Domain analysis of contemporary Chinese American language use in northern California: Some implications for minoritized Chinese languages in the U.S.

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This paper uses domain analysis to look the language use of 93 Chinese American people of Hoisan heritage in northern California. *Hoisan-wa* is one of the languages linking all early Chinese immigrants to the U.S.A., but no substantive research has focused solely on people of this language and cultural heritage. Participants were asked to self-report their language proficiencies and use across domains for four languages (*Hoisan-wa*, Cantonese, Mandarin, and English). Results show that *Hoisan-wa* is used most frequently with grandparents and parents, while the younger generation used Cantonese more than *Hoisan-wa*. English prevailed as the language used by the younger generation. Mandarin was not used with much frequency across all generation groups. This research offers implications for *Hoisan-wa* and other minoritized Chinese languages in the U.S. currently under pressure because of "Chinese-as-Mandarin" ideologies in public and foreign language learning discourse.
Keywords: Hoisan-wa/Toishanese; Chinese Americans; language maintenance; U.S.; minority languages

1   Introduction

Cantonese, like other minority languages in the U.S.A., currently faces a host of challenges in terms of language maintenance by its speakers. While present trends of U.S. immigration show a vast spread of ethnic Chinese immigrants of various language backgrounds, nearly all Chinese immigrants from the 1800s to 1970s spoke some variety of "Cantonese" originating in the Lliyip/Szeyap/Seiyap (四邑, literally: "Four Districts") region in Guangdong (廣東) province in mainland China which consists of four districts: Taishan (台山), Kaiping (開平), Enping (恩平), and Xinhui (新會). Because of the proximity of this region to various seaports, much of the early ethnic Chinese immigration to the U.S. came from these four districts, with Taishan sending off the largest population of people, mostly as laborers from agrarian villages. Speakers from the Taishan

region of the Four Districts spoke *Hoisan-wa* (台山話)[1], also known as "Toisanese" or "Toishanese," as it is rendered from Standard Cantonese, and "Taishanese," as it is rendered from Modern Standard Mandarin.

Chinese Americans who can trace their ancestors' arrival in the U.S.A. back to the 19th and mid-20th centuries come from a shared Lliyip ancestral heritage language that differs greatly linguistically, culturally, and historically from Mandarin, the current standard language of China and Taiwan. This particular population is not at all small, as it encompasses a sizable proportion of third-generation Chinese Americans and nearly all fourth-generation-plus Chinese Americans. Chan and Lee (1981) note that "The Seiyap group accounted for approximately 70-90% of the resident Chinese population in various communities in the period 1870-1930" (p. 121). The exponential rise in the status of Mandarin today has resulted in the heightened demand for and consumption of Mandarin, thus impacting Chinese Americans of various "Cantonese" backgrounds and shifting in the political economy of languages. Put under a different light, this also means that even without institutional support, *Hoisan-wa*, despite ongoing repositioning and changes in context of use and esteem, has still managed to remain visible and operative for over 150 years, through all the phases of ethnic Chinese immigration to the U.S.A. For various Chinese Americans, *Hoisan-wa* is a language that is an L1, L2, heritage language (HL), and even a foreign language (FL), spoken with varying degrees of fluency. Still, there is no substantive documentation in the U.S.A. of speakers of this language background, their family language practices, or their various ideologies about *Hoisan-wa* in relation to Standard Mandarin and Standard Cantonese. This dearth of research stems multi-directionally from confusion in the West over "Chinese" and what constitutes a "language" and "dialect," as well as the tendency in China to level language varieties as being part of a single standard due to imagined linguistic and national boundaries (cf. Anderson, 1983/1991).

Broadly, the need to distinguish *Hoisan-wa* from Cantonese is a move that serves the practical means of honing onto a variety that so many Chinese Americans can so readily trace their roots to but know so little about. This distinction becomes an absolutely necessary component in tracing the shifting language ideologies of the varieties of Chinese in the U.S. as well as

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[1] The romanization of 台山話 is something I have struggled with for a very long time. I have chosen to romanize *Hoisan-wa* as such because this is how its speakers pronounce it. Many refer to *Hoisan-wa* as "Toisanese," with a voiceless alveolar plosive [t], indicative of how a Cantonese speaker – but not a *Hoisan-wa* speaker – would say it. As a user of both varieties, and also having discussed this issue with younger speakers of *Hoisan-wa* in the U.S., I feel it is most fair to call *Hoisan-wa* in the way I am choosing, maintaining the glottal [h] sound. I recognize this seemingly slight distinction is an… …ideologically-fraught marker of alliance. I am staying away from the Mandarin romanization "Taishanese." I recognize that these choices break from traditional romanization schemes but am opting to make *Hoisan-wa* visible and deemphasize Cantonese and Mandarin. For standardized place locations in China only, I will maintain the Modern Standard Mandarin (MSM) romanization (e.g., Taishan).

understanding the contributions of Chinese Americans to U.S. history by recognizing and celebrating their language varieties. No research to date has specifically looked systematically at intergenerational language transmission and use specifically by those of *Hoisan-wa* language and ancestral heritage backgrounds. In a climate where Mandarin-language education is so publicized and valued, it becomes even more critical to look at the historical shaping and language learning experiences of and prospects for this neglected Chinese American population of *Hoisan-wa* heritage, whose very important histories and language backgrounds will continue to be slowly erased if left perpetually omitted in research as they have been the last 150 years.

2 Framework and review of relevant literature

The following section will briefly discuss the framework and relevant literature related to *Hoisan-wa* language maintenance, including issues related to (socio)linguistics, minoritized languages and language/cultural loss, and reversing language shift.

2.1 Understanding *Hoisan-wa* in (socio)linguistic terms

One of the reasons why people typify *Hoisan-wa* as sounding "harsh" is because it has a voiceless lateral fricative [ɬ], often Romanized as "thl", "tl", or "ll", a sound not found in the sound inventories of either Cantonese or Mandarin. As this is a sound that requires forcing the breath through a partially obstructed passage in the vocal tract while pulling the tongue back to the alveolar ridge, it is not uncommon for Cantonese speakers to mock *Hoisan-wa* speech through the use of this sound. Historical linguists, however, indicate that this sound is a relic of Middle or Elder Sinitic/Chinese (Cheng, 1973). There are also several other qualities of *Hoisan-wa* that point to its long linguistic life and survival, including tonal inflection for personhood as opposed to adding a lexical morpheme to the singular forms and the use of the negation particle *mo4*, documented only in the older generation of speakers in Macau and Hong Kong (Kuong, 2008).

Nonetheless, these phonological and lexical peculiarities are precisely the reasons why people cast such negative judgments on *Hoisan-wa*. As Kroskrity (2001) states of African American English and other "nonstandard" languages, "Rather than being understood as linguistic differences, such perceived inadequacies are instead naturalized and hierarchized in a manner which replicates social hierarchy" (p. 503). The devaluing and subordination of *Hoisan-wa* can also be understood in terms of the perceived value of social capital attached to a so-called "standard language", be it Standard Cantonese or Modern Standard Mandarin, both of which seem to be "presented as universally available [and] commoditized and presented as the only resource which permits full participation in the capitalist economy and an improvement of one's place in its political economic system" (Kroskrity, 2001, p. 503). As this process involves erasure, where "ideology, in simplifying the sociolinguistic field, renders some

persons or activities (or sociolinguistic phenomena) invisible" (Irvine & Gal, 2000, p. 38) and limiting access to participation, it is one that needs to be both questioned and re-evaluated. How *Hoisan-wa* speakers and people of Hoisan heritage are grappling with such issues of reconciling history with their language's continued existence is an area no one has yet explored and, with the number of monolingual *Hoisan-wa* speaking elders becoming fewer and fewer, this investigation and presentation of the research is indeed time-sensitive.

2.2   Minoritized languages and language/cultural loss

Language hegemony is largely seen through the lens of the English-speaking world (Fishman, Cooper & Conrad, 1977; Maurais & Morris, 2004), and the hegemony of Mandarin Chinese is not usually brought up in traditional discussions about linguistic imperialism and language rights. While Mandarin might fall short when compared to the far-reaching scope of English globally, within the less-heard talk of Chineses, Mandarin is considered a hegemonic force (Hsiau, 2000; Snow, 2004). As such, work by Skutnabb-Kangas and Phillipson (1994) greatly informs the way *Hoisan-wa* and other non-Mandarin varieties are viewed currently in light of Mandarin, which many construct as a "world language," and why, now more than ever, it becomes even more important to look at the effects of language hegemony on a local community. Left unchecked, language hegemony has the capacity to set off "linguistic genocide" of minority languages and is especially potent in the realm of education. As an institution, education at all levels is likely to perpetuate – if not exacerbate – language hegemony and existing ideologies about language.

    The notion of linguistic capital (Bourdieu & Passeron, 1990) is useful in viewing institutional and professional currency as factors in language learning and use. In order to understand how other varieties of Chinese are maintained in relation to Mandarin, social and power relations must be considered. King (2001) writes, "For the more powerful, majority-language groups, [language maintenance] is often a non-issue, and something of which most speakers are not conscious" (p. 3). Conversely, she states, "For the less powerful, minority-language speakers... language maintenance tends to entail conscious effort and is often a collective goal in the face of adverse circumstances" (p. 3). Thus in the U.S. context, it is critical to recognize the dynamic tensions between so-called "minority" and "majority" speakers of a Chinese language, and, more importantly, under which contexts one becomes positioned as a minority and a majority speaker. For example, for those who are multilingual, it is equally possible to simultaneously be a minority and majority speaker. For many, when English is taken into consideration, speakers of all varieties of Chinese may become minority speakers. When it comes to intra-"Chinese" language relations, those who speak or are acquiring Mandarin undoubtedly view *Hoisan-wa* through a different lens than those of *Hoisan-wa* heritage do as they struggle to keep the variety seen and heard. Researchers have noted the value and ties between Mandarin Chinese and budding linguistic and economic markets (Curdt-

Christiansen, 2009) but few have considered intra-Chinese relations and how non-Mandarin Chinese languages like Cantonese and *Hoisan-wa* negotiate language choices and use.

The loss of languages is tantamount to an "intellectual catastrophe" (Zepeda & Hill, 1991, p. 135), and oftentimes, language users are not up in arms about language loss until their language truly becomes threatened. As Pyoli (1998) notes, "Paradoxically, some kind of ethnic awakening does not seem to arise among the minorities until the terminal state of a language, when statistics already reflect the decline of minority-language speakers" (p. 129). Speaking to the U.S. educational context, Wong Fillmore (2000) writes that "[t]he dilemma facing immigrant children, however, may be viewed as less a problem of learning English than of primary language loss. While virtually all children who attend American schools learn English, most of them are at risk of losing their primary languages as they do so" (p. 203). Wong Fillmore argues that this loss is not limited to the actual decline in language use but also affects the emotional and psychological well-being of HL speakers.

2.3   Reversing language shift (RLS)

To ward off shifts by minority languages to a more hegemonic language, a language group can make deliberate efforts in language maintenance. Fishman (1991) calls these efforts of reversing language shift (RLS), a process that "requires reversing the tenor, the focus, the qualitative emphases of daily informal life – always the most difficult arenas in which to intervene" (p. 8). As these efforts oftentimes run counter to popular ideologies and are undertaken by those in society that have less implementational power, RLSers face harsh criticisms of being "backward looking ('past-oriented'), conservative, change-resistant dinosaurs" (Fishman, 1991, p. 386). Fishman and others (Luo & Wiseman, 2000; Uchikoshi & Maniates, 2010, to name a few) note how crucial a unit the family is in helping a community maintain its HL and values and whose language attitudes are worth studying in full.

King (2001) notes that while the restoration of family language transmission is a large component of language revitalization, there are more aims to revitalization than that. As Hornberger and King (1996) eloquently state, language maintenance is not so much about "bringing a language back" as it is "bringing it forward" to new domains, users, and uses (p. 440). As a contemporary multilingual Chinese American of *Hoisan-wa* heritage, this means acknowledging that children of Hoisan heritage may not speak the same way, or perhaps reach the same fluency as their parents or grandparents; however, it is nonetheless hoped that these children can feel pride in being of Hoisan heritage and develop the language abilities in speaking multiple varieties of Cantonese in conjunction with English and even Mandarin into the future, reflective of the language situation of the times.

Many of the published endeavors of language reclamation and reversing language shift have come from Native American and indigenous communities,

including Miami (Leonard, 2007), Keres (Benjamin, Pecos, Romero, & Wong Fillmore, 1998), Maori (Benton, 1991), to name only a few. As Leonard (2007) notes, "Leaders of these and similar efforts often articulate the idea of an initial group of people learning the language so as to be able to raise children with it, hence re-establishing the historical pattern of intergenerational transmission" (p. 10). However, these efforts are often thwarted by certain prevailing sociohistorical conditions that led to the language's decline as well as the presence of a majority language, particularly English in the U.S. context.

With regards to minoritized languages, Blommaert (2010) notes that the processes of rescaling can reorder and functionally specialize language resources and their usages in different domains, which thereby removes traditional labels like "endangered languages". In doing this, Blommaert reconceptualizes language use by allowing for "a detailed and precise view in which shades of grey are allowed, and in which we can see that particular resources, even if they look obsolescent to the analyst, can have important functions for language users" (p. 134). One can thereby re-envision a situation of so-called "language loss" to one where "'languages' of the traditional vocabulary exist as 'registers' in a new and more productive vocabulary, and the real 'language' that the people possess is this patchwork of specialized multilingual resources" (p. 134). That is, a minoritized language can be seen as being part of a truncated repertoire that is far from "disappearing" into oblivion; rather, the language has become a specialized register with its own indexical values and functions. This is reminiscent of Ruiz's (2010) argument that a language-as-resource orientation to multilingualism views even the most marginalized languages as resources because their multifaceted values are not just defined solely along economic planes, but in terms of intellectual, aesthetic, cultural, and citizenship connections. Ruiz (2010) uses the example that many communities have used their languages for generations without so-called "instrumental" end goals to show that values are not entirely defined by outside communities. It is through these lenses above that I look to position my framework and view the data I present.

3   Methodology and data collection

Data from this research comes from a larger, interview-based qualitative study that investigated the linguistic elements of *Hoisan-wa* (e.g., lexicon, phonology) as well as the language ideologies and discourse around it (e.g., why *Hoisan-wa* was worth or not worth bringing forward). For the purposes of this paper, however, only the self-reported language proficiencies and domain analysis sections will be detailed.

Between January 2011 to January 2012, I interviewed 93 participants of Hoisan heritages, a sufficient number to run descriptive statistical analyses on the language proficiency and domain analysis sections, adjusting for measurement fallibility (Light, Singer, & Willett, 1990, p. 206). After collecting general age, gender, and education demographics, next section of the research protocol asked respondents to rate their own proficiencies in *Hoisan-wa*/Lliyip, Cantonese,

Mandarin and English using a seven-point scale. Rather than pass out a paper questionnaire, I opted to ask my participants verbally and record their responses on a blank copy of my questionnaire, which I held in front of me. Most of the time, I asked these questions in English, but for those participants who wanted to use *Hoisan-wa* or Cantonese, I asked them the same questions in the language of their choosing. The participants were asked to rate their own proficiencies in Cantonese, *Hoisan-wa*/Lliyip, Mandarin, English, any other languages they spoke, on a scale from 1-7, with 7 being the most proficient. The domain analysis section asked when participants used which languages (Cantonese, *Hoisan-wa*/Lliyip, Mandarin, English) across different domains (grandparents, parents, siblings, spouse/significant other, children, close friends, neighbors, strangers, teachers, classmates, colleagues, boss). These statistics were supplemented with sociolinguistic and semi-structured interview questions dealing with various issues of language maintenance.

In total there were 41 males and 52 females (n=93) who participated in the sociolinguistic interviews. The youngest participant was eight years old, and the oldest was 97. Some of the participants were different generations of the same family. The participants were later grouped into three main age groups: 1) "young people", who are aged 8 to 30 (n=22), 2) "middle aged people", who are aged 31 to 65 (n=35), and 3) "elders", who are aged 66 and above (n=36). To gather as complete a picture as possible of the diverse range of Hoisan-heritage people in the San Francisco Bay Area, the only two requisites to participate in my sociolinguistic interviews were that participants be of Hoisan heritage on either the maternal or paternal side (or both) and that they have lived in the Bay Area for a consecutive period of time. For the younger generation in particular, I made it clear that spoken knowledge of *Hoisan-wa* was not necessary. My decision to use this criterion is informed by research and by my own personal experiences as a Chinese American of partial Hoisan heritage. As Canagarajah (2008) notes, for some in the Tamil diaspora, "it is cultural practices that seem to define Tamil identity... not language" (p. 168). I realize that identities and communities are not fixed but rather dynamically adapt over time, nor do they revolve solely around language. Rather, it is possible for language to be "sacrificed to maintain culture" (Canagarajah, 2008, p. 169). Thus, having a language fluency criterion for eligibility to participate in my study, especially for the younger generation, did not seem well-informed.

4 Findings

Below I present the statistical results from the demographics, reported language fluency, and domain analysis questions that my participants answered. A full copy of this questionnaire can be found in Appendix A. The domain analysis instrument that I utilized is based closely on the one used by Yeh, Chan, and Cheng (2004) and is similar to the instruments used in the domain analysis research by Lin (2007) and Bartoo (2009). While I chose to use this instrument out of pragmatic comparability to existing research, I concede that there are

inadequacies to this instrument, which I will discuss later in this section.

4.1   Demographic information

Below are the basic demographic features of the participants.

Table 1. Demographic features of participants

Variables		n	%
Gender	Male	41	44.0%
	Female	52	56.0%
Age	Young	22	23.66%
	Middle	35	37.63%
	Elder	36	38.71%
Education	Literate, no formal education	7	7.53%
	Elementary	25	26.88%
	Secondary	14	15.05%
	College	27	29.03%
	Advanced degree	20	21.51%

I divided my participants into three main age groups: young, middle, and elder. These three groups were meant to roughly delineate the generational divides. Additional details of these three age groups are provided below.

Table 2. Age ranges and means of participants

Group	Range (years)	Mean (years)	n
Young	8-30	23.7	22
Middle	31-65	55.5	35
Elder	66-97	79.5	36

As evidenced by Table 2 above, the youngest respondent was 8 years old, and the oldest was 97 years old.

4.2   Reported language fluencies

Once the demographics were collected, the second section of the research protocol asked respondents to rate their own proficiencies in *Hoisan-wa*/Lliyip, Cantonese, Mandarin and English using a seven-point scale. The seven fluency options were as follows:

1: Can talk about any topic fluently
2: Can appreciate TV shows, movies, music
3: Can conduct casual speech
4: Can understand and speak simple sentences
5: Can understand a few sentences

6: Can understand a few words
7: Cannot understand at all

Choices 1-3 point to productive fluency, while choices 4-6 point to receptive fluency. I added "Lliyip" next to *Hoisan-wa* after my pilot research showed that some participants called their heritage language "Lliyip" instead of "*Hoisan-wa*". I fully recognize that *Hoisan-wa* is a term I have explicitly chosen to employ, and I wanted to recognize what others call their/our language, too.

Below, I will show my participants' reported fluencies for *Hoisan-wa*/Lliyip. Statistically-significant mean differences (at the p<.05 level) have been starred, and redundant mean differences have been excluded. The results were corrected for multiple comparisons with the Bonferroni correction.

Table 3. Comparison of reported fluencies of *Hoisan-wa*/Lliyip and Cantonese

	Hoisan-wa/Lliyip				Cantonese			
	Mean	SD	Mean difference		Mean	SD	Mean difference	
			Group	Difference (Age group - group)			Group	Difference (Age group - group)
Young	5.136	1.726	Middle	-2.451*	4.000	1.799	Middle	-1.286*
			Elder	-3.553*			Elder	-1.500*
Middle	2.686	2.026	Young		2.714	1.506	Young	
			Elder	-1.102*			Elder	-0.214
Elder	1.583	1.228	Young		2.500	1.464	Young	
			Middle				Middle	
Total	2.839	2.158			2.936	1.660		

As indicated from the mean fluencies by age group, the youngest generation had the lowest reported fluency (5.136 out of 7, hovering around "can understand and speak a few sentences"). The middle generation reported an average of 2.686 out of 7, and the oldest generation reported an average of 1.583, making them the most fluent group in *Hoisan-wa*/Lliyip. A one-way ANOVA indicates that the differences among the three groups' averages are significant. That is to say, there is a significant effect of age group on language fluency. Each generation has a statistically different degree of fluency in *Hoisan-wa*/Lliyip.

The average reported fluencies of *Hoisan-wa*/Lliyip and Cantonese were similar at 2.839 and 2.936, respectively. Taking a closer look at Cantonese, the youngest generation gave themselves a higher fluency score than they did for *Hoisan-wa*/Lliyip: 4 out of 7 ("can understand and speak simple sentences"). As age increased, so did the average fluency in Cantonese. The middle generation reported an average of 2.714 out of 7, nearly the same as their average for *Hoisan-wa*. The oldest generation reported an average of 2.5 out of 7. A one-

way ANOVA also shows that the differences when comparing the mean averages of the youngest to the middle and oldest generations are significant, indicating that age group has an effect on Cantonese language fluency.

As a point of comparison to *Hoisan-wa*/Lliyip and Cantonese, the respondents' scores for Mandarin and English are presented below in Table 4.

Table 4. Comparison of reported fluencies of Mandarin and English

	Mandarin				English			
	Mean	SD	Mean difference		Mean	SD	Mean difference	
			Group	Difference (Age group - group)			Group	Difference (Age group - group)
Young	5.136	1.670	Middle	0.0636	1.000	0	Middle	0.286
			Elder	1.207*			Elder	3.743*
Middle	5.200	1.605	Young		1.286	1.202	Young	
			Elder	1.1429*			Elder	3.457*
Elder	6.343	0.968	Young		4.743	2.105	Young	
			Middle				Middle	
Total	5.620	1.511			2.533	2.289		

One can see that the average reported fluency for Mandarin is 5.620 out of 7, with the oldest generation reporting the least fluency in Mandarin. The mean differences between the young (5.136 out of 7) and middle (5.200 out of 7) generations were not significant, which means that the two groups' reported fluencies were about the same. These findings are interesting considering the rhetoric behind the linguistic economical view of learning Mandarin because it is "useful" for the future.

It is probably not all too surprising considering the linguistic climate of the U.S. that the average reported fluency score for English was the highest of all four languages: 2.533 out of 7. All respondents in the youngest generation rated themselves as able to "talk about any topic fluently" in English. The middle generation also reported very similar results: 1.202 out of 7, a mean that was not statistically different than the youngest generation's mean. As respondents reached a higher age, their reported fluency in English decreased: their average mean was 4.743 out of 7 (between "can understand and speak simple sentences" and "can understand and speak a few sentences").

4.3   Language use and interlocutors

I will now report the statistical data from the domain analysis section. Following existing studies, I used 12 interlocutors (grandparents, parents, siblings, spouses/significant others, children, close friends, neighbors, strangers, teachers, classmates, colleagues, bosses) standing for the domains of family members/home, friends, acquaintances, strangers, school, and work. Participants

were asked to rate, on a three-point Likert scale, the frequency of their use of *Hoisan-wa*/Lliyip, Cantonese, Mandarin, and English with the 12 different interlocutors. Using this scale, respondents chose 3 if they "frequently use the language", 2 if they "sometimes use the language" and 1 if they "rarely or never use the language".

I will summarize the findings by interlocutor. Full tables of these analyses[2] can be found in Appendix B and C. As with the reported language fluency data, I will first discuss the *Hoisan-wa*/Lliyip and Cantonese numbers side by side before turning to Mandarin and English.

4.3.1   *Self-reported Hoisan-wa/Lliyip and Cantonese use*

The grandparents group was the highest scoring for use of *Hoisan-wa*/Lliyip for the youngest and middle age groups. The oldest generation reported a 2.800 out of 3 for frequency of use. The middle generation averaged a use of 2.429, and the youngest generation reported an average of 1.409. Put in practical terms, the grandparents of the elders, of those in the middle generation, as well as many of the grandparents of those in the youngest generation were/are all presumably monolingual *Hoisan-wa* speakers, so the participants did not have much of a choice but to use *Hoisan-wa* with them. These results seem to confirm what we already know about Hoisan heritage people and other first-generation immigrants.

Interestingly, for Cantonese use with grandparents, the youngest generation averaged 1.954, hovering around using it "sometimes". Out of the three generation groups, the youngest generation used Cantonese the most (perhaps as the "Chinese" of choice) with grandparents. The middle and oldest generations averaged 1.514 and 1.114, respectively.

The parents group was the highest-scoring interlocutor group for use of *Hoisan-wa*/Lliyip for the oldest age group: 2.829 out of 3. For the middle and youngest age groups, this was the group rated with the second-highest average frequency of use of *Hoisan-wa*/Lliyip, 2.343 and 1.272, respectively. These numbers also seem to confirm the research findings for this dissertation as well as common knowledge in the *Hoisan-wa*-speaking community that *Hoisan-wa* is used within the family, particularly parents and grandparents.

Along a similar vein to the Cantonese frequency of use with grandparents, the youngest generation also reported the highest average (1.682 out of 3) for using Cantonese with parents. The middle and oldest generations averaged 1.371 and 1.057, respectively.

For use of *Hoisan-wa*/Lliyip with siblings, the average scores for the younger and oldest generations were nearly the same as for parents: 1.227 and 2.657, respectively. The sharpest difference came from the reported frequency of use for the middle generation: 1.677 out of 3. It seems that within the home

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[2] To correct for running multiple tests, the calculated p-values were multiplied by 12 (corresponding to the 12 interlocutor groups) and used those values as the benchmarks for establishing statistical significance at the p>.05 level

domain, while this generation used *Hoisan-wa* with their parents and their grandparents, they did not use it as much with their siblings.

For Cantonese, there were no statistical differences among age groups for the mean differences for use of Cantonese with siblings. The averages for all three groups were about the same: 1.273 for the youngest generation, 1.324 for the middle, and 1.200 for the oldest.

All of the respondents in the youngest generation responded that they "rarely or never" used *Hoisan-wa*/Lliyip with their spouses or significant others. Similarly, the middle generation reported an average of 1.519 out of 3 for *Hoisan-wa* use with this group of interlocutors. Only the oldest generation reported a high average of 2.688 out of 3 for using *Hoisan-wa*/Lliyip to speak with a spouse or significant other.

For Cantonese use, all of the respondents in the youngest generation responded that they "rarely or never" used Cantonese with their spouses or significant others. The middle generation averaged the same as their use of *Hoisan-wa*/Lliyip use (1.519), and the oldest generation averaged 1.219. There were no statistical differences among age groups for the mean differences for this interlocutor group.

All of the respondents in the youngest generation responded that they "rarely or never" used *Hoisan-wa*/Lliyip with their children (though not everyone in this age group had children). Both the middle and oldest generations reported using less *Hoisan-wa* with their children than for the first four interlocutor groups discussed, averaging 1.462 and 2.500, respectively. As later corroborated by conversation data, participants stated that even if parents spoke in *Hoisan-wa* to their children, the children would answer in English, forcing the parents to begin to use more English.

For Cantonese, none of the respondents in the youngest generation reported using Cantonese with their children. The middle generation reported an average of 1.269, and the oldest generation averaged 1.438. There were no statistical differences among age groups for the mean differences for this interlocutor group.

Hoisan-wa/Lliyip was not a frequent language used between close friends for the youngest and middle generations, averaging 1.045 and 1.371 out of 3 for these groups, respectively. The oldest generation averaged 2.411 out of 3.

The youngest generation averaged 1.591 for using Cantonese with close friends. The middle and older generations averaged 1.314 and 1.559, respectively. There were no statistical differences among age groups for the mean differences for this interlocutor group.

Hoisan-wa/Lliyip was also not frequently used with neighbors, averaging 1.000 for the youngest generation, 1.171 for the middle generation, and 2.176 for the oldest generation. This is not particularly surprising considering the diverse demographic make-up of the Bay Area.

For Cantonese use with neighbors, the youngest and middle generations averaged 1.047 and 1.176. The oldest generation averaged 1.647.

The youngest generation did not use *Hoisan-wa*/Lliyip to talk to strangers (averaging 1.000 out of 3), and the middle generation also averaged a similarly low frequency: 1.371. The oldest generation averaged 2.324.

For Cantonese use with strangers, the youngest generation averaged 1.409 out of 3, the middle averaged 1.714, and the oldest averaged 1.647. One can see that the youngest and middle generations had higher averages for using Cantonese in their interactions with strangers, but the averages for Cantonese use with strangers for the oldest generation were lower than that of use of *Hoisan-wa*/Lliyip. This seems to corroborate with the ideology articulated by many younger and middle generation respondents that *Hoisan-wa* is not a language used in public spheres, an ideology that is not shared by the older generation.

The youngest and middle generations rarely or never used *Hoisan-wa*/Lliyip with their teachers, averaging 1.000 and 1.114, respectively. This seems unsurprising, especially since *Hoisan-wa* is not taught in any schools. This group of interlocutors was also the lowest averaging for the oldest generation for frequency of use: 1.567 out of 3. This low average can be explained by the fact that many of the elders did not attend school, and even if they did, instruction was mostly in Cantonese and not *Hoisan-wa*.

Reported frequency of Cantonese use with teachers was higher than that of *Hoisan-wa*/Lliyip for all groups. The youngest generation averaged 1.333, the middle averaged 1.914, and the oldest generation averaged 2.300.

For *Hoisan-wa*/Lliyip use with classmates, the youngest and middle generations averaged 1.000 and 1.200, respectively. The low frequency of *Hoisan-wa* use can be explained by the diversity of the Bay Area. While the oldest generation did not use *Hoisan-wa* with their teachers, who had higher status and authority, they reported a higher frequency of use with classmates: 2.200 out of 3.

For the case of Cantonese use with classmates, both the youngest and middle generations reported higher averages than for *Hoisan-wa* use: 1.439 and 1.571, respectively. The oldest generation reported a lower average than for the use of *Hoisan-wa* with classmates: 1.567.

For *Hoisan-wa*/Lliyip use with colleagues, the youngest and middle generations averaged 1.000 and 1.200, respectively. The older generation averaged 2.147. It is likely that many of these elders worked jobs typical of many early Chinese American immigrants (e.g., seamstresses, line cooks) and had work colleagues that spoke *Hoisan-wa*, which helps to explain the higher average.

For the case of Cantonese use with colleagues, the youngest generation averaged 1.177. The middle generation averaged 1.457, and the oldest generation averaged 1.588, which was a lower frequency than their reported use of *Hoisan-wa* with colleagues.

For *Hoisan-wa*/Lliyip use with bosses, the youngest and middle generations averaged 1.000 and 1.143 for this category, and the oldest generation averaged 2.029.

For Cantonese use with bosses, the youngest and middle generations averaged 1.000 and 1.286. The oldest generation averaged 1.647.

4.3.1.1 Self-reported Hoisan-wa/Lliyip and Cantonese use summary

In short, arguably the most compelling findings from the *Hoisan-wa*/Lliyip and Cantonese frequency of use findings seem to be that the interlocutor groups of grandparents and parents are where *Hoisan-wa*/Lliyip were and are most used. For the youngest generation, while they still report to use *Hoisan-wa*/Lliyip with their grandparents and parents, the Chinese language of choice to be used with these two groups is actually Cantonese, which suggests a shift of "Chinese" language use across the generations. Respondents did not use *Hoisan-wa*/Lliyip or Cantonese with their siblings as frequently as they did with their parents and grandparents. Another telling statistical result is the reported frequency of use of *Hoisan-wa* with teachers as opposed to classmates for the middle and older generations, indicative of the status differential: the language of "educated-ness" was Cantonese, not *Hoisan-wa*. While the older generation tended to use the most *Hoisan-wa*/Llyip by nature of the fact that they were most likely mostly monolingual, the younger and middle generations tended to not use *Hoisan-wa*/Lliyip or Cantonese much with all other domains and interlocutor groups.

4.3.2   Self-reported Mandarin use

Looking at the results for Mandarin (Appendix C), one can immediately see an obvious trend: it is not used with much frequency at all. In fact, the highest average across all groups is 1.314 out of 3, which was the average for the youngest generation's use of Mandarin with teachers. Additionally, the low standard deviations as well as the lack of statistical significance between mean differences across groups show that this trend is stable for all three generations. This is also corroborated by one of my interview questions, which asked what my participants called their HL (or the language they used with their grandparents or parents that was not English). All of the participants referred to this language (be it *Hoisan-wa* or Cantonese) as "Chinese". The use of the word "Chinese" never referred to Mandarin. Thus, in efforts to avoid redundancy in reporting the Mandarin statistical data, I will opt not to describe each of the interlocutor groups but instead will save this result for the discussion section.

4.3.3   Self-reported English use

Having situated the findings for *Hoisan-wa*/Lliyip, Cantonese, and Mandarin, I now turn to my participants' reported frequency of use of English. Since use of English is such a pervasive factor in the U.S. context, I am operating under the assumption that participants will likely have differentiated frequencies of English language use depending on various interlocutors and domains. As such, I will discuss all the interlocutor groups in turn.

   On average, the youngest generation reported using English to their grandparents more frequently (2.136 out of 3) than the middle and oldest

generations (1.343 and 1.086, respectively). Knowing what we know about language maintenance in the U.S., these results should roughly be inversely related to reported use of *Hoisan-wa* to grandparents. That is, the more frequently *Hoisan-wa* is reported to be used with grandparents, the less frequently English is used, and the less frequently *Hoisan-wa* is reported to be used with grandparents, the more frequently English is used. This is the case in these findings as well.

The youngest generation averaged 2.727 out of 3 for use of English with parents. The middle generation averaged 2.057, and the oldest averaged 1.143. With each generation averaging around the score for one of the three levels of frequency, it seems that the interlocutor group of parents experienced a shift in frequency of use across the generations.

For speaking to siblings in English, the youngest and middle generations averaged 2.955 and 2.794 out of 3. It was only the oldest generation that reported to "rarely or never" use English to speak with siblings, averaging 1.342 out of 3.

The youngest generation all responded that they used English frequently with their spouses or significant others. The middle generation averaged 2.519, and, as in the case of siblings, the oldest generation was the only group to "rarely or never" use English with this group of interlocutors, averaging 1.188.

As for the interlocutor group spouses and significant others, the youngest generation all responded that they used English frequently with their children. The middle generation averaged a high frequency of use of 2.808, and the oldest generation again was the only group to "rarely or never" use English with this group of interlocutors, averaging 1.250.

The averages for close friends are also very similar to that of children and spouses and significant others: 2.955 for the youngest generation, 2.889 for the middle generation, and 1.294 for the oldest generation.

The youngest generation all reported to use English with their neighbors. The middle generation also averaged a high frequency of 2.829, and the oldest generation averaged 1.382.

The youngest generation all reported to use English with their teachers. The middle generation also averaged a high frequency of 2.886, and the oldest generation averaged 1.567. Some of the elders mentioned going to citizenship classes, which was the only time they had gone to a classroom setting where English was used and spoken.

The youngest generation all reported to use English with their classmates. Like with the interlocutor group of teachers, the middle generation averaged 2.886. The oldest generation averaged 1.367.

The youngest generation all reported to use English with their colleagues. The middle generation averaged 2.886, and the oldest generation averaged 1.382.

Very similar to the use of English with colleagues, the youngest generation all reported to use English with their bosses. The middle generation averaged 2.829, and the oldest generation averaged 1.353.

4.3.3.1 Self-reported English use summary

As predicted, the use of English was differentiated across interlocutors. The youngest generation used the most English across all interlocutor groups, while the older and middle generations used the least English with grandparents and parents. For the youngest generation, the lowest reported frequency of using English with grandparents, though that result still hovered around "sometimes".

4.4 Limitations to the instrument

As with all instruments, there were limitations to this domain analysis. I could have, for example, added questions to the existing protocol that probed the attitudinal beliefs of my respondents and thereby could have run more robust correlational analyses. I could have developed a more complex protocol instead of following existing studies. It could have also been possible to expand the Likert scales for frequency of language use to better capture the degree of frequency. There was also the danger of my participants responding in a way that did not actually reflect their "true" language use and/or fluencies. However, since there is currently no existing numerical data for *Hoisan-wa*-speaking communities beyond discourse circulating within the community, or beyond data where all Chinese languages are lumped together, these numbers are a start in our better understanding the language situation of Hoisan heritage people in the U.S. The statistical methods employed in this chapter were sound, and I have not asked the data to tell us more than they can. I hope that the offering of these statistics can lead to other studies that draw from the trends I have outlined above.

5 Discussion and implications

Based on the findings from the domain analysis, we can use the statistics to confirm some of what we already know about *Hoisan-wa* language use as well as larger language maintenance trends in the U.S. Within the domain of the home was where *Hoisan-wa* was said to be used most frequently, especially frequently with grandparents and grandparents and, to a lesser degree, with siblings. For the oldest generation, *Hoisan-wa* was used most frequently across all contexts; the middle and youngest generations used English most frequently to talk with friends, acquaintances, strangers, school classmates, and work colleagues. The "Chinese" of choice for the youngest generation seems to be Cantonese and not *Hoisan-wa*, as evidenced from higher averages for Cantonese use than *Hoisan-wa* use with strangers and also with grandparents and parents. From the very similar averages across the reported frequency of language use of English across all domains except the home and family, we are also able to confirm the prevalence of English language use in various public spheres. In the U.S. sociolinguistic milieu this is not a particularly surprising finding, and at first blush it might be a fair assessment to say that language shift seems to be

occurring. However, as the qualitative data from my research show (Author, 2012c), at local, family levels, *Hoisan-wa* is still significant in ways that have diverged across generations, thus making it possible to find ideological and implementational spaces (cf. Hornberger, 2005) wherein Hoisan language and the unique Chinese American history associated with Hoisan heritage people can be shared and transmitted. Rather than conceptualizing the findings of the above domain analysis as strictly an example of language loss, in alignment with Blommaert (2010), one could also argue that *Hoisan-wa* has become functionally specialized along specific domains involving the family.

Additionally, across all age groups surveyed in this study, Mandarin is not used with frequency. This point runs contrary to broader discourses about the presumed utility of Mandarin Chinese; that is, from the domain analysis data presented above, not all Chinese American families find Mandarin centrally relevant to their lives. I argue that more school and community language programs need to be cognizant of this. I bring up this last point in efforts to draw attention to the linguistic realities of not only the participants in my study, but of what I would argue is a population of Chinese Americans that are often muted in wider academic and public "Mandarin-as-Chinese" discourses. A testament to this point, alluded to earlier, is my participants' use of the word "Chinese" to refer to either *Hoisan-wa* or Cantonese, but never to Mandarin. For those who only know or are aware of Chinese in the form of Mandarin, my participants' use of the word "Chinese" to refer to anything other than Mandarin might seem strange or even sacrilegious. Yet, this act of naming speaks to the very long history of *Hoisan-wa* and Cantonese speakers in the U.S., whose linguistic experiences and backgrounds should not be discounted. True, there were participants who mentioned that knowing Mandarin would be useful in the future, they often qualified that this would be for the benefit of their (future) children but not themselves. That is, the current push to acquire Mandarin is not something that is of immediate concern. Evidenced by the self-reported fluency data, on average, the range in participants' reporting of their proficiency in Mandarin averaged from 5.10 to 6.35 out of 7, at the least proficient end of the 1-7 scale, between the receptive levels of "understanding a few sentences" to "cannot understand at all". While some might interpret these figures to mean that these Hoisan heritage Chinese Americans have found themselves in the deficit position of having learned the "wrong Chinese", my conversations with my participants hardly contained these types of discourses. Rather, most of the regret that was expressed came in the form of lamenting that not enough *Hoisan-wa* or Cantonese was being acquired to communicate with older family members.

Thus, if we aim to promote equitable "Chinese" language maintenance opportunities for all Chinese Americans, we must not falsely assume that families of non-Mandarin Chinese backgrounds want to acquire Mandarin as their "surrogate" HL (Author, 2012a). Instead, we should strive to understand which Chinese language(s) are most relevant for these Chinese Americans, their families, their future trajectories, and why. Rather than viewing Chinese language acquisition as linear and limited to only one variety at a time, there needs to be

more inclusion of the diverse Chinese languages that are in the local communities, *Hoisan-wa* among them. This type of inclusion is integral to Chinese language learning because the local linguistic landscape of many Chinese diasporic communities includes prevalent coexistence among Chineses, their scripts, and their expressions (Author, 2012b).

In sum, this research has implications for non-Mandarin Chinese languages as well as other minoritized languages. Better understanding the local-level processes of how speakers of these languages reconcile and value the multiple languages in their lives will help bring minoritized languages forward into modern and relevant contexts.

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Appendix A: Research Protocol

Questionnaire: A Look at the Language Use of People of Toishan/Hoisan Heritage

1. BACKGROUND

Gender: ___Male   ___Female   Age: ___ years old

Highest education level completed:

___literate, but no formal education

___elementary school education

___secondary school education

___college education

Languages you interact with (can check more than 1):

___Cantonese (Hong Kong)

___Cantonese (Mainland)

___Lliyip/*Hoisan-wa*

___Samyap

___Mandarin (Taiwan)

___Mandarin (Mainland)

___other Chinese (list here: _____)

Note: Szeyap/Lli-yip (四邑) is a region of Southern China consisting of Toishan, Hoiping, Yanping, and Sunwui (台山, 開平, 恩平, 新會). Check this box if you interact in a language spoken by someone from these four regions. Samyap (三邑) is a neighboring region consisting of Punyu, Namhoi, and Shundak (番禺, 南海, 順德). The varieties spoken here resemble Standard Cantonese. Check this box if you interact in a language spoken by someone from these three regions.

Your Birthplace:_____

Place(s) where you grew up:_____

Length of residence in U.S.:_____

Your mother's ethnic identity:_____

Your father's ethnic identity:_____

Your spouse's ethnic identity:_____

Your mother tongue (1st language): ___Cantonese ___Lliyip ___Mandarin ___English

___other Chinese (list here: _____)

Language you most commonly use:___Cantonese ___ Lliyip ___Mandarin ___English

___other Chinese (list here: _____)

2. LANGUAGE PROFICIENCY: check the situations that best apply to your language proficiency

Proficiency / Languages	Can talk about any topic fluently	Can appreciate TV shows, movies, music	Can conduct casual speech	Can understand and speak simple sentences	Can understand a few sentences	Can understand a few words	Cannot understand at all
Cantonese							
Lliyip							
Mandarin							
English							
Other ___							

3. LANGUAGE USE: How often do you use your languages in the following situations? Circle a number to indicate frequency. If not applicable to you, ignore it. It is possible to use multiple languages in the same situation.

Frequency: 3=frequently   2=sometimes   1=rarely or never

Languages / Situation	Cantonese			Lliyip			Mandarin			English			Other Chinese ____		
1. When you talk to **your grandparents**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
2. When you talk to **your parents**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
3. When you talk to **your siblings**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
4. When you talk to **your spouse or signifcant other**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
5. When you talk to **your children**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
6. When you talk to **close friends**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
7. When you talk to **your neighbors**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
8. When you talk to **strangers**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
9. When you talk to **your teachers**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
10. When you talk to **your classmates**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1

11. When you talk to **your colleagues**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1
12. When you talk to **your boss**	3	2	1	3	2	1	3	2	1	3	2	1	3	2	1

Appendix B: Domain Analysis Comparison across age groups for *Hoisan-wa*/Lliyip and Cantonese

Language		*Hoisan-wa*/Lliyip				Cantonese			
Inter-locutors	Age Group	Mean	SD	Mean difference		Mean	SD	Mean difference	
				Group	Difference (Age Group-Group)			Group	Difference (Age Group-Group)
Grandparents	Young	1.409	0.734	Middle	1.025*	1.954	0.844	Middle	-0.440
				Old	1.391*			Old	-0.840*
	Middle	2.429	0.884	Young		1.514	0.853	Young	
				Old	0.372			Old	-0.400
	Old	2.800	0.584	Young		1.114	0.471	Young	
				Middle				Middle	
Parents	Young	1.273	0.703	Middle	1.070*	1.682	0.839	Middle	-0.310
				Old	1.556*			Old	-0.625*
	Middle	2.343	0.938	Young		1.371	0.690	Young	
				Old	0.486			Old	-0.314
	Old	2.829	0.568	Young		1.057	0.338	Young	
				Middle				Middle	
Siblings	Young	1.227	0.528	Middle	0.449	1.273	0.631	Middle	0.051
				Old	1.430*			Old	-0.073
	Middle	1.677	0.843	Young		1.324	0.684	Young	
				Old	0.981*			Old	-0.124
	Old	2.657	0.684	Young		1.200	0.531	Young	

Language		Hoisan-wa/Lliyip				Cantonese			
Inter-locutors	Age Group	Mean	SD	Mean difference		Mean	SD	Mean difference	
				Middle				Middle	
Spouses/SO	Young	1.000	0	Middle	0.519	1.000	0	Middle	0.519
				Old	1.688*			Old	0.219
	Middle	1.519	0.753	Young		1.519	0.700	Young	
				Old	1.169*			Old	-0.162
	Old	2.688	0.693	Young		1.219	0.553	Young	
				Middle				Middle	
Children	Young	1.000	0	Middle	0.462	1.000	0	Middle	0.269
				Old	1.500			Old	0.438
	Middle	1.462	0.811	Young		1.269	0.533	Young	
				Old	1.039*			Old	0.168
	Old	2.500	0.842	Young		1.438	0.759	Young	
				Middle				Middle	
Close friends	Young	1.045	0.213	Middle	0.326	1.591	0.796	Middle	-0.277
				Old	1.366*			Old	-0.0321
	Middle	1.371	0.731	Young		1.314	0.631	Young	
				Old	1.040*			Old	0.560
	Old	2.411	0.892	Young		1.559	0.860	Young	
				Middle				Middle	
Neighbors	Young	1.000	0	Middle	0.171	1.047	0.218	Middle	2.381
				Old	1.176*			Old	0.599*
	Middle	1.171	0.514	Young		1.286	0.622	Young	
				Old	1.005*			Old	0.361
	Old	2.176	0.936	Young		1.647	0.884	Young	
				Middle				Middle	

Language		*Hoisan-wa*/Lliyip				Cantonese			
Inter-locutors	Age Group	Mean	SD	Mean difference		Mean	SD	Mean difference	
Strangers	Young	1.000	0	Middle	0.371	1.409	0.590	Middle	0.305
				Old	1.324*			Old	0.238
	Middle	1.371	0.690	Young		1.714	0.667	Young	
				Old	.952*			Old	-0.0672
	Old	2.324	0.878	Young		1.647	0.849	Young	
				Middle				Middle	
Teachers	Young	1.000	0	Middle	0.114	1.333	0.577	Middle	0.581
				Old	.567*			Old	.967*
	Middle	1.114	0.404	Young		1.914	0.853	Young	
				Old	.452*			Old	0.386
	Old	1.567	0.898	Young		2.300	0.915	Young	
				Middle				Middle	
Classmates	Young	1.000	0	Middle	0.200	1.429	0.676	Middle	0.143
				Old	1.200*			Old	0.138
	Middle	1.200	0.584	Young		1.571	0.739	Young	
				Old	1.000*			Old	-0.005
	Old	2.200	0.925	Young		1.567	0.817	Young	
				Middle				Middle	
Colleagues	Young	1.000	0	Middle	0.200	1.177	0.393	Middle	0.281
				Old	1.147*			Old	0.412
	Middle	1.200	0.584	Young		1.457	0.780	Young	
				Old	.947*			Old	0.131
	Old	2.147	0.958	Young		1.588	0.857	Young	
				Middle				Middle	
Bosses	Young	1.000	0	Middle	0.143	1.000	0	Middle	0.286

Language		*Hoisan-wa*/Lliyip				Cantonese			
Inter-locutors	Age Group	Mean	SD	Mean difference		Mean	SD	Mean difference	
				Old	1.029*			Old	.647*
	Middle	1.143	0.494	Young		1.286	0.667	Young	
				Old	.887*			Old	0.361
	Old	2.029	1.000	Young		1.647	0.917	Young	
				Middle				Middle	

Appendix C: Domain Analysis Comparison across age groups for English and Mandarin

		English				Mandarin			
Inter-locutors	Age Group	Mean	SD	Mean difference		Mean	SD	Mean difference	
				Group	Difference (Age Group-Group)			Group	Difference (Age Group-Group)
	Young	2.136	0.941	Middle	-0.794*	1.136	0.468	Middle	-0.136
				Old	-1.051*			Old	-0.136
Grandparents	Middle	1.343	0.725	Young		1.000	0	Young	
				Old	-0.257			Old	0
	Old	1.086	0.373	Young		1.000	0	Young	
				Middle				Middle	
	Young	2.727	0.631	Middle	-.670*	1.091	0.294	Middle	-0.091
				Old	-1.584*			Old	-0.091
Parents	Middle	2.057	0.938	Young		1.000	0	Young	
				Old	-.914*			Old	0
	Old	1.143	0.494	Young		1.000	0	Young	
				Middle				Middle	

Inter-locutors	Age Group	English				Mandarin			
		Mean	SD	Mean difference		Mean	SD	Mean difference	
Siblings	Young	2.955	0.213	Middle	-0.160	1.000	0	Middle	0.0588
				Old	-1.612*			Old	0
	Middle	2.794	0.592	Young		1.059	0.343	Young	
				Old	-1.451*			Old	-0.0588
	Old	1.342	0.765	Young		1.000	0	Young	
				Middle				Middle	
Spouses/SO	Young	3.000	0	Middle	-0.481	1.000	0	Middle	0.741
				Old	-1.813*			Old	0
	Middle	2.519	0.802	Young		1.074	0.385	Young	
				Old	-1.331*			Old	-0.0741
	Old	1.188	0.592	Young		1.000	0	Young	
				Middle				Middle	
Children	Young	3.000	0	Middle	-0.192	1.000	0	Middle	0.0385
				Old	-1.75			Old	0
	Middle	2.808	0.567	Young		1.039	0.196	Young	
				Old	-1.558*			Old	-0.385
	Old	1.25	0.622	Young		1.000	0	Young	
				Middle				Middle	
Close friends	Young	2.955	0.213	Middle	-0.0689	1.046	0.213	Middle	0.0689
				Old	-1.660*			Old	-0.0455
	Middle	2.889	0.471	Young		1.114	0.404	Young	
				Old	-1.592*			Old	-0.114
	Old	1.294	0.719	Young		1.000	0	Young	
				Middle				Middle	
Neighbors	Young	3.000	0	Middle	-0.143	1.000	0	Middle	0.0286

Inter-locutors	Age Group	English				Mandarin			
		Mean	SD	Mean difference		Mean	SD	Mean difference	
				Old	-1.588*			Old	0
	Middle	2.857	0.494	Young		1.029	0.169	Young	-0.0286
				Old	-1.445*			Old	
	Old	1.412	0.783	Young		1.000	0	Young	
				Middle				Middle	
Strangers	Young	3.000	0	Middle	-0.171	1.136	0.468	Middle	-0.079
				Old	-1.618*			Old	-0.136
	Middle	2.829	0.514	Young		1.057	0.236	Young	
				Old	-1.446*			Old	-0.057
	Old	1.382	0.739	Young		1.000	0	Young	
				Middle				Middle	
Teachers	Young	3.000	0	Middle	-0.114	1.048	0.218	Middle	0.267
				Old	-1.433*			Old	0.019
	Middle	2.886	0.471	Young		1.314	0.676	Young	
				Old	-1.319*			Old	-0.248
	Old	1.567	0.858	Young		1.067	0.365	Young	
				Middle				Middle	
Classmates	Young	3.000	0	Middle	-0.114	1.095	0.301	Middle	0.133
				Old	-1.633*			Old	-0.095
	Middle	2.886	0.471	Young		1.229	0.646	Young	
				Old	-1.519*			Old	-0.229
	Old	1.367	0.765	Young		1.000	0	Young	
				Middle				Middle	
Colleagues	Young	3.000	0	Middle	-0.114	1.000	0	Middle	0.0857
				Old	-1.618*			Old	0

Inter-locutors	Age Group	English				Mandarin			
		Mean	SD	Mean difference		Mean	SD	Mean difference	
	Middle	2.886	0.471	Young		1.086	0.373	Young	
				Old	-1.504*			Old	-0.086
	Old	1.382	0.779	Young		1.000	0	Young	
				Middle				Middle	
Bosses	Young	3.000	0	Middle	-0.171	1.000	0	Middle	0.029
				Old	-1.645*			Old	0
	Middle	2.829	0.568	Young		1.029	0.169	Young	
				Old	-1.476*			Old	-0.0286
	Old	1.353	0.774	Young		1.000	0	Young	
				Middle				Middle	