

Interjections in Taiwan Mandarin

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Conventions

When presenting examples, I use the Hànyǔ Pīnyīn transcription system for the first line. This has been the official transcription system for Mandarin in the Latin alphabet in China since 1958. Nowadays, Pinyin is the most frequently used romanisation system for Mandarin internationally.

For interjections, I have designed additional conventions in the first line, because interjections often contain sounds that have no common representation in Pinyin. These additional conventions, along with their corresponding glosses and meanings that form the second and third lines, are in the list below. In order to make these additional conventions recognisable as interjections, I have opted for the closest possible approximation in canonical Pinyin, and added a final <h> for easy recognition.

Glosses in examples follow the Leipzig Glossing Rules (2008). In the glosses, interjections are transcribed with a semantic label, preceded by a single-letter prefix indicating a semantic category in accordance with the analysis presented here. The category letters are s- for structuring, B- for backchannel, E- for exclamatory, and o- for bonding. When categories overlap, there will be two category letters.

When I describe pronunciations of interjections in the text, I will use the International Phonetic Alphabet. This is a system of phonetic notation. Every different sound corresponds to a different symbol in this alphabet. This alphabet was last updated in 2005. I will use the version of 2005 in this thesis.

Gloss	Pinyin	Meaning	Gloss	Pinyin	Meaning
1	wǒ	first person	B-ATB	ʒɿ	backchannel interjection: 'yes'
2	nǐ	second person	B-CFM	heih	backchannel interjection: 'yes'
3	tā	third person	B-COR	duih ah	backchannel interjection: agreement
-		slip of the tongue	BE-CPR	oh	backchannel/exclamatory interjection: comprehension and surprise
--		interruption by other speaker			
[...]		incomprehensible	BE-CPS	ah	backchannel/exclamatory interjection: comprehension and surprise
B-AFF	ah	backchannel interjection: affirmation			
B-AGE	eih	backchannel interjection: agreement	BE-CMS	oh jjuh	backchannel/exclamatory interjection: comprehension and surprise
B-AGH	duih mah hoh	backchannel interjection: agreement			
B-AGL	mmmh	backchannel interjection: strong agreement	BE-OKY	okeih okeih	backchannel/exclamatory interjection: agreement and comprehension
B-AGM	mh	backchannel interjection: agreement	BE-ORT	oh shih ah	backchannel/exclamatory interjection: 'oh alright'
B-AGR	enh	backchannel interjection: agreement			
B-AGT	duih	backchannel interjection: agreement	BE-SPR	okeih wah	backchannel/exclamatory interjection: comprehension and strong surprise
B-AST	duih duih duih	backchannel interjection: strong agreement			
B-AMR	mh mh	backchannel interjection: strong agreement	BE-TOK	th oh	backchannel/exclamatory interjection: agreement and comprehension

Gloss	Pinyin	Meaning	Gloss	Pinyin	Meaning
B-LAG	ah ah	backchannel interjection: agreement	S-AGT	duih	structuring interjection: confirming own story
B-OOR	okeih okeih haoh	backchannel interjection: 'okay okay alright'	S-COR	duih ah	structuring interjection: confirming own story
BO-YES	heih hahah	backchannel/bonding interjection: saying 'yes' while laughing	S-FIN	zheyangh	structuring interjection: finishing an explanation
B-RAR	hah hah hah haoh	backchannel interjection: 'alright'	SG		singular
B-RRT	haoh	backchannel interjection: 'alright'	S-GLR	ngrh	structuring interjection: a glottal rattle
B-YSR	eeh	backchannel interjection: 'yes'	S-ILT	jiuh shih zheyangh	structuring interjection: 'it's like that'
COL	men	collective	S-IOW	jiùh shih shuoh	structuring interjection: 'in other words'
E-CLK	th	exclamatory interjection: an alveolar plosive click sound	S-ITC	nàh	structuring interjection: continue talking within a subject.
E-CNF	mh	exclamatory interjection: 'huh?'	S-ITW	nàmeh	structuring interjection: 'in that way'
E-CUR	eih	exclamatory interjection: curiosity	S-JST	jiùh	structuring interjection: 'just'
ENT	a	particle that expresses enthusiasm	S-JUL	jiùh shih	structuring interjection: 'just like'
E-EXI	wah	exclamatory interjection: excitement	S-NPS	nth	structuring interjection: a smacking sound, but not plosive
E-PSU	ph ph ph ph ph	exclamatory interjection: positive surprise	S-SLP	lh	structuring interjection: a slurping sound
E-RLY	oh zhenh deh	exclamatory interjection: 'oh really'	S-TCL	mrmh	structuring interjection: a throat-clearing sound
E-SPR	ah	exclamatory interjection: surprise	S-THK	zhèigeh	structuring interjection: speaker is thinking
E-SRP	oh	exclamatory interjection: surprise	S-THN	náhòuh	structuring interjection: move on with a subject
E-SRR	eih oh	exclamatory interjection: strong surprise	S-THP	náhòuh neh	structuring interjection: move on with a subject
E-SUR	hh	exclamatory interjection: strong surprise	S-TKG	nèigeh	structuring interjection: speaker is thinking
E-WHT	eh	exclamatory interjection: 'huh?'	S-TIS	nàh jiùh shih	structuring interjections: 'in other words'
E-WOW	tianh ah	exclamatory interjection: 'oh my god'	SUB	de	subordination particle
OBV	ma	modal particle indicating that something is obvious	S-UHH	eh	structuring interjection: speaker is thinking
O-LGH	hahah	bonding interjection: a laughing sound	S-YES	heih	structuring interjection: 'yes'
p.c.		personal communication			
PRF	le	perfectivity particle			
S-ACT	qíshih	structuring interjection: 'actually'			

Preface

As a graduate in China Studies, I wanted to write my linguistics master thesis about Mandarin. In order to find a suitable topic for my master thesis, I started listening to different kinds of Chinese conversations and interviews, looking for an interesting feature to write about, and soon stumbled upon a frequently used, but often neglected part of language: interjections.

Words like *sorry*, *hello*, *huh*, *uh*, and *okay* are examples of English interjections. Their characteristics can be very different from each other, which makes interjections very diverse as a group. In Mandarin, like any other language I know of, interjections occur extremely frequently in spontaneous speech. For instance, consider example (1) below, which occurred as part of a political interview.

(1) Lǐ Hóngyuán (2015: 5:00)

A: Tā céngjīng eh yé biǎodá le yì xiē lh zhèigeh duì zhèi
3 ever S-UHH also express PRF one some S-SLP S-THK be.directed.at this

běn shū de zhèigeh zhèigeh kànfa lái--
volum book SUB S-THK S-THK viewpoint come
e

'He also uh expressed some of these, these opinions on this book, to--'

B: Mh.

B-AGM

'Mhm.'

Interjections in this example are *eh* 'uh', *lh*, *zhèigeh* 'uh', and *m* 'mhm'.

When I started focusing on interjections, I suddenly heard them everywhere. In grammars, they are often overlooked and although a few linguists have described interjections, interjections are often placed at the very end of language descriptions. This surprised me, as interjections are a very common part of language. Therefore I decided to look into interjections myself: what exactly are interjections, and what interjections are used in Taiwan Mandarin? I chose to look into Taiwan Mandarin for two reasons. The first reason is that not much has been written about Taiwan Mandarin yet. The second reason is that I studied in the city of Taipei in Taiwan for a year with a scholarship. This was part of my Bachelor in China Studies at Leiden University. Living in Taiwan for a year sparked my special interest in Taiwan Mandarin.

This thesis is structured as follows. Firstly, I will discuss the differences between Chinese, Mandarin, and Taiwan Mandarin. After that, I will discuss my research question and methodology, followed by a discussion of my data. Then, I will talk about what interjections are, how linguists have dealt with them, and present the results of my own investigation. Finally, I will look into the influence of the microphone on the interjections used by the speakers in my data. This means I will compare the interjections they use when they think the microphone is on and they are being investigated, and the interjections they use when they think they are off the record. I will end this paper with my conclusion.

§ 1 Language background

1.1 Mandarin, a Sinitic language

First of all, I want to explain what I am talking about when I use the terms Mandarin and Chinese. When Chinese languages are mentioned, this usually refers to what linguists call the Sinitic languages. The seven Sinitic languages are Wú, Gàn, Xiāng, Mǐn, Hakka, Yuè and Mandarin. These languages are sometimes referred to as *dialects* of Chinese, but they are so different from each other that they are not mutually intelligible. For this reason, I prefer to call them *languages*. Within these seven languages, there are many dialects that are very different from each other as well. For example, some Mǐn dialects differ so much from each other that they are mutually intelligible. These dialects could also be regarded as languages.

Mandarin is the official standard language in China and Taiwan. This Sinitic language became a very prestigious language during the Ming dynasty (1368 – 1644 AD) when it was spoken among educated people and high officials in court (Coblin 2010: 537). High officials all over the empire spoke Mandarin with each other. This situation remained during the Ming and Qing Dynasty (1644 - 1911). It slowly developed to become the standard language in China in 1932 (Wiedenhof 2015: 4). Officially, the standard grammar is based on the Mandarin variant spoken in Northern China. However, there are many regional varieties. The Mandarin variants can be divided in four large groups: Northern Mandarin, North-Western Mandarin, Southern Mandarin, and South-Western Mandarin. Even though languages in these regions are all called Mandarin, their differences can be surprisingly large.

Interjections that are used in a particular region will not necessarily also be used in another. I decided to investigate interjections in the Mandarin variant spoken in Taiwan. This particular variant of Mandarin is quite different from the Mandarin variants spoken in Mainland China. I will explain why in the next section.

1.2 Language diversity in Taiwan

There is not just one variant of Taiwan Mandarin. Speakers differ greatly among each other. Because speakers from Taiwan have very different language backgrounds, they all talk in different ways. When interpreting the data I collected, it has to be taken into account that some interjections might be more common in one place than another.

The indigenous languages of Taiwan are Austronesian languages. In the Ming dynasty, people from southern China started migrating to Taiwan, bringing along their own languages. Most migrating people spoke variants of Mǐn, some of them spoke Hakka. Mǐn languages rapidly became the most frequently spoken languages in Taiwan in the Ming dynasty.

At the end of the 19th century, Mainland China ceded Taiwan to Japan. As a result, the Mǐn speakers in Taiwan became isolated from the Mǐn speakers in China, and Japanese became the official language in Taiwan.

In 1945, the Kuomintang took over power in Taiwan. Taiwan became part of the Republic of China, and Mandarin became the new official language. In 1949, the Communist Party of China took over power in Mainland China and proclaimed the People's Republic of China. The losing party, the Kuomintang, retreated to Taiwan. Millions of Mandarin-speaking immigrants came to Taiwan. As a result, Mandarin became a very important medium of communication (Klötter 2006: 209).

From the early 1950s to the late 1980s, the Taiwanese government severely restricted the use of local languages in public settings. Because of this, Mandarin rapidly became the dominating language. After 1987, the oppression policy was reversed, and language diversity was promoted. Currently, Mandarin is still the official language, but many people speak other languages besides Mandarin. About seventy percent of the people in Taiwan speak varieties of Mǐn. These varieties are known under various collective terms, e.g. Taiwanese, Taiwanese Mǐn, Taiwanese Hokkien, and Táyü. About twelve percent of the people speak Hakka. In addition, twelve indigenous languages from the Austronesian language family are spoken on Taiwan by about two percent of the population (Klötter 2006: 207-211).

From 1949 until 1987, Taiwan was under martial law. This meant that the government was ruled by the military. The executive, legislative and judicial branches of the government had no power anymore. Both the Kuomintang in Taiwan and the Communist Party in Mainland China claimed sovereignty over China. Martial law in Taiwan was aimed at suppressing Communist activities. Mainland China and Taiwan were isolated from each other during this period. Additionally, the Mandarin variant spoken in Taiwan was influenced a lot by the other languages spoken on the island, and by languages the Kuomintang brought along. The isolation and influences of other languages like Mǐn caused Taiwan Mandarin to develop differently from Mainland Mandarin.

1.3 Tones and prosody

Mandarin is a tone language. This means that every syllable has a tone, and tones co-determine the meaning of a word: a change of tone usually involves a change of meaning. In this thesis, I will describe both tones and pitch with IPA symbols for pitch contours. The height of the horizontal line corresponds with the relative height of the tone. For example, ˥ is a high tone, and ˩ is a low tone. If the tone changes height, the left side of the horizontal line corresponds with the starting level of the tone, and the right side corresponds with the ending level of the tone. For example, the tone ˥ start mid, then rises to high.

Mandarin has five tones. The first tone is a long high level tone, for example *tang˥* 'soup'. The second tone is a short high rising tone, for example *tang˥˨* 'hall'. The third tone is a long low dipping

tone, for example *tang*˥ ‘drip’. The fourth tone is a short high falling tone, for example *tang*˥˩ ‘hot’. Some words have a neutral tone. The neutral tone is short, has a low volume, and its pitch is determined by preceding tones and intonation.

Aside from tone, there is also prosody. Prosody and tone do not rule each other out. Every language has prosody. Therefore, a tone language like Mandarin has both prosody and tone. Prosody consists of tempo, volume and intonation. Tempo is the speed of speech. If the speech rate is slower, then the syllables become longer. Volume is the loudness of speech. Intonation is the pattern of pitch movements across a stretch of speech (Language Files 2007: 65-66). Prosody can occur on a single vowel, but also on bigger units of speech such as sentences. For example, a rising intonation at the end of an utterance tends to make the utterance sound like a question, while a falling intonation makes it sound like a statement. Notice the difference between sentence (2) and (3) (Language Files 2007: 65).

(2) You got an A on the test?

(3) You got an A on the test.

Prosody is a very challenging phenomenon to take into account because when investigating interjections in Mandarin, it is quite hard to distinguish prosody and tone. This is because interjections in Mandarin tend to have a neutral tone, but they are usually stressed (Chao 1968: 795). Intonation could cause a word to sound like the original tone is still there, or changed. For example in (4):

(4) Zhèng Zhāngxióng (2015: 0:18)

Nàh, Táiwān zhe yí kuài de yúyè zīyuán de bǎohù yé
s-ITC Taiwan this one piece SUB fishery resource SUB protect also

bǐjiào liánghǎo.
relatively good

'Well, the protection of this part of Taiwan's fishery resources is also relatively good.'

The word *nàh* probably originates from *nà* 'that'. This original word has a fourth tone. The fourth tone is a high falling tone, i.e. it starts high, and then goes down. However, a sentence-initial clause could also have a falling intonation. Since both situations would result in a high falling intonation, it is hard to decide whether the falling pitch is due to tone or to intonation.

Like pitch, tempo and volume can influence the meaning of interjections. Various interjections, for example *eh* and *mh*, may display enormous variation in length and/or volume. I describe the length of these interjections by prolonging them in my transcription with the symbol <: >, e.g. *eh*:

§ 2 Methodology

2.1 Overview

In order to describe interjections in Mandarin, I started out by collecting conversational data from Taiwan Mandarin speakers. An easy way to collect these is to download interviews in Mandarin from the internet. An advantage of this kind of data is that the speakers are not aware of their language being investigated, and I do not have to worry about the speakers modifying their language because they want to talk correctly. However, using downloaded interviews also has disadvantages. In many interviews, the interviewer is explicitly left out of the video. The final video is often edited, and direct conversation between the interviewer and interviewee is often deleted. But especially when investigating interjections, listening to natural conversations is very important. Spontaneous conversations form the natural habitat. Therefore I have used these interviews merely to test the waters, before embarking on my own recordings of natural conversation in Mandarin. These took place between two Taiwanese Mandarin speakers in the Leiden University Centre for Linguistics (LUCL) Phonetics Lab at Leiden University. In the Phonetics Lab, a recording booth and decent recording equipment is available for use.

Another method to investigate interjections could be asking people about their use of interjections directly. However, this method is not suitable in my opinion. People's intuitions about their behaviour can be different from their actual behaviour (Dingemanse, Enfield & Torreira 2013: 3).

Written sources are equally unfit as a method for investigation, because written sources often delete or avoid the topic of interjections. Interjections are hardly ever used in writing, while in conversations they occur extremely frequently. Therefore, investigating interjections in writing is not a good way to study them. The most reliable way to study conversational interjections is by examining cases of actual use (Dingemanse, Enfield & Torreira 2013: 2).

After describing how I collected my data, I will show what interjections can be found in Taiwan Mandarin, and analyze my findings.

2.2 Selecting online interviews

In order to describe what interjections are used in Taiwan Mandarin, I first collected data from videos on the internet. When selecting data, I considered various factors, namely:

- The speaker should be a native speaker of Taiwan Mandarin. This can be verified by asking the speaker where he grew up and what languages he speaks in different places, e.g. at home, at school, and on the street. However, it is important to note that what a speaker thinks they speak, is not always what they actually speak. If the speaker is not a native speaker of the language, or if they have a second native language, there could be a large influence of interjections from other languages.

- The speaker is not reading out loud from a cue or paper. That could cause the language to be written language instead of spoken language. Written language is very different from spoken language, especially in Chinese. For instance, even though the Chinese written language is based on spoken Mandarin, it contains many elements from Classical Chinese.
- The speaker does not consciously monitor their language. If the speaker knows that their language is being investigated, they might unwittingly influence their language. This phenomenon is called the *observer's paradox*. To obtain data important for linguistic theory, we have to observe how people speak when they are not being observed. Yet, the only way to obtain these data is by observation (Labov 1972: 113).
- Data of multiple speakers are collected. Because of individual differences, using data from multiple speakers leads to more representative results.

2.3 Recording a conversation

When recording a conversation between two speakers, many things had to be taken into account. I will list them here.

- Two Mandarin speakers from Taiwan had to be willing to talk in the LUCL Phonetics Laboratory in Leiden.
- I needed written permission from both speakers to record them. The ethics code of the LUCL Phonetics Lab requires all researchers to gather each participant's informed consent by means of a consent form. Researchers must also provide participants with information regarding the procedure.
- I needed to collect general information about my speakers, for example their age, the languages they speak at home, where they grew up, and what kind of education they received.
- For transcription purposes, it is convenient to record one male and one female speaker. That way, their voices are much easier to distinguish.
- The two speakers are not aware of the object of my investigation. If they knew that their interjections are being observed, they would inevitably think about them before using them. That would cause the conversation to become self-conscious and unnatural.
- Preferably, the two speakers should not know each other. In case the two speakers already knew each other, the conversation would be harder to follow for an outsider like me, because they would already have common ground which outsiders did not know about.
- The equipment in the Phonetics Lab needed to be understood by me.
- The two speakers needed to be at ease. This would ensure that their conversation would be more natural and spontaneous.

The participant information form, the model consent form and the speaker background data are provided in Appendix 2-4.

The following sections explain how I have dealt with these requirements.

2.4 Summary of the recording

I started by listening to conversations in the videos I selected based on the criteria mentioned earlier, and wrote down any interjections I could hear. At that time I had not formulated a definition of interjections yet, so I maximized my search by including clear cases from the literature, as well as all doubtful ones.

I consciously chose to approach my data this way. The reason I had not formulated a definition of interjections yet, is that I could look at my data in an unbiased manner. If I had already formulated a definition of interjections at that time, I could have missed some cases that do not fit in that definition. In short, I wanted to formulate a definition of interjections based on my data, instead of selecting interjections based on an a priori definition of interjections.

Because of the disadvantages of edited interviews mentioned earlier, I next decided to produce my own data by recording conversing Taiwan Mandarin speakers in the Leiden University Phonetics Lab. So I started looking for two Taiwanese Mandarin speakers who would be willing to help me. One Taiwanese girl I met in Taiwan three years earlier agreed to help me immediately. However, finding a male participant from Taiwan that she did not know already proved an arduous task. It took me months of sending e-mails before I finally found a male speaker who was able, and willing, to help me. This was just in time, because the day of the recording was just a few days before the female speaker would return to Taiwan.

In order to get acquainted with the equipment in the phonetics lab, the phonetics lab technician advised me to practice a few times. I visited the lab twice before actually recording two Taiwanese Mandarin speakers. During my first visit, the lab technician explained to me how the equipment works. This included how to turn the microphones on and off, how to adjust the volume of the microphones, how to operate the computer, and how to instruct the speakers to get optimal results. The second time, I invited two classmates to talk with each other in the Phonetics Lab, while I practiced working with the equipment myself. I also asked them to fill in my questionnaire and consent form, to simulate the actual recording. While they were talking, I experimented with the microphones, and practiced interacting with them using the equipment. This trial run turned out to be very important. I accidentally forgot to push one button, which caused my own microphone not to work properly. If I had not practiced, this would have stayed unnoticed until the actual recording.

On the day of the actual recording, I went to the Phonetics Lab early in the morning to pick up the key. At that moment, the lab technician was already setting up the microphones for me. We quickly went over the procedure again before he left. In the afternoon, thirty minutes before the recording, I

went back to the lab again to prepare the equipment. When the two speakers came in, I poured them a cup of tea to make them feel at ease, and asked them to fill in the paperwork first. While they were doing the paperwork and discussing it, I turned the microphones on and adjusted the sound. This happens between 0:00 and 4:42. I will call this Part A. At 4:42, I signalled them to start. From that moment until 17:51, the speakers were engaged in conversation. This part is called Part B. Note that during this time, the speakers were aware that they were talking with the microphone on. At 17:51, I came in to tell them they were finished, and told them that they could finish their tea. Then I left again, and the speakers continued their conversation. This is from 18:41 until 27:57. I call this Part C. At 27:57, they ended the conversation. In the last minute, they were collecting their stuff and leaving the room. That is called Part D. The total length of the recording is 28 minutes and 50 seconds long.

Generally, the recording session went fairly well. However, I did make one mistake. After the participants filled in the paperwork, they started their conversation while the paperwork and pens were still on the table. At one point in the conversation, one of the participants grabbed a pen and played around clicking it several times all during the interview. I did not want to disturb the conversation and possibly make the participants nervous, so I just let them continue. Sadly, the clicking turned out really loud in the recording. I advise anyone who wants to record speakers like me, to remove pens and papers before continuing the recording session.

At first, I listened to the whole recording at once. I listened for general things that struck me as special, and wrote down what topics the speakers were talking about. These are:

Part A 0:00 Filling out forms	12:40 Research of Speaker 2
Part B 4:45 Start of conversation.	13:50 Teaching in MA and PhD curricula
4:46 Voting in the polls	14:30 Learning Dutch
5:40 Getting to know knowing each other	15:00 Holiday in Italy of Speaker 1
6:00 A potential candidate for research	15:30 A scam in Paris
6:40 Research of Speaker 2	Part C 19:00 Location of the East Asian Library
7:50 Studies of Speaker 1	19:50 Time in the Netherlands
9:20 Teachers and courses	21:00 Taiwanese people studying in Leiden
10:20 Choosing courses	22:00 Going back to Taiwan
11:40 Politics	23:00 Wrapping up
12:20 Going back to Taiwan	Part D 27:57 End of conversation

Table 1: Conversation topics

2.5 First impressions

Part of my methodology is that I first looked thoroughly into my own data, before looking at literature about interjections. When listening to the recording again, I started writing down interjections. A list of all interjections and corresponding times can be found in Appendix 1. My initial observations were as follows.

The two speakers treat each other in a very friendly way. Even though their genders are different, and Speaker 2 is seven years older than Speaker 1, their social statuses are very similar. The fact that both speakers are expatriates from Taipei, may have created some spontaneous affinity.

In the beginning, the two speakers laugh a lot, maybe because they are a little bit nervous. Later, they loosen up and do not laugh so often anymore. Still, they laugh a lot, even though none of the speakers is joking at any time. Although the laughing might sound exaggerated to a speaker of English or Dutch, I think it functions to improve the ambience between speakers of Mandarin.

Awkward feelings could be a reason for laughing in situations that are not humorous (Chafe 2009: 84). Maybe the nervous kind of laughing here is similar to that behaviour. In China and Taiwan, this phenomenon occurs very frequently in comparison to European countries.

Darwin (1872: 144) writes about possible origins of laughing. He states that many types of monkeys expose their teeth when angered. This behaviour could have evolved to laughing in awkward situations as humans do nowadays.

The recording contains a lot of backchannel, i.e. the speakers are showing their interest in, attention for and agreement with the other. The two speakers are constantly saying [ɔ], [m] and [ə̃] to confirm that they understand each other.

The speakers use the word *ránhòu* 'then' a lot. They always say this word really fast, making it sound like [naʃhoʊʌ] or [nãʃhoʊʌ]. It's interesting that *r-* [ɹ] becomes [n] here. This could be an influence of Mǐn. Some cognates that start with an [ɹ] in Mandarin, start with an [n] in certain Mǐn dialects, for example 染 'to dye' is pronounced as [ɹanʌ] in Mandarin, but as [nĩʌ] in Xiàmén and Cháozhōu, both Mǐn languages (Hànyǔ Fāngyán Cìhuì 1995: 381). The [ɹ] sound in Mandarin becomes [l] in many Mǐn dialects. In some Mǐn dialects, [l] and [n] are in complementary distribution. For example, in Hokkien, [n] is used in combination with nasal vowels, while [l] is used with other vowels. This could explain why [ɹ] becomes [n].

The male speaker says *ɔkei* a lot of times. This is a loanword, borrowed from the English *okay*.

Many retroflex sounds, i.e. [tʂ], [tʂʰ] and [ʂ] are pronounced as [ts], [tsʰ] and [ʃ] or [s] by both speakers. In Taiwan, pronouncing retroflexes like alveolars is very common (Lin 2014: 266).

Both speakers use a lot of *duìh* 'right'. They not only use this when they agree with each other, but also say it after having talked themselves. I consulted a native speaker about the second case, who told me that this is used a lot when the speaker is talking and thinking at the same time: at the end of the story, the speaker thinks about what they just said, and confirms that what they say is true. This also reassures the listener. An example of this is shown in (5).

(5) Corpus 9:28

1: Náhòuh, Wén-zǔ gēn Lí-zǔ dōu huì gè yǒu yí
S-THN Society-group and Nature-group all can every be.there one

ge bān.

individual class

'And there is one class scheduled for both the Society and Nature groups.'

2: 'Oh.'

BE-CPR

'Oh.'

1: Duìh.

correct

'Right.'

In this example, speaker 2 is saying *oh* between the two sentences of speaker 1. When speaker 1 says *duìh*, this could be a confirmation of the first sentence of speaker 1, but it could also be an answer to what speaker 2 says. In this example and in all other cases *duìh* is used in my data, this is ambiguous. However, a native speaker reported that *duìh* can still be used if speaker 2 does not say anything. In conclusion, *duìh* can be used both for agreeing with another person and for confirming one's own statements.

§ 3 Typological inventory

3.1 Grammaticalisation

In the following sections, the term grammaticalisation will be used a lot. In this section, I will explain what it is and give some examples.

Grammaticalisation can occur when a word or group of words is used a lot in a language. Because of frequent use, the meaning gradually broadens. It gets a different, but similar meaning aside from its original meaning. In many cases, a content word changes into a grammatical function word. At the same time, phonetic erosion may occur. This means that the form is in some way reduced.

An English example of grammaticalisation is the verb *to go*. This used to be a verb that expressed only movement. Nowadays, this verb is also used to express future tense (van de Velde 2009: 135). In Dutch, a similar process has taken place with the verb *gaan* 'to go'.

In Mandarin, grammaticalisation occurs frequently as well. An example is *yī* 'one'. This word can be used as a number, but nowadays, it is also used like the English indefinite article *a*. When that is the case, the form *yī* becomes *yi* in Mainland Mandarin. The loss of tone here is a case of phonetic erosion. The meaning 'one' has broadened to 'a' (Wiedenhof 2015: 253). This process has also taken place in Dutch, in which the number *één* 'one' has become *een* 'a'.

In the following sections, we will come across some examples of grammaticalisation in Taiwan Mandarin.

3.2 The phonological form of interjections

Interjections can have many different forms. Some interjections are polysemes of existing words, like *zhèigeh*, which was originally *zhèige* 'this'. Other interjections have forms that have slightly changed, for example *náhòuh*. The form has changed from *ránhòu* 'then' to *náhòuh* as a result of grammaticalisation.

Loss of tone as a result of grammaticalisation is not very common in Taiwan Mandarin as opposed to Mainland Mandarin. In Taiwan Mandarin, tones do not easily change to a neutral tone (Huang 2012: 2). As a result of that, many polysemous interjections still have the same tone, e.g. *zhèigeh*, *nèigeh*, *qíshíh* that come from *zhèige* 'this', *nèige* 'that', and *qíshí* 'actually'.

Aside from polysemous words, there are also words that can only be interjections. Examples of this are *mh*, *oh*, *wah*, and *eh*. *Mh* is used by speakers to agree with the other. *Oh* is very similar to *oh* in

English. It is used to let the other know that you understand something. *Wah* is used to express surprise. *Eh* sounds a lot like the English word 'uh', and has the same meaning.

Monosemous interjections are usually not longer than one syllable. They have no specific tone, but they usually do have intonation. For example, I found the following pronunciations of the interjection *oh*: ɔ:ʌ, ɔʌ, ɔ:ʌ, ɔ:, ɔ:ʌ, ɔ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ. Intonation, vowel length, nasality and breathiness can all lead to different forms of an interjection.

3.3 The meaning of interjections

After producing an overview of the interjections I found in my data and determining their forms, I categorized the interjections based on their meaning. I found four basic types of interjections.

3.3.1. Backchannel interjections

The most frequent type of interjections I found is backchannel. By backchannel, I mean that the speaker is showing his interest in, attention to and/or agreement with the other speaker. In my data, *oh* and *mh* are the most common backchannel interjections. Speaker 1 often uses *mh*, while speaker 2 often uses *oh*. This example contains backchannel interjections.

(6) Corpus 7:17

2: Bǐrú shuō nǐ de yánjiù duìxiàng nà hěn duō
 for.example say 2SG sub research counterpart that very much

ren zai shuō shéme Riběn yánjiù,
 person be.at say what Japan research

'For example your research objective, many people are talking about things like Japanese studies.'

1: Mh.

B-AGM

'M.'

2: Yìndù yánjiù a,

India research ENT

'Indian studies.'

1: Mh.

B-AGM

'M.'

2: Náhòuh Zhōng-dōng yánjiù, Dōngnányà yánjiù nà qíshí yíyàng dōu
S-THN middle-east study east-south-Asia research that actually same all

pǎo-dào Hélán lái-- [...]

run-reach Netherlands come

'And also Middle Eastern studies, South-East Asian studies, they all come to the Netherlands to-- [...]'

While *mh* only indicates that the speaker understands and pays attention to the other, I think *oh* has the additional meaning that the speaker has heard something new, something they had not thought of before. Therefore, *oh* can also be ranged with the second category, which I will discuss below.

3.3.2. Exclamatory interjections

The second type of interjections I found is exclamatory interjections. These mostly occur at the beginning of a sentence to indicate an emotion or reaction to something. Examples of exclamatory interjections are *oh* 'oh', *wah* 'wow', *eih* 'huh?'. They can be found in examples (7) and (8).

(7) Corpus 5:14

2: Eih oh, nǐ shì jiéshù le.
E-SRR 2SG be finish PRF

'Oh hey, you are already finished.'

1: Enh.

B-AGR

'M.'

2: Oh oh wah.

BE-CPR BE-CPR E-EXI

'Oh wow.'

1: Wó yǐjīng duō dāi le haha liǎng ge duō yuè le.
1SG already much stay PRF O-LGH two individual much month PRF
'I've already stayed haha more than two months extra.'

2: Hahah.
O-LGH
'Haha.'

(8) Corpus 10:46

2: Wǒ nà ge shíhòu zhèng --
1SG that individual time exactly
'At that time I just--'

1: Hahah.
O-LGH
'Haha.'

2: Eih. Eih, wo nài ge shíhou yīnggāi yīnyuè zhè ge
B-AGE E-CUR 1SG that individual time should music this individual

yì-bān¹ yìzhí dōu cúnzài zhǐ shì z- rénwén zīyōu-bān dàgài
justice-class continuously all exist only be z- humanities talented-class probably

shì zài wǒ de zhīhòu liǎng sān jiè cái yǒu [...]
be be.at 1SG SUB after two three period only be.there

'Yes. Huh, at the time I was there this music yì-class should have existed all along, but, the humanities talents class probably came two or three years after me [...]'

1: Shì ah.
be ENT
'Yes.'

3.3.3. Structuring interjections

¹ In example (8), *yì* 'justice' in *yìban* 'justice class' does not define the class. *Yì* is merely the name of the class. While classes in English are often named with A, B, C, etc., these classes are named after Confucian virtues.

Another type of interjection that occurs frequently is the structuring interjection. This type of interjection is used by the speaker to structure his thoughts and/or his storyline, to buy time, and to dominate turn-taking, i.e. continuously talk so the other speaker will not take turn. Examples are *náhòuh* 'then', *qíshíh* 'actually', *zhèiyànggh* 'like this', *eh* 'uh', *duì* 'right', and *nèigeh* 'that'. Some sounds, like throat-clearing and smacking sounds, can also be used to dominate turn-taking. I also included these in my list of structuring interjections. Most of these expressions are grammaticalised. These words were originally words with a lexical meaning, now they are used as function words. As interjections, they are used for structuring a conversation, for instance in (9).

(9) Corpus 6:40

1: Suóyí nǐ zhīqián shì qù nǎlǐ?
 so 2SG before be go where
 'So where did you go before?'

2: Wǒ shíyī- shí'èr- shíyīyuè de shíhòu zài Běijīng.
 1SG eleven twelve November SUB time be.at Peking
 'In Novem- Decem- November I was in Peking.'

Náhòuh hòulái shí'èryuè huí jiā yíxià xià T- huí Táiwān de,
 S-THN later December return home a.while go.down T- return Taiwan SUB
 zhèiyànggh.

S-FIN

Then, after that, in December I went back home, to Taiwan, like that.'

1: Oh.
 BE-CPR
 'Oh.'

As mentioned before, *náhòuh* was originally *ránhòuh* 'then'. *Náhòuh* is now not only used to express time anymore, but it can also be used to structure a story or organise different topics. It can still mean 'then', but it's not strictly related to time anymore. The temporal meaning has weakened, and it now has a structural meaning.

Other examples of structural interjections are *zhèigeh* and *nèigeh*. *Zhèi* 'this' and *nèi* 'that' are originally demonstratives, and *ge* is a classifier. If a demonstrative is used before a noun, a classifier is usually required, for example 'that child' would be *nèi ge háizi*. As an interjection, it has grammaticalized and no longer refers to a specific noun anymore, like the original word does. It is

used by a speaker who is thinking about what to say next or who is looking for a certain word. It can also be used multiple times in a row, as we saw in Example (1). It is often best translated with 'uh'. Parts of these words sometimes keep their original tone when used as interjections.

Examples (5) and (6) also contain structural interjections.

3.3.4. Bonding interjections

The last type of interjection is used by speakers to strengthen their relationship. A very common example of this is laughing. Laughing takes several forms. Laughing can stand by itself, but it can also occur while someone is talking. Since laughing does not really fit into any of the other categories, I created this fourth category. As mentioned, I think the extreme amount of laughing is an expression of nervousness. This is very common in China and Taiwan. Example (7) and (8) contain examples of this category.

§ 4 Data analysis

4.1 Lists of the categorized interjections

After designing the categories above, I went through my list of interjections again, and categorized each of them. Interjections with the same meaning and only a slightly different form are grouped together. I grouped these interjections together based on my knowledge of Mandarin. Small differences do not necessarily change the meaning a lot. Examples of small differences are tonal differences, length differences, glottal stops, breathiness or nasality, or a combination of them.

A list of all categories can be found in the tables below.

Gloss	Pinyin	IPA	Meaning
	convention		
B-AFF	ah	a, ā, a:, a:, aʅ, āʅ, āʅ, aʅ, āʅ, ā:ʅ, āʅ, a:ʅ, a:ʅ, a:ʅ, a:ʅ, a, a, aʅ	backchannel interjection: affirmation
B-AGE	eih	ei, ei, ʔeiʅ	backchannel interjection: agreement
B-AGH	duih mah hoh	tweiʅ maʅ hoʅ	backchannel interjection: agreement
B-AGL	mmmh	ṁmṁmṁm	backchannel interjection: strong agreement
B-AGM	mh	m, m:, mʅ, ʔmʅ, m:ʅ, m:ʅ, m:ʅ, mʅ, mʅ, ṁm, ṁ	backchannel interjection: agreement
B-AGR	enh	ẽʅ	backchannel interjection: agreement
B-AGT	duih	twei, tweiʅ, ə twei, aʅ tweiʅ, e:ʅ twei	backchannel interjection: agreement
B-AST	duih duih duih	t- twei twei twei, twei twei twei, twei twei, tweiʅ tweiʅ a, m twei a twei a twei a, a twei a twei a twei ə, tweiweiweiwei	backchannel interjection: strong agreement
B-AMR	mh mh	m mʅ, ṁʅ ṁʅ ṁʅ, ẽ:ʅ ẽ:ʅ ẽ:ʅ, ẽ ẽ ẽ ẽ ẽʅ	backchannel interjection: strong agreement
B-ATB	ʂʅ	shih	backchannel interjection: 'yes'
B-CFM	heih	hei, heiʅ, hẽĩ	backchannel interjection: 'yes'
B-COR	duih ah	twei a, ə tweiʅ a, tweiʅ a, ei twei a	backchannel interjection: agreement
B-LAG	ah ah	a:ʅ aha aha, a a: əʅ, ā: ā:	backchannel interjection: agreement
B-OOR	okeih okeih haoh	əkei əkei haə	backchannel interjection: 'okay okay alright'
B-RAR	hah hah hah haoh	ha ha ha haə	backchannel interjection: 'alright'
B-RRT	haoh	haə, m haə, haə	backchannel interjection: 'alright'
B-YSR	eeh	ɛ, ɛ, ɛ:	backchannel interjection: 'yes'

Table 2: List of backchannel interjections

Gloss	Pinyin	IPA	Meaning
E-CLK	th convention	t↓	exclamatory interjection: an alveolar plosive click sound
E-CNF	mh	m̩, m̩, m:̩	exclamatory interjection: 'huh?'
E-CUR	eih	ei̯, ei̯, ei:, ei, ei̯,	exclamatory interjection: curiosity
ENT	a	a	particle that expresses enthusiasm
E-EXI	wah	wa	exclamatory interjection: excitement
E-PSU	ph ph ph ph ph	k̯ k̯ k̯ k̯ k̯	exclamatory interjection: positive surprise
E-RLY	oh zhenh deh	ɔ̯ tʂən dɔ̯	exclamatory interjection: 'oh really'
E-SPR	ah	a, a̯	exclamatory interjection: surprise
E-SRP	oh	ɔ, ɔ̯, ɔ̯, ɔ̯, ɔ̯	exclamatory interjection: surprise
E-SRR	eih oh	ɔ̯: ɔ̯, ɔ̯, ei ɔ̯	exclamatory interjection: strong surprise
E-SUR	hh	ɦ↓	exclamatory interjection: strong surprise
E-WHT	eh	ɛ̯	exclamatory interjection: 'huh?'
E-WOW	tianh ah	tʰien a	exclamatory interjection: 'oh my god'

Table 3: List of exclamatory interjections

Gloss	Pinyin	IPA	Meaning
	convention		
S-ACT	qíshíh	cɕʰi4ɣzɿ4, cɕi4fʒɿ4, cɕʰi4ɣzɿ, cɕʰi4ɣzɿ4, cɕʰi4fʒɿ4, cɕi4fʒɿ	structuring interjection: 'actually'
S-AGT	duìh	tweiʋ, twei	structuring interjection: confirming own story
S-COR	duìh ah	twei a	structuring interjection: confirming own story
S-FIN	zhèyangh	tsei jaŋ	structuring interjection: finishing an explanation
S-GLR	ngrh	mF	structuring interjection: a glottal rattle
S-ILT	jiuh shih zhèyangh	cɕoʊʋ fʒ tsəjaŋ	structuring interjection: 'it's like that'
S-IOW	jiùh shih shuoh	cɕoʊʋ fʒɿ ɣɔɿ, cɕoʊʋ ɣɔ, cɕoʊʋ fɔ	structuring interjection: 'in other words'
S-ITC	nàh	naʋ, na1, na	structuring interjection: continue talking within a subject.
S-ITW	nàmeh	naʋ mə	structuring interjection: 'in that way'
S-JST	jiùh	cɕoʊʋ, cɕoʊʋ, cɕoʊʋ?	structuring interjection: 'just'
S-JUL	jiùh shih	cɕoʊʋ fʒ, cɕoʊʋ fʒɿ, cɕoʊʋ fʒɿ, cɕoʊʋ fʒ	structuring interjection: 'just like'
S-NPS	nth	ɕ	structuring interjection: a smacking sound, but not plosive
S-SLP	lh	l̥↓	structuring interjection: a slurping sound
S-TCL	mrmh	hm̥	structuring interjection: a throat-clearing sound
S-THK	zhèigeh	tʂeiʋ kə	structuring interjection: speaker is thinking
S-THN	náhòuh	na1fioʊʋ, na1fioʊ, nafioʊ, na1fioʊɿ, nafioʊʋ, zɕ11fioʊʋ	structuring interjection: move on with a subject
S-THP	náhòuh neh	na1fioʊʋ nə	structuring interjection: move on with a subject
S-TKG	nèigeh	neiʋkə, neikə, neiʋkə:	structuring interjection: speaker is thinking
S-TIS	nàh jiùh shih	naʋ cɕoʊʋ fʒɿ	structuring interjections: 'in other words'
S-UHH	eh	ə, ə:, əm:	structuring interjection: speaker is thinking
S-YES	heih	hei	structuring interjection: 'yes'

Table 4: List of structuring interjections

Gloss	Pinyin	IPA	Meaning
	convention		
O-LGH	hahah	e.g. h̥h̥h̥	bonding interjection: a laughing sound

Table 5: Bonding interjections

Gloss	Pinyin	IPA	Meaning
	convention		
BE-CPR	oh	ɔ̃:ʔ, ɔʔ, ɔ:A, ɔ:, ɔ̃:ʔ, ɔ, ɔʔ, ɔʔ, ɔʔ, ɔʔ, ɔʔ, ɔ̃:ʔ, ɔ̃:ʔ, ɔ, ɔʔ	backchannel/exclamatory interjection: comprehension and surprise
BE-CPS	ah	ɑ, ɑʔ, a:ʔ, a:, a:, aʔ, aʔ, ɔʔ, ɔʔ	backchannel/exclamatory interjection: comprehension and surprise
BE-CMS	oh jiu	ɔʔ cçɔ̃	backchannel/exclamatory interjection: comprehension and surprise
BE-OKY	okeih okeih	ɔkei, ɔkeiʔ	backchannel/exclamatory interjection: agreement and comprehension
BE-ORT	oh shih ah	ʃɔʔ ɔ, ɔ ʃɔʔ ɔ, ɔ ʃɔ ɔ, ɔ ʃɔʔ ɑ, a ʃɔʔ ɔ, ɔʔ ʃɔʔ ɑ, ɔ ʃɔʔ ɑ	backchannel/exclamatory interjection: 'oh alright'
BE-SPR	okeih wah	ɔʔk ^h eiʔ wauʔ	backchannel/exclamatory interjection: comprehension and strong surprise
BE-TOK	th oh	t↓ ɑɔ, kθ ɔ	backchannel/exclamatory interjection: agreement and comprehension

Table 6: List of backchannel-exclamatory interjections

Gloss	Pinyin	IPA	Meaning
	convention		
BO-YES	heih hahah	hei:, hei	backchannel/bonding interjection: saying 'yes' while laughing

Table 7: List of backchannel-bonding interjections

4.2 Previous scholarship

There is no standard definition of interjections. Different linguists have different ideas about what an interjection is. However, as we will see, several authors speak of conventional ideas about interjections as if there was a standard definition. Also note that some grammars do not mention interjections at all, e.g. Li & Thompson (1981), van der Lubbe (1968). I will discuss some ideas about interjections below.

4.3 Formal descriptions

Ameka (2006: 743) lists different criteria to define interjections. These are the following:

Formal criteria:

- It is a lexical form that conventionally constitutes a non-elliptical utterance by itself. According to Matthews (2007: 222-226), a lexical form is a form assigned to or involving units assigned to a lexicon. The lexicon is the aspect of a language, or of a linguist's account of a language, that is centred on individual words or similar units. An elliptical utterance is an utterance in which one or more words are left out, while the sentence can still be understood.

- It does not enter into construction with other word classes. In other words, interjections are syntactically independent.
- It does not take inflectional or derivational affixes. This means that it can only be one frozen form: it cannot be modified to express different grammatical categories anymore.
- It is monomorphemic. A morpheme is the smallest unit conveying meaning in a language. Monomorphemic means that a word only contains one morpheme. Ameka does admit that there are also formally complex interjections that are multimorphemic, for example *goddammit* in English. This consists of the morphemes *god*, *damn*, and *it*.

Brill (1854: 381) writes in his grammar of Dutch that interjections are outside the grammatical and logic cohesion of reason. No words can be derived from them, and they have no case.

Chao (1968: 795-819) writes about interjections in his *Grammar of spoken Chinese*. He lists the following characteristics:

- Interjections have no tone but do have intonation.
- Interjections are ever-free forms, i.e. they constitute an utterance by themselves.
- The segmental phonemes of interjections often exceeds the range of the phonemic inventory for other classes of words. In other words, interjections include some sounds that are not present in other word classes.

Chao does not discuss the meaning or function of interjections in general, but he does provide a five-page list of Mandarin interjections.

The E-ANS (1997), the electronic version of a Dutch grammar called the *Algemene Nederlandse Spraakkunst*, treats interjections as a separate word class, with the following characteristics:

- They are syntactically independent. They are outside of the grammatical structure of a sentence, and constitute a separate utterance. A word or group of words that is usually or always used in this way can be called an interjection.
- Interjections have a frozen form: they do not take derivations or inflections. In order to amplify the meaning, they can be reduplicated, for example *nounou*, *jaja*.

Finally, the E-ANS states that interjections are the only class of words that include words without vowels, words that cannot be described in our alphabet, and words that end in a so-called short vowel, for example [hɛ] 'huh?', which is used when someone wants their conversation partner to repeat or elaborate on what they just said. Dutch short vowels are [ɑ], [ɛ], [ɪ], [ɔ], and [ʏ].

Hansen, Henne & Rongen (1977: 20) write in their *Handbook of Chinese language structure* that an interjection is a free word which lacks tone, but has intonation and stress.

In Rijpma & Schuringa's (1936: 118) grammar of Dutch, interjections are defined as words that are outside the actual sentence in such a way that they are not subject, nor predicate, nor adjunct.

De Vries (2001: 314-321) states that interjections are words with a free role. Some of them occur alone, like *au* 'ouch', *hé* 'hey'. Others are used at the beginning or end of a sentence, like *Zeg, moet je horen!* 'Hey, listen up!'. In a few exceptions, they occur in the middle of a sentence, e.g. *verdomme* 'damn' in the following sentence: *Kijk toch verdomme uit waar je loopt!* 'Damn, watch where you're going!' Interjections are not part of the grammatical structure of a sentence. De Vries also regards particles as interjections.

At the beginning of his grammar of Dutch, De Vooy's (1957: 37-42) writes that interjections are derived from spontaneous sounds that are related to animal sounds, and sounds that express feelings. Our alphabet is not suitable for approaching these sounds, which results in poor adaptations, e.g. *brrr* for when you are cold, and *ha* for laughing. When people started writing them like this, people also started using them like this. The moment these expressions of feelings get their own form, it becomes an interjection. People imitate each other when using them, and they even borrow these words from other languages, for example the English *huzzay* is *hoezee* in Dutch. Finally, de Vooy's mentions that onomatopoeia are also called interjections, even though they have nothing to do with the types of interjections mentioned above.

Wierzbicka (1992: 164) defines interjections with slightly different criteria, namely:

- It is a linguistic sign that expresses a specifiable meaning.
- It can be used on its own.
- It does not include other signs (with a specifiable meaning).
- It is not homophonous with another lexical item that would be perceived as semantically related to it. Homophonous here means that two lexical items sound exactly the same.
- It refers to the speaker's current mental state or mental act.

Wilkins (1992: 124) mainly uses structural criteria to define interjections. In his opinion, an interjection is a conventional lexical form which commonly and conventionally constitutes an utterance on its own, typically does not enter into construction with other word classes, is usually monomorphemic, and generally does not host inflectional or derivational morphemes.

4.4 Comparison: phonological form

I encountered some problems while comparing opinions of different linguists with each other and with my own data. First of all, the ideas are very different from each other, as illustrated in Table 8 down below, in which I compare the three most commonly mentioned features. If a certain characteristic is not mentioned at all by an author, this is indicated by the symbol –. If it is stated as a possibility, I write a question mark. If it is usually the case, this is symbolized as +/- . Finally, if it is confirmed to be a characteristic, then this is indicated by +.

	Independent	Frozen form	Monomorphemic
Ameka (2006)	+	+	+/-
Brill (1854)	+	–	–
Chao (1968)	+	–	–
E-ANS (1997)	+	+	–
Hansen, Henne & Rongen (1977)	+	–	–
Mullie (1930-1933)	–	–	–
Rijpma & Schuringa (1936)	+	–	–
de Vooyo (1957)	–	–	–
de Vries (2001)	+	–	–
Wierzbicka	?	–	–
Wilkins (1992)	+	+/-	+/-

Table 8 Opinions on formal characteristics

Almost all authors mention that interjections are syntactically independent. In other words, interjections do not enter into constructions with other word classes. They always constitute an utterance by themselves. Most interjections in my own data – backchannel, exclamatory and bonding interjections – behave like this as well. For example, they are often used at the beginning of a sentence, or they constitute sentences themselves. Structuring interjections, however, behave differently. They occur both between and in the middle of sentences. Some of them, for example *náhòuh*, behave like connectors: they link different sentences with each other. Without these sentences, they cannot function. Therefore, I conclude that some of my structuring interjections are not syntactically independent.

Some structuring interjections, like *eh*, can be used in the middle of a sentence, for example if the speaker is thinking about what to say next. It does not enter in construction with the other words in the sentence, but they are part of the sentence as a separate utterance within the sentence. So some of my structural interjections are syntactically independent, and some are not.

Ameka, E-ANS and Wilkins claim that interjections do not take inflectional or derivational affixes. This criterium might be very relevant for some languages, but it cannot be used to define interjections in Mandarin. The interjections in my data do indeed never have inflectional affixes.

This is because Mandarin has no inflection whatsoever. Mandarin does have derivation, and interjections do indeed not occur with derivational affixes.

The E-ANS says interjections have frozen forms, but it is also mentioned that interjections can be reduplicated to amplify their effect, which suggests that their forms are not strictly frozen. I have found some cases of reduplication in my own data, for example Corpus 19:17 *duìh duìh duìh* 'right right right' and Corpus 23:16 *duìh a duìh a duìh a* 'right right right'. Using this interjections multiple times in a row indicates that the speaker strongly agrees with the other. I also found some cases where an interjection is prolonged. For example *eh*, used when the speaker is thinking and/or wants to stay in turn, can be made longer if the speaker is thinking longer.

Ameka (2006) and Wilkins (1992) claim that interjections are usually monomorphemic. However, Ameka does admit that this does not count for some formally complex interjections, e.g. *goddammit* in English, and interjectional phrases, e.g. *bloody hell* in English. The interjections in my own data are often monomorphemic, but I have found some multimorphemic interjections as well, for example *jùh shìh* 'just like' and *qíshìh* 'actually'.

Two sources mention that interjections can have forms that are not present in other word classes, namely E-ANS (1997) and Chao (1968). I found some of these in my data as well, for example *mh*, which is a backchannel interjection. I will explain why this form is different from words in other word classes in Mandarin. According to the traditional analysis, syllables in Mandarin can be divided into two parts: the initial and the final. The initial can be a non-glide consonant or nothing. The final consists of the medial and the rime. The medial can be a glide or nothing. The rime consists of the nucleus and ending. The nucleus is obligatory, and always contains the main vowel. The ending is an optional post-nuclear vowel or a consonant (Lin 2014: 106-107). For example, the word *liáng* 'good' can be divided into l-i-a-ng. The initial is *l*. The medial is *i*. The nucleus is *a*. The ending is *ng*. Now we go back to the case of *mh*. *Mh* is an exceptional form, because if we assume there is always a nucleus, the nucleus is not a vowel. Apparently, interjections can have a consonant as their nucleus.

Multiple authors who wrote about Mandarin, namely Chao (1968), Hansen, Henne & Rongen (1977) say that Mandarin interjections lack tone, but do have intonation. Some of the exclamatory and backchannel interjections I found do not have a discernible tone. However, some of the polysemous interjections do have tones, e.g. *qíshìh* 'actually'. These authors would probably not regard polysemous interjections as interjections.

'An interjection can be defined as a linguistic sign expressing the speaker's current mental state, [...] which is not homophonous with another lexical item that would be perceived as semantically related to it.' (Wierzbicka 1992: 164) By saying interjections should not be homophonous with other semantically related lexical items, Wierzbicka excludes all secondary interjections, such as *goddammit*. I found some interjections in Mandarin that belong in this category as well, for example

náhòuh ‘then’, *jiùh shih shuōh* ‘in other words’, and *nàmeh* ‘in that way’. Wierzbicka would not recognise these words as interjections. However, this depends on how interjections are defined. In my definition, that I will state in 4.7, I accept these words as interjections. Just because they are polysemous does not mean they cannot be interjections.

In conclusion, when encountering interjections in natural language, the definition used determines what expressions qualify as interjections. Every author defines interjections differently, both in terms of formal and semantic criteria. Therefore, every author will also distinguish different interjections.

Finally, many authors state that interjections are words by definition. I do not want to define the term *word*, so I will not refer to interjections as words.

4.5 Semantic descriptions

What do interjections mean, what communicative functions do they have?

According to Ameka (1992), these are the semantic and pragmatic characteristics of interjections:

Semantic criteria: It is a conventionalised linguistic sign that expresses a speaker’s current mental state, attitude, or reaction toward a situation.

Pragmatic criteria: It is a context-bound linguistic sign. This means it is tied to specific situations and it cannot be fully interpreted unless it is situated in the appropriate discourse.

Ameka (1992: 113) distinguishes three categories. These are expressive, conative, and phatic.

Expressive interjections are interjections that express the state of the speaker. They form two subgroups: emotive interjections and cognitive interjections. Emotive interjections express the emotions and sensations of the speaker at the time of utterance. An example from English is *Ew!* expressing disgust. Cognitive interjections express the state of knowledge and thoughts of the speaker at the time of utterance. For example *Aha!* that a speaker can use when they realize something.

Conative interjections express the wishes of the speaker. When the speaker wants attention or an action from the listener, the speaker may use conative interjections. An example of this is *Shh*, which indicates that the speaker wants the listener to be silent, or *Huh?* indicating that the speaker needs clarification from the listener.

Phatic interjections aim to establish contact between the speaker and listener. Examples of this type of interjections are backchanneling or feedback-signalling vocalisations. These are responses of the listener to what the speaker is saying, expressing comprehension or interest. Phatic interjections can express someone's mental attitude towards the on-going discourse. An English example is *mhm*, expressing agreement.

Brill (1854: 381) writes that semantically, interjections do not denote concepts, but they are sounds that express a feeling or a sensory perception. There are two types of interjections. The first type consists of natural sounds, the second type consists of words or sentences that function as interjections. Interjections express feelings, imitate sounds, or express some kind of desire.

The E-ANS discusses the meaning of interjections as well. It distinguishes two categories. The first kind has a non-lexical meaning: these sounds are onomatopoeic, i.e. they imitate a certain sound, for example in Dutch, [kykələky] expresses the sound a rooster makes. The second kind of interjections has a lexical meaning. This lexical category can be divided into two types as well:

- Interjections a speaker uses to indicate something. It could be a question (*huh?*), a statement (*ok*), an order (*shh!*) or a wish (*congratulations*).
- Interjections a speaker uses to emotionally react to physical or mental experiences. For example *Ouch!* When the speaker is in pain, and *Aha!* When a speaker recognises or understands something.

Hansen, Henne & Rongen (1977: 20) only write about the meaning of interjections that they have an exclamatory value.

In his grammar of Chinese, Mullie (1930-1933: Vol. 2 pp. 569-571) states that interjections express feelings. He gives a list of emotions with corresponding interjections. He notes that interjections do not have a fixed writing form, and that one form can have multiple meanings.

Rijpma & Schuringa (1936: 118) distinguish three categories of interjections: onomatopoeia, e.g. *boem* 'boom'; expressions of feelings, e.g. *au* 'ouch', and signals e.g. *hallo* 'hello'. The last two categories are actually small sentences, for example *Bravo!* means 'You did really well!'.

De Vooy (1957: 37-42) writes that interjections are sounds that express feelings. Besides that, interjections can also be used to attract attention, warn, command, or scare others.

De Vries (2001: 314-323) gives many examples of Dutch interjections. Interestingly, he distinguishes *popular interjections* and *sounds*. Popular interjections are words or groups of words that have an interjectional meaning. Sounds are non-verbal sounds that act like interjections, for

example laughing or coughing sounds. Some sounds can act like interjections. At the end of his chapter on interjections, he also mentions that forms of address, which are used to address one or more beings, formally act like interjections as well.

Wierzbicka (1992: 165) also distinguishes three categories. These are emotive, volitive and cognitive. Emotive interjections express the feelings of the speaker. Volitive interjections express the wishes of the speaker. Cognitive interjections express the thoughts or knowledge of the speaker.

4.6 Comparison: meaning

The different opinions of the authors are shown in Table 9 below.

	Expresses modality	Expresses mental state/emotions	Includes onomatopoeia
Ameka (2006)	+	+	-
Brill (1854)	+	+	+
Chao (1968)	-	-	-
E-ANS (1997)	+	+	+
Hansen, Henne & Rongen (1977)	-	+	-
Mullie (1930-1933)	-	+	-
Rijpma & Schuringa (1936)	+	+	+
de Vooyo (1957)	+	+	+
de Vries (2001)	+	+	-
Wierzbicka	-	+	-
Wilkins (1992)	-	-	-

Table 9: Opinions on the meanings of interjections

Brill, The E-ANS, Rijpma & Schuringa and de Vooyo all regard onomatopoeia, words that mimic sounds, as a type of interjections. For example *yap yap*, the sound of a barking dog in English, would be an interjection. These words do have something in common with other interjections, namely that their forms are very different from all other word classes. Mandarin does have onomatopoeic words, but I have found no onomatopoeic words in my data. Besides that, I think the function of these words is different from the function of interjections. Therefore, I will not include onomatopoeia in my definition of interjections.

All authors distinguish different categories. These categories do have some things in common. Wierzbicka's emotive and cognitive categories are similar to Ameka's expressive category. Wierzbicka's volitive category is the same as Ameka's conative category. Wierzbicka does not have a category in which Ameka's phatic interjections fit. The first category the E-ANS mentions, interjections used to indicate something, are similar to Ameka's cognitive and phatic categories. The second, emotional category, is similar to Ameka's expressive category. Rijpma & Schuringa have

an emotive category just like E-ANS and Ameka. They also have and a signal category, very similar to Ameka's conative category.

The authors Brill and de Vries have different ideas about categorising interjections. Brill distinguishes two types of interjections that are very similar to what de Vries calls *sounds* and *popular interjections*.

How do the categories of all these authors match my own categories, which I created on the basis of my own data?

I call my first category backchannel interjections. There are used by a speaker to show interest, attention and/or agreement to the other. This category is similar to Ameka's phatic interjections, but it does not match any of the other authors' categories.

My second category of exclamatory interjections contains interjections that are used to indicate an emotion or reaction to something. The expression of an attitude toward a situation is often called modality. This category matches Ameka's expressive category, the emotional category of the E-ANS, Wierzbicka's emotive interjections, and Rijpma & Schuringa's expressive category. It also matches the views of the other authors.

The interjectional category that I call structuring interjections, used by the speaker to structure his thoughts and/or his storyline, to stalk time, and to dominate turn-taking, is not present in any of the other works. Perhaps other linguists do not consider these words to be interjections, or they simply put these words into their other categories.

Bonding interjections, used by speakers to strengthen their relationship, would belong in Ameka's category of phatic interjections. However, Ameka (p.c. 2016) points out that he would not consider laughter as an interjection, because laughter does not consist of words. I think the specific form of laughter should not necessarily exclude it from being an interjection.

4.7 Towards a new definition

I will define interjections as follows:

Interjections are grammaticalised words or short utterances that can be used to express emotions, interest, attention to and agreement with another speaker, structure a speaker's own narrative, and strengthen the relationship between interlocutors.

This definition aims at describing Taiwan Mandarin as accurately as possible.

There are some examples of words or utterances of which it is unclear whether they are interjections or not. I will list some of these below.

Laughing is the first interjection I want to discuss. Interjections are often seen as a word class. If that is the case, laughing would not be an interjection because laughter does not consist of words, but rather of sounds. However, laughing expresses emotions and strengthens the relationship between interlocutors. It definitely has an interjectional meaning. I do not think interjections have to be a word class or consist of words, so I do recognize laughing as a kind of interjection.

There are a lot of interjections that have a non-interjectional meaning as well. Some of these meanings are really close to the interjectional meaning, for instance *duìh*. This word originally means 'right' or 'correct'. As an interjection, it is used to express agreement with another speaker. This is another case of grammaticalisation. I think *duìh* is an interjection, because its meaning is now much broader than just 'right', and it is used very frequently as a means of backchannel.

I found many interjections that structure the speaker's narrative, for example *jiùh shih*. *Jiù shi* can mean 'exactly', 'just', 'even if', 'it comes down to', and 'then'. I found *jiùh shih* with different tones, e.g. [cçot̚ʃɿ], [cçot̚ʃɿ̌], [cçot̚ʃɿ̎], [cçot̚ʃɿ̋]. In my view, *jiùh shih* is an interjection because its original meanings grammaticalised. It does not have a strong lexical meaning anymore. It is mainly used to structure sentences now.

§ 5 The power of the microphone

The most reliable way to study conversational interjections is by examining cases of actual use, because of the *observer's paradox* I mentioned earlier. I have tried to minimise this undesirable influence by not telling my speakers about my research objectives. However, we must consider the possibility that the very fact that they sat in front of a microphone alone already influenced their behaviour. After all, many speakers have an idea about how their native language should sound, and try to speak that way when being investigated.

We might hypothesise that from the moment I left them to finish their tea, they might have felt less nervous and pressured because they thought they were not officially talking into a microphone anymore. If this is the case, I may find a difference between the interjections they use in Part B and Part C.

Circumstances thus present us with a unique opportunity to test this hypothesis: Does the presence of a running microphone have an influence on the use of interjections by my speakers?

In order to answer this question, I have listed the interjections used in the first and second parts of the conversation for comparison. They are structured per category. First bonding, second structuring, third backchannel, fourth exclamatory, and after that interjections that could belong to multiple categories.

Some interjections sound slightly different, but I listed them in the same row. For example [eiʔ], [eiʔ], [ei:], [ei] and [eiʔ]. Although the tone, length or breathiness of interjections might slightly differ, if they have exactly the same function, I counted them as instances of the same interjection.

When comparing numbers in the first and second parts, it is important to take into account that the first part takes 13 minutes and 11 seconds, while the second part only takes 9 minutes and 16 seconds. This has to be taken into account when comparing Part B and Part C.

An overview of the division of the recording into different parts can be found in Table 10 below. The tables below that show the frequency of the categorized interjections from Part B and C of my data.

Part	Time	Duration
A	0:00 – 4:42	4' 42"
B	4:42 – 17:51	13' 11"
C	18:41 – 27:57	9' 16"
D	27:57 – 28:50	0' 53"

Table 10: Division of the recording

Interjection	Gloss	Pinyin	Part B	Part C
Backchannel			88	51
a, ā, a:, a:, aʎ, āʎ, āʎ, aʎ, āʎ, ā:ʎ, āʎ, a:ʎ, a:ʎ, a:ʎ, a, ā, ɔʎ	B-AFF	ah	30	7
ei, ei:, ei, ʎeiʎ	B-AGE	eih	5	3
tweiʎ maʎ hoʎ	B-AGH	duih mah hoh	0	1
m, m:, mʎ, ʎmʎ, m:ʎ, m:ʎʎ, m:ʎ, mʎ, mʎ, ʎm, ʎ	B-AGM	mh	16	12
ʎmʎmʎmʎm	B-AGL	mmmh	0	1
āʎ	B-AGR	enh	0	1
twei, tweiʎ, ə twei, aʎ tweiʎ, e:ʎ twei	B-AGT	duih	17	6
m mʎ, ʎʎ ʎʎ ʎʎ, ā:ʎ ā:ʎ ā:ʎ, ā ā ā ā ā	B-AMR	mh mh	1	3
t- twei twei twei, twei twei twei, twei twei, tweiʎ tweiʎ ā, m twei a twei a twei a, a twei a twei a twei ə, tweiweiweiwei	B-AST	duih duih duih	2	6
ʂʂ	B-ATB	shih	1	0
hei, heiʎ, hēi	B-CFM	heih	1	3
twei a, ɔ tweiʎ a, tweiʎ a, ei twei a	B-COR	duih ah	5	7
a:ʎ aha aha, a a: ɔʎ, ā: ā:	B-LAG	ah ah	3	0
ɔkei ɔkei haɔ	B-OOR	okeih okeih haoh	1	0
ha ha ha haɔ	B-RAR	hah hah hah haoh	1	0
haɔ, m haɔ, haɔ	B-RRT	haoh	2	1
ɛ, ɛ, ɛ:	B-YSR	eeh	3	0

Table 11: Frequency of backchannel interjections

Interjection	Gloss	Pinyin	Part B	Part C
Exclamatory			22	12
t↓	E-CLK	th	2	0
m1, mʌ, m:ɹ	E-CNF	mh	1	2
ei1, ei1, ei, ei1,	E-CUR	eih	4	1
wa	E-EXI	wah	1	1
kʉ kʉ kʉ kʉ kʉ	E-PSU	ph ph ph ph ph	1	0
ɔ tʂən dɔ	E-RLY	oh zhenh deh	0	1
a, aʌ	E-SPR	ah	1	2
ɔ, ɔ1, ɔ1, ɔʌ, ɔ1	E-SRP	oh	7	4
ɔ: ɔ, ɔ ə, ei ɔ1	E-SRR	eih oh	2	1
h↓	E-SUR	hh	1	0
ɛ1	E-WHT	eh	1	0
tʰien a	E-WOW	tianh ah	1	0

Table 12: Frequency of exclamatory interjections

Interjection	Gloss	Pinyin	Part B	Part C
Structuring			61	48
cɸh1ʂz1, cɸi1ʂz1, cɸh1ʂz1, cɸh1ʂz1, cɸh1ʂz1, cɸh1ʂz1	S-ACT	qíshíh	7	1
tweiʌ, twei	S-AGT	duih	10	9
twei a	S-COR	duih ah	5	2
tsei jaŋ	S-FIN	zheyangh	1	0
cɸɔɔ ʂz tɔəjaŋ	S-ILT	jiuh shih zheyangh	1	0
cɸɔɔʌ ʂz1 ʂɔ1, cɸɔɔʌ ʂɔ, cɸɔɔ ʂɔ	S-IOW	jiùh shih shuoh	2	1
naʌ, na1, na	S-ITC	nàh	1	4
cɸɔɔʌ, cɸɔɔ, cɸɔɔ?	S-JST	jiuh	1	6
cɸɔɔ ʂz, cɸɔɔʌ ʂz1, cɸɔɔʌ ʂz1, cɸɔɔʌ ʂz	S-JUT	jiùh shih	11	9
na1ʰioʌ, na1ʰioɔ, na1ʰioʌ1, naʰioɔ, naʰioʌ, zɸ1ʰioʌ	S-THN	náhòuh	11	11
na1ʰioʌ nə	S-THP	náhòuh neh	1	0
naʌ cɸɔɔʌ ʂz1	S-TIS	nàh jiùh shih	1	0
neiʌkə, neikə, neiʌkə:	S-TKG	nèigeh	3	2
ə, ə:, əm:	S-UHH	eh	4	3
hei	S-YES	heih	2	0

Table 13: Frequency of structuring interjections

Interjection	Gloss	Pinyin	Part B	Part C
Bonding			35	13
hahah	O-LGH	hahah	35	13

Table 14: Frequency of bonding interjections

Interjection	Gloss	Pinyin	Part B	Part C
Backchannel/Exclamatory			39	31
ᵛᵛ cçoʋ	BE-CMS	oh jjuh	1	0
o:ʌ, oʌ, ɔ:ʌ, o:, ɔ:ʌ, o, oʌ, oʌ, oʌ, oʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ, ɔʌ	BE-CPR	oh	18	14
a, aʌ:, a:ʌ, a:, a:, aʌ, aʌ, ʋʌ, ʋʌ	BE-CPS	ah	8	1
oʌei, oʌʌeiʌ, oʌʌeiʌ, kei	BE-OKY	okeih okeih	0	7
ʃɔʌ o, o ʃɔʌ o, o ʃɔʌ ʋ, o ʃɔʌ a, a ʃɔʌ o, oʌ ʃɔʌ a, o ʃɔʌ aʌ	BE-ORT	oh shih ah	6	2
oʌkʰeiʌ wauʌ	BE-SPR	okeih wah	5	4
tʌ aʌ, kʰ o	BE-TOK	th oh	1	3

Table 15: Frequency of backchannel-exclamatory interjections

Interjection	Gloss	Pinyin	Part B	Part C
Backchannel/Bonding			1	1
hei: hahah, hei hahah	BO-YES	hei hahah	1	1

Table 16: Frequency of backchannel-bonding interjections

The most striking difference between Parts B and C is that the speakers laugh a lot more in Part B. They laugh 35 times in Part B versus 13 times in Part C. I think this is because in the beginning they do not know each other yet, and they might be nervous about talking to each other. They are also nervous about talking into a microphone in the beginning. As mentioned before, awkward feelings can be the cause of the excessive amount of laughing (Chafe 2009: 84).

There are also some backchannel interjections that are used a lot more in Part B. These are *duih*, and *ah*. *Duih* is used 17 times in Part B, while only 6 times in Part C. *Ah* is used 30 times in Part B, and 7 times in Part C. In the backchannel/exclamatory section, *ah* is used 8 times in Part B and just once in Part C. I cannot logically explain these large differences. Maybe these are coincidental outliers.

Concluding, aside from a few outliers, the interjections used in Part B do not differ much from those used in Part C. So it does not matter much whether the speakers think the microphone is on or off. This seems to be a counterexample to the *observer's paradox*, which would mean that observing a conversation does not influence the language.

§ 6 Conclusion

In order to describe interjections, I collected interjections from a contemporary spontaneous conversation between two Taiwan Mandarin speakers that I recorded in the Leiden University for Linguistics Phonetics Laboratory. I described these interjections by writing down their form as accurately as possible. Then, I placed them into categories I designed based on their meaning. After that, I discussed existing literature about interjections and compared it with my own data. Since there is no standard definition of interjections, I formulated my own definition based on my data.

As far as I know, interjections in Taiwan Mandarin have never been described on this scale before. My data and analyses can therefore shed light on the use of interjections in Taiwan Mandarin.

Furthermore, my recording consists of one part during which the speakers think the microphone is running, and another part during which they think it is off. These circumstances provided me with a unique opportunity to test whether or not the presence of a running microphone has an influence on the use of interjections by my speakers. Contrary to what might be expected, the interjections I found in the first part are very similar to the ones I found in the second part. This finding is very reassuring as it suggests that my recording reflects a natural language conversation.

This work aims to contribute to a wider discussion of interjections. As I hope to have shown, there remains a lot to learn about them. I hope this thesis inspires us linguists to direct our attention to interjections as a topic worth studying, as it sits at the heart of spoken language use.

Appendix 1 Data inventory

1 = female speaker

2 = male speaker

Interjections:

Time	Speaker	Interjection (IPA)	Type	Time	Speaker	Interjection (IPA)	Type
4:45	1	LGH	O	6:03	2	ɔʌ	B/E
4:45	2	LGH	O	6:07	2	neiʌkə	S
4:54	1	LGH	O	6:15	1	a ʂzʌ ɔ	B/E
4:55	1	a	E	6:16	2	twei	S
5:01	2	cçʰiʌʂzʌ	S	6:17	2	naʌʰioʌʌ	S
5:04	1	ã	B	6:27	1	LGH	O
5:09	1	ɦ↓	E	6:31	1	LGH	O
5:14	2	ei ɔʌ	E	6:35	1	a	B
5:16	1	ŋ	B	6:36	1	a	B
5:16	2	ɔ: ɔ	E	6:40	1	ɔ	E
5:17	2	wa	E	6:45	1	a	B
5:19	1	LGH	O	6:45	2	naʌʰioʌʌ	S
5:19	2	LGH	O	6:47	2	tsei jan	S
5:24	1	LGH	O	6:48	1	a	B
5:24	2	m	B	6:52	2	t- twei	B
5:25	1	LGH	O	6:57	2	hei	S
5:29	1	twei a	B	7:03	2	naʌʰioʌʌ nə	S
5:35	2	twei	B	7:09	1	ɔ:ʌ	B/E
5:36	1	twei a	S	7:13	1	a:ʌ	B/E
5:39	1	ei twei a	B	7:14	2	twei	S
5:40	1	neikə	S	7:21	1	mʌ	B
5:43	2	ɔ:ʌ	B/E	7:23	1	mʌ	B
5:44	1	twei	S	7:29	1	naʌ	S
5:53	2	ɔ	E	7:37	1	ɔ:ʌ	B/E
5:56	1	LGH	O	7:38	2	hei	S
5:56	2	ha ha ha haɔ	B	7:39	2	ʂzʌ	B
5:58	2	LGH	O	7:46	2	ɔ:	B/E
6:01	1	zãʌʰioʌʌ	S	7:47	2	ɔkei ɔkei haɔ	B
6:01	2	twei	B	7:47	1	LGH	O
6:02	1	LGH	O	7:49	2	ei	B

Time	Speaker	Interjection (IPA)	Type	Time	Speaker	Interjection (IPA)	Type
7:50	1	LGH	O	9:03	2	ɔkei	B/E
7:50	2	hei:	B/O	9:05	2	ɔʔ cços	B/E
7:50	1	mʔ	E	9:08	1	twei	B
7:52	2	LGH	O	9:10	1	twei	B
7:53	2	eiʔ	E	9:11	1	naʔ cçosʔ fʒʔ	S
7:56	1	twei	B	9:15	1	neiʔkə	S
7:56	2	twei	S	9:16	2	ɔ:ʔ	B/E
8:00	1	ãʔ	B	9:22	2	cçosʔ ʒo	S
8:00	2	cçosʔ fʒʔ	S	9:24	1	twei	B
8:04	2	ʔeiʔ	B	9:26	1	cçʰiʔfʒʔ	S
8:07	1	LGH	O	9:27	1	naʔfhoʔ	S
8:08	2	LGH	O	9:30	2	ɔ:ʔ	B/E
8:14	1	aʔ	B	9:31	1	twei	S
8:15	1	aʔ	B	9:31	2	ɔ	B/E
8:17	1	aʔ	B	9:33	1	ã	B
8:20	1	LGH	O	9:36	1	cçosʔ fʒ	S
8:21	2	LGH	O	9:39	2	ɔ	B/E
8:22	1	LGH	O	9:45	1	ã	B
8:23	2	ei	B	9:50	2	ɔ	B/E
8:26	1	twei a	S	9:53	2	a	B/E
8:26	2	aʔ tweiʔ	B	9:55	1	cçosʔ fʒʔ	S
8:30	2	e:ʔ twei	B	9:58	2	ɬʔ:	B/E
8:31	1	twei	S	9:59	1	tweiweiweiwei	B
8:36	1	ɔʔ fʒʔ a	B/E	10:00	2	ɔʔ	B/E
8:36	1	LGH	O	10:05	1	cçosʔ fʒ	S
8:39	1	tweiʔ	B	10:06	2	m:ʔ	B
8:44	1	ãʔ	B	10:08	2	hao	B
8:45	1	cçosʔ fʒ	S	10:10	2	m:ʔ	B
8:49	2	ɔ:ʔ	B/E	10:10	1	twei a	S
8:49	1	naʔfhoʔ	S	10:11	2	tʔ aʔ	B/E
8:53	1	cçosʔ fʒʔ	S	10:12	1	cçosʔ fʒ tsəjan	S
8:54	2	hei:ʔ	B	10:25	2	twei a	B
8:56	2	ɔʔ	B/E	10:29	1	ɔʔ	E
8:57	1	cçosʔ fʒʔ	S	10:36	2	cçosʔ fʒʔ	S
9:00	2	ɔkei	B/E	10:44	2	ɔʔ	E

Time	Speaker	Interjection (IPA)	Type	Time	Speaker	Interjection (IPA)	Type
10:44	1	twei	S	12:58	1	ã	B
10:45	2	kʈ kʈ kʈ kʈ kʈ	E	13:03	1	ɑ ɑ: ɔʎ	B
10:45	1	LGH	O	13:11	2	cçotʌ	S
10:47	2	ei:	B	13:13	1	m:	B
10:48	2	ei	E	13:15	2	cçotʌ ʃʒ	S
10:57	1	ʃʒʌ ɔ	B/E	13:18	1	ɒʎ	B/E
11:05	2	ɱm	B	13:20	1	ɒʎ	B/E
11:08	2	ɔ:ʎ	B/E	13:26	1	ɒʌ	B
11:10	2	mʎ	B	13:27	2	naɦotʌ	S
11:12	2	t↓	E	13:30	2	twei	B
11:14	2	t↓	E	13:33	1	a	B
11:15	2	ɔ:ʎ	B/E	13:34	2	cçʰiʃʒ	S
11:20	2	m	B	13:34	2	naɦotʌ	S
11:22	2	haɔ	B	13:41	1	LGH	O
11:23	1	twei	S	13:41	2	twei	B
11:31	1	ɔ	E	13:47	1	ɔ ʃʒʌ ɔ	B/E
11:32	1	ãʌ	B	13:55	2	əm:	S
11:46	2	m	B	14:05	1	mʌ	B
11:54	1	LGH	O	14:08	1	ɔ ʃʒʌ ɔ	B/E
11:56	1	LGH	O	14:14	2	ɛ	B
12:07	1	ã: ã:	B	14:14	2	cçʰiʎʃʒʎ	S
12:14	2	ei	E	14:17	2	cçotʌ ʃʒʎ ʂɔʎ	S
12:15	2	cçʰiʎʂzʎ	S	14:21	1	a	B
12:17	1	ɔ ʂzʎ aɔ	B/E	14:21	2	naɦotʌ	S
12:20	2	naɦotʌ	S	14:27	2	ə:	S
12:22	1	ɱm	B	14:27	2	cçʰiʎʃʒʎ	S
12:23	2	naɦotʌ	S	14:33	1	a	B
12:31	2	cçʰiʎʃʒ	S	14:34	1	a	B
12:35	1	m	B	14:37	1	ɑ	B
12:39	1	ɔ	E	14:40	1	ɑ	B
12:40	2	ɛ	B	14:45	1	LGH	O
12:41	2	ə	S	14:45	2	LGH	O
12:42	1	ɑ:ʎ aɦa aɦa	B	14:46	2	naʎɦotʌ	S
12:47	1	ãʌ	B	14:47	2	eiʎ	E
12:52	1	ɱm	B	14:49	1	twei a	B

Time	Speaker	Interjection (IPA)	Type	Time	Speaker	Interjection (IPA)	Type
14:49	2	LGH	O	17:08	2	twei a	B
14:51	1	LGH	O	17:18	1	ẽ:ʋ ẽ:ʋ ẽ:ʋ	B
14:54	1	a	B	17:22	1	ã:ʋ	B
14:55	1	a	B	17:25	2	ə	S
14:56	2	twei a	S	17:30	2	twei	B
14:58	2	ɛl	E	17:35	1	twei a	S
15:01	1	LGH	O	17:38	2	cços ʃʒ	S
15:06	2	ɔʎ	B/E	17:43	2	LGH	O
15:08	2	ɔ	E	17:43	1	LGH	O
15:08	1	twei	B	17:50	2	ɔkei	B
15:09	1	twei	B	17:51	1	twei	S
15:12	2	ɔkei	B/E	18:43	2	kθ ɔ	B/E
15:16	2	LGH	O	18:47	1	ɔ ʃʒ ɐ	B/E
15:25	1	twei	B	18:53	2	twei	S
15:29	2	m	B	18:58	1	ʔmʋ	B
15:38	2	ɑ:	B/E	19:04	1	ɔl	B/E
15:43	2	ɑ:	B/E	19:17	2	tweitweitwei	B
15:44	2	ɹʎ	B	19:19	2	naʎ	S
15:45	1	twei	S	19:25	1	m	B
15:47	1	cços ʃʒ	S	19:27	1	ɔ:ʎ	B/E
15:53	2	ɔkei	B/E	19:30	1	ɔʎ	B/E
15:56	2	LGH	O	19:44	1	ɑʎ	B
15:59	2	ɛ:	B	19:46	1	ŋʎ ŋʎ ŋʎ	B
16:05	2	a:	B/E	19:49	2	wa	E
16:20	2	ɔ:ʎ	B/E	19:54	1	ɔʎ	B/E
16:31	2	a:ʎ	B	19:54	2	cços	S
16:34	2	a:ʎ	B	20:00	1	LGH	O
16:40	1	twei	B	20:00	2	LGH	O
16:42	1	twei	B	20:07	2	ɔʎkeiʎ	B
16:44	2	tʰien a	E	20:10	2	cços	S
16:45	2	ei	B	20:11	1	cços	S
16:48	2	ɹ:	B	20:13	2	naʃios	S
16:49	2	LGH	O	20:16	2	kθ ɔ	B/E
16:52	2	ɹ:	B	20:17	1	LGH	O
16:58	2	ɔ:	B/E	20:18	2	kθ ɔ	B/E

Time	Speaker	Interjection (IPA)	Type	Time	Speaker	Interjection (IPA)	Type
20:21	2	ɔʌ	B/E	22:13	2	m:ʌ	B
20:23	2	ɔʌkʰeiʌ wauʌ	B/E	22:13	1	LGH	O
20:23	2	twei	S	22:18	1	LGH	O
20:26	1	cçɔɔ ʃʒ	S	22:26	2	ə	S
20:30	2	kei	B/E	22:29	1	ẽ ẽ ẽ ẽ ẽ ẽ ẽ ẽ ẽ ẽ ẽ	B
20:33	2	cçʰiʃʒ	S	22:31	1	twei twei twei	B
20:34	1	ɔ tweiʌ a	B	22:31	2	twei twei	B
20:36	1	cçɔɔ ʃʒ	S	22:37	2	cçɔɔ ʃʒ	S
20:39	1	cçɔɔ ʃʒ	S	22:39	1	naʃioʊʌ	S
20:45	2	ɔʌ	B/E	22:41	2	m mʌ	B
20:47	2	ɔkei	B/E	22:47	2	m	B
20:48	1	twei	S	22:48	1	naʃioʊ	S
20:49	1	twei a	B	22:53	2	ɔ ə	E
20:51	1	twei	S	22:57	2	ei	B
20:55	2	ɔkei	B/E	22:58	2	twei	B
21:11	2	naʃioʊ	S	23:01	1	ẽʌ	B
21:17	2	twei	B	23:05	2	naʌʃioʊʌ	S
21:18	1	twei	S	23:10	2	tweiʌ maʌ hɔʌ	B
21:24	2	ɔkei	B/E	23:13	2	tweiʌ a	B
21:27	2	m̩m̩m̩m̩m̩m̩	B	23:14	2	neiʌkə	S
21:32	1	mʌ	B	23:17	2	naʃioʊʌ	S
21:33	1	twei a	B	23:20	1	m	B
21:38	2	m	B	23:23	1	ã	B
21:40	2	a twei a twei a twei ə	B	23:26	1	m twei a twei a twei	B
21:42	1	ŋ	B			a	
21:43	2	ɔ	E	23:29	2	ɛi	B
21:46	2	LGH	O	23:29	1	twei a	S
21:47	1	LGH	O	23:36	1	ɑʌ	B/E
21:53	1	twei	B	23:39	2	ə:	S
21:53	2	ɔkei	B/E	23:44	1	tweiʌ tweiʌ ẽ	B
21:56	1	ɔ ʃʒʌ ɑ	B/E	23:52	1	m	B
21:59	2	ɔkei	B/E	23:53	1	m	B
22:01	2	ɔʌ	B/E	23:54	2	naʌʃioʊʌ	S
22:06	1	twei a	B	24:01	2	naʌʃioʊʌ	S
22:11	2	ɔkei	B/E	24:08	2	cçɔʊʌ	S

Time	Speaker	Interjection (IPA)	Type	Time	Speaker	Interjection (IPA)	Type
24:22	1	mʌ	E	26:05	2	cços ʃɜ	S
24:27	2	naɫ	S	26:08	1	ã	B
24:30	1	o	B/E	26:13	2	oɫ	E
24:30	2	cços ʃɜ	S	26:14	2	hēĩ	B
24:33	1	ã	B	26:28	2	LGH	O
24:36	2	oɫ	E	26:20	2	o	E
24:43	1	eiɫ	E	26:33	2	cços ʃɜ	S
24:44	2	naɫ	S	26:36	2	naɫhioʊɫ	S
24:47	2	okei	B/E	26:39	1	õ	B/E
24:49	2	hei	B	26:42	1	ã	B
25:03	2	LGH	O	26:44	1	oɫ	B/E
25:07	1	cços	S	26:53	2	ə twei	B
25:07	2	oɫ	B/E	26:54	1	twei a	S
25:08	2	a	E	26:56	2	hei LGH	B/O
25:09	1	twei a	B	27:02	2	oɫkeiɫ	B/E
25:09	2	o:ɫ	B/E	27:04	2	LGH	O
25:12	1	m:ɫ	E	27:07	2	LGH	O
25:18	2	naɫhioʊɫ	S	27:12	2	hei	B
25:19	2	naɫhioʊɫ	S	27:17	2	m	B
25:23	1	o tʃən dɔ	E	27:18	1	twei	S
25:26	2	ə:	S	27:23	1	ã	B
25:27	2	ei	B	27:36	2	cçosʔ	S
25:28	1	cços ʃɜ	S	27:38	2	cços ʃɔ	S
25:30	2	m	B	27:42	1	o:	B/E
25:35	1	m haɔ	B	27:43	2	na	S
25:37	2	aɫ	E	27:44	2	twei	B
25:40	2	cços ʃɜ	S	27:45	1	twei	S
25:41	2	neiɫkə:	S	27:48	1	twei	B
25:51	2	oɫ	B/E	27:48	2	twei	S
25:52	1	ã	B	27:55	1	twei a	B
26:01	2	LGH	O	27:57	2	twei	S
26:03	1	LGH	O				

Appendix 2 Participant information form

Dear participant,

I would like to invite you to take part in a study in which I hope to gain more knowledge about spoken Mandarin.

Procedure

The study consists of one session of about fifteen minutes. During the session I will be recording conversation in Mandarin between you and another participant. You may talk about any topic you like.

Voluntary participation

Participation in this study is voluntary. You can decide to withdraw at any time, without providing a reason.

Participant confidentiality

All information collected with regard to this study will be treated strictly confidentially. All data will be processed and stored anonymously, i.e. your name will not be used anywhere.

This research is coordinated by me, Myrthe Kroon. Please contact me if you have any questions or comments about this study. You can find her contact details below.

Consent

In order for you to participate in this study, I would like you to fill in a small questionnaire. My university requires me to have you sign a consent form.

Contact details

Coordinator: Myrthe Kroon

Telephone: +31 6 31492074

E-mail: m.kroon.4@umail.leidenuniv.nl

Appendix 3 Model consent form

By signing this form, you confirm that you have read and understood the participant information form. By signing this form, you also confirm that you agree to the study procedure described in the participant information form.

Date:

Place:

Name:

Signature:

Appendix 4 Speaker background data

Speaker 1

Gender: f

Date of birth (dd-mm-yyyy): 19-04-1993

Place(s) of growing up: Taipei

Native language(s) of mother: Chinese

Native language(s) of father: Chinese

Language(s) spoken: Chinese

	國語	台語	客家	其他 (即...)
母語	x			
Home	x	x		
Work	x			
School	x			
Friends	x			
Street	x	x		

Speaker 2

Gender: m

Date of birth (dd-mm-yyyy): 01-05-1985

Place(s) of growing up: Taipei, Taiwan

Native language(s) of mother: Mandarin Chinese

Native language(s) of father: Mandarin Chinese

Language(s) spoken:

	國語	台語	客家	其他 (即...)
母語	x	x		
Home	x	x		
Work	x			
School	x			
Friends	x	x		
Street	x	x		

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