ACQUISITION OF SOCIOLINGUISTIC KNOWLEDGE

IN A MANDARIN-ENGLISH DUAL IMMERSION SCHOOL

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Abstract

In addition to knowing what is grammatical in their language, native speakers also understand how to use language appropriately in different situations and the social implications of particular ways of using language; this ability is known as communicative competence (Hymes 1972). As children acquire language and encounter new speakers and linguistic situations, they also acquire the knowledge of sociolinguistic variation necessary to achieve communicative competence (Romaine 1984). When children enter school, they encounter new speakers, a new set of linguistic situations and styles, and sometimes new language varieties or even entirely new languages. Children's exposure to new languages is particularly intense in language immersion models; in the dual-language immersion model, students dominant in different languages interact in the same classroom, and spend time learning in each language. The reasoning behind these programs is that students will learn from both classmates and teachers, and become bilingual, biliterate, and bicultural (Lindholm-Leary 2001). Previous researchers, however, have questioned the level of communicative competence that can be achieved based on input from a limited classroom setting (e.g, Swain 1985).

The "dual" in dual-language simplifies the more complex reality of many such programs, in which multiple varieties of languages are in fact present (Rubinstein-Avila 2002). In dual-language immersion classrooms where teachers and students speak a range of dialects, participants must learn to negotiate between varieties as well as between languages. The present study seeks to investigate what sociolinguistic

knowledge children can acquire in the early elementary school years of a Mandarin-English dual-language immersion program, by examining how sociolinguistic meaning is reflected and negotiated in the linguistic practice and metalinguistic discourse of members of the school community. This question is addressed through ethnographic and quantitative analysis of teacher and student language use, corrective feedback, and other metalinguistic discourse.

This research draws on data from a year-long participant-observation study of first-grade and second-grade classes (ages 5 – 8) at a Mandarin-English dual-language immersion program in the United States. While the linguistic targets of the program were American English and Standard Mandarin Chinese, a range of dialects was present in each class. Most crucially, none of the teachers natively spoke the target dialects: the English teachers were British and Canadian, and the Chinese teachers spoke regional varieties from Taiwan and Northeastern Mainland China. Students came from a range of Mandarin-speaking and non-Mandarin-speaking backgrounds, and were also exposed to a variety of dialects at home.

The speech of three Chinese teachers was collected via audio recordings and quantitatively analyzed. All three teachers were found to use both standard and non-standard phonological features in their classroom speech. Their choice of variant is significantly predicted by two measures of stylistic context: event type, and utterance context. The teachers are more likely to use standard variants in teaching events versus non-teaching events; their speech also varies according to a scale of utterance contexts, from extremely standard in read speech, to progressively less standard in instructional

speech, non-instructional administrative speech, and behavior management (i.e., scolding). These findings illustrate that teachers draw upon the social meaning of standard and non-standard variants to construct personae appropriate to different classroom tasks. Variation was also found to be predicted by internal linguistic factors, which patterned according to the regional origin of the speaker. The regular patterning of variation in teacher speech suggests that, using this input, students could acquire knowledge of of the social meaning of these variables, while also using these patterns to target more standard variants in their own acquisition.

The most prominent metalinguistic behavior observed in the school was corrective feedback, meaning correction directed at others. An analysis of corrective feedback, in both English and Mandarin, reveals that corrections are a widespread phenomenon, with all teachers and most students individually initiating at least one correction, targeting teachers as well as students. Correction is a socially risky behavior; to avoid negative social consequences, correctors are more likely to target features perceived to be under the speaker's conscious control, and avoid directly challenging certain sociolinguistically privileged features, such as features of Taiwanese Mandarin. Students follow distinct practices regarding correction, but do show influence from teachers in their strategies for framing and responding to corrections. Student-initiated corrections also exhibit influence from teachers' language ideologies about Mandarin and English, which promote the notion of a single standard Mandarin, but equally valid dialects of English.

Analysis of other metalinguistic discourse reveals that students have an

understanding of how languages and dialects are acquired, but their explicit knowledge of specific dialect features lags behind their implicit knowledge. The Chinese language was linked with Chinese ethnicity in student metalinguistic discourse, while English was not ethnically marked. Students were observed sharing narratives accounting for their individual and family histories; these narratives help students locate themselves within the spectrum of linguistic experience in the school community.

The language use of both Chinese-language and non-Chinese-language-background students was analyzed for use of certain standard and non-standard phonological features. Native-speaker students show high levels of individual variation, suggesting that their speech is primarily shaped by their respective home varieties. Non-native-speaker students, however, avoid acquiring the non-standard features used by their teachers, resulting in more standard speech than that of their teachers or native-speaker classmates. A significant effect of classmate speech was found; students with native-speaker classmates who use more non-standard features are significantly less standard than their counterparts in a class with more standard native-speakers. This finding demonstrates that students do model their speech, to a limited extent, on native-speaker classmates, but they also take into account their own sociolinguistic knowledge gained from observation of linguistic and metalinguistic patterns.

This research establishes that, rather than simply imitating the speech of their teachers or classmates, students in the early elementary grades can make use of sociolinguistic information present in stylistic variation and metalinguistic discourse to target and acquire a variety distinct from that used by the speakers around them. This

analysis of the variation present in a dual-language immersion school setting also

suggests that the sociolinguistic information present in classrooms is more rich and

varied than has been previously assumed, and equips students to competently navigate a

range of linguistic situations.

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Chapter 1

Introduction

1.1 The Acquisition of Sociolinguistic Knowledge

The study of sociolinguistic variation seeks to account for differences in language use across social groups, contexts, and time. Competent adult native speakers have mastered the interpretation and use of sociolinguistic variation, in the sense that their knowledge of language includes not only what is grammatical, but also what sort of language is appropriate in different scenarios, and what variants are likely to be used by different types of speakers (Hymes 1972). In order to understand how variation functions and is transmitted within a speech community, we must also examine how, and when, speakers acquire the skills necessary to becoming competent interpreters and users of socially meaningful variables.

While some sociolinguists have argued in the past that children do not begin to exhibit patterns of stylistic variation until early adolescence (e.g., Labov 1970), scholars have come to accept that young children can and do engage in consistent and meaningful variation (Andersen 1990, Roberts 1994, Kornhaber & Marcos 2000, a.o.). Indeed, although children's patterns of language use often do not exactly match those of adults, a consensus has been reached that the acquisition of communicative competence is an integral part of the language acquisition process (Romaine 1984:261). Recent studies have provided a window into how children acquire sociolinguistic variation as they acquire language, mirroring the variation patterns of their caregivers (Smith et al. 2007).

When children first enter school, however, they encounter new patterns of

variation, new social categories, and perhaps a new language (or two). Students who do attend school in a new language are generally dependent upon the linguistic input they receive at school in their acquisition process; crucially, they are also dependent upon the sociolinguistic input available in school in order to develop their communicative competence in that language. Given the wide range of linguistic situations a native speaker encounters outside of school, acquiring sociolinguistic knowledge comparable to a native speaker via a restricted school setting is a daunting task. Previous work suggests that acquiring casual speech styles through school is particularly challenging, even for students in full-day language immersion (Swain 1985).

Acquiring a new language in a school setting becomes more complicated when multiple varieties of a language co-exist within a single school. This situation can arise not only in the case of non-standard varieties used along with a prestigious standard variety promoted by the school, but also when multiple standard varieties come into contact; the latter scenario is particularly common in settings where immigration has caused populations from different countries or regions to attend a single school. In dialectally-heterogeneous settings, members of the school community must negotiate between varieties, as well as between languages. To successfully navigate this complex landscape, students learning a language in this school environment must take cues from available sources of sociolinguistic information to develop a picture of the social meaning of linguistic variants. Such sources might include patterns of language use by different members of the school, metalinguistic discourse relating to language or particular linguistic features, and other metalinguistic behaviors, including corrections.

Not much is known by sociolinguists, however, about what sort of sociolinguistic information is present in the linguistic and metalinguistic patterns found in elementary school, or how children in these settings take advantage of this information in their acquisition of sociolinguistic knowledge.

The present study seeks to explore what sociolinguistic knowledge students in their first years of elementary school acquire in a dialectally-diverse multilingual setting, and how this knowledge manifests in their language use. This question will be addressed through ethnographic observation and quantitative analyses of the language use patterns and metalinguistic discourse of teachers and students in a dual-language immersion program.

1.2 Dual-Language Immersion and Dialect Variation

Dual-language immersion (also called two-way bilingual immersion) is an increasingly popular educational model in which students from two different language backgrounds are placed in the same classroom, and spend time learning in each language. In contrast to single-language immersion programs, dual-language immersion simultaneously serves the functions of a heritage language program, an ESL program, and a conventional immersion program, integrating them into a single model (Lindholm-Leary 2006:1). The goal of these programs is to produce high-achieving students who are bilingual, biliterate, and bicultural.

While Spanish-English dual-language immersion programs are the most common in the United States (CAL 2011), dual-language immersion has also proven to be a

popular model for Mandarin Chinese, due to the availability of both a population of heritage and native speakers who want their children to continue to speak Chinese, and a population of non-Chinese speakers who want to start their children early on learning Chinese, a language that is supposed to be quite difficult. The growing popularity of the dual-language immersion model has also coincided with an explosion of general interest in learning Chinese, and with increasing immigration of Mandarin-speakers from Mainland China who want their families to maintain close ties to their native country (Semple 2009). Many new immigrants are looking for alternatives to the existing weekend Chinese language school model, which is considered relatively ineffective, and is dominated by Taiwanese Americans and other more well-established immigrant groups. Individuals who are interested in enrolling their children in a Chinese-English program often have the money and time required to lobby for the establishment of such programs within the public school system, or to organize private programs themselves (Hu 2011). As a result, the past few years have seen a boom in the number of new Chinese-English dual-language immersion programs, in both public and private institutions (Lin 2006).

The limited research that has been done on dual-language immersion programs has been extremely positive; students from both language backgrounds have been found to achieve comparable or better test results in their home language compared to students in monolingual schooling, while also gaining proficiency in a second language (Lindholm-Leary 2006:313). In comparison to conventional immersion, dual-language immersion has the advantage of native-speaker peer interaction, which has a myriad of

potential sociolinguistic benefits. But, as Rubinstein-Avila puts it in her 2002 article titled "Problematizing the 'dual' in a dual-immersion program," there is a problem here with the notion of "dual." Because participants in these programs are generally made up of individuals from a wide range of immigrant backgrounds, for many dual-language immersion programs, at least one of the languages in the school is being represented by a number of different dialects. Crucially, this diversity is not localized to the student body, but is also present among the teachers. This heterogeneity in the varieties used by the staff of a program can create a scenario in which the language variety promoted by the school must be negotiated; in Rubinstein-Avila's case study, for example, Portuguese teachers from Brazil and Portugal discovered that they had very different ideas about what constituted standard Portuguese (Rubinstein-Avila 2002:81). Inter-variety conflicts can arise, particularly when prescriptive norms disagree, either among teachers, in written or multimedia classroom materials, between teachers and students, or between students themselves.

Dual-language immersion programs which incorporate Mandarin Chinese, the most widely-spoken and promoted dialect of Chinese, encounter significant variation-related challenges, due to Mandarin's widespread use as a first and second language across a large portion of Asia, including Mainland China, Taiwan, Singapore, and Malaysia. In particular, although Mandarin was standardized relatively recently, in the early 20th century, diverging Mandarin standards originating in Mainland China and Taiwan complicate teaching a single prescriptive standard (Chen 1988; Yao 1998). Selecting a single standard to promote has proved a challenge for American schools

teaching Mandarin, because Mainland China's recent broadening influence and large population must be balanced against the greater cultural capital and stronger historical influence of Taiwanese Americans on Chinese pedagogy in the United States. Given that no variety is accepted as the ultimate standard across regions, in the common American Chinese instruction setting in which the classroom includes participants from a mix of regional backgrounds, someone's preferred prescriptive standard will inevitably be challenged.

As a result of the wide-ranging variation present in Mandarin Chinese, teachers in Mandarin immersion programs are placed in a delicate and challenging position; they must attempt to instruct students in a standard variety that they do not necessarily speak, while dealing with native-speaking students with a range of dialect backgrounds. In fact, situations may arise in which students natively speak a variety that holds more sociolinguistic prestige than the variety spoken by the teacher. Moreover, some teachers may find themselves teaching with classroom materials from a different region, written using a character style and/or phonetic alphabet unfamiliar to them. In order to successfully run their classrooms, teachers must address these issues, which place them in a sociolinguistically weak position, while simultaneously maintaining authority in the class. To accomplish this goal, teachers may draw upon the social meaning of linguistic variants in their repertoire to construct personae appropriate to various classroom tasks. This behavior, in turn, might become a source of information for students about the social meaning of linguistic variants.

Students in the dialectally-heterogeneous class face their own challenges. Native-

Chinese-speaking students in a classroom in which their variety does not match their teacher's variety may experience corrections or other linguistic challenges from their teacher or classmates, and linguistic and sociolinguistic input which conflicts with the input they receive at home. This scenario could result in a number of outcomes for native-speaking students; these students might alter their own speech to match school norms, or, on the contrary, draw upon their social capital in the classroom to challenge and reject the variety used by the teacher. These outcomes may hinge on the sociolinguistic capital of the students' native variety within the school community.

Students from non-Chinese-language backgrounds experience unique challenges when encountering linguistic variation in the classroom. Due to the presence of native-speaking classmates, learners are faced with a far broader range of Mandarin varieties than they would encounter in a conventional language learning environment. Although this diversity of input might result in certain difficulties for the learner, it also creates an opportunity for children to learn about the social meaning of a range of linguistic variables, and to experience Chinese language ideologies relating to dialect difference. This communicative competence could serve them well, particularly in their future interactions with different types of Mandarin speakers with varying educational and regional backgrounds.

1.3 Main Research Questions

This research uses ethnographic and quantitative methods to address several questions relating to student acquisition of sociolinguistic knowledge in the early-elementary

grades of a Mandarin-English dual-language immersion school. First, what sorts of sociolinguistic messages are conveyed by teachers in their patterns of language use? Secondly, how are dialect differences negotiated and represented in metalinguistic discourse? Finally, how do students make use of the sociolinguistic knowledge acquired based on teacher and classmate language use and metalinguistic discourse in their own speech?

1.4 Chapter Structure

The topics that comprise this project will be addressed in the following order: the dual-language immersion school fieldsite and the methodology used in collecting data for this work will be outlined in Chapter 2. Chapter 3 will introduce key background information about Mandarin and the primary set of linguistic variables to be analyzed. An analysis of teacher language use will be presented in Chapter 4. Metalinguistic corrective feedback will be analyzed in Chapter 5, and other metalinguistic discussion will be presented in Chapter 6. Student language use will be examined in Chapter 7. Chapter 8 will include a discussion of the results of the previous analyses, examine some additional variables, and address how the findings may be extended and interconnected. Finally, Chapter 9 will summarize the key conclusions of this project.

Chapter 2

Fieldwork Site and Methodology

2.1 General Fieldwork Site Description

2.1.1 About Meizhang

The Meizhang School[1] is a private school on the west coast of the United States. A portion of the school is devoted to a Mandarin-English dual-language immersion program, with the rest involved in a separate dual-language immersion program for a European language. My research focused on observation of the entire Mandarin-English program's first grade, consisting of two classes, and the second grade, a single class.

Because the present study of language at Meizhang will consider the role of the broader social and linguistic context at the school in the acquisition of sociolinguistic knowledge, certain features of the staff, students, and school environment are relevant to understanding this analysis, and are detailed in the following sections.

2.1.2 Faculty and Staff

2.1.2.1 Chinese Staff

The Chinese-speaking faculty and staff at the school include primary subject teachers, specialized teachers for music, art, and gym, substitute teachers, and a handful of administrative staff. The majority of Chinese faculty and staff are Taiwanese women who have moved to the United States as adults; the rest of the staff is made up primarily of women from Mainland China and Hong Kong. Staff members display varying degrees of

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1   Meizhang is a pseudonym, as are all names of individuals referenced in this study.

regional Mandarin features, with some using more standard features than others. While all staff members are native speakers of some variety of Chinese, a handful are native speakers of other varieties, such as Cantonese, and are not entirely fluent in Mandarin.

2.1.2.2 English Staff

The English teachers in the Mandarin-English immersion program are a mix of Americans, Canadians, Britons and natives of former British colonies, and a few non-native speakers. The students also interact with the English teachers employed at the other immersion program in the school, who are a similar mix of American and non-American.

2.1.2.3 Other Staff

The majority of the non-teaching staff at Meizhang are native speakers of the European language taught in the other immersion program at the school, who speak non-native English with the Chinese program students. The students have limited interactions with the European language teachers who also speak to them in non-native English.

2.1.3 Family Backgrounds

Parents of students in the Mandarin-English dual-language immersion program come from a wide variety of backgrounds. Socioeconomically speaking, families range from middle-class to extremely well-off; some of them live in areas that are among the most expensive in the nation, and have multiple homes in multiple countries, while others are

making sacrifices to allow their children to attend Meizhang. These socioeconomic differences do not appear to be particularly salient to the students, particularly given that the commodities most highly valued in school are inexpensive items like Pokemon cards and snacks.

Families are also ethnically diverse. Approximately 2/3rds of the first and second grade parents are ethnically Chinese. The largest group of ethnically Chinese parents are Taiwanese-born, 1.5, and 2nd generation Taiwanese Americans, with varying degrees of proficiency in Mandarin. A slightly smaller group are those born in Southern Chinese dialect areas of China including Sichuan, Shanghai, and Hong Kong, or those born to Southern Chinese dialect-speaking families in Southeast Asian countries such as Malaysia and Singapore. A handful of parents are from other areas of Mainland China.

Of the non-Chinese parents, around half are American-born native English speakers of European, East Asian, and South Asian ancestry. The other half are native speakers of various other East Asian, Asian Pacific, Middle Eastern, and European languages. The majority of non-Chinese parents do not speak any Mandarin, although there are some with various levels of Mandarin proficiency.

Many of the Meizhang students have parents who each belong to different categories described above. A sizable portion of students, for example, have one European American parent and one Chinese American parent. In addition, some of the children are adopted, and in some cases this means their ethnic background does not match those of their parents. The high level of ethnic diversity present in the classroom, and in students' lives more generally, is relevant to how students develop their

understanding of difference, whether social, ethnic, or linguistic. Also, as I will discuss in Chapter 6, students' conception of themselves as Chinese or English speakers appeared to be influenced by their understanding of ethnicity.

2.1.4 Target Language Varieties of the School

While a diverse range of language varieties and dialects are spoken by the families and staff at Meizhang, the school has very apparent target varieties for student acquisition in both English and Mandarin. In the case of English, the target variety is Mainstream American English. There is abundant evidence for this target, aside from the obvious point that the school is located in America: American rather than British spelling is taught in class, the school has used the term 'American' rather than 'English' in the title of its language programs in the past, and the school's promotional materials explicitly state the goal of preparing students for American high schools. We can assume that Mainstream American English is the particular target variety due to the socioeconomic makeup of the families, and the school's stated goal of helping students achieve admission to prestigious private high schools in the area.

For Mandarin, the target variety is a bit more complex. Chinese American communities must negotiate between the Taiwanese standard, *Guoyu*, and the Mainland Chinese standard, *Putonghua*, which are quite similar in their spoken form (Yao 1998). In their written form, however, there are significant differences that come to the fore in an educational context. Firstly, in Taiwan, Chinese is written with traditional characters, and in Mainland China it is written with simplified characters. In addition,

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schoolchildren in Taiwan learn a specialized phonetic alphabet called *zhuyin fuhao* that uses unique symbols, while in Mainland China children learn *pinyin*, standardized Chinese romanization.[2] While a certain degree of discussion and negotiation over the choice between Taiwanese and Mainland standards was occurring at the school, at the time of my fieldwork, the Taiwanese standard, *Guoyu*, was the clear target language variety. Students were taught *zhuyin fuhao* and traditional characters, and classes used school materials and children's books from Taiwan.

2.2 First Grade

2.2.1 Student Demographics

The first graders are divided into two classes of approximately 15 students each, with two thirds of the grade made up of female students. Approximately half of the students have two parents with Chinese heritage, and an additional quarter have one parent with Chinese heritage. The majority of the first graders are dominant in English, but a handful of students in each class are Mandarin-dominant. In each class, about half of the students are fluent Mandarin speakers. Fluency in Mandarin does not correlate entirely with ethnic background, with some non-Chinese students being just as fluent as some students with Chinese heritage. The distribution of sex, ethnicity, and language background is approximately the same in each of the two first-grade classes.

2.2.2 Teachers

The first grade classes share a primary English teacher and a primary Chinese teacher.

2   See Chapter 3 for a more complete discussion of Mandarin varieties.

The English teacher, Miss Alice, is newly arrived in the United States from England. The Chinese teacher, TW Teacher, is originally from Taiwan.

Both of the primary teachers for the first grade classes use language varieties that are significantly different from the target varieties of the school; the English teacher uses a standard British English variety close to Received Pronunciation, and the Chinese teacher varies between more standard pronunciation and pronunciation consistent with non-standard Taiwanese Mandarin. The teachers' language varieties will be discussed in more detail in Chapters 4 and 5.

2.2.3 First Grade School Activities

The first graders split their primary classroom time equally between English and Chinese, but also do all of their special subject classes (music, art, gym, library) with Chinese teachers. The students spend considerable amounts of the school day outside the classroom, with three recess periods and a lunch period. The language of the playground is English, and students generally use a lot of it, with recess activities centered around storytelling and elaborate imaginary scenarios.

Classroom time is divided between more formal instructional contexts, in which students are meant to be listening to the teacher, and more informal contexts, in which students are free to converse as they engage in activities such as completing workbooks, drawing, reading, or playing with educational toys.

2.3 Second Grade

2.3.1 Student Demographics

The second graders consist of a single class of approximately 15 students, equally divided between boys and girls. No second grade students are Mandarin-dominant, but a few are dominant in third languages rather than in English. Approximately 1/3rd of the class is fluent in Mandarin, and several of these more advanced students are non-Chinese. The second grade has a slightly lower portion of ethnically Chinese students than the first grade, with only 2/5ths of the class having two parents of Chinese heritage, in contrast to about half of students in the first grade. An additional quarter of the second-grade students have one parent with Chinese heritage.

2.3.2 Teachers

The second grade English teacher, Miss Brenda, is originally from Canada. The Chinese teacher, NE Teacher, is from Northeastern Mainland China. She is in her first year of classroom teaching at Meizhang, and is also the library subject teacher for all students in the Mandarin-English program.

The second grade teachers do not speak varieties that are identical to the target varieties, but the differences are more subtle than in the case of the first grade teachers; the English teacher uses Canadian English, and the Chinese teacher varies between standard *Putonghua* and non-standard Northeastern Mainland Mandarin. In the previous school year, the second graders were taught by the current first grade Chinese teacher (TW Teacher), but they had a different English teacher who was also not a speaker of

American English.

2.3.3 Second Grade School Activities

The overall split between English and Chinese classtime in the second grade is similar to that of the first grade. Students also engage in classroom and recess activities of roughly similar type to those of the first graders, with some contexts requiring them to quietly listen to the teacher and others allowing more interaction with peers.

Due to a variety of behavioral issues in the class, the second grade is widely considered by parents, staff, and students to be a "problem class." This status as a problem class has various effects on relationships between other members of the school and second grade students, and on the language learning environment in the classroom. These issues will be addressed in further in Chapter 5.

2.4 Fieldwork Methodology

2.4.1 Methodology Overview

Ethnographic fieldwork for this research was conducted over the 2006–2007 school year, using the participant-observation method. I observed the first grade, regularly alternating between each of their two classes, for two periods in the fall (21 days) and spring (19 days), and observed the second grade in the winter (26 days). During the bulk of my fieldwork, I was present at Meizhang four days a week, over the entire school day and after school activities.

My goal in conducting this fieldwork was to observe as much as possible the

normal operation of the school community. During classroom time, I functioned primarily as an observer, occasionally assisting students with classwork and teachers with administrative tasks when they requested it. During lunch and recess, I became more of a participant, eating lunch with students and participating in recess activities. In keeping with this research goal, my data collection was entirely based on participant-observation. While I did interact with students and ask them questions in the course of conversation, I did not conduct formal interviews.

2.4.2 Data Recording and Collection

Data was collected through two methods of audio recording. For my primary recording, I used two pocket-sized Sony ICD-X20 digital recorders, which each recorded approximately six hours of stereo audio at 44 kHz in WMA format. I kept one of these recorders running at all times, sitting in my lapel pocket or on a nearby table, using the internal stereo microphone to record. Because the quality of these recordings was quite good, and the recording method was conveniently unobtrusive, I used this method to collect the bulk of my audio data, in spite of the limitations of the compressed WMA format.

In addition to the everyday digital recordings, I made a few high-quality recordings using a lavalier microphone attached to students' clothing and a Marantz PMD 660 flash recorder. I used this method to capture certain student presentations in which students were speaking individually before the class.

I collected detailed field notes to supplement the audio data. Because the majority

of the school day took place in classrooms, I was able to take most notes as events occurred. During recess times, which usually involved a great deal of running around, I would generally leave my notebook in the classroom and take notes about what had happened after returning inside.

2.4.3 Data Collected

In total, approximately 470 hours of recorded data were collected. Specific ways in which these recordings were analyzed will be detailed in the relevant chapters.

2.4.4 Fieldwork Challenges

In other sociolinguistic studies involving ethnographic fieldwork in a school environment, the ethnographer often finds it initially challenging to gain student acceptance, and to integrate into student life (Mendoza-Denton 2008, Eckert 1989, etc.). This is one reason why ethnographers have avoided classroom settings, to guard against being associated with teachers and power structures at school (Eckert 1989:29). My experience at Meizhang was quite different, probably due to the relatively young ages of the students. When I first began fieldwork, I was concerned that students would treat me like a teacher or staff member, but this proved not to be an issue; the majority of Meizhang students treated me as an older kid, and immediately invited me to participate in their games and other activities.

In the first grade, where I began my fieldwork, I never received a formal classroom introduction, and the students seemed unaware that my presence at school was

at all unusual, or required an explanation. Meizhang occasionally had visitors observing their classes, and during my fieldwork I wore one of their "visitor" tags; as a result, some of the first graders nicknamed me "Visitor", and seemed to be under the impression that this was a normal role for someone to perform in a school. On several occasions, I did explain to first graders that I was a student, and I was there to study how they talked in school, but they did not seem particularly interested.

In the case of the second graders, I did receive formal introductions in class by both the Chinese and English teachers, although many of the students were already familiar with me from recess periods and shared after school activities. I decided to have the second graders sign assent forms for the study, because they were old enough to read such a document. I expected the assent forms to lead to discussions about my purpose in observing them, but, for the most part, they did not. The most interesting aspects of the assent forms, from the perspective of the second graders, was that I was from Stanford University (which several of them wished to attend, to become "medical doctors"), and that it gave them an opportunity to sign their names in cursive. One student was relatively interested in the purpose of my research after reading the form, and he proudly announced to the rest of the class that he had learned I was there to "look at how we say words," but the other students seemed entirely unimpressed by his discovery.

An aspect of my experience that I found quite surprising was the lack of interest in my digital recorders. Before I began my fieldwork, I was concerned that students would try to steal my recorders, but I found that they were generally ignored. Students at Meizhang are accustomed to adults carrying cellphones and other handheld devices, and

they may have viewed the recorder as another such device. Although I explained to students on several occasions that the recorders were recording what everyone said, and that I would take the recordings and analyze them to study how kids and adults speak at school, they did not appear to understand the subtleties of how recorders worked, asking me questions like, "does it record what *you* say?" What did receive slightly more attention were my field notebooks, which students would sometimes borrow to write messages in, or just to look at—my handwriting was too messy for them to read, which they found interesting in itself.

One of my primary concerns in approaching this research was not to cause disruption in the classroom, or put pressure on the teachers. This was a particular concern for Meizhang, as opposed to conventional school programs, due to the nature of the dual-language immersion curriculum; teachers were expected to accomplish a great deal in limited time, in an educational model that is still seen as relatively experimental. I assumed that having a researcher recording every class would be stressful for the teachers, and I anticipated that some would object to my being there. Fortunately, every teacher I worked with at Meizhang was willing to accommodate my research. While I initially offered to assist the teachers in any way they liked, in each classroom the teacher and I quickly fell into roles in which we generally ignored each other during class, which was convenient for both sides. During my fieldwork time in classrooms, I tried to be as invisible as possible, sitting in the back and not disrupting the lesson. With the exception of my initial letter of introduction explaining the purpose of my study, I avoided conversation about my research with the Meizhang teachers, so that they

wouldn't become self-conscious about or attempt to alter their language use in the classroom. In light of the general lack of attention paid to my presence as a researcher and to the recording process, I believe that I was able to record and observe authentic exchanges from the students and teachers at Meizhang.

The challenges I faced in collecting the data I wanted at Meizhang stemmed primarily from the fact that I became so quickly and thoroughly integrated into the social structures of the first and second grades. While my intention was to observe each student equally, certain students wanted to spend more time with me and would seek me out. Also, because there was a certain degree of self-segregation by gender, it was difficult for me to spend equal time with certain male student friendship groups. As a result, I collected more data from female students, and from those male students who spent time with the female students.

The social situation in the second grade, which was structured into cliques and contained a large, socially powerful gang of girls, also posed a problem, because it was socially risky for me to spend time with students other than those in the gang. In the end, I had to sacrifice my good standing with this group in order to conduct the fieldwork I needed to do with the other students in the class. In spite of these social challenges, I was able to survive the fieldwork experience and acquire a great deal of sociolinguistic data from a full range of students in the different classes.

2.5 Summary

The first and second grade communities at the Meizhang School are composed of

students and teachers with a diverse range of backgrounds and skills. In particular, the teachers in all four primary subject classrooms speak varieties of English and Mandarin that are different from each other and different from the varieties promoted as the target varieties at the school. Data for this study was collected via participant-observation over the course of the school day. The data consist of two types of audio recording, supplemented by field notes.

Chapter 3

Standard Mandarin and Sibilant Initials

3.1 What is Standard Mandarin?

The term "Standard Mandarin" may refer to several standards, some of which are promoted by the various governments of officially Mandarin-speaking states. In our case, the relevant standards are *Putonghua* ("common language," hereafter PTH), the standard promoted in Mainland China, and *Guoyu* ("national language," hereafter GY), the standard promoted in Taiwan. Both of these varieties share a common origin. In the early 20th century, the Nationalist government of China put forth a standard Mandarin, with a grammar based on the Chinese varieties spoken in Northern China, a phonological system based on Beijing Mandarin (a Northern variety), and a lexicon drawn from "the works of certain representative modern Chinese writers" (Chen 1988:131). As a result, the phonology of both PTH and GY contrast sharply with varieties of Southern Mandarin. One of the most salient of these differences is the distinction between retroflex and non-retroflex initials,[3] which will be the focus of the present analysis.

3.2 Retroflex Initial Variables

Standard Mandarin contains a phonemic distinction between sibilant retroflex initials and sibilant dental initials:

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3 I follow the Chinese linguistics convention of using the term "initial" to refer to the onset of a syllable. With very few exceptions, Mandarin follows the rule of one syllable per character. Each character presented here, therefore, should be assumed to have at most one initial.

Retroflex 圈舌			Dental 平舌		
pinyin	IPA	freq.	*pinyin*	IPA	freq.
zh	/tʂ/	2.11	z	/ts/	1.38
ch	/tʂʰ/	1.04	c	/tsʰ/	0.45
sh	/ʂ/	3.13	s	/s/	0.86

Table 1: Retroflex vs. Non-Retroflex Sibilant Initials in Standard Mandarin, with relative percent proportion based on corpus data (Suen 1982:374)

The three retroflex sibilant initials, and in particular (zh) and (sh), are extremely frequent in corpora of Standard Mandarin (with relative percent proportion of 2.11 and 3.13). They appear in some of the most frequent function words in Mandarin, including 这 *zhe* ('this'), 是 *shi* ('to be'), 什么 *shenme* ('what'), etc. (z) is also quite common (1.38), appearing in such common words as 在 *zai* ('at') and 做 *zuo* ('to do'), while (c) and (s) are less frequent. Crucially, for each of the retroflex-dental pairs, the retroflex variant is more frequent than the dental variant.

Non-standard varieties of Mandarin differ in both the phonetic realization and phonemic distribution of these initials. In terms of phonetics, the marked retroflex place of articulation is particular to Mandarin among the Chinese varieties, and is thought by some Chinese linguists to have been introduced into Chinese by the Manchurians (Luo 2004). While these initials are referred to as retroflex, they are not in fact articulated with the reverse side of the tongue, and are often produced with a post-alveolar or even palatal place of articulation, particularly among native speakers of Southern Mandarin or speakers of Southern Chinese varieties who have learned Mandarin as a second

language. The following analysis, however, will focus on the phonemic rather than phonetic non-standard use of these initials.

Phonemically, there is a great deal of variation in retroflex and dental sibilant initials among various dialects of Mandarin. One factor that may influence the degree of variation in this feature is the lack of cues for initial values in Chinese orthography; although Chinese characters often contain a "phonetic component," this phonetic element is more likely to provide cues to the rhyme of a syllable, not to its onset (Chen et al. 2003:118). The assignment of initials to lexical items in Standard Mandarin was originally determined according to their distribution in one particular region, Beijing (Chen 1988:131). Other dialects of Mandarin, primarily those in the north, also have a retroflex-dental distinction, but in these dialects the particular initials are distributed differently throughout the lexicon. Xiong (2001) discusses the distribution of initials in several regional dialects of Mandarin, including these examples from the Changli region:

Character	Std PTH	Changli
租	zu	zhu
诗	shi	si
罩	zhao	zao

Table 2: Pronunciation of example lexical items in PTH vs. Changli dialect (Xiong 2001)

Notice that the difference in distribution may run in either direction, meaning that in certain cases regional dialects assign retroflex initials to lexical items in which standard PTH calls for dental, and in other cases the reverse phenomenon occurs.

In other varieties of Mandarin, primarily those in the South, the retroflex set of

initials does not exist. Lexical items which begin with retroflex initials in PTH (zh, ch, sh) begin with their dental counterpart (z, c, s), resulting in a merger between dental and retroflex initials. Additionally, due to the phonologies of their native varieties, which lack retroflex initials, many speakers of Southern non-Mandarin Chinese varieties (Cantonese, Shanghainese, Taiwanese, etc.) are likely to merge these sets of initials when speaking Mandarin as a second language (Starr 2004). Crucially for the present analysis, this merger of dental and retroflex initials is common in Taiwan (Li 2004, Tse 1998).

In this discussion of retroflex and dental initials, I have contrasted "Standard Mandarin" initials with those of non-standard varieties, treating the various standards as uniform. While certain differences exist between the standard GY in Taiwan and the standard PTH in Mainland China, primarily in the area of vocabulary, both varieties agree almost entirely upon which lexical items begin with which sibilant initials (Li & Thompson 1989:1). The small phonological differences that do exist between lexical items in the two varieties largely relate to tones, with only a handful of characters receiving different standard pronunciations in terms of segmental features (e.g., *lese* versus *laji* for 垃圾 ('garbage')) (Harbaugh 1998). Additionally, while many speakers in Taiwan do not use retroflex initials, there are certainly speakers who do use them, and retroflex initials are generally considered to be part of the GY standard in Taiwan (Li 2004). Therefore, the distinction between GY and PTH will not be particularly relevant in this discussion, and we can assume that, as far as retroflex initials are concerned, from a phonemic perspective, all speakers are targeting an equivalent standard, regardless of whether they have a Taiwan or Mainland background.

3.3 Language and the Retroflex-Dental Merger in Taiwan

The linguistic situation in Taiwan is made complex by the island's multi-layered history of immigration. Taiwan's oldest inhabitants, the aborigines, are speakers of Austronesian languages. During its early history as a European colony, Taiwan experienced its first wave of immigration of ethnic Chinese, speakers of Fujian dialect (now known as "Taiwanese") and Hakka. Descendants of these older ethnic Chinese immigrants make up the majority of today's population, and are known as 本省人 *benshengren* ('people from inside the province') (Sandel 2003:527). As a Japanese colony from 1895 until the end of World War II, Taiwan also experienced a great deal of Japanese cultural and linguistic influence, which persists today.

In the time since World War II, Taiwan's linguistic environment has largely been dominated by ethnic Chinese who emigrated from Mainland China to Taiwan following World War II (a.k.a 外省人 *waishengren*, 'people from outside the province') (Corcuff 2002:163). Crucially, *waishengren* came mainly from the Southern dialect regions of China, were relatively well-educated, and spoke (or were able to speak) Mandarin (Roy 2003:6). Thus, while they brought the standard retroflex-dental distribution with them as an aspirational ideal, they were not necessarily users of this standard distinction. Through their ruling KMT party, the Nationalist Party, *waishengren* implemented Mandarin as the official language of Taiwan from the beginning of their rule in 1945, and promoted GY as its standard variety, in spite of the fact that the majority of people living in Taiwan were native speakers of Taiwanese (Sandel 2003:529). Since the 1990's,

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with the rise of the opposition DPP party, the status of Taiwanese and other non-Mandarin languages has risen. A crucial policy change in 1987 ended punishments in school for not speaking Mandarin; however, Mandarin continues to dominate the educational sphere, and young people's fluency in Mandarin is thought to be increasing (Sandel 2003: 531,534).

Partly because *waishengren* are concentrated in cities, and in the north of the island, the dominance of Mandarin varies a great deal from region to region (Hashiya 2007:448). Due to their predominantly Southern Mainland background, however, even *waishengren* may use the non-standard retroflex-dental merger, and therefore the distinction between *waishengren* and *benshengren* is not crucial in the present study, which focuses on variation within Mandarin rather than variation between Mandarin and Taiwanese.[4]

3.4 Social Distribution and Significance of the Merger

3.4.1 Phonetics

The majority of linguistic scholarship addressing the dental-retroflex distinction and its non-standard merger has focused on Taiwan. In the phonetic realm, Tse (1998), in a paper entitled ″台湾地区年轻人ㄓㄕㄔ与ㄗㄘㄙ真的不分吗?″('Do young people in Taiwan really not distinguish between zh, sh, ch, and z, s, c?'), analyzed the initials of 30

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4 A common view in Taiwan is that the non-standard dental-retroflex merger is a feature of *benshengren* speech, and that it results solely from Taiwanese language influence, while *waishengren* are thought to pronounce these initials standardly (Sandel 2003:545). This is connected to a similar ideology that characterizes all *waishengren* as educated elites (Corcuff 2002). While it may be the case that a greater percentage of *waishengren* than *benshengren* use standard initials, given the patterns of language use in Mainland China, there is no evidence that being from the Mainland implies standard use of retroflex initials.

students at Taiwan Normal University under the age of 31 who were qualitatively described as not having a "Northern accent" or noticeable use of retroflexion. This study found that, while the male talkers indeed produced no significant measurable difference between standard retroflex and standard dental tokens, the female speakers had an approximately 1,000 Hz difference between the two sets of initials, with the greatest distance occurring for (sh) vs. (s) and the smallest for (zh) vs. (z) (Tse 1998:3). His findings suggest that a sex may be a relevant social factor in the distribution of the merger, and that, for some speakers, the two sets of initials operate as a "near merger" rather than as a total phonemic merger.

3.4.2 Ideology

As suggested by the title of Tse's paper, the popular perception in Taiwan is that most young people do merge Mandarin dental and retroflex initials. Conventional wisdom holds that almost no one in Taiwan speaks "proper" Mandarin, and that this state of affairs is the result of insufficiently strict education and influence from Taiwanese. Another theme that frequently appears in discussions of the merger is shame and anxiety about the standardness of one's Mandarin pronunciation, particularly on the part of older *benshengren*, who say they feel embarrassed or nervous when they speak Mandarin because they fear their pronunciation is too non-standard. Sandel (2003:545) argues that this attitude results from the fact that "before the 1990's teachers and government officials politicized, or ideologized, a speaker's ability or inability to speak Standard National Language: 'standard' pronunciation indexed a person's intelligence and

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patriotism." The connection between non-standard pronunciation and political ideology is not surprising in this case; because *waishengren* were the introducers of Mandarin to Taiwan, and because the non-standard pronunciation of initials has popularly been attributed to Taiwanese influence, it is understandable that KMT officials would view the non-standard merger of initials as indicative of a move away from Mainland standards toward a distinctive Taiwanese standard, and in turn a rejection of their ideal of reunification with Mainland China.

Also participating in the politicization of retroflex initials are scholars who hold rather different political views. Certain Taiwanese linguists have attacked the GY Mandarin standard, advocating a shift in standards to reflect the way that Mandarin is spoken by the majority in Taiwan (Li 2004, Luo 2004, Yao 1998). Among their arguments is the claim that Mandarin is not a true Han Chinese language variety, and in particular that retroflex initials should not be part of a Han Chinese sound system, because they were introduced by northern invaders (Luo 2004).

In spite of its prevalence in Taiwan and in Southern Mainland China, and its politicization, the merger of dental and retroflex initials is consistently seen as non-standard and indicative of low education in Mandarin-speaking communities (Li 2004:120). The merger is a particularly salient marker due to the frequency of retroflex initials (Suen 1982:374), perceptual saliency of the sounds (Li 2004:121), and orthographic distinctions between the retroflex and dental initials in both Mainland *pinyin* and in Taiwanese *zhuyin fuhao* phonetic alphabet systems. In contrast to other non-standard Southern features, such as full tone, the dental-retroflex merger is not

adopted by Northern Mainlanders seeking to put on trendy Southern accents (Zhang 2001:129). At the same time, however, some Southerners are said to hold negative views of retroflex initials, claiming that they sound overly pompous or elitist (Li 2004:120). This view of a Northern pronunciation feature is consistent with more general views of Northerners, and in particular of Beijing people, who are perceived as thinking that they are superior to everyone else (Li 2006).

When evaluating discussions of the retroflex dental distinction, it is crucial to keep in mind that there are in fact two phenomena being discussed here: the phonemic distinction between dental and retroflex, and the phonetic realization of extremely back, retroflex initials. When individuals speak of the retroflex initial sounding pompous, they may in fact be referring to the phonetic realization of those initials. Because the term for the retroflex phoneme in Chinese is 卷舌 (*juan she*, 'curled tongue'), the phonetic realization of the retroflex initial as extremely retroflex is quite salient in the minds of laypeople. When they claim that they do not use retroflex, speakers often mean that they use a postalveolar rather than retroflex place of articulation for phonemically retroflex initials. Thus, the view that the dental-retroflex merger sounds uneducated, and the view that retroflex initials sound too snooty, do not necessarily stigmatize all possible sound systems when held simultaneously.

3.4.3 Variation Studies

Because there have been few large-scale variationist or dialectological studies of Mandarin speakers, most evidence on the current state of the dental-retroflex distinction

comes from qualitative observation. Li (2004:121) claims that, in spite of popular

perception of the state of Mandarin in Taiwan, standard use of retroflex initials appears

to be on the rise among younger speakers, but a quantitative analysis has yet to be

carried out to confirm this trend.

In Starr (2004), I examined the dental-retroflex distinction using a 2003 corpus of

100 speakers from Shanghai, a city in the south of Mainland China. Shanghai natives

have traditionally spoken Shanghainese, a Wu dialect mutually unintelligible with

Mandarin, but recent economic growth has resulted in a dramatic shift towards

Mandarin, as newcomers from Mandarin-speaking regions have moved in to participate

in the city's development (Starr 2004:8). I found that, as Mandarin has popularized, it has

also standardized, with young people ages 25–26 using far more standard retroflex

initials than older speakers. I also found that speakers were more likely to use standard

initials in read speech than in spontaneous speech, that women spoke more standardly

than men, and that more educated speakers spoke more standardly than less educated

speakers (Starr 2004:35). Overall, the findings of my study of variation in the use of the

dental-retroflex merger in Shanghai are consistent with previous findings for non-

standard pronunciation features in other languages (e.g., Cheshire 2003:426), suggesting

that previous characterizations of the merger as a stigmatized sign of poor education are

accurate.

3.5 Conclusion

This chapter has introduced some basic facts about Standard Mandarin, Taiwanese

Mandarin, and variation in dental and retroflex sibilant initials. Non-standard production

of retroflex and dental initials is one of the most frequent, salient, stigmatized, and widely-distributed features in non-standard Mandarin varieties. Chapters 4 and 7, about teacher and student language use, will focus on this linguistic variable.

Chapter 4

Teacher Language Use

4.1 Introduction

In keeping with other dual-language immersion programs, the Meizhang school aims to achieve a three-fold competency: students who are bilingual, biliterate, and bicultural. The "bicultural" portion of this mission statement represents not only the most general sense of cultural competency, but also encompasses sociolinguistic and communicative competency; students are meant to acquire such skills as the ability to shift registers in various contexts, knowledge of regional and social variation, and other competencies comparable to those of a native speaker growing up surrounded by other native speakers (Andersen 1990:1). Given what we know about how sociolinguistic knowledge is acquired—specifically, that it is primarily acquired indirectly through exposure to speech communities in everyday life rather than through explicit instruction—it is unreasonable to expect students growing up in a dual-immersion environment to acquire sociolinguistic knowledge identical to that of children in monolingual Mandarin or English environments, or even to children in other bilingual environments, because their experiences will necessarily be quite different. The goal of schools like Meizhang, however, is not to produce children who are identical to native speakers in every respect, but to make them sufficiently competent to operate within speech communities of native speakers. This task is still a tall order, considering the limited hours and contexts available in which to expose students to the range of styles and meanings in two different

languages. Moreover, the two languages used in the Meizhang program are spoken by multiple communities in various parts of the world, encompassing many different dialects and cultural conventions. Different native speakers of English and of Mandarin coming from different communities may have different sociolinguistic practices, and therefore we cannot be sure that students are receiving a unified message, even when they are absorbing sociolinguistic information.

When approaching the question of what communicative competence students may achieve at Meizhang, it seems appropriate to first establish what patterns of language use they are being exposed to at school. Because we acquire our knowledge about the social meaning of language primarily through exposure to variation, it follows that the nature of linguistic variation present at school is crucial in determining what sociolinguistic knowledge students acquire. In the case of English, regardless of their primary home language, students are exposed to a wide range of native and non-native Englishes, by students, staff, and teachers at school, as well as by media and other sources encountered through living in the United States. In the case of Mandarin, however, because English is the language of the playground, for many students the classroom is essentially their only source of Mandarin, with the vast majority of Mandarin classroom speech coming from their teachers. Thus, particularly in the case of Mandarin, the speech of teachers is a crucial data source for students as they develop their sociolinguistic understanding of language.

One of the criticisms leveled at single-language immersion has been that students who are primarily exposed to a second language in an immersion classroom, where the

teacher is the only native speaker of that language, will have limited exposure to stylistic variation, and therefore that their competence will necessarily be limited (Swain 1985, Swain & Lapkin 1990, Genesee 1991). In other words, the claim is that, because students will only be exposed to teacher speech, they will not acquire sufficient competence in language styles more common to non-school settings. Dual-language immersion models attempt to improve upon this situation by introducing native speakers of both target languages into the classroom, thus increasing students' exposure to different native speakers in different social and stylistic contexts. Exposure to as many speakers as possible is inarguably a good thing for learners; it would be a mistake to assume, however, that students who receive input only from teachers are not hearing stylistic variation.

What are students actually hearing when they listen to teachers in the classroom? While much previous work has characterized teacher speech as monolithically formal and standard (Labov 1969, Kleifgen 1985, Wong Fillmore 1985, Wheeler & Swords 2004, Godley et al. 2006), in fact very little quantitative analysis has been done on how teachers speak in the classroom, other than at discourse and interactional levels (Sinclair & Coulthard 1975, Heath 1978, Foster 1989, Mehan 1998, etc.). Researchers have claimed, primarily anecdotally, that teachers use more standard pronunciation when they are teaching than outside the classroom (e.g., Wheeler & Swords 2004:474), but the classroom itself has remained something of a black box in which teachers are presumed to consistently use "teacher talk" (Wong Fillmore 1985). In real classrooms, however, teachers engage in a variety of activities, and, as I will argue in this chapter, use language

appropriate to these different contexts.

Another issue central to the examination of teacher speech is the notion of standard language. While it may be true that many teachers are promoters of prescriptive language norms, it is also the case that many teachers are not native speakers of a standard language variety, or of a language variety promoted by the school.[5] Teachers who are non-standard language speakers are faced with several challenges: first, they must construct an educator persona appropriate to the classroom, when their speech may not be associated with education. They must devise strategies of deflecting challenges to their language use from students, some of whom may use more standard language than the teachers themselves. And, finally, they must teach students in a way that is acceptable to the school (and not, for example, teach students to speak "incorrectly").

Students in the classroom of a teacher who uses non-standard language face challenges of their own. In the case of students whose greatest exposure to a language comes from the teacher, we might wonder whether students would be able to acquire a standard language variety from a teacher who does not consistently use that variety, or if they would even realize that the variety spoken by their teacher was non-standard. More generally, students might find it difficult to piece together a coherent understanding of sociolinguistic meaning in a setting where they are exposed to limited amounts of widely varying dialects from teachers and native-speaking students. Understanding what students are hearing from their teachers is a first step in developing a complete picture of how students fare in such environments.

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5   There are no statistics on how many teachers are speakers of non-standard language around the world, but we may assume that many exist, primarily because there is a global shortage of trained teachers (Sharma 2008), and therefore schools cannot be particularly selective about the speech of the teachers they hire.

This chapter will address the language use of Mandarin-speaking teachers at Meizhang, considering the perspectives of the teachers and of their students.

4.2 Teachers' Speech in the Classroom

4.2.1 Teacher Talk

The majority of previous work on teachers' speech in the classroom has focused on interaction and communication, rather than on lower-level analysis. Present in discussions of interaction, however, are assumptions about the standardness of teacher speech. Cullen (1998), for example, references a debate in the literature on teacher talk in EFL classrooms relating to how much speech from the teacher is helpful for students; some researchers feel that the less students are listening to the teacher speak, the better, because students need more time to practice everyday communication via interaction with others, while others feel that teacher talk is helpful to students because it provides a source of "comprehensible input" (Cullen 1998:179). In this literature, "teacher talk" is uniformly assumed not only to be speech that includes a particular set of communicative practices, but also speech that conforms to the target standard which students are meant to be acquiring.

At this point, we should consider whether it makes sense to talk about a "target" language variety in a classroom setting that is separate from the variety spoken by the teacher. It would seem that most studies of school settings assume that the target variety and the teacher variety are identical. For the sake of argument, let us define the target variety of the classroom as the variety that the teacher wishes the students to acquire, and

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let us assume that the target variety is not relevant unless students are aware, at some level, that it is the target variety. Must it be the case that students conclude that the variety the teacher wishes them to acquire is the same as the variety used by the teacher? In a setting where teachers are not explicitly teaching language, it might be argued that students have no way of differentiating the target variety of the classroom from the teacher variety. In a setting where teachers are explicitly giving some language instruction, however, students may acquire knowledge about how the teacher wishes for them to use language features based upon metalinguistic comments she makes about those features. For example, a teacher who uses "ain't" in her own speech might explicitly warn students not to use "ain't" when speaking English, thereby creating a distinction for students between teacher language and target language. This case alone illustrates that teacher and target language are not necessarily identical. Moreover, in this discussion we have been assuming that the teacher uses only one variety in the classroom. In a classroom setting where teachers are switching between varieties, or using some features more frequently in certain contexts, students no longer necessarily require metalinguistic commentary to draw conclusions that may differentiate between the target variety and the teacher variety. If we expand our focus to the broader school context, in addition to the classroom, students are exposed to language use and attitudes from other students, teachers, and staff in the wider school community. In a school program where language acquisition is a specific focus, the promotion of particular language varieties may be quite explicit. Therefore, it seems reasonable to talk about a target language variety of the school community which is not necessarily identical to that

used by the teacher. Or, to be more precise, we may acknowledge the existence of target language varieties; varieties that are taught, promoted, or valued at school.

There have been very few studies of language education programs that acknowledge dialectal differences in the community, let alone dialectal differences among teachers; the notable exception is Rubinstein-Avila (2002), a qualitative study of varieties of Portuguese in an American dual-language immersion school. Crucially, in spite of standardization efforts, Portuguese does not have a single dominant standard, with Brazil and Portugal both holding significant cultural capital (Rubinstein-Avila 2002:68). The Portuguese-speaking students in this program came from various language backgrounds, including speakers from Portugal, the Azores, Brazil, and Cape Verde (Rubinstein-Avila 2002:68). The majority of the teachers spoke some variety of Iberian Portuguese (and were native to Portugal or the Azores), but others spoke Brazilian Portuguese, and one was from Cape Verde (Rubinstein-Avila 2002:80). While Rubinstein-Avila does not provide a quantitative analysis of teachers' speech, she describes some of the conflicts that arose among the teachers as a result of dialect differences; when developing a language assessment tool, Brazilian teachers were shocked to hear their Iberian colleagues' views that Iberian Portuguese was the only standard Portuguese variety (Rubinstein-Avila 2002:81). In spite of these differences, the teachers are characterized as using standard varieties in the classroom; the single Cape Verdean teacher, for example, claimed to use Iberian Portuguese when teaching (Rubinstein-Avila 2002:82). Even in this context, where the standard was under dispute, teachers viewed themselves as users of a standard variety. The question of how these

teachers were actually speaking in the classroom, however, remains open.

4.2.2 Teaching as Performance

This examination of teacher speech will proceed under the view that speakers use linguistic variants that index social meanings to construct and perform personae, e.g., "being an instructor" (Podesva 2007, Eckert 2002). For this particular analysis, it is not crucial that we accept the notion that speakers perform in all contexts, or that all life is performed (cf. Goffman 1959), but only that teachers perform in the context of the classroom. The treatment of speech as a performance is particularly appropriate to the classroom speech of teachers, which has frequently been studied as performance both by performance theorists and education researchers (Prendergast 2008, Pineau 1994, etc.). As observed by both Pineau and Prendergast, the literature on teaching as performance uses a vast array of metaphors and frameworks, some of which problematically cast the teacher as actor, thus diminishing the importance of interaction (Pineau 1994:18). The present analysis of teacher speech is not intended to be located within any particular framework of performance theory, and my focus here on the speech of teachers rather than on the interaction of teachers and students is not meant to suggest that such interaction is unimportant in understanding teaching as performance.

I also do not mean to suggest through this analysis that the teachers who are studied here themselves view their teaching as performance and characterize their stylistic variation as a means of persona construction. While I did not explicitly ask the teachers in this study about their own variation, conversations with other Mandarin-

speaking teachers indicate that teachers whose speech contains certain salient, stigmatized features (such as /n/-/l/ merger typical in parts of Southern China), and are aware that they vary in their use of these features, most often present an attention-paid-to-speech account of their variation (cf. Labov 1972). In other words, they claim that when they are paying attention to how they are speaking, they remember not to use their "natural" variant, which then slips out when they are not paying attention. Later in this analysis I will address whether this account is appropriate for the data found in the present study.

4.3 The Teachers

4.3.1 Introduction

This analysis of teacher speech focuses on three of the Mandarin teachers at Meizhang: the first and second grade primary teachers, and the music subject teacher. These teachers were selected based on the relevance of their speech to the students, and the quality of data available. Not included in this analysis are the speech of the Mandarin-speaking art teacher, gym teacher, and various substitute teachers. These teachers have been excluded as a result of problematic acoustic characteristics of their classroom or teaching environment, or due to the low quantity of data available.

The two primary English teachers have also been excluded from this account of teacher speech; this is not because their speech contains no variation. Due to the noisy nature of classroom data, my analysis is limited to variation that is dramatic and categorical enough to be coded perceptually. For this reason, I have chosen to focus on

teachers who are native speakers of non-standard dialects that dramatically differ from the standard in respects that do not require fine-grained acoustic analysis.

The following descriptions introduce the three teachers examined here, summarizing their role in the classroom and providing a brief characterization of their speech.

4.3.2 TW Teacher

4.3.2.1 TW Teacher in the Classroom

TW teacher is the primary teacher of the first grade students, and was the primary teacher of the second graders when they were in first grade the previous year. She is in her 40's, originally from Taiwan, and has taught at Meizhang for a number of years. TW Teacher teaches two classes of first graders separately, and is with each class for approximately half of the school day, with the exception of one class period a week when she teaches all the students in a joint class. She has the sole use of a classroom which the students enter and leave for Chinese class. TW teacher's role in the classroom is to teach lessons (primarily in language arts and math), maintain classroom order and resolve disputes, discuss upcoming school events and administrative classroom issues, and organize special school activities and performances.

4.3.2.2 Characterization of TW Teacher Speech

Overall, TW Teacher's speech is quite non-standard. In addition to the retroflex-dental merger feature examined in the following analysis, TW teacher uses a few other non-

standard features in her speech, the most prominent of which is the variable absence of

syllable-final rhoticity in words like 二 *er* ('two'). Her features are typical of non-

standard Taiwanese Mandarin varieties (Li 2004).

4.3.3 NE Teacher

4.3.3.1 NE Teacher in the Classroom

NE teacher is the primary teacher of the second grade students, and the library subject

teacher for all students in the Chinese program. She is in her 30's and is from the

Northeast region of Mainland China. This is her first year serving as a primary teacher at

the school, although she had previously been serving as the library teacher. In her

capacity as library teacher, she teaches a library lesson to each class one period a week,

consisting primarily of reading stories aloud to the students in the library. When she is

performing her role as the second grade primary teacher, her responsibilities are

essentially identical to those described above for the TW teacher. As the second grade

primary teacher, she shares the second grade room with the second grade English

teacher. In contrast to the first grade, the second graders do not have their days

consistently split evenly between English and Chinese, but alternate heavy English days

with heavy Chinese days, depending on the day of the week. In spite of the more

complex schedule, on the whole the students are spending half of their primary class

time with NE teacher in a Chinese-medium class.

4.3.3.2 Characterization of NE Teacher Speech

The NE teacher has several non-standard features in her speech. In addition to the non-standard retroflex-dental merger, she makes non-standard use of (-en)/(-eng) codas (i.e., "mixes up" (-en) and (-eng)), and has a labial fricative /v/ in place of /w/ before unrounded vowels, which is a common regional feature in the Northeast of China (Shen 1987). NE teacher is one of a very few non-Taiwanese teachers and staff in the Chinese program at Meizhang, and therefore her accent is considered quite distinctive by the other members of the school.

4.3.4 MT Teacher

4.3.4.1 MT Teacher in the Classroom

MT Teacher is the music subject teacher for all of the students. She teaches a lesson of approximately 40 minutes with each class once a week. Like the TW Teacher, she is in her 40's, from Taiwan, and has taught at Meizhang for a few years. Her role in the music classes consists of teaching the students Mandarin children's songs using handouts with the music and lyrics, playing the piano and singing those songs with the students, assisting the students in completing worksheets for basic music reading and listening training (e.g., "circle the highest note"), teaching the students to play simple instruments like the xylophone, and helping choreograph and prepare student musical performances for special school events. She teaches in the music classroom, which she shares with a music teacher for the students in the European language program. MT Teacher often uses a clip-on microphone with an amplifier when she teaches, to avoid raising her voice. This amplifier adds a bit of distortion to my recordings of her, but her speech is still clear

enough to understand and analyze.

4.3.4.2 Characterization of MT Teacher Speech

MT teacher's speech is similar to the TW teacher's speech in terms of its nonstandard features.

4.3.5 Other Chinese-speaking Teachers and Staff

In addition to the teachers described above, the students interact with several additional Chinese-speaking teachers on a weekly basis. Each class of students has a weekly lesson with the gym teacher, who is from Hong Kong, and the art teacher, who is Taiwanese American. Due to the nature of gym and art classes, which involve students participating in activities without extensive commentary from the teacher, the speech produced by these two teachers is not comparable to that of the three teachers above and thus will not be considered here. The students also interact with several substitute Chinese teachers, as well as a few senior administrative staff members of the Chinese program. Most of these substitute and staff members are originally from Taiwan.

4.4 Linguistic Variable

This analysis focuses on the use of dental and retroflex sibilant initials in Mandarin.[6] In this discussion, when I refer to standard pronunciation of retroflex initials, I am referencing those initials of lexical items which in Standard Mandarin are retroflex, and which are being realized as phonologically retroflex by the speaker, as opposed to

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6   Please refer to Chapter 3 for discussion of these variables and their sociolinguistic patterning.

phonologically dental. Hypercorrect pronunciation of dental initials refers to initials which in Standard Mandarin are dental, and which are being realized as phonologically retroflex rather than dental.

4.5 Methodology

4.5.1 Introduction

When examining dental and retroflex sibilant initial use by these three teachers, I will first address the question of whether these teachers consistently use standard dental and retroflex sibilant initials. If their use is variable, we will then investigate what external and internal constraints govern their patterns of use, and whether these patterns can tell us something about the social meaning of these variables. Additionally, we are interested in establishing whether students could pick up on these patterns to either acquire the standard dental-retroflex distinction, or to learn something about the social meanings the variables index. The fact that our interest lies primarily in how teachers' speech is perceived, rather than subtle differences that may exist in production, shapes the present methods of analysis.

4.5.2 Data Collection

Data for the present study was gathered via digital audio recordings made at Meizhang during participant observation sessions, as described in Chapter 2. For the purposes of this analysis, 144 minutes of classroom interaction were transcribed and analyzed. Segments of classroom speech were selected for analysis according to criteria that will

be discussed in the following section on classroom events.

4.5.3 Coding Methodology

This study seeks to understand how students might develop an understanding of the retroflex/dental distinction based upon teacher input; therefore, all initials of lexical items that in Standard Mandarin would be realized as either retroflex or dental sibilant initials were collected for analysis. Speech was segmented and tokens then coded by the author using Praat software. 2,555 retroflex and dental sibilant initial tokens were coded in total. The data were then analyzed using the statistical software R, including the Rbrul statistical package for mixed-effects variable rule analysis (Johnson 2009) and the lme4 package containing the lmer method of linear mixed-effect modeling described in Baayen (2008).

Because recordings were made amid classroom noise, acoustic analysis of these initials was impossible. The primary goal of this analysis, however, is to determine whether students receive perceptual cues that cause them to classify a particular lexical item as dental or retroflex, and therefore the precise acoustic value of the initials is not as relevant as their perceptual category. As discussed in Chapter 3, considerable variation exists in the phonetic realization of retroflex initials, whereas the dental category is relatively uniform; therefore, the tokens were perceptually coded into a binary distinction wherein tokens that were perceptually dental were classified as phonologically dental, and tokens with a postalveolar, retroflex, or generally back place of articulation were classified as phonologically retroflex.

4.6 Results

4.6.1 Overall Rates of Use

4.6.1.1 Retroflex Tokens

Tokens of initials that are pronounced as retroflex ((sh), (zh), or (ch)) in Standard

Mandarin comprised 66.77% of the data (1706 tokens out of 2,555). The three teachers'

overall realizations of these tokens is given in Table 3:

Teacher	Rate of Retroflex (Standard)	Total N
TW	35%	667
NE	63%	612
MT	40%	427

Table 3: Overall rates of standard pronunciation of retroflex initials

Each teacher exhibits a considerable level of overall variation. According to Fischer's

Exact tests, the difference between TW teacher and MT teacher's overall rates of

standard retroflex is not significant (p = .1084). The differences between NE vs. TW and

NE vs. MT, however, are both extremely significant (p < .0001, p = .0001). These

findings are consistent with the facts that TW and MT teacher are both from Taiwan, and

that the features of their speech were characterized as qualitatively similar.

4.6.1.2 Dental Tokens (Hypercorrection)

Tokens of initials that are pronounced as dental ((s), (z), or (c)) in Standard Mandarin

comprised 33.23% of the data (849 tokens out of 2,555). The relative frequencies of

dental vs. retroflex initials in these data are consistent with their overall relative

frequencies in Mandarin, as discussed in Chapter 3. The teachers' realizations of these

tokens is given in Table 4:

Teacher	Rate of Retroflex (Hypercorrection)	Total N
TW	10%	375
NE	1%	294
MT	8%	180

Table 4: Overall rates of hypercorrect pronunciation of dental initials

The rates of hypercorrect pronunciation were quite low. In particular, the low rate of

hypercorrect pronunciation for NE teacher was unexpected, because northern varieties of

Mandarin are thought to contain retroflex initials but assign them throughout the lexicon

differently. Thus, we would expect a speaker of such a variety to consistently realize the

initials of certain lexical items as retroflex which in Standard Mandarin are dental. These

results suggest that NE Teacher may not be a speaker of such a variety; because we do

not know her exact native regional variety, or the linguistic environment in which she

grew up, our evidence here is limited.

According to Fischer's Exact tests, the difference between the hypercorrection

rates of TW Teacher and MT Teacher is not significant ($p = .2332$). Again, this is

consistent with their being speakers of the same variety. The differences between NE vs.

TW and NE vs. MT were both significant ($p < .0001$, $p = .0003$).

We can also use these data to investigate whether the realization of retroflex

initials as retroflex and the realization of dental initials as retroflex are part of the same

phonological process, or are two separate processes. In other words, we can evaluate a possible model, Model A, in which sibilant initials are treated as one group, with place of articulation unspecified, and are variably assigned retroflex or dental values. This contrasts with Model B, in which the realization of standard retroflex tokens as dental is a different process from the realization of standard dental tokens as dental. In Model A, we would expect rates of retroflex realization for retroflex and dental initials to be comparable, because they are part of the same process. In Model B, these rates would not necessarily be comparable.

For NE Teacher, we find a retroflex rate of 63% for retroflex tokens, versus a retroflex rate of only 1% for dental tokens. Clearly, in her case, Model A is not a good fit, meaning that she is not treating retroflex tokens in the same manner as dental tokens. For TW Teacher, we have a rate of 35% for retroflex tokens versus 10% for dental tokens, and MT Teacher has respective rates of 40% and 8%. Fischer's Exact tests indicate that these rates are significantly different for both teachers ($p < .0001$). Thus, we can conclude that these teachers are not equally likely to assign retroflex initials to any sibilant initial.

Why do we find this difference in rates? Two possible explanations for this pattern are that the teachers have an underlying knowledge of the standard realization of each token, which influences the likelihood of its realization as retroflex, or that there are unrelated linguistic factors, such as lexical frequency, which are causing this asymmetry to emerge. Given that the phonological contexts in which dental vs. retroflex initials can appear are essentially identical (i.e., the same set of vowels can occur after dental and

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retroflex initials), it seems unlikely that linguistic factors could account for this large difference in retroflex rates. I will return to this question in the later section on internal linguistic constraints on variation.

4.6.1.3 Conclusions

These data have confirmed that all three teachers vary in their use of standard retroflex and dental sibilant initials. In the case of the NE Teacher, we might characterize her usage as retroflex variably merging with dental initials, while for TW and MT Teacher, there seems to be an additional process by which dentals are sometimes realized as retroflex.

While we might find it unremarkable that TW and MT Teacher have such similar rates of overall retroflex and dental realization, given that they are both from Taiwan, in fact individuals from Taiwan vary a great deal in their use of this variable, depending upon their specific regional and personal background, as discussed in Chapter 3. We will see in further analyses whether their speech continues to pattern similarly as we examine different stylistic and linguistic contexts.

4.6.2 Stylistic Variation

4.6.2.1 Introduction

This analysis is restricted to classroom settings, in which teachers are consistently addressing students, rather than multiple types of interlocutors with whom they maintain a variety of stances and power relations. What constitutes different stylistic contexts here

is therefore restricted to speech activities that occur within this single setting. In fact, teachers do much more than "teach" within the classroom, and the interactions between teachers are students are not limited to those in which their roles are instructor and learner.

Teachers, at most levels of education, are tasked with not only instructing students, but also with two other major classroom tasks: policing student behavior ("behavior management"), and conveying administrative information about school and classroom events. An example of instruction would be the teacher teaching students what numbers add up to ten. A behavior management example would be the teacher telling students to stop talking while she is trying to teach them what numbers add up to ten. An example of conveying administrative information would be informing students that tomorrow they will have a quiz on what numbers add up to ten. These categories could be broken down even further, but, at least in the context of the present fieldwork, these are the three basic categories of interactional tasks in the classroom that involve speech from the teacher in which the entire student body of the classroom serves as either "addressees" or "auditors" (cf. Bell 1984).

In this analysis, I will adopt the view that instruction is a distinct and privileged stylistic context, associated with the persona of the instructor, of which speech community members have well-developed expectations. As we have learned, teachers are assumed in both linguistic and educational literature to use a certain type of language in the classroom; this speaks to the expectations we have for the role of classroom instructor. The prediction then follows that teachers will make use of linguistic features

to perform this instructor persona, and thus distinguish instructional contexts from other classroom contexts. Additionally, we must consider that instruction of curricular material highlights language itself, as well as ideologies of standard language. Even in instructional contexts which are not specifically language arts lessons, teachers in immersion classrooms frequently introduce new vocabulary items, and engage with the language on a level that is perhaps different from teachers in mainstream classrooms. Even in mainstream classrooms, however, teachers are expected to teach standard language to students, and at the early elementary level teachers are introducing significant amounts of new vocabulary to students, regardless of the subject of instruction. As a result, language use is uniquely salient during instruction in contrast to other classroom activities.

While we might argue from an anthropological or pedagogical perspective that correcting student behavior is a type of instruction, in that it teaches students the expected behaviors of the classroom which in turn prepares them to operate acceptably within the public sphere, from an interactional perspective, there are clear differences between instruction and behavior management. First, instruction is a planned activity that is controlled to a large extent by the teacher; she prepares the lesson, and proceeds according to a set curriculum. Behavior management is defined here as only those events which are reactive on the part of the teacher; that is, she is reacting to and referencing a particular incident that occurs in class. If the teacher plans a lesson on how to behave in the classroom that she intends to teach regardless of whether a behavior incident arises or not, that is no longer behavior management, but instruction. Furthermore, while

teachers may be encouraged to view behavior management as a teaching opportunity, in reality the motivations involved in a behavior management interaction are not primarily pedagogical, but aimed at stopping undesirable behavior that is interfering with instruction. In this context, teachers are performing the persona of a disciplinarian, and are pursuing the goals of being obeyed and maintaining face within the classroom. I will return to the question of face and the disciplinarian persona in the discussion of behavior management utterances in section 4.6.2.4.4.

Conveying administrative information is also reminiscent of instruction, in the sense that it imparts information to students. In spite of this, several factors distinguish this type of interaction to the extent that it belongs in a different class. First, the information being conveyed is not curricular, and the teacher is serving in the same role as a parent or caregiver would in any other context, rather than in a specialized instructor role that is specific to the classroom. Secondly, although conveying administrative information is generally planned, it is not rehearsed or strategically presented in the same way that instruction is prepared. Moreover, because the teacher is not acting specifically as an instructor in this context, conveying administrative information does not highlight language, or ideologies of standard language, in the same sense that instruction does.

The following analyses will examine two alternate methods of classifying teacher speech contexts. First, we will look at how teacher speech patterns by classroom activity, grouping all speech during that activity into a single category. Then, we will break down teacher speech by utterance, classifying each utterance separately according to its topic.

4.6.2.2 Classroom Events

4.6.2.2.1 Introduction

Teachers in traditional classroom settings[7] generally plan out a class period (which, at Meizhang, is a period of time lasting from one to two hours, demarcated by recess or lunch breaks, or by a transfer of students from one classroom to another) so that students are mostly engaging in the same activities at the same time, and so that activities progress and are linked together in a particular fashion. The result of this planning is that class periods are structured as a sequence of what I will call "classroom events," which are activities lasting from a few minutes to half an hour, generally with a clearly marked beginning and end. Most of these events are pre-planned by the teacher, while others are spontaneous.   In Chinese classrooms at Meizhang, most classroom events involve considerable amounts of speech from the teacher directed to the entire class, but in others the teacher is largely silent, or engaging with individual students. Examples of classroom events which do not involve much speech from the teacher include students filling out music worksheets, engaging in individual reading or drawing, filling out their Chinese dictionary index cards, and completing art projects. Because we are focusing on teacher speech, we are most interested in those events which do involve speech from the teacher. Events that involve speech from the teacher directed at the entire class include teaching a lesson, discussing an upcoming school event, and dealing with major behavioral incidents.

For our analysis of speech categorized by classroom event, we will compare two broad categories of events that involve significant amounts of speech from the teacher. In

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7   In contrast to models such as Montessori, which emphasize student choice of activities (Lillard 2005).

light of the distinctive nature of instruction as a speech activity, as discussed in the previous section, the two categories examined here will be "teaching events" versus "non-teaching events."

I have grouped behavior management and administrative topics here into an umbrella non-teaching category, at least for this initial analysis, because behavior management does not occur as a classroom event in itself; rather, it occurs as isolated utterances within larger contexts of teaching or non-teaching events. While we might have an entire classroom event devoted to the topic of student behavior, the bulk of teacher utterances in this event type are not direct behavior management utterances in reaction to current student behavior, but statements referring to how students should behave more generally. These statements are similar to administrative utterances in the sense that they inform students about how the classroom will be run, rather than imparting curricular material. Thus, while on an utterance level behavior management and administration are quite different, on a classroom event level, the distinction between teaching and non-teaching events seems the most salient.

Because teaching events consist primarily of instruction, we can predict that teachers will make greater use of standard pronunciation than they will in non-teaching events, as a means of performing an instructor persona.

4.6.2.2.2 Classroom Events: Methodology

Four classroom events were analyzed for each of the three teachers. For each teacher, a point on a particular day was randomly selected, and the first two teaching events and

first two non-teaching events were selected for analysis. In the case of the two subject

teachers, TW Teacher and NE Teacher, the two consecutive classroom events each

contained a language arts lesson and a non-language arts lesson. This is not entirely

surprising, given that the teachers generally taught a variety of topics within a day,

making it unlikely for two consecutive language arts lessons to occur.

For the MT teacher, because she is a subject teacher who only sees students

during a short class period, it was not possible to select classroom events all occurring on

the same day. Because MT Teacher interacts with both the first and second graders, one

teaching event and non-teaching event were selected from interactions with each grade.

4.6.2.2.3 Classroom Events: Results

4.6.2.2.3.1 TW Teacher

TW Teacher's classroom events are listed in Table 5:

Name	Event Type	Description
Tree Story	Teaching	Reading and discussing book about trees.
Jump-Rope Rhyme	Teaching	Teaching a rhyming numbers chant for jumping rope.
Jump for Heart	Non-Teaching	Reminding students about an upcoming school event.
Spy Game	Non-Teaching	Resolving a dispute about students spying on others during recess.

Table 5: TW Teacher Classroom Events

A selection from the Tree Story event is given in Example (4.1), with syllables with

standard retroflex initials highlighted in bold:

(4.1) TW: 你说的会讲到树会提到树。
　　　　ni **shuo** de hui jiangdao **shu** hui tidao **shu**
　　　　You said it will talk about trees, it will be about trees.

A selection from the Spy Game event is shown in Example (4.2), with syllables with

non-standard initials italicized:

(4.2) TW: 这个问题你们下课的时候还是没有解决。
　　　　ze ge wenti nimen xiake de *si*hou hai*si* meiyou jiejue
　　　　You still didn't resolve this problem during recess.

Figure 1 illustrates the percent of standard retroflex initials produced as retroflex by TW

Teacher in the four classroom events. Each of the event categories are followed by the

mean rate for that category.
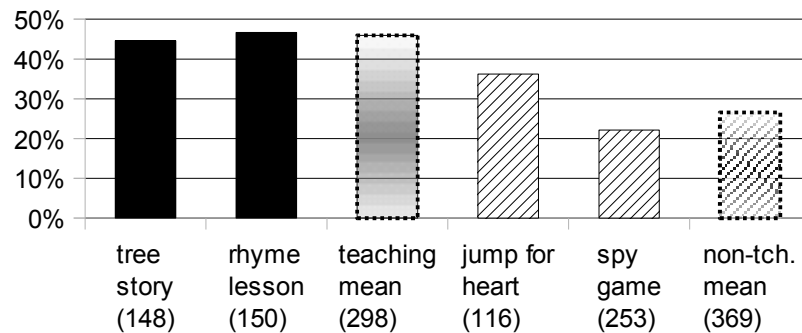
Figure 1: Percent standard retroflex initials by event (TW Teacher) (number of tokens given in parentheses)

As predicted, TW Teacher uses significantly more standard retroflex initials in teaching

events than in non-teaching events ($p < .0001$). Her speech in the Spy Game event is also

significantly less standard than in the Jump for Heart event ($p < .0001$).

We find that the language arts lesson (Jump-Rope Rhyme) and the science lesson

(Tree Story) are very similar in their rates of retroflex initials. In some respects this is

surprising, since a language arts lesson should theoretically highlight language more than a non-language arts lesson, and in turn lead to more standard pronunciation of initials. On the other hand, if we look more closely at the content of the Tree Story lesson, the event consists primarily of TW Teacher reading a story and discussing new vocabulary words related to trees. This example illustrates that, at least in the context of language immersion, we cannot expect to draw a clear line between language arts and other instruction at the early elementary level.

In the non-teaching events, we see a much larger gap between the two events. The primarily administrative non-teaching event, Jump for Heart, a reminder about an upcoming student activity, contains 36.21% retroflex standard initials, while Spy Game, a spontaneous event in which the teacher resolves a major dispute that occurred at recess, features only 22.13% standard retroflex initials. This difference suggests that, while teaching events may be a coherent category, non-teaching events are not. In the following section containing analysis by utterance type, we will see if we can account for some of this variation.

4.6.2.2.3.2 NE Teacher

NE Teacher's classroom events are listed in Table 6:

Name	Event Type	Description
Ethics Story	Teaching	Reading and discussing a book of short stories about ethical behavior
Grammar Lesson	Teaching	Teaching a grammar point
Field Trip Reminder	Non-Teaching	Going over organizational details for an upcoming field trip
Report Reminder	Non-Teaching	Reviewing how students are supposed to turn in assignments.

Table 6: NE Teacher Classroom Events

Examples (4.3) and (4.4) are excerpts from the Ethics Story and Field Trip Reminder

events, respectively:

(4.3) NE: 可是羊妹妹还是摇头说什么
　　　ke**shi** yang meimei hai**shi** yaotou **shuo shen**me
　　　But Little Sister Sheep is still shaking her head, and what is she saying?

(4.4) NE: 哎［TONY］听得很认真啊
　　　ei [TONY] ting de hen ren*zen* a
　　　Hey, [TONY] is listening very well

　　　我知道［TONY］为什么最近有进步
　　　wo *zi*dao [TONY] wei**shen**me zuijin you jinbu
　　　I know why [TONY] has recently made progress
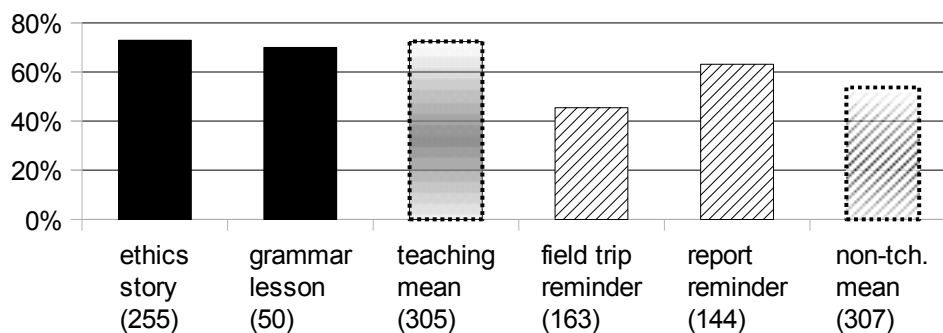
Figure 2: Percent standard retroflex initials by event (NE Teacher)

Figure 2 summarizes the percent standard retroflex for each classroom event, plus the mean of the two event classes. As with TW Teacher, NE Teacher's teaching events are significantly more standard than her non-teaching events (p < .0001). Another similarity is that the teaching events are extremely uniform in rates of standard initials, while the non-teaching events are significantly different from each other (p = .002). Again, these teaching events are on different topics, one being a grammar lesson, which ought to maximally highlight standard language, and the other a social studies lesson featuring stories about ethical behavior. While the ethics story lesson is not explicitly about language, it does center around reading a story. In contrast to the tree story event of TW Teacher, however, the Ethics Story event does not involve considerable discussion of new vocabulary items. Overall it seems as though the nature of the teaching event itself, rather than the explicit discussion of grammar or vocabulary, is the relevant factor in the teaching event style.

It is suggestive that of the non-teaching events, the more curriculum-related event, a reminder about homework, is more standard than the more administrative event, the reminder about the field trip. This is consistent with the indications in the TW Teacher events that non-teaching events may not be a coherent category.

4.6.2.2.3.3 MT Teacher

MT Teacher's classroom events are listed in Table 7:

Name	Event Type	Description
Try Again Song	Teaching	Teaching a song about trying again
Fish Song	Teaching	Teaching a song about fish
Say Sorry	Non-Teaching	Resolving a dispute among the second graders
Pictures	Non-Teaching	Looking at first graders' drawings of fish

Table 7: MT Teacher Classroom Events

Examples (4.5) and (4.6) are excerpts from the Try Again Song and Say Sorry events:

(4.5) MT: 大声一点说这是一句好话
da*seng* yi dian *suo* **zhe shi** yi ju hao hua
Say it a little louder, 'this is a good phrase'

(4.6) MT: 现在你想上好好上音乐课的就坐下来
xianzai ni xiang *sang* haohao *sang* yinyue ke de jiu zuo xialai
Right now those of you who want to have-- properly have music class, sit down.

你不想着就站着
ni bu xiang *ze* jiu *zan ze*
Those of you who don't want to, stand.

MT Teacher's rate of standard retroflex usage in classroom events is given in Figure 3.
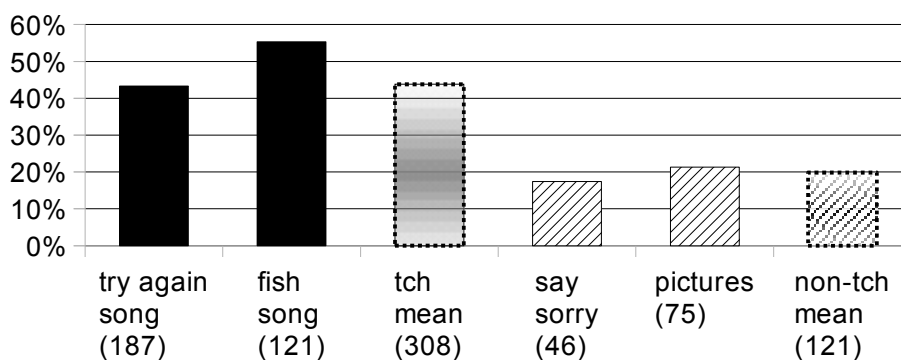
Figure 3: Percent standard retroflex initials by event (MT Teacher)

MT Teacher's rates are consistent with the previous two teachers, in that her teaching events are significantly more standard than her non-teaching events ($p < .0001$). Her mean rates are comparable to those of TW teacher, with a teaching mean of 43.8% for MT as compared to 45.95% for TW (n.s., $p = .683$), and a non-teaching mean of 19.83% for MT vs. 26.56% for TW (n.s., $p = .114$). While MT Teacher's teaching events appear more different than the other two teachers' teaching events, they are not significantly different from each other according to a Fischer's exact test ($p = .906$).

Given that teaching music is quite a different task from teaching curricular material in a primary classroom, it is interesting that MT and TW Teacher's rates are comparable for teaching events. Again, this suggests that the topic that is being taught is not as relevant as the nature the teaching event itself.

4.6.2.2.4 Discussion

The rates of use of standard retroflex initials from the three teachers indicate that, while teaching events are consistently significantly different from non-teaching events, teaching events form a coherent category while non-teaching events do not. Teaching events have been found to contain consistent rates of standard retroflex initials, even across subjects such as language arts, science, social studies, and music, and across activities such as teaching songs and rhymes, reading stories, or teaching grammar lessons. In some of these activities, language was explicitly highlighted as a subject of instruction, while in others it was not. This variation was not reflected in the teachers' language use, suggesting that their use of more standard language was not simply a result

of speaking about language or teaching language. The model that best accounts for the consistency of teaching events is one in which teachers adopt the persona of an instructor during teaching events. Because standard retroflex initials index education and formality, teachers make use of these variants in teaching contexts to construct and perform being an instructor, regardless of what they are teaching.

For two of the three teachers, non-teaching events were significantly different from each other. This suggests that the notion of the non-teaching event in fact encompasses a range of event types in which teachers use significantly different speech styles. Another explanation for this finding is that classroom events themselves are not the relevant contextual unit that shapes speech style, but rather that classroom events of different types are more or less likely to contain utterances of various classes, and these utterance classes are stylistically consistent. In this model, if teaching events more consistently contain the same classes of utterances, this would account for why the rate of standard initials used during these events is more similar. Given that we have already identified two types of speech, administrative talk and behavior management, which differ from instructional speech, it is not entirely surprising to find that non-teaching events are less coherent. Because behavior management speech is not structured in a way so that it can form a complete classroom event, however, it is not practical to continue investigating teacher speech by further splitting non-teaching events. Instead, we will break events down by utterance, thereby more directly addressing the question of whether teachers consistently vary by utterance.

4.6.2.3 Utterance Types

4.6.2.3.1 Introduction

Within a classroom event, teachers may engage in very different styles of speech. During a teaching event, for example, the teacher might scold students for talking, read a passage from a book, then discuss that passage, and so on. As discussed in Section 4.6.2.1, three major tasks in the classroom which involve speech from the teacher are instructional speech, administrative talk, and behavior management.

Stylistically, we can break instructional speech down into read speech and other instructional speech. Extensive previous research has established that reading aloud is stylistically distinct from non-read speech, and for Chinese in particular, Starr (2005:18) found that speakers of Shanghai Mandarin used more standard retroflex initials in read speech than in spontaneous speech. Because Chinese characters contain no phonetic information relating to the initial consonant, the effect we see from reading in Chinese may be different from the effect of an orthographically marked case in a language such as English. Given the findings of Starr (2005), we would expect read speech to be the most standard speech style, followed by instructional speech.

For behavior management, it is possible that the nature of the utterances about student behavior affect language use. Specifically, we can distinguish between praise, neutral comments, and scolding within the behavior management category. In the Meizhang recordings, however, there was very little praise and neutral data in contrast to scolding data. This is partly because praise comments generally consist of short phrases (e.g., 好棒 *hao bang*, 'wonderful') which often do not contain sibilant initials, but also

because teachers were doing far more scolding than any other type of behavior management. Due to this data imbalance, most of the following analysis of utterance types will treat behavior management as a unified class. To be classified as any of these behavior management utterances, the speaker must be evaluating specific current behavior, rather than referring to abstract or past behavior.

Predictions for which linguistic features will be associated with behavior management utterances are not as clear as they are for well-studied registers such as read speech. Smith et al. (2007), a study of Scottish caregivers and their children, found that caregivers used a more standard pronunciation variant more frequently in "discipline" contexts, and that discipline contexts patterned together with "teaching" contexts, in contrast to "play" and "routine" contexts in which the less standard variant was favored (Smith et al. 2007:75). Because this speech was directed at preschool-aged children, however, we might expect that behavior management utterances in Smith et al. are significantly different from those directed at 5–8 year olds.

Administrative speech and any other utterances will be classified in a single class of topical, non-instructional speech. The term topical is used here to distinguish this class of utterance from behavior management, which is by definition speech that is not related to the topic of discussion. Following the findings in the previous section, we expect topical non-instructional speech to be less standard than instructional speech.

4.6.2.3.2 Results

4.6.2.3.2.1 TW Teacher

TW Teacher's use of standard retroflex initials by utterance type is given in Figure 4.
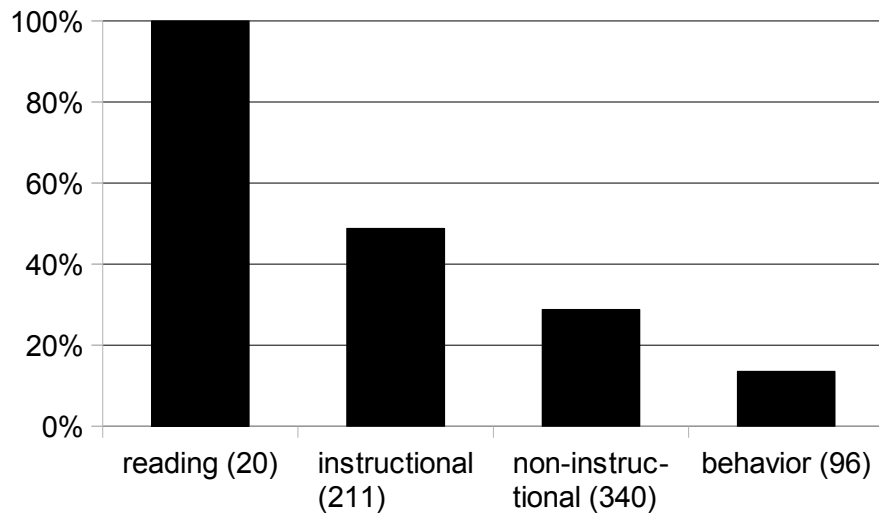
Figure 4: Percent standard retroflex initials by utterance type (TW Teacher)

TW Teacher shows an extremely wide range of variation, from 100% standard tokens in read speech to only 13.5% standard in behavior management utterances. Each of these distinctions is highly significant ($p < .0001$).

Each of these utterance types has a rate of standard initial use consistent with our predictions, with the exception of behavior management. Contrary to the findings of Smith et al. (2007), TW Teacher is using less standard initials when producing behavior management utterances. I will consider why this might be the case in Section 4.6.2.4.4.

4.6.2.3.2.2 NE Teacher

Figure 5 shows a similar pattern for NE Teacher as for TW Teacher, with the most frequent use of standard initials in read speech and the least in behavior management. The differences across types are all significant, with the exception of behavior vs. non-

instructional speech (p = .3213).
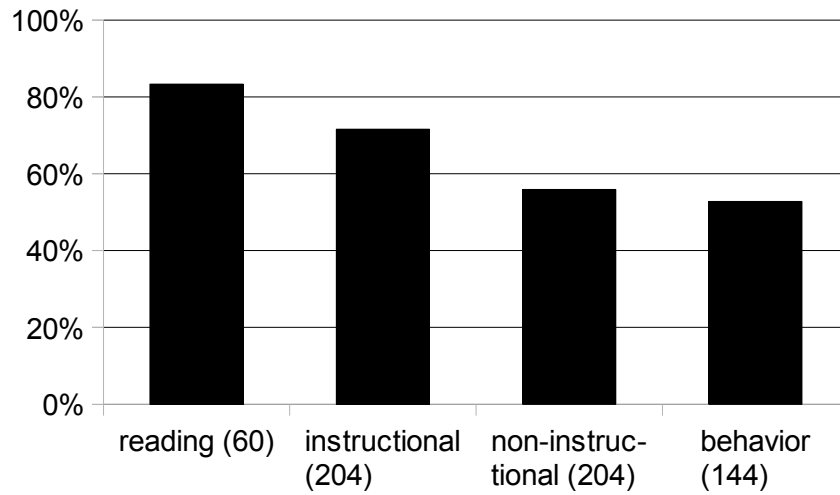
Figure 5: Percent standard retroflex initials by utterance type (NE Teacher)

4.6.2.3.2.3 MT Teacher

The results by utterance for MT Teacher are given in Figure 6.
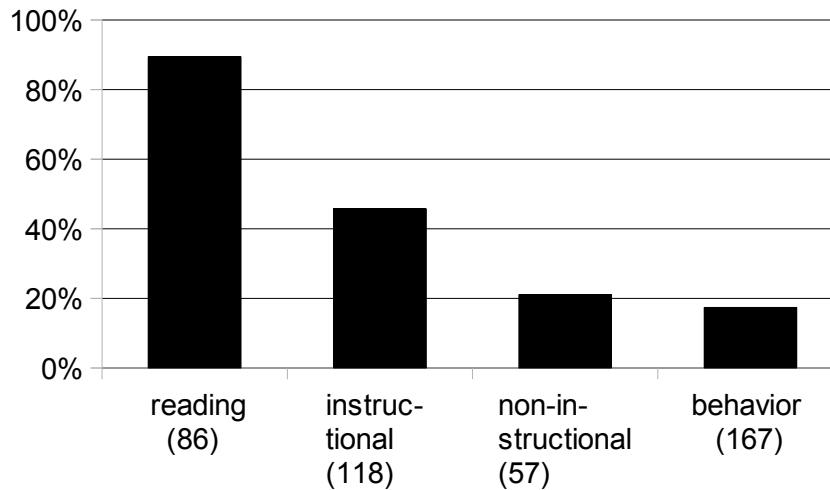
Figure 6: Percent standard retroflex initials by utterance type (MT Teacher)

These rates look quite similar to those for TW Teacher. The two results are shown

together in Figure 7.
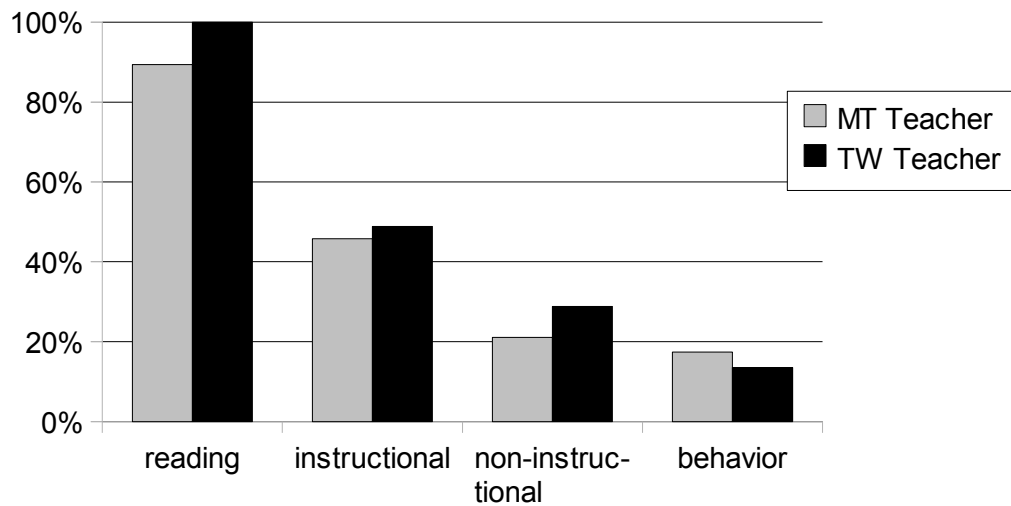
Figure 7: Percent standard retroflex initials by utterance type (MT Teacher vs. TW Teacher)

In fact, the rates of standard initials for each of the four utterance types are not significantly different between the two teachers. Because MT Teacher has a slightly lower rate for non-instructional speech, and a slightly higher rate for behavior management, the difference between those two utterance types is no longer significant, as they were for TW Teacher.

4.6.2.4 Discussion

4.6.2.4.1 Introduction

In this analysis of utterance types, overall we have seen the expected pattern in which different utterance types are produced with significantly different rates of retroflex initials. A few key findings pertaining to specific utterance classes will be discussed in the following sections.

4.6.2.4.2 Instructional vs. Non-Instructional Speech

One of the more crucial findings of this analysis is that there is a consistent significant difference between topical instructional speech and topical non-instructional speech. This finding is key because, unlike read speech and behavior management, many aspects of topical instructional and non-instructional speech are similar; they both involve lecturing to the class with the goal of imparting information. The only distinction between these utterance classes is that instructional speech relates to a curricular topic, while non-instructional speech relates to administrative or other non-curricular topics. This finding underscores the claim that there is more to instructional speech than the speech context of lecturing to a class, and that instruction is a distinct style that here is performed using standard linguistic features.

4.6.2.4.3 Read Speech

A striking finding in TW Teacher's data is that, although there are only 20 tokens of read speech, each token is produced as standard. This is telling, given that Chinese characters give no explicit indications of retroflex versus dental initials.[8] When taken together with her relatively low rate of hypercorrection from dental to retroflex, these data suggest that TW Teacher has explicit, accurate knowledge of which lexical items have retroflex and dental initials in Standard Mandarin, and that she is able to make use of this knowledge in read speech. In non-read speech, however, her use of retroflex plummets to 45.76%, even in her most standard style.

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8 Although some of the material read in class was written in the Taiwanese phonetic alphabet, which does indicate initial pronunciation, that was not the case for the material read in the passages transcribed for this analysis.

As large as this gap between read and non-read speech appears, it is in fact even larger when we examine the acoustic data. Although detailed acoustic analysis was impossible in the face of considerable classroom noise, perceptually it is clear that TW Teacher is producing more "back," retroflex tokens in her read speech, and more postalveolar back tokens in her spontaneous speech. This was also true to some extent of MT Teacher's data. These more retroflex tokens are consistent with pronunciation associated with Northern Mainland China, and are nominally the standard pronunciation in Taiwan but in practice are rarely heard, in favor of a postalveolar place of articulation for back sibilant initials.

This place of articulation issue is one that is quite meaningful to Taiwanese Mandarin speakers. The Chinese term for retroflex initials is 卷舌 (*juanshe*, 'curled tongue') and speakers are very aware that the "proper" place of articulation for these back initials involves a curled tongue in a retroflex position, and that this is not something that Taiwanese people normally do. Chinese speakers have often expressed to me that these sounds are inherently difficult to produce, and therefore that they must be stressed when teaching Chinese to non-Chinese speakers.[9] Thus, TW Teacher's use of a retroflex place of articulation for retroflex initials is not necessarily simply a reflection of her careful read speech style, but may be a style specifically targeted to learners of Chinese.

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9 While Chinese speakers perceive these sounds as difficult to produce, and certainly they are somewhat cross-linguistically marked, in my experience they are not in fact very difficult for English speakers to acquire. This perception appears to be an ideological position based on dialect distribution in China rather than on second language acquisition research.

4.6.2.4.4 Behavior

The overall finding for behavior management utterances contradicts the finding of Smith et al. (2007:75), which found that disciplining speech patterned together with teaching contexts, and involved more standard variants. Because the teacher is the authority figure in the classroom, it makes sense that teachers would make use of standard initials to reinforce their position as the teacher during behavior management utterances, but that is not what happened in this case. We can, however, find several explanations for the present results in sociolinguistic theory.

If we were to follow an attention paid to speech model of style-shifting (cf. Labov 1972), the fact that behavior management utterances were the least standard of the utterance types would come as no surprise. Behavior management is spontaneous and reactive, and often conveys heightened emotion, as in Example (4.7):

(4.7) TW: 我是你的老师欸
wo *si* ni de lao*si* ei
Hey, I am your teacher!

Accounting for the data using this model, the standard variants used in instructional speech would be a result of careful, often rehearsed speech, to which a great deal of attention is being paid because it serves as a model for students. During behavior management utterances, in contrast, teachers "forget" that they are supposed to be speaking standardly for students, and their natural vernacular appears.

While this analysis is tempting, I believe there is a stronger explanation to be found by focusing on the social significance of the non-standard features themselves. Studies of language attitudes have consistently found non-standard varieties to score

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more highly on "solidarity" measures while standard varieties score highly on "status" measures (Luhman 1990, Cavallaro & Chin 2009, etc.). Bai (1994), Zhou (2001), and Liu & Mizerski (2002) specifically found in China that Standard Mandarin is seen as more formal, while regional varieties are perceived to be friendlier and more expressive. Their findings are consistent with my general impression of how Standard Mandarin is perceived; as a modern, somewhat artificially constructed language variety associated with Northern Mainland China, the standard is seen as stilted, bare, elegant, and cold relative to regional varieties, and in particular relative to Southern varieties, which are seen as preserving and reflecting the more materialistic and expressive cultures of the South. This evidence suggests that, in addition to indexing informality and a low educational level, non-standard dental sibilant initials may index expressiveness or emotiveness.[10]

We have several reasons to believe that teachers would make use of more expressive variants in behavior management utterances than in the other utterance types. One set of factors relates to the teacher's own emotional state, and the other to the effect she wishes to produce with her speech. While scolding makes up the bulk of the behavior management data, teachers generally wish to avoid producing these utterances, and only do so when student behavior is preventing them from proceeding with the class in an orderly manner. As a result, teachers are likely to be in a heightened emotional state when scolding. It is my observation, however, that most of the Meizhang teachers (both English and Chinese) deliberately add additional emotional cues to their scolding,

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10 In suggesting that a linguistic variable can index expressiveness, I follow the work of Podesva (2007:490), in which falsetto phonation type is argued to carry a meaning of expressiveness.

beyond what they might produce in non-classroom contexts. These additional cues include increased volume, lowered pitch, the use of emphatic modal particles, and stern facial expressions and gestures, which quickly disappear once the scolding is concluded. For these teachers, scolding is very much a performance, and not the unmonitored, vernacular speech that we had suggested previously.

Why would teachers "perform" anger during scolding utterances? Scolding is an inherently face-threatening act, because it opens the speaker up to the risk of being ignored or defied by students. Teachers whose scolding is ignored run the risk of losing authority in the classroom. It is understandable, then, that teachers make use of rhetorical and linguistic strategies to improve the likelihood that their scolding will be heeded. Performing anger through the use of expressive linguistic variants is one of these strategies; behavior management utterances delivered with greater emotional force are perceived as being more likely to be obeyed. Another strategy used by teachers to achieve compliance, in addition to using more nonstandard dental sibilant initials, is to make use of English in scolding contexts. MT Teacher uses significant amounts of English in her scolding, as in Example (4.8), although her English is far from proficient.

(4.8)   MT: 这不行的话我就叫主任来
                ze bu xing de hua wo jiu jiao **zhu**ren lai
                If this isn't okay then I will just call the director to come

         MT: 然后再送你到 PRINCIPAL 那里
                ranhou zai song ni dao PRINCIPAL neli
                and then send you to the principal

         MT: 然后再去– CALL 你的 PARENTS
                ranhou zai q- CALL ni de PARENTS
                and then go- call your parents

MT: THAT IS THE GOOD RESUL- RESOLUTION
that would be a good resolution.

This is a significant phenomenon in that it illustrates that teachers are not simply

speaking in the way that comes most naturally to them, but in the way that they believe

will achieve the best results. Because the teachers are aware that the native language of

certain students is English, they will resort to using English during scolding, in the belief

that students are more likely to attend to, understand, and obey them when their message

is conveyed in English. Teachers engage in this practice, to a limited extent, even though

they are supposed to use Mandarin exclusively during class time. When the use of

English is taken into account, it is evident that teachers are not using the vernacular in

behavior management, but are drawing upon socially significant linguistic features to

create meaning, just as they do in any other style of speech.

The claim that teachers are using nonstandard dental sibilant initials to carry a

meaning of expressiveness is not only interesting in terms of how teachers perform in the

classroom, but also in respect to what sociolinguistic information students may be

acquiring. While previous scholars have assumed that classroom speech from the teacher

will inform students about formal language and leave them in the lurch when it comes to

informal speech (e.g., Wong Fillmore 1985), we can see that students are actually

exposed to sociolinguistic cues from nonstandard language in the Meizhang data. Given

the frequency of behavior management utterances during classtime, it is quite likely that

students in these classrooms will develop a very accurate idea of what linguistic features

signal heightened emotion and expressiveness in Mandarin. Moreover, they will be

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learning appropriate use of nonstandard features, in addition to standard features. This aspect of classroom language exposure illustrates a key advantage of immersion over traditional language teaching models; even when teachers believe they are being distracted from teaching by disruptive behavior, they are in fact producing linguistic evidence that is crucial to developing communicative competence.

This discussion of behavior management utterances must also address the issue of different behavior-related utterance types. In the initial coding of the data, behavior management utterances were broken down into praising language, in which explicit positive evaluation was given to student behavior, neutral language, in which teachers commented on ongoing student behavior but made no evaluation of it, and scolding, in which teachers negatively evaluated a behavior. If we examine behavior management by utterance subtype, as shown in Figure 8 (with token counts for each teacher given in parentheses), we see that the number of tokens produced within praise and neutral utterances are extremely small for all three teachers, which precludes finding a statistically significant effect.
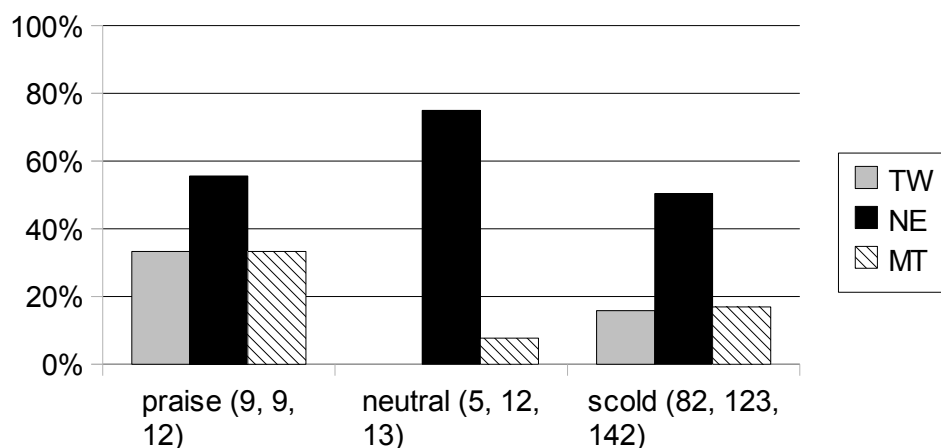
Figure 8: Percent standard retroflex initials for behavior management by type for TW, NE, and MT Teachers.

If teachers were using non-standard language to index expressiveness, we would expect to find more standard tokens used with neutral behavior management utterances, since those would be intended to carry less emotional weight than praise or scolding. We might also predict that scolding would be less standard than praise or neutral behavior management utterances, under the assumption that scolding carries the heaviest pressure to convey expressiveness of the three types. Unfortunately, the present data are insufficient to address this question.

4.6.2.4.5 Event and Utterance Type Interactions

Ideally in this sort of analysis, we would like to include both event type and utterance type in a single model to analyze whether there are interactions between these factors. In this case, however, it is not practical to compare them in this way, because several of the utterance classes do not occur within each event type. Specifically, read speech and instructional speech only occur during teaching events, and there is a limited amount of non-instructional speech within non-teaching events. We can, however, compare behavior management utterances within the two classroom event classes.

If the effects we saw by event type are simply a result of the utterance type distribution being different in the two event types, then we would expect to see no significant difference between behavior management utterances in teaching events versus in non-teaching events. If, however, event type has its own unique effect on teacher speech, then we would expect to see consistent significant differences between the rates of standard initials during behavior management utterances in the two event

types.

As shown in Figure 9, we do see a consistent difference, in the expected direction; behavior management utterances in teaching events for each teacher are more standard than in non-teaching events. This difference is not significant for TW Teacher ($p = .2659$) or for MT Teacher ($p = .329$), but it is significant for NE Teacher ($p = .0217$). Although the token counts are relatively small, the data do show consistent trends; this evidence suggests that event type has a unique effect on teacher speech.
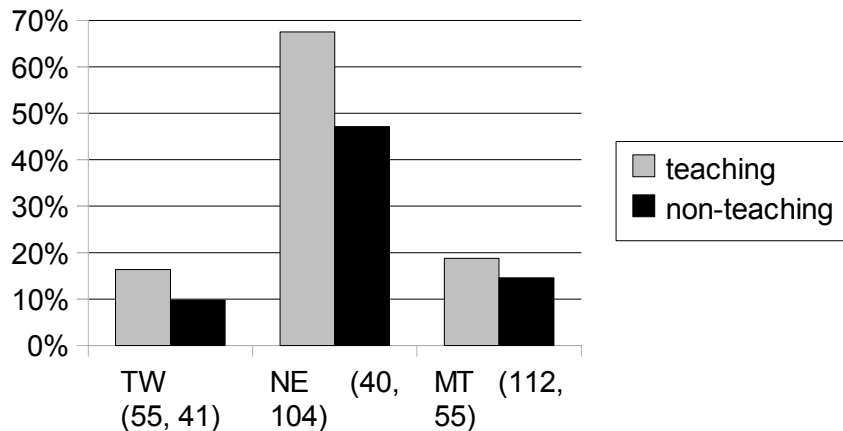
Figure 9: Rate of standard initials by event type, for behavior management utterances (total n's given in parentheses).

We also see that there is no consistent trend in terms of how much behavior management goes on in the two event types, with TW Teacher having approximately equal amounts of behavior management speech in both event classes, and NE Teacher having far more behavior management speech in her non-teaching event (the overall number of tokens in the two event classes is almost identical, so this absolute difference of 40 vs. 104 behavior management tokens represents a real difference in frequencies). Therefore, we cannot account for consistent differences in standardness levels in the two events types

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through an imbalance in behavior management utterances.

The range of standard rates for NE Teacher behavior management utterances, from 47.12% to 67.5%, is quite large, considering her overall range for teaching vs. non-teaching events is 53.75% to 72.45% and that she has a smaller range of variation overall than the other two teachers. We might say, based on this evidence, that NE Teacher is more inconsistent in how she performs behavior management utterances. She may be adopting different personae in these different instances, in an attempt to find a style that produces effective results. This interpretation is consistent with my observations of the class; NE Teacher had a difficult time controlling student behavior, and tried a variety of methods for disciplining and managing students, sometimes appearing more friendly and other times more stern. In contrast, TW Teacher and MT Teacher had qualitatively more consistent behavior management styles, and this consistency appears to be reflected in the quantitative data.

Looking more carefully at NE Teacher, we see the pattern given in Figure 10
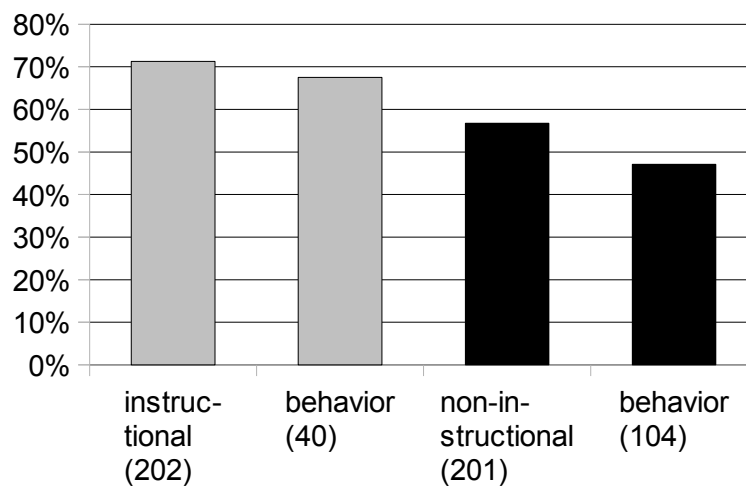
Figure 10: NE Teacher rate of standard retroflex initials in teaching events (gray) vs. non-teaching events (black).

when we break down utterances by teaching vs. non-teaching events. Figure 10

compares the primary utterance type of the speech event with behavior management

utterances. In teaching events, shown in the gray bars, the primary utterance type is

instructional speech. Interestingly, while NE Teacher's behavior management utterances

differ from her instructional utterances overall (see Figure 5), within teaching events

they are not significantly different (p = .3797). In non-teaching events, the difference

between the primary utterance type, non-instructional speech, and behavior management

is approaching significance (p = .07). Overall, her behavior management utterance style

appears to be governed by event context; she produces these utterances approximately

the same way that she produces the primary utterance type of that event, at least from the

perspective of our linguistic variable.

Let's contrast NE Teacher's pattern with what TW Teacher is doing, as illustrated

in Figure 11.
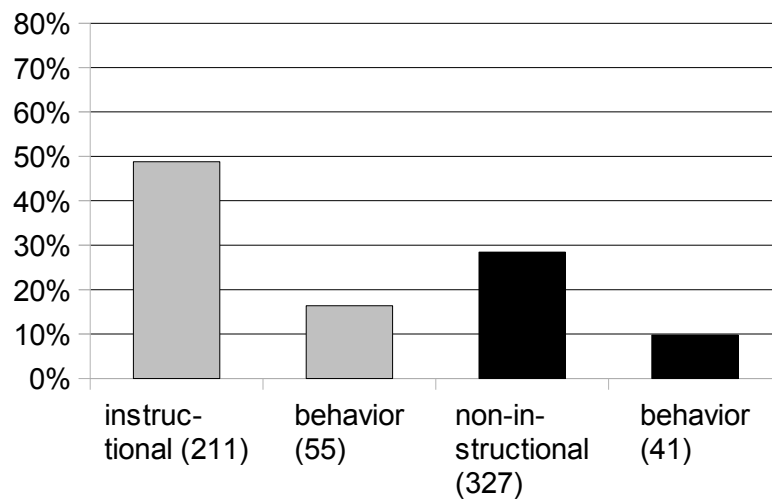
Figure 11: TW Teacher rate of standard retroflex initials in teaching events (gray) vs. non-teaching events (black).

Here we have large and significant differences between instructional and behavior

management utterances in teaching events (p < .0001) and between non-instructional and behavior management utterances in non-teaching events (p = .0056). The crucial point here is not that these utterances types are distinct, which we have already established, but that TW Teacher creates a clear and consistent difference between her primary speech type and behavior management, in both event types.

From a classroom management perspective, students in TW Teacher's class have clear linguistic cues to help them understand when someone's behavior is being evaluated, as opposed to when the regular business of the class is occurring. The ability to make this distinction is particularly important for classrooms with a significant number of students not fluent in the language of the classroom; they need all the help they can get in figuring out the mechanics of classroom life. Moreover, because, as we have discussed, one of the primary goals of behavior management utterances is to produce a desired behavior change, it is crucial that these utterances capture student attention. Making a clear, consistent distinction between "normal" classroom speech and behavior management speech helps ensure student attention and thus compliance. It is not surprising for us to learn, then, that TW Teacher is a more effective manager of classroom behavior than NE Teacher.

Returning to the original question of whether event type and utterance type play unique roles in teacher speech, for some teachers there is a clear unique effect for both factors, while for others this effect is not statistically significant, but we do find a consistent trend in the expected direction. This evidence is enough to establish that classroom events are not simply a collection of different utterance types.

4.6.2.5 Conclusions for Stylistic Variation

Although the three teachers examined here come from different Mandarin-speaking

regions and have regional accents that would be considered quite different by native

listeners, we have nonetheless found that they share an overall pattern of variation

between standard and non-standard features in their speech. All three teachers speak

more standardly in teaching events than in non-teaching events, and they share a pattern

of variation in utterance types such that read speech, topical instructional speech, topical

non-instructional speech, and behavior management form a scale of standardness.

4.6.3 Internal Linguistic Factors

4.6.3.1 Introduction

Moving on from stylistic variation, I will now look briefly at constraints on variation

arising from internal linguistic contexts. Due to their different backgrounds, we would

expect NE Teacher to exhibit different variation patterns from TW and MT Teacher;

specifically, we would expect to find a reduced effect of phonological context in NE

Teacher's speech, because variation in her dialect is assumed to stem from the non-

standard assignment of retroflex vs. dental initials throughout the lexicon. On the other

hand, given that I did not find any significant level of hypercorrection of dental initials in

NE Teacher's speech, it is unclear to what extent this lexical assignment factor is in fact

at work in her production of retroflex versus dental initials. Among the two Taiwanese-

background teachers, because there is no lexical factor in their dialect's use of retroflex

versus dental initials, we would predict that retroflex initials will be more likely to be produced in contexts where they have an articulatory advantage, e.g., before rounded vowels.

These internal factors are interesting primarily as a dialectological issue, given that not much work has been done on the merger of dental and retroflex initials in Mandarin. They are also important in terms of developing a more complete model of variation, and ensuring that the stylistic differences we observed above are independent effects that cannot be accounted for by variation in the linguistic context.

4.6.3.2 Effect of Initial

In this analysis of retroflex initials, I have thus far treated the three initials (zh) (ch) and (ch) as a unified group. This grouping was not made under the assumption that all three initials would have precisely the same overall rates of standard production, but rather that the same external factors would govern their variation, based on previous results for Shanghai Mandarin in the CASS-JHU corpus used in Starr (2005). In that study, (sh) was found to be leading the shift toward the standard. Similarly, in Tse (1998:3), (sh) was found to be the most "distinct" of the three initials, meaning that speakers were producing (sh) with a significantly backer place of articulation than for (s). Of the three initials, (zh) was found to be the least distinct. Based on these results, we might expect (sh) to be the most standard and (zh) the least standard for our two Taiwanese speakers. Our expectations for NE Teacher are less clear, given the lexical effect we anticipate to be factor in her dialect.

4.6.3.2.1 Main Effect

The rates of standard retroflex initial production for (zh), (ch), and (sh) for each teacher are given in Figure 12.
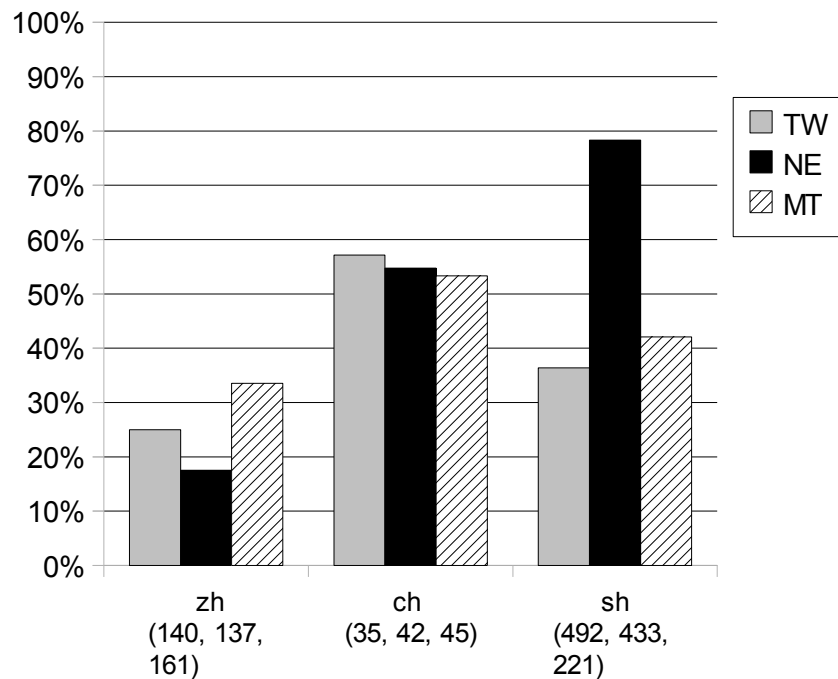
Figure 12: Rate of standard initial by initial (total tokens by teacher given in parentheses).

As predicted by the results of Tse (1998), (zh) is least frequently produced as a standard retroflex initial. (zh) is significantly least standard for all three teachers (TW $p = .0079$, NE $p < .0001$, MT $p = .043$).

It is not surprising that (zh) would be frequently produced as (z), when taking into consideration the relative frequency of each retroflex token's dental counterpart; while retroflex tokens are generally more frequent than dental tokens, (z) is a relatively frequent dental, with 609 tokens in the current corpus of teacher speech, as compared to

163 (s) tokens and only 77 (c) tokens. In light of the greater frequency of standard dental (z) tokens relative to (zh) tokens, it is understandable that speakers would frequently produce (zh) as (z).

This breakdown of the three initials allows us to see the distinction between the Mainland and Taiwanese teachers in a new way. While it appeared in the external factor data that NE Teacher had a higher overall rate of standard retroflex initials, here we see that in fact her rates of standard initials for (zh) and (ch) are comparable to TW and MT Teacher. The difference in her overall rate comes exclusively from her significantly higher rate of standard (sh) initials (p < .0001). This distinction speaks to the fact that NE Teacher does come from a different speech community than the other two teachers, and, as a result, the constraints on her variation are not the same.

Another, more puzzling difference among the three teachers is that, while all three have comparable numbers of (zh) and (ch) tokens, MT Teacher has a mysterious lack of (sh) initials in her speech, with only half the number reached by the other two teachers. This is not a huge concern, given that the token counts are still quite high, but it does illustrate that MT Teacher's speech in music class is not entirely comparable to the speech of primary subject teachers, and might be characterized as more restricted and less representative of everyday speech, where we would expect to find a much higher rate of (sh) initials.

Overall, we have found that a main effect does exist for initial type, and that this effect replicates the findings of Tse (1998) in that (zh) is consistently least standard. We have not, however, replicated the data in the CASS-JHU Shanghai Mandarin corpus or of

Tse (1998) for the Taiwanese speakers in terms of (sh) leading the three initials in

standard retroflex production, although we did find this to be the case for NE Teacher.

Returning to the question of what students are acquiring from teacher input, we might

predict that students will come to expect (zh) to be the least standard of the three initials,

but may show no consistent differences in their treatment of (sh) and (ch).

4.6.3.2.2 Interaction with External Factors

To justify treating retroflex initials as a unified variable, we must confirm that they

pattern the same way with respect to external factors. The most conservative test of such

potential interaction is to look at our most fine-grained external factor, utterance type.

Figures 13, 14, and 15 show results for each initial by utterance type for TW, NE, and

MT Teacher:
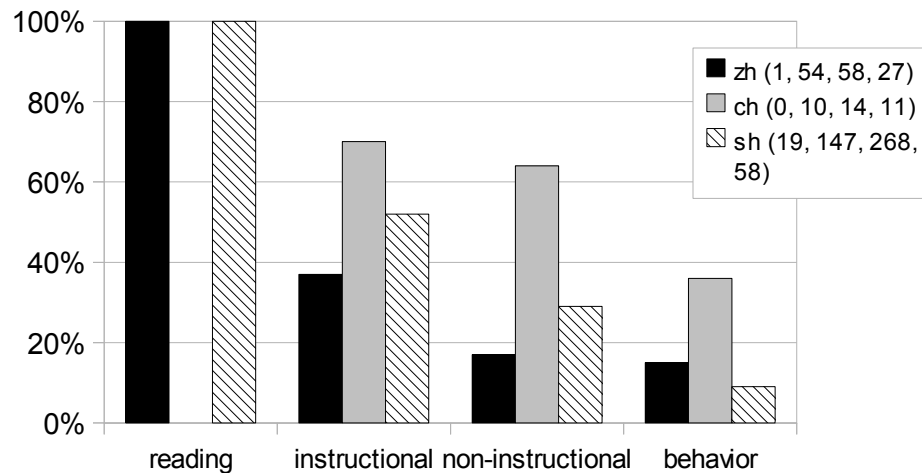
Figure 13: Rates of standard retroflex for each initial, by utterance type,
for TW Teacher (total token counts given in parentheses).

Because token counts are low for (ch), we run into issues as we break down results by

cell, as in the absence of (ch) tokens for reading. On the whole, however, Figure 13

illustrates that the patterns we observed in the overall data hold for each initial for TW Teacher. In an Rbrul binary logistic regression step-down model, the interaction between initial and utterance type was not found to be a significant contributor to the model for TW Teacher (p = .663). Both initial and utterance type were found to make significant independent contributions to the model (p < .0001).
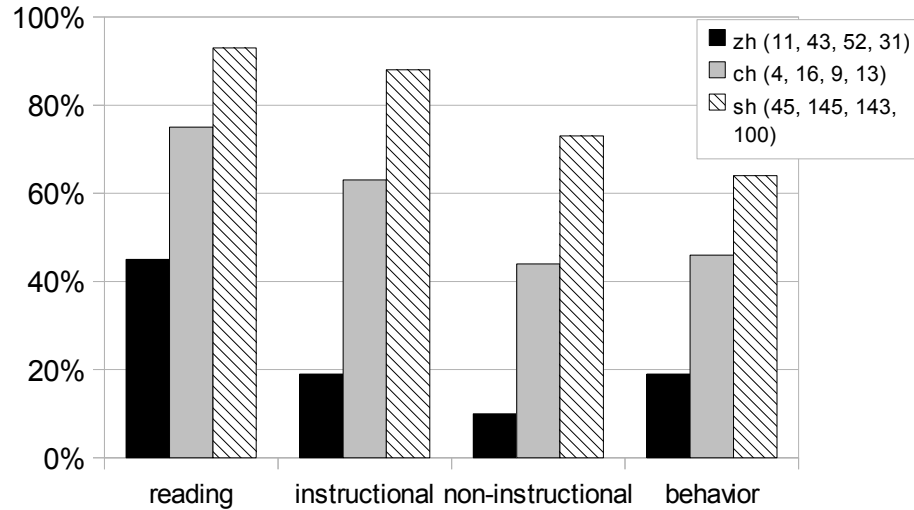
Figure 14: Rates of standard retroflex for each initial, by utterance type, for NE Teacher (total token counts given in parentheses).

Results for NE Teacher are similar to TW Teacher. In an Rbrul binary logistic regression step-down model, the interaction between initial and utterance type was not found to be a significant contributor to the model for NE Teacher (p = .493). Both initial and utterance type were found to make significant independent contributions to the model (p < .0001).
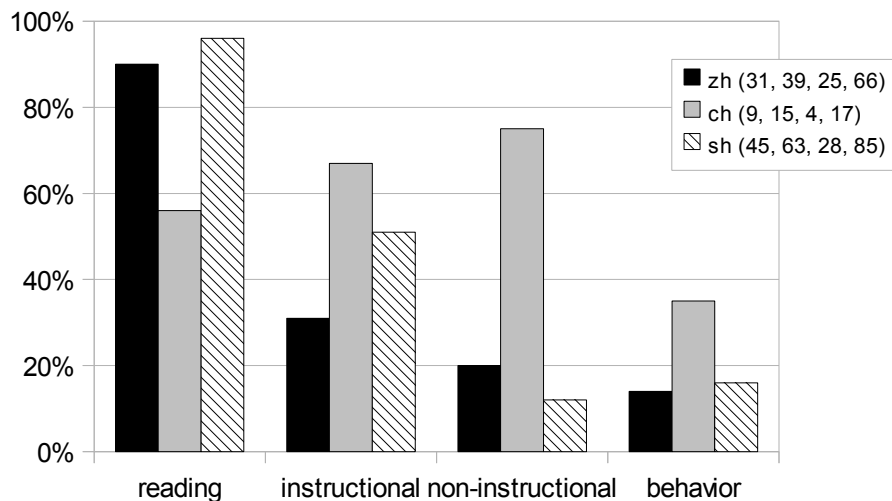
Figure 15: Rates of standard retroflex for each initial, by utterance type, for MT Teacher (total token counts given in parentheses).

In the case of MT Teacher, the results are slightly more messy. In an Rbrul binary logistic regression step-down model, the interaction between initial and utterance type was found to be a significant contributor to the model for MT Teacher (p = .00347). The nature of the interaction, however, appears to be that the distinction between topical curricular speech and topical non-curricular speech is much greater for (sh) than it is for (zh); the general trend, however, still holds for both initials (the results for (ch) are all over the place due to low token counts). Initial, utterance type, and the interaction between the two were found to make significant independent contributions to the model (p < .0001, p < .0001, p = .00347).

In sum, for two out of the three speakers we have found no interaction between initial and utterance type, while for the third we have found that the degree of effect of utterance type differs between initials, but that the general trend remains the same. It therefore appears fair to conclude that variation in the production of all three retroflex sibilant initials is similarly constrained by external factors.

4.6.3.3 Effect of Following Vowel

Retroflex and dental sibilant initials can co-occur with approximately the same subset of Mandarin vowels. Two vowel features which may constrain sibiliant initial variation are backness and rounding. The first effect we might expect to find is that rounded vowels favor retroflex initials, due to a potential lip rounding gesture in the articulation of (sh) (zh) and (ch). In fact, Chinese linguists have traditionally maintained that retroflex initials do not involve lip rounding (Chao 1968, etc.), but this assertion has not been supported by systematic observation in the articulatory phonetic literature. Chang (2010), a preliminary articulatory study of Taiwanese Mandarin speakers, found that a lip rounding gesture was involved in the production of retroflex initials for at least some individuals, but this research has not been matched by similar studies of Mainland Chinese speakers. I believe we can remain agnostic on the question of whether retroflex initials are standardly produced with a lip-rounding gesture, and simply say that a lip-rounding gesture might be extended from a following rounded vowel onto an initial consonant, making it sound back. For the purposes of this analysis, the following finals were identified as rounded: (ong), (ou), (u), (ua), (uan), (uang), (ui), (un), (uo).

In the case of backness, we might expect back vowels to favor the production of the backer retroflex initial over the dental initial, in contrast to mid vowels (these initials cannot occur with front vowels). However, when we consider that the apical /ɿ/, which is produced without a change in place of articulation following a retroflex initial, is a mid vowel, it seems likely that mid vowels are quite easy to produce following a retroflex

initial. Nevertheless, we will investigate a possible backness effect. The following finals were identified as back: (ang), (ao), (eng), (ong), (ou), (u), (ua), (uan), (ui), (un), (uo).
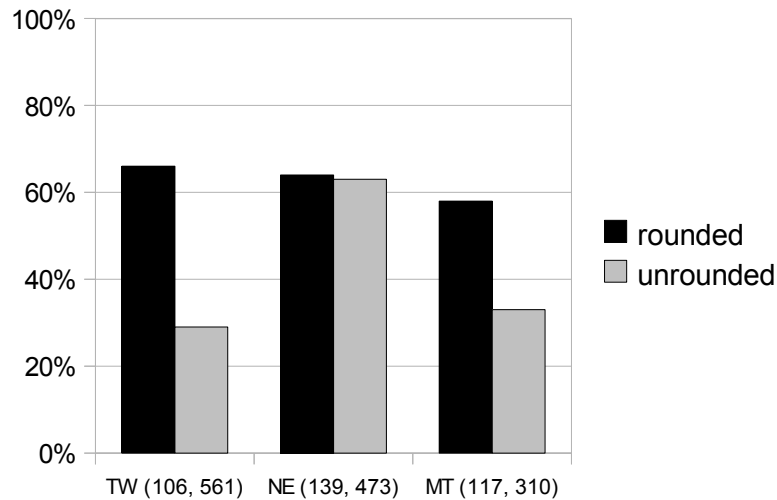
Figure 16: Rate of standard initials preceding rounded vs. unrounded vowels, by teacher.

As shown in Figure 16, TW and MT teacher exhibit the expected pattern in which retroflex initials are significantly more likely before rounded vowels, while NE Teacher shows virtually identical rates regardless of vowel rounding. This finding is consistent with NE Teacher's choice of initials being lexically rather than phonologically determined. An Rbrul step-down test identifies separate unique effects of vowel rounding, initial type, speaker, and utterance type (p < .0001 for all factors).

Vowel backness, in contrast, was not found to be a significant predictor of standard retroflex initials in a similar step-down test (p = .389). Overall, 49% of sibilant initials preceding back vowels were produced as standard retroflex, in comparison to 45% of those preceding mid vowels. These findings indicate that rounding, not backness, is the key vowel factor in constraining sibilant initial variation.

4.6.3.4 Retroflex Tendency of Final

Chinese syllables are traditionally divided into initials (the initial consonant) and finals (the remaining segments). Phonotactically, retroflex and dental initials share the same set of possible finals; certain finals, however, appear more often with one set of initials than the other in standard Mandarin. This sort of neighborhood-density-like effect may have an influence on likelihood of the use of standard retroflex. If a particular syllable's final is associated with retroflex initials almost all of the time, speakers may be more likely to produce the initial as standardly retroflex (and may also be more likely to hypercorrect in the case of a dental initial). Using the corpus of teacher speech, each final was rated according to the frequency with which it appeared within a syllable that in standard Mandarin would have a retroflex versus dental initial. Table 8 gives several examples of finals and their ratings:

Final	Total Count	% retroflex initial in standard Mandarin
-ang	113	99%
-an	84	49%
-ai	254	0.4%

Table 8: Retroflex tendencies for example finals in teacher speech corpus.

Because retroflex initials are more frequent than dental initials, it was not surprising to find that most finals appeared with retroflex initials more frequently. Therefore, a binary variable was created in which finals were coded as "strongly retroflex" only if they appeared over 75% of the time with retroflex initials: 11 of 18 finals in the teacher speech corpus were strongly retroflex. When incorporated into the full model, although

its effect trends in the predicted direction, this factor is not significant (p = .1107). Its

lack of significance may be due to the relatively strong collinearity between this factor

and the rounded vowel factor (0.785).

4.6.3.5 Lexical Factors

There are several possible ways in which lexical factors could influence the choice of

initial for standardly retroflex tokens. Here, we will examine the role of frequency. We

might imagine that an infrequent character[11] would be more likely to be pronounced in a

non-standard way, because the speaker would have more trouble recalling its standard

pronunciation. On the other hand, speakers might be more likely to produce very

frequent tokens, such as function words, as non-standard.

In order to maximize the relevance of lexical frequency to this particular setting,

a six-level ranking system was created using the characters in the teacher speech corpus,

based on the logarithm of each character's frequency. Table 9 gives examples of

characters at each rank:

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11 For the purposes of this analysis, "lexical item" refers to the unit of a Chinese character. Each unique
   pronunciation of a character was treated as a lexical item (长 *zhang* and 长 *chang* were treated as two
   separate items).

Frequency Rank (low to high)	Example Character
0	失 *shi* (to lose)
1	室 *shi* (room)
2	世 *shi* (world)
3	始 *shi* (start)
4	时 *shi* (time)
5	是 *shi* (to be)

Table 9: Frequency rank based on log frequency of characters in teacher speech

Lexical frequency rank was not found to be a significant predictor of retroflex use (p = 0.5314). Attempts to locate a different significant lexical factor, such as content versus function word, were also unsuccessful

There is another possible way in which lexical factors could be influencing choice of initial realization; speakers could be more likely to produce a particular lexical item in a certain way. To investigate this variability, we can test the significance of adding lexical item as a random effect in a linear mixed-effect model (lmer). An ANOVA comparing two models with and without the lexical item random effect reveals that lexical item is indeed a significant contributor to the model (X^2 = 139.1, df = 1, p < .0001).

Incorporating lexical item as a random effect in the model results in reduced significance and subsequent elimination of phonological interaction effects, leaving only the main effects of utterance type, roundedness, and initial type as significant fixed effects. Because there is a relatively small range of lexical items in this corpus due to the restricted context of the classroom speech setting (only 130 distinct lexical items were

found), it is possible that these phonological interaction effects do exist, but their behavior was completely captured by the lexical item factor because only a few lexical items corresponded to a particular phonological configuration (for example, only three lexical items in the corpus correspond to initial (ch) plus rounded following vowel). This finding, therefore, may not generalize to patterns in Mandarin more broadly, but it does suggest what factors students might attend to when learning which contexts are likely to promote standard or non-standard use of retroflex.

4.6.4 Overall Model

Using linear mixed-effects modeling and incorporating both speaker and character (lexical item) as random effects (shown in ANOVA tests to both be significant contributors) yields the following best model:

Effect	Coefficient	Std Error	P
speaker (random)	N/A	N/A	N/A
character (random)	N/A	N/A	N/A
(Intercept)	0.41334	0.11241	0.0002
utterance type (reading)	0.39582	0.04301	0.0000
utterance type (instruction)	0.16520	0.02566	0.0000
utterance type (behavior)	-0.06339	0.02931	0.0307
rounded	0.17578	0.06047	0.0037
initial (sh)	0.05726	0.07692	0.4567
initial (zh)	-0.22749	0.08115	0.0051

Table 10: Linear mixed-effects model for teacher retroflex (using lmer and pvals.fnc in R)

These results indicate that the fixed effects utterance type, roundedness of following vowel, and initial type are all significant in the model. Taking the non-instructional utterance context as the default, the model finds that each of the utterance types are significantly different from each other. Taking (ch) as the default initial, it finds that (zh) is significantly different, but not (sh).

Examining each teacher's speech in a separate model reveals that utterance context is the one significant fixed effect they all share. Roundedness is significant for TW Teacher ($p < .0001$), and initial type is significant for NE Teacher ($p = .0049$). The lexical item random effect was also a significant contributor for each speaker ($p < .0001$ for all three speakers).

4.6.5 Modeling Hypercorrection

Although hypercorrection of dental tokens to retroflex was relatively rare in the teachers' speech, we can still examine which external and internal factors predict its use. Table 11 gives the linear mixed-effects model for hypercorrection (higher coefficients indicate more standard dental realization):

Effect	Coefficient	Std Error	P
speaker (random)	N/A	N/A	N/A
character (random)	N/A	N/A	N/A
(Intercept)	0.77725	0.05663	0.0000
rounded	0.18664	0.09260	0.0442
initial (s)	0.21287	0.07620	0.0053
initial (z)	0.17420	0.06516	0.0077
rounded:initial(s)	-0.31183	0.12246	0.0111
rounded initial(z)	-0.21858	0.10855	0.0444

Table 11: Linear mixed-effects model for teacher hypercorrection (using lmer and pvals.fnc in R)

Both speaker and character are significant random effects in the model, according to

ANOVA analyses comparing models with and without these effects (both $p < .0001$).

Utterance context does not play a significant role in predicting hypercorrection, but the

internal linguistic factors of initial type and following rounded vowel do have significant

effects. Initial (s) is the least likely to undergo hypercorrection, followed by (z).

Roundedness interacts with initial type, such that (s) paired with a rounded vowel is most

likely to undergo hypercorrection (e.g. *su → shu*), followed by (z) with a rounded vowel

(e.g. *zong → zhong*). This pattern is phonetically natural, in that the rounding gesture in

the vowel is extended to the initial. However, overall, the main effect of rounded

following vowel is the opposite of that predicted: rounding actually discourages

hypercorrection to retroflex. Given the interaction effect of rounding and initial type,

what appears to be happening here is an unusually high level of hypercorrection for

unrounded vowels following initial (c). This is caused by the large number of

hypercorrections for a handful of lexical items including 次 *ci → chi* ('time'), 猜 *cai →*

chai ('guess'), and 才 *cai → chai* ('only'). A larger corpus with a broader lexical set

would tell us whether this (ch) finding is an idiosyncrasy of these data or a more robust

trend.

The linguistic factors lexical frequency and retroflex tendency of final were not

significant predictors of hypercorrection in this model. The lack of significance for

retroflex tendency is particularly interesting, because it indicates that speakers are not

simply using retroflex initials to create more common syllables. For example, although

the final (-e) occurs with 98% retroflex and only 2% dental initials, this does not make

speakers more likely to transform tokens like *ce* into *che*.

4.6.6 Summary of Results

This analysis sought to account for variation in the realization of sibilant initials as

retroflex or dental via external stylistic and internal linguistic factors, for three

Mandarin-speaking teachers. In the realm of stylistic factors, both event type (teaching

vs. non-teaching event) and utterance type (reading, instructional speech, non-

instructional speech, behavior management) were shown to predict rate of standard

retroflex initials for all three teachers. While event type accounts for certain data that

utterance type does not, the two factors are not fully independent, and overall utterance

type was found to be the more predictive of the two factors. Teachers used more standard

retroflex initials in reading and instructional speech, and more non-standard retroflex

initials in non-instructional speech and behavior management utterances. The internal

linguistic factors of initial type and roundness of following vowel also predicted rate of

standard sibilant initials. While the Mainland teacher and the two Taiwanese teachers

patterned similarly in terms of stylistic factors, both the Taiwanese teachers showed

certain internal phonological constraints on variation which the Mainland teacher did

not, supporting the position that NE Teacher's non-standard use of retroflex sibilant

initials has a lexical basis, while TW and MT Teacher's variation is primarily

phonologically conditioned. The random effects of speaker and lexical item were also

significant in the model, indicating that speakers were significantly different, and that

rates of standard retroflex varied by lexical item.

Although hypercorrection of dental tokens to retroflex was rare in the data,

several internal linguistic factors were found to condition its use: initial type,

roundedness of the following vowel, and the interaction of initial type and roundedness.

The random effects of speaker and lexical item were also significant. Stylistic factors did

not make significant contributions to the model in the case of hypercorrection.

4.7 Discussion

There are several perspectives we can take on the significance of the preceding data on

teachers' classroom speech. I will address three of them here: what the data tell us about

Mandarin variation, what they tell us about teachers and their language, and finally, what

they tell us about students.

In this analysis, I have attempted to provide a unified account of speakers from

two different dialect regions. From a dialectological perspective, this effort was perhaps

ill-advised, but when considering the implications of dialect contact in immigrant

communities, particularly from the perspective of children acquiring a language based upon the language use of this community, we must consider how dialects intersect and appear "synchronically" to newcomers. When I arrived at Meizhang, I was told by several Taiwanese staff members that I ought to go and listen to NE Teacher's exotic accent—to them, it seemed very different from their own. But to a student first encountering Mandarin, or even to a heritage learner with limited access to Mandarin speakers, NE Teacher's Northeastern dialect features intersect to a large degree with nonstandard Taiwanese features. Moreover, as I have shown, her patterns of variation match closely with those of the other teachers. To a Mandarin learner, the language of TW Teacher, MT Teacher, and NE Teacher are all integrated into one large picture of how Mandarin is spoken by the Meizhang community, and that picture is, in fact, quite internally consistent. As individuals from Mainland China continue to prosper and emigrate to regions of the world previously dominated by speakers of Southern and "deterritorialized Mandarin" varieties (cf. Zhang 2001), these dialect contact issues in language learning settings will become increasingly common. Although the political issues that arise from this contact will continue to be challenging, in terms of language teaching, there may be fewer difficulties in integrating speakers from diverse dialect backgrounds than anticipated by community members.

While the three teachers in this study shared some linguistic behaviors in common with participants in previous studies of Mandarin variation, they also differed in certain key respects. Most notably, while middle-aged speakers in the Shanghai Mandarin corpus used in Starr (2005) made extensive use of hypercorrection (using

100

retroflex sibilant initials where Standard Mandarin calls for a dental), hypercorrection was virtually absent from this data. This absence was particularly surprising from NE Teacher, who comes from a dialect region in which we would expect hypercorrection due to nonstandard lexical assignment of sibilant initials. While in some ways these teachers are typical speakers of their dialects, then, there are crucial differences in their linguistic behavior that may arise from, or at least correlate with, their status as teachers. As teachers, these speakers know which initials are standardly assigned to which lexical items; this is why they have extremely high rates of standard initials when reading. This raises the question of why, and under what circumstances, some Mandarin speakers do hypercorrect. Is this phenomenon characteristic of speakers who do not have conscious knowledge of which initials are meant to go on which words? Alternatively, it is a style of speech adopted by some individuals as a way of being formal, but rejected by others as sounding ignorant? The speech patterns of these teachers suggests that, to them, hypercorrection is more marked than use of the merger; this is an intriguing possibility given that the merger is by far the more salient of the two phenomena in metalinguistic discourse about nonstandard varieties of Mandarin. While I began this chapter with the criticism that teachers are more like normal people than previous literature has acknowledged, I will have to close it with the caveat that teachers certainly can exhibit certain behaviors, such as avoidance of hypercorrection, which are not typical of the rest of the population.

In spite of these lingering questions, these data on teacher speech in the classroom present strong evidence that there is more to "teacher talk" than prescriptive

lecturing on standard grammar. Although there are natural limits to the styles of speech a student is likely to hear in the classroom, from a quantitative standpoint, the sheer range of variation exhibited by these teachers is striking, in one case going from 100% standard in read speech to 13.5% standard in behavior management utterances. More importantly, teachers are using these different styles not because they are forgetting to pay attention, but because they are effective resources with which to accomplish particular linguistic tasks, such as instruction and scolding. The examples at Meizhang are useful in that they are extreme and clear-cut, but we can also potentially apply these findings to cases in which teachers don't speak such dramatically non-standard dialects. We also observed a certain degree of variation among the teachers, with some using consistent linguistic cues to distinguish between utterance types, and others varying in their strategies. Future studies of how this relates to effective classroom management might have practical benefits for teachers.

Finally, we can return to the question of what students are learning about language variation in school. Assuming access to only a single teacher and a single classroom, students of the teachers examined here would be exposed to comprehensible sociolinguistic cues that are consistent with the wider norms of the Meizhang community. Students would be able to get a good sense of what sorts of language features are considered formal and educated-sounding, but also what sorts of features are considered more expressive. Another key point that arises from these data is that, if a student were so inclined, they would be able to acquire a more standard variety of Mandarin than that spoken by their teacher, by targeting the language variety used by

their teacher in certain contexts, and by "reverse-engineering" from non-standard to standard pronunciations based upon patterns of variation they have observed. In the present case, because we are dealing with a merger of two sets of sounds, students would have to apply knowledge they have acquired about relative frequency patterns of dental versus retroflex initials to make educated guesses about which initial is standard for a particular lexical item. Sometimes, these guesses will inevitably misfire. Therefore, if students were targeting a more standard variety than that spoken by the teacher, we would expect to see more hypercorrection in their speech than we observed in the teacher's speech. We will return to this question in Chapter 7.

4.8 Conclusion

In this analysis, variation in the use of retroflex and dental sibilant initials was found in the speech of the Taiwanese primary first grade teacher, Northeastern Mainland Chinese primary second grade teacher, and the Taiwanese music teacher at the Meizhang school. These teachers' use of standard initials was predicted by both overall event type and by the more fine-grained measure of utterance type. All three teachers followed a consistent stylistic variation pattern such that more standard retroflex initials were used in read speech and instructional speech, and fewer standard initials were used in non-instructional, administrative speech and in behavior management. This use of sibilant initials reflects not only the status of standard retroflex as an index of formality and education, but also the link between non-standard initials and expressiveness and emotivity. Teachers were able to draw on these social meanings to construct personae

appropriate to different classroom situations. Internal linguistic constraints on this variation were differentiated by region, in that the two Taiwanese teachers exhibited a phonologically-conditioned pattern distinct from that of the Mainland Chinese teacher.

The patterns of variation found in teacher speech send consistent signals about the social meaning of standard and non-standard retroflex and dental sibilant initials, and provide valuable sociolinguistic cues to students acquiring Mandarin in this setting. It remains to be seen whether students acquire patterns of variation similar to that of their teachers, or whether they make use of stylistically-conditioned patterns in their input to target standard sibilant initials.

Chapter 5

Corrective Feedback

5.1 Introduction

In the previous chapter, I looked at how teachers' patterns of language use might provide indirect cues to students as to the social meaning of linguistic variants. This chapter widens the scope of investigation to include all members of the first and second grade communities, examining both teachers and students. Rather than looking at language use, I will focus here on metalinguistic discussion—that is, talk about language. Metalinguistic discussion can provide more explicit evidence as to the social meaning of a variable; a teacher, for example, might directly state to the class that some variant is incorrect. This metalinguistic evidence may interact with language use evidence in complex ways, particularly if what teachers say about language is inconsistent with how they use language. Because the Meizhang school presents an explicit language-learning context, it is not surprising to find such metalinguistic discussion occurring. Several aspects of this discourse are potentially informative in an investigation of how sociolinguistic knowledge is acquired: which linguistic features are targeted for discussion, how they are targeted, and which members of the community participate.

Some of the metalinguistic discussion I observed in the Meizhang data could be characterized as talk about language in the abstract, such as one student claiming to another that an accent is when you speak a language but speak it badly. The majority of discourse falling under the metalinguistic umbrella, however, was devoted to challenging specific language use of other speakers. I describe this behavior as 'corrective feedback,'

construed very broadly to mean linguistic behavior that challenges a specific instance of language use. In the following sections, I will describe in more detail how this behavior was recorded and analyzed, examine patterns in who corrects what and whom, and discuss the possible social origins and ramifications of these trends. The chapter following this one will be devoted to a brief analysis of non-corrective metalinguistic discussion.

5.2 Corrective Feedback

5.2.1 Sociolinguistic Significance of Corrective Feedback

Many researchers have puzzled over the observation that children often appear to ignore corrections of their language use, and yet their speech nonetheless becomes more grammatical over time (Zwicky 1970, Braine 1971:161, MacWhinney 2004:883). Scholars have long debated the role in first language acquisition of 'negative evidence,' referring to various forms of corrective feedback children receive from parents or other speakers; disagreements have arisen over whether children take note of negative evidence, how explicit evidence needs to be before it qualifies as negative evidence, how consistently negative evidence is provided to children, and, most significantly, whether negative evidence is required for language acquisition (Baker 1979, Marcus 1993, Rohde & Plaut 1999). Second language acquisition research on corrective feedback has also addressed the question of whether learners absorb or ignore corrections (White 1991, Lyster 2002). The ultimate issue in these debates is the existence of innate Universal Grammar, which could account for how learners acquire language seemingly without

sufficient feedback from adult native speakers (Baker 1979:534).

In the present analysis, I take an agnostic view on whether corrective feedback is necessary or even helpful in first or second language acquisition. I do, however, claim that corrective feedback contributes to the acquisition of sociolinguistic knowledge by members of the speech community. In other words, corrective feedback is construed here as a metalinguistic behavior involved in the negotiation of social meaning, rather than simply as a means of improving the correctee's knowledge of grammatical structures. Moreover, in this sociolinguistic framework, it is not only the content of a correction that is relevant, but also the form of the correction, and the individuals involved in initiating, receiving, and overhearing the correction, that determine the significance of a correction.

5.2.2 Previous Work on Corrections in the Classroom

While my present study of corrections encompasses linguistic corrections taking place at all times during the school day, including during non-class times, most corrections in these data nonetheless take place in the classroom, and therefore the literature most relevant to this analysis are studies of feedback given in the classroom. Previous studies of corrections in the classroom generally focus on corrections originating from teachers and directed at students. In studies that examine language-teaching contexts, researchers are primarily concerned with the relationship between teachers' style of correction and improvement in the accuracy of students' second language production. A typical study of this type is Lyster & Ranta (1997), which examined fourth grade classrooms in a French immersion school in Quebec. They found that teachers produced corrections for 62% of

student turns containing errors, and that over 50% of these corrections were 'recasts' (repetitions of the student utterance in which the offending error was reformulated). The authors concluded that recasts appeared to be a comparatively ineffective method of correction, at least in the short-term, in the sense that 70% of the recasts did not lead to immediate repairs by the students (Lyster & Ranta 1997:56). They were unable, however, to determine whether recasts led to long-term gains by students, and also could not conclusively state whether recasts were perceived as corrections by the students at whom they were directed. In contrast, other authors encourage the use of recasts as a relatively non-anxiety-producing and non-invasive way of correcting student production without inhibiting student participation in class. Sato (2003:14-15), for example, promotes the use of recasts rather than explicit correction in English teaching to Japanese students, arguing that corrections in the classroom should be limited as part of a general strategy of promoting fluency over accuracy, a common view in modern language teaching.

The relationship between corrective behavior by teachers and the linguistic behaviors of students has also been previously studied in the context of AAVE-speaking students in the classroom. The general consensus in the literature is that frequent explicit correction from teachers has a chilling effect on student participation in class while failing to increase students' use of standard forms (e.g. Piestrup 1973:162). Wheeler & Swords (2004) discuss the impact of teachers adopting different correction styles from the perspective of a White third grade teacher. When Swords, the teacher, used an explicit corrective style and consistently corrected every non-standard utterance from her

students, she observed that her African American students were discouraged from speaking up in class. When she began using a recast style, in which she integrated a standard version of the students' utterance in her response, students were no longer discouraged from speaking, but she did not feel that she had any impact on their use of non-standard language (Wheeler & Swords 2004:471). A disadvantage of this type of research is that, in spite of its insider perspective, the conclusions drawn are based solely on one individual's subjective impressions of the behavior of her students, rather than quantitative data. It is possible, for example, that Swords' new correction style was having a subtle but significant impact on her students' language use. As an active participant in the classroom, Swords did not have the time or perspective needed to rigorously account for her own or her students' corrective behavior and language use. In the same article, for example, Swords claims that she uses a Southern accent when speaking with her friends, but not when in a school environment (Wheeler & Swords 2004:474). This assertion is not elaborated on or supported by data, and Swords makes no serious attempt to analyze her own language use in the classroom.

Research on corrective behavior and AAVE-speaking students may have limited relevance to other groups, given that authors specifically point to the degree to which certain interactional styles are consistent with styles found in African American culture as an explanation for their effectiveness with African American students. In Piestrup (1973), the success of the "Black Artful" approach to teaching literacy, in contrast to the "Interrupting" approach, is claimed to be due to links between the Black Artful approach and the linguistic practices of various facets of the African American community, such as

preaching (Piestrup 1973:131). In contrast, the student community at the Meizhang

School does not have a similarly cohesive set of linguistic practices that are distinct from

the practices of the school. Michele Foster, in her discussion of implications of

sociolinguistic findings for teaching practices, warns against transferring teaching

strategies and programs wholesale from one community to another without considering

sociocultural differences between the two settings (Foster 1992:308). We have little

reason to expect that interactional practices that work well with urban African American

students would also work well with the upper-middle class students of Meizhang, whose

families are generally highly invested in the educational model and practices of the

school. If anything, we might expect Meizhang students with an East Asian background

to come from a culture that favors more explicit corrections from teachers; Takahashi &

Beebe (1993:153), for example, found that East Asians were less likely than Americans

to preface corrections with softening positive remarks when addressing someone of

lower status. On the other hand, the families of most Meizhang students are members of

an upper-middle class Mainstream American culture in which a philosophy of "every

child is special, every child is a winner" is prevalent, and who therefore may expect that

teachers will avoid explicitly correcting students for fear of damaging their self-esteem

or increasing their anxiety about language learning (Hewitt 1998:73-75, Stepp 2007).

Another respect in which the classroom situation in Meizhang appears to diverge

from the observations of previous work is the frequency of corrections initiated by

students, directed towards both teachers and other students. As we will see in the data in

following sections, in each class I observed, students are actually more active initiators

of corrections than the teachers are. I do not believe that Meizhang is necessarily exceptional in this regard, although it is possible that the dual-language immersion model, in which students with diverging language backgrounds are deliberately grouped together, is conducive to students assuming teacher-like roles. Indeed, previous studies of immersion models and bilingual children have observed that children in such situations display a high degree of metalinguistic awareness, and engage in activities that center around language and language differences (Lambert & Tucker 1972:207, Ben-Zeev 1977:45). Previous research on corrections in the classroom focuses on teacher behavior and teacher-initiated corrections, presumably because the primary goal of such education research is to develop effective teaching strategies. Implicit in much of this research is a model of the classroom in which the teacher is the competent native speaker who initiates actions, and the student is the learner who reacts to those actions. In the classes I observed at Meizhang, however, teachers are not necessarily the most competent speakers of the target variety in the classroom, and students are often initiators of independent action rather than reactive listeners. I view corrective behavior in these classrooms, therefore, as a practice engaged in by various members of a speech community, which serves functions both in terms of language learning and in terms of negotiating linguistic and social space within the community.

5.3 Methodology

5.3.1 Collection Methodology

The present analysis is based on every linguistic correction that I observed and recorded

during my participant observation fieldwork at the Meizhang school. Because I was the

sole fieldworker involved in this project, I acknowledge there may be flaws in the data

collection process stemming from the limits of relying upon a single observer. Ideally,

these data would have been collected and re-checked by multiple listeners; unfortunately,

due to the complex nature of classroom recordings, with many students speaking at once

with similar-sounding voices in multiple languages, and due to the large quantity of

recordings, it was not practical to bring in outside listeners who had not been present in

the classroom to recode all of these data. While there are significant limitations inherent

in this methodology, there is evidence that the consistent trends observed in the data are

representative of real phenomena occurring among the members of the school

community.

5.3.2 Coding

5.3.2.1 Coding Overview

Each correction was coded for corrector, correctee, corrected linguistic feature, linguistic

class of corrected feature, correction given, correction class, language of correction, and

reaction to correction. More detailed descriptions of correction classes and linguistic

classes are given below.

5.3.2.2 Exclusions

Certain types of corrections were not included in this analysis. Corrections of behavior

rather than language use were excluded, since they cannot tell us very much about the

status of particular linguistic features or language varieties. Telling a student to stop talking out of turn, for example, would be a behavioral correction not included here. Similarly, general admonitions to "speak Chinese in Chinese class" or "speak English in English class" were not included, since they did not target specific linguistic features. Corrections of the form "Don't say A [English], say B [Chinese translation of A]" were coded, although they proved to be uncommon and were not of interest in the analysis, which focuses on variation within rather than between languages.

Corrections that were entirely in written form, such as individual written corrections on a spelling test, were not included. I excluded these corrections because I did not have comprehensive data on every piece of written feedback that students received on their worksheets, and because written corrections are private and do not have the same effect on the classroom community that public spoken corrections do. I did include correction incidents that involved some written elements, such as spoken discussions of material that was written on the classroom whiteboard.

I also did not include corrections given in contexts where corrections were specifically elicited through correction-centered activities, such as tasks in which students practiced their editing skills by correcting a passage written by the teacher containing deliberate mistakes. In a context where a teacher is asking "what is wrong with this sentence," students are no longer challenging anyone's language use by offering a correction. These correction-centered activities were not frequent in the Meizhang classes I observed.

5.3.2.3 Classes of Corrections

5.3.2.3.1 Introduction

In classifying the corrections that occurred in school, I took as my starting point the system given in Lyster & Ranta (1997), which categorized corrective feedback as 'explicit correction,' 'recast,' 'clarification request,' 'metalinguistic feedback,' or 'elicitation.' I then developed subclasses of corrections based on the types commonly observed in the Meizhang data. Corrections were classified as follows:

5.3.2.3.2 Direct

The direct corrections class is comprised of three major subtypes that explicitly challenge the correctee's language use.

Direct Type 1: "It's not A, it's B."

(5.1) Ramzi: It's not H/a/lloween, it's H/æ/lloween.

Direct Type 2: "[It's not A, it's] B."

(5.2)   Zoe: Me and [Alexandra]--

        Alexandra: [Alexandra] and I.

Direct Type 3: "That's wrong."

(5.3) Thomas: 声调都不对.
                  shengdiao dou bu dui.
                  [His] tones are all wrong.

5.3.2.3.3 Indirect

Indirect corrections include correction types that indirectly challenge the correctee's speech by drawing attention to some aspect of their language use:

Indirect Type 1: Why do you say A?

> (5.4) Stephanie: Why do you say r/ʊ/fs?

Indirect Type 2: Mocking imitation of A

> (5.5) Miss Alice: gl/aː/sses--
>
> >   Ginny: gl/aː/sses (laugh)

Indirect Type 3: You say A and we say B

> (5.6) Cynthia: You say th/ɜt/y and we say th/ɜɾ/y. [thirty]

Indirect Type 4: What's A? [Do you mean to say B?] [12]

> (5.7) Audrey: 因为是什么?
> yinvei si senme?
> what's '*yinvei*'?

5.3.2.3.4 Recasts

I define recast as a correction type in which the corrector embeds a reformulated version of the correctee's utterance in their responding utterance, as in Example (5.8):

---

12 While in written form, "What's A?" may appear to be a question rather than a correction, the intonation pattern of these utterances and subsequent statements make clear that the corrector is challenging the utterance. In Example 7, Audrey is attempting to embarrass the teacher by calling attention to her non-standard pronunciation. Even in cases where the corrector may be genuinely asking for the meaning of A, I included corrections in which the response given by the correctee indicated that it was perceived by the correctee as a challenge to their language use.

(5.8)   Nancy: You don't speak Spain or read Spain.

           Miss Alice: Right, I don't know how to read Spanish.

Following the analysis of Chouinard and Clark (2003), recasts are a type of correction in the sense that correctees are provided with the conventional form of an utterance and are able to make use of that evidence as they would an explicit correction. I only include embedded recasts in this category, in contrast to Chouinard and Clark, who use a broader 'reformulations' category which also include side-sequences formulated as clarification questions, e.g. "Did you mean to say B?" I coded these side-sequences as a separate category, and then grouped them in the 'indirect' class of corrections for my analysis, as described above. This grouping was made because I felt that recasts are crucially different from clarification questions in that recasts do not overtly challenge the correctee's language use or interrupt the flow of conversation, while clarification questions, much like the other indirect correction subtypes, do challenge language use, and provide an opportunity for the correctee to accept or reject an offered correction.

In performing a recast, speakers are not necessarily indicating that what the correctee said was incorrect in the context of the correctee's speech variety. They are, however, indicating that what the correctee said is not acceptable in the corrector's own speech variety, which may provide a signal to listeners who are still developing an understanding of what sort of speech is acceptable from which speakers. In the context of Miss Alice's class, for example, when she produces a British variant of some vowel, and students repeat the vowel using their American variant, they may be indicating what is conventional for themselves, rather than trying to tell Miss Alice that she has made a

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mistake. These sorts of recasts provide crucial clues to other students, some of whom have limited contact with Mainstream American English, signaling that they should not adopt the vowel used by Miss Alice if they wish to speak like their peers. For this reason, it is not particularly relevant whether or not correctors are consciously performing recasts or simply unconsciously repeating utterances using their conventional speech patterns.

5.3.2.4 Linguistic Class of Corrected Feature

Linguistic features targeted for correction were initially classified into 6 categories: tones, phonetic/phonological, lexical, morphological, syntactic, and orthographic. Due to the rarity of morphological and syntactic corrections, I then merged these with lexical into a "morphological and above" category. Additionally, because tone corrections do not exist in English, for the purpose of comparing of Mandarin and English, tone corrections will be merged into the phonological category.

5.4 Results

5.4.1 Number of Corrections by Class

366 corrections were coded in total. Of these, 244 were from the first grade students and teachers, and 92 were from the second grade students and teachers. While the absolute number of first grade corrections is higher, this number breaks down to 111 corrections from my Autumn fieldwork period (21 days of fieldwork), and 133 from my Spring fieldwork period (19 days), as compared with 92 corrections from 26 days of second

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grade fieldwork; these rates of correction are not wildly different. The remaining gap in rates between the first and second grades may be due to the amount of time during which the second grade classroom was too chaotic for corrections to be observed and recorded.

5.4.2 Distribution of Corrections

5.4.2.1 Distribution of Corrections by Corrector and Correctee Type

There are multiple ways in which we can conceive of and analyze these corrections data, depending on which research question we want to address. Our first approach will be to examine how the corrections break down according to who is correcting whom: how many corrections are coming from teachers directed toward students (t-to-s), how many are coming from students directed toward teachers (s-to-t), and how many are student-to-student (s-to-s). While a traditional classroom model suggests that the majority of corrections would be t-to-s, in fact the data do not bear this out. Figure 17, illustrating the distribution for the first-grade classes, shows nearly identical numbers for each of the three categories, with t-to-s making up 35.2% of corrections, s-to-t making up 29.5%, and s-to-s also at 35.2%. The second grade data (Figure 18) break down quite differently, with only four corrections total coming from teachers (4.3% of total corrections), with the rest of corrections made up of 39.1% s-to-t, and 56.5% s-to-s.

1st Grade Corrections Distribution
n = 244

2nd Grade Corrections Distribution
n = 92
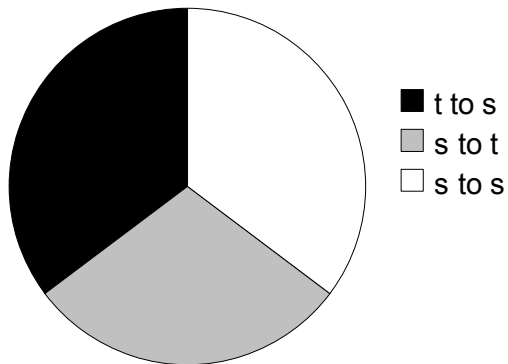
Figure 17: Distribution of first grade corrections by corrector and correctee.
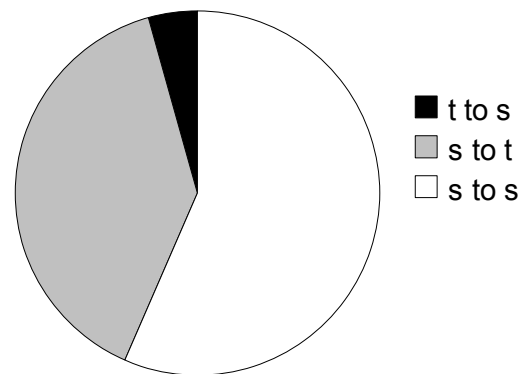
Figure 18: Distribution of second grade corrections by corrector and correctee.

5.4.2.2 Teacher-Initiated Corrections Distribution

The four corrections coming from second-grade teachers break down further into three corrections from NE Teacher in the Chinese class, and one from Miss Brenda, the English teacher. For the first grade t-to-s corrections, 57 corrections are from TW Teacher in the Chinese class, 23 corrections come from the English teacher Miss Alice, two corrections come from NE Teacher in her capacity as the library teacher for the first graders, two corrections from substitute Chinese teachers, and one remaining correction from an English-speaking teacher's aide. Thus, in the data overall, 64 of the teacher-initiated corrections are from Chinese teachers, and 25 are from English teachers, a statistically significant difference (X^2 (1, N = 89) = 16.227, $p < .0001$).

This relatively strong focus on correction in Chinese class is not a result of students being stronger English speakers than Mandarin speakers. If anything, students produced more non-standard English than non-standard Mandarin, because English was

the language of the playground and students with lower English skills were willing to

speak English and make mistakes. I observed frequent occurrences of non-standard

English from students left uncorrected by teachers; many of these were then picked up

on and corrected by students. Examples (5.9), (5.10) and (5.11) illustrate a range of non-

standard English or speech errors produced by students in class presentations, left

uncorrected by teachers:

(5.9) Zoe: She can talk to animals, also the legend ones, like dinosaurs.

(5.10)Audrey: Grand Canyon, Nig- Nigra- ra Falls.

(5.11) Thomas: And the Yoda tell him to train but I think he forgot it and he just
                    listen to that bad people.

The relative absence of correction by English teachers may result from differing

ideologies about correction in Western versus Asian cultures (cf. Takahashi & Beebe

1993). As discussed in Piestrup (1973) and Wheeler & Swords (2004), correction of

students, and in particular interruption of students, is considered by Western researchers

and teachers to have a negative effect on student self-perception and school performance.

Teachers may be particularly sensitive to this issue in a dual-language immersion

context, in which certain students produce far more non-standard forms than others;

regular correction would result in singling out certain students. This concern appeared to

be specifically connected to teacher-initiated corrections, since English teachers at

Meizhang generally did not discourage students from correcting each other. This attitude

about student-initiated correction also held for Chinese teachers, with the exception of

one substitute teacher, who informed students that they should refrain from correcting their classmates, because that was her job.

The virtual absence of linguistic corrections from teachers in the second grade is partially explained by differences in teaching styles, and partially by classroom management issues. In the case of the English teacher, Miss Brenda, her more *laissez-faire* style resulted in few corrections of any kind, whether of behavior or language use. In the Chinese class, NE Teacher was primarily focused on student behavior issues, and therefore had little time to spend on linguistic correction. The fact that NE Teacher produced almost as many corrections directed at first-grade students, with whom she spent relatively little time during library class, suggests that it was the context of the second-grade classroom, rather than her general teaching style or views on correction, that caused her to produce so few linguistic corrections directed at second-grade students.

5.4.2.3 Extent of Student-Initiated Correction

As shown in Figures 17 and 18, student-initiated corrections make up the majority of corrections in both grades. Is this the result of a few enthusiastic students, or are all students giving corrective feedback? The overall data, focusing on only those corrections initiated by an identifiable individual rather than by a group, point to widespread adoption. In the first grade, all but two of the students (93%) individually initiated at least one correction. 36% of students initiated over five corrections; the highest number of corrections initiated by a single student was 27. A detailed breakdown of the numbers

of first grade students and corrections initiated is given in Figure 19. While a few

students are responsible for a large number of corrections, there are nonetheless

significant numbers of students regularly initiating corrective feedback.
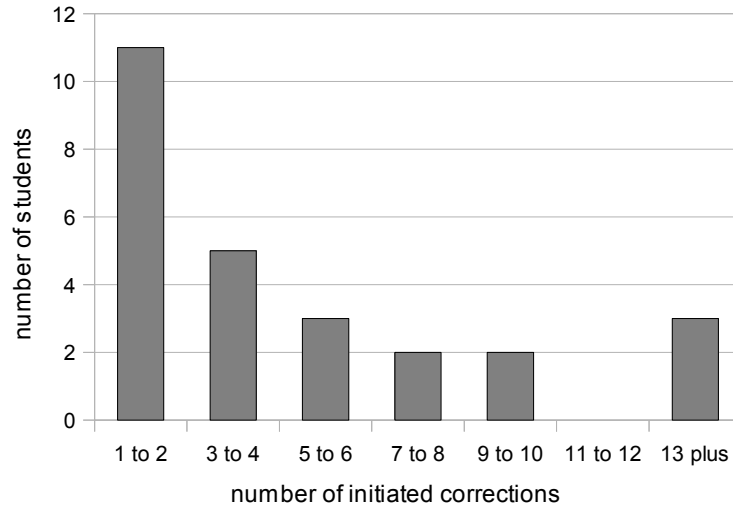
Figure 19: First grade students by number of initiated corrections.
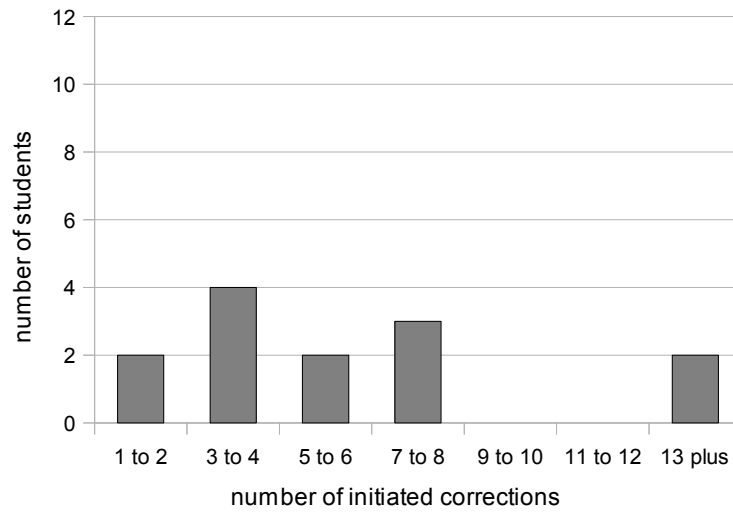
Figure 20: Second grade students by number of initiated corrections.

In the second grade, all but four students (76.5%) initiated at least one correction. 41% of all students initiated over five corrections; the highest number of corrections initiated by one student was 29. Because there were fewer overall corrections from the second graders, this means that a single student, Audrey, was responsible for approximately one third of all student-initiated corrections in the second grade. Figure 20 gives the breakdown of number of students by number of corrections for second graders.

One of the more notable features of the correction type breakdowns in Figures 17 and 18 is the frequency of student-initiated, teacher-directed (s-to-t) corrections. While this behavior may seem unusual, in fact it is widespread among the students. 76.9% of first graders and 69.2% of second graders who initiated at least one correction also initiated at least one teacher-directed correction. This means approximately three-quarters of the first graders, and slightly over half of the second graders, were engaging in linguistic correction of teachers.

The breadth of adoption of both student-directed and teacher-directed corrective behavior by students found in these data indicates that linguistic corrective behavior was accepted and widespread in the classroom communities of both grades.

5.4.2.4 Extent of Correction Targeting

Having established that a large number of students were initiating corrections, we should briefly examine whether these corrections were all aimed at a few individuals, or more evenly spread throughout the student body. Figure 21 illustrates the number of students targeted for various quantities of corrections, for each grade.
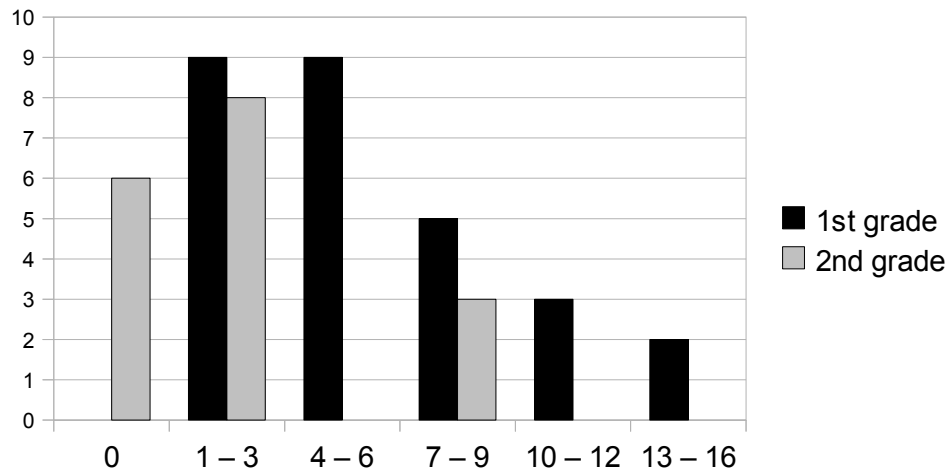
Figure 21: Numbers of students receiving different numbers of corrections by grade.

In the first grade, every student was the individual target of at least one correction. The mean number of corrections targeted at each student was 5.82. In the second grade, 64.7% of students were targeted by at least one correction, and the mean number of corrections per student was 2.29. These distributions indicate that, while certain students were targeted for correction relatively frequently, corrective behavior was not overwhelmingly targeted at a small group of students.

5.4.2.5 Summary of Corrections Distribution Findings

A breakdown of corrections by initiator and target has revealed that the majority of corrections in the Meizhang data were initiated by students. Virtually all of the first grade students both initiated and were targets of corrections, while the majority of second graders initiated and were targets. While all primary teachers initiated at least one correction, Chinese teachers initiated far more corrections than English teachers.

Looking at both grades, only one student was completely removed from any corrective behavior, initiating no corrections and receiving no corrections. She achieved this distinction by almost never speaking, in class or at recess. In light of these data, there is ample evidence that virtually all students in the first and second grades were engaged in the practice of negotiating corrective feedback, either as initiators or targets of corrections.

5.4.3 Features Targeted for Correction

5.4.3.1 Introduction

While more corrections were initiated by Chinese teachers than by English teachers, corrections overall were evenly split between those that targeted English (n = 157) and Mandarin (n = 156), with 23 remaining corrections targeting moving from one language to another. In the following sections, we will look more closely at which types of features were targeted for correction, within each language. Analyzing which features were targeted, and how they were corrected, can shed light onto how variation is conceived of in each language, and which aspects of variation within English and Mandarin are most salient in the school community.

5.4.3.2 Level of Features Targeted

As described in Section 5.3.2.4, the linguistic features targeted by each correction were categorized as belonging to morphology or higher levels (syntax, semantics, etc.), phonology or phonetics, tones, and orthography. To compare English and Mandarin,

tones were merged into the phonology/phonetics category, resulting in three basic

categories: grammatical features, phonological features, and orthographic features.

Examples (5.12), (5.13), and (5.14) illustrate grammatical, phonological, and

orthographic corrections in English from the Meizhang data:

> (5.12) (grammatical)
> Kevin: She has a glass.
>
> Miss Alice: Yes, she's wearing glasses.
>
>
> (5.13) (phonological)
> Miss Alice: This is an [ɔ]ctagon [RP pronunciation of octagon]
>
> Ginny: [a]ctagon [American English pronunciation of octagon]
>
>
> (5.14) (orthographic)
> Jared: Um, crème brulée is spelled wrong.

Examples (5.15), (5.16), and (5.17) give examples of the three classes in Mandarin:

> (5.15) (grammatical)
> Peter: 我有去厕所
> wo you qu ce suo
> I have gone to the bathroom
>
> Sean: 我*要*去厕所
> wo *yao* qu ce suo
> I *need* to go to the bathroom
>
>
> (5.16) (phonological)
> Alexandra: 我做完了
> wo zuo w[æ]n le
> I've finished
>
> TW Teacher: 做完了
> zuo w[a]n le

finished

(5.17) (orthographic)
  Thomas: 这是简体字
         zhe shi jiantizi
         This is a simplified character

Percentages of corrections targeting features in these three categories in English and

Mandarin are given in Figure 22:
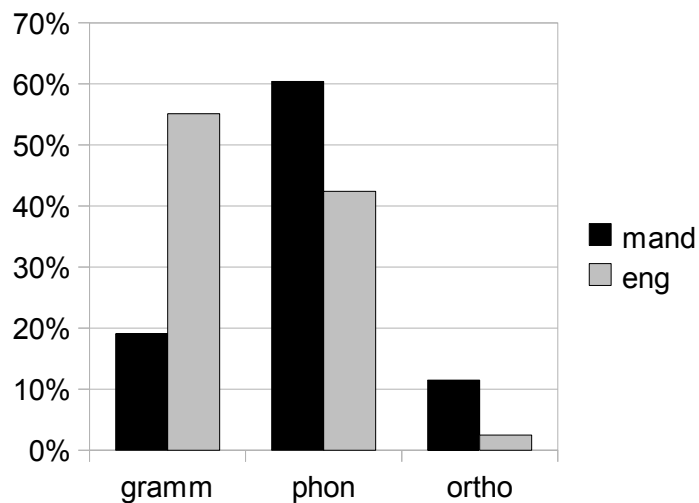
Figure 22: Features targeted by language.

In Mandarin, significantly more corrections target phonological than grammatical

features (X^2 (1, N = 139) = 43.772, p < .0001). This is not the case in English, with a

trend in the opposite direction but no statistical difference between grammatical and

phonological feature classes (X^2 (1, N = 154) = 2.597, p = .107). This difference between

the languages is not surprising, in the sense that English has more complex

morphosyntactic and other higher-level features (e.g., irregular verb inflections); it may

be that there are fewer possible mistakes to make in Mandarin at these levels of

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grammar, and so fewer corrections occur.

While this is not the focus of the present study, there were also significantly more corrections of Chinese orthography than of English orthography (X^2 (1, N = 22) = 8.909, p = .0028). The difference here may result from differences in teaching styles for English spelling and Chinese character and Taiwanese phonetic alphabet writing; English spelling was most often corrected privately, in the form of written corrections, which were not included in these data, while Chinese characters and writing were often discussed and corrected in front of the class.

If the difference in grammatical versus phonological features targeted in English and Mandarin correction is purely the result of different areas of complexity in the two languages, we would expect students and teachers to target similar features. Moreover, if students are taking cues from teachers about which features are appropriate to correct, we would also expect similar features to be targeted. To examine how the features targeted by students relate to the features targeted by teachers, we will consider only those corrections initiated by teachers and students and directed at student speech, and exclude those directed at teachers, in order to control for the nature of the speech that is potentially being corrected (specifically, we can assume that teachers make fewer morphosyntactic and higher-level speech errors, and therefore are less open to correction for this class of feature). Figure 23 indicates the percentage of student-directed corrections given by teachers and students which target features above the phonological level, in each language:
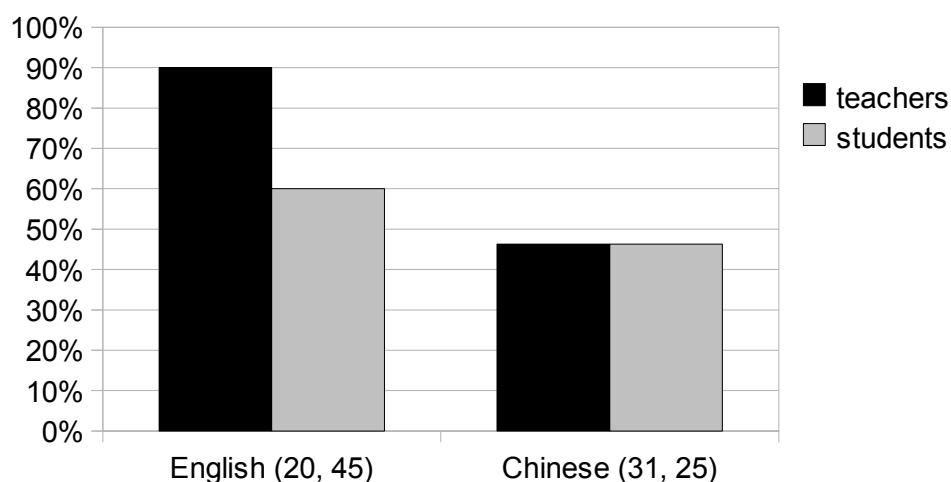
Figure 23: Percentage of student-directed corrections targeting features above phonological level. N token amounts given in parentheses.

For Chinese corrections, students match teachers' level of non-pronunciation corrections extremely closely, devoting slightly less than half of their corrections to these features. In the case of English, however, while teachers devote 90% of their corrections to features above the phonological level, with only two instances of pronunciation-targeting corrections recorded in their data, students behave quite differently, showing no significant difference between the frequency of phonological versus non-phonological corrections (X^2 (1, N = 75) = 2.614, p = .1059). In other words, while English teachers avoid correcting their students' pronunciation, students do not avoid correcting their peers' pronunciation. It is not the case, however, that students target features equally regardless of language; the distribution of features targeted is different in English and Chinese, with students targeting significantly more higher-level features in English (X^2 (1, N = 75) = 5.357, p = .0206).

Do students target the same features when they direct corrections at teachers versus students? Previously, we predicted that the features targeted would be different,

based on the supposition that teachers would make fewer higher-level grammatical errors than students. Looking briefly at teacher-directed corrections from students, where higher-level corrections are expected to decrease, we see the predicted pattern; 95% of English student-to-teacher corrections target phonological-level features, as do 84% of Chinese s-to-t corrections.

Returning to student-directed corrections, these data suggest that, while there are English pronunciations being produced by students that their peers feel are worthy of correction, teachers are overlooking them, either unintentionally or by design. There are two questions to address here: why do the English teachers not correct pronunciation, and why don't students adopt the correction distribution of their English teachers? There are several reasons for the English teachers in the Meizhang data to avoid correcting student pronunciation. Given that the second grade teacher, Miss Brenda, makes only one linguistic correction in these data, we can speculate that her lack of pronunciation-targeting corrections is reflective of her broader practice of not correcting students. As for Miss Alice, looking at an example of a pronunciation-targeting correction she does make is instructive:

(5.18)   Shannon: Ask about being an /ar/thor [author]
           Miss Alice: Ask him about being an /ɔ:/thor.

Miss Alice's recast of Shannon's r-insertion into 'author' is of questionable utility here. As a speaker of British English, not only is Miss Alice's vowel in 'author' far removed from Shannon's, but she regularly deletes post-vocalic /r/'s, meaning that it would take quite a bit of detective work from Shannon to reverse-engineer the American English

pronunciation that Miss Alice would like Shannon to adopt. Unlike the Chinese teachers, who, as discussed in the previous chapter, are able to use the standard target variety of Mandarin in particular contexts, Miss Alice does not use American English, and is therefore limited in how she can model pronunciation for students. Thus, as a newcomer in an American school where the target variety is Mainstream American English, Miss Alice is not in an ideal position to correct many aspects of student pronunciation. More importantly, as I will discuss further in Section 5.4.3.4, Miss Alice's comments on language difference (as in Example (5.19)) reveal an underlying ideology that tolerates variation and holds that communication trumps speech errors or language differences.

(5.19) Miss Alice: I call it a tick, you call it a check, but we all know it's the same thing, don't we.

Her corrections of higher-level features routinely emphasize successful communication. She frames standard grammar in terms of clarity, avoiding prescriptive language about correctness, as shown in Example (5.20), in which she corrects a missing 'the' in a student's writing:

(5.20) Miss Alice: Why don't you write it so that it makes sense.

Working within a framework in which "making sense" is more crucial than pointing out differences, it follows that Miss Alice would regard pronunciation correction as relatively unimportant. Even if she were a speaker of American English, it is therefore unlikely that Miss Alice would engage in significant amounts of pronunciation correction.

As for the second question, why students are failing to adopt teacher behavior in

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this instance, it may be that students reject tolerance of pronunciation differences in English because they have been exposed to competing ideologies about English at home, in the media, through interaction with peers, or through interaction with previous teachers. Additionally, by virtue of being native speakers of American English, certain students are in a better position to correct pronunciation than non-speakers of the target variety. To understand student corrective behavior, we need a more thorough understanding of precisely which features are being corrected, and how those corrections are delivered and received. A more detailed analysis of features targeted for correction by students, and how they are being corrected, will be given in Section 5.4.4.

5.4.3.3 Correction of Mandarin Features

5.4.3.3.1 Introduction

One of the aspects of the Meizhang linguistic situation that makes it interesting for sociolinguistic analysis is that the language variety spoken by the majority of staff and Chinese-background students, non-standard Taiwanese Mandarin, is not the target variety of the school. In the previous chapter, I discussed how two Taiwanese teachers, TW Teacher and MT Teacher, and one Mainland Chinese teacher, NE Teacher, varied in their use of the non-standard merger of retroflex and dental sibilant initials.[13] I found that teachers consistently varied in their use of these initials, using more standard initials in more instructional contexts. In this section, we will look at how this variable, and other features characteristic of non-standard Taiwanese Mandarin varieties, are treated in corrective feedback, in contrast to other non-standard features that are not characteristic

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13 See Chapter 3 for an introduction to retroflex and dental sibilant initials.

of this variety.

As discussed in Chapter 3, many of the non-standard features typical in Taiwan can also be found in other varieties of Mandarin. Because Taiwanese Mandarin speakers are dominant at Meizhang, and because many of these speakers vary between more and less standard features, we might expect that students would become familiar with both standard Taiwanese Mandarin pronunciation, and non-standard Taiwanese Mandarin pronunciation. However, students would be less familiar with non-standard features typical of other dialects, and certain features of standard Mainland Mandarin (*putonghua*) that differ from Taiwanese Mandarin. We would therefore expect Taiwanese and non-Taiwanese features to be treated differently. Table 12 lists some examples of non-standard features found in the Meizhang data, and their associated regions.

Feature	Taiwanese?	Associated Regions
retroflex/dental sibilant merger or non-standard assignment	yes	everywhere but Beijing (see Chapter 3)
final /r/ deletion	yes	southern China
/n/ merger with /l/	no	Sichuan, Guangdong, HK
/w/ to /v/	no	northeastern China
o to *e* following labials	no[14]	northeastern China
third tone fa3 for 'France'	no	standard in Mainland

Table 12: Selected non-standard features present in Meizhang data.

5.4.3.3.2 Corrective Feedback for Taiwanese Features

The present analysis of treatment of regional features will focus on phonological features, and how corrections of these features are framed. Figure 24 illustrates the percentage of direct, indirect, and recast corrections used to target Taiwanese

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14 While *o → e* is found in some Taiwanese Mandarin varieties heavily influenced by Taiwanese, it was not a feature used by the Taiwanese speakers in the Meizhang data.

phonological features, Northeastern Mainland phonological features, tones, and all other phonological features.[15] While the number of tokens in each category is relatively small, there is a dramatic difference in the treatment of Taiwanese phonological features and all other phonological features. Other features, and in particular tones, are corrected explicitly, using forms discussed in Section 5.3.2.3.2, while Taiwanese features are overwhelmingly corrected using recasts.
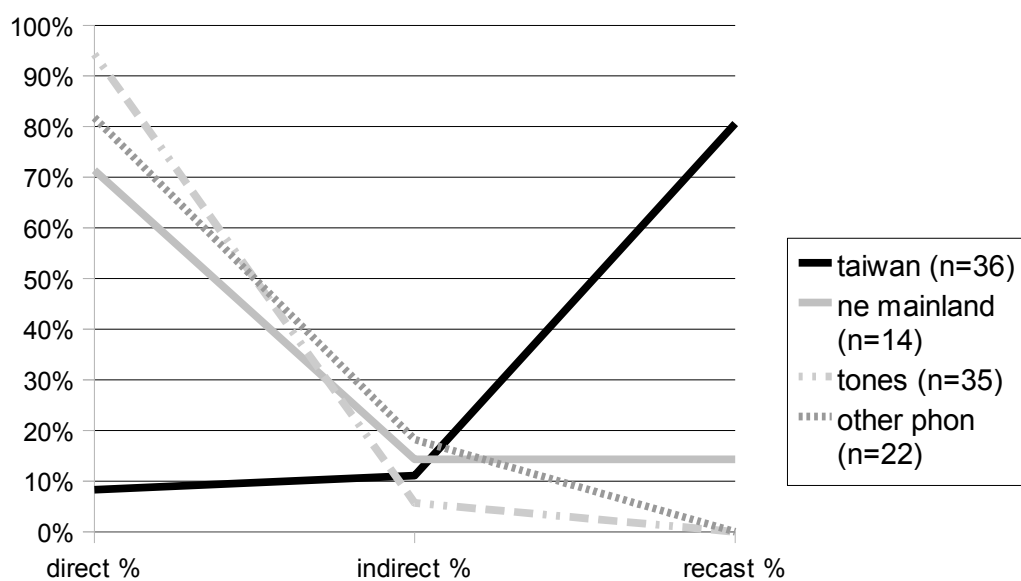
Figure 24: Percent correction type for phonological feature classes.

In the case of Taiwanese phonological corrections, teacher-initiated and student-initiated corrections pattern similarly. There were only two direct corrections of Taiwanese phonological features initiated by teachers in the data. One was initiated by a substitute teacher, who was unfamiliar with the social and linguistic practices of the school. The other was initiated by TW Teacher in an unusual set of circumstances;

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15 Phonological features were categorized according to whether students would be familiar with those features due to their frequency in Taiwanese Mandarin, rather than according to whether they were produced by a Taiwanese speaker. In other words, features shared by Taiwanese Mandarin and other varieties were classified as Taiwanese for the purposes of this analysis.

students were preparing a song to sing to their mothers for Mothers Day that contained

the phrase 慈爱的眼睛 *ci'ai de yanjing*, meaning "affectionate, loving eyes." Using their

typical hypercorrection strategy,[16] when students heard TW Teacher say *ci'ai*, they

reformulated it as *chi'ai*, incorrectly guessing that the relative frequency of retroflex

initials meant that the initial syllable should be standardly pronounced *chi*. TW Teacher

generally ignored these sorts of hypercorrection errors, but in this case, she paused and

explicitly corrected the students, to ensure that they sang about their mothers' loving

eyes, rather than eyes that loved too late (迟爱), or loved shamefully (耻爱). While this

correction was related to a Taiwanese phonological feature, it was a correction of a

hypercorrection away from the merger; none of the regular teachers ever explicitly

corrected a students' use of the dental/retroflex merger.

The *ci'ai* example above is actually a correction within a correction, and

illustrates some crucial functions of recasts. Students, upon hearing a dental initial, *c*,

initiated a corrective recast based on their statistical knowledge of Mandarin. This recast

was not meant to directly challenge the teacher's pronunciation; it served as both a

learning strategy, and as a strategy for resolving the conflicting classroom pressures to

repeat what the teacher says, and to produce standard speech in the target language

variety. In this case, the recast was effective as a learning strategy, in that students were

able to receive explicit negative feedback to solidify their understanding of how *ci'ai* is

meant to be standardly pronounced. As I will argue in Chapter 7, this recast strategy

resulted in students adopting more standard pronunciations than they were exposed to by

16 See Chapter 7 for discussion of student hypercorrection and other language use patterns.

their teachers.

The absence of direct corrections for Taiwanese regional features from teachers would have been particularly salient to students due to the high frequency of these initials in Mandarin, and the relatively high proportion of direct corrections for other features. In the Chinese classrooms, correction of students took place very visibly, with activities that highlighted correction such as individual students reading aloud in class and being interrupted with corrections by teachers. Students quickly became familiar with which students were frequently corrected by the teacher, and which were not; those who were subject to frequent correction were sometimes teased by peers. Because the majority of students from a Chinese-language background spoke either Taiwanese Mandarin or similar southern Chinese varieties, students heard many instances of these non-standard features being produced, and then either being recast or left uncorrected by the teachers. There is ample evidence, then, for students to acquire the understanding that Taiwanese regional features, and in particular the merger of dental and retroflex sibilant initials, are not appropriate targets of explicit correction.

The following excerpt from a reading-aloud activity illustrates how the Taiwanese feature of non-standard dental initials is recast by TW Teacher, while other features are explicitly corrected:

(5.21)

1   Sean: (reading)
                   图上找到了美国
                   tu sang *zao* dao le mei2guo
                   On the map, we found America

2   TW Teacher: 等一下，那个国家再念一次

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deng yi xia, neige guojia zai nian yi ci
Wait a minute, read that country again

3   Thomas: 美
    mei3
    America

4   TW Teacher: 哎哎
    ei ei
    Hey, hey

5   找到了
    zhao dao le
    We found....

6   Sean: 美国
    mei3 guo
    America

7   TW Teacher: 对，美国那个美要低一点喔
    dui, mei3guo neige mei yao di yidian o
    Right, the "mei" in America needs to be a bit lower

8   再来
    zai lai
    keep going

9   Sean: (reading)
    有的同学找到了中国
    you de tongxue *zao* dao le *zong*2guo
    Some students found China

10   TW Teacher: 来，等，那这两个字再念一次那个国家再念一次
    lai, deng, na *ze* liang ge zi zai nian yi ci nei ge guojia zai nian yi*chi*
    Okay, wait, so read these two characters again, read that country one more time

11   Sean: 中国
    *zong1*guo2
    China

12   TW Teacher: 对了

dui le
Right

13   是平的时候 " 中 " 不要 zhong2
si ping de *si*hou **zhong1** bu yao **zhong2**
When it's level tone it should be zhong1 not zhong2

14   中国，再来
zhong1guo, zai lai
"China", keep going

Two features are targeted for explicit correction here: the pronunciation of *mei3* (third tone) as *mei2* (second tone) in 美国 *meiguo* ('America') (Line 1), and the pronunciation of *zhong1* (first tone) as *zong2* (second tone) in 中国 *zhong1guo* ('China') (Line 9). These tone mistakes are non-native-type errors that Chinese learners would make. Meanwhile, two instances of Taiwanese Mandarin features are recast by TW Teacher but not explicitly corrected: the pronunciation of 找 *zhao* ('to find') as *zao*, and the pronunciation of *zhong* in 中国 *zhongguo* ('China') as *zong*. In the case of *zhongguo*, TW Teacher actually targets the syllable *zong2* for tone correction, ignoring the non-standard dental, and then approves the pronunciation *zong1* as correct (Lines 10 through 12). When she repeats the word in Lines 13 and 14, however, she recasts the syllable using the standard retroflex initial (zh). These recasts are particularly highlighted, because they are in fact the only standard retroflex initials that TW Teacher uses in this interaction: the rest of her retroflex initials have been fronted to non-standard dental initials (e.g., *sihou* for standard *shihou* in Line 13).

There are several layers of sociolinguistic information to be gleaned from TW Teacher's treatment of these variables. The fact that she explicitly approves of Sean's production of *zong1* sends a very strong message that Taiwanese Mandarin initials are not appropriate targets for explicit correction. On the other hand, the fact that she recasts *zao* and *zong* as *zhao* and *zhong* indicates that she recognizes that the dental variants are non-standard, and is unwilling to model these words in citation form using a non-standard initial. Her use of non-standard dental initials in the same utterances as the standard retroflex citation forms for *zhao* and *zhong* is another example of the stylistic variation we have explored in the previous chapter, and gives cues to students about which terms she is highlighting in her evaluation of Sean's reading.

This example also gives us a better sense of how corrections are approached in the Chinese classroom. TW Teacher follows a regular pattern in her corrections: she prompts the student to produce the correction on his own, then approves the correction, and finally makes explicit metalinguistic comments explaining the correction ("it needs to be a bit lower"). Evidently, the prompting aspect of this process is quite significant to her; she assiduously avoids producing the correct variant before the prompt (asking Sean to "read that country one more time" instead of mentioning its name), and when another student, Thomas, attempts to insert himself into this process and produce the correct variant himself (Line 3), the teacher shuts him down. The metalinguistic commentary she provides does not seem to be for the benefit of Sean alone, who appears to grasp the source of his reading error, but for the other students who may be confused about what feature the teacher is targeting. Another key aspect of this example is that Sean is not a

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native Chinese speaker. Thus, TW Teacher is not simply ignoring Taiwanese features produced by students for whom it is their native variety, but rather is allowing all students to use these features without explicit correction.

Students generally framed their corrections of Taiwanese features as recasts, following the example of their teachers. The only example of a direct correction of the dental-retroflex merger initiated by a student illustrates the social conventions surrounding correction targeting this variation. Second-grader Crystal, who did not get along well with Audrey, corrected Audrey's use of the merger in the word 说 *shuo* ('to say'), ignoring the fact that she herself was using the non-standard pronunciation she was correcting:

> (5.22) Crystal: 你是说'说'，不是'说'
> ni *si suo* '**shuo**', bu *si* '*suo*'
> you mean to say [suo] 'say [shuo]', not 'say [suo]'

In this instance, the direct challenge to Audrey's pronunciation is meant to be a hostile put-down. According to the conventions of the classroom, directly challenging Taiwanese phonological features is rude, and Crystal knows it. The fact that she herself is not bothering to produce the form that she is directing Audrey to use indicates that the linguistic content of the correction is superfluous. The primary intent of the correction is to convey hostility, rather than help Audrey produce more standard Mandarin. The social functions of corrective feedback will be further discussed in Section 5.4.4.3.

One result of the absence of direct corrections targeting Taiwanese regional features was that TW Teacher was very rarely explicitly challenged on her language use in class. The only times she was targeted for direct or indirect corrections rather than

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recasts were for production errors in speech, and for use of non-native pronunciation for English borrowed words (e.g., 'binder'). Rather than being the result of the treatment of Taiwanese regional features, an alternate explanation for the lack of explicit corrections directed at TW Teacher would be a general hesitancy to challenge her. Given the strict manner in which classrooms in Taiwan are generally run (cf. BBC News 2006), it would be understandable to speculate that students did not correct TW Teacher because it was not acceptable to challenge the teacher in a culturally Taiwanese classroom. In this case, however, while the first grade Chinese classroom was run more formally than the English classroom, TW Teacher made a point of regularly telling students that it was okay to point out when she had made mistakes, making comments such as, "老师也可以做错的事情, 也要说对不起" ('The teacher can also make mistakes, she can also have to apologize.'). I observed that students were not generally hesitant to point out when TW Teacher made errors in class, such as writing the wrong date on the board. Students often received positive feedback for asking questions and pointing out mistakes; there is therefore no reason to believe that a general reluctance to challenge the teacher was the cause of the infrequency of direct corrections targeting TW Teacher.

As indicated in Figure 24, other phonological features aside from Taiwanese regional features were targeted overwhelmingly with direct corrections. Many of these features are best characterized as non-native speech errors or production errors. The other major class of features were Northeastern Chinese regional features. Corrections targeting these features will be analyzed in the following section.

5.4.3.3.3 Corrective Feedback for Northeastern Mainland Features

While the first grade Chinese classes restricted their corrections of TW Teacher primarily to recasts, the situation in the second grade, with NE Teacher, was quite different. Example 23 is a typical example of the relatively long corrective exchanges that took place between NE Teacher and several of her students, in particular Audrey, about her Northeastern features. Some of these corrections targeted her heavy fricative /h/, but most corrections focused on her pronunciation of /w/ as /v/ before unrounded vowels. In the present example, two features are being targeted: the /w/-to-/v/ feature, and the alternate pronunciation of 因为 yinwei4 ('because') as yinwei2, with a second tone on the second syllable. Crucially, both of these variants, while not part of the official standard, are accepted variants that are frequently heard in the media and not subject to stigmatization.

> (5.23)
>
> 1   NE Teacher: *因为他乱说话他大声说话，因为...*
> *yinvei2* ta luan shuo hua ta da sheng shuohua, *yinvei2*
> *Because* his talking was out of control, he was talking loudly, *because* of that...
>
> 2   所以老师把他的名字拿掉了.
> suoyi laoshi ba ta de mingzi na diao le
> Therefore Teacher took down his name
>
> 3   Audrey: '因为' 是什么?
> 'yinvei2' si senme?
> What is 'yinvei2'?
>
> 4   NE Teacher: '因为' 是--
> 'yinwei4' shi
> 'yinwei4' is--
>
> 5   Audrey: '因为' 不是' 因为'. 因为不是' 因为'.

'yinwei4' bushi 'yinvei2'. 'Yinwei2' bu shi 'yinvei2'.
It's 'yinwei4' not 'yinvei2'. It's yinwei2, not 'yinvei2'.

6 NE Teacher: 老师还想是' 因为'. 哦... 我会看. 下一个!
        laoshi hai xiang shi 'yinwei2'. o... wo hui kan. xia yi ge!
        Teacher still thinks it's 'yinwei2'. Oh... I'll look it up. Next one!

7 Audrey: 不是' 因为' .... 是' 因.... 为....'
        bu si yinvei2... si yin... wei2...
        It's not yinvei2... it's yin... wei2...

8 NE Teacher: ' 因为', okay. 如果你讲得对了谢谢你啊. 下一个!
        'yinwei2', okay, ruguo ni jiang de dui le xiexie ni a. xia yi ge!
        'yinwei2', okay. If what you have said is correct, then thank you.
        Next one!

In the above example, NE Teacher is practicing "because A, therefore B"-pattern sentences with the students, thereby drawing particular attention to her pronunciation of 'because'. In Line 1, she stresses the *yinvei2* and repeats it. Audrey has objected to NE Teacher's pronunciation of 'because' in the past, and apparently she cannot let this highlighted instance pass without comment. In Line 3, Audrey initiates her correction by asking what *yinvei2* means. Here she is framing her correction as a question, in a show of deference to the teacher; asking questions is appropriate classroom behavior, and Audrey enjoys following and enforcing appropriate classroom behavior.[17]

NE Teacher then recasts Audrey's imitation of her pronunciation and uses the standard pronunciation, *yinwei4*, in Line 4. After several previous incidents, she is already aware that her non-standard pronunciation of 'because' is a pet peeve of Audrey's, as evidenced by this pronunciation shift. Audrey then explicitly corrects NE

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17 Audrey is well-known in the second-grade classroom for enforcing rules and punishing peers for rule-breaking. As Crystal observed, "[Audrey]'s so strict. Stricter than my mom."

Teacher, twice, in Line 5. Her targeted form is inconsistent here; the first time, she uses the standard fourth tone variant, *yinwei4*, but in her repetition she switches to the alternate second tone variant, *yinwei2*. This may be a production error on her part as a result of alternating between pronunciations, but it suggests that Audrey's primary objection to NE Teacher's pronunciation is her use of /v/ for /w/, rather than the tone difference. NE Teacher appears to misinterpret Audrey's objections in Line 6, interpreting the correction to be solely focused on the tone difference. She says that she believes the standard pronunciation might in fact be *yinwei2* (she is technically incorrect, since dictionaries give the standard as *yinwei4*, but the two variants are equally acceptable to all native speakers I consulted). She then promises Audrey that she will look into the matter, and tries to move on. This appeal to the dictionary is a new strategy NE Teacher is using to attempt to handle these corrections, which had become more frequent and disruptive in the classroom. In Line 7, however, we see that Audrey is unwilling to let the matter drop, until she gets a "thank you" from NE Teacher in Line 8. Having succeeded in forcing NE Teacher to lose face in front of the class, Audrey finally brings her challenge to an end.

A revealing aspect of the exchange above is that, although the variants discussed in the two features above are each non-stigmatized alternate pronunciations with approximately equivalent prestige in China, NE Teacher never attempts to convey this viewpoint, instead framing the issue in terms of correctness. She responds to Audrey's correction as if there is one single correct pronunciation, and the solution to their dispute can be found in the dictionary. In the context of this classroom, her use of *yinvei2*, which

would not be out of place in a news broadcast from Beijing, becomes a mistake that NE

Teacher needs to apologize for. Ironically, in this exchange, Audrey is the one using

stigmatized non-standard pronunciation features (the merger of dental and retroflex

initials), but NE Teacher does not bring this up.

NE Teacher is consistent in her apologetic attitude, thanking students for

corrections to her Northeastern features, as in Example (5.24):

(5.24) NE Teacher:　还没做完--
　　　　　　　　　hai mei zuo van--
　　　　　　　　　 still haven't finished--

　　　Audrey:　　不是' 做完', ' 做完'
　　　　　　　　　bu si 'zuo van', 'zuo wan'
　　　　　　　　　it's not 'zuo van', it's 'zuo wan'

　　　NE Teacher:　做完，谢谢你
　　　　　　　　　zuo *wan*, xie xie ni
　　　　　　　　　'zuo *wan'*, thank you

At no point in my observations did NE Teacher respond to corrections by suggesting that

alternate pronunciations were equally acceptable, that different people pronounced things

in different ways, or that it was inappropriate for students to correct the teacher. She

consistently thanked students for their input, changed her pronunciation to their

suggested target, and sometimes made allusions to a future consultation of the dictionary

that would resolve their questions.

From the perspective of a speaker of standard Mainland Mandarin (*Putonghua*),

it would seem bizarre that one of the most standard Mandarin speakers at Meizhang

would be apologizing for the use of alternate accepted pronunciations, and in particular

apologizing to non-adult speakers of non-standard Taiwanese Mandarin, whose own

pronunciations remained unchallenged. But NE Teacher was not perceived to be a standard Mandarin speaker at Meizhang, where the target variety was standard Taiwanese Mandarin (*Guoyu*). Before I came to observe the second-grade class, I was repeatedly told by adult members of the Meizhang community that I should go listen to NE Teacher, because her strange accent would surely be of interest to me. As a new teacher and a speaker of an outsider dialect, who was tasked with teaching unfamiliar traditional characters, the Taiwanese *zhuyin fuhao* phonetic alphabet, and using Taiwanese classroom materials, NE Teacher was on shaky linguistic footing in her classroom and in the Meizhang community. When confronted by students who were native speakers of Taiwanese Mandarin, she had good reason to assume that sociolinguistic judgments made by those students would be shared by the majority of the teachers and staff at the school. This social context, when combined with an underlying ideology that upholds the notion of a single correct Mandarin, accounts for NE Teacher's behavior here.

Given that NE Teacher has issues with controlling behavior in her class, we might assume that the framing of corrections in these examples is simply a result of the second graders being disrespectful and not liking NE Teacher, as opposed to being a result of students' different attitude toward Northeastern features versus Taiwanese features. The strongest evidence against this view is that students did not explicitly correct NE Teacher's use of features which are shared by Taiwanese Mandarin speakers, such as the non-standard merger of dental and retroflex sibilant initials. As shown in the previous chapter, NE Teacher made extensive use of this merger, but it was never targeted for

explicit correction. Another feature she shared with Taiwanese Mandarin was *en/eng*

merger, which was also not targeted. Furthermore, not all of the corrections targeting

Northeastern features were directed at NE Teacher, or initiated by second graders. A

first-grade substitute teacher from Northeastern China was also targeted for corrections,

as in Example (5.25), in which Thomas targets the non-standard merger of *o* and *e*:

(5.25) Substitute:　你的脖子--
　　　　　　　　　ni de be zi--
　　　　　　　　　your neck--

　　　　Thomas:　'脖子', 不是' 脖子'
　　　　　　　　　'bozi', bu shi 'bezi'
　　　　　　　　　it's '*bozi*', not '*bezi*'

　　　　Substitute:　哦, 脖子
　　　　　　　　　o, 'bozi'
　　　　　　　　　oh, '*bozi*'

The evidence here points to the Northeastern features themselves being treated

differently by students, due to their unfamiliarity. The /w/-to-/v/ feature may have been

particularly targeted due to its perceptual saliency, and because /v/ is an unusual sound

for Mandarin, which generally does not have voiced consonants. Audrey held this feature

in such disdain that she would bring it up and mock it even in contexts outside of the

classroom. During an after-school activity one afternoon, she performed a spontaneous

impression:

(5.26) Audrey: ［NE］老师 IS LIKE, "我们用鼻子*闻东西. 闻东西*"
　　　　　　　　[NE] laoshi IS LIKE, "women yong bizi */v/en* dongxi. */v/en*
　　　　　　　　dongxi."
　　　　　　　　[NE teacher] is like, "we use our noses to *smell* [/v/en] things.
　　　　　　　　Smell things."

As an enforcer of classroom rules and practices, Audrey may have viewed NE Teacher's accent as an unacceptable flaw that violated the conditions of her prescribed role as a teacher. Teachers are supposed to be users of standard language, and to not make mistakes, and NE Teacher's failure to speak like the other Chinese teachers at Meizhang may have provided evidence that she was not performing her role properly. This notion that NE Teacher was not a proper teacher was seized upon by other members of the class, some of whom followed suit in openly correcting NE Teacher's use of this feature, while others challenged her in other ways, such as questioning her right to punish them for rule-breaking.

5.4.3.3.4 Discussion of Chinese Corrections

What picture might students acquire of Mandarin variation, based on explicit metalinguistic discussion in the classroom? There was very little explicit discussion of Mandarin variation in the Chinese classrooms, and even less discussion of specific regional linguistic differences. In my observations, none of the Chinese teachers discussed with students that they came from a particular region, or that certain aspects of their own speech resulted from regional differences. When teachers discussed variation, they often couched it in aregional terms, mentioning only that "some people" say one thing, and "some people" say another thing, as in Example (5.27).[18]

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18 The reluctance to discuss regional differences in Chinese with the students was not a result of teacher ignorance of regional linguistic differences. The adult teachers and staff at Meizhang brought up regional linguistic differences in discussions with me, wishing to draw my attention to members of the school community who were from unusual places and therefore spoke differently. Part of the lack of discussion of region with students may have resulted from a presumption that most of the first- and second-grade students were unfamiliar with Chinese geography, and also a reluctance to discuss the political situation of Taiwan and Mainland China. Another issue may be that, for individuals from Taiwan, a lot of linguistic variation in their experience is not regional, but varies according to family

(5.27) TW Teacher:　有的人说 zen，有的人说 ze，
　　　　　　　　　you de ren shuo zen, you de ren shuo ze,
　　　　　　　　　some people say 'zen', some people say 'ze',

　　　　　　　　　所以你听别人说 ze，不要想他们是念错的.
　　　　　　　　　suoyi ni ting bieren suo ze, but yao xiang tamen si nian cuo de.
　　　　　　　　　so if you hear someone say 'ze', don't think they are making a mistake.

One example of a regional difference that was made far more complex through aregional framing was a difference in Mainland and Taiwan standard pronunciations of the word for 'France,' *faguo*, which in Taiwan is pronounced *fa4guo2* and in Mainland China is pronounced *fa3guo2*. As unlikely as it might seem for students to have the opportunity to observe variation in such an infrequent lexical item, a set of circumstances occurred which resulted in a lengthy debate among students and teachers that lasted multiple days. The first-grade students were using a textbook which automatically assigned tones to syllables based on that character's most frequent tone, and as a result sometimes contained errors. TW Teacher therefore had a practice of going through the texts with the students, and pointing out tone-marking errors. In the Taiwanese standard, while the character 法 is normally pronounced *fa3*, in the word for France it is pronounced as *fa4*, and so TW Teacher had explicitly corrected this with the students. Because students had trouble remembering this correction due to the conflicting tone mark in the textbook, this issue came up repeatedly during lessons on this text. One exchange on the subject of *fa3* vs. *fa4* is illustrated in Example (5.28):

(5.28)

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background and other social factors that would be too complex and sensitive to explain to students.

1	Students:	(reading)
		我想去法国，怎么去法国？
		wo xiang qu fa4/fa3 guo2, zenme qu fa4/fa3guo2
		I want to go to France, how do you get to France?

2   (mix of fa4 and fa3 being read by different students)

3	Sean:	老师
		laoshi
		Teacher

4	TW Teacher:	好，什么是？
		hao, shenme si?
		Okay, what is it?

5	Sean:	法国是什么？
		fa4guo shi senme
		What is 'France' (fa4guo)?

6	TW Teacher:	我们班有没有解释法国是哪里
		women ban you meiyou jiesi fa4guo shi nali?
		Have we explained in our class where France is?

7	Thomas:	老师不是 fa3 , fa4
		laoshi busi fa3, fa4
		Teacher, it's not fa3, it's fa4

8	TW Teacher:	法国
		fa4guo
		Fa4guo

9	Thomas:	法
		fa4
		fa4

10	Students:	法，法
		fa3, fa4
		fa3, fa4

11	TW Teacher:	我听到了！
		wo ting dao le

I've heard you!

12   好等一下停止吵架。
　　　　　　　　　　　　　hao deng yi xia ting zi chao jia
　　　　　　　　　　　　　Okay wait a moment, stop arguing.

13   Thomas: 法国
　　　　　　　　　　　　　fa4guo
　　　　　　　　　　　　　France (fa4guo)

14   TW Teacher: 为什么要吵架？
　　　　　　　　　　　　　weisenme yao chaojia?
　　　　　　　　　　　　　Why do you have to argue?

15   那个音，它有两个，它有--
　　　　　　　　　　　　　nege yin, ta you liang ge, ta you--
　　　　　　　　　　　　　That sound, it has two, it has--

16   事实上那个字，它有四个音
　　　　　　　　　　　　　sisisang nege zi, ta you si ge yin
　　　　　　　　　　　　　Actually that character, it has four pronunciations

17   它可以念 fa1，还可以念 fa2
　　　　　　　　　　　　　ta keyi nian fa1, hai keyi nian fa2
　　　　　　　　　　　　　It can be read as fa1, and also as fa2

18   还可以念 fa3，还可以念 fa4
　　　　　　　　　　　　　hai keyi nian fa3, hai keyi nian fa4
　　　　　　　　　　　　　and also as fa3, and also as fa4

19   所以它叫什么字？
　　　　　　　　　　　　　suoyi ta jiao senme zi?
　　　　　　　　　　　　　So it's called a *what* kind of character?

20   Students: 法！法！
　　　　　　　　　　　　　fa4! fa4!
　　　　　　　　　　　　　fa4! fa4!

21   TW Teacher: 破音字，它有四个声调都有
　　　　　　　　　　　　　poyin zi, ta you si ge sengdiao dou you
　　　　　　　　　　　　　'Multiple-sound character', it has four tones, it has them all

22	Students:	法
		fa1
		fa1

23	TW Teacher：	(writes zhuyin on board)
		对，fa1 fa2 fa3 fa4.它四个声调都有
		dui, fa1, fa2, fa3, fa4, ta si ge sengdiao dou you
		Right, fa1, fa2, fa3, fa4, it has all four tones

24	Students:	法，法，法
		fa1 fa2 fa3
		fa1, fa2, fa3

25	TW Teacher:	好，请看老师这边。所以这个字呢，
		hao, qing kan laosi zhebian. suoyi zege zi ne,
		Okay, please look over this way at the teacher. So as for this character,

26		它是一个破音字，有很多不同的音。
		ta si yi ge po yin zi, you henduo butong de yin
		It is a multiple-sound character, it has lots of different sounds

27		刚刚有小朋友提到
		gang gang you xiao pengyou ti dao
		Just now a kid pointed out

28		有两个小朋友在吵那个 fa3 国跟 fa4 国
		you liangge xiao pengyou zai cao nege fa3guo gen fa4guo
		There were two kids arguing about fa3guo versus fa4guo

29		在一些字典上老师找到的呢
		zai yi xie zidian sang laoshi zao dao de ne
		Teacher has found this in a few dictionaries

30		念这个音的时候念 fa4 的时候
		nian zege yin de sihou nian fa4 de sihou
		When reading this character, when reading fa4

31		是指国家的时候我们念 fa4，那也是 fa4.

shi zi guojia de shihou women nian fa4, na ye si fa4
It's when it refers to a country that we read it as fa4, that's
fa4

32 可是有的时候我们常常也听到有人念 fa3 国
keshi you de sihou women cangcang ye ting dao you ren
nian fa3guo
But sometimes we often also hear some people reading it as
fa3guo

33 对，所以他刚刚讲 fa4 国那是没有错的
dui, suoyi ta ganggang jiang fa4guo na shi meiyou cuo de
Right, so what he just said about fa4guo, that is correct

34 有一些字典里头它都是讲它读 fa4
you yi xie zidian litou ta dou si jiang ta du fa4
In several dictionaries they all say it's read as fa4

35 是因为它指国家的时候才读 fa4
si yinwei ta zi guojia de sihou cai du fa4
It's because it refers to a country, only then is it read as fa4

36 读 fa3 的时候是方法
du fa3 de sihou si fangfa3, senme banfa3
The times when it's read as fa3 are 'method'(fangfa3)

37 什么办法，那个时候才念 fa3.
senme banfa, nege sihou cai nian fa3
'what way'(banfa3), in those cases is when it's read as fa3.

The metalinguistic corrective incident above begins when Sean, in Line 5,

indirectly introduces a correction using the "What is A?" frame. Notice that exactly the

same frame was used by Audrey in Example (5.23) ("What is *yinvei*?"), although the two

students belong to different grades. This frame is popular as a means of initiating

corrects in a lecture context, perhaps because it takes the guise of asking a question,

which is an acceptable activity during class, rather than interrupting and explicitly

challenging someone else's language use. As in the incident in (5.23), the teacher appears to initially interpret the query as a question about the meaning of the word, and then is forced by student intervention to address the linguistic correction (Thomas's explicit "it's not *fa3*, it's *fa4*" in Line 7).

In addressing this correction, TW Teacher does three key things: first, she uses the question as an opportunity to reinforce previously-learned language arts material, by bringing up the term 破音字 *poyinzi,* meaning a character with multiple pronunciations (Lines 21 - 26), broadening the focus of the question to different pronunciations of the character 法 in various contexts, and reminding students of other words they know that use the same character (Lines 36 - 37). Then, like NE Teacher in Example (5.23), she appeals to the dictionary as the authority, in fact claiming that she has consulted *multiple* dictionaries on the subject (Lines 29, 34). Finally, she acknowledges that there are "some people" who pronounce this word as *fa3guo2* (Line 32)*,* but indicates that they are incorrect, because the dictionary has declared *fa4guo2* to be the proper pronunciation.

Through her discussion, TW Teacher has framed the *fa3* vs. *fa4* issue in terms of one single Mandarin standard, in which *fa4* is the correct pronunciation. Unfortunately for her, this pat solution was fated to be challenged later that day, when TW Teacher had to leave early, and was replaced for the second class period by a substitute from Mainland China. Example (5.29) is an excerpt of the incident that occurred when the substitute asked the students to read from the lesson text:

(5.29)

1   Students: 我想去法国，怎么去法国？
                        wo xiang qu fa4 guo, zenme qu fa4 guo

I want to go to France, how do you get to France?

2	Sub:	OKAY，我有一个问题。是 fa3 国，fa4 国，还是 fa3 国？ Okay, wo you yi ge wenti, shi fa3guo, fa4guo, haishi fa3guo? Okay, I have a question, is it 'France'(fa4), or is it 'France'(fa3)
3	Students:	fa4！fa4 国！ fa4! fa4guo2! fa4! fa4guo2!
4	Sub:	fa4 国？是 fa3 国。fa4 国，还是 fa3 国？ fa4guo? shi fa3guo. fa4guo, haishi fa3guo? fa4guo? It's fa3guo. Fa4guo, or fa3guo?
5	Cynthia:	老师说都可以。 laoshi shuo dou keyi. Teacher said both are okay.
6	Sub：	嗯？ ng? Huh?
7	Cynthia:	［TW 老师］说哪个都可以。 [TW laoshi] shuo neige dou keyi. [TW Teacher] said either is okay.
8	Sub:	问你的拼音注的是什么？ wen ni de pinyin zhu de shi shenme? I'm asking you what does the pinyin say?
9	Students:	fa3. fa3. fa3.
10	Sub:	嗯。那我们还是按拼音来，okay？fa3 国。 ng. na women haishi an pinyin lai, okay? fa3guo. Yeah, so we should go according to the pinyin, okay? Fa3guo2.

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11	Cynthia:	但是我们有注音，我们不会读拼音！
		danshi women you zhuyin, women bu hui du pinyin!
		But we have zhuyin, we don't know how to read pinyin!

12	Students:	不会读拼音！
		bu hui du pinyin!
		We don't know how to read pinyin!

13	Sub:	嗯，你的注音。
		ng, ni de zhuyin.
		Oh, your zhuyin.

(2 mins later)

14	Stephanie:	(reading)
		怎么去 fa4 国。
		zenme qu fa4guo
		How do you get to France (fa4)?

15	Peter:	她说 fa4！
		ta shuo fa4!
		She said fa4!

16	Sub:	嗯，还是 fa4 国和 fa3 国的问题，哦，我们还是一
		ng, haishi fa4guo he fa3guo de wenti, o, women haishi--
		Hm, it's still that fa4guo versus fa3guo problem, huh, we should--

17	Sub:	还是跟着那个拼一　注音，注音，
		haishi genzhe nage pin- zhuyin, zhuyin.
		We should do it according to the pin[yin]- zhuyin, zhuyin.

18	Sub:	注音注的是什么，
		zhuyin zhu de shi shenme,
		Whatever the zhuyin says it is,

19	Sub:	你们要尽量读注音的音，哦
		nimen yao jinliang du zhuyin de yin, o.
		You should try your best to read the sound that's in the zhuyin, okay?

20	Cynthia:	老师，可是老师说那个注音是错的。

laoshi, keshi laoshi shuo neige zhuyin shi cuo de.
Teacher, but our teacher said that the zhuyin is incorrect.

21	Sub:	哦，那这个是［TW 老师］有没有说注音是 wrong 的？
		o, na zhege shi [TW laoshi] you meiyou shuo zhuyin shi wrong de?
		Oh, so did [TW Teacher] tell you that this zhuyin was wrong?

22	Students:	是！
		shi!
		Yes!

23	[Unknown]:	没有！
		meiyou!
		She didn't!

24	[Unknown]:	有！
		you!
		She did!

The confusion that erupts in (5.29) results from a mismatch in the sociolinguistic knowledge of the substitute and the students. Based on her reactions, the Mainland substitute's probable understanding of the initial situation is that *fa3guo* is the universal pronunciation of France, and that some of the students have made a reading error because they are not native speakers. When she asks, in Line 2, for the class to tell her whether the word in question is *fa3guo* or *fa4guo*, she is expecting them to give the answer written in the lesson text, *fa3*. The students, on the other hand, recognize this situation from their previous discussions with TW Teacher, and believe that the substitute intends to quiz them on whether they remember that the textbook has the incorrect tone for this lexical item, so they confidently answer *fa4*. The substitute is taken aback by this response, and struggles to understand what is going on (Lines 4 – 8). Rather than

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referring to the dictionary as the authority, she appeals to what is written in the textbook—the textbook says *fa3*, so we should pronounce this as *fa3* (Line 10).

The students, however, are not inclined to accept her argument. Even after her initial warning, as they are asked to read individually, they continue to ignore her and pronounce France as *fa4guo* (Line 14). Some students appear to be using this conflict as an opportunity to stir up drama in the class (e.g., Peter in Line 15), and others use it to publicly demonstrate loyalty to TW Teacher and reject the interloper who has dared to contradict her (e.g., Cynthia). Cynthia at first claims that TW Teacher has said that both pronunciations are okay (Line 7), and then changes her mind and says that TW Teacher said *fa4* was the correct variant (Line 20).[19] The other students are vocally divided on this issue, as illustrated in Lines 22 through 24. Following this excerpt, the classroom discussion devolves into extended arguing among the students, which the Mainland substitute eventually handles by giving up on the controversy and moving on to a new classroom topic.

One theme evident in this exchange is the loyalty of certain students toward Taiwanese linguistic conventions (i.e., the conventions of their regular teacher and their classroom), and a rejection of Mainland conventions. In Line 11, Cynthia points out that the substitute has used the term *pinyin*, normally used to refer to the Mainland phonetic alphabet, instead of the term *zhuyin*, used to refer to the Taiwanese phonetic alphabet. To the Mainland substitute teacher, there is no significant difference between these two terms (she is using *pinyin* here as a generic term for a phonetic alphabet), but to the

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19 Although the exchange in (29) took place on the same day as (28), different classes of first-grade students were present for the two incidents, which is why the students seem less clear on what TW Teacher said about *fa3* vs. *fa4* than we might expect given the discussion in (28)

students, *pinyin* refers specifically to the Mainland system, and her use of the term *pinyin* marks her as an outsider to their classroom culture (hence their hostile response, "We don't know how to read *pinyin*!" in Line 12). The Mainland substitute evidently has absorbed this message by Line 17, where she corrects her use of *pinyin* to *zhuyin*. This incident provides another example of how the sociolinguistic climate of Meizhang places Mainland teachers in a vulnerable, outsider's position, causing them to cede certain linguistic points and treat particular linguistic usages as errors which, from a Mainland perspective, are not incorrect.

When contrasting the incidents in (5.28) and (5.29), certain telling similarities and differences in the teachers' reactions can be seen that illustrate Taiwanese and Mainland linguistic contexts. One general difference we notice is that the Mainland substitute seems genuinely baffled by the Taiwanese *fa4guo* pronunciation; she appears to have never heard it before. In contrast, TW Teacher indicated that she had heard the *fa3guo* pronunciation many times, and had previously consulted several dictionaries in her attempt to determine which variant was correct. This difference reflects the broader power differential between the Mainland and Taiwan, and the Mainland's status as the dominant source of Mandarin, in spite of Taiwan's dominance in the local linguistic market at Meizhang. However, regardless of whether they had heard this variation before, both teachers seem convinced that there is only one correct variant, and neither appeals to regional differences. Also, rather than asserting that a particular pronunciation is correct because they say so, both teachers appeal to traditional, outside sources of linguistic authority, the dictionary and the textbook.

Following the visit from the substitute, students were left in the quandary of having to pick a pronunciation of France, when both options had been rejected as incorrect by a teacher. When TW Teacher returned, students brought up the troubling events of the substitute's class, and, after some confusion, TW Teacher eventually stated that, although her dictionary said *fa4guo2*, "some people" say *fa3guo2* and "some people" say *fa4guo2*, and it was okay to say it either way. The pronunciation of this word became a salient marker in the class, with some students eager to show their loyalty to TW Teacher by using her pronunciation, and others excited by an opportunity to rebel slightly by using the alternate pronunciation.

As the France incidents illustrate, while students had ample opportunities to gain knowledge about the social meaning and acceptability of certain variants, their ability to link variants with broader social groups, and in particular with regional dialects, was sometimes limited by the minimal input they received. In this particular case, students would have learned that both *fa3guo2* and *fa4guo2* were considered standard pronunciations by different groups of people, but not that *fa3guo2* was the standard in Mainland China and *fa4guo2* was the standard in Taiwan. Perhaps more significantly, however, students had an opportunity from these two incidents to learn something about Chinese language ideologies; specifically, that Chinese teachers promote the notion of a single standard pronunciation, and yet disagree as to what that standard is.

In spite of a lack of explicit sociolinguistic discussion of the dental-retroflex sibilant initial merger, an extensive understanding of the merger could be gained based upon how it was discussed and treated in the Meizhang community. There was explicit

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discussion of the merger of retroflex and dental sibilant initials, but this discussion was exclusively framed in the abstract sense that students should be careful not to confuse the two—teachers never acknowledged that they themselves used the merger, or that it was a regional feature, and they never identified specific instances of the merger when used by students. These explicit discussions arose mainly when teaching new vocabulary or *zhuyin fuhao*, the Taiwanese phonetic alphabet. Retroflex and dental initials were presented to students as easily-confusable sounds which the students had to practice distinguishing in dictation exercises, without any mention of the fact that the teachers themselves often failed to distinguish them. In one incident, on the day TW Teacher was reviewing the ㄗ *z* character in *zhuyin fuhao* by having the students practice listening and transcribing words that began with *z*, she posed a "trick question" by asking them to write the syllable *zhang* (a trick question because, following a standard (zh)/(z) distinction, this syllable could not be written with the ㄗ *z* character, it required the ㄓ *zh* character). She then told the students who had written ㄗ ㄤ *zang* that they were incorrect, because she had said *zhang*. This lesson ran counter to the practical knowledge students had acquired listening to TW Teacher speak in other contexts; given that TW Teacher frequently merged retroflex and dental initials, in the course of the regular school day students would often be required to interpret an utterance of *zang* as *zhang*, or vice-versa.

Incidents such as these, as frustrating as they may have been for certain students, imparted key sociolinguistic knowledge about the dental-retroflex sibilant merger. Firstly, they provided students with clear evidence that retroflex and dental sibilants were

meant to be separate in the prescriptive standard. Furthermore, the lack of discussion about their frequent merger sent the message that an individual's use of the merger was not an acceptable target for explicit correction. For Chinese-background students who used the merger themselves, the lack of explicit correction may have indicated to them that their use of the merger was acceptable, in spite of being subject to recasts. This attitude is conveyed by Audrey in Example (5.30), answering a peer's spelling question:

(5.30) Jerry: *Laoshi* [teacher], '*zai*' or '*zhai*'?

Audrey: They're both exactly the same.

When Audrey says that *zai* and *zhai* are "exactly the same" here, she is acknowledging that speakers in the class, including herself, may use one variant or the other to refer to the same word. She also may be using her statistical knowledge of Mandarin phonotactics to draw the conclusion that the distinction between *zai* and *zhai* is minimally informative; *zhai* is an extremely rare syllable in Mandarin, while *zai* is very common, so a *z* underspecified for place of articulation followed by *ai* has one overwhelmingly likely interpretation, *zai*.

We have seen that students are willing to accept the use of the dental-retroflex merger from both students and teachers without direct correction. In certain contexts, however, students indicated that acceptability of this merger was limited to speakers with the "correct" ethnic background. As I will discuss in Chapter 7, non-Chinese students in the first and second grades generally used standard retroflex initials. I discovered one day that this did not hold true for the entire Meizhang student body, when a non-Chinese student from a higher grade came in to give an announcement to the second-grade

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Chinese class I was observing. When she produced a word with a non-standard dental initial, several students started to laugh, and some repeated her pronunciation of the word mockingly. In spite of the fact that this girl's speech was identical to that of most of the teachers at Meizhang, and to several of the Chinese-background students in the class, students evidently found it strange that she would have acquired this non-standard feature of Mandarin.

As for Northeastern Mainland features, their treatment by both correctors and correctees contained considerable sociolinguistic information. The fact that NE Teacher responded to corrections of these features by changing her pronunciation sent a message that these features were non-standard and unacceptable in the classroom. This evaluation of /w/-to-/v/, fricative /h/, and other non-stigmatized Northeastern features is inaccurate in relation to how these variants are perceived in Mainland China, but they are relatively accurate in terms of how they are viewed in the Taiwanese-dominated Meizhang community. Using these features, while not unacceptable, would mark one as an outsider in the community; they were therefore not desirable features for students to acquire. NE Teacher's responses to these corrections also conveyed the message that a single correct variant was associated with each variable, and that these correct variants comprised a unified standard Mandarin. More generally, in spite of rare instances when teachers acknowledged acceptable variation, the overall picture of Mandarin being created for students was that of a unified prescriptive standard, with an extremely limited amount of variation acceptable within this standard. Moreover, this unified standard was the variety of Mandarin that non-Chinese students were expected to acquire, or face social

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consequences of explicit correction, or mocking.

In the following sections, we will compare the sociolinguistic information conveyed by corrective behavior in Mandarin to the situation in English.

5.4.3.4 Correction of English Features

5.4.3.4.1 Introduction

In Section 5.4.3.2, we found that English teachers, but not students, were avoiding targeting pronunciation features in student speech. In this section, we will look in more detail at which features were being targeted, and how English s-to-t corrective behavior contrasted with the corrections we saw in Mandarin.

5.4.3.4.2 Corrective Feedback for British English Features

The first grade English teacher, Miss Alice, was in some respects in a similar situation to NE Teacher. She was a new teacher at the school (and new to the United States), a speaker of British English, and tasked with teaching American English spelling, and aspects of American culture and history. Just like NE Teacher, Miss Alice's students were eager to point out ways in which her language variety differed from their own, as in Examples (5.31) and (5.32), two excerpts from a single lesson about telling time:

(5.31)

1	Miss Alice:	five thirty, or could we say, h/a/lf p/a/st five
2	Cynthia:	h/æ/lf p/æ/st five.
3	Miss Alice:	It's gone h/a/lf the way round the clock, here's five o'clock,

4		and it's gone h/a/lf-way round, so it's h/a/lf p/a/st five.
5	Nicole:	h/æ/lf p/æ/st five, not h/a/lf p/æ/st.
6	Miss Alice:	I say it different to you, you say h/æ/lf
7	Nicole:	Yeah, h/æ/lf
8	Miss Alice:	I say h/a/lf
9	Nicole:	Because it's h/æ/lf
10	Miss Alice:	I say h/a/lf p/a/st, you'd say h/æ/lf p/æ/st. It's a-- it's just our accents.
11	Ramzi:	h/a/lf p/a/st
12	Cynthia [to me]: Good accent?	
13	Miss Alice:	What time is this one.

(5.32)

1	Ellie:	H/æ/lf p/æ/st eleven
2	Miss Alice:	H/a/lf p/a/st eleven, or, eleven --
4	Cynthia:	th/ɜːɾ/y!
5	Miss Alice:	Eleven th/ɜt/y, there's two ways to say it.
6	Cynthia:	You say th/ɜt/y and we say th/ɜɾ/y.
7	Miss Alice.	Yeah. You can say h/a/lf p/a/st eleven or eleven th/ɜt/y

In these examples, three variables are targeted by students: /a/ vs. /æ/ in 'half' and 'past', r-lessness in 'thirty', and t-flapping in 'thirty'. The first instance of corrective feedback is

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initiated by Cynthia, in Line 2. When this is ignored by Miss Alice, Nicole chimes in with a direct correction. Miss Alice's response, beginning in Line 6, reveals several key differences from the correction responses we saw from NE Teacher. First, she rejects Nicole's correction by reframing the situation from saying the "wrong" thing to saying a "different" thing. She then reinforces this difference by identifying the variant that she uses and the variant that Nicole uses. This strategy allows her to demonstrate to Nicole that she can in fact say h/æ/lf, and what it would sound like if she had said it.

Nicole's response in Line 9, "because it's half," indicates some possible confusion on her part, suggesting that she doesn't understand that h/a/lf is simply a different pronunciation of the word 'half'. In Line 10, Miss Alice summarizes and restates the situation, clarifying that the difference in what she says and what Nicole says is simply a result of different accents. This discussion of /a/ vs. /æ/ then inspires another student to perform an impression of Miss Alice's accent. In Line 12, Cynthia turns to me and asks, "good accent?" Based on my observation of previous metalinguistic comments she had made, I believe Cynthia was under the impression that having an accent meant speaking a language poorly, and she was confused by Miss Alice's neutral use of "accent" here, in "it's just our accents". Meanwhile, Miss Alice is ready to move on.

In Example (5.32), Cynthia again initiates a correction, this time by doing an impression of how Miss Alice pronounces the word 'thirty' (Line 4). Her impression is only partially successful, since she produces the r-lessness but also flaps the t, resulting in an interdialectal form. This performance is ignored by Miss Alice. When Cynthia then initiates a slightly more explicit correction, she frames it as a "you say A, we say B"

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contrast. Notice that this framework matches the one set up by Miss Alice earlier in the lesson, "you say h/æ/lf, I say h/a/lf." Miss Alice acknowledges Cynthia's observation, but rejects it as a correction by continuing to use her own variant.

As suggested in the above examples, Miss Alice used several strategies to deflect corrections which were not employed by NE Teacher. The first strategy was to downplay accent differences. I observed Miss Alice using the phrase "it's just our accents" several times during my fieldwork. She also drew explicit connections between region and accent, framing her accent as a natural consequence of her regional background:

(5.33) Miss Alice: It's just the way I say it. It's just where I'm from.

The second strategy Miss Alice frequently employed, which she did not use in the above examples, was to "signpost" dialect differences, by which I mean, to anticipate and proactively identify and explain dialect differences, often referring explicitly to English versus American regional differences. Miss Alice primarily used this strategy with lexical differences, probably because they were easier for her to anticipate. Examples (5.34), (5.35), and (5.36) illustrate instances of dialect signposting:

(5.34) Miss Alice: In England this is a word we use for plastic wrap. We call it cling film.

(5.35) Miss Alice: Trainers with mud. Trainers is an English word for sneakers.

(5.36) Miss Alice: In England we don't say y/ow/gurt.

        Nancy: What do you say?

    Miss Alice: We say y/ɒ/gurt.

Miss Alice used a similar strategy for non-linguistic cultural differences. When teaching a lesson about Thanksgiving, for example, she explained to students that in England they don't celebrate Thanksgiving, before the students could ask her about it. Other cultural differences addressed in class included different currencies, different names for grades in school, and different conventions for addressing teachers.

A crucial element of the signposting strategy was that Miss Alice did not avoid using non-American lexical items, even when she could anticipate them. Instead, she explained what they meant and continued to use them. It may be that Miss Alice was, on some level, attempting to avoid using too many British terms, in conjunction with this signposting strategy, but, whether by design or not, she did produce many British terms, and she made a point of not shifting to American lexical items when students suggested them. Miss Alice was very consistent in explaining British lexical items, with a few exceptions that occasionally caused minor confusion in the class, such as using the term 'wax crayon' for what Americans would call a 'crayon', and the term 'crayon' for any colored pencil or crayon (because this is not a widely-known dialect difference, Miss Alice probably did not realize there was any difference in usage to explain). Generally, explicit dialect signposting was an effective strategy for communicating across dialects in the classroom.

Miss Alice was able to deploy these two strategies to balance two competing goals: portraying dialect differences as relatively unimportant, and portraying them as interesting and not embarrassing. Convincing students that dialect differences were not a

big deal was central to Miss Alice's ability to successfully manage the classroom and teach. Because so many students were interested in language and drawn to language differences, if left to their own devices, the first graders could have potentially spent all day discussing Miss Alice's accent rather than focusing on the content of what she was teaching. As shown in the above examples during the time-telling lesson, certain linguistic contexts, such as the juxtaposition of 'half' and 'past', could trigger a cascade of comments about Miss Alice's accent. The "it's just our accents" strategy allowed her to deflect these comments with minimal interruption. The message that accents were unimportant was also echoed in the distribution of corrections initiated by Miss Alice; as found in Section 5.4.3.2, she focused almost exclusively on higher-level features and ignored pronunciation-level errors.

Portraying dialect differences as interesting and natural was part of a broader project to encourage tolerance of difference and interest in different cultures in the classroom. In some respects, Miss Alice treated her situation as a new teacher in an American dual-language immersion program as an opportunity for cultural exchange, both in terms of Chinese-English and American-British exchange. In her position as the teacher using the dominant language, Miss Alice could afford to be less restrictive than the Chinese teachers were about allowing in elements of the other language. While students were strict enforcers of the school's "no Chinese in English class" policy, and extended it to apply to even the most minor appearances of Chinese, such using someone's Chinese name or humming a Chinese song, Miss Alice, realizing that students were exposed to plenty of English at it was, was not concerned about keeping the

classroom completely Chinese-free, and would sometimes ask students to explain

aspects of Chinese culture or language. Similarly, in the second grade, the English class

curriculum included units on learning about various cultures and nations. In contrast, in

the Chinese classrooms of both grades, the curriculum was solely Chinese-focused.

Chinese teachers behaved as if the English classes did not exist, and engaged in frequent

battles with students to minimize the use of English. The result of this distinction was

that the celebration of difference was associated with English, and not with Chinese.

5.4.3.4.3 Effects on Student Corrective Behavior

The treatment of corrections in Miss Alice's classroom not only had noticeable effects on

how students initiated corrections, but also on how students dealt with corrections aimed

at them. As we have seen, the "it's just our accents" strategy of downplaying the

importance of accent differences was not entirely accepted by students, in the sense that

students continued to correct peers' pronunciation rather than take cues from Miss

Alice's distribution of corrections. This strategy, however, did succeed in altering the

way that students framed corrections of Miss Alice's own speech. Figure 25 illustrates

the breakdown of classes of corrections directed at Miss Alice in the fall versus in the

spring:
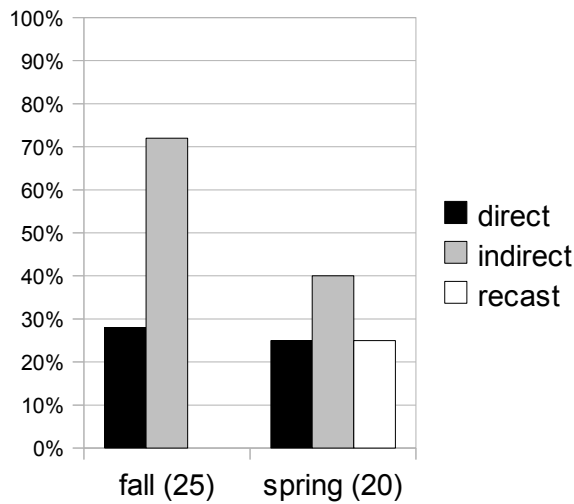
*Figure 25: Corrections directed at Miss Alice
by correction type in the fall versus spring.*

Although these three broad correction categories (direct, indirect, recast) provide only a

rough picture of how corrections are being framed, we can see that, while the proportion

of direct corrections has remained the same, students have decreased their indirect

corrections (most often of the forms, "Why do you say A?" or "What's A?") and begun

to use recasts, which do not directly challenge Miss Alice's language use.

Looking more closely at the direct corrections class, while the overall proportion

of direct corrections remained the same from fall to spring, students completely stopped

using the "it's not A, it's B" subtype of corrections to target Miss Alice's regional

features, instead only using this frame to target production and reading errors. For

example, when reading a student's work aloud to the class, Miss Alice automatically

corrected a spelling error, reading "my new room" in place of what was written, "my

now room." Several students then objected that they could see that she should have read

"now room." These sorts of corrections are different from those in the fall that

challenged Miss Alice's regional language features, such as Example (5.37):

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(5.37)   Ginny: Not '/h/erbs', it's 'erbs'.

Miss Alice: Yes, well that's how *you* say it.

Miss Alice's "it's just our accents" deflection strategy, and her association of variation with regional differences, proved to be popular strategies among students negotiating corrections among themselves. Examples (5.38) and (5.39) show student responses to corrections that mirror Miss Alice's:

(5.38) Zoe: It's just my accent. I've said it since I was little.

(5.39) Stephanie: Why do you say r/ʊ/fs? [roofs]

Ginny: That's just the way I say it.

Stephanie: Where were you born?

Ginny: Here. Well, not [local town], somewhere else.

Although significant regional differences among the students also existed in Mandarin, I did not observe students making appeals to region or using "it's just my accent" strategies to respond to Mandarin corrections.

Other than their shift in corrections targeting Miss Alice, did students' correction strategies change overall? The correction types for all student-initiated corrections in the first grade over time are given in Figure 26.

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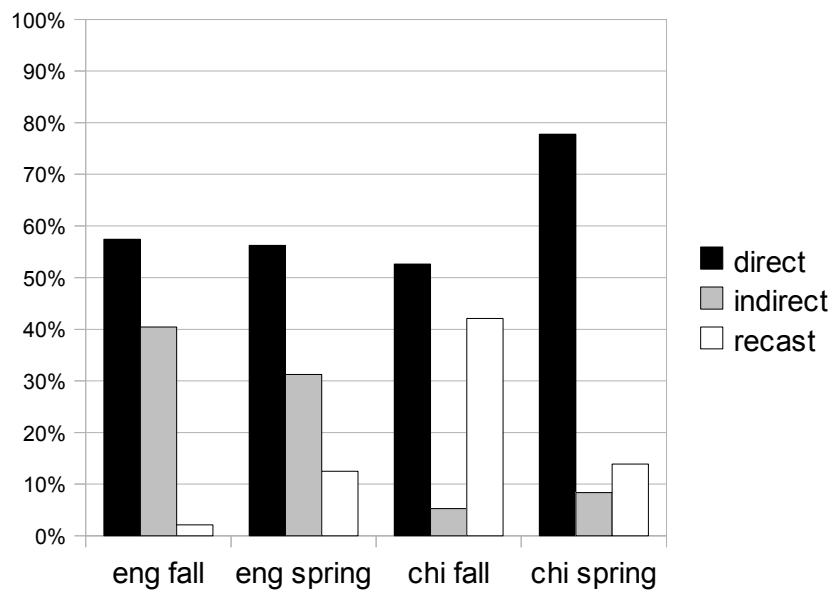
Figure 26: First grade student-initiated corrections by type, from fall to spring, for English and Chinese.

For English corrections, the first graders slightly but significantly shift in their behavior, moving toward less challenging forms of correction by increasing recasts (X^2 (2, N = 48) = 8.842, p = .0012). Chinese corrections show the opposite pattern, with students increasing the proportion of direct corrections and decreasing recasts (X^2 (2, N = 36) = 11.744, p = .0028). In other words, students are becoming less tolerant of variation in Chinese as they become more tolerant of variation in English.

5.4.3.4.4 Corrective Feedback for Canadian English Features

The second-grade teacher, Miss Brenda, was from Canada. While Canadian English is far closer to Mainstream American English than British English, her students did indirectly or directly correct several of her distinctive pronunciations of particular lexical items, including the deletion of the first /k/ in 'arctic', h/uw/ves for 'hooves', and

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b/o/rrowing for 'borrowing', as in Example (5.40):

(5.40) Miss Brenda: He's just b/o/rrowing it.

Jared: What's b/o/rrowing?

Max: b/a/rrowing, not b/o/rrowing..

Only seven corrections were directed at Miss Brenda in total, in contrast to 45 directed at Miss Alice. This is likely to be due to the difference in distances from American English of the two dialects, rather than reflective of a difference in how British versus Canadian regional features were treated by the students. In contrast to Miss Alice, however, Miss Brenda consistently ignored linguistic corrections directed at her, and did not make use of the strategies of dialect signposting or downplaying dialect differences.

5.4.3.4.5 Discussion of English Corrections

Miss Alice's strategies in responding to corrections formed a cohesive pattern with her own corrective behavior to convey a particular set of attitudes about linguistic and cultural differences: variation is interesting, the natural result of regional differences, and as long as we can understand each other, such variation is not very important. Looking at student corrective behavior in English, it appears that at least some students adopted this framework, while other students were still operating under more prescriptive language ideologies. There is no evidence that students transferred these attitudes about English to Mandarin, which was associated with entirely separate metalinguistic standards and practices, as seen in the very different patterns of correction types used in each language.

Miss Alice's attitudes toward linguistic variation were echoed in the general

attitude of the school community toward her language variety. The status of Miss Alice, and other non-American English-speaking teachers in the school, contrasted strikingly with the situation of NE Teacher and other non-Taiwanese non-standard Mandarin speakers. My impression was that parents and staff viewed having non-American English teachers as an exciting cultural opportunity for the students that could only have positive linguistic outcomes; multiple parents mentioned to me that they loved it when in previous years their children had supposedly acquired cute accents from non-American teachers. On the Chinese side, views about teachers with non-Taiwanese regional accents were either neutral or negative—no one proposed that it would be fun or cute for a student to acquire a regional accent in Mandarin.

As cute as it may have been considered for students to acquire a British English accent, this outcome was rather unlikely. My observations of student corrective behavior suggest that while students did not have negative attitudes toward Miss Alice's language variety, the mainstream practice of the classroom was to identify and avoid picking up non-American features from her. As illustrated in many of the above examples, students were remarkably good at picking out British English features in Miss Alice's speech, identifying variation in words like 'herbs' that many first graders would not be expected to know, let alone have detailed sociolinguistic knowledge about. Students were generally successful in avoiding producing British English expressions. Those who did produce them were sometimes corrected, as in Example (5.41):

(5.41) Martin: Stop moaning!

Loretta: You don't have to be just like the teacher.

In this example, Loretta targets two unacceptable practices with a single correction: Martin's inappropriately bossy behavior, and his use of a British English expression that the students associate with Miss Alice. The fact that students avoided acquiring these features is particularly interesting when we consider that a portion of the first graders were not native English speakers and did not hear English at home. Under these circumstances, students must be particularly sensitive to the language use and metalinguistic practices of their peers, if they are to successfully acquire the variety of English accepted and targeted by their peers. In Section 5.4.4, we will look more closely at one source of metalinguistic evidence for these students, student-to-student corrections.

5.4.3.5 Summary of Features Targeted for Correction Findings

In this multifaceted analysis of the linguistic features targeted for correction, we have found that students model their corrective behavior on their teachers, but only to a certain extent. An analysis of the levels of features targeted for corrections revealed that, while students mirror their Chinese teachers' distribution of features targeted, they target pronunciation features significantly more frequently in English than their English teachers do. For Mandarin features, we found that students target Taiwanese regional features differently from other features, modeling their corrective behavior on that of their teachers. For English features, we found that students frequently targeted non-American features produced by their teachers. For both Mandarin and English, we saw that teachers' response to corrections and general strategies for addressing dialect

difference significantly influenced students' corrective behavior.

5.4.4 Student-to-Student Corrections

5.4.4.1 Introduction

In previous sections, we have looked at student corrective behavior in light of corrections initiated by and targeted toward teachers. The following analysis examines patterns of student correction more closely, and the social significance of corrective behavior in the Meizhang community.

5.4.4.2 Student and Teacher Feature-Targeting

In Section 5.4.3.2, we saw that the student breakdown of linguistic features targeted for correction was different than the teacher breakdown. Specifically, we saw that students targeted phonological features more frequently overall than teachers. Looking at English and Chinese together, students were just as likely to target phonological features as higher-level features; but which phonological features in particular did students target in their peers' speech? Looking more carefully at the phonological features that students targeted, they can be classified into four categories: non-adultlike pronunciations, regional pronunciations, alternate pronunciations, and non-native pronunciations. Table 13 gives a breakdown of the distribution of these corrections, and provides examples for each class of feature[20]:

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20 Classifying each feature into a single category was problematic at times, since certain features were theoretically characteristic of multiple categories (/r/ vocalization, for example, is typical of non-adultlike, regional, and non-native variation). In this case, I assigned categorization priority in the order that the classes are listed here, in an effort to be conservative in measuring the trend seen in these data.

Class	n% of corrections	Example
non-adultlike	12.06% (7)	/r/ → /w/ ('wock') (English)
regional	13.80% (8)	dental-retroflex merger (Chinese)
alternate	12.06% (7)	Chil/iy/ vs. Chil/ey/ ('Chile') (English)
non-native	62.07% (36)	'candy cane' → 'candy can' (English)

Table 13: Types of phonological features targeted in s-to-s corrections (total n = 58)

Here we see significant differences in the distribution of corrections based on their subclass (X^2 (3, N = 39) = 42.552, $p < .0001$). Students rarely target non-adultlike, regional, and alternate pronunciations, in favor of non-native pronunciations. This distribution is certainly not reflective of the distribution of such phonological features in student speech; many students use non-adultlike and regional features all the time, so opportunities to target these features far outpace their rate of correction.

The distribution of s-to-s phonological corrections is considerably different from that of t-to-s (Figure 27).
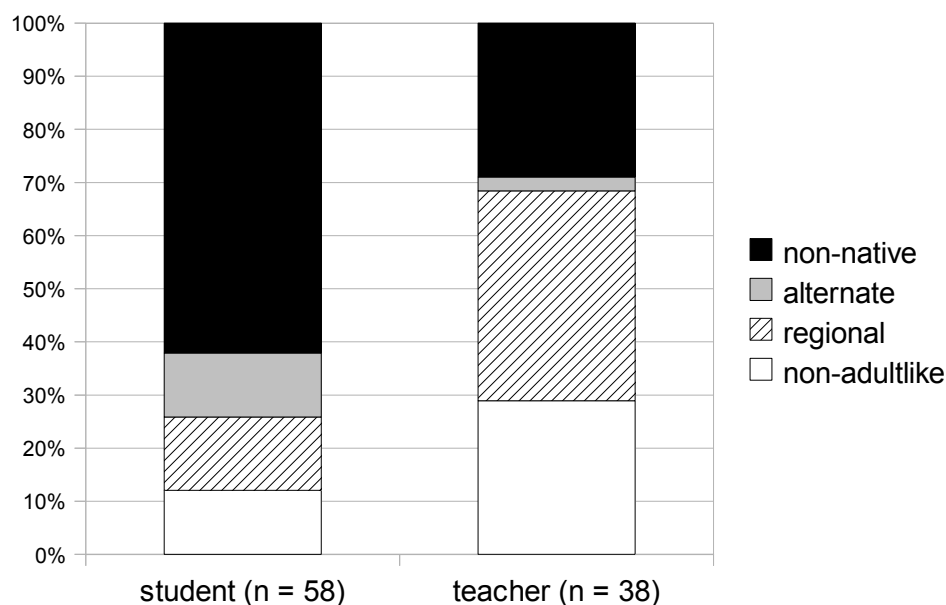
Figure 27: Breakdown of student-directed phonological corrections, for students and teachers (total number of corrections given in parentheses).

Teachers target regional and non-adultlike pronunciations more frequently than students do, while students target non-native and alternate pronunciations more frequently. This evidence suggests that students are less tolerant of non-native pronunciation than teachers are; this is interesting given that virtually all of the students are intimately familiar with the situation of being a non-native speaker of a language, and find themselves in the role of non-native speaker every day in either Chinese or English class. It is also striking that, in spite of teachers' explicitly prescriptive role in the dual-language immersion classroom, they nevertheless avoid making non-native pronunciation a major target of correction (as discussed in Section 5.4.2.2, this is particularly the case for the English teachers, who make virtually no pronunciation corrections of any kind). One explanation for this discrepancy is that students are accustomed to listening for non-native pronunciation errors due to their practice of self-monitoring their own non-native speech, and see other-directed correction as an extension of this; in other words, they are in language-learning mode, and apply its associated behaviors to both themselves and others. This account is supported by the additional observation that students often initiated corrections targeting their non-native language, rather than only their dominant language.

The different frequencies of "alternate pronunciation"-class targeting reflects a gap between adult and non-adult knowledge of acceptable pronunciation variation for various lexical items. Students appear to identify certain pronunciations as errors, while an adult would recognize them as acceptable alternatives. Examples of alternate pronunciations targeted included H/a/lloween vs. H/æ/lloween for 'Halloween', tera-

c/ow/tta vs. tera-c/a/tta for 'tera-cotta', sem/ay/ vs. sem/iy/ for prefix 'semi-', and th/iy/ vs. th/ə/ for 'the'.

The distribution of non-adultlike corrections is somewhat misleading, in that all but one of the non-adultlike corrections initiated by teachers targeted student reading errors, which I classified as non-adultlike. This distinction between reading errors versus other non-adultlike errors is significant because, in the case of a reading error, students can easily repair their pronunciation, while for non-adultlike features like the pronunciation of Mandarin initial *z* as /d/, this is not the case. Aside from reading errors, the majority of instances I found of teachers correcting non-adultlike features were in cases targeting higher-level features (not included in the figure above) where there was evidence from other linguistic and behavioral cues that students were engaging in deliberate performances of babytalk, as in Example (5.42).

(5.42)   Carly: Me done!

Miss Alice: That's not proper.

Once again, the features targeted here are ones that are easy for students to repair, because they are being consciously performed. From a teacher's perspective, it makes sense to target only those features which are perceived as repairable; targeting features which students could not change would only result in humiliating them. This would account for why teachers were generally more likely to target higher-level features, which are perceived to be under more conscious control. Students showed a similar understanding of non-adultlike features. As I will discuss further in the following section, when students did correct non-performed use of non-adultlike forms, such as /r/

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vocalization, their corrections were strongly rejected either by the target or by peer overhearers, and it was made clear that the corrector had broken a social taboo. Because these features were perceived as beyond the speaker's control to repair, drawing attention to them was classified as a mean behavior.

Looking at the non-native features corrected, a similar pattern holds; both students and teachers preferred to target those pronunciation features which were "fixable." This meant focusing on phonological errors in which students produced one sound in their inventory in place of another, or used an incorrect lexical tone or stress pattern (e.g., *xue4* for Mandarin 学 *xue2*). Correctors rarely targeted interlanguage forms that speakers would have difficulty correcting because the targeted correct form was not in their inventory, such as the use of /t/ for /θ/ (e.g., 'tird' for 'third'). When these features were targeted, correctors generally appeared to be acting in a deliberately transgressive way as part of a bullying behavior (see Section 5.4.4.3). A breakdown of features targeted for s-to-s correction within the non-native class is detailed in Table 14. The first three subclasses are ones in which the target corrected form is within the speaker's phonological inventory, while the final subclass, phonetic interlanguage form, involves a target form which is not.

Class	n% of corrections	Example
phonemic substitution within inventory	33.33% (12)	b/ə/llet vs. b/æ/llet ('ballet')
lexical tone substitution	41.67% (15)	*wan2wan2* vs. *wan1wan1* ('弯弯')
stress pattern	2.78% (1)	'peru vs. pe'ru ('Peru')
phonetic interlanguage form	19.44% (7)	/s/inking vs. /θ/inking ('thinking')

Table 14: Sub-classes of features targeted in s-to-s non-native phonology correction (total n = 36)

As demonstrated in the data above, students focus their corrections (albeit not exclusively) on linguistic targets which they have reason to believe that correctees can successfully produce. The overall picture of s-to-s phonological corrections, then, is that the majority of corrections are focused on language-learning-related errors that are perceived to be under the control of the speaker and potentially repairable. Corrections of this kind are less socially perilous because they are more likely to be perceived as helpful. On the other hand, students also sometimes engage in corrections which are perceived as unhelpful, and perhaps hurtful. In the following section, we will consider the social significance of corrective behavior in more depth.

5.4.4.3 Social Significance of Student Corrections

Initiating corrective feedback was a socially risky behavior at Meizhang. Linguistic correction was viewed by students as linked to a broader taboo behavior: criticizing or making negative comments about peers. In particular, students were very sensitive to negatively evaluating other students' schoolwork and performance. Students could receive rebuking comments for relatively minor violations:

(5.43) Hannah: Does this look like a puppy?
                    [holds up her painting]

        Ramzi: Kind of... not.

        Nancy: [Ramzi]! Imagine how would you feel if someone said that
                    to you!

Associated with this taboo were specific forbidden behaviors, such as whispering about others, and forbidden words, especially "stupid" and "dumb." The ban on these words was shared by all students at the school, who treated them as curse words ("The 's' word," "The 'd' word"). While these standards of behavior may have been implemented by teachers in earlier grades, they were not enforced among the teachers I observed at Meizhang; teachers very rarely scolded students for criticizing or correcting others, and seemed largely unaware of student taboos on certain words and behaviors. These standards were enforced, and in certain cases possibly created and implemented, by students themselves. Rebukes often employed rhetorical strategies as in Example 43, referring to hurt feelings and making others feel bad.

Given the association between correction and making others feel bad, it is not surprising that certain students would make use of linguistic correction as a bullying tactic. Linguistic correction was a particularly powerful method of putting others down due to the high value placed on linguistic ability at Meizhang. While not all students valued good behavior in class or class participation, virtually all did place high value on performing well in class, as well as on academic knowledge. Perhaps because of the language-learning focus of the curriculum, language skills were universally valued. Even in the rebellious second grade, knowing languages, especially socially desirable

languages spoken by popular members of the class, was a frequently-discussed positive attribute of both students and adults. This was most often framed in terms of "knowing words," and how many words of Mandarin, Japanese, Taiwanese, Russian, etc. a person knew. Some students crafted insults based on deliberately denying their target's linguistic knowledge, as in this example directed at me:

(5.44) Julie: Rebecca's coo-coo! She doesn't even know a single word of Japanese!

Students would also target variation within languages in their bullying behavior, accusing other students of having accents or mispronouncing words. In one incident, Cynthia accused two of her first-grade classmates of having accents, and, when asked by another classmate what "having an accent" meant, replied:

(5.45) Cynthia: It's when someone speaks a language and speaks it badly.

Targeting pronunciation was a bullying behavior employed by the Julie gang, a group of second-grade girls led by Julie who frequently engaged in disruptive behavior. The gang expressed hostile feelings toward the students enrolled in the European language immersion program located in the same building at Meizhang, and would find opportunities to pick on them during recess. This bullying often consisted of mocking these students for their inability to read Chinese, but also for their supposed non-standard pronunciation of English, as in this example, in which the gang cornered a first-grade girl in the hallway and forced her to read lines from school safety posters:

(5.46) Euro-lang student: [reading a sign]
                          Playing nicely on the playground is safe.

          Julie: Okay --

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> Crystal: Not 's/ɛ/f.' [laugh] It's s/ey/fe. sa::fe

Crystal's correction here did not accurately identify an error in the speech of this girl (who appeared to be a native English-speaker), but targeted a typical error that a speaker of this European language would make. In my observation of corrections which had a clear bullying intent, the linguistic targets of correction were rarely accurately identified, but appeared to be selected based on the errors the corrector anticipated that the correctee would be likely to make.

Sometimes, the line between helping and bullying was blurred, as in this exchange between first graders Ginny, Vivian, and Cynthia:

(5.47)
1   Ginny: Hey, what's your favorite color?

2   Vivian: 你要说中文！
                 ni yao shuo zhongwen!
                 You have to speak Chinese!

3   Ginny: 你的。。。
                 ni de...
                 your...

4   Vivian: 说！
                 shuo!
                 say it!

5   Ginny: 你的。。。你的最喜欢的颜色是什么？
                 ni de... ni de zui xihuan de yanse shi shenme?
                 Your... what is your favorite color?

6   Cynthia: 你最喜欢，NOT 你的最喜欢
                 ni zui xihuan, NOT ni de zui xihuan
                 "ni zui xihuan," not "ni de zui xihuan"

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7	Ginny:	I said 你--I just--
		I said ni-- I just --
		I said "you" -- I just --

| 8 | Vivian: | She's still-- you're still learning, [Ginny], right? |

The exchange in (5.47) took place during free time in Chinese class, where all discussion is supposed to be in Chinese. Vivian and Cynthia used this opportunity to pick on Ginny, who was weaker in Chinese than they were, and sensitive about it. In Line 8, however, it would seem that Vivian had a change of heart, and turned on Cynthia for being too mean, because Ginny was "still learning."

As discussed in the section on the second grade's treatment of NE Teacher's pronunciation, bullying behavior using linguistic correction was not limited to student-to-student correction. In addition to targeting NE Teacher, students targeted other adults, including parents who came to volunteer in class. The second-graders were particularly unforgiving to non-Chinese parents who would attempt to speak Chinese, using indirect "What's [word]?" tactics as a way to mock their poor Chinese pronunciation, or to reject the use of Chinese pronunciation rather than Anglicized pronunciation, as in Example (5.48):

(5.48)	Volunteer:	Okay, so we're gonna pretend that we're in Sh/a/nghai--
	Students:	[laugh]
		Sh/æ/nghai!
	Tony:	Sh/æ/nghai is English.
	NE Teacher:	[Tony]! Shh!
	Volunteer:	Okay, so we're gonna pretend that we're in Sh/a/nghai, and we have to make--

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Jerry: Sh/æ/nghai.

In this particular incident, students were enforcing their own extension of a school policy against code-mixing in class. Students reacted very strongly to any appearance of Chinese in non-Chinese contexts, such as the use of their Chinese names in English class, or even a line of Chinese text visible on a book in the English classroom. The volunteer's use of the Chinese pronunciation of Shanghai here violates student-created policy, thus making her an acceptable target for bullying behavior.

Corrective behavior was also linked to two other taboo behaviors: showing off, and behaving too enthusiastically or obediently in class. In the second grade in particular, students would be accused of "thinking they are so cool" and "just wanting to be good," for displaying their linguistic knowledge in the form of corrections. The association between correction and aligning oneself with the values of the classroom sometimes overrode the more literal interpretations of the social meaning of a correction. In the case of Audrey's bullying corrections of NE Teacher, for example, rather than interpret Audrey's behavior as challenging to the teacher, fellow members of the Julie gang used this behavior as evidence that Audrey liked class too much and was overly invested in classroom rules and practices. While other members of the Julie gang occasionally initiated linguistic corrections directed at NE Teacher themselves, they preferred to engage in more direct, non-linguistic challenges to the teacher's authority. This perceived difference in underlying values led to frequent clashes between Audrey and the rest of the gang.

In spite of its status as a taboo behavior, students most often engaged in corrective behavior of other students without explicit bullying intent. The basic premise of dual-language immersion relies on some level of other-directed correction, with students with stronger skills in a language helping those at lower levels, and it is therefore not surprising that students would correct their peers as part of the language acquisition process. As described in the earlier section on the extent of corrective behavior, the majority of students initiated at least one correction. Thus, while this behavior was socially risky, it was nonetheless something engaged in by most community members. Socially successful corrections—that is, corrections that did not result in rebukes from peers—were determined according to the identity of the corrector, correctee, linguistic target, and the manner of correction. Students were criticized by peers for correcting too much, or for targeting a particular individual too often for correction. As discussed in Section 5.4.4.2, linguistic features perceived to be repairable were seen as more acceptable for correction, while those that were seen as beyond a speakers' control were off-limits. One of the most dangerous corrections a student could make would be to target vocalized /r/ among the first-graders, both because of its perceived status as beyond conscious control, and also because it was a feature used by Zoe, a popular girl particularly sensitive to criticism. Only the most socially clueless students would target this feature, and their correction would be met by cold stares and comments such as, "I don't think she likes that."

Due to the age of the students, a wide range of social skills and understandings coexisted in the first- and second-grade classes. Students not yet equipped to understand

the subtle social rules of correction could find themselves in deep trouble with their peers, much to their bewilderment. Beatrice stumbled into a major fight with her friends in the first grade when she corrected Hannah's pronunciation of 'thirteenth' as 'thir/d/eenth'. This correction of a non-standard flapped-t elicited strong responses from the group:

(5.49)

1	Hannah:	Of course today was the thir/d/eenth, because if it wasn't the thir/d/eenth my birthday would already be passed!
2	Beatrice:	Why you say-- how come you say thir-/d/eenth?
3	Hannah:	Cause if, today *was* the thir/d/eenth.
4	Beatrice:	No it's not thir-/d/eenth
5	Hannah:	Yes it is.
6	Shannon:	Yes!
7	Beatrice:	Yeah, *thir/d/y* is a number, but not thir-/d/een
8	Shannon:	Yes!
9	Hannah:	Yes it is.
10	Shannon:	Yeah it is a word, yeah.
11	Beatrice:	thir-/t/eenth
12	Shannon:	That's how she says it!
13	Alexandra:	(to me) I don't understand, thirteen *is* a number!
14	Hannah:	That's how my- my whole family says it!
15	Beatrice:	我，我说-- wo, wo shuo-- I'm, I'm saying--

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16		I know, I'm saying deen 上的 d
		I know, I'm saying deen sang de d
		I know, I'm saying the "d" on the "deen"

| 17 | Shannon: | But [Beatrice], that's how she says it! |

| 18 | Beatrice: | I know! |

| 19 | Shannon: | So if you tell her, how- the way- she will feel sad. |

| 20 | | Then you say, you said she is saying the wrong way. |

| 21 | Beatrice: | I'm just telling her, not thir-*/d/eenth* |

| 22 | Shannon: | Well, but that's how she says it! |

| 23 | Hannah: | People-- |

| 24 | Shannon: | And you said the "D" word. |

| 25 | Hannah: | Yeah, you said the "D" word, too. |

| 26 | Beatrice: | No, I just said-- |

| 27 | Hannah: | Yes! |

| 28 | Beatrice: | No, it was someone-- |

| 29 | Shannon: | Then tell me who |

In the exchange above, Shannon outlines for Beatrice the reasons why, according to classroom practice, it is considered mean to correct others. First, she points out that thir/d/eenth is just the way Hannah pronounces 'thirteenth', using a Miss Alice-style "it's just our accents" strategy (Lines 12, 17, 22). (Hannah then claims that this is how her "whole family" pronounces this word (Line 14), apparently trying to suggest that this pronunciation is a legitimate variant.) Then, Shannon argues that, by telling Hannah that

she is saying it the wrong way, Beatrice is making her feel bad (Lines 19 – 20). Finally, she draws the connection between being corrected and being called "the 'd' word" ('dumb') (Line 24).

Beatrice, who is unaccustomed to dramatic incidents, reacts as though the trouble she is encountering here is a result of her failing to properly explain her correction. She first expands on the correction by drawing a comparison with 'thirty,' (Line 7), then models the correct pronunciation (Line 11), then resorts to Chinese (Lines 15-16) (Beatrice, Hannah, and Shannon are all Chinese-dominant). She offers no response to the allegations that she is hurting Hannah's feelings by correcting her. Hannah and Shannon's accusation that Beatrice has used the 'd' word leads to a long argument about who might have said the 'd' word when, ending in Shannon declaring that Beatrice is no longer her "sissy," meaning her friend. As a result, Beatrice began sobbing in the middle of class, and, following this incident, permanently shifted friendship groups to another group of girls.

As shown in the above example, corrective behavior was closely tied to social relations among the students, both reflecting and influencing the trajectories of friendships. Based on my observations of the social structures in the classes, there were clear social positions associated with students engaged in frequent linguistic correction. The students who engaged in the most corrective behavior were those who had high linguistic competence and mid-range popularity levels. The two most frequent correctors in the second grade, Audrey and Crystal, were mid-level members of the Julie gang, and the two most frequent correctors in the first grade, Cynthia and Ramzi, were peripheral

members of friendship groups.

High-frequency linguistic correctors were generally highly skilled in both linguistic production and perception, and able to perform various accents in both Mandarin and English. Ramzi, for example, enjoyed performing impressions of how Chinese songs they had learned in class would sound with an American English accent, and also did excellent impressions of Miss Alice. Audrey, as shown in (26), did impressions of NE Teacher. These correctors sometimes perceived subtle differences in pronunciation that they were unable to communicate effectively to their correctees; Ramzi once unsuccessfully attempted to correct another student's use of fronted English /uw/ for the Mandarin high-back vowel /u/.

In contrast, I observed that the most popular students in the social structures of the first- and second-grade classes also had high linguistic skill-levels, but they either had lackeys to engage in corrective behavior for them, or knew better than to offend others by correcting them. Alexandra, for example, one of the most popular students in the first grade, was able to make high-level corrections (as in, "Alexandra and I" for "me and Alexandra", in Example (5.2)), in both English and Chinese, in spite of having a non-Chinese background. She was also a frequent performer of impressions and funny voices. However, she was not one of the higher-frequency correctors, and never ran into trouble with her peers as a result of any of her corrections— most of her corrections were targeted at relatively low-status students, such as Beatrice and Peter. Essentially, Alexandra understood how to deliver corrections in a socially non-risky manner. This skill was reflective of her broader ability to navigate the social world of the first grade;

through various techniques, Alexandra was able to remain best friends with Zoe, a student who was very sensitive to criticism and prone to dramatic incidents. Alexandra would entertain Zoe by composing stories about other students in the class, and kept her occupied by having Zoe run a recess-time snack trading market that Alexandra organized behind the scenes.

Students at the bottom of the social ladder generally lacked the linguistic skills to notice as many errors as their peers did, resulting in lower levels of corrections. Peter, for example, initiated only two corrections, but was the target of 16, making him the most-corrected member of the first grade. One exception to this pattern was Ginny, who had frequent conflicts with other first-grade students. Ginny was the target of 12 corrections, but initiated 13 corrections of her own. In contrast to Alexandra's corrections, most of Ginny's corrections targeted teachers and popular students, suggesting the role of corrective behavior in initiating and perpetuating conflicts.

5.4.4.4 Discussion of Student-to-Student Correction

The preceding two sections offer an analysis of the social significance of student corrections based on the specific features they target and the broader social context of the school. Corrections served multiple social functions, they were sometimes intended and/or interpreted as an effort to help a classmate, to show off one's own linguistic knowledge, to demonstrate allegiance to classroom values, or to threaten the face of both peers and adults.

While corrections were a risky behavior that could lead to serious social

consequences, most students in the first and second grades initiated at least one correction, suggesting that the risks were balanced out by potential benefits, or that students felt compelled to engage in corrective behavior in spite of its pitfalls. Why exactly might students have engaged in so much correction? As Mark Liberman observed in his 2007 Language Log post, "The Social Psychology of Naming and Shaming," "social annoyance and public griping reinforce one another" (Liberman 2007). The more students complained about particular features, such as /w/-to/v/, the more salient they became, and the more likely they were to be brought up again for correction. We might add to Liberman's observation a corollary that this feedback loop also applies to linguistic features which are evaluated more neutrally, or even positively; the more people discuss a feature, the more salient it becomes, and the more likely it is to be observed and discussed again. As we saw in the "half past" time-telling exchange (Example (5.29)), students were easily excited by examples of language difference; they found these differences interesting, and sought explanations for them via corrections of various frames.

Many individuals with whom I have discussed this research have suggested that the "unusually high" frequency of other-directed correction at Meizhang is related to the dual-language immersion context of the school. Because there is no previous research on other-directed correction among students in early elementary classrooms, the claim that Meizhang is unusual in regard to correction frequency is based purely on qualitative impressions of what goes on in typical classrooms. Assuming that the level of corrective behavior is in fact relatively high, we might point to the high socioeconomic status of the

student population, or some other demographic factor, as an explanation for this frequency. Given the patterns we have observed in corrections, however, it does seem reasonable to suggest that the language-learning context, and the variability in language backgrounds present in the dual-language model classroom, both contribute to the frequency of correction. A link between language learning and corrective behavior is evident in the backgrounds of the most frequent correctors. All four of the most frequent correctors (Cynthia, Ramzi, Audrey, and Crystal) were students whose first language was not English, but who had achieved a very high degree of proficiency in English. Moreover, in three out of the four cases, these students' first language was not Mandarin, and all four were regularly being exposed to third languages at home at the time of my fieldwork. What is of particular significance here is that these frequent correctors, in spite of an absence of native speakers of American English at home, had managed to acquire virtually native-like pronunciation of American English. In order to achieve those results, these speakers would necessarily have to be sensitive to relatively subtle aspects of linguistic variation. They would also then be sensitive to the variation present in the language of teachers and peers.

This claim about unusual correction frequency at Meizhang is actually ambiguous between three distinct claims: claim one, that more linguistic variation was present than at a conventional school; claim two, that more variation was noticed than would be at a conventional school; and claim three, that more noticed variation was corrected than at a conventional school (in other words, students at a conventional school would notice just as much variation, but they would not bother to correct it). Any of

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these three scenarios could lead to corrections being relatively high at Meizhang, and it is my intuition that all three factors were at play to a certain extent. Unfortunately, the data collected here do not allow us to identify variation that was observed but left unchallenged by students, and thus we are unable to distinguish between claims two and three, and claim one is unresolvable without data from other schools with diverse student backgrounds. Further research into the contextual factors that influence the frequency of corrective behavior might benefit teachers and administrators seeking to better understand classroom dynamics.

5.4.5 Summary of Findings for Corrective Feedback Analysis

Analysis of corrective feedback in the first and second grades of Meizhang has revealed that virtually all members of the classroom community are engaged in the negotiation of such feedback. Corrections were found to be initiated by both students and teachers, and directed at both students and teachers. Teachers' corrective behavior influenced student behavior, but students nonetheless followed distinct patterns of behavior governed by principles regarding acceptable targets for correction.

A general difference was observed between Mandarin and English, in that Mandarin corrections reflected a prescriptive ideology of a single correct standard, while English corrections were more reflective of a pluralistic view of language. Mandarin corrections also reflected a distinction between the familiar non-standard features of Taiwanese Mandarin, which were recast, and other unfamiliar non-standard features, which were directly challenged. For both languages, students and teachers focused on

targeting those features perceived to be most correctable, and under the speaker's conscious control.

Correction was found to be a socially risky behavior which students engaged in for multiple social purposes, including to threaten face, to demonstrate language skills, to demonstrate affiliation with school, and to help classmates. Providing corrective feedback to others may stem from students' more general language-learning practices, which become more salient in a dual-language immersion context.

5.5 Conclusion

Several key findings have emerged from this analysis of corrective feedback. Most crucially, the social meanings of variants within the Meizhang community influenced how the use of those features were negotiated in the classroom. Students distinguished between those features which were non-standard but not appropriate targets of direct correction, such as Taiwanese Mandarin features and non-adultlike features, and those which were fair targets, such as Northeastern Mandarin features and non-native features which could be corrected within the speaker's phonemic inventory. Students developed their own standards of corrective behavior distinct from those of their teachers, but took certain significant cues from teachers as to how to frame corrections, and how to respond to corrections directed at themselves. Students kept ideologies about Mandarin and English largely separate, adopting an increasingly prescriptivist stance toward Mandarin as the year progressed, and an increasingly tolerant view of dialect difference in English. These stances were consistent with the behaviors of their teachers, who presented

Mandarin as a largely unified standard, and English as a collection of equally valid dialects associated with regions. In addition to reflecting underlying ideologies about language variation and particular language features, the corrections themselves were significant as a socially risky behavior which served several valuable social functions in the classroom community, as a result of the high value placed on language ability at Meizhang. The following chapter on other metalinguistic behavior will examine more broadly how language and language skills were discussed in the Meizhang community.

Chapter 6

Other Metalinguistic Discussion

6.1 Introduction

Corrective feedback, as discussed in the previous chapter, was the dominant

metalinguistic practice at Meizhang. In spite of being in a language-learning context

where students came from a variety of language backgrounds, students and teachers

engaged in little explicit metalinguistic discussion that was not corrective. This was

surprising to me, particularly in light of my presence as a researcher, given that several

of the students, and all of the teachers, understood that the purpose of my fieldwork was

to look at variation in language at the school.[21] The metalinguistic comments that

students did make, however, revealed certain understandings of language and linguistic

variation. In the present chapter, I will address how students and teachers talked about

language, language backgrounds, and inter- and intra-speaker variation.

6.2 Bilingual Children and Metalinguistic Awareness

Several researchers have made the observation that children in multilingual

environments show high levels of metalinguistic awareness, as well as a particular

interest in linguistic differences. A common account for why this is the case is that,

because they learn multiple words for the same referent, bilingual children develop an

early sense of the arbitrary relationship between the signifier and the signified (Turner &

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21 The majority of the metalinguistic comments I will discuss here were spontaneously produced. In a few
cases, I asked students and teachers questions that elicited metalinguistic comments in the course of
conversation.

Myhill 1984:179). Others argue that bilingual children must develop an understanding of language as a system in order to organize and separate their multiple languages (Ben Zeev 1977:45). In her study of the communicative competence of children, Suzanne Romaine speculates that children exposed to multiple languages develop sociolinguistic awareness earlier than other children, partly because differences between languages are more salient than differences between forms in a single language (Romaine 1984:132). Turner & Myhill (1984) argue that metalinguistic awareness is the factor that accounts for the higher academic achievement of bilingual students (169).   There has been little previous work, however, relating to how this increased metalinguistic awareness manifests itself in the practices of multilingual children. Lambert & Tucker (1972), a study of Canadian French immersion, observed that children in the program they studied engaged in "incipient contrastive linguistics" and demonstrated "an attentive, patient, inductive concern with words, meanings and linguistic regularities" (207). As we have already seen, the major practice in which this awareness manifests among the students at Meizhang is other-directed correction. The following sections explore other ways in which metalinguistic awareness influences discourse in the school.

6.3 Metalinguistic Discussion of Language and Language Skills

All students I interacted with at Meizhang appeared to have a solid understanding of the notion that languages were something that could either be acquired as a child, or studied in school. More specifically, students understood that certain people were more likely to have acquired a language through study. Many students made comments to me that

reflected an understanding that, in normal circumstances, ethnically Chinese people spoke Mandarin, and non-Chinese people did not speak Mandarin. This issue came up in relation to my own presence in the school because, for many of the students, I was the first non-Chinese adult they had met who spoke Mandarin. I was surprised to discover that students found this unusual, given that there were many non-Chinese students learning Chinese at Meizhang. Students would ask me questions such as, "Where did you learn all that Chinese?", indicating that they understood I had most likely learned Chinese in a school setting rather than acquired it when growing up. At first, I concluded that the students were making a distinction between children, who could know Chinese regardless of their ethnicity, and adults, whose linguistic knowledge could be determined according to ethnicity. This distinction would make sense given their personal experiences at Meizhang. But later, I noticed that several students made comments like the following:

(6.1) Betty: I'm not Chinese, so I don't actually know Chinese.

(6.2) Lawrence: I don't know many Chinese words, because I'm not Chinese.

Although these students understood and could speak Mandarin, they expressed conceptions of themselves as non-Chinese-speakers, and presented this status as being a direct result of their non-Chinese ethnicity. This conflation of Chinese ethnicity with the ability to speak Chinese was at odds with the actual linguistic situation of the school, in which many ethnically Chinese students did not speak Chinese at home, and were no better at Chinese than their non-Chinese peers, while some non-Chinese students

performed extremely well in Chinese class. The result of this normative association of

Chinese language ability with Chinese ethnicity resulted in certain students inaccurately

casting themselves as poor Chinese speakers relative to their peers. Significantly, this

association was exclusively made by speakers who were non-Chinese, when describing

themselves. I observed that, while students were not afraid to identify certain students as

Chinese, identifying students as non-Chinese, and in particular identifying them as

belonging to some non-East-Asian ethnicity, was a taboo behavior. Students appeared to

be unfamiliar or uncomfortable with terms to identify White students, choosing instead

to describe them as "people like [White student's name]". Students never claimed that

another student's lack of Chinese ability was the result of non-Chineseness. They did,

however, occasionally describe non-Asian students as deprived of, or unappreciative of,

various aspects of Asian culture, such as not knowing how to use chopsticks, or not

liking dried seaweed, as in (6.3):

    (6.3) Crystal: Do you want some [dried seaweed]?

         Rebecca: No, I don't really like seaweed.

          Crystal: Yeah. Most people who are, uh, like [Christina], don't like
                     seaweed.

          Crystal: But Asian people do.

This asymmetry in students' self-description versus other-description suggests

that the link between Chinese ability and Chinese ethnicity was not propagated by the

student community, but by the attitudes about Chinese that non-Chinese students

encountered at home and elsewhere outside of school. In addition to the self-descriptions

discussed above, I was the recipient of several private confessions from non-Chinese students that they wished they could go to a "regular school" where they didn't have to learn Chinese and where various other conditions would surely be better (being allowed to use sharp scissors, being allowed to play on more play structures, not having so much homework, etc.). A few students even claimed to me that they were not smart enough to learn Chinese. I never observed these sentiments being expressed to other students or in more public settings; they were treated as shameful secrets. This attitude about Chinese being too difficult for them may be linked with the notion expressed to me by several non-Chinese parents at Meizhang, that they were sending their children to an immersion program because they believed Chinese was too difficult a language to learn in any other way, and certainly too difficult for the parents themselves to learn as adults.[22] These beliefs are consistent with widely-held notions in the West about Chinese being one of the most difficult and mysterious languages in the world (DeFrancis 1986:37, 52). Under these circumstances, it is not surprising that non-Chinese students would absorb the message that they were embarking on an unusual and difficult journey through their participation in a Mandarin-English dual-language immersion program, and feel occasional doubts about whether they were up to the challenge. On the other hand, non-Chinese students also expressed to me that they enjoyed learning Chinese because it gave them a skill that their parents did not have, which allowed them to do things like talk to their friends without their parents being able to understand.

In contrast to the situation with Chinese, Chinese-dominant students did not refer

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22 I also encountered many non-Chinese parents at Meizhang who did speak Mandarin, or who were engaging in various efforts to learn it.

explicitly to ethnicity when discussing their perceived lack of competence in English, but rather to their home linguistic situation. When the second-graders were assigned an English editing assignment, in which they had to identify writing errors in a text, Crystal complained to me that this task was too difficult for her, because she spoke Chinese at home (in spite of the fact that she almost exclusively spoke English at school, and had no trouble completing the assignment she was complaining about). Because students were exposed to many ethnically Chinese peers who were native English speakers, and to English-speakers of different ethnicities in general in the course of their daily lives, it makes sense that they would not associate English competency with ethnicity.

6.4 Metalinguistic Discussion of Linguistic Variation

Students appeared to have a good understanding of the basic concepts of accent and linguistic variation (although, as shown in Cynthia's comment about accents ("It's when someone speaks a language and speaks it badly"), they did not necessarily have a complete understanding of the term 'accent'). In light of Miss Alice's frequent explicit discussion of regional dialect differences, it should come as no surprise that students were very clear about how speakers acquire regional differences:

> (6.4) Nicole: When [my friend] comes back from England, he'll have an
> England accent. And he'll be saying England words like
> [Miss Alice]!

> (6.5) Stephanie: My mom is from Singapore. She has an accent from
> Singapore, you can hear it.

Some students also expressed an understanding of regional variation in China, but only

in contexts where I explicitly brought up region in discussions with them. When asked to name specific regional differences in China, students primarily brought up lexical tone differences, rather than variation at the phonological or higher levels. While students could associate features (such as /w/-to-/v/) with particular speakers at Meizhang, I saw no evidence that they were aware of how these features were distributed regionally.

When it came to specific linguistic differences, students often had trouble remembering and accurately reporting specific variants. For example, Nicole, who made the observation about "England accents" above, was aware that the Chinese gym teacher had an unusual accent; she was a native Cantonese speaker who merged /n/ with /l/, and as a result she would pronounce the first consonant in Nicole's Chinese name (also an /n/) as an /l/. When describing this situation to me, however, Nicole reported that the gym teacher pronounced her name starting with an /f/. She remembered that something was going on with that first consonant, but she could not accurately report what it was.

Even older second-grade students with recent experience traveling in China had trouble identifying specific linguistic features, as in this conversation I had with Christina:

(6.6)

1	Christina:	My nanny can't even help me with my homework.
2	Rebecca:	Oh, because she does simplified [characters]?
3	Christina:	Yeah.
4	Rebecca:	Oh.
5	Christina:	She's from [place in Southern China].

6	Rebecca:	Oh really?
7	Christina:	Yeah.
8	Rebecca:	Cool.
9		Does she, when she speaks Chinese is her--
10		Is the way she pronounces things, is it a little bit different?
11	Christina:	Well, uh
12		There's something that I-- I learned most of my Chinese from her
13		She pronounces some things differently from the way people like our teacher who come from Beijing do.[23]
14	Rebecca:	Oh yeah? Like what?
15	Christina:	Uh there's one I can't remember
16		背！I CALL IT 背着书包。背。 bei4! I CALL IT bei4zhe shubao. bei4. bei4! I call it "carrying (bei4) a backpack." bei4.
17		And I calling it bei1
18	Rebecca:	Yeah?
19	Christina:	背着书包 bei1zhe shubao. "carrying (bei1) a backpack"
20	Christina:	And my teacher was like-- I mean my nanny was like, "it's bei1, not bei4."
21	Rebecca:	[laugh]
22	Christina:	And then she's like, "it cannot be pronounce like that!"

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23 In this conversation, Christina identifies NE Teacher as coming from Beijing, which is not the case. This misconception is reflective of the lack of explicit discussion of teachers' regional backgrounds at Meizhang.

23   Rebecca: [laugh]

24   Christina: Well I can't remember, but I think that's what she said.

On the surface, the conversation in (6.6) would appear to be a successful discussion of Christina's nanny's accent features. However, while Christina does show metalinguistic awareness that people in the southern Chinese city where her nanny is from (and where Christina has spent a great deal of time) speak differently from people from the Northeast, she fails to identify any of the many salient features that distinguish this variety of Southern Mandarin. The feature she does discuss, 背 being pronounced as *bei1* vs. *bei4* (Line 16), is an example of a Chinese learner's error, in which *bei4*, meaning 'back,' is mistaken for the semantically-related *bei1*, meaning 'to carry'. It is noteworthy, though, that while Christina's explicit knowledge of her nanny's dialect is lacking, she has considerable implicit knowledge, as demonstrated in Line 22, when she performs an impression of her nanny's non-native English ("it cannot be pronounce like that").

On the English side, while students were very good at listening to Miss Alice's speech and identifying British English features she was using, they had a harder time recalling and demonstrating features that Miss Alice used when discussing her dialect with each other outside of class. First-grader Carly successfully identified Miss Alice's pronunciation of 'Tuesday' with an affricate (which Carly performed as "chewsday"), but was unable to recall what was different about how Miss Alice would pronounce her own name (which contained a postvocalic /r/ that Miss Alice would have deleted).

These cases illustrate a gap between students' ability to identify features when

they are present, and to reproduce them out of context. This difference underscores the importance of conducting observational fieldwork with children, rather than relying on elicited tasks to determine what children know about sociolinguistic variation.

One aspect of language use that students failed to make metalinguistic comments on was intraspeaker variation. When characterizing or mocking someone's speech, as in Audrey's imitation of NE Teacher (Chapter 5, Example (5.28)), students never framed their comment in terms of a speaker sometimes saying one thing and sometimes saying another thing. This is consistent with the way variation was discussed in the school, as a strictly inter-speaker phenomenon.

6.5 Metalinguistic Discussion of Personal Language Use

In regard to their own language use, certain students made comments that indicated they were aware of unusual features in their own speech. Students who used vocalized /r/ would make comments such as:

(6.7) Nicole: I say a/w/ow [arrow] because I don't know the r's.

The only context in which students made comments about their own linguistic variation was in relation to code-switching or the use of different languages in different settings:

(6.8) Ellie: Sometimes I say English in Chinese class, but sometimes Chinese
                in English class.

As suggested in the discussion above about non-Chinese students (Section 6.2), many students could perform developed narratives reflecting their understanding of their personal linguistic history, skills, and practices. Students recounted elaborate stories to

me about their linguistic histories, explaining that they had been born both in China and in America at the same time, which is why they could speak both Mandarin and English, or that at the time they entered school they could only say one word in English, as in Cynthia's personal narrative:

>   (6.9) Cynthia: When I was a baby, I only knew Chinese, I was only speaking Chinese. And I only knew one word in English, "why". Just "why." So, if someone asks me my name, I just said, "why?" And I didn't even know my name. [laugh]
>
>   Rebecca: But now you know English?
>
>   Cynthia: Yeah, because I went to school.

In classes containing students with such diverse linguistic backgrounds, linguistic history and variation was inevitably highlighted, and creating these narratives allowed students to locate themselves within the range of backgrounds in the class. Students were also comfortable giving family language background narratives, describing which members of their family spoke which languages to what extent. Teachers would sometimes elicit these narratives as part of class activities, and they were also subjects of discussion on the playground. As a result, students became familiar with the range of linguistic backgrounds present in the class.

6.6 Metalinguistic Discussion by Teachers

In previous chapters, I have discussed several aspects of how teachers spoke about language difference and variation. With the exception of Miss Alice, teachers rarely discussed regional variation. Prescriptivist corrections were couched in Chinese classes

in terms of what was correct and incorrect, while in English classes they were more often framed in terms of what "made sense."

One subset of metalinguistic discussion which teachers engaged in was relating student language background to their classroom performance. Chinese teachers would often refer to students' home language background when discussing student performance with each other and with me; they occasionally also brought this up in front of the class. This was generally done in a context of praising students for their performance in class, during which the teacher would mention that the performance was particularly impressive because they did not speak Chinese at home. I never observed English teachers discussing student language backgrounds, or drawing attention to students' comparative linguistic performances (the English teachers generally avoided publicly ranking or comparing students, disguising ranked groups for reading and math, for example, by assigning them non-ordered labels).

This contrast between Chinese and English teacher behaviors is consistent with previous observations discussed in Chapter 5, in which the Chinese teachers were more willing to highlight differences between students via correction. Also parallel to findings in the previous chapter is the distinction between what English teachers do, and what students do in English, with the teachers entirely avoiding discussion of home language background, and students willing to bring it up as an account of poor English performance, as discussed in Section 6.2. In this case, student views of language competence appear to be influenced by messages that they are hearing outside of school, from peers, or possibly from the Chinese teachers.

6.7 Conclusion

While students displayed a great deal of implicit linguistic knowledge in their corrective behavior, they demonstrated limited explicit knowledge of sociolinguistic variation in their metalinguistic comments. This is perhaps not so surprising when we consider that most adult non-linguists also display a similar lack of explicit knowledge about variation phenomena. Students did demonstrate a solid understanding of the basic concepts of language acquisition and learning, and of regional dialects. While students associated Chinese language with Chinese ethnicity, their explicit understanding of Chinese regions and their associated linguistic features appeared to be limited. Student recall of specific linguistic features in varieties of both languages was also limited. Students did, however, have well-developed narratives concerning their personal and family linguistic situations.

These findings suggest that student knowledge about how sociolinguistic variation works was primarily gained indirectly, through observation of language use and corrective behavior, rather than through explicit metalinguistic discussion. While their variation-rich dual-language immersion school environment may have influenced students to engage in unusually high amounts of corrective feedback, this effect did not appear to extend to other metalinguistic discussion.

Chapter 7

Student Language Use

7.1 Introduction

Previous chapters have demonstrated several patterns in metalinguistic behavior and teacher speech which suggest ways in which students at Meizhang are likely to use language. On the metalinguistic side, we have seen that, while dialect varieties in English are presented as equally valid, Chinese metalinguistic discussion has promoted the notion of a single standard. At the same time, Taiwanese dialect features have been treated as privileged and are not targeted for explicit correction, but are instead reformulated. These phenomena suggest that students who already use Taiwanese features might not feel pressured to alter them, but students who are acquiring Mandarin in this environment would nonetheless get the message that they should target standard Mandarin.

In the analysis of teacher language use, all three Chinese teachers examined varied in their use of standard retroflex and dental sibilant initials in predictable ways. Most notably, teachers were more likely to use standard retroflex in reading and instructional contexts, and more likely to use non-standard dental initials in administrative and behavior management contexts. It was proposed that teacher language use would give students a sense of the social meaning of these variants, and also that these patterns of variation could be exploited by students seeking to acquire standard initials. Without examining student language use, we do not know whether students are

acquiring their teachers' patterns of variation, or using information from those patterns in an attempt to construct a different variety that is either more or less standard. Given the metalinguistic environment at Meizhang, in which the notion of a single standard Mandarin is promoted, and students are told not to produce non-standard variants in the abstract, the most likely scenario is that students are targeting a more standard variety. On the other hand, because standard retroflex is associated with instruction, it could conceivably be the case that students conclude from the available evidence that standard pronunciation is for teaching only. They would then target a more informal way of speaking, and therefore acquire a less standard variety.

Regardless of the validity of the two hypotheses above, the outcome for students learning Mandarin in class would seem to crucially depend on what their native-speaking peers in the class are doing, because they would provide a model of the language use of Mandarin-speaking children. If considerable variation exists among the native-speaking students, however, there may be no clear model to emulate. In such a scenario, lacking a clear peer model, students may target the only consistent model available to them, and acquire prescriptive norms.

This chapter will assess the validity of these predictions through an analysis of student language use in the first grade. As in Chapter 4, this analysis will focus on Chinese rather than English. In addition to the question of how teacher speech interacts with student speech, another focus of this analysis will be the influence of students from a Chinese-language background on those students who do not come from a Chinese-language background.

7.2 Language at the Early Elementary Age

7.2.1 Introduction

The sections below address how previous work in phonological acquisition, sociolinguistic development, second-dialect acquisition, and student language in immersion programs relate to expectations about student language use at Meizhang.

7.2.2. Phonological Development

The following analysis of student speech focuses on phonological variation in relation to retroflex and dental sibilant initials [tʂ], [tʂʰ], [ʂ], [ts], [tsʰ], and [s] (in pinyin, (zh), (ch), (sh), and (z), (c), (s)).[24] With the exception of [s], these phones are both typologically unusual and relatively difficult for children to acquire. Research on child phonological acquisition distinguishes between age of "acquisition," in which sounds are first produced, and age of "stabilization," in which sounds are reliably produced. Hua Zhu's study of monolingual Mandarin speakers found a stabilization age of 4 – 4;6 for [s], and "above 4;6" for the remainder of the initials in question, indicating that they were the final initials to stabilize in the Mandarin sound inventory (Zhu 2006:92).[25]

Given that the students in the present analysis are all six to seven years of age, we would expect them to have mastered these sounds, were they all monolinguals. Because

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24 See Chapter 3 for further discussion of this variable.
25 Zhu finds that these sounds are stabilized later than Mandarin initial (r) ([ʐ]) and final (-r) ([ɻ]), while acknowledging that the inability to produce these (r) phones is a commonly-encountered speech disorder (Zhu 2006:95). In my fieldwork, I found that the two (r) sounds were the only Mandarin phones that some children were unable to produce. The children unable to produce the (r)'s in Mandarin had the same issue with English (r)'s.

some of the students are early L2 learners, however, the situation is somewhat less clear.

It is possible that L2 students acquire these phones in Mandarin by transferring sounds

from their English inventory, or at least bootstrapping based on similar distinctions in

English; this is a common phenomenon in early L2 acquisition (Macken & Ferguson

1987:11). Transfer seems quite likely in this case, because "retroflex" initials in

Taiwanese Mandarin are often produced as post-alveolar, making them extremely close

to post-alveolar phones in English; moreover, the voiced-voiceless stop distinction in

American English is perceptually close to the voiceless-aspirated stop distinction in

Mandarin, and both early and late bilinguals commonly make no distinction in VOT

between the two languages (Chang et al. 2011:3972). Assuming, then, that children are

able to transfer their English pronunciations to Mandarin, it is relevant to examine

English-speaking children's acquisition of [s], [ʃ], [ʤ], and [ʧʰ]. Dodd et al. (2006), a

survey of multiple acquisition studies, found that [s] and [ʃ] stabilized at around the same

time, followed by [ʧʰ], with [ʤ] being the most difficult to master; children had mastered

all of these sounds in most studies by approximately age six (Dodd et al. 2006:29). These

findings are consistent with what I observed in the Meizhang data; every student could

reliably produce the phones listed above when speaking English. In Mandarin, because

the relevant sounds are dialect features that are variably produced in adult speech, this

question is more complex.

Is it possible that pronunciation shifts which appear to be dialect-based variation

are in fact error patterns produced as a result of non-adult-like speech? Zhu noted that,

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before stabilizing their production of sibilant initials, children often made both "fronting" and "backing" errors, finding that 77% of children in the study exhibited an error pattern of producing retroflex initials as dental, with backing as the next most common error (Zhu 2006:93). These two "error patterns" are identical to the merger of retroflex to dental and hypercorrection of dental to retroflex, which, as established in Chapter 3, are common dialect features in China. First of all, while this error rate is strikingly high, one must consider the possibility that Zhu has mistaken regional dialect variation for speech errors. Setting that point aside, the fact remains that all of the errors observed by Zhu were made before age 4;6. Given that all of the Meizhang students were able to reliably produce comparable phones in English, the more likely explanation for non-standard fronted or backed tokens in the Meizhang data is that they are "intentional," as opposed to resulting from non-adult-like speech errors. It is nonetheless important to keep in mind the possible effects of non-adult-like speech in these data. One example of this is another common error pattern, in both English and Mandarin: replacing affricates with their initial stops, as in [t] for [ts] (Dodd et al. 2006:54, Zhu 2006:93). This type of error is relevant for retroflex or postalveolar phones in the present analysis, since an intended target of [ɖʐ] for initial (zh), for example, may be realized as [d], which would be coded as a front token rather than a back token. These errors were not frequent in the data, and, to some extent, they are irrelevant in light of the focus of this analysis; if students are acquiring pronunciation information from their peers, it does not matter if what they hear results from a speech error or an intentional production, because, in either case, they are still hearing a particular phone being used in a given

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context.

In sum, previous studies of children's phonological acquisition of Mandarin and English all indicate that children by the early elementary age should have mastered the Mandarin phones examined in the present analysis. This prediction is consistent with my impression that the students at Meizhang were all capable of reliably producing both retroflex and dental sibilant initials.

7.2.3 Sociolinguistic Patterns and Skills

John Fischer's 1958 study of inter- and intra-speaker variation among children aged three to ten is considered a seminal work in modern sociolinguistics. In light of this initial interest, one might expect sociolinguists to devote considerable attention to children in this age range. Instead, while researchers have documented sociolinguistic variation among adolescent and preadolescent students (e.g., Eckert 2000, 2011), relatively little investigation has been done into how children develop these skills in their early years at school. The more extensive body of research on preschool-aged children has demonstrated that, even before entering elementary school, children have acquired an understanding of social appropriateness and engage in stylistic variation. Several studies, for example, have found that two-year-olds use different levels of politeness when making requests of mothers versus fathers (Kornhaber & Marcos 2000, Lawson 1967). Such research suggests that children's acquisition of stylistic variation may be embedded in the very processes of learning to communicate. Crucially, however, studies of preschoolers have also consistently found that preschool-aged children's patterns of

sociolinguistic variation do not match those of adults. Julie Roberts' 1994 dissertation on preschoolers' acquisition of (ing) and (-t, -d) deletion found that, while children had almost fully acquired adult-like internal linguistic constraints, sex differences ran opposite to patterns in adults, and there was no evidence for stylistic variation in (-t, -d) deletion (Roberts 1994:171, 176). These findings indicate that preschool-aged children have not yet experienced sufficient or appropriate social interaction needed to acquire adult-like patterns of stylistic variation.

Considerable work has been carried out on sociolinguistic variation in the early elementary age range within the specific domain of gender differentiation in interaction styles. This literature, while of limited relevance to the current research, does highlight the significance of peer interaction in childhood development of socially appropriate language use. Serbin et al. (1982) found that boys' and girls' request styles became more different over time as they interacted with peers. Further studies focusing on gender also point to peer interaction as a major cause of the maintenance of gender norms, and find that these differences increase from early childhood to middle childhood (beginning at age seven), as children interact in the early elementary grades (Maccoby 2003:20, Leaper 1991:798, Camras 1984).

Research on intra-speaker stylistic variation in early elementary school, in contrast to inter-speaker differentiation, has been strikingly limited. This is, in part, due to past claims by several influential scholars that pre-adolescent children do not style-shift in socially appropriate ways (Piaget 1923, Vygotsky 1962, Labov 1970, Lakoff 1973). In *The Language and Thought of the Child* (1923), Piaget claimed specifically

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that children up to age seven or eight are egocentric, assume that others can read their thoughts, and are therefore unwilling to tailor their speech to an interlocutor (Piaget 1923:99-102). Most influentially in sociolinguistics, William Labov initially argued that children before approximately age fourteen are monostylistic (Labov 1970). In *Stages in the acquisition of Standard English*, Labov proposed a model of language acquisition in which speakers first acquire the language of their caregivers, then shift to the vernacular of their peer group, and only begin to exhibit patterns of stylistic variation as adolescents (Labov 1970:289).

Labov's framework was contested in 1984 by Suzanne Romaine in her book *The Language of Children and Adolescents*, in which she argued that communicative competence was an integral part of the acquisition process. She presented evidence from a wide array of previous research indicating that, for certain linguistic variables, children show consistent patterns of use quite early. Lawrence Biondi for example, found that six- and ten-year-old Italian-American children in Boston exhibited consistent style shifting between casual, narrative, and read speech in the case of despirantization of interdental fricatives (Biondi 1975, cited in Romaine 1984:97). By 1989, Labov had evidently adopted an altered view of children and style-shifting; his study of children in King of Prussia found that children ages six and seven had acquired stylistic variation rules for (ing) variation (Labov 1989).

While scholars did initially put forth models of acquisition in which children were monostylistic, this theoretical stumbling block may be of limited importance in accounting for the lack of studies focused on children relative to the impact of

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methodological difficulties inherent in such studies. As observed in Roberts' dissertation on the speech of preschool-aged children, gathering data from children comparable to the data gathered from adults in sociolinguistic studies is time-consuming and challenging (Roberts 1994:2). Moreover, the sociolinguistic lives of children are quite different from those of adults, in that the social world of children is different from the adult social world; basic social and stylistic notions in sociolinguistics, such as social class, formal vs. informal speech, etc., are based on the world of working adults, and are not necessarily directly transferable to analyses of children. Scholars whose interests center around how these theoretical notions operate in the adult world may therefore be uninterested in examining the speech of children.

A more fundamental reason why children in the early elementary years have been particularly ignored in sociolinguistics, compared to the preschool, preadolescent, and adolescent age groups, is that children in this age range are thought to be relatively stable and uninteresting. Early elementary age is often considered the easiest stage of parenting, because children have mastered basic social skills and are not yet engaging in the "drama" of the preteen years (as Gilbert (2010) puts it, "the calm before the storm") (Gilbert 2010, Borrink 2007). This supposed lack of social drama may lead researchers to assume that the sociolinguistic life of children at this stage is boring relative to their preteen or preschool counterparts. Children at the early elementary stage are overlooked not only in sociolinguistics, but in academia in general and the culture at large; the very lack of a term for children of this age, in contrast to "preteens," illustrates this phenomenon.

One notable investigation of early-elementary-aged children's sociolinguistic abilities is Elaine Andersen's study of register-shifting in role-playing scenarios. Andersen used a "controlled improvisation" methodology to test how children ages four to seven perform different registers in home, classroom, and doctor's office play scenarios (Andersen 1990:76). While this methodology did not shed much light on how children actually style-shift in everyday interactions, this research establishes that children are aware of various registers used by individuals in different roles (e.g, teachers and students), and will engage in shifts in pitch, phonology, lexical choice, and syntactic patterns to perform these registers. Anderson also discovered that many children were unwilling or reluctant to perform certain roles, such as that of the teacher and the non-native speaker of English (164). She therefore speculated that "if [children] are aware that a special register exists but they don't know its features... they will avoid it"(165). This phenomenon has interesting implications for students in a dual-language immersion environment, in which speakers are obliged to perform in languages and registers for which their comprehension exceeds their production abilities.

In spite of initial theories to the contrary, previous work in sociolinguistics has established that children at the early elementary age have an understanding of appropriate language use, and will alter their speech consistently in different settings, although not always in ways that match those of adults. The studies described above have focused on monolingual/monodialectal acquisition; it remains to be seen how much communicative competence students can acquire in the Meizhang dual-language immersion setting, where their access to sociolinguistic information on each language is

more limited and varied.

7.2.4 Dialect Acquisition

One of the central issues in the present analysis of variation in the Meizhang school has been the implications of dialect contact within Chinese and English classrooms. It is therefore relevant to consider past research on children's acquisition of new dialects. Previous work on this subject has shown that second dialects are not acquired wholesale, but rather that certain linguistic patterns are acquired more easily than others. Chambers' 1992 study of dialect acquisition suggests several principles that govern dialect acquisition, including the observations that lexical replacements are acquired more readily than phonological variants, simple phonological rules are acquired more easily than complex rules, old rules are eliminated more rapidly than new ones are acquired, and orthographically distinct variants are acquired more quickly. Chambers also acknowledges that acquirers may follow an "early" or "late" pattern, meaning that some children acquire complex patterns and new phonemes more readily than others (Chambers 1992:687). Payne (1980), a study of children who had moved to Philadelphia after age eight, found that second-dialect learners had trouble acquiring the local pattern of /æ/-raising, which involved lexical conditioning, in contrast to other, more easily-acquired rules which were conditioned by simple phonological context. Kerswill (1996), reviewing a range of dialect acquisition studies, also concludes that lexically-complex rules are the most difficult to acquire (Kerswill 1996:187).

Considering how these previous studies might apply to Chinese-heritage students

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in the Meizhang classroom, one prediction to be made here is that speakers who come from a dialect background that distinguishes retroflex and dental sibilants would more easily adopt the merger than merging speakers would adopt the distinction. In fact, given the findings of Payne (1980), we would predict that speakers who merged retroflex and dental initials would find it exceedingly difficult to acquire the retroflex-dental distinction, because the two sets of initials are distributed randomly throughout the lexicon with no significant degree of phonological conditioning. However, Chinese-heritage students coming from dialects that variably use the merger—i.e., students with dialects similar to the three teachers examined in Chapter 4—would not have to acquire a new linguistic rule at all, but rather a sociolinguistic rule, to change their frequency of use of the merger versus the distinction. But this speculation begs the more fundamental question of whether Chinese-heritage students would alter their dialect in the first place, given the heterogeneous nature of the Meizhang Chinese speech community. While the dominant dialect of this community is Taiwanese Mandarin, many other dialects are commonly heard in the school; it is therefore unclear whether the sort of Taiwanese Mandarin used by TW Teacher and MT Teacher is dominant to the extent that students would modify their own home dialects in order to acquire it. This question will be addressed in the analysis of Chinese-heritage student speech.

Looking at the non-Chinese-heritage students, the setting of Meizhang is reminiscent of studies of acquisition of changes in progress, as in Julie Roberts' 1997 study of Philadelphia children acquiring several vowel changes, or Paul Kerswill's 1992 study of the creation of a new dialect in Milton Keynes. In all of these cases, children

are acquiring a language based on dialectally-heterogeneous input. Both authors concluded that acquisition is largely a function of degree of contact with speakers of particular dialects, but also found that children exhibit individual differences. Kerswill, for example, found that some four-year-olds matched older children, some matched a parent, while others produced "compromise" features that melded their different inputs and thus matched none of them (Kerswill 1996: 188). Crucially, however, Kerswill then argues that children begin to converge around shared norms as they increase their level of peer interaction upon entering school (192). Because the students at Meizhang are using Chinese mainly in the classroom, and spending most of their social interaction time using English, it is unclear that this same convergence would necessarily occur in this case.

7.2.5 Student Language Use in Immersion Programs

The present analysis examines children enrolled in a dual-language immersion program. Previous research on immersion programs suggests several respects in which these speakers might differ from the children discussed in the above research on sociolinguistic and dialect acquisition. As discussed in previous chapters, bilingual children are thought to have have more metalinguistic awareness and be more cognitively flexible than their monolingual counterparts (Reynolds 1991, Turner & Myhill 1984). Indeed, previous chapters have established that the Meizhang students have high metalinguistic awareness and exhibit frequent attention to the language use of others. Previous research also indicates that students in prestige-language immersion

programs, such as the Meizhang program, are high-achieving relative to students in conventional programs (Gardner 1991, Swain & Lapkin 1982, Lambert & Tucker 1972). Additionally, parents of children in immersion programs have been found to be more involved in their children's lives and to value intellectual achievement more than other parents (Reynolds 1991:158). All of these findings suggest that we would expect children at Meizhang to show advanced acquisition of sociolinguistic patterns, and to be particularly adept at acquiring academic registers such as reading and reciting styles.

At the same time, some researchers have argued that immersion students lag in the acquisition of informal speech styles in their second language. Swain (1985), for example, found that, while native French and French immersion students in Canada scored comparably on written discourse and oral comprehension tests, native speakers performed better on oral story-telling tasks (Swain 1985:241). Even more significantly, Swain found that native speakers outperform immersion students in tests of appropriate style-shifting given various contexts and interlocutors (242). This study, however, was not performed with dual-language immersion students, but with students who had acquired French in classrooms populated by other French learners; it is possible that increased exposure to informal speech from peers would ameliorate this deficiency among immersion students.

Previous research also provides some insight into individual differences in student performance in immersion settings. Gardner (1991) argued that success in immersion programs correlates with student attitude. Similarly, Long (1997) observed that some children acquiring a second language are reluctant to use it in formal school

settings, preferring to restrict their use to informal peer interactions (Long 1997:133).

My own observations also suggest that individual attitudinal differences play a large role

in shaping language use and achievement in immersion programs. Because some

students prioritize academic achievement while others prioritize social interaction in

their language acquisition process, we should expect some children to acquire more

formal, academic speech than others. In the case of Chinese at Meizhang, this may

translate into differences in the use of non-standard Taiwanese Mandarin features.

7.3 Methodology

7.3.1 Linguistic Variable

This analysis will examine the same two related phenomena that were addressed in

Chapter 4 on teacher speech: use of the retroflex-dental merger ((zh), (ch), (sh) to (z),

(c), (s)), and hypercorrection of dental tokens to retroflex ((z), (c), (s) to (zh), (ch), (sh)).

A complete discussion of these variables can be found in Chapter 3. Tokens were coded

using the same criteria as in teacher speech (see Chapter 4 section 4.5.3). These variables

were chosen because they are the most perceptually salient, frequent, and stigmatized

features of non-standard Mandarin dialects. A brief discussion of other variables will be

given following the main analysis.

7.3.2 Classes

Data for this analysis of student speech are drawn from two classes of first-grade

students (Table 15).[26] The second-grade class is not included in this analysis, because

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26 See Chapter 2 for more discussion of the first grade and Meizhang school fieldsite.

Chinese was more rarely spoken by non-native speakers in that class, and because including only first graders controls for several factors: the two first-grade classes shared a set of teachers, and followed identical curricula throughout the school year. The makeup of the two classes appeared to be determined partially by Chinese language background balance, but also by social and academic blending concerns. Each class was divided approximately evenly into those with a Chinese-language background and those without such a background. There was no "advanced" class; each class contained students with a range of academic and social development levels. While one of the classes contained more Chinese-background students who spoke Southern Mandarin dialects, this was evidently entirely coincidental. This difference, however, is quite significant in the current analysis, because it creates a large difference in the Chinese input received by non-Chinese-background learners in the two classes.

In this analysis, in regard to Chinese language use, I will treat the two classes as mostly separate communities of practice. To some extent, the social networks of the classes were merged; all students shared a lunch time and three recess periods per day. It was not uncommon for students in different classes to play together at recess. Close friendships, however, were all within-class. More crucially, the students spent the vast majority of their cross-class time speaking English, because it was the language of the playground. The only major source of cross-class Chinese exposure was from a joint Chinese period the classes shared once per week. This class period generally involved group activities that did not require many individual speech contributions. As a result, students had little opportunity to hear first graders in other classes speaking Chinese.

Name	Sex	Class	Chinese-language background	Name	Sex	Class	Chinese-language background
Heather	f	1	yes	Thomas	m	2	yes
Stephanie	f	1	yes	Melissa	f	2	yes
Cynthia	f	1	yes	Beatrice	f	2	yes
Kevin	m	1	yes	Hannah	f	2	yes
Ellie	f	1	yes	Shannon	f	2	yes
Nancy	f	1	yes	Carly	f	2	no
Ginny	f	1	no	Zoe	f	2	no
Nicole	f	1	no	Alexandra	f	2	no
Ramzi	m	1	no	Sean	m	2	no
Vivian	f	1	no	Lawrence	m	2	no
Loretta	f	1	no	Joseph	m	2	no
Martin	m	1	no	Peter	m	2	no
Tristan	m	1	no	Betty	f	2	no

Table 15: First graders in student language use analysis[27]

7.3.3 Student Speech Collection

The tokens collected for this analysis include every instance occurring in individually-identifiable speech produced in the Spring portion of my first-grade fieldwork (late April to early June). This was the period of maximum influence of input from other members of the classroom, and maximum integration of the classroom as a community of practice. At the time of collection, all students were ages six through seven. Every Chinese class period that occurred during the Spring fieldwork period was included for analysis; because time periods in which students were working quietly were skipped over, however, it is possible that certain student utterances were overlooked. Chinese

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27 The analysis of student speech includes every student in the first grade who was present from the beginning of the year. Two students who joined the school late in the year are excluded.

utterances on the playground were also not coded. These were quite rare, and took place in such a different context as to be incomparable to classroom utterances from other students.

Tokens were only coded from individual, clearly-identifiable student speech. This resulted in the exclusion of collective speech, such as groups of students reciting lesson texts or songs. I will address how this criterion may have skewed the data in section 7.4.3.1. As with the teacher speech analysis, tokens were coded perceptually by the author.

7.3.4 Utterance Context

7.3.4.1 Introduction

Previous studies discussed above in section 7.2 have found that children at the early elementary age exhibit consistent, although not always adult-like, patterns of stylistic variation. This analysis will examine patterns of student variation, with reference to the stylistic variation found among their teachers. In Chapter 4, teacher speech was classified by utterance type as "reading," "instructional," "non-instructional," and "behavior management." Teachers were found to use significantly different proportions of standard variants in these different contexts. In this analysis, student utterances are classified as "reading," "curricular," and "non-curricular." Details on each category is given below:

7.3.4.2 Reading

This class of utterance includes reading aloud, reciting from memory, and singing. Students engaging in these activities would sometimes have access to supplementary phonetic information (i.e., zhuyin or pinyin romanization written next to characters). Because it was not possible to determine when students were making use of such information, no distinction was made between contexts in which it was available and those in which it was not. Example (7.1) illustrates an utterance classified as "reading":

> (7.1) Carly: 平平六岁，是一个快乐的小女孩
> pingping liu ***shui***, **shi** yi ge kuaile de xiao nuhai[28]
> Pingping is six years old, she is a happy little girl

Following the results of the teacher analysis, we would expect students to use the most standard forms in read speech, particularly given that they sometimes have access to supplementary phonetic cues in this context. On the other hand, in the case of hypercorrection, if students are using retroflex phones as a marker of formality, we would expect more non-standard hypercorrection forms in reading style.

7.3.4.3 Curricular

Utterances classified as curricular are those which are not necessarily directly related to the current topic of instruction, but qualify as related to some topic of instruction in school. If a student asks about the meaning of a character during a lesson about islands, for example, that would be classified as curricular although their utterance was not directly about islands. An example of an interaction containing curricular utterances

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28 Standard retroflex syllables are highlighted in bold. Non-standard dental syllables are italicized. Non-standard hypercorrect dental syllables are bold and italicized.

from students is given below:

(7.2) TW Teacher: 有没有人可以用中文解释给我听什么是岛上？
　　　　　　　　　 you meiyou ren keyi yong *zong*wen jie*si* gei wo ting *sen*me *si* dao*sang*
　　　　　　　　　 Is there anyone who can use Chinese to explain to me what an island is?

　　　　Hannah: um 一个地方
　　　　　　　　　 um yi ge difang
　　　　　　　　　 um it's a place

　　　　TW Teacher: 然后呢？
　　　　　　　　　 ranhou ne?
　　　　　　　　　 and what else?

　　　　Melissa: 要坐船去一个地方
　　　　　　　　　 yao ***zhuo*** **chuan** qu yige difang
　　　　　　　　　 A place you have to go on a boat to get to

While student curricular utterances take place in the same context as teacher instructional utterances, these two utterance types are far from equivalent in terms of stance. Instructional speech is a register used by teachers in constructing their instructor persona; teachers doing instruction are in charge and explaining things. Students, in contrast, are supplicants; they are generally seeking approval of their contributions to classroom discourse. On the other hand, in both the case of instructional speech from teachers and curricular speech from students, the speech context involves the highlighting of language and the prescriptive norms of school. Thus, while we do not expect curricular speech to be stylistically identical to instructional speech, it is likely to contain a high level of standard features.

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7.3.4.4 Non-Curricular

All other utterances from students are classified as non-curricular. These include administrative comments about activities in the classroom, scolding of other students, and informal conversation among classmates. Although the language of the playground was English, students spent a good deal of Chinese class engaging in coloring or other "free time" activities and chatting with each other in a mix of Chinese and English—the teacher would scold them if she heard too much English. Example (7.3) is classified as non-curricular:

    (7.3) Ginny: What do you-- what are you writing down for real?

        Vivian: [Ginny], 说中文！
                 [Ginny], **shuo zhong**wen!
                 [Ginny], speak Chinese!

        Ginny: 好
                hao
                Okay

                你，你，你写什么？
                ni, ni, ni xie **shen**me?
                You, you, what are you writing?

The class of non-curricular speech is a collection of multiple stylistic contexts that have been merged due to the relative infrequency of informal speech in Chinese among the students. Ideally, separate analyses would be conducted of certain styles, such as scolding speech, but not enough tokens were available for this to be possible. Following the results of the teacher analysis, we would expect non-curricular speech to contain the most non-standard variants.

7.3.5 Factors Predicting Variation

This analysis attempts to account for variation in student language use based on social, stylistic, and internal linguistic factors. External factors will include class membership, Chinese-language background, sex, and utterance context (as discussed above). Internal factors will include initial, lexical frequency, rounding of the following vowel, and degree of retroflex association of the final.

7.4 Results

7.4.1 Introduction

A total of 1,754 sibilant initial tokens were collected and coded, consisting of 884 tokens from Class 1, and 870 from Class 2. 919 tokens were from students with a Chinese-language background, and 835 were from students with no Chinese-language background. Retroflex initials will be analyzed first, followed by hypercorrection of dental initials.

7.4.2 Retroflex Initials

7.4.2.1 Overall Results

Figures 28 and 29 indicate rates of standard production of tokens of initials that are standardly retroflex, for three utterance contexts, for the primary first grade Chinese teacher, Chinese-language background students ("natives"), and non-Chinese background students ("non-natives") in each class.
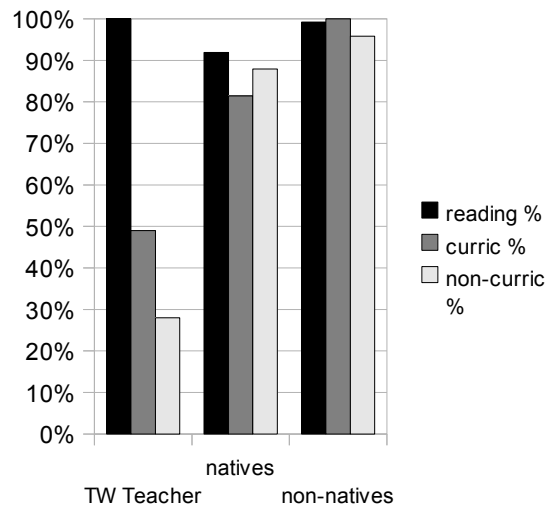
Figure 28: % standard retroflex use by utterance type for Class 1
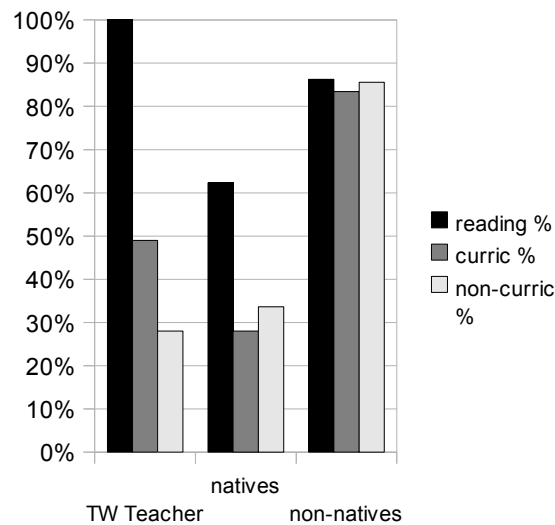
Figure 29: % standard retroflex use by utterance type for Class 2

These overall numbers are a weighted average, in the sense that they have been

calculated by averaging all of the tokens produced by speakers in each category, rather

than averaging means for each speaker. As a result, students who spoke more in class

carry more weight than those who did not. This method approximates what a listener

would be hearing from each group of speakers. For the sake of comparison, TW

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Teacher's curricular and non-curricular utterance type means are given here, although they are not entirely comparable to the student styles, as discussed in section 7.3.4.

Before we unpack these results in more detail, two points jump out in these overall findings. First, there is a large difference between the Chinese-language background students in Classes 1 and 2: the Class 1 speakers use far more standard tokens. The second striking observation is that non-Chinese-language background students are speaking quite standardly in all contexts, in both classes. With this result, one of the central questions of this project has been answered: can students learn a standard variety in a classroom where the teacher does not speak that variety? Evidently, when it comes to retroflex initials, the answer is yes.

7.4.2.2 Results by Student

7.4.2.2.1 Class 1

Figure 30 presents a breakdown of the findings in Figure 28 by speaker.[29] In this figure, when fewer than five tokens in a particular utterance context were produced by a speaker, the cell has been left blank, to avoid misleading percentages. One context is therefore missing for speakers Stephanie, Kevin, Loretta, Martin, and Tristan.

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29 For all graphs listing data by speaker, Chinese-language-background students will be grouped on the left, and non-Chinese-language background students on the right.
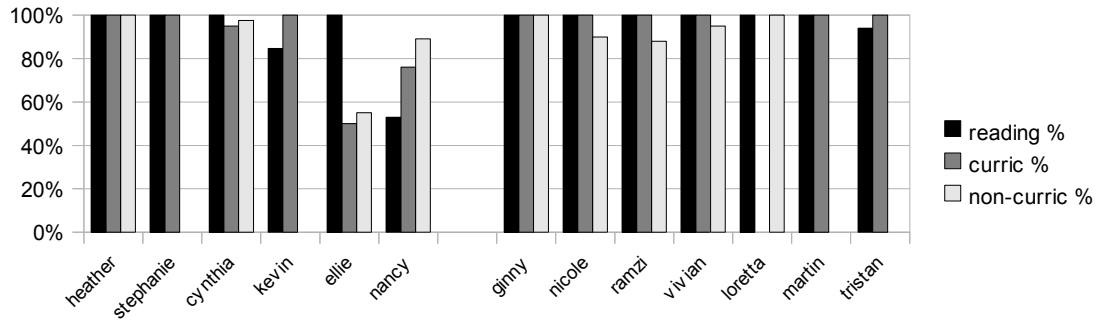
Figure 30: % standard retroflex for Class 1 members, by utterance context.

In Class 1, the majority of students are using completely or virtually completely standard realizations of retroflex initials. Among the "native" students, one student, Ellie, is exhibiting a pattern similar to TW Teacher, in which her read style is far more standard than her other styles. Another student, Nancy, is exhibiting a "reverse" style, in which her read speech is less standard than her other styles. The non-native students are uniformly standard, with only one or two instances of dental tokens used for retroflex initials per speaker. Overall, these results suggest that at least some of the native students are retaining their home dialect use of retroflex, while the non-native students are acquiring a standard norm.

7.4.2.2.2 Class 2

The results for Class 2 are given in Figure 31. Again, blank bars represent cases of fewer than five tokens in a particular utterance context. In the case of Hannah and Shannon, however, what appear to be blank bars are actually 0% rates of standard retroflex.

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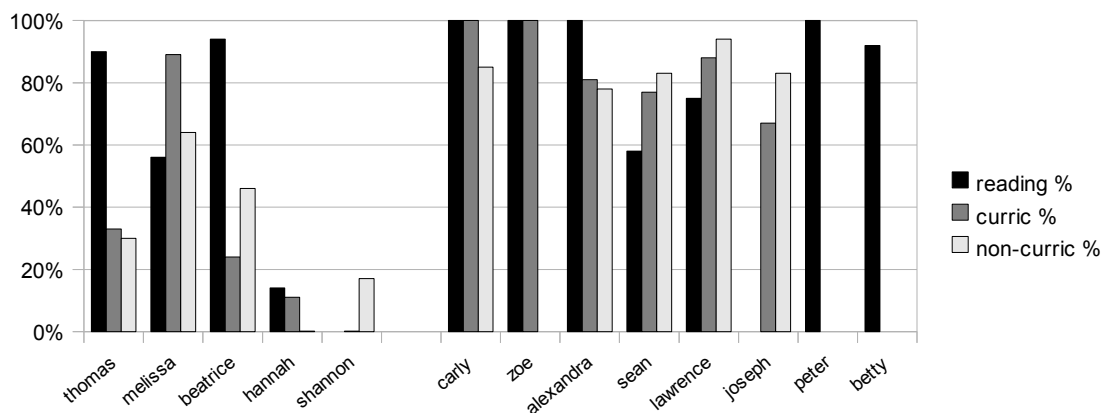
Figure 31: % standard retroflex for Class 2, by utterance context

As was indicated in Figure 29, the native speakers in this class are less standard than the

native speakers of Class 1. What is particularly notable here is that not a single one of the

native speakers in this class exhibits a "standard" retroflex pattern. Two of the speakers,

Thomas and Beatrice, show a variable pattern like TW Teacher, where read speech is

dramatically more standard. Two speakers, Hannah and Shannon, exhibit a "high-

merging" pattern, using almost no retroflex tokens. The remaining speaker, Melissa, has

an idiosyncratic pattern with highly variable use of retroflex. Again, these idiosyncrasies

suggest that native students are maintaining their home dialect use of retroflex initials.

The lack of any standard speakers among the native students means that the non-native

students in Class 2 have no model within the class for consistent standard use of retroflex

initials.

The non-native students in Class 2 are each more standard overall than the native

speakers. While Carly, Zoe, and Alexandra are not wildly different from their Class 1

peers, Sean, Lawrence, and Joseph have lower rates of standard retroflex, and exhibit a

reverse pattern in which non-curricular speech is most standard. The fact that the more

standard group is made up of female students while the less-standard group is made up of male students is notable, but perhaps not more significant than the fact that Carly, Zoe, and Alexandra are friends, as are Sean, Lawrence, and Joseph. Peter and Betty do not frequently speak spontaneously in class, so the only data available over the five-token minimum is in read speech; based on their data in read speech, they have evidently acquired standard use of retroflex in at least one context.

7.4.2.2.3 Discussion of Results by Student

The breakdown of retroflex use among native and non-native students has shown significant differences between the two groups. The Chinese-language background students exhibit virtually the greatest possible range of variation: some students are 100% standard in all three contexts, and other students use only a handful of retroflex tokens. The fact that the high-merging students have happily maintained their high-merging ways indicates that TW Teacher's practice of not explicitly correcting non-standard merger of dental and retroflex tokens has translated into a lack of retroflex adoption among native speakers who were not using it in the first place. The most likely explanation of these data is that the native speaker students are simply continuing to speak the way they speak at home. Complicating this issue slightly is the fact that, even in the case of native speakers, students are acquiring new words in school, and, more importantly, learning to read the Taiwanese phonetic alphabet. For this reason, we might expect that students would be more likely to acquire standard pronunciations of words in school than they would at home. This point, while interesting from a pedagogical point

of view, is not crucial to the present analysis, particularly given that certain students appear to be resistant to acquiring any standard retroflex at all.

Among the non Chinese-language background students, while there are gaps in the data, we can make the following observations: first, the non-native students are each more standard than the native students or their teacher. Secondly, the non-native students Class 2 are overall less standard than Class 1. Finally, most of this difference is coming from three boys who form a friendship group. What is it about these three boys that might lead them to be less standard, and to show a reverse pattern in which their non-curricular speech is most standard? Sean, Lawrence and Joseph are the "bros" of the first grade; they enjoy talking about sports and playing active games. Sean and Lawrence, in particular, don't get along well with the other boys in the class, who are more interested in science fiction and imaginative play, and they have mildly antagonistic relationships with the girls (including me). They have a distinctive vocal style with a lowered pitch and "husky" voice quality, and they engage in certain stereotypically masculine practices, such as chanting "chug chug chug" while someone is drinking. They are quite competitive about their performance in Chinese class, and participate aggressively in class activities. Crucially, they are most likely to use Chinese when there is a competitive or antagonistic element involved in the speech situation. When chatting neutrally in class, they generally use English, unless specifically scolded by the teacher to switch into Chinese. This may, in fact, explain why they use more standard features in non-curricular speech; while their curricular speech is spontaneous, their non-curricular speech is often prompted. Moreover, for these boys, participation in class means something different

than it does for the other students. While other students participate in class seeking

teacher approval, the "bro" boys have rejected the norms of the classroom and reframed

classroom participation in terms of competition among themselves. Example (7.4) is an

excerpt of a discussion between Lawrence and Sean during English class, when

Lawrence is creating an English word-find for Sean, that illustrates their view of Chinese

as a competition in which they can rack up words as points:

(7.4) Lawrence: I'm gonna put some Chinese. (laugh)

Just kidding.

Sean: You don't know many Chinese words anyways.

Lawrence: I know about...

fifty. (laugh)

But we're gonna learn a hundred and fifty after this year,

y'know?

One hundred thousand fifty! (laugh)

In (7.4), Lawrence references the fact that the first graders are supposed to learn to write

150 Chinese characters by the end of the year. He is excited about this goal (he has even

memorized the number), not because he's interested in communicating better in

Chinese, but rather because more words is better, and knowing the most Chinese words

is a way to beat his classmates, just like being the fastest at addition in math class, or

being the first person to finish filling out vocabulary cards. By fundamentally reframing

what learning Chinese is about, the "bro" boys have created an alternate sociolinguistic

marketplace. This may account for why they are the only non-Chinese language

background students to exhibit non-standard retroflex in their read speech, and overall to show a reverse variation pattern.

What is most interesting about these data is that the same sociolinguistic conditions and metalinguistic behaviors in relation to the merger of dental and retroflex initials have left the native-speaking students happy with their home use of retroflex, but, at the same time, have instilled the non-native students with the desire to seek out and use standard retroflex, in spite of a lack of modeling from their teacher and, in the case of Class 2, from native-speaker classmates. This is consistent with the predictions made based on metalinguistic feedback patterns in Chapter 5.

The following sections will examine how social, stylistic, and internal linguistic factors constrain student variation in the standard use of the retroflex initials.

7.4.2.3 Social and Stylistic Factors

7.4.2.3.1 Introduction

In Chapter 4, three teachers from different dialect areas (Taiwan and Northeastern Mainland China) showed the same stylistic constraints on retroflex variation. Thus, although the students in this analysis are evidently showing different patterns of overall retroflex use, we might expect to find shared social and stylistic constraints. The following results for social and stylistic factors were obtained using a linear mixed model in R (lmer), incorporating two random effects for speaker and lexical item. The full model will be given following a discussion of each factor.

7.4.2.3.2 Sex

Analyzing sex differences in the first grade was complicated by the small number of male students. The linear mixed-effects model found no significant difference between the retroflex rate of male and female students ($p = 0.8706$). It is possible that in a class with a larger number of Chinese-language background male students, students may have differentiated retroflex use by sex, but that was not the case here.

While there are no general sex differences in the student data, the "bro" boys, who do show lower use of the standard than other non-native classmates ($p = .0008$), have replicated a more general pattern in the use of the dental-retroflex merger, in the sense that male speakers have been shown to use more of the merger than female speakers (Starr 2004). The Meizhang community, however, lacks adult male Chinese speakers, and there is no indication that these boys were emulating the native-speaker boy in the class, who uses highly standard retroflex in read speech. On the other hand, because the students do have evidence relating to the social meaning of the merger, it is conceivable that this group of boys is indexing something like expressiveness or toughness through their higher use of the merger, which is similar to the root of broader gender differences among native speakers. Then again, this phenomenon could simply be a rejection of classroom norms that is unrelated to sex.

7.4.2.3.3 Utterance Context

Two factors were tested to model effects of utterance context: a factor with a three-way contrast between each of the utterance types, and a binary factor measuring only reading

versus non-reading contexts. It was found that reading versus non-reading was the better measure; the distinction between curricular and non-curricular contexts was not significant. There is a significant interaction between Chinese-language background and utterance context ($p < .0001$). In fact, this interaction is the most predictive factor in the model (see section 7.4.2.5). While Chinese-language background students produce significantly more standard retroflex in reading contexts, the non-Chinese-language background students as a whole do not exhibit variation by utterance context. This is the result of the extremely high overall level of standard retroflex among the non-native students, and the fact that the "bro" boys (Sean, Lawrence, and Joseph) exhibit a reverse pattern. Among the non-bro-boy non-native students, there is a significant difference between contexts such that reading contexts are more standard ($p = .0092$).

Because there is inconsistency among the non-native group, and because their overall standard level is so high in every utterance context, it does not seem fair to characterize this situation as the students "acquiring" the style-shifting pattern of their teacher or Chinese-language background classmates. These data are more consistent with the account that the non-native students (except perhaps the "bro" boys) are targeting standard use of retroflex in all contexts, and sometimes fail to identify contexts in which the retroflex should be used in standard pronunciation, resulting in infrequent non-standard initial use. They may be more standard in read speech not due to the social meaning of retroflex versus dental initials, but because the reading situation often provides them with phonetic cues that help them identify which initial is standard for a particular lexical item. The hypercorrection data, addressed in section 7.4.3, will help

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clarify whether this scenario is likely; if the non-native students are targeting the standard use of retroflex rather than imitating the style-shifting patterns of the native-speakers, we should see high levels of hypercorrection as they attempt to identify standard retroflex tokens.

7.4.2.3.4 Chinese Language Background

The linear mixed-effects model finds a significant difference between native versus non-native student groups (p = .0167). There is also a significant interaction between class and language background: in Class 1, the difference between the groups is only marginally significant (p = .0714), while in Class 2 it is highly significant (p < .0001). In both cases, the non-Chinese-language background students use more standard retroflex tokens than their classmates.

7.4.2.4 Internal Linguistic Factors

7.4.2.4.1 Introduction

In Chapter 4, three internal linguistic factors were found to predict teacher use of standard retroflex initials: initial type, rounded following vowel, and lexical item (as a random effect). The impact of these factors on student retroflex use will be analyzed below, as well as the factors character frequency and strongly retroflex final, which were not found to be significant in the teacher data; because the first grade students are still acquiring Chinese, we might expect certain lexical effects to occur that were not observed among the teachers.

7.4.2.4.2 Initial Type

In the teacher data, each of the three teachers showed the lowest rates of standard

retroflex for initial (zh), but there was inconsistency on the rates for (ch) and (sh).

However, previous research has found that (sh) is significantly more standard than other

initials (see Chapter 4 section 4.6.3.2). Because the Chinese-language background

students have shown large individual differences in their use of retroflex, we might

expect similar differences in their use of different initials. The non-native students,

however, may pattern more similarly.

Figures 32 and 33 illustrate the rate of standard retroflex for tokens with initials

(zh), (ch), and (sh), for TW Teacher, Chinese-language background students, and non-

Chinese-language background students:
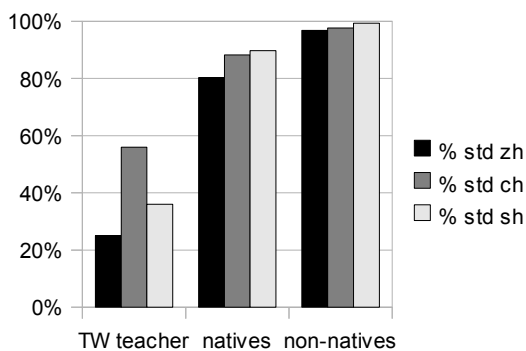
Figure 32: % std retroflex by initial,
Class 1
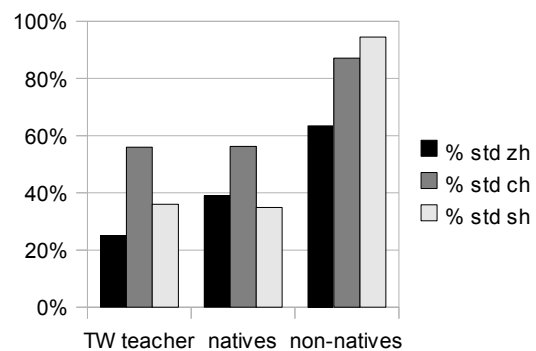
Figure 33: % std retroflex by initial,
Class 2

As predicted from the overall retroflex rate data, the native speakers of Class 1 and 2

pattern quite differently, with Class 1 not showing significant differences in standardness

rates by initial, and Class 2 patterning similarly TW Teacher, with (zh) and (sh) less

standard than (ch). Figures 34 and 35, which break these results down by speaker, reveal that Ellie, Thomas, and Beatrice, the three native speakers who exhibited the style-shifting patterns most similar to TW Teacher, are also the only three native speakers who individually exhibit this same initial distribution, with (ch) more standard than the other initials (In Fischer's exact tests, Ellie p = .0129, Thomas p = .0866, Beatrice p = .0815).
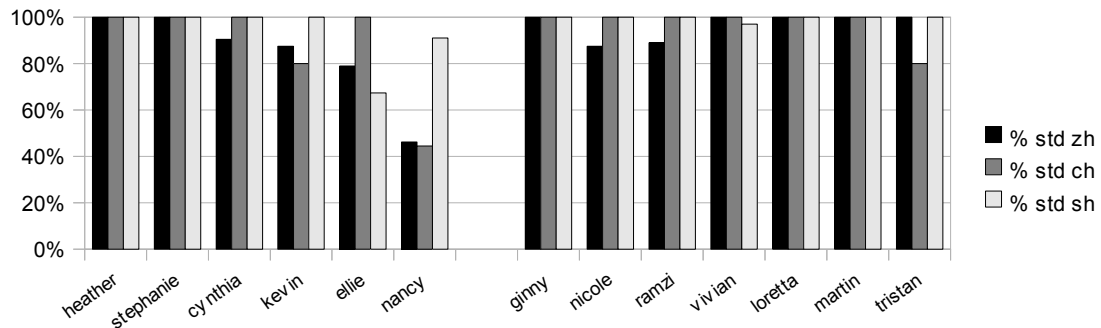
Figure 34: % std retroflex by initial, by speaker, Class 1
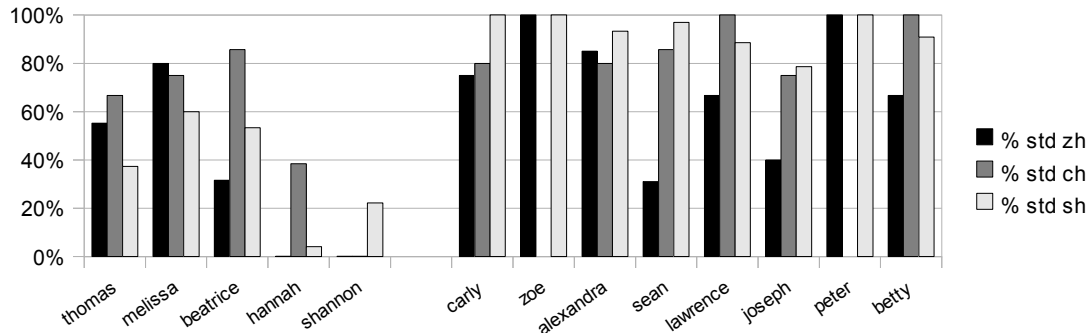
Figure 35: % std retroflex by initial, by speaker, Class 2

For the non-native students, Class 1 students show no difference in initials, since they are virtually at ceiling for all of their retroflex initial use, while the non-natives of Class 2 show a pattern in which (zh) is least standard, but (sh) is far more standard relative to the patterns of their classmates and teacher. This is consistent with the

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prediction of Tse (1998), and with the findings of Starr (2004), in which (sh) is found to

be the most standard of the initials. Looking at the breakdown in Figure 35, we can see

that, for each student who is not 100% standard, their (zh) tokens are less standard than

their (sh) tokens, although this is not a significant difference for all students (Carly p = .

0075, Alexandra, p = .31, Sean, p < .0001, Lawrence p = .1007, Joseph p = .15, Betty = .

3956). Tokens of (ch) are rare in the data, so no significant trends can be found (in fact,

two of the students, Zoe and Peter, produce no (ch) tokens at all).

As was observed in the analysis of teacher speech, it is not particularly surprising

that (zh) would be most likely to be produced as its dental counterpart (z), given that (z)

is the most common of the three dental initials, and that, according to Tse (1998),

productions of (zh) and (z) are the least acoustically distinct of the three contrasts in

Taiwanese Mandarin. Also, while the three Meizhang teachers analyzed in Chapter 4 had

different treatments of (sh) versus (ch), they were unified in their non-standard

pronunciations of (zh); the students may simply be picking up on this overall pattern.

In the overall model, both a main effect of initial type and an interaction effect

between initial type and roundedness are significant. Initial (sh) was found to be

significantly more standard than the other initial types (p = .046). The following section

on roundedness will discuss the interaction effect.

7.4.2.4.3 Roundedness of Following Vowel

In teacher speech, whether the vowel following the initial was rounded was shown to

predict the use of standard retroflex (see Chapter 4 Sections 6.3.3 and 6.5). It was also

found that teachers were more likely to produce hypercorrect retroflex tokens of (s) and (z) (producing them as (sh) and (zh)) before rounded vowels. It makes sense that retroflex initials would be easier to produce before rounded vowels, because rounding gestures are one method of producing a back initial. It is also the case, however, that predicting a retroflex before a rounded vowel is not a good bet. In the corpus of student speech used in this analysis, 70% of both unrounded and rounded vowels were preceded by an initial that is standardly retroflex; neither vowel type is more likely to follow a retroflex. Producing a retroflex before a rounded vowel might be articulatorily easier, but it is not more likely to result in a standard pronunciation. For this reason, to acquire standard tokens, students would be better off using an "anti-roundedness" strategy: because teachers are more likely to produce hypercorrect retroflex initials for standard initials (s) and (z) before rounded vowels, students might try to correct for this by producing more dental tokens when they encounter (sh) and (zh) before rounded vowels.

According to the overall model, this is exactly the strategy the students are adopting. While there is no significant main effect of roundedness (p = .1), students are significantly more likely to produce a non-standard dental token for a retroflex initial (sh) when it is followed by a rounded vowel (p = .031), and even more likely to do so in the case of (zh) (p = .0104). This finding is quite significant in that it suggests that students are not simply imitating teacher patterns of internal variation or doing what is articulatorily easiest, but adapting to teacher patterns of language use in order to target standard pronunciations.

In addition to the interaction of initial type and roundedness, there is an

interaction between Chinese-language background and reading such that native-speaker students are more likely to use standard retroflex before rounded vowels. This makes sense given the pattern observed among the teachers; while native-speaker students' and teachers' use of retroflex is shaped by articulatory ease, non-native students are primarily using rounding trends among the native speakers to make guesses about standard retroflex.

7.4.2.4.4 Retroflex Tendency of Final

While the degree to which a final was associated with retroflex initials proved not to be a significant factor for teachers (see Chapter 4 section 4.6.3.4), we might expect this factor to constrain student variation, because students are learning new words and may use phonological frequency as a tool when assigning them pronunciations. For example, if a particular final appears 99% percent of the time with a retroflex initial, it is a good bet that a new lexical item with that final will use a retroflex initial. To make this factor maximally relevant to the students, retroflex tendencies were calculated using only tokens from the student data; as a result, 6 of the 20 finals were coded with a different value ("strongly retroflex" versus "not strongly retroflex") than they had received in the teacher analysis.

This factor did not prove to be a significant predictor in the overall student model (p = .744). Replacing this measure with the teachers' retroflex tendency measure did not improve its significance. It is notable, however, that students used a wider range of finals than those observed in the teacher data. As a result, some of these rare finals were only

associated with one lexical item, meaning that the random effect of lexical item may have masked some effect of this factor.

7.4.2.4.5 Lexical Effects

Lexical frequency was not found to be a significant predictor of teachers' retroflex use (see Chapter 4 section 4.6.3.5). Using the same methodology from the teacher analysis, a new lexical frequency rank was developed based on the student rather than the teacher speech corpus. While I had expected students to use a far more limited range of lexical items than the teachers did, in fact students' lexical variability was comparable to the teachers', with a total of 114 distinct lexical items in contrast to the teachers' 130. Normalizing for total number of tokens, this means each lexical item was repeated an average of 15.3 times among the students, versus 19.65 times among the teachers. This supports my fieldwork observations that students, from all home language backgrounds, were not simply repeating the same phrases in Chinese class, but constructing new sentences and communicating relevant ideas in classroom discussions. Our prediction for lexical frequency would be that more frequent words, which students had more chances to hear produced by different speakers in the classroom or to see written down with phonetic cues, would be more likely to be produced with standard retroflex.

Contrary to this predictions, lexical frequency was not found to be a significant predictor of retroflex use (p = .1035). Given this result and the previous non-significant result in the teacher analysis, there is no evidence that lexical frequency plays any role in the production of standard retroflex sibilant initials. In the case of students, this lack of a

lexical frequency effect may result from the many different ways in which a lexical item might be introduced to a student, independent of frequency; a student might learn a word via the textbook, in which case phonetic alphabet information would be available, or by overhearing it in class, in which case it would not.

As in the teacher speech model, a random effect was introduced into the model for lexical item which was found to be highly significant via an ANOVA test comparing the two models ($p < .0001$).

7.4.2.5 Overall Retroflex Model

Table 16 gives the details of a linear mixed-effects model which incorporates speaker and character (lexical item) as significant random effects:

Effect	Coefficient	Std Error	P
speaker (random)	N/A	N/A	N/A
character (random)	N/A	N/A	N/A
(Intercept)	0.92655	0.07250	0.00000
native speaker	-0.19142	0.07991	0.0167
class (2)	-0.12278	0.07267	0.0914
native * class	-0.35702	0.10992	0.0012
reading	0.00322	0.03447	0.9257
native * reading	0.17541	0.04251	0.00000
initial (sh)	0.10682	0.05438	0.0460
initial (zh)	-0.02201	0.05716	0.7003
rounded	0.12136	0.07372	0.1000
initial (sh) * rounded	-0.18084	0.08373	0.0310
initial (zh) * rounded	-0.24215	0.09431	0.0104
native * rounded	0.12048	0.04588	0.0088

Table 16: Linear mixed-effects model for student retro. (using lmer and pvals.fnc in R)

As discussed in the sections above, significant fixed main effects are Chinese-language background, Class 1 versus. Class 2 (marginal), and initial type (sh) versus others. Significant interactions are language background by class (Class 2 has a greater distinction between native and non-native speakers), language background by reading versus non-reading context (native speakers have a significant difference between the two styles), initial (sh) and initial (zh) by roundedness of following vowel (less likely to be standard retroflex in those contexts), and language background and roundedness of following vowel (native speakers more likely to use standard retroflex before a rounded vowel).

7.4.3 Dental Hypercorrection to Retroflex

7.4.3.1 Introduction

The analysis of teacher speech in Chapter 4 found that teachers had a lower rate of hypercorrection than expected. Nonetheless, TW Teacher had a 10% hypercorrection rate (10% of standardly dental tokens were produced as retroflex), which is not negligible. We might expect to find comparable rates of hypercorrection among Chinese-language background students with patterns of retroflex use similar to TW Teacher.

If we view non-native student use of retroflex as containing strategies to deal with non-standard teacher and classmate input, then their hypercorrection patterns are crucial. Because retroflex tokens are so much more frequent than dental tokens in standard Mandarin, students have reason to believe that any dental token they hear from a speaker they know uses non-standard sibilant initials is likely to actually be retroflex.

Hypercorrection from the students gives us clues about how students are interpreting the standardness of someone else's speech. Looking at hypercorrection will also clarify a major point of ambiguity from the retroflex data: are non-native students really acquiring standard retroflex, or are they simply absorbing the message that retroflex is more formal and using retroflex to replace dental initials across the board?

Capturing the hypercorrection patterns of students at Meizhang is difficult, because students are most likely to hypercorrect in situations where they are speaking or singing in unison, often in response to the teacher. Because I only coded individual utterances and excluded group utterances, these collective speech instances are left uncounted .Example (7.5) illustrates this teacher-response phenomenon, involving the lexical item 岁 *sui* ('years old'):

(7.5) TW Teacher: 平平几岁？
                     pingping ji sui?
                     How many years old is Pingping?

      Students: 六岁
                     liu ***shui***
                     Six years old.

In (7.5), students have guessed that TW Teacher's pronunciation of *sui* is non-standard, and, attempting to target the standard, they respond to her question with the hypercorrect pronunciation *shui.* This particular instance is quite striking given that the students are responding to questions about a lesson they have just read moments ago, in which the *zhuyin* phonetic alphabet spelling for *sui* was available and read aloud by each of the students. Moreover, the students are already quite familiar with the word *sui*; they have

seen it many times before in written form with phonetic cues and heard it produced by speakers with various dialects.

Students are particularly consistent about using hypercorrect retroflex in songs, sometimes when they involve vocabulary with which they are unfamiliar, as in Example (7.6), where 自由 *ziyou* ('freedom') is hypercorrected to *zhiyou*, but also in cases with very common words, such as 做 *zuo* ('to do') to *zhuo* in Example (7.7):

> (7.6) Students:我是只小小鸟飞就飞叫就叫
>   wo **shi zhi** xiao xiao niao fei jiu fei jiao jiu jiao
>   I am a little bird, I can fly and call as I please
>
>   自由逍遥
>   ***zhi*you xiaoyao**
>   free and carefree
>
>
> (7.7) Students:我做他爸爸我做他妈妈
>   wo ***zhuo*** ta baba wo ***zhuo*** ta mama
>   I'll be his father, I'll be his mother

As noted in Chapter 5, students' fondness for using hypercorrect retroflex tokens when singing proved too much for TW Teacher when she was teaching them a Mother's Day song, causing her to produce her only explicit correction of the dental/retroflex distinction for the pronunciation of 慈爱 *ci'ai* ('loving') as *chi'ai*.

There are a few explanations of why students might be particularly prone to hypercorrection in collective speech and singing. The most simple account is that the most confident (i.e., loudest) students in each class happen to be particularly prone to hypercorrection (or perhaps this is not a coincidence at all, since students who

hypercorrect have some level of sociolinguistic awareness that may lead them to

participate confidently in class). There may also be something about this speech context

that leads students to avoid potentially non-standard dental tokens. This makes some

sense, because collective recitation and singing falls under the formal reading style

umbrella, but generally lacks the phonetic cues that students have access to when reading

lesson texts and books. Wanting to sound formal but lacking information about which

pronunciation is standard is a classic recipe for hypercorrection.

Keeping in mind that the following analysis undercounts hypercorrection by

excluding collective speech, the sections below address external and internal linguistic

factors constraining use of hypercorrection.

7.4.3.2 Breakdown by Class and by Student

Figures 36 and 37 indicate percentage of standard dental tokens that were hypercorrected

to retroflex for each speaker in Class 1 and 2 (unlike the retroflex figures, the scale here

only goes up to 50%). Figure 36 confirms what we had already suspected about Class 1:

both the native and non-native students are extremely standard and use very little

hypercorrection. Because token counts for dentals are relatively low (286 tokens for

Class 1, 240 for Class 2), small numbers of hypercorrect tokens can appear large on the

graph: Nicole has only two hypercorrect tokens, and Loretta has only one. Thus, in total,

the non-native students produce only three hypercorrect tokens out of 110 dental tokens;

that is extraordinarily few. As shown on the left side of the graph, the Class 1 non-native

students have multiple models for standard use of dental and retroflex among their

native-speaker classmates; this may be how they have acquired such standard use of sibilant initials.
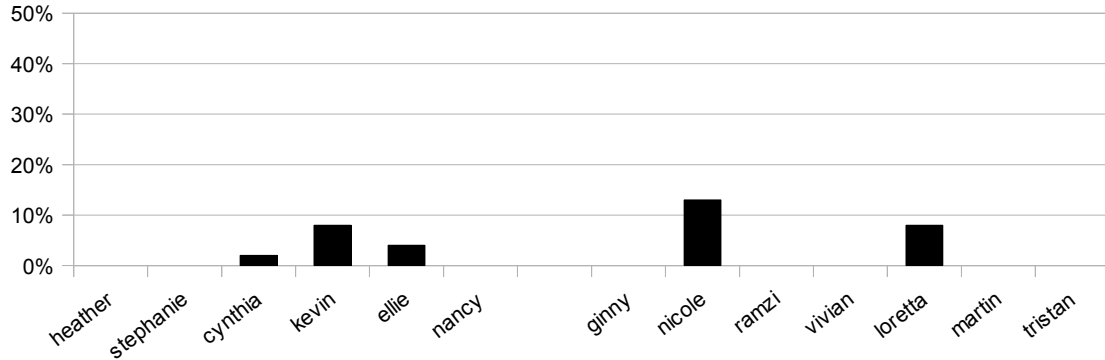
Figure 36: % hypercorrected tokens for Class 1.
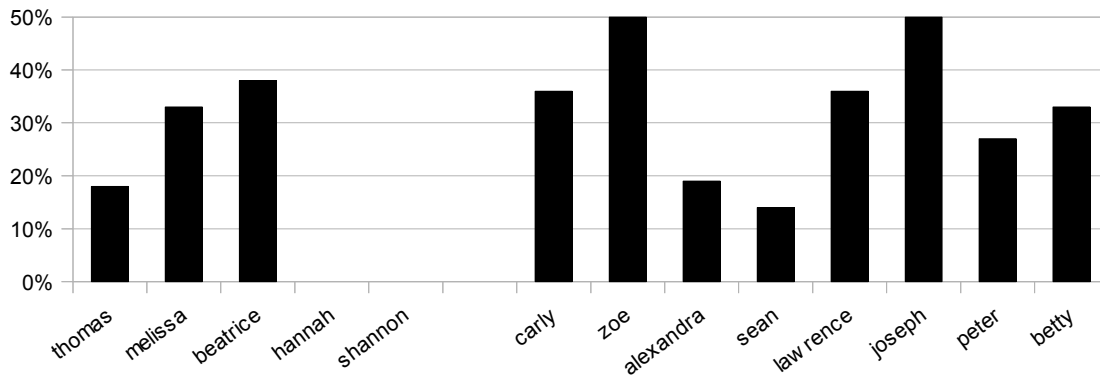
Figure 37: % hypercorrected tokens for Class 2.

Moving on to Figure 37, it would at first appear that some of the native students are engaging in hypercorrection, while others are not. This is technically true, but Hannah and Shannon, who use no hypercorrect retroflex in this figure, are the same two students who used virtually no standard retroflex in the previous analysis. In other words, these girls are using no retroflex across the board, in standard or non-standard contexts. A non-native student who was seeking data on where to use retroflex, therefore, would have eliminated these two students as a source, because their lack of hypercorrection is not particularly informative. As a result, we can say that all of the

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native-speaker students who use retroflex at all are using it variably in standard and non-standard contexts. Some of these native speakers are using hypercorrection to the extent that, in non-reading contexts, they have comparable rates of standard retroflex to non-standard retroflex. This leaves the non-native students with no reliably standard source of data on the use of sibilant initials.

It comes as no surprise, then, that every single non-native student in Class 2 engages in hypercorrection—furthermore, even the least-hypercorrecting non-native student in Class 2 engages in more hypercorrection than the most-hypercorrecting student in Class 1. These hypercorrection results provide us with strong evidence of a classmate effect: in the retroflex data of the previous analysis, it was plausible that the lower rates of standard retroflex in Class 2 non-natives were the result of a few non-conforming students, but in this case we see an effect on every non-native class member.

In spite of this dramatic difference between the classes, it should also be emphasized that the hypercorrection rates in both classes are still relatively low; students in Class 2 are still using standard retroflex more often than they are using non-standard retroflex. There is no evidence here that students are simply wildly guessing in their assignments of dental and retroflex initials, or determining their use entirely through phonological context.

7.4.3.3 Overall Hypercorrection Model

A linear mixed-effects model using student and lexical item as random effects yields the following results (in this model, positive coefficients indicate more standard use of

dental, and negatives indicate more non-standard use of hypercorrect retroflex):

Effect	Coefficient	Std Error	P
speaker (random)	N/A	N/A	N/A
character (random)	N/A	N/A	N/A
(Intercept)	0.95738	0.08304	0.00000
class (2)	-0.22208	0.04592	0.00000
reading	-0.06693	0.03323	0.0445
initial (s)	0.01026	0.11825	0.9309
initial (z)	0.04315	0.11316	0.7031
rounded	-0.59462	0.16920	0.0005
initial (s) * rounded	0.28425	0.22871	0.2145
initial (z) * rounded	0.61815	0.20808	0.0031

Table 17: Linear mixed-effects model for student dental (using lmer and pvals.fnc in R)

The main fixed effects of class, reading context, and roundedness of following vowel are significant in the model. As seen in the previous section, Class 2 members are more likely to engage in hypercorrection. Students are also more likely to hypercorrect in reading contexts (which includes related registers such as reciting and singing) versus other contexts; this is consistent with retroflex being a formal variant, and also with my observations about students' propensity to hypercorrect in collective speech contexts. Although students as a whole were not more likely to produce standard retroflex before rounded vowels, they are more likely to hypercorrect to retroflex before rounded vowels. Our previous example of *sui*, for instance, is likely to be hypercorrected to *shui* due to phonological context. The interaction of initial type and rounded following vowel indicates that this tendency to hypercorrect before rounded vowels is less strong in the case of initial (z).

According to these results, students seem to be primarily guided by stylistic and phonological contextual cues in their use of hypercorrection. The fact that students are more likely to hypercorrect in reading contexts, but teachers showed no utterance context effects, is rather interesting, given that students are the ones who are more likely to use phonetic alphabet cues when reading, which should make non-standard pronunciations less frequent. This difference does suggest that, while teachers view the standard distinction of retroflex and dental sibilants as formal, some students may view the retroflex itself as formal, even when it is a non-standard replacement for a standard dental. This is analogous to English-speakers who interpret "whom" as a more formal version of "who." That being said, clearly all students in both classes are willing to use dentals in formal reading contexts, and no student has entirely merged the sibilant initials into a single retroflex set.

One interesting factor that is not significant in these data is native versus non-native speaker. There is no overall difference between the rate of hypercorrection for students with different language backgrounds in Class 1 or Class 2. While this result is unsurprising for Class 1, in which everyone is quite standard, it is strange for Class 2, where we would expect that the non-natives would target standard dentals more successfully, just as they did with standard retroflex. This lack of difference may be a result of the two native-speakers in Class 2 who do not hypercorrect due to overall avoidance of retroflex, or the limitation of the small dental token count. On the other hand, in a situation where other members of the class frequently use non-standard dentals for standard retroflex, a speaker targeting the standard would naturally overuse

retroflex; in that sense, the truly surprising finding is that the non-native students in Class 1 have managed to avoid hypercorrection while so successfully producing standard retroflex.

7.4.4 Summary of Results

The overall model of student use of standard retroflex initials included the random effects speaker and lexical item. Students were more likely to use standard retroflex if they were non-native-speakers, if they were in Class 1, and when using initial (sh). Students in Class 2 showed an even larger distinction between native and non-native speakers. Native speakers were more likely to use standard initials in reading versus in other speech contexts. Students were more likely to use standard retroflex when (sh) and (zh) were followed by unrounded vowels, but native speakers were more likely to use standard retroflex before rounded vowels for all initials.

The model of student use of standard dental initials also included the random effects of speaker and lexical item. Students were more likely to use use hypercorrect retroflex initials in Class 2 than in Class 1, and in reading contexts. Students were more likely to hypercorrect preceding a rounded vowel, and were particularly likely to hypercorrect before a rounded vowel for initials (s) and (c).

7.5 Discussion

7.5.1 Introduction

In this analysis of retroflex and dental sibilant initials, we have seen that neither the

Chinese-language background students nor the non-Chinese-language background students are matching the language use of their teachers. Instead, the native-speaker students appear to be maintaining their own home patterns of use, while the other students are exploiting patterns in teacher and classmate speech to acquire relatively standard distributions of these initials. Due to differences in the native-speaker makeup of the two classes, non-native students in Class 1 use extremely standard initials, while the students in Class 2 are more standard than their native-speaker classmates in their use of standard retroflex, but comparable to their classmates in their use of hypercorrection. The following sections explore how these findings fit into broader patterns of student language use in the classroom.

7.5.2 Initials in Interaction

There is more happening in the student speech at Meizhang than simple dialect acquisition. In a classroom where other members use retroflex and dental initials variably, the use of standard and non-standard initials becomes not just an acquisition strategy, but a crucial communication tool. To interact successfully with others in the class, speakers and listeners must constantly make predictions and compensatory moves relating to dialect variation. As a member of the classroom community, I found that I was using hypercorrection strategies myself when trying to communicate with and understand the students. The following exchange between Alexandra (Class 2, non-Chinese-language background) and me contains several examples of how interlocutors in the classroom use retroflex and dental tokens in interaction. In this example, Alexandra

is reading a story to me involving a pond (池 *chi2*) and some bushes with thorns (刺

ci4). She then tries to ask me a clarification question about the thorns, which I mistake

for being about the pond:

(7.8)

1	Alexandra:	刺的里面 OR 刺的外面？
		ci4 de limian OR ci4 de waimian?
		Is it inside the ci4 or outside the ci4 [thorns]?

2	Rebecca:	这个？池塘？
		zheige? **chi2**tang?
		This thing? chi2tang [the pond]?

3	Alexandra:	刺的里面还是刺的外面？
		chi4 de limian hai**shi** *chi4* de waimian?
		Is it inside the chi4 or outside the chi4 [thorns]?

4	Rebecca:	里面啊，不是外面。
		limian a, bu**shi** waimian
		It's inside, not outside

| 5 | Alexandra: | NO, NOT 池 |
| | | no, not *ci2* [pond] |

6	Alexandra:	IT'S LIKE THIS, 刺，刺。
		it's like this, ci4, ci4.
		[making thorn poking gesture]

| 7 | Rebecca: | oh! |

Alexandra's first question uses standard dental initials for each instance of ci4 for thorn

(Line 1). In my reply, however, I ask her if she means the pond, using the standard

retroflex *chi2*, because I mistakenly assume that any question involving "inside" and

"outside" would be about ponds rather than thorns. Inherent in this reply is my erroneous

conclusion that Alexandra used a non-standard dental for the retroflex *chi2* (as well as an

incorrect tone). To deal with this miscommunication, Alexandra repeats her initial question, this time trying a hypercorrect retroflex initial for thorn, *chi4* (Line 3); this suggests that she thinks her first question was misunderstood because she used the wrong initial. By Line 5, Alexandra has realized that I am still talking about the pond. At this point, she adopts a third strategy to be understood, using a non-standard dental *ci2* for the retroflex *chi2* for pond. She then resorts to gestures to convey the meaning of being poked by thorns, and reverts to using the dental for *ci4* (thorn), apparently deciding that retroflex variants were getting her nowhere.

One aspect of this interaction that I find striking is Alexandra's patience in soldiering on with this muddled conversation using Chinese terms for 'pond' and 'thorn,' in spite of her knowledge that we are both native English speakers, even after abandoning the rest of her utterances to English (e.g. "it's like this"). Part of the purpose of this conversation, for Alexandra, appears to be for her to figure out how 刺 *ci4* is meant to be pronounced. My initial lack of understanding raises a warning flag for her that she might be saying something incorrectly, so she tries out an alternate pronunciation, before determining that there was nothing wrong in the first place, and going back to her original use of the dental initial. Significantly, her first guess is that our misunderstanding was caused by pronunciation factors, and only later does she realize that there has been a different sort of miscommunication. This sort of sensitivity to pronunciation variation is what allows non-native students like Alexandra to acquire a more standard variety of Mandarin than those spoken by her teacher and native-speaker classmates.

When interacting with speakers who use variably standard retroflex, students often make decisions about which initial to use based on information from their interlocutor. Example (7.9) illustrates how non-Chinese-language background students use retroflex and dental initials in interaction with TW Teacher. This is an excerpt from the "spy game" incident introduced in Chapter 4, in which students come in from recess complaining that some of the girls have been spying on them:

	(7.9)	
1	Nicole:	SHE JUST LE-- I MEAN 都-- 我要说她的但是她走了
		SHE JUST LE-- I MEAN dou-- wo yao **shuo** ta de dan**shi** ta zoule
		she just le-- I mean all-- I wanted to tell her but she left
2		是是 LIKE THIS
		shi shi LIKE THIS
		it was it was like this
3	TW Teacher:	然后她就走掉了
		ranhou ta jiu zou diao le
		so then she just left
4		那你下课的时候都没有跟她说
		na ni xia ke de *si*hou dou meiyou gen ta *suo*
		so during recess you didn't tell her at all
5		老师不是说别人做什么事情
		lao*si* bu *si suo* guo le ma dang bieren zuo **shen**me **shi**qing
		hasn't teacher told you that when other people do something
6		你不舒服的时候
		ni bu **shu**fu de *si*hou
		when you feel uncomfortable
7		你要告诉他让他知道
		ni yao gaosu ta rang ta *zi*dao
		you have to tell them and let them know

8	Nicole:	我告诉她不喜欢 SPY ON 我
		wo gao**shu** ta bu xihuan SPY ON wo
		I told her I didn't like her to spy on me

9   ON PLAYGROUND
        on the playground

10   但是她 KEEP ON DOING IT
       dan**shi** ta KEEP ON DOING IT
       but she kept on doing it

11   TW Teacher: 你有告诉她你不喜欢她在那边 SPY 你
       ni you gaosu ta ni bu xihuan ta zai neibian SPY ni
       you told her you didn't like her spying on you there

12   但是她还继续在做
       dan**si** ta hai jixu zai zuo
       but she still continued to do it

13   Nicole: 是
       shi
       yes

Linguistic negotiations are happening at several levels in this exchange. Nicole is doing her best to convey her story in Chinese, but code-switches into English quite frequently and makes several syntactic and lexical errors in Chinese. TW Teacher consistently reformulates Nicole's utterances; she is taking this opportunity to inject a language-learning element into an unplanned behavior management event. On a phonological level, Nicole is attempting using standard dental and retroflex initials even while TW Teacher is not. She is mostly successful in this effort, with one exception, the hypercorrection of *gaosu* to *gaoshu*. We can see how this hypercorrection came about: in lines 3 through 7, TW Teacher exhibits her usual pattern of mixing standard and non-standard tokens for retroflex initials: she uses *sihou* for standard *shihou*, but uses

standard *shen* in *shenme*. She also uses a standard dental initial for *su* in *gaosu*. In Nicole's response, however, she has mistaken *su* in TW Teacher's speech for a non-standard dental token, so she hypercorrects by producing retroflex *shu* (Line 8). In TW Teacher's response, she reformulates Nicole's hypercorrect *gaoshu* as the standard *gaosu*, but she also changes Nicole's standard use of *shi* in *danshi* to the non-standard dental *dansi* (Lines 11 & 12). As a result, Nicole is given no evidence that the *su* in *gaosu* is a standard dental initial. We have reason to suspect that Nicole is not very familiar with the word 告诉 *gaosu* ('to tell'), because in Line 1, she uses the non-standard structure "我要说她" *wo yao shuo ta*, literally "I wanted to say her," instead of "我要告诉她" *wo yao gaosu ta*, "I wanted to tell her." In contrast, in Line 1 Nicole is able to use a standard dental initial for a word she is familiar with, 走 *zou* ('to leave'). Because dental initials are relatively rare, students won't get as much input on standard dental pronunciation as they have access to for retroflex initials. Nicole, however, is in Class 1, and therefore is likely to hear this lexical item used with standard dental initials by her native-speaker classmates.

This sort of interaction between non-Chinese-language background students and their teachers is quite typical at Meizhang; teachers use variably standard initials, and the students do their best to use standard initials. But why are they making this effort at all? Surely it would be easier to go along with the variety being used by the teacher. We have seen this same phenomenon in the first-grade students' interactions with their English teacher, Miss Alice, where both native and non-native English-speaking students go to

great lengths to point out and avoid using British English features they notice in her speech. In both cases, students have concluded that their target variety is not the variety being used by the teacher. This is not simply a matter of students deciding to speak like their peers rather than like the adults, as Labov's original model of sociolinguistic development would suggest. In the case of Chinese class, non-native-speaker students are not approximating the speech patterns of their peers, but targeting the prescriptive standard. Something in the sociolinguistic setting has evidently led students to identify the standard as their target variety, at least in the case of retroflex and dental initials. This issue will be addressed further in the following chapter.

7.5.3 Stylistic Use of Initials

I argued in Chapter 4 that teachers were using non-standard dental initials to index expressiveness, particularly in their behavior management utterances. Among the Chinese-language background students, it seems that at least some of the students are using non-standard dental initials in a similar way. This is particularly evident in complaining events, in which students are whining or telling on other students, as in Examples (7.10), (7.11), and (7.12):

(7.10) Ellie: 一直跟他们讲
yi *zi* gen tamen jiang
we kept telling them

你要做还要对她很生气
ni yao zuo hai yao dui ta hen *sen*qi
if you do this then we'll be mad

(7.11) Nancy: 我在说那个我们想到那个东西

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wo zai *suo* neige women xiang dao neige dongxi
I was telling them the-- the stuff we had thought of

他们不听
tamen bu ting
they didn't listen

(7.12) Thomas:　　　哦，那不是对的
o, na bu *si* dui de
Oh, that one isn't right

TW Teacher:　　他还没有-- 他还没有写完
ta hai meiyou-- ta hai meiyou xie wan
He still hasn't-- he hasn't finished writing it yet

Thomas:　　　我是说[Beatrice]的！
wo *si suo* [Beatrice] de!
I'm talking about [Beatrice]'s one!

Obviously, the extent to which non-Chinese-language background students could be using dentals in a similar way is limited, because they do not use many non-standard dentals in the first place. Among the non-native students who do use them, however, they do appear to use them to emphasize emotionally-heightened statements, as in this example between bro boys Sean and Lawrence having an argument about which one of them had moved their chair over too far:

(7.13) Sean:　　你做
ni zuo
You did it

Lawrence: No, you did it

Sean:　　是，你做
shi, ni zuo
Yes, you did it

说中文！
*suo zong*wen
Speak Chinese!

You moved the chair over at me
Move it that way, not this way!

In (7.13), Sean raises his voice and shifts from using standard retroflex to non-standard dentals in his scolding of Lawrence, at the same time as he attacks Lawrence for not using Chinese in their conversation. This scolding about breaking the rules of the classroom appears to simply be a method of winning a rhetorical point against Lawrence, since Sean himself immediately shifts into using English. It is unclear here whether Sean is simply imitating the style of TW Teacher to perform scolding, hoping to borrow some of her authority when referencing classroom rules, or whether he is bypassing the reference to TW Teacher altogether and directly indexing expressiveness.

Most of the non-native-speaking students are happy to complain without using non-standard dental initials, as we have seen in the "spy game" excerpt in Example 9. Does this mean that, like the students in Swain (1985), they will be judged as having less communicative competence? Of course, there are many native speakers of Mandarin for whom non-standard use of sibilant initials is not a sociolinguistic resource in their style-shifting repertoire. The trouble is, these students are not exposed to those types of speakers; they have no way of learning how to perform casual speech in dialects with standard sibilant initials. That being said, there are many other, less-stigmatized features in Taiwanese Mandarin that students may acquire to perform different styles. The fact that students are not using one particular feature does not mean they are speaking identically regardless of speech context. Some of these other features will be discussed

in the following chapter.

7.5.4 Effects of Previous Language Experience

Given the seemingly miraculous extent to which non-native-speaking students appear to have acquired standard retroflex and dental initials, we must address an obvious question: are the non-native students simply using standard initials because they have learned them in earlier years at school? Perhaps their Kindergarten teacher used standard initials. Of course, the non-native-speaker students entered the first-grade classroom with a great deal of Chinese knowledge already in place. But even if we assume the students' language use patterns are entirely the result of a previous grade in which the teacher spoke more standardly, we still have to explain what conditions, in any grade, led to native-speaker students being happy with continuing to use non-standard language patterns, but the non-native-speaker students acquiring very standard patterns rather than the variety of their peers. Moreover, the difference in language use between Classes 1 and 2 (which did not exist in the same configuration the previous year) shows that there is an effect of first-grade classroom. The broad differences between classes in hypercorrection, in particular, suggest that the non-native-speaker students are looking to native-speaker classmates for linguistic data, and then changing their own speech based on that input.

Also, because retroflex and dental sibilant initials are distributed randomly throughout the lexicon rather than determined by a phonological rule, there is a great deal of room for change in a speaker's dialect as they acquire new words. As a result,

even if students came into the first grade with 100% standard pronunciations of the words they already knew, the linguistic environment of the first grade would necessarily shape how they pronounced any new lexical items; this holds true for both native-speaker and non-native-speaker students. My observations were that students learned a large number of new words in the first grade, and made huge advances in terms of communication skills; students who were unable to participate in class at the beginning of the year were participating confidently by the end. This was also the year in which students solidified their knowledge of the Taiwanese phonetic alphabet, and reviewed every Mandarin phone represented by the phonetic alphabet in class. For most of the students, therefore, first grade was a crucial year for linguistic and sociolinguistic development. A potential future study of how students' language use changed from the fall to the spring may shed further light on the impact of the first grade classroom environment.

7.6 Conclusion

First-grade students' use of retroflex and dental sibilant initials does not match the usage patterns of their teachers, but rather is constrained by several social, stylistic, and internal linguistic factors. Students from Chinese-language backgrounds showed idiosyncratic use of these initials, indicating that they are maintaining their individual home varieties. Students not from Chinese-language backgrounds generally acquired more standard use of sibilant initial tokens than that of their teacher or native-speaker classmates. Non-native-speaker students in Class 2, in which native-speakers used fewer

standard initials, were less standard than their Class 1 counterparts; this suggests that students acquire standard initials with the assistance of input from classmate and teacher patterns of use. Certain factors, such as the interaction of rounding and initial type for standard retroflex initials, may be strategies developed in reaction to patterns of teacher language use. Other factors, such as the effect of rounding in hypercorrection, appear to be shaped by articulatory constraints or statistical distributions of sound patterns.

These findings confirm the predictions of the previous chapters, that students make use of patterns in variable speech input and absorb metalinguistic information around them in order to target and successfully acquire a more standard language variety than the varieties to which they are exposed.

Chapter 8

Additional Language Use Patterns and Connections

8.1 Introduction

The previous chapters have presented three major analyses of how language operates in the Meizhang school. In Chapter 4, I analyzed how Chinese teachers use standard and non-standard features to perform different sorts of classroom speech. Chapters 5 and 6 explored how the social meaning of linguistic variables and ideologies about language are negotiated in corrective feedback and other metalinguistic discourse. In Chapter 7, I examined how students use Chinese in class, and how their patterns of use might be shaped by teacher speech and metalinguistic behaviors. Each of these analyses contributes to the central focus of this research, which seeks to discover what sociolinguistic knowledge children acquire in the early years of a dual-language immersion program. Students have been found to gain sociolinguistic knowledge through evidence from the language use patterns of their teachers and classmates, and from metalinguistic feedback and discussion; this knowledge is then reflected in their own patterns of language use and metalinguistic behaviors. Rather than simply imitating the speech around them, students use cues in the sociolinguistic environment to evaluate the social meaning of linguistic variables, and then exploit patterns in the linguistic input they receive to target the variety they wish to acquire.

Because the Meizhang school is a real-world fieldsite, rather than a controlled experiment, a multitude of factors interact and contribute to the sociolinguistic

knowledge of students; this knowledge then manifests in a wide array of linguistic and metalinguistic behaviors. Due to the practical necessity of defining a finite scope for this research, not all of these social factors and linguistic variables were subject to extensive quantitative analysis. The following sections briefly address the use of additional variables, and draw connections between certain related findings. These preliminary analyses reinforce previous findings, and suggest future research directions.

8.2 Use of Other Variables

8.2.1 Introduction

Throughout my analyses of teacher and student speech, I have focused on the use of retroflex and dental sibilant initials. I selected this set of variables due to their high frequency, perceptual saliency, and social significance. Though less salient and frequent than sibilant initials, there are many other dialect features being negotiated and acquired in the Chinese classrooms. I will briefly discuss my qualitative impressions of some additional dialect features below. While conducting quantitative analyses of each of these variables was beyond the scope of this project, some qualitative trends among these variables suggest an account of why certain variables are acquired while others are avoided.

8.2.2 Derhotacization of (er)

While final (er) (pronounced [ɚ]) is commonly added to lexical items in Beijing Mandarin and other Northern varieties (e.g., 歌 *ge* → *ger* ('song')) in a process known as

儿化 *erhua* ('rhotacization') (cf. Zhang 2001), only a few lexical items, in both Mainland and Taiwanese Standard Mandarin, include the (er) as a mandatory segment (e.g., 二 *er* ('two')). Because non-Mandarin dialects of Chinese do not natively include final (er), this feature is frequently not acquired by those who are native speakers of another dialect, such as Taiwanese. Thus, some speakers of Taiwanese Mandarin derhotacize (er) ([ɚ] → [ə]), resulting in a merger with final (e) (e.g., 二 *er* → *e*) (Wei 2009:261). This pronunciation feature, known as "さ、儿不分" *e, er bu fen* ('not distinguishing between e and er') is considered to be a feature typical of the Mandarin spoken by native Taiwanese dialect (i.e., Hokkien) speakers, and is stigmatized as incorrect and nonstandard (e.g., Horizons 2010).

TW Teacher made extensive use of this derhotacization feature, only using final (er) in citation forms. I did not observe any cases of students acquiring this feature. With the exception of the few students who could not produce (r)'s in English or Chinese, all students used final (er), and did not variably delete it. This may be because English has a very similar final (r) that is easily transferred to Mandarin. Alternately, it could be because final (er) is quite rare in Mandarin (ignoring regional patterns of rhotacization in Northern China), and therefore students were probably only exposed to this feature on the lexical item 二 *er,* ('two'). Given that students certainly came into the first grade already knowing the word for two, there was little opportunity or reason for them to acquire TW Teacher's derhotacization feature.

8.2.3 (-in) → (-ing)

Standard Mandarin distinguishes between two nasal codas, an alveolar /n/ (n) and

velar /ŋ/ (ng). Because these nasals pattern very differently depending upon the

preceding vowel, they are generally discussed as a complete "final" unit in Chinese

linguistics, meaning the vowel plus the coda. In Standard Mandarin, the finals (-in) [in]

and (-ing) [iŋ] are distinguished not only by their coda nasals, but also by the place and

manner of articulation of the vowel, which is further back and more nasalized preceding

the velar nasal due to coarticulatory effects (Chen 2000:60,63; Li 2008).

It is commonly observed that (-in) and (-ing) are undergoing some sort of merger

in Taiwanese Mandarin (Yang 2010). While phoneticians are divided on the precise

acoustic nature of the merger, with some arguing that (-in) is merging into (-ing) (e.g.,

Hsu & Tse 2007) and others equally convinced that it is the other way around (e.g., Tse

1992, Yang 2010), all researchers agree that this merger is extremely pervasive in

Taiwan, and that it is on the rise among young speakers (Hsu & Tse 2007, Yang 2010).[30]

As for its social significance, (-in) and (-ing) are orthographically distinct, in both pinyin

and the Taiwanese phonetic alphabet, but this distinction is not very perceptually salient,

perhaps because the final nasals are often reduced or deleted and realized only as

nasalization on the vowel, leaving very little difference between the two finals (Chen

2000). Thus, while this merger is widespread, it does not appear to be salient in public

discourse or stigmatized, either in Taiwan or elsewhere (Li 2004). This lack of

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30 One possible account for these conflicting findings, in light of the different pools of speakers used in
   these studies, is that two distinct phenomena are occurring in Taiwan: in Taipei, (-in) is merging to (-
   ing), while elsewhere, coda (ng) is fronting to (n). This would further suggest that the pronunciation of
   standard (-in) as (-ing) carries some prestige in Taiwan, due to its association with Taipei.

stigmatization may result from the merger being particularly common in Taipei, the capital city, and therefore becoming associated with the prestige of this urban center (Yang 2010:51).

TW Teacher used the (-in)-(-ing) merger categorically, except when producing lexical items in citation form. This merger was never discussed in class, as the retroflex-dental sibilant initial merger was, nor were these sounds presented as difficult or easily confusable. This complete lack of metalinguistic commentary belies the fact that students did, in my observation, find these sounds to be highly confusable; students had a hard time distinguishing between lexical items that standardly end in (-in) versus (-ing). In a lesson on the character 英 *ying* ('hero, England'), for example, first-grade students in both classes suggested that 英 *ying* was a component in the words 音乐 *yinyue* ('music'), 因为 *yinwei* ('because'), and 发音 *fayin* ('pronunciation'); in other words, they were unaware that 英 *ying* was distinct from *yin*. In response to this incident, TW Teacher, clearly alarmed by this situation, asked the students whether they thought that *yinyue* was pronounced starting with *ying* or *yin*: all of the students responded that it started with *ying*.

Students' acquisition of the (-in)-(-ing) merger is significant, because it suggests that they are not simply rejecting features based on evidence from orthography. It also indicates that students are more likely to acquire features that are used categorically by the teacher, because they have no significant source of input in which the feature is not used.

8.2.4 (-eng) → (-en)

Another vowel that can precede the two nasal codas is (e) [ə], resulting in (-en) [ən] and

(-eng) [əŋ], with the vowel in (-eng) much further back due to coarticulatory effects

(Chen 2000:64). In this case, all phoneticians agree that a widespread merger occurs in

Taiwan, in the direction of (-eng) to (-en) (Yang 2010:45, Hsu & Tse 2007). This merger

also occurs in certain other non-standard Mandarin varieties (Hsu & Tse 2007). While

the (-eng)-(-en) merger is more perceptually salient than the (-in)-(-ing) merger, due to

the larger vowel difference in (e) vs. in (i), Li (2004) argues that this merger is not very

stigmatized, pointing to the fact that it can be heard in pop songs. Some scholars have

proposed that this merger is restricted to more rural, heavily-Taiwanese dialect

influenced varieties of Taiwanese Mandarin; Hsu & Tse (2007), however, found it to be

widespread among natives of Taipei, regardless of ethnic and linguistic background, and

to be stable in regard to apparent-time age differences.

All three of the teachers used the (-eng)-(-en) merger variably, but particularly

with certain lexical items, including 朋友 *pengyou* ('friend') → *penyou*, and 生气

shengqi ('angry') → *shenqi*. These variants were also commonly used by the native-

speaker students. I observed that some non-native-speaker students had acquired (-en)

for these two words, but did not merge (-eng) and (-en) more generally. It may be that

the greater perceptual salience of (-eng) versus (-en) prevented this merger from

expanding beyond idiosyncratic pronunciations of a few lexical items.

8.2.5 (-eng) → (-ong) following labial initials

In Standard Mandarin, the final (-ong) [ʊŋ] does not appear following labial consonants.

However, when (-eng) [əŋ] appears following a labial consonant in Taiwanese Mandarin (and particularly after (f) and (w)), as a result of coarticulatory effects from a preceding labial, the (e) vowel can become rounded, resulting in (-ong) [ʊŋ]. This rounded pronunciation appears to block the broader (-eng) → (-en) merger discussed in the previous section (Yang 2010:45).

While Standard Mandarin does call for an unrounded vowel following labials, this rounded variant has a "quasi-standard" status, in the sense that the rounded 'o' variant is reflected in certain prescriptive norms in Taiwan. For instance, while 风 *feng* ('wind') is written in with an 'e' in pinyin and Wade-Giles (the romanization system used traditionally in Taiwan), in Tongyong pinyin (an alternate system also used in Taiwan that was introduced in the 1990's) it is written as 'fong.' In the Taiwanese phonetic alphabet *zhuyin fuhao* transcription, ㄈㄥ, the vowel is not specified, leaving the system somewhat agnostic, although it is written distinctly from 'fong,' which would be ㄈㄨㄥ. The fact that Tongyong pinyin, which was designed by linguists to more closely reflect Taiwanese Mandarin pronunciation, uses 'ong' rather than 'eng' in these contexts was pointed to as a reason to preserve the use of Tongyong in recent debates in Taiwan over the adoption of new pinyin standards (Zhongwenwang 2009). This evidence suggests that (-eng) → (-ong) is not stigmatized in Taiwan, but is seen as an alternate, acceptable pronunciation, and, moreover, the pronunciation typical of Taiwan. The

presence of different romanization systems using constrasting orthographies reflecting each variant, and the recent debate over the merits of these systems, would both contribute to making this a salient feature of Taiwanese Mandarin.

The (-eng) → (-ong) feature, in fact, is one of the few explicitly discussed by TW Teacher in class. When introducing the character 风 *feng* ('wind'), she explained that some people pronounce this word as 'feng' and other people pronounce it 'fong.' While her metalinguistic discussion implied that either use was okay, TW Teacher noticeably altered her normal 'fong' pronunciation to 'feng' when giving the citation form of this word, sending the message that 'feng' was the more standard of the two variants. TW Teacher used the (-ong) variant exclusively, other than in citation contexts as described above.

As was the case for (-in)-(-ing), students appeared to have acquired this feature. Unlike the previous features discussed in this section, (-eng) → (-ong) following labials is not a merger, because (-ong) does not occur in a post-labial context in standard Mandarin. There is, then, no linguistic reason to preserve (-eng) following labials, from an information theoretic perspective. Because there is no conflicting (-ong) set of syllables, and because TW Teacher almost exclusively used (-ong) rather than (-eng), there was little barrier to the students acquiring the (-ong) variant.

8.2.6 (w) → (v) before unrounded vowels

This Northern Mainland feature, used variably by NE Teacher, was introduced in Chapter 5. As discussed in that chapter, speakers who use this variant replace initial /w/

with a /v/ before unrounded vowels. According to native speakers from Mainland China, and my own impression, the use of /v/ before unrounded vowels is increasingly prevalent in Chinese media, and appears to be spreading throughout the country as a prestigious alternate pronunciation. This variant is never heard in Taiwan, however.

Given the disdain and explicit rejection this feature encountered from the second-grade students at Meizhang, it will come as no surprise that none of the students acquired it. The acquisition of this feature may have also been made less likely due to its unusual phonetic features (standard Mandarin has no other voiced initials) and overall perceptual salience.

8.2.7 Discussion of Other Variables

Several factors appear to predict student acquisition of non-standard features. The most important factor is exposure to alternate forms: if students almost never hear the standard variant, as in (-eng)-(-ong) merger, they are unlikely to acquire it. Another factor is perceptual saliency, as in (-in)-(-ing) merger. Finally, degree of stigmatization in the Meizhang community: students will avoid features which they observe being rejected by others. In the case of the first graders, TW Teacher told them that (-ong) was an acceptable alternate pronunciation of (-eng), but warned them not to "confuse" dental and retroflex initials. In the second grade, students observed (w) → (v) being loudly rejected by classmates, and these corrections being subsequently accepted by their teacher.

One factor that did not seem to influence acquisition of these features was their

relationship to English. The (-in)-(-ing) distinction in Mandarin is analogous to the 'seen'/'sing' distinction in English, but this did not cause students to avoid the merger. Similarly, although (-eng) is more similar to English (it is equivalent to the rime in 'lung') than (-ong), this was not a barrier to the acquisition of (-ong).

This analysis of student acquisition of other variables is preliminary and qualitative, but it does support the view that students take into account their knowledge of sociolinguistic meaning when targeting particular variants for acquisition. The fact that students are acquiring certain non-standard features also suggests that they will have a wider range of linguistic resources with which to mark style-shifting and perform other sociolinguistic tasks than was initially evident from the analysis of the dental-retroflex merger. Rather than lamenting students' inability to acquire a dialect that is 100% standard, this finding seems like a victory for the dual-language immersion model, which is producing students with some of the features of native Mandarin speakers in their local community.

8.3 Student Language Use in English

A complete analysis of student language use on the English side of the program was beyond the scope of the present project. I will make some brief observations here about the English situation, and how it fits into the larger analysis.

Both the first- and second-grade classes contained a minority of students with parents who were native speakers of American English; many of the students who did not speak Chinese at home spoke a third language, or had parents who spoke non-

American varieties of English. In spite of this, and the fact that their English teachers did not speak American English, most of the students were quite successful in acquiring American English features. Certain features, however, lagged behind: several students had yet to acquire t-flapping, /æ/-raising before nasals, and a few other phonetic features that are not found in non-American varieties. In particular, many of the Chinese-language-background students who extensively used non-standard retroflex initials in Chinese did not raise /æ/ before nasals in English. This could be because most of these students were in Class 2 and formed a friendship group, thus reinforcing each other's English speech norms. It could also be the case that these students could not pick up on, or did not want to acquire, classmate speech norms in both English and Chinese.

In contrast to the non-standard group, the Chinese-background students who used standard initials, in Class 1, had acquired a native-like level of American English. In the previous chapter, we had assumed that these students simply came from a home dialect background in which standard initials were used; in fact, based on my informal observations of their parents' speech, this was not entirely the case. A different possible account for these students' language patterns is that they have used their superior sociolinguistic abilities to target and acquire standard initials in Mandarin, and standard features in American English. Among the non-Chinese-language background students, there is a similar subgroup of students (Ramzi, Alexandra, and Betty) who have acquired standard American English features without access to this variety at home, and have also managed to acquire standard sibilant initials in Mandarin.

These trends suggest that individual differences in linguistic sensitivity may play

a role in patterns of student language use in both Chinese and English. This connection leads us to wonder whether we might see a link between students' corrective behavior and their language use; this will be addressed in the following section.

8.4 Corrective Behavior and Student Language Use

In Chapter 5, I suggested that students with a high level of linguistic skill initiated the most corrections. It makes sense that students with the ability to notice linguistic differences, and the initiative to comment on them in the form of corrections, would also notice that certain features used by their classmates and teachers were considered non-standard. These same students, given their interest in prescriptive norms demonstrated via corrections, would seem likely to target those features which they consider to be standard. Figure 38 breaks down the first grade into high-correctors (11 students), who initiated at least four corrections, and low-correctors (15 students):
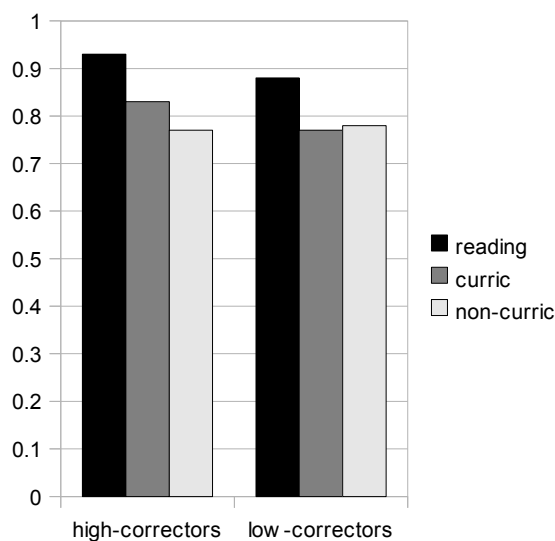

Figure 38: Student language use by utterance context, high-correctors vs. low-correctors.

Controlling for language background (since we know that native speakers are more likely to use non-standard initials), there is a small but statistically significant difference between high- and low-correctors, such that high-correctors are slightly more standard ($F = 4.99$, df $= 1$, $p = .02562$).

This result provides additional evidence that students who are likely to engage in corrective behavior are particularly sensitive to social meaning in language. This effect is small, perhaps because, as observed in the chapter on corrections, students at the very top of the social ladder were also linguistically skilled, but knew better than to initiate high levels of corrections. The "low-corrector" group, then, includes both those students at the top and bottom of the social scene, with varying levels of linguistic ability.

8.5 Conclusion

The sections above have touched on how the results of this research connect with a wider range of Chinese variables, with English language use patterns, and with the previous analysis of corrective behavior. The discussion of Chinese variables found that students' acquisition of non-standard variants was influenced by availability, perceptibility, and social meaning. The following two sections concluded that individual differences in sociolinguistic sensitivity may lead to broad differences in language use and metalinguistic behavior. These brief discussions point toward possible directions of future analyses of the Meizhang data, and data collected from other similar settings, which will be discussed in the following chapter.

Chapter 9

Summary and Conclusion

9.1 Summary of Key Findings

This research has drawn upon qualitative and quantitative methodologies to examine linguistic and metalinguistic practices in the Meizhang dual-language immersion program. The most relevant findings of the multiple analyses discussed in previous chapters are summarized below.

The speech patterns of three Chinese teachers from Taiwan and Northeastern Mainland China (the first and second grade primary teachers, and the music teacher) were analyzed with respect to the use of standard retroflex and standard dental initials. This analysis revealed that, although the speech of teachers from different regions is constrained by different linguistic factors, all three teachers follow a common pattern of variation by both event type and utterance context. Specifically, teachers used more standard retroflex in teaching events than in non-teaching events, and progressively less standard retroflex in reading, instructional speech, non-instructional speech, and behavior management. Teachers' use of hypercorrect retroflex initials, which was less frequent than their use of non-standard dental initials, was conditioned by linguistic rather than stylistic factors. The stylistic variation present in teachers' use of standard and non-standard retroflex initials reflects the social meaning of these variants, and demonstrates that teachers draw upon these social meanings to construct personae appropriate to different classroom situations. Students could make use of these patterns to target more standard pronunciations, and to acquire an understanding of the social

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meaning of standard and non-standard sibilant initials.

In the analysis of corrective feedback, other-directed correction was found to be widespread at Meizhang; all teachers and most students initiated corrections, and corrections were directed at both students and teachers. Patterns in corrective feedback indicated that the social meanings of variants influenced how their use was challenged. Students and teachers preferred to target "fixable" features, such as non-native tone errors, and avoided explicitly targeting features which were perceived to be beyond the speaker's control, such as non-adultlike pronunciations, or features that were privileged, such as features of Taiwanese Mandarin. Students did not model their corrective behavior exactly on their teachers' patterns, but showed teacher influence in their strategies for framing and responding to corrections. In their negotiations of corrections, Chinese teachers framed Mandarin as having a single standard, while English teachers presented different dialects as equally valid. Accordingly, students adopted more explicit correction frames for Mandarin and more indirect frames for English over the course of the year. These findings illustrate how language ideologies are transmitted in an early elementary school setting.

An examination of other metalinguistic discourse at Meizhang showed that students' explicit sociolinguistic knowledge was more limited than their implicit knowledge. While students understood how languages and dialects were acquired, they had trouble correctly identifying specific dialect features. Students explicitly associated the Chinese language with Chinese ethnicity, and a few non-Chinese students expressed insecurity about their ability to learn Chinese, showing influence from ideologies about

Chinese most likely acquired outside of school. Students were able to produce elaborate narratives accounting for their individual and family language backgrounds, locating themselves within the spectrum of linguistic experience in the classroom community.

The analysis of student speech focused on first-graders' use of Chinese. As predicted, non-Chinese-language-background students avoided acquiring the non-standard dental-retroflex merger, and used more standard retroflex than the teacher and their native-speaker classmates. Chinese-language-background students exhibited idiosyncratic patterns of initial use, indicating that their speech was primarily shaped by home dialect. A significant difference in the native-speaker makeup of the two first-grade classes resulted in corresponding differences in non-native-speaker student use of retroflex and hypercorrection; this finding demonstrates that classmate speech serves as a significant source of linguistic input for students still acquiring the language. Utterance context proved to be a significant predictor of retroflex use for native speakers, and was a significant predictor of hypercorrection for all speakers. Student use of retroflex and dental initials was significantly constrained by several linguistic factors. Some of these patterns appeared to be strategies for interpreting teacher speech, while others were shaped by articulatory effects. Overall, these findings confirmed the hypothesis that students make use of sociolinguistic knowledge gained from the linguistic and metalinguistic patterns they observe at Meizhang.

Several additional Mandarin variables were briefly analyzed in the preceding chapter, including the merger of (-in) and (-ing), the merger of (-eng) to (-en), the shift of (-eng) to (-ong) following labial consonants, and the shift of (w) to (v) preceding

unrounded vowels. While students learning Mandarin at Meizhang largely avoided the acquisition of non-standard sibilant initials, it was found that they did acquire certain non-standard variants: specifically, the merger of (-in) and (-ing), (-eng) to (-ong) following labials, and, to a limited extent, the merger of (-eng) to (-en). Acquisition of non-standard variants was found to be predicted by the availability, perceptibility, and social meaning of those variants.

The preceding chapter also examined preliminary evidence of a link among the Meizhang students between acquisition of standard Mandarin features and the

acquisition of certain American English features, including /æ/-raising before nasals and t-flapping, reflecting a single set of skills underlying the targeting and acquisition of certain features in the presence of variation. A similar correlation was found between students who acquired more standard Mandarin features and engaged in high levels of other-directed correction. This link between linguistic and metalinguistic phenomena supports the notion that a common skill-set accounts for both behaviors.

9.2 Future Directions

This study is the first quantitative analysis of sociolinguistic variation in a dual-language immersion environment. It also may be the first quantitative analysis of phonological variation in teacher speech. It is my hope that these findings can be extended via further analysis in both of these areas. While the present study focused exclusively on dual-language immersion, I would expect the same patterns to hold in a different language-learning setting, such as a heritage language weekend school, and for languages other

than Mandarin Chinese.

Spanish, in particular, seems to be an ideal language in which to examine these sorts of dialect variation phenomena. Like the Portuguese situation addressed in Rubinstein-Avila (2002), Spanish is in the sociolinguistically interesting situation of having no single internationally-recognized standard, with standards split between the historically prestigious Castilian Spanish, based in Europe, and Latin American Spanish, which boasts the majority of speakers. Moreover, although the notion of a neutral Latin American Spanish exists, in reality this standard is further broken down into Mexican Spanish and several other varieties, to account for the wide range of variation present in different Latin American countries (Cotton & Sharp 1988:145). In schools across the United States, where standard Mexican Spanish is generally loosely targeted, cross-dialect issues are a frequent phenomenon. Countless students each year experience the disorientation of getting a new Spanish teacher with an entirely different dialect from the teacher they had the previous year. American students studying abroad in Spain must decide whether to adopt the interdental fricative of Castilian Spanish, or maintain their Mexican Spanish pronunciation. Spanish teachers must negotiate with their coworkers and students which varieties are acceptable, and which will be promoted in the classroom. Extending the present study to Spanish classrooms would no doubt be of considerable practical value to the hundreds of Spanish-English dual-language immersion programs, as well as to the far larger number of conventional Spanish language classes.

Chinese heritage language weekend schools, still far more prevalent than full-day

language immersion programs, are also deserving of study with respect to questions about dialect variation. Weekend schools meet for a few hours once per week, often with separate classes for native and non-native speakers. Teachers in these schools are usually volunteers who lack formal training, and frequently speak non-standard dialects. What crucially distinguishes the weekend school environment from the full-day immersion environment, aside from classroom hours, is student interest and involvement; students in weekend schools are often not enthusiastic classroom participants. This lack of interest, combined with low levels of teacher input due to limited classroom hours, might result in students not targeting standard Mandarin features. A study comparing the sociolinguistic outcomes of weekend school versus full-day immersion would increase our understanding of what sorts of factors can influence the acquisition of sociolinguistic knowledge.

This project also demonstrates the need for further work on the speech of teachers in the classroom, beyond the limited scope of interaction studies. The findings of the teacher analysis show that the assumption that teachers uniformly use standard language in class is unsupported. Instead of simply propagating the notion of teachers as speakers and defenders of the prescriptive standard, researchers should be looking at teachers as speakers who make use of linguistic resources to perform various classroom tasks. When we acknowledge that teachers are human users of language, we gain a better understanding of how prescriptive linguistic norms are promoted and targeted in schools, and what sociolinguistic messages students are absorbing in class.

Finally, further research on the topic of student acquisition of sociolinguistic

knowledge could be pursued using additional methodologies, including production and perception experiments. Following Andersen (1990), students could be asked to role-play as a teacher, to investigate whether students associate particular linguistic variables with teaching. Based on my observation of students at Meizhang, early elementary-aged students do make use of the language variety of their teacher when role-playing. Students in the first grade, for example, would use a British accent when pretending to be an English teacher, modeling Miss Alice. What would be particularly interesting to test is whether students with teachers who vary in their use of standard features model their teachers by simply speaking like their teachers do, using a mix of standard and non-standard variants, or by drawing on the sociolinguistic meaning of variants, and using standard features to perform the role of the teacher. The findings of the present research suggest that students would choose the latter option, and use standard features to portray a teacher, even though this would not match the actual language use of their teachers. Crucially, however, this prediction holds only for instruction; when asked to play a teacher scolding students, we would predict that students would draw on non-standard features to perform a disciplinarian persona. Such a finding would reinforce the notion that students are able to acquire and apply sociolinguistic knowledge relating to the significance of standard and non-standard features, based on input they receive in a school environment.

In the realm of perception experiments, it would be informative to test whether students can consistently associate particular varieties (or variants) with the speakers they know who use those varieties. In other words, although they might not be able to

identify a Northeastern Mainland accent by name, they might be able to identify that speaker as sounding similar to NE Teacher. This sort of study could illustrate the process by which children learn to associate linguistic features with speakers, and then social groups, and, ultimately, social meaning. Employing experimental methodologies in the study of the acquisition of sociolinguistic knowledge would complement and enhance the findings of existing ethnographic research through more precise quantitative assessment performed in a controlled setting.

9.3 Conclusion

In the Mandarin-English dual-language immersion program at Meizhang, teachers and students with various language backgrounds transmit, acquire, and negotiate the sociolinguistic meaning of variables and language varieties via linguistic and metalinguistic practices. Teachers exploit the social meaning of standard and non-standard variants to construct styles appropriate to different classroom tasks, while students make use of the sociolinguistic knowledge they have gained in school interactions by avoiding certain features while targeting others. The rules governing metalinguistic discourse in the school are informed by perceived speaker agency and the sociolinguistic status of given linguistic features, and by ideologies regarding variation in English and Chinese. This research demonstrates that students in the early years of elementary school are able to acquire broad communicative competence in a second language from a relatively limited school setting.

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