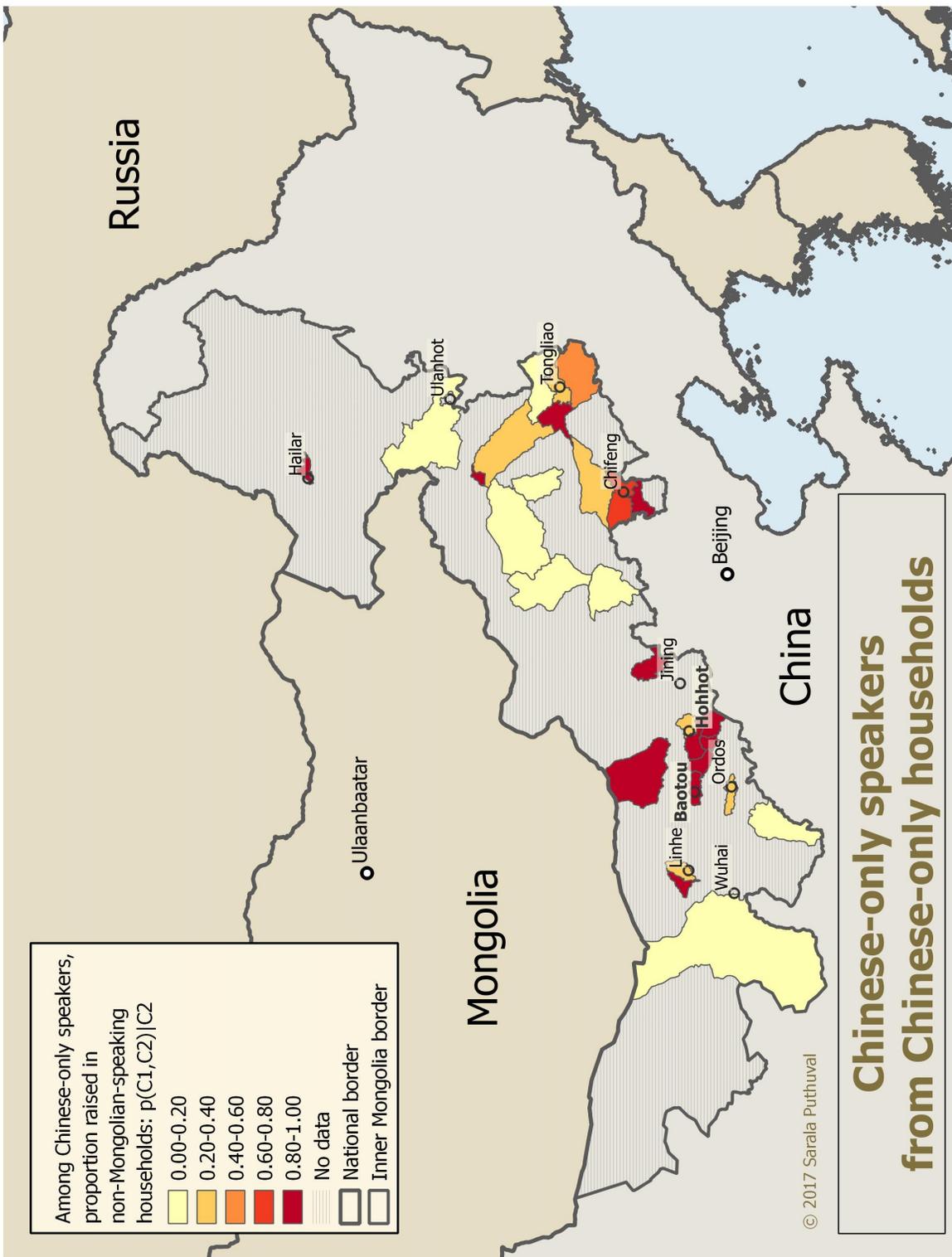
cent language shift, perhaps in the generation of our interviewees' parents. For example, the relatively high concentration of (C to C) transitions in eastern Tongliao Prefecture might be explained in this way. We know from the rest of this dataset that Mongolian language maintenance is quite strong in Tongliao Prefecture, but language shift may nonetheless have taken place among a minority of the population.

Some other counties on Map 4.18 have only a handful of data points (total N=127), so I am reluctant to interpret in too much more detail.

The map in Figure 4.19, focusing on the subset with bilingual (B) caregivers, displays the ratio of (B to C) versus (B to B) or (B to M) transitions in each county-level unit for which we have data. Cities generally have a higher rate of shift, as we already knew from the previous section. Other than cities, there are few reliable hotspots of language shift; most rural counties which appear to have a higher ratio are all ones for which we have 10 or fewer data points (see Figure 4.1), so it is hard to be sure that their higher ratio is meaningful. In Tongliao Prefecture, the target of our "deep sample" with at least 11 data points for every county, language maintenance is strong everywhere except in urban Tongliao City and in the Horchin Left Flank Middle Banner, where the rates of shift are in the 0.40-0.60 range and the 0.20-0.40 range respectively.

Overall, the results of mapping the distribution of language shift from the point of view of children and caregivers are, in both cases, suggestive but inconclusive. This is partly because our data is unevenly distributed geographically. For future research, a more balanced dataset could be used, or alternatively a more sophisticated statistical analysis might reveal patterns in this dataset.

4.7.3 Summary of spatial patterns

Language shift (B to C) is more common in cities than in towns or villages. This holds true regardless of whether we focus on the (B) parent subset or the (C) child subset. In other words, shift is more common than bilingual maintenance in cities; but rural children generally are more likely to resemble their parents linguistically, regardless of whether those parents fit the (M), (B), or (C) profile.

Figure 4.19: Proportion of (B to C) transitions, given (B) elders, by county

Proportion of Chinese-only
speakers among children
from bilingual households:
p(B1,C2)|B1

0.00–0.20
0.20–0.40
0.40–0.60
0.60–0.80
0.80–1.00
No data
National border
Inner Mongolia border

Language shift in
bilingual households

© 2017 Sarala Puthuval
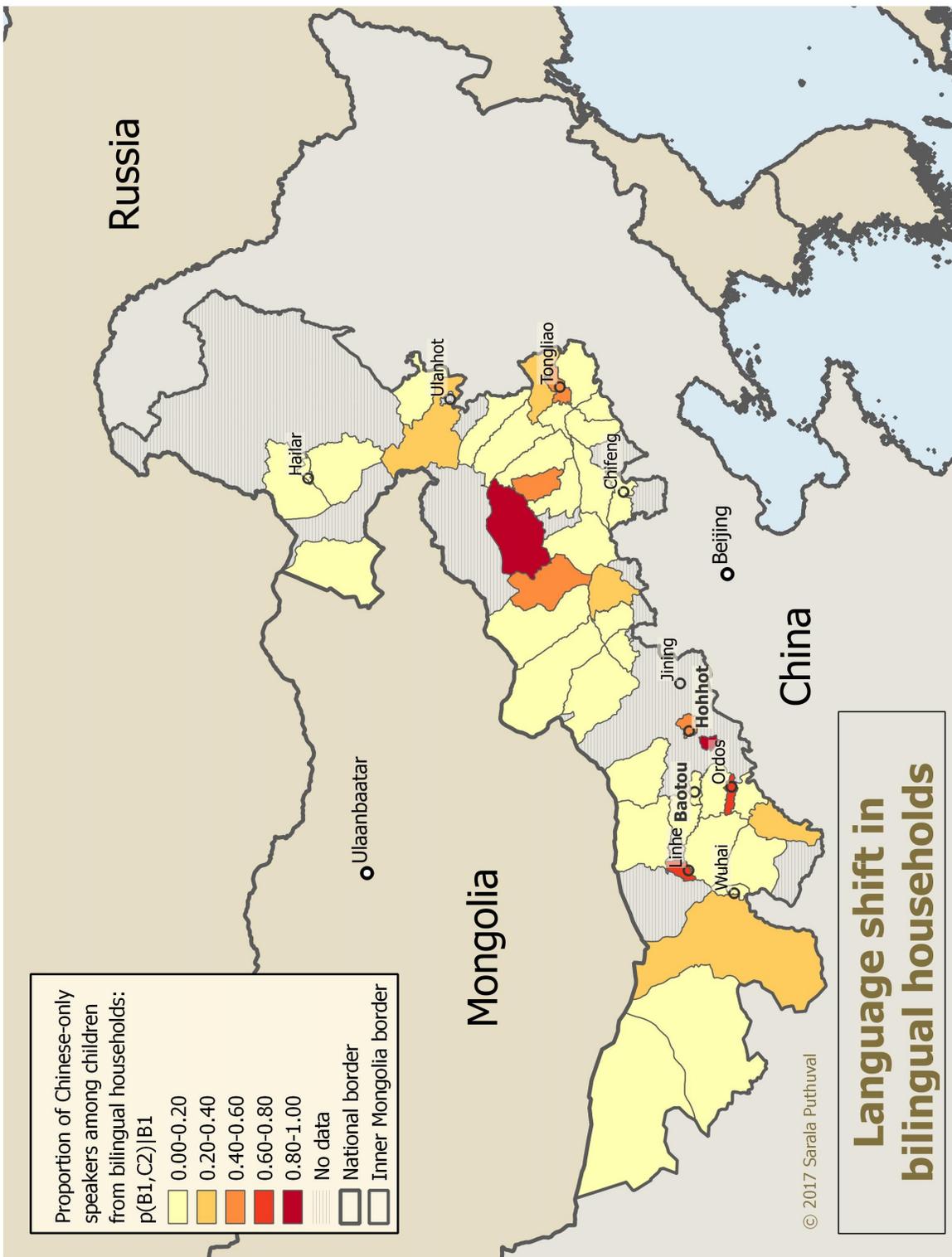
Bilingual maintenance (B to B) is quite strong in rural areas throughout Inner Mongolia, including pastoral areas like Alashan, Hulunbuir, and northern Bayannuur, and also agricultural areas such as Tongliao, Hinggan and parts of Chifeng Prefecture.

These results bear on Bulag's "rural reservoir" hypothesis. I will discuss their implications in the next chapter.

4.8 Regression analysis

There were three research questions of which two were amenable to hypothesis testing (see 3.2.4 and 3.3). Here I present results of a logistic regression analysis used to evaluate those hypotheses. The main outcome variable of interest is language shift, defined as $p(B_1, C_2)|B_1$, that is, the probability of a child's growing up Chinese-monolingual, given a bilingual household. Research question (b) asked whether people born in later years would be more likely to experience language shift (hypothesis: yes). Research question (c) asked whether people raised in urban environments would be more likely to experience language shift (hypothesis: yes). From the analyses presented so far, the relationship between birthyear and the likelihood of language shift does not seem to be very strong (4.6), while the role of urban vs. town vs. rural environments is more evident (4.7). It is possible that some interaction between birthyear and location is obscuring the role of birthyear. To clarify any possible interaction, and to confirm the results observed so far, the two hypotheses can be formally tested using logistic regression with $p(B_1, C_2)|B_1$ as the outcome variable, and either birth decade, residence type, or both together as the predictors. This gives three models to test:

1. $p(B_1, C_2)|B_1 \sim birth\ decade$

2. $p(B_1, C_2)|B_1 \sim birth\ decade + residence$

3. $p(B_1, C_2)|B_1 \sim residence$

When we model the probability of language shift based on decade of birth, using the 1950s as the reference level (because that is the earliest decade for which we have data for this subgroup),

we find that none of the subsequent birth decade cohorts have rates of shift significantly different from the 1950s cohort (all p-values > 0.2). When we model the rate of shift across birth decades and residence types simultaneously, we find significant differences in the probability of language shift between "rural" (the reference level) and both "urban" and "town". The effect is ordered: language shift is more likely in towns than in rural locales (estimated difference in log-odds 1.16, $z = 2.62, p = 0.009$), and even more likely in urban locales (estimated difference in log-odds 3.22, $z = 8.66, p < 0.001$). In this model there is still no significant difference between the 1950s (the reference level) and subsequent birth decades (all p-values > 0.2). In fact, the combined decade-plus-residence model fits the data no better than a model that *only* contains the residence type (likelihood ratio test, $p = 0.58$).

One might ask whether the non-significance of birth decade is perhaps just an artifact of where the cohort cut-points were located. For instance, perhaps 1950-1959 is not a relevant 10-year grouping, but 1954-1963 is. To test this, we can replace the birth decade predictor with a set of basis splines or "B-splines" (polynomial curves with "knots" spaced equidistant through the range of the birthyear values). These splines can be used in a regression model to test whether a non-linear function made up of piecewise polynomials is a better fit to the data than a linear function. A B-spline model can reveal whether the data has any prominent bumps or fluctuations in it which were unlikely to have arisen by chance. I pointed out some apparent fluctuations in 4.6.3 above.

When we model the probability of language shift based on birthyear using cubic B-splines with 5 degrees of freedom (the same number of free parameters as when we modeled birthyear in six decade-sized cohorts), we find no significant relationship between the basis splines for age and the probability of language shift (all p-values > 0.2). As before, including both residence type and birthyear in the model (this time using B-splines for birthyear instead of decade cohorts) does not significantly improve model fit compared to the model that only includes residence type (likelihood ratio test, $p = 0.66$). The B-spline model finds no evidence that the fluctuations noted in 4.6.3 were more than a coincidence.

The result is that an urban, town or rural childhood residence is the best predictor of language

shift, and incorporating birthyear into the model does not add any predictive power. Thus, the hypothesis for research question (c) is supported, while the hypothesis for research question (b) is not supported.

4.9 Summary of results

The vast majority of Mongolian speakers in Inner Mongolia are bilingual with Chinese. Bilingualism was already common in the early 20th century, but it gradually rose among people born after 1950 until it became almost universal by the end of the 20th century. Throughout the late 20th century, the vast majority of children raised by Mongolian-monolingual speakers grew up to be bilingual. This increase in bilingualism has not immediately been followed by language shift in the next generation. Rather, most children raised by bilingual speakers also grew up bilingual, which suggests stable bilingualism.

At the same time, alongside this stable bilingualism there is some loss of speakers to language shift in every generation. Furthermore, the ongoing urbanization of Inner Mongolia's population seems to pose a threat to stable bilingualism. Language shift is much more common in large cities than in rural areas or medium-size towns. Given that many of our survey respondents have relocated from rural to more urban areas in their lifetime, it is possible that rates of language shift will be higher in future generations.

Chapter 5

CONCLUSIONS

In Chapter 4, I presented the results organized by data type and analysis method. Now, I will look back over the same results as they pertain to the research question stated in 3.2: how seriously threatened is Mongolian in Inner Mongolia, given recent and ongoing social changes in China? Is the newly widespread bilingualism a stable state, or a transitional state on the way to a complete language shift? The research question is considered from three angles (the three sub-questions previously stated in 3.2.1, 3.2.2 and 3.2.3). First, section 5.1 presents a twentieth-century chronology of the spread of Chinese and the subsequent shift away from Mongolian. Second, section 5.2 discusses the overall rate of language shift in our data and, surprisingly, finds no evidence that the likelihood of language shift given bilingual parents has been rising over time. Third, section 5.3 shows that there is a strong link in our data between urbanization and language shift, but our data offer only partial support for Bulag's "reservoir drying up" thesis. In each case, I discuss some limitations of the present study's methodology and sampling, and outline some promising avenues for future research. In Section 5.4 I revisit the issue of bias toward Mongolian speakers in the sample of the present study, relating it to bigger questions about language, identity, and the practical and epistemological problems that are faced by language shift research. In Section 5.5 I summarize the methodological innovations of the present study and recommend how they could be applied to other situations of language shift and endangerment.

5.1   *Spread, maintenance and shift across the twentieth century*

A clearer picture of the history of twentieth-century language contact in Inner Mongolia is one of the goals of this study, as described in 3.2.1. Previous accounts of Mongolian's status in the

late twentieth and early twenty-first centuries have tended to compare it against an idealized baseline of pure Mongolian language and culture (see 1.6, 3.2.3). Although Chinese cultural and linguistic influence is generally held to have increased dramatically after the founding of the PRC in 1949, there is plenty of evidence that inter-ethnic contact and language shift were happening well before that date (see 1.2, 1.3). Results from the present study allow us to more precisely describe the timing of the spread of Chinese and loss of Mongolian over the course of the twentieth century, taking into account the preexisting state of language contact.[1]

This study's most important historical contribution is chronicling the spread of Chinese and the loss of Mongolian as two separate processes (see 3.1 for how the study design facilitated this). Bilingualism does not inevitably lead to language shift. However, a fully bilingual speech community is constantly at risk of language shift or, to put it less negatively, could shift quite suddenly at any time. The stability, or sustainability, of Mongolian-Chinese bilingualism in Inner Mongolia would depend on Chinese spreading without Mongolian being lost. Previous studies have tended to treat the spread of Chinese and loss of Mongolian as if they were the same process.

Based on data collected during this project, I can identify three historical stages in the spread of Chinese and loss of Mongolian during the twentieth century. The stages can more appropriately be called "cohorts", since they are based on the birthyears of speakers, not on the time when they learned each language. For the first cohort, people born from about 1900-1950, Chinese was spreading gradually and unevenly through the Mongol population, and Mongolian was being lost only in certain areas. For the second cohort, born from about 1950-1980, Chinese was spreading extremely rapidly through the Mongol population, and Mongolian was still being lost by some people. For the third cohort, from about 1980-2000, knowledge of Chinese was already practically universal among Mongols, and Mongolian continued to be lost by some people, but maintained by others.

Among the first cohort, born between about 1900 and 1950, most ethnic Mongols spoke Mon-

---

[1] Some material from this section was covered in my 2017 Linguistic Society of America talk on "Stages of language shift in twentieth-century Inner Mongolia" (Puthuval, 2017b).

golian as their primary or only language. Non-Mongolian-speaking Mongols were concentrated in a few regions where Han in-migration had taken place in the 18th and 19th centuries (see 4.4, 4.7). A good portion of the Mongolian speakers, perhaps one-third or more, could communicate in Chinese well enough to count as bilingual for this study (see 4.3). Still, most children of Mongolian-monolinguals also grew up monolingual (see 4.6). Bilingualism was more common among males than females at this time (see 4.5.1).

The second cohort, born between about 1950 and 1980, experienced a rapid expansion of bilingualism. With each passing decade, children of Mongolian-monolinguals were more and more likely to grow up bilingual (see 4.3 and 4.6.1). It seems clear that Mongols during this period had greater motivation and/or opportunity to acquire Chinese than ever before, whether through schooling or by other means (circumstances of Chinese acquisition are discussed in 4.2). Chinese proficiency was becoming more necessary in their lives. At the same time, children born and raised during this period do not seem to have been abandoning Mongolian in great numbers, even if their parents were bilingual (see 4.6.3).

The third cohort, born between about 1980 and 2000, arrived after bilingualism had already spread throughout the adult Mongol population. Mongolian-monolinguals are almost never seen among people born 1980 and later (see 4.3). More importantly, Chinese was no longer *spreading* at this stage: bilinguals raised during this period were not learning a new language unknown to their parents, but rather they were maintaining the use of Mongolian even though they and their parents could both communicate in Chinese (see Section 4.6). From approximately 1980 onwards, according to our data, the entire Mongolian-speaking population of childrearing age has been functionally bilingual. This was the point where the possibility of sudden, massive language shift began. Interestingly, a massive language shift has not in fact taken place. Rather, language shift continued to proceed gradually, perhaps no faster than it had in the 1960s and 1970s (see Section 4.6.3). I will discuss the quantitative analysis of the rate of shift vs. maintenance in Section 5.2 below.

5.1.1   Historical context for the three cohorts

The three cohorts that emerged from our data happen to correspond to three major periods in twentieth-century Chinese history. I am not claiming that there is necessarily a direct connection, but simply providing some context for non-China-specialists. 1900-1950 was the transitional period between the Qing empire and the founding of the PRC. 1950-1980 was the Maoist era of Communist economic and social reform. 1980-2000 was the market reform era led by Mao's successor Deng Xiaoping.

During the first period, 1900-1950, Inner Mongolia was a primarily rural economy, with both agriculture and nomadic pastoralism being practiced. As described in 1.2 and 1.3, the political situation was unstable, and inter-ethnic contact was increasing in some areas due to Han settlement, conversion of pasture to farmland, and the building of railroads.

The second cohort, approximately 1950-1980, coincides with the period from the founding of the PRC in 1949 to the death of Mao Zedong in 1976 and the rise of Deng Xiaoping in 1978. This period saw land reform and collectivization; the Great Leap Forward and the subsequent famine; the beginning of mass education; and the Cultural Revolution.

The third cohort, 1980-2000, coincides with the period when China was turning from a planned economy towards a market economy. Economic development accelerated and the population became more mobile. Language skills became heavily incentivized in the education system, and English became important in addition to Putonghua. This is the period that Lim & Ansaldo (2016) focused on (see 1.1).

The present study finds that the founding of the PRC did indeed expand the role of Chinese in Inner Mongolia, as claimed by Lim & Ansaldo (2016) and other sources discussed in Chapter 1. However, this happened against a background of some preexisting bilingualism, and both the expansion of Chinese and the loss of Mongolian have been gradual. It took several decades for the spread of Chinese to reach its saturation point, where basically all Mongolian speakers also knew Chinese.[2] Bilingualism has been widespread in Inner Mongolia for several generations already,

---

[2] A study looking more closely at bilinguals' competence and proficiency would certainly find that the spread of

longer than is generally acknowledged, and some young children are still learning Mongolian. In 5.2.4 below, I will discuss how the results relate to PRC-era language policy.

5.1.2   Limitations of the present study: geographic and temporal coverage

One limitation of the present study is that the sample is relatively small and geographically scattered. It contains about 2,000 people including both interviewees and their childhood caregivers (who were reported on but not interviewed directly). Geographically, we have at least some data from over 60 counties, or about 57% of the county-level administrative units in Inner Mongolia, but our data is most concentrated in a dozen counties in Tongliao Prefecture, Chifeng Prefecture, and Hohhot Prefecture. Although the coverage is broader than any previous survey study to my knowledge, it is still not enough for drawing firm conclusions about all of Inner Mongolia. The conclusions are strongest for Tongliao, Chifeng and Hohhot Prefectures.

Another limitation of the present study is that the sample is skewed towards people born in the second half of the twentieth century — a hard problem to avoid, since the interviews did not begin until 2014. The direct interviewees were mainly born after 1950, and their parents and caregivers were mainly born between 1930 and 1979. This means we have very little intergenerational transmission data from before 1950, and we have very little language proficiency data at all from before 1930. Of the three cohorts I have identified in the twentieth century, the descriptions of the second and third cohorts are more reliable than the first cohort. Even so, the temporal coverage of this sample is very broad compared to other studies, thanks to the intergenerational transmission design.

A third limitation of the present study is not to do with the amount of data, but with the data structure. All the data points are situated in time according to speakers' birth years. This is not a problem when talking about L1 acquisition, since that is tied to a specific life stage. However, some of the language data concern L2 acquisition, which is not tied to a specific point in the

---

Chinese is still ongoing, in the sense that the average Chinese proficiency among Mongolian-Chinese bilinguals is probably still rising with time. The present study had a low bar for "bilingual" and did not distinguish well between Chinese-dominant and Mongolian-dominant bilinguals (see 3.6).

lifespan. This is a problem for estimating when exactly Chinese was spreading. For example, intergenerationally speaking, the spread of Chinese (the M-to-B transition) seems to have spiked among people born in the 1960s. However, we do not know when in their lifetime they acquired Chinese; it could have been any time from the 1960s until the 2010s. Thus, my estimates about the timing of the spread of Chinese are only approximate. My estimates about the timing of maintenance vs. loss of Mongolian are more reliable, since this concerns L1 acquisition for the most part. Actually, the present study did collect data about the age at which interviewees acquired their second language (see 3.6, 4.2, and 4.2.3), although it was not incorporated into the intergenerational transmission analysis (see 3.6.1 and 4.5 for why). A future study based on the same dataset could use this data to time the midcentury spread of Chinese more precisely.

Another relevant limitation is that the sample may be biased toward Mongolian speakers, i.e. those who have not undergone language shift (see 3.10.2). This issue and how it affects my interpretation of the shift data is discussed in 5.2.2 below.

5.2 How fast is the shift away from Mongolian?

In situations where a language is still being acquired by some, but not all, children, we would like to know exactly what proportion of children are acquiring it. This could tell us how immediate the danger is of the language disappearing (see 2.2.4).

Among Mongols in Inner Mongolia, some but not all children of Mongolian speakers are still acquiring Mongolian. This gradual loss of Mongolian has been going on for many decades. The present study therefore focused not on the current generation of children, but on the intergenerational transmission of Mongolian to children born over the past several decades (i.e. all adolescents and adults now living). The present study attempts to quantify the rate of this gradual loss, and also to find out whether that rate has speeded up over time, using the methodology laid out in 3.1 and 4.5.

Section 5.2.1 below discusses the overall rate of language shift; Section 5.2.2 discusses some limitations on what can be inferred from that rate; and 5.2.3 talks about how the rate varies over time.

5.2.1 Overall rate of language shift in this sample

Among speakers interviewed for the present study, intergenerational shift from bilingual to Chinese-only is happening at the rate of 16% on average. This number is the probability that a child with bilingual parents will grow up to be Chinese-monolingual, $p(B_1, C_2|B_1)$, or the proportion of (B to C)[3] transitions in the subset with bilingual (B) caregivers, as shown in Table 4.8 in Section 4.5.4. If the dataset is representative of Inner Mongolian Mongols as a whole, it predicts that 16% of children raised by bilingual caregivers will ultimately fail to acquire Mongolian.

This may seem like a small number, but compounded over time, even a 16% rate of shift could quickly add up. A gradual decline in which a steady proportion of speakers is lost in each generation will produce an exponential decline in speaker numbers, not a linear decline.[4] The shape of that decline is schematized in Figure 5.1. Starting at Generation 0 with a community of bilingual speakers, it shows—hypothetically—how the number of Mongolian-speaking children in each new generation would decline over the next five generations. By the fourth generation, about half the children in the community would still speak Mongolian.

---

[3] M stands for a Mongolian-only speaker; B is a Mongolian-Chinese bilingual speaker; and C is a Chinese-only speaker. These abbreviations were introduced and defined in 4.3.1.

[4] The formula for an exponential decay curve is $y = e^{-x*\lambda}$, where λ stands for the *exponential decay constant*. The rate of language shift here estimated for Mongolian, 16%, gives rise to an exponential decay constant of 0.17. The formula for calculating the constant based on a known percentage decline p per unit of time is: $\lambda = -\ln(1-p)$, where both p and λ are positive rates.

Figure 5.1: Exponential decay (schematic)

Decline in new child speakers over five generations, assuming a constant rate of shift

Rate of shift = 0.165
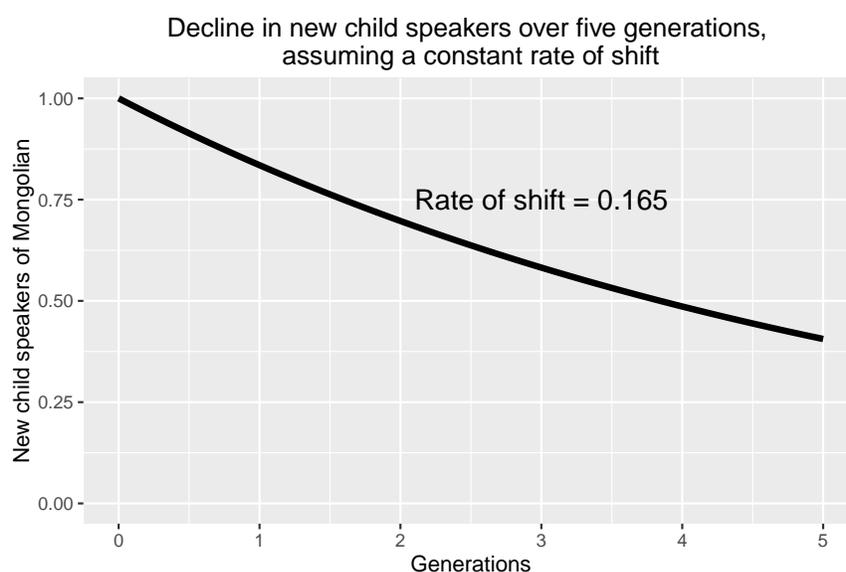
Fishman once defined language shift as outflow of speakers exceeding inflow over several generations (Fishman, 1991, 1). The present study has demonstrated that the inflow of new speakers of Mongolian is reduced because some speakers' children are not acquiring Mongolian, and that this situation has persisted for several generations. The consequences are hinted at in Figure 5.1.

Of course, in order to be sure that the outflow exceeds the inflow, we would have to consider mortality rates, birth rates and so on, which is beyond my capacity at present. Also, the rate of 16% language shift is likely not representative of Inner Mongolian Mongols as a whole, but probably errs on the low side, as will be discussed in the following section. Given these limitations, the present study does not attempt a specific projection of the future Mongolian-speaking population. A future study, combining the language transmission data from the current study with general demographic data about Inner Mongolia, could indeed produce an estimate of the changing speaker population over the time period of the study and into the near future.

5.2.2 Inferring the rate of language shift in the population from this sample

I have some reservations about the number 16%. The sample of speakers in the present study is not, and was not intended to be, a random sample with respect to whether or not speakers spoke Mongolian. We intentionally recruited participants with the goal of obtaining 50% Mongolian speakers and 50% non-Mongolian-speakers. Thus, the absolute proportion of shift in the sample is not necessarily meaningful. Rather, the study was designed to analyze *relative* proportions of shift as they vary across age cohorts, geographic subgroups, etc.

As described in 3.10.2, we fell short of a 50/50 sample because we found it relatively more difficult to recruit non-Mongolian-speaking participants. Our resulting sample was about 78% Mongolian-speaking. Ironically, the actual sample might be more representative of the population than the intended sample. Published estimates of the proportion of Mongolian speakers range from 40% to 80% of the Inner Mongolian ethnic Mongol population (see 4.1), so our sample falls at the high end of these estimates. Still, it is likely (though not certain) that our sample over-represents Mongolian speakers, in which case the number 16% would be underestimating the real rate of language shift.

I can illustrate the potential effect on my analysis by using some counterfactual data. Suppose that we had succeeded in obtaining a 50/50 sample, and suppose that the proportion of caregiver language profiles within each group remained the same. In that case, the observed probability of language shift $(p(B_1, C_2)|B_1)$ would have been about 42%.[5]

Based on the known sample bias and the counterfactual calculation, the number 16% is almost certainly an under-estimate of the rate of shift. Perhaps the real figure is somewhere between 16% and 42%. The five-generation exponential decay curves for both a 16% and a 42% rate of shift are shown in Figure 5.2.

---

[5] The fake data used for this thought experiment can be found in Appendix D.

Figure 5.2: Exponential decay II (schematic)

Decline in new child speakers over five generations,
assuming a constant rate of shift
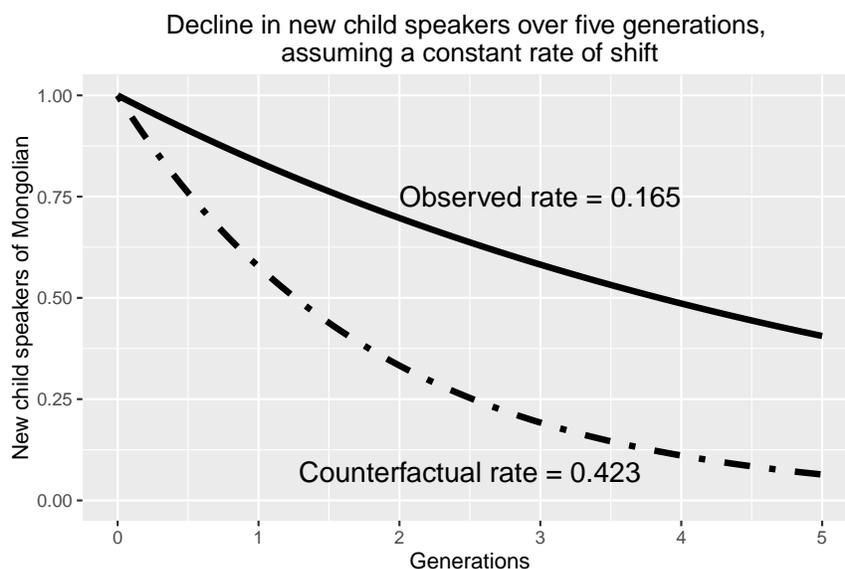
This caveat does not undermine the reliability of the results: on the contrary. Given that the result is in the expected direction (shift > 0) even though the known sample bias is in the opposite direction, then the present study's findings are likely to be reproducible and are not an artifact of the sample bias. Even though our sample was skewed towards Mongolian speakers, we still found evidence of language shift; a better sample would probably find stronger evidence of language shift.

5.2.3   Ups and downs in the rate of shift

Section 5.2.1 considered the mean rate of shift for the sample as a whole, regardless of speakers' birth years. Turning now to the question whether language shift is speeding up over time, the data suggest that it is not.

As shown in Section 4.6.3, when we examine how the rate of shift changes across age cohorts, no clear "shifting generation" emerges from the data. Based on the standard errors plotted in Figure 4.11, there appears to be no net rise or fall in the rate of language shift during the period of time for which we have data. This can be tested more formally with a logistic regression model

for $p(B_1, C_2|B_1) \sim birthyear$. The model likewise finds no statistically significant relationship between birthyear and the likelihood of language shift, given bilingual parents (see 4.8). In Section 3.3, I hypothesized that there would be an effect of birthyear on the likelihood of language shift, and that the rate of shift would be rising over time. This hypothesis was not supported.

It is possible that a study with a larger sample would find a relationship between birthyear and language shift. In the present study, the number of Chinese-only speakers among the interviewees was low, limiting the statistical power. Either a larger overall sample, or a sample with a larger number of Chinese-only speakers, could solve this problem.

On the other hand, supposing there really is no relationship between birthyear and shift outcomes, we have arrived at an interesting descriptive characterization of the process of language shift. This pattern shows that Inner Mongolia is a different kind of language shift situation from what is often described in the sociolinguistics, language endangerment and heritage languages literatures (see Chapter 2 and Section 5.4). If there is indeed a constant rate of shift in each generation, it might mean that the Mongolian speech community is facing an underlying, constant pressure to shift toward Chinese, which is having a cumulative effect (perhaps like the curve sketched in Figure 5.1). In that case, it is interesting that, as discussed in 5.1 above, the rate of shift should not have changed even after the spread of Chinese bilingualism was complete.

A third possibility is that there is indeed a relationship between birthyear and shift outcomes in this data, but it is a series of short-term fluctuations rather than a long-term, one-directional (monotonic) rise or fall. As discussed in 4.6.3, language shift appears to peak for the 1960s and 1980s cohorts, and to fall again for the 1970s and 1990s cohorts. However, the regression model using B-splines found no evidence that the fluctuations were statistically distinguishable from chance (see 4.8).

5.2.4 A possible relationship between fluctuations in shift and fluctuations in policy

The fluctuations are nonetheless worth investigating further because of claims in the social science literature that PRC language policy has fluctuated on a similar timeline, swinging between more multiculturalist and more assimilationist. Zhou (2001) posited three stages for China's

minority language policies in general: the "first pluralistic stage" from 1949-1957, the "Chinese-monopolistic stage" from 1958-1977, and the "second pluralistic stage" from 1978 to the present (i.e. 1978-2001). Tsung (2014) posited four stages for Mongolian language policies in the Inner Mongolia Autonomous Region: the "first golden period" from 1947-1965, the "destructive period" from 1966-1976, the "second golden period" from 1977-92, and the "Mongolian language decline period", from 1995-2012. Zhou's and Tsung's chronologies are based primarily on changes in educational policy. They are broadly in agreement that the 1950s and 1980s were the most supportive of minority-language education.

Tying Tsung's Inner Mongolia chronology back to our data may partly explain why people born in the 1960s and 1980s were more likely to undergo language shift than people born in the 1970s and 1990s. We have to consider not only the year of birth, but the years during which people were acquiring the essentials of their L1 (ages 0-4), solidifying their grammatical and vocabulary knowledge (ages 5-20), attending school (ages 7-13 at least) and perhaps acquiring an L2 (ages 4 and up). People born during the 1960s would have been most affected by the "destructive phase", the anti-minority backlash in the 1960s and 1970s. People born during the 1970s would have benefited from the "second golden period" starting in the late 1970s. However, according to Tsung's chronology, people born in the 1980s and 1990s (especially the 1990s) should have been affected by the "Mongolian language decline period" starting in 1995. This is the reverse of the pattern seen in our data, where the 1980s cohort had a relatively higher rate of shift and the 1990s cohort a relatively lower rate.

As noted in 4.3, the boundaries between age cohorts in the present study are arbitrary, chosen for convenience of analysis and not to reflect meaningful historical groupings. It is possible that the discrepancy between our results and Tsung's predictions would be resolved if different cut points were used (for example if we split up the early 1980s and the late 1980s). On the other hand, the discrepancy could have happened because educational policy (Tsung's focus) and intergenerational transmission (my focus) are not in fact linked. The present study's B-spline regression analysis, reported in 4.8, found that the apparent fluctuations in the data might well have been due to chance fluctuations in the sample, regardless of where the cut points between

cohorts fell. However, this is a null result, and it would be over-interpreting to say that the fluctuations were definitely due to chance and not to some outside force such as language policy. Thus, the present study has not ruled out the possibility that the fluctuations seen in the data are somehow related to the fluctuations in language policy noted by Zhou (2001) and Tsung (2014). Some of the results so far suggest that the question is worth pursuing. If such results are borne out in future studies, it will be further confirmation that small changes in language policy can have an immediate and real effect on minority language maintenance. Against the background of a constant background pressure toward language shift, even a short-term withdrawal of policy support for a minority language may immediately increase the rate of language shift for that generation of young people, with a ripple effect on their eventual children.

5.3   Urbanization and other geographic factors

The third component of the research question was to investigate the role of urbanization, which is perhaps the most important social change affecting language shift in Inner Mongolia. As stated in 3.2.3, there are three reasons to look at urbanization. One, it is a sweeping social change affecting many people in present-day China. The period 1980-2015 has seen China's population shift from a mainly-rural to a majority-urban population. Two, city life might in some ways preview the future of rural life. Third, urbanization in general tends to change the structure and composition of people's social networks, promoting more intensive language contact, convergence of dialects, formation of new dialects, and loss of minority languages.

With respect to urban-rural differences, most of the findings of the present study are consistent with the previous literature. There is indeed a strong relationship between urbanization and language shift, as expected from previous literature on Inner Mongolia and on multilingualism generally (see 3.2.3). Results are presented in Sections 4.4.1 and 4.7.1. Comparing rural, town and urban residents, we found that language shift was most common among urban-raised children and least common among rural-raised children. We also found that among adults resident in towns and cities, regardless of where they were born, Mongolian monolingualism was basically nonexistent; Chinese skills seem to be required for survival in large cities in Inner Mongolia.

However, the present study found that the difference between rural and urban areas is not absolute. Urban-raised bilinguals do exist. Furthermore, towns are intermediate between country and city, suggesting that the three categories in our data are merely approximations of an underlying continuum between more-rural and more-urban environments. Perhaps there is also a continuum between Mongolian-dominated and Chinese-dominated environments.

For a better understanding of what it is about country vs. city environments that affects language maintenance and shift, we can turn to the audio-recorded interviews in which speakers described their personal history of acquiring Mongolian and/or Chinese (reported in 4.2, among others). Bilingualism in rural environments occurs naturally, without special effort from caregivers. This is probably because rural areas of Inner Mongolia are more segregated ethnically and linguistically than urban areas. Rural children (if their parents are bilingual or Mongolian-monolingual) tend to be exposed to only or mainly Mongolian during early childhood. Even after 1980, most rural Mongolian-L1 children seem to be acquiring Chinese only in later childhood or adolescence, as an L2 (see 4.2.1). Of course, there are some rural areas where Mongolian is not spoken at all, even among ethnic Mongols, due to language shifts that took place long in the past. But overall, intergenerational transmission of Mongolian is well preserved in rural areas. The main risk is that rural bilingual children may end up attending Chinese-medium schools and losing enough of their Mongolian ability that, by the time they grow up, they no longer want to use Mongolian as their home language.

In towns and cities, on the other hand, maintaining Mongolian seems to require intentional reinforcement. The people we interviewed who grew up in towns and cities (see 4.2.2, 4.5.3, 4.6.4) tended to have been exposed to Chinese from their earliest childhood, even if their parents were Mongolian speakers. For these children, Chinese was either their only L1; a simultaneous L1 with Mongolian; or an early L2 acquired before age 8. Some had lost most of their Mongolian ability by the time they grew up. Others said they had never really acquired Mongolian. Of those who did maintain Mongolian, the key factors seemed to be speaking only or mainly Mongolian with their parents and other elders, and attending Mongolian-medium schools. Both of these reflect intentional choices on the part of the parents. To explore these questions further, a quantitative

analysis of these factors could be done using the current dataset (see 3.6).

The urban and rural populations of Mongols are interconnected. Almost all urban-dwelling Mongols come from families who relocated to cities sometime between 1949 and now. Extensive family and other social ties exist between urban dwellers and rural dwellers. Like elsewhere in China, more and more people are relocating from the country to the city (also true in the country of Mongolia, incidentally). Nearly every young person spends at least part of their life in a city as a student or a migrant worker, even if they do not settle there long-term. In the 1950s, the phenomenon of urban language shift only affected a small minority of Mongols, the intellectual and political elite. Today, its impact is broadening. In the present study, the vast majority of interviewees had spent their childhoods in rural areas, but at the time of the survey, as adults, they were about evenly distributed across urban, town and rural residences, showing that many of them had moved from country to town, town to city, or country to city during their lifetime (see 4.4.1). The urban tendency toward language shift will affect their children.

5.3.1 Are rural areas still a reservoir of Mongolian linguistic spirit? A comment on language shift vs. language change

With regard to urbanization, the present study also evaluated a thesis put forth by Uradyn Bulag (Bulag, 2003) whereby the steppe heartlands of Inner Mongolia, which have long served as a "reservoir" of Mongolian language and culture, are starting to be Sinified as well, thus draining the reservoir that had given Mongols a false sense of security about their cultural preservation prospects (see 3.2.3). So far, this is consistent with the present study's results, as seen in the preceding section: the Mongolian language is "draining away" as Mongols pour (or perhaps trickle) into cities.

However, Bulag did not include all rural Mongols in his conception of the reservoir, and here our results diverge from his prediction. In Bulag's formulation, the reservoir consists of rural *pastoral* Mongols, that is, Mongols who live on the steppe, herd livestock, and generally follow a classic and traditional Mongolian lifestyle. Agricultural (grain-farming) Mongols such as those in Eastern Inner Mongolia are considered to have lost Mongolian. Just like urban Mongols, they

need to draw on the reservoir of Mongol spirit that the pastoral Mongols provide (see Bulag (2003) and Section 3.2.3 of this dissertation).

The present study is not quite a full test of the rural reservoir hypothesis, although I did state a version of the hypothesis in 3.3. However, it does constitute a a positive demonstration of counter-evidence to Bulag's proposal that rural *pastoral* areas are the main reservoir for language maintenance. The lion's share of our data come from rural *agricultural* areas in eastern Inner Mongolia. Bulag preemptively discounted agricultural areas as part of the reservoir because of their Chinese-influenced Mongolian dialect. On the contrary, the present study finds that Mongolian is alive and well in agricultural Eastern Inner Mongolia, being passed on through multiple generations despite widespread bilingualism. Relevant results are presented in 4.4.2 and 4.7.2. Even Mongolian-monolingualism persists in the agricultural regions. All of the young Mongolian monolinguals in the interviewed sample were actually residents of rural Tongliao prefecture (see 4.3).

However, Bulag's statement was not made in ignorance of the situation in Tongliao. In fact the Horchin Mongols of Tongliao are explicitly mentioned in the article. From Bulag's perspective, Horchin Mongolian is not linguistically pure. He describes it as "pidgin Mongolian" (Bulag, 2003, 756) — technically inaccurate, but expressing the fact that Horchin is relatively more Chinese-influenced than pastoral Mongol dialects such as Chahar (see 1.4.2).

This is a legitimate point. However, language shift (people changing which code they use) is not the same as language change (the properties of the code itself changing). This goes back to the question of what is a language. Linguistic codes are systems; they have to maintain a certain consistency across a speech community. Horchin Mongolian is far from being mutually intelligible with Chinese. Even the code-switching speech style referred to as *hùnhéhuà* 混合话 "mixed speech" (Hasierdun et al., 2012) is not intelligible to Chinese speakers, though fragments of it might be. Native Horchin speakers who wish to communicate with Chinese-monolinguals must use Chinese rather than Horchin. Not to belabor a point, but *they are bilingual* and, whatever the exact nature of the Horchin dialect, it remains a distinct code with its own speech community.

Bradley & Bradley (2010; 2017) have put forth the proposal that tolerance of multilingualism,

rather than an ideology of linguistic purity, is a survival trait for linguistic minority communities. Perhaps there is no such thing as "pure Mongolian". Bulag himself wrote an entire book debunking the ideology of ethnic purity held by the Halha Mongols of Mongolia (Bulag, 1998). Even so, there is a meaningful distinction between dialects of Mongolian that have borrowed more words and converged more (phonologically and grammatically) with Chinese, and dialects of Mongolian that show relatively less influence from Chinese.[6] There is also the issue, well-known from psycholinguistic research on heritage speakers (see 2.3), that bilingual speakers of minority languages may have difficulty acquiring the full lexicon and the more subtle grammatical features of their native language, if most of their linguistic input comes from the majority language. I do not wish to erase these distinctions. But I do wish to propose that, when we are talking about Mongolian language maintenance, Horchin Mongolian should count as Mongolian.

5.3.2   Limitations of the present study with respect to urban-rural and agricultural-pastoral differences

With respect to regional differences, the present study included a broad sample of data from counties around Inner Mongolia, but the distribution is not very even. The rural sample is concentrated in Tongliao Prefecture and the urban sample is concentrated in Hohhot Prefecture (see 4.1). A priority for future studies is to investigate interactions between the rural-urban variable, the birthyear variable, and regional variables, as well as to expand the sample.

With respect to urban-rural differences, the present study's sample is skewed towards the rural. There is relatively little data from Mongols who were born and raised in large cities. Even so, the urban-rural differences in language shift are quite obvious and I expect that a larger sample would yield a similar result. A larger sample, moreover, would allow us to investigate potential interactions between urbanization and other factors, which is not really possible with the current dataset. A priority for future studies would be to expand the urban sample. It might be necessary to focus on younger people, since the number of Mongols in cities has only recently

---

[6] The influence of Russian, English etc. on Halha Mongolian is also a topic worth investigating.

grown.

The present study has compared agricultural vs. pastoral regions impressionistically rather than quantitatively. With some secondary research, it would be possible to systematically classify prefectures and also smaller units (counties and townships) according to whether their primary economic activity was agricultural or pastoral. There is also some relevant data collected during the present study that has not been analyzed yet, for example, interviewees' occupations, which would reveal which individuals were herders, farmers etc. In this way, a quantitative test of Bulag's rural reservoir hypothesis might be possible even with the existing sample, although ideally it would be tested on a larger sample with a wider regional distribution.

5.4   *Language, identity and sampling: The speech community during language shift*

In this document, I have frequently brought up the problem of the sample being biased toward Mongolian speakers (bilingual or not), for instance in 3.10.2 and 4.1. This section focuses on the larger methodological and epistemological problem of how to delimit the speech community when some of the people we are interested in are no longer speakers.[7] Any large-scale study of language shift faces a problem in defining group boundaries. The population of interest consists of descendants of a historical speech community; this necessarily includes individuals who no longer speak the language and may not identify with the group in question. Smaller-scale studies can avoid this problem by focusing on a well-defined speech community and a short time period. For example, the Oberwart study of shift from Hungarian to German (Gal, 1979) concerned a village, a speech community based on face-to-face interaction and common identity (see 2.5.1). The Hopkins study of shift from Garifuna to Belizean Creole and English (Ravindranath, 2009) was also based in a village. Both authors mention that their research site was chosen because it exemplified a certain stage of language shift, in contrast to other nearby villages where shift was more and less advanced. The present study and other studies looking at a larger temporal and geographic scale have to take into account all the stages.

---

[7] The discussion here is based on my talk at a 2015 workshop on language shift in the Sinophone world (Puthuval, 2015).

The sampling problem in the current study, like so many research problems, is an interesting finding in itself. First of all, it confirms that language ability is important to Inner Mongolians' perception of their own and others' ethnic identity, regardless of ID documents (as foreshadowed in 1.5). Some authors have argued that even though the *minzu* categories in the PRC were imposed from above, they have become more relevant with time as the subjects of the labels have come to identify with the labeled groups (Gladney, 1990; Harrell & Li, 2003).[8] Yet, ethnic authenticity is still a contentious matter, as probably no scholar of ethnicity in China would deny. While accepting the label of *mengguzu* (*měnggǔzú* 蒙古族), people still perceive distinctions between good Mongols and bad Mongols, real Mongols and fake Mongols, pure Mongols and Hanified Mongols. Second, the sampling problem reveals that there is a social divide between Mongols who do and do not speak Mongolian, manifesting as a lack of social network ties between individuals from the two groups. This has been relatively little discussed in the literature, at least in the descriptions of voluntary social associations among ethnic Mongols.

As a practical solution for future studies in Inner Mongolia, I suggest a two-pronged recruiting strategy that contacts Mongolian speakers and non-Mongolian-speakers via separate channels, addressing these two distinct social identities. I expect that non-Mongolian-speakers would be more willing to participate if approached by a Han friend or another non-Mongolian-speaking friend. Because of the implied moral superiority of a Mongol who speaks Mongolian, some people may have been turned off on the project. If possible, research should not be presented solely as "Mongolian language research". As a more general solution, I think the two-pronged strategy is likely to be helpful in other places besides Inner Mongolia, although the best way of approaching speakers vs. non-speakers will differ.

There are some fundamental epistemological problems here that do not just concern Inner Mongolia. Quantifying language shift depends on identifying those people who might be expected to speak the language but, in fact, do not speak it. One wonders if this is really possible. The usual approach is to define these "potential speakers" in terms of ethnic group or community

---

[8] Gladney calls it "dialectical re-creation and re-interpretation of the past". Harrell & Li call it "revisionist history". Mullaney (2011) calls it "the consent of the categorized".

membership.[9] For example, Factor 3 on UNESCO's 9-factor language endangerment assessment refers to the proportion of the community that speaks the language (see 2.2.3). At first "the community" seems like a simple concept. But linguistic repertoires and community membership mutually influence each other. People who have undergone language shift may be already drifting out of the community formed by those who still speak the language. In the present study, this manifested as non-Mongolian-speakers being less willing to participate in the study.

Even though there were problems at the data collection level, at the analysis level the present study's methodology goes a long way toward solving the problem of quantifying language shift. The intergenerational transmission model of language shift (3.1, 4.5) defines "potential speakers" in terms of their circumstances of language acquisition. People who could have received input in a language from their early-childhood caregivers are considered potential speakers. Compared to using ethnic group or community membership to identify potential speakers, the intergenerational transmission approach is more systematic and therefore more reproducible.

5.5   Contributions to language endangerment research methodology

The present study has tested a new method of collecting and analyzing data about language vitality and endangerment. The motivation for developing this method is that, for a better understanding of the processes of language maintenance and shift, the gradient (scalar) nature of language shift needs to be considered more carefully.

Existing language endangerment assessments tend to avoid quantifying the proportion of children who are acquiring the language. Instead, they distinguish between languages that are being transmitted to all children, languages being transmitted to some children, and languages not being transmitted to any children (see 2.2). This kind of simple yardstick has its uses. Data about speaker populations and how they change over time is actually very difficult to obtain. For example, the China population census records only ethnicity, not language. Even in countries where the census tracks language, the data may be not cover all languages; questions may use

---

[9] Another approach is to look for the descendants of known speakers; this works well for languages with only a handful of speakers left.

wording like "mother tongue" that relates more to ethnic identity than language; and questions may change from census to census, rendering longitudinal analysis impossible (Holmes, 1997). In many cases, the simple "transmitted or not" distinction may be an appropriate response to practical difficulties. However, that does not make it an adequate theoretical model for distinguishing maintenance from shift.

The present study's contribution to a better integration of theory and methodology is the intergenerational transmission model of language shift. I introduced the model in Chapter Three (3.1) and applied it to Inner Mongolian data in Chapter Four (4.5, 4.6, 4.7). The model formalizes Fishman's notion of language shift (see 2.2) in such a way that it can be used as the outcome variable in any study investigating the causes of language shift and the social factors influencing language shift and maintenance. In the process, the present study introduced and tested a field research strategy that allows for a cheap, small-scale survey to get useful information about language shift, perhaps more useful information than an official census. We developed a questionnaire to assess shift and maintenance in terms of ultimate attainment (i.e. the proficiency of adult speakers), intergenerational dyads, and retrospective questions about childhood language environments (see 3.6).

In the course of the present study the research team found some ways to make self-report data more valid: first by collecting the data with a certain amount of caution, and next by analyzing it with a certain amount of skepticism (see 3.9). Our validity strategies are easy to apply, and are well adapted for communities where some people still speak the relevant language(s) fluently. Thus, for languages with similar population sizes and similar sociopolitical status to Mongolian in China, the same measures can be fruitfully applied to improve the validity of self-report data. I expect they can be applied to smaller language varieties too, for example, many of the Mongolian dialects.

The most difficult and important requirement for valid self-report data (under this methodology) is that questionnaires be administered in person by fieldworkers who speak the relevant languages fluently. For medium-sized languages such as Mongolian, which still have a population of fluent speakers, this requirement is only a little more difficult than distributing written

surveys, and I suggest it is worth the trouble. It represents an intermediate level of validity between unsupervised written questionnaires and systematic behavioral tests of language proficiency. It has the advantage of being almost as fast to do as unsupervised written questionnaires, allowing for much larger sample sizes compared to behavioral tests (i.e. experimental methods) or ethnographic methods.

The fluent-interviewer requirement may not be feasible for very small, isolated languages or for languages where semi-speakers outnumber fluent speakers. In such cases, methods such as that of the Cajun French Survey (Dubois & Melançon, 1997) or the methods recommended by Decker & Grummitt (2012) may be more effective. Dubois & Melançon (1997) designed a questionnaire where speakers were asked about specific linguistic tasks such as "counting to ten" and "having a conversation about a controversial political issue". This is good for languages with mostly semi-speakers. I considered using it for the present study, but was warned that fluent Mongolian speakers would be offended at most of the questions, making it hard to apply the questionnaire systematically. Decker & Grummitt (2012) recommend triangulating between self-report, participant observation, and simple tests of comprehension and production. This is good for small, isolated languages where fieldworkers do not necessarily have a lot of information about the language before beginning the survey. It is also good for close-up studies of a particular community, and is very similar to the methods of the Oberwart and Hopkins studies (Gal, 1979; Ravindranath, 2009).

Some aspects of the current study are technologically complex. Fortunately the questionnaire itself is easy to use and works with paper forms. But the data analysis requires both the R programming language and the support of a custom-built relational database. Future research could focus on simplifying the data analysis and storage methodology to make them accessible to a wider range of researchers. For example, someone could build a more user-friendly frontend to the database. It would also be possible to split up the field data collection and the analysis across specialized research teams. I believe it is fundamentally not a complicated idea, and there can be a simpler implementation.

5.6 Final remarks

This dissertation has examined the process of language contact between Mongolian and Chinese in Inner Mongolia, China in the twentieth and early twenty-first centuries. It has also introduced a new method for collecting data about language endangerment, providing a type of information that is crucial to existing language status assessment frameworks, but is often not available from official sources.

The present study finds that, as of the late twentieth century, bilingualism with Chinese has become almost universal among Mongolian speakers in China. If one speaks Mongolian at all, one is bilingual. Some ethnic Mongols have shifted to only speaking Chinese. Nonetheless, the spread of bilingualism has not been immediately followed by loss of Mongolian in the next generation. Rather, bilingualism in many cases persists for multiple generations. Even so, I hesitate to say that stable bilingualism has been firmly established. The earliest that the Mongol community could be described as fully bilingual is perhaps 1980, that is, any Mongolian speaker born after that date is almost certain to be bilingual. Furthermore, although in the present study's sample of speakers, maintenance of Mongolian is far more common than shift to Chinese, the real rate of shift to Chinese in the population may be higher, if our sample was biased toward Mongolian-maintaining types of people.

It does not seem like Mongolian in Inner Mongolia is headed for a mass language shift in the immediate future. If present trends continue, stable bilingualism could still take hold, though probably only among a minority of the ethnic Mongol population. Regardless, maintaining Mongolian in the future will not happen without active effort and the continued (or improved) support of language policy and educational policy.

Mongolian in China, while not in imminent danger of disappearing, can serve as a model for understanding language endangerment precisely because it is in a relatively early stage of endangerment. Often, by the time we notice that a language is endangered, this early stage has already passed and can no longer be observed. Research on threatened, not-yet-endangered languages such as Mongolian in China fills a gap in our knowledge of the processes by which

languages rise, fall and disappear.

BIBLIOGRAPHY

Abrams, J. R., Barker, V., & Giles, H. (2009). An examination of the validity of the Subjective Vitality Questionnaire. *Journal of Multilingual and Multicultural Development*, *30*(1), 59–72.

Arends, J. (2008). A demographic perspective on creole formation. In S. Kouwenberg, & J. V. Sigler (Eds.) *The Handbook of Pidgin and Creole Studies*, Blackwell handbooks in linguistics, (pp. 309–331). Oxford: Blackwell.

Atwood, C. (1994). National questions and national answers in the Chinese Revolution; Or, how do you say Minzu in Mongolian. *Indiana East Asian Working Paper Series on Language and Politics in Modern China*, *5*, 37–73.

Bayancogtu (2002). *Xorcin Aman Ayalɣun-u Sudulul [A Study of the Horchin Dialect]*. Inner Mongolia University Press.

Bhatia, T. K., & Ritchie, W. C. (Eds.) (2013). *The Handbook of Bilingualism and Multilingualism*. Blackwell handbooks in linguistics. Chichester; Malden: Wiley-Blackwell, 2nd ed.

Borchigud, W. (1994). *When Is a Mongol? The Process of Learning in Inner Mongolia*. Doctoral dissertation, University of Washington, Seattle.

Borchigud, W. (1995). The impact of urban ethnic education on modern Mongolian ethnicity, 1947-1966. In S. Harrell (Ed.) *Cultural Encounters on China's Ethnic Frontiers*, (pp. 248–277). University of Washington Press.

Borchigud, W. (1996). Transgressing Ethnic and National Boundaries: Contemporary 'Inner Mongolian' Identities in China. In M. J. Brown (Ed.) *Negotiating Ethnicities in China and Taiwan*.

Bourhis, R. Y., Giles, H., & Rosenthal, D. (1981). Notes on the construction of a 'subjective vitality questionnaire' for ethnolinguistic groups. *Journal of Multilingual and Multicultural Development*, *2*(2), 145–155.

Bradley, D. (2001). Language policy for the Yi. In S. Harrell (Ed.) *Perspectives on the Yi of Southwest China*, vol. 26, (pp. 195–213). University of California Press.

Bradley, D. (2007). Report on the 2nd workshop on heritage language maintenance for endangered languages in Yunnan, China. *Linguistics of the Tibeto-Burman area*, *30*(1).

Bradley, D. (2010). Language Endangerment and Resilience Linguistics: Case Studies of Gong and Lisu. *Anthropological Linguistics*, *52*(2), 123–140.

Bradley, D., & Bradley, M. (2017). *Language Endangerment*. Cambridge University Press.

Brosig, B. (2014). *Aspect, Evidentiality and Tense in Mongolian: From Middle Mongol to Khalkha and Khorchin*. Doctoral dissertation, Stockholm University.

Bulag, U. (1998). *Nationalism and Hybridity in Mongolia*. Oxford University Press, USA.

Bulag, U. (2002). *The Mongols at China's Edge: History and the Politics of National Unity*. Lanham, Maryland: Rowman & Littlefield.

Bulag, U. (2003). Mongolian Ethnicity and Linguistic Anxiety in China. *American Anthropologist*, *105*(4), 753–763.

Campbell, L. (2004). *Historical Linguistics: An Introduction*. Cambridge: MIT Press, 2nd ed.

Caodaobateer (2007). *Kālāqìn měnggǔyǔ yánjiū* 喀喇沁蒙古语研究 *[A study of Harachin Mongolian]*. Beijing: Minzu Press.

Chambers, J. (2003). *Sociolinguistic Theory: Linguistic Variation and Its Social Significance*. Oxford: Blackwell, 2nd ed.

Chan, K. W. (2009). The Chinese Hukou System at 50. *Eurasian Geography and Economics*, *50*(2), 197–221.

Chen, N. (1988). Wutunhua Yinxi. 五屯话音系 [The Sound System of Wutun]. *Minzu Yuwen*, *3*, 1–10.

Christian, D. (1998). *A History of Russia, Central Asia and Mongolia.*, vol. Vol. 1, Inner Eurasia from prehistory to the Mongol empire of *Blackwell history of the world*. Oxford; Malden: Blackwell.

Chu, Y. (2015). The power of knowledge: A critical analysis of the depiction of ethnic minorities in China's elementary textbooks. *Race Ethnicity and Education*.

Cooper, R. L. (Ed.) (1982). *Language Spread : Studies in Diffusion and Social Change*. Indiana University Press; Center for Applied Linguistics.

Crissman, L. (2002). Digital Language Atlas of China - ACASIAN Dataverse - Based on maps produced by Theo Bauman for the Language Atlas of China (1987). `hdl:1902.1/18939`.

Decker, K., & Grummitt, J. (2012). *Understanding Language Choices: A Guide to Sociolinguistic Assessment*. Dallas, Tex: SIL International. OCLC: ocn805654585.

Dede, K. (1999). *Language Contact, Variation and Change: The Locative in Xining, Qinghai*. Doctoral dissertation, University of Washington, Seattle.

Dede, K. (2007). The deep end of the feature pool: Syntactic hybridization in Chinese dialects. *Journal of Chinese Linguistics*, *35*(1), 58.

Dorian, N. (1982). Defining the speech community to include its working margins. In S. Romaine (Ed.) *Sociolinguistic Variation in Speech Communities*, (pp. 25–33). London: E. Arnold.

Dubois, S., & Melançon, M. (1997). Cajun is Dead—Long Live Cajun: Shifting from a Linguistic to a Cultural Community. *Journal of Sociolinguistics*, *1*(1), 63–93.

Dwyer, A. (1992). Altaic elements in the Linxia dialect. *Journal of Chinese Linguistics*, *20*(1), 160–178.

Dwyer, A. (1998a). Language Contact in Qumul. *Journal of Central Asian Studies*, *3*(1), 30–41.

Dwyer, A. (1998b). The texture of tongues: Languages and power in China. In W. Safran (Ed.) *Nationalism and Ethnoregional Identities in China*, (pp. 68–85). London: Frank Cass.

Edwards, J. (1992). Sociopolitical aspects of language maintenance and loss: Towards a typology of minority language situations. In W. Fase, K. Jaspaert, & S. Kroon (Eds.) *Maintenance and Loss of Minority Languages*, (pp. 37–54). Amsterdam: Benjamins.

Elliott, M. (2000). The Limits of Tartary: Manchuria in Imperial and National Geographies. *Journal of Asian Studies*, *59*(3), 603–646.

Erdenituyaga (2013). *Xota-yin mongɣolcud-un xelen-u obor-un tuxai sudulɣa [A sociolinguistic research on the language attitude of Mongolian residents in the urban area].* Doctoral dissertation, Inner Mongolia University, Hohhot.

Fishman, J. A. (1964). Language maintenance and language shift as a field of inquiry. A definition of the field and suggestions for its further development. *Linguistics*, *2*(9), 32–70.

Fishman, J. A. (1991). *Reversing Language Shift: Theoretical and Empirical Foundations of Assistance to Threatened Languages.* No. 76 in Multilingual matters. Clevedon; Philadelphia: Multilingual Matters.

Fishman, J. A. (Ed.) (2001). *Can Threatened Languages Be Saved?: Reversing Language Shift, Revisited: A 21st Century Perspective.* No. 116 in Multilingual matters. Clevedon ; Buffalo: Multilingual Matters.

Gal, S. (1978). Peasant men can't get wives: Language change and sex roles in a bilingual community. *Language in society*, *7*(01), 1–16.

Gal, S. (1979). *Language Shift: Social Determinants of Linguistic Change in Bilingual Austria.* Language, thought, and culture. New York: Academic Press.

Giles, H., Bourhis, R., & Taylor, D. (1977). Towards a theory of language in ethnic group relations. In H. Giles (Ed.) *Language, Ethnicity and Intergroup Relations*, no. 13 in European Monographs in Social Psychology, (pp. 307–348). London: Academic Press.

Gladney, D. (1990). The ethnogenesis of the Uighur. *Central Asian Survey*, *9*(1), 1–28.

Goodman, L. A. (1961). Snowball Sampling. *The Annals of Mathematical Statistics*, *32*(1), 148–170.

Grenoble, L., & Whaley, L. (1998). Toward a typology of language endangerment. In L. Grenoble, & L. Whaley (Eds.) *Endangered Languages: Current Issues and Future Prospects*, (pp. 22–54). Cambridge, UK: Cambridge University Press.

Grosjean, F. (1998). Studying bilinguals: Methodological and conceptual issues. *Bilingualism: Language and Cognition*, *1*(02), 131–149.

Hale, K., Krauss, M., Watahomigie, L. J., Yamamoto, A. Y., Craig, C., Jeanne, L. M., & England, N. C. (1992). Endangered languages. *Language*, *68*(1), 1–42.

Hammarström, H. (2010). A full-scale test of the language farming dispersal hypothesis. *Diachronica*, *27*(2), 197–213.

Han, E. (2011). The dog that hasn't barked: Assimilation and resistance in Inner Mongolia, China. *Asian Ethnicity*, *12*(1), 55–75.

Harrell, S. (1993). Linguistics and hegemony in China. *International Journal of the Sociology of Language*, *1993*(103), 97–114.

Harrell, S. (1995). Introduction: Civilizing projects and the reaction to them. In S. Harrell (Ed.) *Cultural Encounters on China's Ethnic Frontiers*, (pp. 3–36). University of Washington Press.

Harrell, S. (2001). *Ways of Being Ethnic in Southwest China*. University of Washington Press.

Harrell, S., & Li, Y. (2003). The History of the History of the Yi, Part II. *Modern China*, *29*(3), 362–396.

Hashimoto, M. (1986). The Altaicization of Northern Chinese. In J. McCoy, & T. Light (Eds.) *Contributions to Sino-Tibetan Studies*, no. 5 in Cornell Linguistic Contributions, (pp. 76–97). Leiden: Brill.

Hasierdun, Bo, S., Ma, Z., Gao, L., Bao, S., & Tie, M. (2012). *Kēěrqín Zuǒyì Zhōngqí Měnggǔzú Yǔyán Shǐyòng Xiànzhuàng Jí Qí Yānbiàn* 科尔沁左翼中旗蒙古族语言使用现状及其演变 *[The Status Quo and Evolution of Language Use of Mongolian in Mid-Banner Left Wing of Horqin]*. 新时期中国少数民族语言使用情况研究丛书. Beijing: Commercial Press.

Holmes, J. (1997). Keeping Tabs on Language Shift in New Zealand: Some Methodological Considerations. *Journal of Multilingual and Multicultural Development*, *18*(1), 17–39.

Huc, E.-R. (1850). *Souvenirs d'un Voyage Dans La Tartarie, Le Thibet et La Chine Pendant Les Années 1844, 1845 et 1846 [Recollections of a Journey through Tartary, Tibet and China during the Years 1844, 1845 and 1846]*. Paris: Librairie d'Adrien le Clerc.

Humphrey, C., & Sneath, D. (1999). *The End of Nomadism? Society, State and the Environment in Inner Asia*. Durham: Duke University Press.

IMAR Local Annals Office (Ed.) (2013). *Nèiměnggǔ zìzhìqū zhì fāngyánzhì* 内蒙古自治区志方言志 *[Annals of the Inner Mongolia Autonomous Region: Dialects]*, vol. Měnggǔyǔ juàn 蒙古语卷 [Mongolian]. Fangzhi Press.

Janhunen, J., Peltomaa, M., Sandman, E., & Xiawu, D. (2008). *Wutun*, vol. 466 of *Languages of the World/Materials*. Muenchen: LINCOM Europa.

Janhunen, J. A. (2012). *Mongolian*. Amsterdam; Philadelphia: John Benjamins.

Jankowiak, W. (1993). *Sex, Death, and Hierarchy in a Chinese City: An Anthropological Account*. New York, NY: Columbia University Press.

Jankowiak, W. (2013). Urban Mongols. *Chinese Sociological Review*, *45*(3), 53–73.

Jiu Yue (2007). Qiǎntán Nèi Měnggǔ dìqū měnggǔzú rénkǒu chéngshìhuà xiànzhuàng 浅谈内蒙古地区蒙古族人口城市化现状 [On city modernization of Mongolian population in Inner Mongolia]. *Journal of Inner Mongolia University for Nationalities*, *33*(2), 1–4.

Khan, A. (1996). Who are the Mongols? State, ethnicity and the politics of representation in China. In M. J. Brown (Ed.) *Negotiating Ethnicities in China and Taiwan*, (pp. 125–159). Berkeley: University of California Institute of East Asian Studies.

King, J. (2001). Te Kōhanga Reo: Māori Language Revitalization. In L. Hinton, & K. Hale (Eds.) *The Green Book of Language Revitalization in Practice*, (pp. 119–128). San Diego: Academic Press.

Krauss, M. (1992). The world's languages in crisis. *Language*, *68*(1), 4–10.

Lattimore, O. (1962). *Inner Asian Frontiers of China*. Boston: Beacon Press, 3rd ed.

Lewis, M. P. (Ed.) (2009). *Ethnologue: Languages of the World, Sixteenth Edition*. Dallas, Texas: SIL International.

Lewis, M. P., & Simons, G. F. (2010). Assessing endangerment: Expanding Fishman's GIDS. *Revue roumaine de linguistique*, *2*, 103–119.

Lewis, M. P., Simons, G. F., & Fennig, C. D. (Eds.) (2013). *Ethnologue: Languages of the World, Seventeenth Edition*. Dallas, Texas: SIL International.

Lewis, M. P., Simons, G. F., & Fennig, C. D. (Eds.) (2015). *Ethnologue: Languages of the World, Eighteenth Edition*. Dallas, Texas: SIL International.

Lewis, M. P., Simons, G. F., & Fennig, C. D. (Eds.) (2016). *Ethnologue: Languages of the World, Nineteenth Edition*. Dallas, Texas: SIL International.

Li, C. N. (1984). From Verb-Medial Analytic Language to Verb-Final Synthetic Language: A Case of Typlogical Change. In *Proceedings of the Tenth Annual Meeting of the Berkeley Linguistics Society*, (pp. 307–323). Berkeley.

Li, W. (1995). Variations in patterns of language choice and code-switching by three groups of Chinese/English speakers in Newcastle upon Tyne. *Multilingua–Journal of Cross-Cultural and Interlanguage Communication*, *14*(3), 297–322.

Li, W. (2013). Conceptual and methodological issues in bilingualism and multilingualism research. In T. K. Bhatia, & W. C. Ritchie (Eds.) *The Handbook of Bilingualism and Multilingualism*, Blackwell handbooks in linguistics, (pp. 26–51). Chichester; Malden: Wiley-Blackwell, 2nd ed.

Lim, L., & Ansaldo, U. (2016). *Languages in Contact*. Key topics in sociolinguistics. Cambridge University Press.

Lim, L., Karregat, A., & Wu, Y. (2009). Once isolated, now multilingual? Language practices, attitudes and identity in Volendam and Inner Mongolia compared. School of Oriental and African Studies, University of London.

Limusishiden, & Dede, K. (2012). The Mongghul experience: Consequences of language policy shortcomings. *International Journal of the Sociology of Language*, *2012*(215).

Lu, Y., & Dorji (1995). Nèi měnggǔ xībù dìqū hànyǔ fāngyánlǐ de měnggǔyǔ jiècí 内蒙古西部地区汉语方言里的蒙语借词 [Mongolian loanwords in Chinese dialects of Western Inner Mongolia]. *Inner Mongolia University Journal*, (4), 55–63.

Luo, P. (2004). Hezhouhua yufa — yuyan jiechu de jieguo. 河州话语法——语言接触的结果 [Hezhouhua grammar: The results of language contact]. *Northwest Normal University Press*, *41*(4), 30–32.

Marian, V., Blumenfeld, H. K., & Kaushanskaya, M. (2007). The Language Experience and Proficiency Questionnaire (LEAP-Q): Assessing language profiles in bilinguals and multilinguals. *Journal of Speech, Language, and Hearing Research*, *50*(4), 940–967.

Mawkanuli, T. (2001). The Jungar Tuvas: Language and national identity in the PRC. *Central Asian Survey*, *20*(4), 497–517.

Mawkanuli, T. (2015). Language shift and the Ethnolinguistic Vitality of the Jungar Tuvan Community. In *Language Shift in the Sinophone World*. Seattle.

McCarty, T., Watahomigie, L., & Yamamoto, A. (1999). Introduction: Reversing Language Shift in Indigenous America—Collaborations and Views from the Field. *Practicing Anthropology*, *21*(2), 2–4.

Meisel, J. M. (2008). Child second language acquisition or successive first language acquisition? In B. Haznedar, & E. Gavruseva (Eds.) *Current Trends in Child Second Language Acquisition: A Generative Perspective*, no. v. 46 in Language acquisition and language disorders, (pp. 55–80). Amsterdam ; Philadelphia: John Benjamins.

Miller, T. (2012). *China's Urban Billion: The Story behind the Biggest Migration in Human History*. London; New York: Zed Books.

Milroy, L. (2001). Bridging the micro-macro gap: Social change, social networks and bilingual repertoires. In J. Klatter-Folmer, & P. van Avermaet (Eds.) *Theories on Maintenance and Loss of Minority Languages: Towards a More Integrated Explanatory Framework*, (pp. 39–64). Muenster: Waxmann.

Milroy, L., & Li, W. (1995). A social network approach to code-switching: The example of a bilingual community in Britain. In L. Milroy, & P. Muysken (Eds.) *One Speaker, Two Languages: Cross-Disciplinary Perspectives on Code-Switching*. Cambridge University Press.

Mongolian Language Research Center (1999). *Mongγol Xitad Toli, Nemen Jasaγsan Debter* 蒙汉词典增订本 *[Mongolian-Chinese Dictionary, Revised and Expanded Edition]*. Hohhot: Inner Mongolia University Press, 2nd ed.

Montrul, S. (2008). *Incomplete Acquisition in Bilingualism: Re-Examining the Age Factor*. No. 39 in Studies in bilingualism. Amsterdam ; Philadelphia: John Benjamins.

Montrul, S. (2013). Bilingualism and the heritage language speaker. In T. K. Bhatia, & W. C. Ritchie (Eds.) *The Handbook of Bilingualism and Multilingualism*, Blackwell handbooks in linguistics, (pp. 168–189). Chichester, West Sussex, UK ; Malden, MA: Wiley-Blackwell, 2nd ed.

Montrul, S. (2016). *The Acquisition of Heritage Languages*. Cambridge ; New York: Cambridge University Press.

Mullaney, T. S. (2011). *Coming to Terms with the Nation : Ethnic Classification in Modern China*. Berkeley: University of California Press.

Nagy, N. (2016). Studying more and less endangered heritage varieties. In *LSA/CELP Symposium on 'Documenting Variation in Endangered Languages'*. Presented at Linguistic Society of America Annual Meeting, Washington, DC.

National Bureau of Statistics (2010). *Zhōngguó 2010 Nián Rénkǒu Pǔchá Zīliào.* 中国 *2010* 年人口普查资料 *[China Population Census 2010 Results]*. http://www.stats.gov.cn/.

Nettle, D., & Romaine, S. (2000). *Vanishing Voices : The Extinction of the World's Languages*. New York: Oxford University Press.

Nichols, J. (1992). *Linguistic Diversity in Space and Time*. Chicago: University of Chicago Press.

Nichols, J. (1997). Modeling ancient population structures and movement in linguistics. *Annual review of anthropology*, (pp. 359–384).

Nichols, J. (1999). The Eurasian spread zone and the Indo-European dispersal. In R. Blench, & M. Spriggs (Eds.) *Archaeology and Language II: Archaeological Data and Linguistic Hypotheses*, vol. 2, (pp. 220–266). London: Routledge.

Nichols, J. (2011). Forerunners to globalization: The Eurasian Steppe and its periphery. *Language Contact in Times of Globalization*, (p. 177).

Puthuval, S. (2013). *Loanwords, Prominence and the Basis for Mongolian Vowel Harmony*. Master's thesis, University of Washington, Seattle.

Puthuval, S. (2015). Language, identity and the moral high ground in Inner Mongolia: Practical problems for language shift research. Presented at the Symposium on Language Shift in the Sinophone World, Seattle.

Puthuval, S. (2017a). A language vitality assessment for Mongolian in Inner Mongolia, China. In *Proceedings of the 2nd Conference on Central Asian Languages and Linguistics*. Bloomington: Indiana University.

Puthuval, S. (2017b). Stages of language shift in twentieth-century Inner Mongolia, China. Presented at the Linguistic Society of America Annual Meeting, Austin.

Puthuval, S., & Wang, X. (2016). Hohhot, Language of. In R. Sybesma, W. Behr, Y. Gu, Z. Handel, & C. J. Huang (Eds.) *Encyclopedia of Chinese Language and Linguistics*. Leiden: Brill.

Ravindranath, M. (2009). *Language Shift and the Speech Community: Sociolinguistic Change in a Garifuna Community in Belize*. Phd dissertation, University of Pennsylvania.

RStudio Team (2015). *RStudio: Integrated Development Environment for R, Running R Version 3.2.3 (2015-12-10)*. Boston, MA: RStudio, Inc.

Sandman, E., & Simon, C. (2016). Tibetan as a "model language" in the Amdo Sprachbund: Evidence from Salar and Wutun. *Journal of South Asian Languages and Linguistics*, *3*(1), 85–122.

Serratrice, L. (2013). The bilingual child. In T. K. Bhatia, & W. C. Ritchie (Eds.) *The Handbook of Bilingualism and Multilingualism*, Blackwell handbooks in linguistics. Chichester; Malden: Wiley-Blackwell, 2nd ed.

Slater, K. W. (2005). *A Grammar of Mangghuer: A Mongolic Language of China's Qinghai-Gansu Sprachbund*. Routledge.

Song, N., Zhang, Z., Wang, M., & Mao, Z. (1987). *Zhōngguó Rénkǒu (Nèi Měnggǔ Fēncè)*. 中国人口 (内蒙古分册)*[China's Population (Inner Mongolia Volume)]*. Beijing: China Finance and Economics Press.

Thomason, S. G., & Kaufman, T. (1988). *Language Contact, Creolization, and Genetic Linguistics.* Berkeley: University of California Press. First paperback printing, 1991.

Tsung, L. (2014). *Language Power and Hierarchy: Multilingual Education in China.* London ; New York: Bloomsbury Academic.

UNESCO Ad Hoc Expert Group on Endangered Languages (2003). *Language Vitality and Endangerment.* Paris: International Expert Meeting on UNESCO Programme Safeguarding of Endangered Languages.

Wang, J. (2000). Měnggǔyǔ de shèhuì biànqiān, kùnjìng yǔ qiánjǐng: Hūhéhàotè Shì Měnggǔzǔ yǔ Měnggǔyǔ guānxi de shèhuìrénlèixué yánjiū. 蒙古语的社会变迁、困境与前景——呼和浩特市蒙古族与蒙古语关系的社会人类学研究。[The Mongolian language's societal shifts, difficulties and future prospects: a cultural anthropology of the relationship between Mongolian language and ethnicity in Hohhot.]. *Xibei Minzu Yanjiu*, (02), 34–46.

Weinreich, U. (1953). *Languages in Contact: Findings and Problems.* No. 1 in Publications of the Linguistic Circle of New York. The Hague: Mouton & Co, 1963 reprint ed.

Whaley, L. J. (2015). Language Loss: Lessons from Northern China. In *Symposium on Language Shift in the Sinophone World.* Seattle.

Wu, Y. (2008). *Language Maintenance or Shift: The Mongols in Inner Mongolia.* Unpublished ma thesis, University of Amsterdam.

Wurm, S. A. (1998). Methods of language maintenance and revival, with selected cases of language endangerment in the world. In K. Matsumura (Ed.) *Studies in Endangered Languages: Papers from the International Symposium on Endangered Languages, Tokyo, November 18-20, 1995*, (pp. 191–211). Tokyo: Hituzi Syobo.

Wurm, S. A., Li, R., Baumann, T., Lee, M. W., Zhongguo she hui ke xue yuan, Australian Academy of the Humanities, & Australian National University. Research School of Pacific Studies. Dept. of Linguistics (1988). Language atlas of China: Parts I and II.

Xu, J., & Dong, L. (Eds.) (2006). *Zhōngguó Yǔyán Wénzì Shǐyòng Qíngkuàng Diàochá Zīliào* 中国语言文字使用情况调查资料 *[The China Language Use Survey]*. Beijing: Yuwen 语文出版社. Zhongguo yuyan wenzi diaocha ziliao.

Yagmur, K., & Ehala, M. (2011). Tradition and innovation in the Ethnolinguistic Vitality theory. *Journal of Multilingual and Multicultural Development*, *32*(2), 101–110.

Zhao, L., & Yang, C. (2009). Nei Menggu shaoshu minzu renkou bianhua yu shaoshu minzu zhengce de guanxi 内蒙古少数民族人口变化与少数民族政策的关系 (The relationship between ethnicity policies and changes in the ethnic minority population of Inner Mongolia). *Journal of Inner Mongolia Normal University*, *38*(5), 99–102.

Zhou, M. (2001). The Politics of Bilingual Education in the People's Republic of China Since 1949. *Bilingual Research Journal*, *25*(1-2), 147–171.

Zhu, Y., Üjiyediin, C., Slater, K., & Stuart, K. (1997). Gangou Chinese Dialect: A Comparative Study of a Strongly Altaicized Chinese Dialect and Its Mongolic Neighbor. *Anthropos: International Review of Anthropology and Linguistics*, *92*(4-6), 433–50.

Appendix A

TRANSLITERATION CONVENTIONS

This document uses a few different transliteration systems for different purposes.

Placenames and personal names are done case-by-case. Most places in Inner Mongolia have multiple names from different languages and time periods; some have conventional English spellings as well; and some contain translatable components such as East and West. For each place I have chosen whichever name and spelling seems least awkward to me, in the belief that readers interested in the region will still be able to easily recognize the names.

For Chinese terms, on the first appearance I provide Simplified Chinese characters and Hanyu Pinyin transliterations, with tone marks. Frequently-repeated terms are given in Hanyu Pinyin only. For Chinese proper nouns, I use Hanyu Pinyin without tone marks. For direct quotations in Chinese from audio-recorded interviews, Hanyu Pinyin with tone marks is also used. There are slight modifications to represent the speaker's actual pronunciation, for example <nèige> instead of <nàge> for < 那个 > "that one". The quotations are from Standard Mandarin or Northeastern Mandarin speakers, whose pronunciation is fairly well represented by standard Hanyu Pinyin.

For Mongolian terms, I provide a romanized form of the Traditional Mongolian spelling as used in modern-day Inner Mongolia. The romanization I use follows that of a particular Mongolian-Chinese dictionary (Mongolian Language Research Center, 1999), but slightly simplified so as to use fewer special characters: for <č> and <ǰ> I write <c> and <j> respectively, and for <ɣ> I write <g>. For Mongolian proper nouns, I romanize more loosely, but still based on Traditional Mongolian rather than Cyrillic. For direct quotations in Mongolian from audio-recorded interviews, I give an orthographic transcription based on Cyrillic Mongolian spelling conventions, because Cyrillic is much closer to the modern pronunciation than the Traditional Mongolian orthography. My transcriptions deviate from the standard Cyrillic spelling in order

to reflect Inner Mongolian dialect features that appear in some of the recordings, such as having only the palatal affricates <j> <ch> and not the dental affricates <z> <ts>. The speakers quoted are using a variety of regional dialects.

Certain dorsal consonants ([x] $\sim$ [χ] in most dialects) are a particularly vexing question in transliterations of Mongolian. I have used <h> in proper names and <x> in terminology and quotations. The digraph <kh> is probably more common in English-language works on Mongolian; <k> and <q> are also seen.

Appendix B

PASSAGE ABOUT INNER MONGOLIA FROM LIM & ANSALDO (2016)

Below is the case study of Mongolian in Inner Mongolia excerpted from (Lim & Ansaldo, 2016, 135-137), which was discussed in detail in Chapter 1.

"To pick up from Gal's Oberwart community, a similar pattern is observed with the Mongols of Inner Mongolia in recent times, whose situation exemplifies many of the textbook factors that lead to shift (Wu 2008). The Mongols, who trace their origins to Mongol tribes in the twelfth century and the Great Mongol Empire of the thirteenth century, were expelled to the north or south of the Great Desert in the time of the Ming dynasty after the fourteenth century, the latter forming Inner Mongolia. Known as the 'horse-back tribe', the Mongols of Inner Mongolia clearly have a distinct culture: living a nomadic pastoral life involving hunting and herding, with a diet distinct from agricultural people, they have their own ethnic history and cultural traditions including traditional dress, music and poetry, and of course the Mongol language. In more modern times the Mongol language has had to face its largest opponents, perhaps the two most dominant languages in the region - namely Putonghua (standard Chinese) and English. In what follows, we witness the impact on language choice and the almost inevitable consequence of language shift."

"The first part of the story concerns Putonghua: in 1947, when Inner Mongolia became an autonomous region of the People's Republic of China, we see how the population's position as a minority in a society with a dominant language impacted on its language maintenance. As in numerous other contexts where industrialisation in minority-language areas has led to massive in-migration of dominant-language speakers – such as in Wales with English speakers and in the Basque Autonomous Region in the third quarter of the twentieth century with Castilian Spanish speakers, making Basque a minority in its own region – so it happened in Inner Mongolia. Numerous towns and cities in Inner Mongolia became modern industrialised cities, and the region saw substantial Han Chinese immigration from other parts of China, for industry and settlement in this newly developing area. Not only did the Mongols exchange their traditional nomadic pastoral economy for Chinese farming culture; more significantly, many started migrating to urban regions in search of occupational and economic opportunities in industrialising China. With in-migration of Han Chinese into Inner Mongolia and internal migration of Mongols to urban centres, demographic factors changed significantly. Younger-generation Mongols have grown up in a society dominated by Han Chinese and their language, Putonghua. Increased contact between Mongols and Han Chinese has also led to substantially greater numbers of mixed marriages: 38 per cent of Mongols are married to Han Chinese. In terms of institutional support,

Putonghua clearly dominates. In education, before the Cultural Revolution in 1965, the Mongols had their own Mongol education system. At present, while there is support for minority languages, there is clear encouragement of Putonghua and dominant Han Chinese culture, with Putonghua (and English, which entered the picture in particular with globalisation and education reform in China in 1949) compulsory from primary school and necessary for the college entrance exam. In addition, textbooks have little by way of information on Mongol history, culture and language. In the media, there is only one radio channel and one television channel in Mongolian at the provincial level. While young Mongols still feel strongly about speaking and learning their mother tongue in the home and school domains, they nonetheless hold more positive attitudes towards the two dominant languages, as well as Mongolian-Putonghua bilingualism for instrumental and integrative motivations, such as job opportunities and cultural integration (Wu 2008)."

"The effect of the appearance of these two major languages in the ecology of Inner Mongolia on the language choices of the Mongols is clear, based on a survey of language use by university undergraduates at the Inner Mongolia Normal University (Wu 2008; Lim, Karregat and Wu 2009). There is significant language shift from Mongol to Putonghua. The use of Putonghua by young Mongols with their parents in the home domain is as much as 25 per cent, compared to 10 per cent in their parents' generation, while in the media domain usage by young Mongols is 75 per cent, compared to 25 per cent in the parents' generation. There is also a significant increase in English: usage is 100 per cent in school and 25 per cent in the media, compared to not at all in their parents' generation. Notably, a bilingual mixed code of Mongolian-Putonghua is the increasingly frequent code amongst the younger generation. The various demographic, institutional, status and attitudinal factors outlined above clearly impact on language choice and consequently language shift within the Mongol community of Inner Mongolia."

Appendix C

QUESTIONNAIRE IN MONGOLIAN AND CHINESE

Figure C.1: Mongolian questionnaire, page 1 of 2

Figure C.2: Mongolian questionnaire, page 2 of 2

④ ⑤ ⑥

4. ᠁

①②③④⑤⑥
①②③④⑤⑥
①②③④⑤⑥
①②③④⑤⑥
①②③④⑤⑥
①②③④⑤⑥
①②③④⑤⑥

5. ᠁

①②③④⑤⑥

Figure C.3: Chinese questionnaire, page 1 of 2

关于蒙古语与城市化的研究
关于语言背景的问卷

1. **受访者基本信息**
   出生年：
   性别：男、女
   民族：蒙古、汉、其他
   职业：
   现在居住的地方
       哪个盟/市：

       哪个旗/县/区：

       哪个镇/苏木/嘎查：

   居住的时间（年）：
   文化程度：未上学、小学、初中、高中、中专、大专、本科、研究生
   受访者代码：

2. **目前的蒙汉语言水平（包括标准语、普通话、方言等等）**
   蒙古语（口语）：熟练、一般、略懂、不会
   蒙古语（文字）：熟练、一般、略懂、不会
   汉语（口语）：熟练、一般、略懂、不会
   汉语（文字）：熟练、一般、略懂、不会
   首先会说的语言：
   第二语言是：　　　　　　　　　第二语言从什么年龄开始说：

3. **小时候的语言环境**
   从出生到七岁在什么地方居住
       哪个盟/市：

       哪个旗/县/区：

       哪个镇/苏木/嘎查：

   兄弟姐妹几个人：　　　　　　您排行老几：
   这段时间家里有哪些长辈来照顾您？他们的蒙汉语水平怎么样？
   （请指出一到四个人，比如爸爸、妈妈、保姆等等）
   长辈一
       与您的关系：
       出生年：
       民族：蒙古、汉、其他
       蒙古语（口语）：熟练、一般、略懂、不会
       蒙古语（文字）：熟练、一般、略懂、不会
       汉语（口语）：熟练、一般、略懂、不会
       汉语（文字）：熟练、一般、略懂、不会
   长辈二
       与您的关系：
       出生年：

Figure C.4: Chinese questionnaire, page 2 of 2

民族：蒙古、汉、其他
蒙古语（口语）：熟练、一般、略懂、不会
蒙古语（文字）：熟练、一般、略懂、不会
汉语（口语）：熟练、一般、略懂、不会
汉语（文字）：熟练、一般、略懂、不会
长辈三
与您的关系：
出生年：
民族：蒙古、汉、其他
蒙古语（口语）：熟练、一般、略懂、不会
蒙古语（文字）：熟练、一般、略懂、不会
汉语（口语）：熟练、一般、略懂、不会
汉语（文字）：熟练、一般、略懂、不会
长辈四
与您的关系：
出生年：
民族：蒙古、汉、其他
蒙古语（口语）：熟练、一般、略懂、不会
蒙古语（文字）：熟练、一般、略懂、不会
汉语（口语）：熟练、一般、略懂、不会
汉语（文字）：熟练、一般、略懂、不会

4. 过去的语言使用情况

到七岁或者上学之前的语言使用情况
在家里跟长辈：①　②　③　④　⑤　　⑥
在家里跟同辈：①　②　③　④　⑤　　⑥
在外面跟玩伴：①　②　③　④　⑤　　⑥
上学以后授课语言
小学：①　②　③　④　⑤　　⑥
初中：①　②　③　④　⑤　　⑥
高中：①　②　③　④　⑤　　⑥
大学：①　②　③　④　⑤　　⑥
研究生：①　②　③　④　⑤　　⑥
①只说蒙古语　②以蒙古语为主　③一半一半　④ 以汉语为主　⑤只说汉语
⑥说其它语言

谢谢您！

5. 访谈总结（由调查员填）

日期：
地点：
调查员姓名：
访谈中使用的语言：①　②　③　④　⑤　　⑥
有关录音：
如果受访者的家人受过采访，他们的关系与受访代码是：

Appendix D

COUNTERFACTUAL DATA FOR THOUGHT EXPERIMENT

In Section 5.2.2, I describe a thought experiment using some counterfactual data. That fake data is shown here alongside the corresponding real data.

Table D.1: Average-elder to child transitions

	(M) elders	(B) elders	(C) elders	Total households
The real data				
(M) child	17	7	0	24
(B) child	77	370	10	457
(C) child	0	75	55	130
Total children	94	452	65	611
The fake data				
(M) child	17	7	0	24
(B) child	77	370	10	457
(C) child	0	277.5	203.5	481
Total children	94	654.5	213.5	962

In the fake data, the number of (C) children is increased so as to be equal to the number of (M) children plus (B) children combined. The proportion of (M) to (B) to (C) elders within each group of children remains the same.