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***“Nuances of Pronunciation in Chinese:
Lexical Stress in Beijing Mandarin”***

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“I cringe before the tyranny of fact...”

- Leonard Cohen, radio interview, Nov. 12 1963

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1. Preface

The pronunciation of Beijing Mandarin¹ is in reality not as straightforward as it is usually presented in general books on the language, nor in common textbooks². Much of the current literature in English³ on the subject commonly gives only basic, prescriptive (though supposedly *descriptive*) analyses of the basic features of pronunciation, and does

1 To replace “Beijing Chinese” with “Standard Mandarin” here, though it might have seemed more appropriate to some, seeing as Beijing Chinese was originally the basis for *Putonghua*, would in my mind not be entirely correct. What is colloquially referred to as (Standard) Mandarin is a lingua franca for all Chinese today, and is a partially synthetic language with no real “native” speakers, in that it is a formally a prescriptive “high” (see below) version of Beijing Mandarin. It has experienced diverse and widespread influences resulting in it being a *linguistic construct* more than a natural language, and has become very heterogenous; in the introduction to his *A Mandarin Phonetic Reader in the Pekinese Dialect*, the famous linguist Bernard Karlgren describes it as “- a sort of artificial, judiciously normalized dictionary language which may conveniently be called *High Chinese*.”. Due to the speakers of this partially theoretical and “idealized” form of Chinese constituting an extremely composite group, the language itself is far from uniform (despite uniformity being the goal for the over 50 years since its initial promulgation). The actual pronunciation of Standard Mandarin is therefore “polluted” to varying degrees by those who speak it, as of today around 900 million people, if not more should one include all those who have learnt it as a second language. It would be difficult to analyze and discover general patterns of word stress within it as such, despite there probably existing quite a lot of generally similar patterns across many, if not most, *topolects* (the designation emphasizing geographic location used to describe the many varieties of spoken Chinese, whether they can justifiably be called *languages*, *dialects*, or something else). Beijing Mandarin, however, is a true language/dialect/topolect, which is in this sense “pure”; the phenomena observed on the basis of Beijing Mandarin should in theory yield (at least comparatively) consistent results due to its assumed comparative internal homogeneity, and is therefore chosen as the object of study here. It is also the basis for the observations in the major sources referenced this thesis, in addition to being a pronunciation held in

generally not discuss finer points in any detail⁴. The treatment of, amongst other things, the aspect of *word stress* in mastering and indeed properly understanding Chinese, in this case the dialect of Mandarin spoken in Beijing, is thus neglected. Neither has it yet acquired the position in Chinese language-teaching it deserves, and arguably needs⁵, so that it may be learned as a second language in a more comprehensive manner.

high regard by most Chinese. For more on the different levels in and varieties of Mandarin, see *The Four Languages of Mandarin* by Robert M. Sanders (1987).

2 General books on the Chinese language from an overall linguistic viewpoint are too numerous to mention here. As for textbooks, neither the *Integrated Chinese* series (one of the most common basic textbooks used in Western countries) nor the *New Practical Chinese Reader* series (very common among foreign students in China) mention word stress in any of the numerous volumes in either series. Only the older edition of the second series, the *Practical Chinese Reader*, briefly sketches out relevant information about stress occasionally (more on this later). Three recent books in English that have chapters dealing specifically with stress are San Duanmu, *The Phonology of Standard Chinese*, Yen-hwei Lin, *The Sounds of Chinese*, and Matthew Chen, *Tone Sandhi* (see bibliography for details). Neither of these treatments provide much empirical data, and seem to underestimate the importance and prevalence of semantically distinguishing stress patterns and minimal pairs in Chinese. See separate chapter for a more in-depth discussion.

3 I do not assume that simply because no relevant material can be easily found in English that no research may have been done in a given area in other languages. The five major sources used in this thesis that all indicate stress patterns for Chinese lexical items are, as well as in English, in German, Russian, Czech, Japanese, and Chinese. See bibliography for details.

4 This is perhaps due to the nature of stress in Chinese, which is often seen as arbitrary. Harbsmeier (2009) points out that: “What has made lexicographic progress so difficult in the case of Chinese is that stress in Chinese can be variable.”. The principles governing this variability and the cases where variability is very minor should not be overlooked for this reason, however. The comparatively “over-studied” aspect of historical phonology in

This thesis will take a basic analytical approach to stress in Beijing Mandarin. It begins with the analysis of two selected aspects of word-level, i.e. *lexical*⁶, stress. The first is what I have chosen to call *supra-tonal stress* (where all syllables in a given word carry their full etymological tone value, but where one or more, depending on the length of the word, syllables are pronounced more heavily than others). The second is *neutralized syllable* (where the regular tone of one or more syllables are diminished or rendered neutral ("qīng/轻")⁷). I continue with a discussion of the more complex phenomenon of stress in words without neutral syllables.

Chinese is by comparison to that of stress just as “esoteric” (in the sense that it is not always easy to obtain unequivocal evidence). This does not mean that it is irrelevant.

5 The inclusion of stress assignment to words in Chinese dictionaries is something I have only found one example of in China. This goes to show that at least some scholars are slowly catching on with regards to being more descriptive than prescriptive in today's standardization frenzy within Chinese teaching. In my mind, with regards to Chinese, writing a dictionary that does not indicate any difference in stress patterns for minimal pairs would be like writing a dictionary in English and ignore that fact that *pro'gress* and *progress'*, or *conduct'* and *con'duct* are two pairs of very different words. This is true even though they are written with the same letters; in fact, this is comparable what has been done in tens of thousands of dictionaries produced in China until now!

6 I here ascribe to the meaning lexical stress that specific stress pattern associated with a particular meaning of a given reading of a word. For example, as mentioned in the previous footnote, the lexical stress pattern of the noun “progress” in the sense “forward movement” would be PRO'GRESS, whilst the verb “progress” in the sense “move forward” would be PROGRESS' (the apostrophe is appended to the emphasized, or *stressed*, syllable).

7 According to Egerod (1983), in words of two syllables there are two stress patterns in Mandarin: i.e. either strong stress – no stress, or weak stress – strong stress. He calls this *intersyllabic agreement* or *suprasegmental government*. This means that an element in one syllable makes it predictable what will happen in another syllable. I make note of this description of his, but do not follow it in this thesis, and find his sketch too brief to be very useful.

The thesis emphasizes the notion that the study of stress⁸, also called *accent*⁹, in common (mainly) two-character words¹⁰ is very important, and that it to a definite, though variable, degree has an influence on the cognitive nature of Chinese words¹¹. It is not merely important for aesthetic reasons (which any serious student of any language should in my opinion also must find relevant), but also for improving communication. As a part of learning Chinese, it enables the speaker/interlocutor to identify and understand the subsequent semantic subtleties brought on by these slight yet often crucial differences in how words are uttered¹².

8 To my knowledge, Carl Arendt (see chapter on methodology) is the pioneer, followed by Bernhard Karlgren, and only a few have done similar research after him, most of which are mentioned somewhere throughout this text. Arendt is the earliest source of stress assignment and it is therefore he who will remain my point of departure here.

9 I.e. the part of the word which is accented, meaning the sonically emphasized syllable (or sometimes even an intra-syllabic element, or *segment*) which not only distinguishes minimal pairs, but are also inherent features of most words regardless of whether that particular word has any homophones or near-homophones.

10 The phenomenon of stress is relevant and the principles for its identification applicable to words of all sizes, though the two common *binomes* (two-character words) used as examples below serve quite well to indicate the basic principles, and indeed pervasive presence of stress. This is true for these examples even when they are divorced from the context of a spoken sentence influenced by pragmatic markers and *contrastive "logical" stress* (this term refers to an argumentative focal stress which governs a sentence and may run counter to the stress in individual words).

11 For more on the problems of attempting to define what a word is in Chinese, see Jerome L. Packard (2000).

12 "...how words are uttered" does not in this case refer to any pragmatic markers (such as speed, tone of voice, acoustic loudness, etc.) and their influence on how a word is pronounced, but to the relative light or heavy quality of the word segments.

2. Introduction

The motivation behind this investigation into stress in Beijing Mandarin is that the work begun here may perhaps begin to fill a lacuna in the teaching of Chinese as a second language. The aspect of stress in the field of Chinese phonology, as well as its general linguistic significance in Chinese, has hitherto been largely neglected¹³. It is only right to mention at the outset that there are those who believe that stress does not exist in Chinese; that it is subject to those same principles that govern contrastive stress, which arguably exist in all languages, but that *lexical stress* is not a pervasive and consistent factor. Therefore, before I get into attempting to demonstrate that lexical stress is indeed important in Chinese, I must to mention the following:

It is indeed strange that, amongst other works, the huge volumes such as those of *The Great Chinese-Russian Dictionary*¹⁴ has been written to describe a phenomenon that supposedly does not exist. Not to mention the other several, if not equally comprehensive works, that I have consulted for this paper, that also posit that lexical stress is relevant (and indeed documents it richly). Even stranger is it that a new dictionary, the *Qingzhong Geshi Cidian* has recently been published in Shanghai by a group of southern Chinese scholars (stress is sometimes thought to be more prominent in Northern Mandarin dialects). Not only do the scholars behind this work argue that stress is vital in the performing arts and particularly broadcasting, to ensure the audience's proper comprehension, they have also created a rather large dictionary of high-frequency words marked unequivocally for stress¹⁵.

13 The study of stress can also be subdivided, and can be said to be part of the more general study of prosody. However, though the study of variable sentential/phrasal stress is also a relevant topic, it is too large to be dealt with here. While a comprehensive study of all aspects of Chinese phonology would of course also include this, the goal of this thesis is to delineate those aspects of stress which are limited to common colloquial words and minimal pairs, and to assess those syntactical rules which govern stress in the structure of words.

14 *Bol'shoj kitajsko-russkij slovar'* (1983)

15 Not only is this dictionary extremely valuable because it is very new and thus reflects

In addition to the above-mentioned, a rather sizable corpus has been consulted for this thesis, demonstrating that *several prominent scholars* have thought the topic of stress to be important. Nonetheless, Harbsmeier (2009) points out: *“Two things have made lexicographic progress on this so difficult in the case of Chinese. One problem is that since in articulatory terms basic frequency and pattern of changing frequency are taken up by the Chinese tonal system, stress cannot simply be expressed by high frequency, and in terms of audial perception, pitch cannot simply function as an indicator of stress. What does so function, however, is primarily greater duration of the stressed syllable, and in addition the “exaggeration” or hyper-specification of the physical contours of the tone of a syllable that is stressed, loudness apparently playing a much lesser role in the articulation of stress in Chinese.”* This difficulty has apparently not daunted everyone, however; he continues: *“The other more serious problem is that stress in Chinese is so often variable. Even a lexically toneless Chinese syllable can receive a tone in a variety of contexts: a lexical qīngshēng 輕聲 will in various contexts (e.g. when one is trying to make clear what character it is written with) be pronounced with its etymological tone. (See Zhāng Xúnú 1957:7) But in ordinary circumstances qīngshēng 輕聲 will certainly not be pronounced with stress on the second syllable as qīngshē'ng. In fact, the latter pronunciation makes the word almost unrecognisable in ordinary discourse, except when there is contrastive “logical” stress which is irrelevant to our purposes.”* Thus, due to the scientific object's inherent complexity, the existing material on stress is comparatively limited. That in itself, however, says nothing of the object's existence. Hopefully this thesis, rooted in these sources, will say something about it.

Before I begin, it should be mentioned that nowadays there are computer programs such

the current language, but it is also made by not just by one, but by a team of scholars who have *been able to agree* upon the stress patterns of core vocabulary (meaning that the phenomenon is perhaps not as arbitrary as many suggest).

Øystein Krogh Visted M.A. Thesis Autumn 2011 *Nuances of Pronunciation in Chinese* as Praat¹⁶ which can quite conclusively indicate the stress patterns of any sound recording¹⁷, rendering the identification of them rather simple, given an internally consistent raw material (i.e. one speaker or one dialect etc.). The scholar Švarný has in his work *Učební slovník jazyka čínského*¹⁸ analyzed sound recordings with the aim of identifying stress in single-syllable words¹⁹. But the *Einführung In Die Nordchinesische Umgangssprache*, a textbook for Beijing Mandarin written in the late 1800s by linguist Carl Arendt, is my main source for stress assignment here in this thesis. I should say that while this may seem secondary because it is older material and one is not able to listen to his sources anymore²⁰, Arendt's as well as the others' data represents important meta-information, which is what I will base myself on. This is to get a more complete picture of the study of the history of stress as well as to sort out what has been said about it previously. I leave first-account empirical data such as recorded speech from informants etc. as the logical next step in a future potential expansion of this thesis. Lastly, I must mention that I have felt it is my duty to concentrate on the counter-evidence of the regularities of stress in many of my analyses, but this is not because there is too much of it. It is because counter-evidence is of greater theoretical interest than the majority of

16 Praat (the Dutch word for "talk") is a free scientific software program for the analysis of speech in phonetics. It has been designed and continuously developed by Paul Boersma and David Weenink of the University of Amsterdam. The program supports speech synthesis, including articulatory synthesis.

17 The linguist Bernard Karlgren also suggested early on his chapter on stress in *A Mandarin Phonetic Reader in the Pekinese Dialect* that instrumental research would enable us to distinguish a lot of degrees of stress, but agreed that for all practical purposes, three degrees would be quite sufficient. The Qingzhong Geshi Cidian and several others do the same. More on this later.

18 "*Dictionary of the most frequent monosyllabic sememes of Chinese*".

19 A very fine type of analysis not immediately relevant to my focus here, but definitely an important part of a more comprehensive approach to stress in Chinese.

20 All my sources may be said to have weaknesses. For instance, the Qingzhong Geshi Cidian for all its strengths is still very likely somewhat prescriptive, the Great Chinese-Russian is too mechanical in its application, not observation, of rule based stress patterns on its vocabulary, etc.. Nonetheless, they represent important reference sources.

“regular” evidence which again and again confirms the view that Beijing Mandarin²¹ is a language in which stress plays a substantial and largely predictable role.

2.1 Thesis Background

The background for this thesis and my wanting to write about the topic of nuances in Chinese pronunciation began in 2005 when I was an exchange student at Fudan University in Shanghai. I was at the time studying Mandarin at an intermediate level, and was for the first time fully immersed in a Chinese speaking environment. I was also introduced to large-scale teaching of Chinese language at one of China's premier higher learning institutions. I found myself in a highly stimulating environment, and although I already had a solid basis in Chinese from before, I was surprised to see how many of the other international students had reached very impressive levels of colloquial Chinese. Other students from Asian countries understandably often had an advantage over many European and American students for obvious reasons, but also among Western students there were many who were very fluent. The learning curve for myself, partially spurred by this motivating environment, rapidly became very steep. I found myself opening up to a less stringent (less rule and grammar-focused) way of learning Chinese, and instead found that emulating native speakers was the way to go. One thing which had always been important for me before when studying other languages was my emphasis on pronunciation. In English, French and German that I had studied before this was always an interesting and important part of the process for me. However, what struck me quite early while studying Chinese in China was that amongst those students who I admired for their obvious great efforts and skills, was that somehow almost none of them seemed to me to *sound* like Chinese people when they spoke. To be sure, their grammar, vocabulary, and pronunciation of the tones were all very solid, and one could not be help but notice their hard-earned “correctness”. Still, when I closed my eyes or heard them speaking down the hall, I was somehow immediately able to distinguish them from their native-speaker

²¹ Beijing Mandarin being the basis for Modern Standard Chinese, *Putonghua*, I assume that much of what we may discern of stress in the Beijing dialect also applies to Standard Mandarin.

interlocutors. A certain “staccato” quality in their speech immediately identified them as foreigners. Having a feel for language and being able to absorb the sounds of a foreign tongue is a very individual thing, and many never quite master it even though they may become very fluent in other aspects of a language. But, I was not quite willing to simply relegate the lack of “authenticity” in their pronunciation simply to the realm of a personal flair for languages quite yet. The most obvious of my observations was that of the importance of authentic sentence prosody (and the prevalence of word stress), which was obviously alive and clear in the Chinese language no doubt, but these aspects seemed to get lost in the rather static representation of words and sentences taught to foreigners. Simply knowing the vowels and consonants and tone of a word is *not* the whole picture when it comes to pronouncing Chinese the way it actually sounds in the living language, and I will try to show this here.

Based on the understanding sketched out above, in the case of Chinese, and in particular in conjunction with the Chinese language craze that is currently sweeping most of the world, I am of the opinion that word stress patterns can be taught in parallel with the methods that are currently used. It can with great benefit augment the learning process for students around the world. The learning of prosody in any language is often what is called “getting a feel for the music of the language”. It is usually something which is not taught but instead “absorbed” by those with a flair for languages and never quite mastered for those without it. However, I believe that the gap between “proper” but somewhat unnatural pronunciation by foreigners speaking Chinese and a more authentic way of speaking can be narrowed by incorporating the study of common stress patterns into the teaching of Chinese. As the end goal in learning a foreign language is to eventually speak it “natively”, Chinese teaching should in my opinion in the 21st century not be content to focus solely on basic, prescriptive phonetics, and the study of word stress is in my mind a part of the more comprehensive approach which should eventually assert itself.

2.2 The Tang Yunling Sound Recordings

Madame Tang Yunling in cooperation with Oldřich Švarný created in 1967-70 what is the

world's first extensive audible record of the language of one person; the *idiolect* of Tang Yunling. Tang Yunling has recorded her own personal explanations of and observations related to almost the whole list of vocabulary items from the 1984 edition of the Hanyu Pinyin Cihui. Although the corpus is limited to those words contained in the Cihui list and is not a complete record of all her own vocabulary (which it would be impossible to ask a person to freely read out from memory), it nevertheless documents *her* personal understanding of the majority of words listed in the *Pinyin Cihui*. Words which do not require any in-depth analysis are skipped, and so are words that she has no clear sense of. But, one of the most interesting aspects of this corpus is how she uses comparatively greater time and effort to discuss words or concepts that have particular significance for her, and thus provides insight into one individual's own linguistic universe; her idiolect.

Starting in 2008, as a branch of Christoph Harbsmeier's *Thesaurus Linguae Sericae* project, I began the process of editing these sound files by cutting each word and the part of each sound recording related to it into separate files. These individual files upon the completion of this work be attached to dictionary entries in the TLS database, so that users may hear the explanation of a given lexical item as understood by a native speaker. Needless to say, this will be a unique language learning situation for pupils; not only may one look up a word electronically, but one may also hear a lengthy interpretation of that word and hear it used in many different contexts. This takes the concept of a dictionary to a whole new level, and will be hugely helpful for students of modern Chinese.

It is a also unique starting point for studying Chinese phonology. Had the scope of this thesis been larger, I might have chosen to focus on the patterns and rules of stress in whole sentences using the TYLIP files as source material. Not only is the material very rich in documentation (more than 1200 hours of tape!), but it is also as close to natural language as any other material would be. She talks freely and with expression completely without any prescriptive parameters, comments extensively on questions of pragmatic context, and provides many sociolinguistic perspectives.. As this material is still undergoing editing and organization, to transcribe a given section from the sound files and analyze it here would be premature and unmanageable, and I have thus limited myself to *written*, secondary sources of stress.

2.3 Sources and Methodology

The *Stress Assignment Comparison Chart* is the name of the empirical contribution of this thesis. It has been compiled with the aim of providing a comparative account of what the sources I have used (which provide data and not just theory) have to say about the stress patterns of a selection (about 500 words, “multiplied” by 6 different sources) of high-frequency vocabulary items. Some may not be interested in the theoretical background for stress in Beijing Mandarin, and simply want to look up what stress patterns have been cited for a particular word. In such cases one may consult the chart and deduce from the between 1 and 6 cited forms of that word and see if they are consistent or inconsistent amongst themselves, and thereby draw one's conclusions²². This thesis is a tentative examination of a cross-section of available meta-data on word stress in Beijing Mandarin; it documents what leading scholars have registered about stress.

The Comparison Chart also has a column referring to numbered sections in the body of the thesis that attempts to tentatively group various *same principle-governed* classes of words that I have taken from the chart after its compilation. These numbered sections try to make sense of the syntactic or logical structure which underlies the overt citation form stress patterns that are either fixed inherent or variable qualities of the words in question.

The vocabulary list, due to the sources themselves as well as time and space constraints, is by no means exhaustive. Hopefully, it will provide sufficient examples to give a basis for stating rules or at least general tendencies and patterns of stress assignment in Beijing Mandarin, while also functioning as a handy reference of stress of some common Chinese words. The list itself may of course be greatly expanded beyond what has been possible here, but is a starting point of a discussion stress in Chinese based on the available

²² For instance, if there are more than two examples of a word in the chart, and they are marked the same for stress, one may conclude that the most common stress pattern for that lexical item is hereby tentatively documented. This is at least true as a citation form of that word, regardless of what common variations occur in the most frequent usages of that word in the type of sentences it occurs.

sources²³. The empirical basis for this thesis is thus, as emphasized above, all metadata; it is a systematization and discussion of what others have said about the issue, not a first-hand piece of fieldwork attempting to document stress patterns from, say, recorded speech of native-speaker informants. This may in the future be a logical continuation of the work presented in this thesis, but it seems a good starting point for the potential future expansion of research in this field to first treat the available earlier sources on the topic.

I now turn to an introduction to the main source, Carl Arendt's *Einführung in die Nordchinesische Umgangssprache*, followed by briefer sketches of the other five sources and their main characteristics. The goal of this thesis is not to determine which of the sources is more "correct" in terms of correctly transcribing Beijing Chinese, since there may be many reasons for the variations occurring among the sources. However, it may be useful to consult the chart to see to what degree there is correspondence among the sources, which can lead us to conclude that certain vocabulary has a fairly fixed stress contour²⁴.

The Einführung in die Nordchinesische Umgangssprache (Carl Arendt)

Carl Arendt's *Einführung in die Nordchinesische Umgangssprache* (1894) is in most ways just a regular textbook for learning basic Beijing Mandarin. Consisting of three parts, the first of which is a general survey of the Chinese language and relevant aspects of its history, typography etc., the second and third part being graded lesson texts with their accompanying Chinese character texts. It introduces the reader to all the basic vocabulary and sentence patterns of the Beijing Mandarin current at the time, and apart from some quaint observations and interesting old-fashioned vocabulary, it is not so different from modern textbooks. What sets Arendt's primer apart²⁵ from the language of most current

23 On the theory side of things, I have not ventured deeply into the Chinese-language discussion of stress, but will in this case limit myself to metalinguistic sources from mainly foreign observers.

24 These may in turn be taught to students of Chinese, and grasping the underlying rules of the stress patterns of these words should also be a goal.

25 Though I personally tend to think that a work of science or literature should speak for

textbooks is the degree of meticulousness with which he presents his material. It is truly a masterpiece of linguistic ethnography, and is particularly valuable when it comes to his sense of detail on descriptive phonology. The transcribed lessons texts, which use a notational system devised by Arendt himself but which is similar to the most common early transcription system Wade-Giles. Arendt's system is more comprehensive for recording minute features by far than is modern Hanyu Pinyin or Wade-Giles, and with regard to the stress patterns it indicates, all other common transcription systems as well. The most important feature of his transcription is that it uses an accent mark " ' " to indicate which syllables in a word or sentence are stressed. In fact, Arendt uses the apostrophe after the *vowel* where the stress is located. He is thus finer in his analyses than the other, later sources which also employ the apostrophe, by noting the intra-syllabic location of the stress, and not just the stressed whole syllable. The discussion of the intra-syllabic location of the accent is not the focus of this paper, because it belongs to the realm of a much finer phonetic analysis and is not entirely relevant to the points that are discussed here. Suffice to say that it is very interesting to note, and has so been left intact when I have transferred transcribed vocabulary from Arendt to the Comparison Chart. However, because Arendt records very small details, there are unfortunately some small mistakes and discrepancies. He also discusses vocabulary items very selectively and does not give citation form phonetic notation consistently for words in isolation. I have tried to use good judgement when encountering such cases, correcting obvious mistakes when importing the words to the Comparison Chart, and made a note when he does not give stress assignments. In many of these cases it is possible that he thought there was no specific pattern, or that there was a so-called "double peak" structure (i.e. where both syllables in a two-syllable word are equally stressed).

The genius of Arendt lies in the fact that he has recorded in writing and indeed teaches his Chinese in the way that he heard it as he learned it himself. In contrast with most textbooks therefore, and in particular the textbooks using pinyin transcription today, he

itself in terms of quality, which the books of Carl Arendt do in a striking fashion, it should not be swept under the rug that Arendt was himself a student of some of the finest scholars of his century, including German linguist and sinologist Georg von der Gabelentz (16 March 1840 - 11 December 1893).

strictly *descriptive* of how Chinese is actually spoken, unlike the language policy-flavored prescriptive paradigm of pinyin and current standardization-oriented language planning and teaching today. Carl Arendt is simply a few steps ahead of the rest (though more than a century earlier!) in that the Chinese he teaches is very authentic and gives students a better understanding of Chinese pronunciation. Because Arendt also transcribes words as they occur in live dialogue, the prosodic environment influences the stress patterns he gives. It has therefore not been enough for me to simply pick them out randomly; a larger study would examine each occurrence of specific words and their prosodic environment analyzed. I have had to limit myself here, and base myself largely on the citation forms of his lexical items as they occur in the glossaries to his lessons, and take them only from as prosodically neutral a place as possible when excising them directly from the lesson texts.

There are many different ways I could have approached the Arendt material. With more time and resources, every instance of every vocabulary item occurring in Arendt's book could have been located and a statistical survey could have been made showing how many times a word occurs, thus also comprehensively revealing what variations occur of those words, and in which significant specific contexts. My approach falls somewhat short of this, as I have limited myself to approximately the first 25 lessons, extracting the vocabulary I myself consider to be relatively high-frequency lexical items. Summarized, if I have found a citation form of a word in the lesson glossaries, I have used that one as a starting point, if it is not explicitly cited in the glossaries, I have use the first occurrence of a word in a lesson text. Then I have placed these words into an excel-sheet, about 500 in all, alphabetized them, and transcribed them exactly the way they are in Arendt's text. Then I have found their corresponding transcribed forms, if available, in the other five sources, for comparison. I have chosen the words in Arendt based on the the subjective criteria of relevance, so that words like for instance the names of historical reigns like Guāngxù 光绪 and Tóngzhì 同治 have not been included (though these indeed are also marked for stress, I have generally attempted to compile a list of highly usable and colloquial vocabulary).

Selected words chosen on the basis of any criteria that are relevant to the discussion of rules and or consistent patterns of stress have been given a number on the Comparison

Chart. Words that belong to “groups” on the basis of their relevance to any important points I have chosen to discuss have been given a numbered analysis number. Thus, words that are natural to discuss together because they share similar traits will be listed in the analysis section (or at least a representative selection of them), but they may be scattered far apart on the wordlist itself. They do, however, have the numbered analysis number attached to them, so that one may see if a given word belongs to the group and adheres to the same principles as those described in the analysis section²⁶.

My main point of departure has been that Arendt's book is the earliest and thus most important (if not the only) source for stress assignment in the Beijing Mandarin of his period (late 1800s) and Wang Fangyi's Dictionary of Spoken Chinese is the primary source for modern stress assignment (1950). The phonological changes in Beijing Mandarin in the last 200 years have not been dramatic, and the changes since World War II have been negligible. The Great Russian-Chinese Dictionary is from the 1980s and in this regard could be considered the most current and thus take precedence when there is a deviation between Wang Fangyi and Arendt. However, there are some important distinctions that must be made about the different characteristics of these sources: Arendt's book and Wang Fangyi's dictionary are relatively short and contain for the most part colloquial vocabulary from the everyday Beijing Mandarin language. They are thus concerned with very common words and phrases where stress assignment is not only in my mind more relevant, but also much less obtuse. The Great Chinese-Russian Dictionary compiled

²⁶ The study of stress is inherently complex because it may be influenced and counter-constructed on the basis of so many factors. This should not however, discourage one from attempting to identify its basic features (see separate chapter), but one must not forget that most cases will be subject to change based on the greater context of the sentence in which they occur. Harbsmeier (2009) also points out: “Chinese word stress is always a matter of degrees and varies significantly not only from dialect to dialect, but even from idiolect to idiolect (from one speaker to another) within one dialect group”. There is still no doubt that the citation form of most words do have fixed stress patterns, which remain constant in most sentences. However, no words are exempt from potential alterations as a result of prosodic alteration due to contrastive logical stress in the sentence as a whole.

under the direction of Oshanin is a huge work which assigns stress to most if not all of the same vocabulary found in Arendt and Wang Fangyi. But it also indicates stress patterns for vast amounts of vocabulary from other levels within the language. The stress assignments for words used exclusively in written language and that are usually incomprehensible in daily spoken communication are perhaps still of interest to some. But, since such words will rarely occur in colloquial language (and if they are then most likely in a situation where context will make it clear) they are not so relevant to our purposes here: I am primarily interested in those common words where stress patterns have a clear phonemic function. Also, much of the content in Oshanin's dictionary is based on the principles formulated by Spešnev (Harbsmeier 2009), and is perhaps not transcribed directly from speech, but predicted on the basis of Spešnev's theories. It is not a written record of real spoken evidence in the way that Arendt and Wang Fangyi is, and I therefore consider it to be secondary.

Generally speaking, I shall be particularly interested to see how these precious early stress assignments made by the highly trained Carl Arendt fit the pattern of predictable stress as described by Christoph Harbsmeier. My thesis should *not* be understood as a kind of stamp collection of instances of stress, for example: I claim that 十几 shíjǐ “ten odd / ten (plus some)” contrasts with 十几 shíjǐ “ten and how many more?”. The two different stress patterns make two very important distinctions, but my point is not linked to only shíjǐ, it applies also to 二十几 èrshíjǐ, 一万几 yíwànjǐ, 五百几 wǔbǎijǐ etc., and in fact an infinite number of expressions. Thus, part of my ambition for this thesis is to see what the underlying regularities of stress are, and to what extent they apply in the language²⁷.

²⁷ The systematic regularities of stress have been described and analyzed in the case of Chinese since the late 19th and early 20th centuries, by Carl Arendt and Bernard Karlgren, respectively. I am aware that there is currently a student at Peking University working on an analysis of stress based in Karlgren's work, and have so chosen to only consult his theoretical comments and not focus on his empirical portions. This is also because the other sources I have compared with Arendt are dictionaries, and so can be easily looked up in and compared. Karlgren's book is a textbook like Arendt's and is so not convenient for use in comparing specific items because there is no alphabetical index of words.

Dictionary of Spoken Chinese by Wang Fangyi

Despite its rather limited scope (as the title suggests and as is stated in the foreword, the dictionary is of *spoken* Chinese, i.e. it limits itself to those words and expressions occurring exclusively in colloquial language), Wang Fangyi's *Dictionary of Spoken Chinese* is the main source I have used to compare stress assignments with the vocabulary items taken from Arendt. This is because I consider Wang Fangyi to have very careful native speaker observations that are valuable to reflect on, as well as his also being, like Arendt, concerned with every-day oral language. Wang Fangyi's *Spoken Chinese* is a dictionary, not a textbook, but one which limits itself to the most relevant vocabulary as it was aimed for rapid instruction in Chinese for American army personnel. As such it does not concern itself with the multiple literary registers of the Chinese language, a focus which is ideal for my purposes here. The four other sources to be described below are more conventional dictionaries that cover much ground in all modes of the language, and while useful and included for the sake of having an overview over available sources that indicate stress and that may provide additional information useful for determining the universality of a given stress, they do not exclusively concern themselves with specifically the spoken language.

Wang Fangyi inserts an apostrophe directly before the syllable which has the stress. I have simply moved the apostrophe to the other side of the syllable, as this is the more common convention and is less potentially confusing. It is also the method I employ when giving my own citations. This has no influence on the transcription of the stress pattern but is simply a different convention. Also, both Wang Fangyi and Oshanin (see below) occasionally place a stress mark on the first syllable in a two-character word where the second syllable is toneless. This is not really necessary, as the first syllable must be the stressed one when the second one is toneless and thus also stressless. As these are most certainly instances of clerical errors I have disregarded them and left neutral syllables unmarked in the Comparison Chart.

The Great Chinese-Russian Dictionary edited by Oshanin

I decided to discontinue my extraordinarily time-consuming policy of hunting down each of

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my 500 hundred words in the Great Russian Dictionary, as it became clear after one hundred such searches that the stress assignments in that book show no interesting deviations from the patterns discerned in the other five sources consulted. I felt the time needed to find the items was not well spent and better used on a comparison of the results obtained from the other sources. Oshanin uses the *Russian System* system of arranging characters, which is very laborious to use for the uninitiated when looking up words as they are not directly alphabetically indexed (I have used a conversion table among the appendices to look things up). Also, as already mentioned, Arendt and Wang Fangyi based themselves on direct oral speech, whilst Oshanin's dictionary is a huge work in which the vocabulary has seemingly not been exclusively based on speech and noted as such, but is partially based on theory²⁸.

Secondary Reference Sources

Isaenko's *Chinese-Russian Pinyin Dictionary, Tentative Edition* 拼音漢俄辭典試編 & Kuraishi's *Chinese Dictionary* 岩波中國語詞典

Like *Spoken Chinese*, the Isaenko dictionary is rather limited in scope, but one of its strengths in my opinion is that it does not mechanically indicate stress patterns for given lexical items. I assume that in those cases where the author is unsure he has simply left the word unmarked, which either is evidence of a less than thorough investigation on his part, or simply the fact that he does not find the evidence unequivocal enough (the title itself exposes the tentative nature of his work). Isaenko also follows the convention of placing an apostrophe after the stressed syllable.

Kuraishi, on the other hand, uses bold type for the stressed syllable, and regular type both with and without tone marks for the unstressed or toneless syllables. He, also, leaves many words unmarked for stress. I find this to be a responsible act, and it leaves one with the impression that the author has marked words for stress in all cases where it is truly

28 As briefly mentioned, many of the stress assignments given for words in the Great Chinese-Russian are predicted from rules of stress formulated by Spešnev, resulting in a great deal of seemingly “artificial” stress placements.

relevant and has left words of a less explicitly stress-dependent nature unmarked. The greatest strength of this dictionary, however, is its scope. Though not encyclopedic like Oshanin's dictionary, it covers very much vocabulary. It is in my mind probably, together with *Spoken Chinese*, the best available dictionary of stress for modern and highly usable vocabulary.

Putonghua Jianming Qingzhonggeshi Cidian

This dictionary is the first and as far as I know only one of its kind published in China. In one way, it is similar to the Comparison Chart in this thesis in that it does not provide glosses for the listed words, but simply lists high-frequency vocabulary marked for stress as well as indicates minimal pairs. It also provides some interesting observations in the foreword, echoing much of what is said throughout this thesis, stating for instance that it is due to the complex nature of stress in Chinese that research and output has been much delayed in the field of stress. It also says, which it is immensely satisfying to read in a dictionary published in China, especially in the southern city of Shanghai²⁹, that among people in broadcasting, theatre and vocal art forms, the need to identify the issues in stress structure reached a consensus early on.

The compilers of the Qingzhong Geshi dictionary mention on an appended CD to the dictionary that they have distinguished more than 10 different categories of stress patterns (which refer to fixed identifiable stress patterns across words of different length), but propose that these can be simplified into a practical 3 basic types. I concur that these are rudimentary types one should concern oneself with initially. They are: heavy-light, light-heavy, and *both possible*³⁰. It is also asserted that “The pronunciation of a neutral tone

29 Generally speaking, both the prevalence of neutral-tone syllables in words and the presence of clearly identifiable stress patterns are thought to be less prominent in southern varieties of Mandarin. I think that the fact that this dictionary is published by a group of Southern Chinese scholars goes a long way towards adjusting this claim.

30 This means that both stress placements may be current and neither is decisive in terms of one meaning as opposed to another, or that each of the either front-heavy or back-heavy have their own meanings, constituting an either *homographic* (same characters,

character loses its original tone, but the tone of the light character in a front-heavy pattern can still faintly be distinguished; the pronunciation of neutral characters have a “closed feel” and “dot³¹ feel”, the light character is only gets a reduction in tonality.”³²

It also outlines some basic rules for stress in common words:

The second syllable is usually heavy in words of two syllables (neutral-heavy structure), a minority have a heavy first syllable (heavy-neutral structure, heavy-light structure, heavy lightest structure); words with more than three syllables are basically heavy on the last syllable. It also states that the double peak structure is not stable in colloquial language, and that there is generally a tendency towards one of the three categories above.

Furthermore, it says that trying to interpret the stress categories of spoken language based on part-of-speech, semantics or morphology is far from fruitful, and that field investigation is the ultimate direct method:

前重格式的发音与轻声的发音有着某种“血缘关系”，后者往往是前者的后裔，两者的发音往往有相近之处，使得一部分前重格式的词念起来很像轻声词。

The pronunciation of the front-heavy pattern and the pronunciation of the neutral tone pattern have a type of “kinship relation”. The latter is frequently the offspring of the former, and the pronunciation of both often have similar features, causing a portion of front-heavy words to be read much like neutral-tone words.

最新的实验语音学已经证明，轻声词的轻声音节，不在于“轻”而在于“短”，而轻重格式的轻读音节却在于调高降低，不在于音长短促，如气氛的氛，虽然还是平直调，但调高在声调五度关系中已不是“5-5”，而是降到了接近“3-3”。

The latest in experimental phonetics has already proven that the neutral syllable in neutral-tone words is determined not by “lightness” but by “length”, and the light syllable in a light-

different readings) or *heterographic* (different characters, similar readings) minimal pair.

31 From musical terminology: The kind of mark used to denote the lengthening of a note or rest by half, or to indicate staccato.

32 Chinese: 轻声字的发音失去了原有的声调，前重格式低读字的声调却依稀可辨；轻声字的发音有“堵塞感”和“附点感”，低读字却只是调高降低。

heavy pattern is determined by a drop in tonality, not by a shortening in tone length. For example, even though the *fēn* in *qīfēn* is still a level tone, the tone height in the 5-degree tonal relationship is not 5-5 any longer, but has dropped closer to 3-3.

Problems / Issues

Full tones in Arendt: It is unlikely that Arendt writes full tones for syllables that are neutral tone in modern mandarin because he was trying to indicate the etymological tone of each morpheme as a pedagogical measure. This would make adding the stress assignments, which is obviously a sign of his acute analyses and eye (or ear!) for detail, seem as a logical clash. I will therefore assume that the words spoken to him were indeed pronounced the way he has written them down in the time and place where he worked. This may be indirect evidence that tone reduction is a pervasive feature that has evolved gradually in Beijing Mandarin over the past hundred some years. I acknowledge this possibility of here, but do not take it for granted. However, it nevertheless means that Arendt's book is not only a valuable source for the aspects that I am taken up with in this paper, but also a tremendous source for the study of diachronic phonology in Chinese. It is interesting to note that his stress assignments usually do not run counter to the stress assignments in the words as transcribed in the other sources, only that the second syllable retain their etymological tones. This might be a valuable piece of information when searching for the reasons why such phonological changes have taken place. As a particular stress assignment for a particular word is consolidated, the stressed syllable becomes more and more primary. This may happen even to the point where the unstressed but full-toned syllables in a word become unnecessary for the speaker to be able to identify which word is being spoken. This has interesting connotations for the study of word-hood in Chinese, and shows that syllables and their tone, usually thought to be an indivisible part of a word, actually is made nearly redundant once the new form of the word, i.e. the word with the particular stress assignment identified with that word, becomes consolidated and enters into the current usage of the language.

Definition of a word: I am not very stringently occupied with the definition of a *word* in Chinese, which can be a notoriously tricky enterprise. For instance, if two characters are very common in a certain collocation, I have chosen to regard them as a word and include

it in the Comparison Chart. Thus, the question of whether 行礼 xíng-lǐ “to salute” (lit. “carry out a ritual”) should be called a single word is not the focus, the point is rather that 行礼 xíng-lǐ will come next to 行李 xínglǐ and is usually transcribed the same way in dictionaries that are alphabetically organized. There may be a space between the syllables for the verbal xíng-lǐ to indicate that it is grammatically different from the other (i.e. it is a verb-object construction: v. 行 o. 礼 xíng-lǐ), and is *not* a noun, 行李 xínglǐ “luggage” (also sometimes transcribed with a neutral second syllable). But most students will not be aware that there should be a pause³³ when reading it or that there is a clear stress pattern to distinguish the two even though they may be identical in Pinyin and other transcription (this case and others will be discussed further later on).

的 DE and 儿 ER: The extent to which an attached nominalizing 的 DE or rhotacized 儿 ER influences a word's stress pattern has not been specifically studied as far as I have been able to find. But, since they are always in the neutral tone and the ER is not even read as a separate syllable but simply adds a (r) to the preceding syllable, I will assume here that they have no bearing on the stress pattern of the word as a whole.

Words containing the suffix (grammaticalized morpheme) “zǐ / 子”:

The first three polysyllabic (disyllabic) words that occur in Arendt's lesson texts are zhuōzi, yǐzi and luózi, “table”, “chair”, and “mule”. What they all have in common, together with a host of other nouns in modern Mandarin, is that they contain the nominalizing suffix zǐ 子. As in most cases³⁴, lexemes which have acquired new functions through grammaticalization and become explicit suffixes are usually read in the neutral tone, and only a handful of these have been listed in the Arendt column in the stress comparison chart, and their corresponding entries in the other sources have not been included. The

³³ Harbsmeier (2009) notes, but in reference to other examples: “Cases of this sort are not rare, and some more will be introduced below. We may have a distinctive slight pause between these two syllables, so that one might want to argue that this pause and not the stress contrast is what makes the difference”. I argue that the pause is a parallel, not substitute, phenomenon.

³⁴ There are exceptions like tóu 头 in 里头 lǐtóu, which is often read tóu with a full tone, instead of the also sometimes used lǐtóu, with neutral tone.

character or morpheme 子 子 is more than many other so-called suffixes in modern Chinese quite clear-cut in its complete grammaticalization and nominalizing function. Many of the entries in the sources do not even indicate stress for the first syllable in binomes containing the suffix (i.e. always second character in these cases) 子 子. As a suffix, the character 子 子 is *necessarily* not stressed vocally, and it is therefore superfluous to indicate it in transcription of the word. In any two-syllable word where one of the syllables is lexically unstressed, the remaining syllable must be stressed. In transcription, however, as the very throughout Arendt has done but Oshanin for some reason does it, is to indicate that stressed syllable even though the stress could logically not be anywhere else does to the obligatorily unstressed second syllable. I have not included in my list all the two-syllable words in Arendt with the suffix 子 子, because the stress pattern is unequivocal and I have only extracted sufficient amounts of examples from Arendt's texts for each case where there is a group of a certain kind of word which has group internal consistent stress patterns.

3. Stress in Beijing Mandarin: Concepts and Identification

Stress in Chinese can broadly be defined as being manifested in the expansion of the *pitch range* (which is usually occupied by the fixed/relative tonal pitches), lengthening or shortening of the duration of the utterance, and the increase/decrease in the loudness or emphasis of the given utterance³⁵. The Swedish linguist Bernhard Karlgren has described the phenomenon in this way: *“The flow of speech always presents in its various elements a fluctuation of maxima and minima of prominence, partly due to the relative muscular force (expiratory and articulatory) employed, partly due to the relative audibility of the various sounds produced, caused by their different physical nature. To use the term stress for this prominence may seem inappropriate, as it might suggest that only the muscular force in producing the sounds is taken into account. This view however is not necessary. We may allow stress to indicate not only the stress of the sound-producing organs but also*

35 Spešnev (1959: 28-34) has tried to show that length is primary.

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the stress on the auditory organs of the listener". Karlgren is one of the earliest linguists working with Chinese to discuss stress in Chinese, and has in his book *A Mandarin Phonetic Reader* much important theoretical insight into the matter. The earliest linguist to systematically teach stress as a part of his curriculum in Chinese, is Carl Arendt, whose lesson text will be the primary source of empirical background for my analyses and observations concerning stress in Chinese. In Yen-hwei Lin's book (2007: p.225), it is stated that: "*For practical purposes, learners of SC (Standard Chinese) may not have to be concerned much about SC stress, given its elusive nature, but it is still necessary to produce and comprehend the pronunciation of the stressed "full-toned" versus unstressed "neutral-toned" syllables of those disyllabic words with a neutral tone*". I would like to point out that had the word *beginning* been inserted before *learners* at the start of Lin's statement, one might on behalf of the many struggling Chinese-students out there sympathize with her, but it is precisely due to the "elusive nature"³⁶ of most aspects of stress in Chinese that the phenomenon warrants further, and more thorough, study. It is certainly to the advanced student that this is, and should be, an area of interest, for in the process of moving from an intermediate to an *advanced* level of fluency, the overall command of all so-called suprasegmental features of Chinese phonology, and not just the tones and various specific phonetic articulations, is essential and desirable. It is important

36 Change in stress patterns owing to different speech habits, for different grammatical categories, or for a different meaning.

in Chinese, just as in English as well as most other languages, be they tonal and not.^{37 38}

In Chinese (as in many if not most, or all, languages) one makes the distinction between *sentential emphatic stress* and *word-level distinctive stress* (i.e. minimal pairs, though, as mentioned above, individual stress patterns are inherent features of basically all words, regardless of whether they have homophones or near-homophones)³⁹. When discussing stress in the context of Chinese, while it is more or less generally accepted that sentence-

37 We should not exclude the possibility that there are languages where stress does not play a prominent role as semantically distinctive features of words, but I insist that Chinese is not one of them. Moreover I suggest that the concept of stress is not transcendental, that is to say, that the feature stress is not the same when applied to different languages. Thus, for Chinese, it has been found that stress phonetically takes the form of lengthening, and in French the lexical stress which is invariably on the last syllable of a word regularly moves from that position under certain conditions. Whereas in English a word like *development* is nowhere found with any stress pattern other than that involving prominent stress on the second E, the pronunciation of the French word *developpment* standardly involves the current possibility of first syllable stress in phrases like “le developpment humain”. It is not a foregone conclusion that all languages have stress, or that stress is the same in all languages. But all languages must have sentence level emphatic stress to some extent, albeit to probably quite varying degrees.

38 Harbsmeier (2009) also specifies: “The importance of stress is striking in pairs like the English *permi't/pe'rmit*. In English such stress contrasts tend to be distinct and clear. Wrong stress produces radically unacceptable words. In French, by contrast, a reading *ci'vilisation* instead of the standard *civilisatio'n*, while non-standard, is not outrageous (*Ci'vilisation françai'se* is current). Perhaps only motivated by some special prosodic context. The regime on stress is less strict in French than in English. In Chinese, word stress - which manifests itself most prominently not only in the loudness but even more in the length of a syllable - is certainly not a neat or clear matter. As in French, non-standard stress is unusual, but not really outrageous. It may be motivated by many kinds of prosodic and other circumstances.”

39 The renowned linguist Y. R. Chao (Chao, 1968: 35-37) identifies three levels of stress in Chinese: Normal stress (full-tone syllables), weak stress (neutral tone syllables), and

level stress exists and is normally quite salient in Chinese, it apparently⁴⁰ remains a controversial issue whether there exists word-level stress⁴¹. Or rather, one can say that the controversy lies in whether or not there is phonemic stress in words without neutral but only full tone syllables.

In this thesis, I am more interested in the influence of variations in accent on the semantics of certain words and, partially, in basic sentences, and less of the overall phonetic phenomena a more exhaustive investigation would call for. Thus, we will here deal with word stress of the type that may influence meaning, both slightly and drastically. There are, again, two types here: One type is discernible from those cases where, usually, a two-character word can be written in two different ways in *pinyin*; i.e. one of the syllables goes from having a definite *lexical tone* (full tone) to becoming neutralized (that is, it becomes the so-called fifth, “neutral”, tone (it is, however, important to note that this fifth tone is not

contrastive stress (as mentioned above, sentence-level stress where elements are emphasized differently to transmit a logical contrastive emphasis in the sentence's argument). He also recounts (1968:38): “Some writers (for example, Hockett Peip Phon, 256) set up a medium degree of stress between the normal and the weak. For instance, in 這不是苦瓜，也不是甜瓜，就是一種甜瓜 *Jeh bushi ,kuu'gua, yee bushi tyan.gua, jiow shi i-joong 'tyan.gua*. ‘This is not bitter-melon (*Momordica charantia*), nor sweetmelon (*Cumumis melo*), it's just a kind of sweet melon.’, where apparently the second *tyan* has normal stress and the second *gua*, though less stressed, is not completely neutral and weak. My treatment of such cases is to regard *'tyan.gua* as having contrastive stress: *''tyan.gua*. Since stress is relative, putting a contrastive stress is often physically equivalent to putting an average normal stress on the syllable to be contrasting-stressed and reducing the degree of other normal stresses”.

40 The fact that this aspect of Chinese phonology has largely been ignored does not change the fact that most Chinese and learners of Chinese are able to recognize semantically distinctive stress in Chinese when confronted with examples, and that native speakers of course quite naturally employ these stress patterns consistently.

41 Another theory, which I also support in this thesis, is that there are three kinds of stress in Beijing Mandarin: Strong stress, weak stress and no stress, i.e. the neutral tone. (Kratochvil, 1967; 1968; Hoa, 1983).

a *fixed* tone, since it can change in pitch depending on the tone of the preceding syllable as well as the general prosodic environment). The second type concerns those words where both tones retain their lexical tone in both the separate morphemes that make up the word, but where the accent, or comparative force or raised volume in either the first or second syllable, marks a difference in actual pronunciation (though this is not recorded in most dictionaries), though this difference is often very subtle and not always interpreted identically by different people (Chao 1968: 38). However, the slight distinction in pronunciation that arguably does occur for that word, and which sets it apart from near-homophones, is often relevant for correct comprehension, and I shall attempt to discern how below using a few examples. Since the majority of Mandarin words in colloquial core vocabulary are disyllabic, I shall not discuss other types here, and as said above, the influence of syntax, grammatical relationships, pragmatics etc., cannot fall within the scope of this paper, where the analysis and identification of a few telling examples of stress patterns evident when even the words are spoken in isolation (citation form) is the main focus. I here observe two types of stress in two-character words:

Type 1: **Supra-tonal stress** ⇒ accent falls on one of the two syllables while tones are retained in both⁴²

Type 2: **Neutral-syllable stress** ⇒ accent falls on one of the two syllables while the tone of the other is neutralized

Before we take a look at an example, it should be said that there are of course words (in which stress is relevant) that are more common than the particular words mentioned below, but the ones chosen are useful here because they are fairly straightforward and unproblematic, and also because they illustrate quite well the range of phenomena potentially subject to this kind of analysis. The idea is that although it is disputed whether

42 In this type, there will be both primary and secondary stress. There are three basic stress patterns which commonly occur in the two-syllable compound words. Pattern One: Normal Stress + Primary Stress, Pattern Two: Primary Stress + Unstressed, Pattern Three: Primary Stress + Normal Stress. Also, any one syllable may be the following: Tonic stressed, tonic unstressed, and atonic unstressed.

the phonemic value of stress is always utilized in Chinese, the postulate in this thesis is that stress is indeed a salient feature of the pronunciation of Chinese words and is among other things important in distinguishing members of pairs of polysyllabic constructions that are *identical in segmental structure and tones*, but differ in *phonemic function*, the identification of which can only be done through stress analysis. Thus stress is held to be a lexical feature and must be studied as an innate part of any lexical item much as its tone and semantic content, et cetera. In the examples here the citation forms of these words are used to exclude the influence of intonation, which is a feature of a sentence as a whole and variable based on the influence of pragmatics in natural speech.

3.1 Examples of *Minimal Pairs*⁴³ Differentiated by Stress

A good visual illustration of how stress is manifested in a common two-character minimal pair can be made using a spectrogram, or in the case of the representation below, a simplified illustration of what a spectrogram would show:

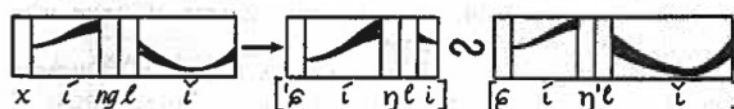


Fig. 13 Modification by stress in ['éiŋli] *xínglǐ* and [éiŋ'li] *xínglǐ*

(Taken from *Kratochvil*, 1968.)

The first box on the left shows the (same) phonetic transcription given in most dictionaries

43 My emphasis on minimal pairs here in no way implies or even suggests that phonological distinctions are essentially linked in all cases to minimal pairs. What is true on the other hand is this: when a distinction is distinctive among minimal pairs, this does demonstrate that it is of phonemic status. A stress pattern that cannot be linked to a contrast in minimal pairs is not for that reason non-phonemic.

for what are two common “homophonous”⁴⁴ words. The pinyin transcription is *xínglǐ*, and this may be the phonetic transcription for both the noun *xínglǐ* 行李 “luggage” and the verb-object construction *xíng-lǐ* 行礼 “to carry out a ceremony; salute”. However, as the phonetic analysis above shows, these two words are not only syntactically different (which is obvious), but are also pronounced slightly differently as a result of this: In the word for “luggage”, the stress is on the first syllable. In the other word, *lǐ* 礼 being the object of *xíng* 行, the second syllable is stressed. I think this is quite an important piece of evidence that stress is indeed relevant in Chinese and truly shapes words. Many if not most dictionaries transcribe *xínglǐ* 行李 “luggage” with a neutral tone on the second syllable. Neutral tones usually occur in syllables that historically are initially unstressed, and may become more and more so to the point of eventually becoming tonally neutralized. But that many dictionaries transcribe the second syllable as neutral when the diagram here shows that the second syllable is not neutral, but rather diminished and less prominent, must then mean that there is at least a commonly observed distinction between these two words. It may be that the unstressed second syllable is often interpreted in these dictionaries as very “close” to a neutral syllable, and that the transcriptive restrictions of most systems only allow for a neutral syllable to account for such phenomenon. A finer analysis and system, however, would distinguish between neutral and unstressed syllables⁴⁵.

Though identifying these particular words does not pose great difficulties in speech

44 In my opinion, the term “homophonous” is used much too frequently in the context of Chinese. Stress patterns often distinguish words, albeit it not always very markedly, that are usually thought of as homophones.

45 While it would be easy to develop a revised version of Pinyin that allows for marking of stress assignment, or less likely, to use IPA or another system for indicating these phenomena, we have yet to see it happen outside of specialized treatments. In the interest of usability and to not put an unnecessary burden on the learner, those making dictionaries and textbooks seem obliged to use the tools at hand to indicate their observations of similar stress-related distinctions. In the above case and many others this is then to simply render unstressed syllables as toneless in transcription (or leave them unmarked, with tone, but undistinguished from the markedly heavier syllable/s in the word). Such a syllable may *not* be toneless, however, but distinguishable from the other by stress pattern.

identification do to their different syntactic properties, there may be other less clear cases. It is in this respect that stress distribution becomes an important factor in understanding speech. It is not only the position or use in any given full sentence that gives these to “homophones” their subsequent individual subtleties. The contours indicated in the diagram are *inherent* features of these two words, though one might both successfully and unsuccessfully argue for how and why their word-internal structure dominates or decides why they have the phonetic structure in real speech that they do. The fact remains that they are consistently unique in their actual speech occurrence, though they are theoretically homophonic: the “phonemic abstraction and phonetic reality”⁴⁶ are not one and the same. However, while it is consistent with the rules for stress assignment in basic constructions that the stress usually falls on the object in a verb-object construction (more on rules for stress later), there is no grammatical explanation for why it is the first syllable in *xínglǐ* 行李 that receives the stress. In many other two-syllable constructions where there is a noun modifying another in a noun phrase, such as *nánrén* 男人 or *nǚrén* 女人, the morpheme modified is usually NOT the recipient of primary stress. Though it would be convenient if the character *xíng* “go, walk” was somehow modifying the *lǐ* 李 in this binome, though the actual stress pattern does not suggest otherwise, there is simply no way that one could convincingly say that it does. *Lǐ* 李 does not have any lexical meaning where this would make sense.

Before we take a look at another example, it should be said that there are of course words (in which stress is relevant) that are more common than the particular words mentioned here, but the ones chosen are useful because they are fairly straightforward and unproblematic, and also because they illustrate quite well the range of phenomena potentially subject to this kind of analysis:

The word *dìfang* 地方, essentially, or perhaps one should say more commonly, is a noun meaning “place” in modern Beijing Mandarin. It has two entries in the *ABC Dictionary*⁴⁷:

46 Kratochvil 1968. Kratochvil also has a short survey of how the different tones are influenced in stressed syllables. However, this is technical and not pedagogically relevant in the case of this more specific study.

47 Of the entries in this dictionary cited, only information relevant to the arguments

1. 地方 difang	noun	<i>place; space</i>
2. 地方 difāng ⁴⁸	attributive	<i>local; regional</i>

One might argue that this is in fact *not* a case of word stress differentiating two orthographically identical and phonetically similar words, but rather simply a case of two words (despite their phonetic similarity and obvious etymological relatedness) incidentally being represented by the same two characters⁴⁹. Indeed, some dictionaries may not list this common (character-)binome as having two different “readings”, nor will the distinction *necessarily* be recognizable to all native speakers, thus leading to the preliminary conclusion that the difference is subtle and, *possibly*, immaterial. That is to say, the difference in meaning between the two (the two belong to two different word classes) is noticed not on the basis of any audible distinction, but rather through the syntax and grammar of the sentence in which the word occurs, making it clear through word-order etc.

presented have been reproduced in the present text. Citations throughout have been edited for clarity and truncated for superfluous text where necessary.

48 According to the ABC Dictionary, there is actually also another meaning attached to this binome in the reading difāng, which is “locality”, also a noun. Also, the entry for 地方 in the *Xinhua Zhengyin Cidian* is reproduced here in its entirety to illustrate the theoretical justification for and identification of these variant readings: 地方 difang [轻声] 例: 那 ~ 我去过 | 你什么 ~ 不舒服 | 这话有的 ~ 对, 有的 ~ 不对。说明: 统称各级行政区划和指本地、当地的“地方”不读轻声, 读作 difāng。如: 中央与地方 | 军队与地方 | 多给地方上的群众办实事。 Translation: 地方 *difang* (neutral tone) Ex.: “I have been to that place.”, “Where (what place) are you not feeling well?”, “Your words are correct in some places, wrong in other places.”. Explanation: 地方 as a general designation for all levels of administrative divisions and when referring to localities is not read with neutral tone, but is read difāng. For instance, “Central authorities and territories*”, “The army and territories.”, “Help out more the people of the territories.”

* Probably the most approximate word in English for this meaning.

49 Sometimes words that sound similar or even identical, regardless of context (though this thesis tries to show that these cases are actually quite rare, contrary to popular belief) have different characters, but in the current example the two characters actually instead “clothe” two separate words.

if one is using the word (or words?) as a noun or attributively. The syntactic function and/or position will thus readily disambiguate which one of these two variants one is indirectly “referring” to when uttering it, regardless of whether or not the speaker is aware or even actually able to make the distinction himself in normal speech. However, since the above-mentioned example is one of the few relatively often distinguished in some common dictionaries⁵⁰, it is even more interesting to note that it indeed *does* seem fairly haphazard when, where, and who will customarily employ these (then) *two* words. The distinction is obviously there at some level, since many will accept that there indeed is a difference when confronted with the issue, but will not necessarily make it when caught unawares⁵¹. Also, there might be another, more consistent phenomenon also playing into the matter, which is that it is not unusual for a noun appearing at the very end of a declarative sentence being rendered, especially at the final syllable, tonally neutral, as would frequently be the case with the noun “dìfāng” (though this possibility belongs to sentence prosody and will not be further analyzed here). But, in the case of the form expressing an attributive function, the case will most often be the opposite (for example: *dìfāng yǔyīn* 语音 / *zhèngfǔ* 政府 etc.; “local pronunciation/government”) as opposed to another type of *yǔyīn* or *zhèngfǔ* (标准 *biāozhǔn*; “standard”, 联邦 *liánbāng*; “federal”, etc.), since in a sentence employing the word in this attributive function it would be natural to place the accent on the focus of the sentence, which would typically be the adjective/attributive. Perhaps these different phonetic realizations of this (in this case *single*) word is how these two separate dictionary entries came to be, where the main point is not that there are two very similar forms of a word which have two slightly different functions but similar meanings, but rather that the context is the deciding factor, and that the two phonetic realizations are merely a byproduct of the indirect influence the different phonetic environments the two disparate contexts provide. But whether or not this probing in the

50 The ABC Dictionary, the *Xiandai Hanyu Cidian* and Lin Yutang's *Dictionary of Common Usage* all note these two readings of the binome 地方.

51 Due to the heterogenous nature of the Mandarin group one needs to strictly define, as has been done here (Beijing Mandarin) which variant and even sub-variant (Beijing city proper, Chéngdé dialect, etc., or any Southern variety for instance) of Mandarin Chinese one uses as object for research before identifying any pertinent stress patterns and minimal pairs.

origin of the phenomenon in this particular case is correct, the fact of the matter is that *currently* two separate, albeit very similar, words actually do, more or less, exist. Thus, the awareness of such phenomena on the level of the individual morpheme as well as the general level is necessary for proficiently speaking (and understanding) Chinese⁵². In the example above, observing the distinction or not isn't necessarily always vital for a proper understanding of what is meant, due to the usually available reference to grammatical structure. But even without the aid of the context of the sentence, the subsequent distinction, based on the already identified nominal versus attributive usage, is in Beijing Mandarin quite pervasive. Regardless of whether or not the neutral versus stressed tone on the second syllable and the distinction thereof is invariable throughout, the point thus remains that the stress pattern is still very often present. Consider the following:

- A. 地方 dìfang versus 地方 dìfāng / 地方 dì'fāng" versus 地方 dìfāng'⁵³
or
B. 地方 dì'fang *but not** 地方 dìfang'

* It is not possible for a syllable to be toneless and receive primary stress at the same time, beyond whatever influence⁵⁴ the neutral second syllable receives from the preceding syllable, which can only be secondary.

52 What is meant by speaking “proficient Chinese” can of course vary quite greatly depending on context; a person can have a very large vocabulary, correct grammar and excellent listening skills, but still not have natural-sounding pronunciation, which often seems to be one of the more hard-earned skills in Chinese language-learning. Here it is meant to refer to someone who is very solid in all of the above, but despite occasional shortcomings in the other aspects, basically “sounds like a Chinese person” when speaking.

53 An apostrophe (') placed after a syllable indicates that this syllable is the recipient of primary stress; a double apostrophe (") indicates that the syllable has secondary stress.

54 On “influence”: “There exists tonic unstressed syllables in MSC (Modern Standard Chinese), but there are no atonic stressed syllables; in tonic stressed syllables the phonetic features of stress vary according to the syllables tones.” (Yen Hwei-Lin: 2007). Karlgren (1918) also says: “The stress which a syllable gets as a member of a sentence has a considerable influence upon the tone. Syllables quite destitute of stress lose their tone, i. e. are pronounced without any special form and key; in my transcription they are

Stress in Chinese mainly falls into two distinct types; one which is relatively easily distinguished and identified, where *tone neutralization* occurs, and the other, where both syllables retain their original stressed tone, but where these two tones are *phonetically manifested differently* in the context of the word (Duanmu: 2007). The word zhòngyào 重要 for example, while usually back-heavy, is not arbitrary if pronounced with the stress on the first syllable; neither of these two variant readings differ in meaning at any level, and it is likely that which one of these two a given Chinese-speaker will employ⁵⁵ either depends on convention or the overall intonation of the statement or question and so on where the word occurs. This will have no bearing on meaning either way and is thus separate from what is the case with minimal pairs, but should it become clear that one is comparably more common than the other, the “right” will be relevant in terms of having correct intonation in the language. At the current stage working out those cases where there is an actual semantic distinction is more important, however. Below is another example that illustrates the importance of and potential “pitfalls” present in some cases for one who is not familiar with or sufficiently aware of the occurrence and significance of word stress⁵⁶. Consider the written without tone- marks”. I consider the interplay between stress and tone to be secondary to my concerns in this thesis, but include these to comments here to show that research specific to this aspect of stress has also been done.

55 As said, this can be flexible depending on the speaker's idiolect/dialect, or the context. Many do not make the distinctions, despite being native Beijingers etc., and depending on the speaker's/interlocutor's fluency and familiarity with the particular variety of Mandarin in question (this can be the Beijing dialect, Southwestern Mandarin, “Standard Mandarin” etc., or any variants thereof), the speaker/listener will consciously or not expect a distinction to be made. Speakers of various dialects will inevitably pronounce words and sentences differently depending on background, and thus segmental and prosodic features are inevitably brought in unintentionally, causing stress to be variable through the different strata. Here the sounds of Beijing-accented Mandarin is the starting point, which is itself not homogenous. But, the fact that the examples cited are fairly clear-cut throughout, at least in the Beijing municipality, should suffice to illustrate the main points of argument since most stress distinctions, both lexical and functional/contrastive, are similar throughout the Mandarin group.

56 One may say at this point that a word is not a word as such, but a word under a set of

following entry for the binome 德行 in the ABC Dictionary:

1. 德行 dé-xíng **n.** ① *morality and conduct* ② *moral integrity/conduct; virtue*
2. 德行(性) déxíng **adj.** ① *vexing; disgraceful* ② *disgusting; shameful*

It is important to note here that the first definition is referring to a rather formal word. This is in part also divulged by the definition itself, more likely to occur in formal or perhaps somewhat solemn recriminatory or praising speech. But it is also because, in contrast, the second definition is marked explicitly with a " <coll./derog.> " label in the full text of the entry, and thus places the word into the category of slang. It is also interesting to note that the colloquial reading of this binome is a seemingly sarcastic use of the original word (the first one has a decidedly longer history of usage than the current colloquial word), but due to its parallel usage with the original word, a new, probably more or less consciously created distinction has occurred. This does not necessarily mean that the neutralization of the second tone has happened due to any specific rule, but rather perhaps that it has happened simply as the easiest alternative to making it distinct from the other; now they have decidedly different phonetic realizations with each its distinct meaning. This should then definitely be considered a very important minimal pair, since whether or not one is being intentionally sarcastic in speech should not be taken lightly. The fact, as the ABC Dictionary also indicates, that sometimes xìng 性 is used for the second syllable instead of xíng 行 to make this difference explicit does not change the fact the phonetic realization of the second syllable in the slang word is rarely xìng (with a full tone and primary stress on the second syllable), except perhaps in some parts of southern China or Taiwan⁵⁷). This is probably only a conventional orthographic measure taken to disambiguate it in writing, and is at any rate not written consistently. Simplified, one might say that the reading of the

readings. Only the word in context, or the particular reading of a word associated with that particular context, can be said to be a specific word.

57 "The Taiwanese educational campaign for Mandarin involved a wide-spread policy to teach Taiwanese students of Mandarin to pronounce the tones of each character in a word. The success of this educational policy must not be confused with the separate phenomenon of reduced stress in Fujian Chinese." (Harbsmeier: 2009)

second syllable as *xìng* is maybe more phonetically reminiscent of the second syllable in *déxìng*. However, this is a recent and inconsistent rendering of the word, and the two should still be regarded as a minimal pair. Any random attempt at compensating for the reading of the character which is present in the mind of the speaker, but different from the lexical tones of the character/s making up the word, on behalf of the reader by adding a similar-sounding character to the “alternative” pronunciation is only approximate. It is not in this case standardized either, but it may be conventional in popular usage.

There are, then, two aspects when speaking of the nuances of Mandarin phonology that need to be emphasized: The first is the comparative weight with which one of the two syllables in a binome is emphasized, though the phenomenon is by no means limited to disyllabic words. A complete study would have to include stress patterns in all types of complex words, *and* on the sentence-level, as well as the general prosodic rules (to the extent that there are systematic sets of rules throughout), but also that of the “fifth” neutral tone should not be overlooked⁵⁸. However, since the occurrence of minimal pairs is more significant in high frequency vocabulary, and perhaps a somewhat less pressing issue in the study of the many homophonous equivalents of common words one might find in the numerous orthographically identical (in *Pinyin*) words that exist in more literary language (书面语 *shūmiànyǔ*), it is still a pervasive aspect of the Chinese language. As such it becomes relevant in the area of second language learning. At the same time, the stress pattern for a word such as, say, 狼狽 *lángbèi*, might be interesting for someone interested in perfecting their pronunciation, but bears little relevance for our study here, and particularly on a basic level, since it rarely occurs in speech. Neither does it have any

58 It is often cited that Mandarin in some places, especially in the Southwest of China, only has three tones in some areas, but interestingly never that it anywhere has more than four, and by most current definitions, it doesn't. As this discussion of stress in Chinese emphasizes, this view must be deemed too simplistic. What Mandarin in fact has is four specific, or “fixed” tones, and one *non-specific*, or flexible, tone, namely the fifth. The functioning of this fifth tone, however, is much more complicated and influential in the area of intonation, and, to be sure, the correct (and natural) pronunciation of oral Chinese, than usually discussed. Its role also relates intimately to the discussion of word stress, of which it is a part, and thus also requires careful study.

common homonyms, in written *nor* spoken Chinese, and most therefore for my purposes be relegated to the realm of the pedantic.

4. Discussion of Word Stress in Beijing Mandarin

The reason for one particular syllable⁵⁹ of a word being emphasized is not always obvious. Sometimes, as evident from the example of 地方 described earlier, there seems to be no necessarily logical rule for why one specific syllable is rendered neutral as opposed to another. It may happen arbitrarily so that it can be separated from the other word with which it constitutes a minimal pair.

Take these examples from the ABC Dictionary:

端详 duānxiáng*⁶⁰ n. details; detailed information ♦v.p. dignified and serene

端详 duānxiang v. scrutinize carefully | Háizi zǐxì ~zhe māma de liǎn._(...TRUNCATED)

章程 zhāngchéng* n. rules; regulations; constitution

章程 zhāngcheng n. <coll.> way; procedure; solution

配合 pèihé* v. coordinate; cooperate | qǐ ~ zuòyòng_ (...TRUNCATED) ♦s.v. cooperative

配合 pèihe s.v. ① suitable; fit ② matching ♦ v. <mach.> join

As evident from these examples, distinguishing members of pairs of polysyllabic

59 As mentioned earlier and as Arendt himself describes, the particular part of a (stressed or unstressed) syllable may even be more heavily accented than other parts of it. This however, belongs more to the study of phonetics than phonology and will not be discussed nor analyzed further in this thesis.

60 The “ * ” is a symbol employed in the ABC Dictionary to indicate which is the more frequently occurring of two homographic entries. I attach no special significance to the fact that of these three pairs the ones with a neutral second syllable are consistently the less frequent, supposedly.

constructions identical in segmental structure and tones, but which have different phonemic functions is in my mind quite essential. The grammatical function of a specific stress pattern may obviously vary greatly from another. Thus, it is a lexical feature and must be studied as an innate part of any lexical item as much as its tone and semantic content. In addition, as far as oral language skills go, the kind of analysis briefly sketched here is a relevant skill on a par with those other aspects more commonly studied. As so many foreign learners of Chinese find listening comprehension, with the possible exception of the more oft-discussed difficulties of character-memorization, the most difficult aspect of learning the language, the incorporation of word stress study is thus highly relevant and timely. The large amount of homophones, near-homophones, and what can at this point be called pseudo-homophones (words that may sound roughly similar to the undiscerning listener but which in reality are highly identifiable through their grammatical and syntactic roles) undoubtedly present some of the more daunting problems learners must face. If a non-native speaker has no concept of these fine points prior to study, which many indeed do not have, it becomes very understandable that phenomena such as “homophones” come to be difficult. But, if he or she has been trained in the analysis and application of these suprasegmental features beforehand and is aware of them while communicating, it goes without saying that the step from an advanced level to native-like comprehension and speaking-skills can be taken. At the beginner or even intermediate stages in Chinese language learning, while most students are still mostly preoccupied with understanding distinctions and nuances in articulation and tone, and the study of and excessive focus on word stress and the identification of lingual nuances based on such suprasegmental features may seem peripheral, there is on the other hand much to work with in this area for the advanced learner. One might even say that in most cases individual word stress is not paramount in terms of communicating one’s general message clearly, nor even something without which one cannot say one has mastered the language fairly decently, but this would be true with any language. In the case of Chinese, however, and especially in the Mandarin topolect, due to its poverty in tones compared to other major dialect-groups, the “problem” of homophony, both actual and “imagined” is all the more present: It is often surprising, and even sometimes disheartening for a foreigner believing himself to be a perfectly fluent Mandarin-speaker (due to his already, for example, having mastered the four tones), to still not be able to escape being identified as a foreigner when

speaking, for instance, on the phone with a Chinese person. Part of the answer to why this might be so has hopefully been made at least partially clear by the some of the above-mentioned arguments and illustrations. A knowledge of the principles and presence of word stress, to the extent they indeed as rules and are syntactically foreseeable, as well as of those cases where individual minimal pairs should be studied specifically in detail, can help to make the learner's listening skills more acute and thus improving the ability to communicate at higher levels as far as his or her Chinese is concerned.

4.1 Comments to Matthew Chen, Yen-hwei Lin, and San Duanmu on Stress

These three scholars all devote minor portions of their works on Chinese phonology (Yen-hwei Lin and San Duanmu) and tone sandhi (Matthew Chen) to the issue of word and sentence level stress⁶¹ (see works referred to in bibliography). Due to the relative scarcity of theoretical material on stress in Chinese, as well as the in my mind somewhat problematic treatment it is given in these books, I here devote here a chapter to analysis and discussion of comments made by these authors on stress:

Matthew Chen

“Paradoxically, despite its pivotal role in determining tonal behavior⁶², stress has proven to

61 Harbsmeier (2009) notes: “All of these linguists emphasize the controversial nature of stress assignment in Chinese. None of these three authors take their point of departure in those minimal pairs distinguished by stress pattern only where the question of stress is no longer a matter of abstract typology (is Chinese a stress language or is it now?), or of phonological analysis and phonetic description only. To the extent that we can identify minimal pairs distinguished by stress only, the question of stress becomes an important part of lexicography and even of the grammar of the language.”

62 It is common knowledge that vowel and rime reduction occurs in unstressed syllables. I do not go into this aspect of the influence of stress in this thesis however, as I consider it to

be frustratingly elusive acoustically and perceptually. Moreover, the level of confidence in the (T.o) vs. (T.T) contrast varies from speaker to speaker. In fact, even dictionaries differ on such matters (see W. Li 1981 and particularly C. Chen 1984 for extensive discussion).”

If I understand Chen correctly, he seems to admit that stress is an integral part of the language, but at the same time disregard the necessity of its proper investigation because it is “elusive”. The object is variable, no doubt, which is why speakers and even dictionary-makers are differ on the subject, but that does not mean that stress is for that reason not also systematic under a set of variable parameters. These should be properly worked out.

He continues: “Even more problematic are the (T.T) expressions, with two tone-carrying (tonic) syllables. W. Li (1981) appears to be the first to argue that Chinese is a free-stress language in the same sense as English⁶³ or Russian: any tonic syllable can attract stress.”

I agree that Chinese is a language where, theoretically, any syllable in a word may be stressed. However, beyond the fact that contrastive stress may target any syllable, this does not mean that there are not consistent patterns for which syllables *are* stressed in specific words and their usages.

Yen-hwei Lin

Lin states: “Unlike English, SC cannot use stress for emphasis or focus in a phrase or sentence.” Karlgren seems to corroborate this notion: “The musical variations, occurring in many languages, called intonations, occupy a very modest place in Chinese. Logical

be of a more technical character than what is needed in my pedagogically-inclined treatment of the matter.

63 Duanmu 2007:132 says: “If the manifestation of stress is the same in English and Chinese, as we have seen, why is stress judgment so much easier in English overall? The main reason I suggest, is that (a) Chinese is a tone language but English is not and (b) most Chinese words are monosyllabic but most English words are polysyllabic. Thus in Chinese there a far more chances of getting case (7) than case (4)”. Cases 7 and 4 are, respectively: *ròuwán* (heavy-heavy / long-short) and *māma* (heavy-light / long-short).

intonations, indicating affirmation, interrogation or exclamation, hardly exist, as they would run counter to the very important tones described above. It is a common fault of Europeans in speaking Chinese to adopt for instance an interrogative intonation, that makes the sentence unintelligible to the native listener. Emotional intonations exist only so far that a whole phrase, a sentence or a sentence group may be placed in a higher or a lower key than the normal.”

I do not have any empirical data at hand with which to disprove this, but I still find it to be strangely illogical. To claim that logical intonation expression emotion etc. is hardly present in Chinese is to force upon the language a very limited view indeed. I do not claim that intonation of this sort does not operate under a certain set of parameters in the case of Chinese that are not applicable to, say, most European languages, which are much freer in this sense. In fact, in the same text, Karlgren also says, rather contradictorily, “The distribution of stress over the comparatively independent members of a sentence varies considerably, for logical, stylistic, syntactical etc. reasons. The rules of stress in this respect being practically the same in Chinese as in other languages, I do not think it necessary to enter into particulars”. If the rules of stress are practically the same in Chinese as on other languages, his previous statement seems unclear to me.

Lin also says: “It is uncontroversial that in a disyllabic SC word with the neutral tone, the first syllable with a full tone is stressed and the second syllable with the neutral tone is unstressed, but in a disyllabic word with two full tones, it is not clear which one has the stress.” She continues: “For a word with a neutral tone, such as *shēnghuo* [ʃəŋ]55[xwo] 'livelihood', the neutral-toned syllable is unstressed, but for a word with full tones such as *shēnghuó* [ʃəŋ]55[xwo]35 'life', it is unclear or debatable which syllable is stressed.” It is interesting to note then, that in Oshanin, Kuraishi *and* Isaenko, the lexical stress pattern for this word is unequivocally assigned as *shēnghuó'*, with the stress on HUO. Also it is interesting to note that only Kuraishi and Oshanin list the pronunciation *shēnghuo* in addition to *shēnghuó* for the characters 生活. According to Yen-hwei Lin, these two characters obviously represent a minimal pair, where one explicit means “livelihood” with the neutral tone and the other “life”, which reading she would then ascribe to the verb “to live” is not mentioned, and we are left to only assume. But, since neither Oshanin or

Kuraishi list shēnghuo as nothing more than a variant reading of the same definition as for shēnghuó, I am inclined to dismiss this “explicit case of minimal pairs” as nothing more than a very personal and not very scientific observation. Kuraishi list shēnghuo as explicit noun, but no stress assignment for full toned shēnghuó. The ABC Dictionary does not distinguish either.

San Duanmu

To be honest, I am not quite sure how to comment San Duanmu's judgements on stress. Firstly, I find his book is too technical to be of much use for one not solidly versed in phonology and phonetics. Secondly, I find his breadth in terms of examples to be very lacking. Neither are any of the works I consult and analyze here in my thesis even mentioned in his bibliography, which is strange, seeing as Duanmu's book is by far the most thorough, which is not to say that it is actually thorough, in its treatment of stress of the three works discussed in this chapter. Duanmu seems to take the issue of stress seriously enough, but his overly technical treatment is too abstract and does not leave one with very much practical information; the concept of stress remains an abstract issue after having read it. Relevant to my purposes here, only a small number of examples are referenced, providing us with little new insight:

大意	大爷	包含 / 涵
dàyì dàyi	dàyé dàye	bāohán bāohan

He identifies that these three examples are instances of minimal pairs where each specific reading has a specific meaning. However, these pairs, belonging to the full-tone vs. neutral tone distinction type, are widely accepted and occur in most modern dictionaries.

Examples of minor interest, not because they are controversial, but because they are quite illustrative of the many features of stress, are:

Nonhead stress

huǒ'chē qì'chē huò'chē gōng'jī

He uses the example *ròuwán* “meatball”, as an example of why stress is harder to identify in Chinese than in English. In my mind, this example clearly belongs to the same category as the above string of Nonhead stress instances.

He also notes a single, though important, instance of the following type:

guàirén'	VS.	guài'rén
V. O.		noun
“blame others”		“weird person”

The point here is that although two morphemes are common in collocation, the pair still has very specific meanings and thus, in this case and similar ones at least, very specific stress patterns attached to them stemming from the relevant syntax of the usage.

5. The Stress Assignment Comparison Chart (Appendix 1)

The methodology behind the compilation of the Chart and the features of its underlying sources is covered in the Methodology section.

The first and most important portion, which constitutes the scientific contribution of this thesis, is a schematic overview of vocabulary marked for stress extracted from six different sources. This overview will show how and to what degree a lexical item is variable or consistent in its stress pattern and will thus give an empirical basis on which to discuss what differences there may be between them and why, if possible, these differences exist.

The Stress Assignment Comparison Chart constitutes the empirical foundation for much of this thesis, as well as the scientific contribution of my M.A. thesis work. Despite any shortcomings or limitations in my own treatment of the material, it may still serve as a representative amalgamation of the most significant sources of meta-information concerning stress assignment in Beijing Mandarin, with a broad historical range. I have

here only begun to scratch the surface of the problems surrounding the phenomena of stress in Beijing Mandarin, building heavily on and also attempting to summarize what various scholars have said, or indeed not said, about it. However, I hope that even the most hardened skeptics of the theoretical postulates presented here may still find it worthwhile to glance at the Chart, so that they may at least be aware of the work already done in there area. There are considerable deviations among the sources, which, for whatever reasons they are there, need not lead one to think that stress is completely arbitrary, but rather that the object of analyses must be clearly defined. The variations of stress throughout Mandarin as whole, and indeed within specific varieties of Mandarin, need not alarm one to the point of throwing the baby out with the bathwater in terms of venturing to understand and delineate the phenomenon.

6. Analysis of Vocabulary Groupings from the *Comparison Chart*

The Predictability of Stress Assignment

If the manifestations of stress in words in Beijing Mandarin were totally arbitrary and occurred in speech with seemingly no underlying regularity, one could perhaps draw the conclusion that stress had no real function in the language. It would still be a feature of the language, much like stress probably is in all languages, but it would serve no purpose of distinguishing meaning in words and sentences, i.e. it would not be *phonemic*⁶⁴. However, this thesis postulates that word stress in Beijing Mandarin is indeed not merely in no way *lexically idiosyncratic*, but that it occurs according to fixed principles and that it dictates specific meanings in minimal pairs and also other words, phrases, and sentences⁶⁵. If I

64 I personally regard the matter as such: Stress in Chinese may definitely be a phonemically distinctive feature, but that does not mean that its phonemic value is therefore always utilized. This may serve as a compromise between those who feel it is grammatically essential and those who feel it is hardly decisive.

65 Again, there are those who claim that stress is in fact not even present in the spoken

were to hold the notion that stress in Beijing Mandarin (and to seemingly varying degrees in Mandarin in general) was *not* phonemic, and there are indeed those who do, I feel obliged to ask the question of why, as the sources used here show, there have then been several pre-eminent scholars from several countries, including China, starting already from the 1800s, who have devoted significant time and energy to identifying and documenting the presence and shapes of the phenomenon in Chinese. It seems to me that, relatively speaking, the issue of word stress in Chinese needn't really be more controversial than any one of several other research areas in most other fields, simply due to the fact that it is of yet *comparatively understudied*. Science is like many other fields guided in part by "fashion", but the fact that the study of word stress has been and still is rather "unfashionable" in this sense does not in my mind in the least impinge upon the already established quality and potential furtherance of the work already done in the area.

Although stress in Chinese can, as Harbsmeier (2009) has pointed out, be variable, and there is supposedly a great deal of ambiguity surrounding the consistent regularity of stress patterns in Chinese, certain rules of predictability have still been formulated. I reproduce here the basic principles for certain word-types outlined by Harbsmeier, and then follow to check relevant examples from the word comparison list up against these rules. It is important to note, however, that these and whatever expanded understanding of the rules I add to Harbsmeier's points, are not necessarily rules as much as they are pervasive tendencies, and should be viewed as such and NOT watertight laws of lingual behavior. Due to spatial constraints as well as for the purpose of testing the pervasiveness of these rules, I only discuss a handful of examples appropriate to each category from the list, but attach the relevant specific rule's ordinal number (see list below) to each lexical item in my list that I feel belongs to a certain rule. I then discuss whether there is a consistent relationship present, or any important deviations⁶⁶.

language, regardless of whether it should be considered lexically idiosyncratic or lexically determinate or not.

⁶⁶ I am not a grammarian, and my own limitations when it comes to attempting very fine grammatical analyses of Harbsmeier's rules and Comparison Chart examples may not hold water in all cases. I have attached a rule number to every item in the Chart, but only discuss those examples that I find clear-cut. The rest of the words are just for reference

Summary of Harbsmeier's rules⁶⁷:

1. Prepositions (or more correctly: coverbs) and grammaticalised elements are generally unstressed:

No appropriate examples in the Comparison Chart. The rule refers to usages like *fàng'zài* / *fàngzai* 放在 "place in/on/at". Though this is not strictly speaking *one* word but a verb+coverb situation, the "appended" preposition/coverb is still consistently unstressed. Directional complements, i.e. *tà'xià* / *tàxia* 踏下 "tread down" (for example, a pedal) also behave according to this principle. Resultative complements, however, i.e. "to hear (and) understand" 听懂 *tīngdǒng'* and "finish reading" 看完 *kànwán'* apparently have stress on the complement.

2. More generally, composita with recurrent semi-affixes or other recurrent elements have stress on the non-recurrent element⁶⁸:

This is a very general rule, and may therefore lend itself to quite a number of exceptions, but it is nonetheless probably the most important rule for word-stress in Beijing Mandarin we have. The most salient feature seems to be that any word which has one potentially recurrent element gets the stress on the non-recurrent part. This means, for instance, that in cases like *hóngtáng* 红糖, *báitáng* 白糖⁶⁹, and *huángtáng* 黄糖, the stress usually falls and may require deeper and more proficient analyses.

67 The rules defined by Harbsmeier in his paper only scratch the surface of what will prove to be a fertile and challenging field in the future, which is determining what other (and there should be many) rules govern word-stress in Beijing Mandarin. My main focus here has been to provide a sufficient empirical basis on which to test the pervasiveness of his rules.

68 Harbsmeier's rule here is in my understanding similar to the rule formulated by Duanmu (2007: 146) of *Nonhead Stress*, which he says "is a consequence of the Information Stress Principle" (discussed below): the head in a phrase does not receive the main stress. On a more general, but also helpful note, Y. Yuan (1999) proposes that there is a general relation between information and word order in Chinese: a word that has less information should come before a word that has more information.

69 Surprisingly, the specific example of "white sugar" is cited as *bái-táng* in Arendt,

one the non-general part of the word⁷⁰, namely the characters meaning red, white or yellow, and each designating a specific type of sugar. In other words, there is a marked disparity in the semantic load of the constituents making up the word, and the gestalt meaning of the word is more closely linked to the modifying elements than the modified element. The fact that they are listed together here and presented contrastively, which in other cases will usually also lead to the stress being on the non-recurrent element, should not here delude one to think that this is the reason for the first part being stressed. The logic is that “sugar” is the general element, while red, white or yellow specifies a particular kind of the general thing, and is therefore, logically, though not necessarily contrastively, stressed. That is not to say that *hóng* 红, for instance, may not itself also of course act as the general element in other cases, such as in *shēnhóng* 深红, *wēihóng* 微红, etc.. Harbsmeier does not specify any potential differences between the part-of-speech of the elements comprising the composita, and so I assume that it also applies to verbal compounds, i.e. in such cases as *luànpǎo* 乱跑 and *mànpǎo* 慢跑. Here the stress is also on the adverbial character modifying the character constituting the general category of a type of action, in this case “running”. The running is implicit, it is the *form* of running which is grammatically as well as logically the source of the stress

contrary to rule number 2, and so I have added an X to the rule number in the Comparison Chart, marking it as an exception or unexplained deviation from the rule. However, there are copious examples indeed proving the pervasiveness of the rule, and so I choose to regard it as an anomaly rather than as a counter-evidence. I do not thereby claim that any exception should be disregarded as an anomaly for that reason. There is a definite possibility that many stress patterns in words are idiomatic and run counter to the rules of the class of word they would seem to belong to, having a unique stress pattern owing to some unexplainable rule. That does not necessarily dictate, however, that I think this is the case with this word. *Bái* is clearly an attributive to *táng*, and because its modifying role is so clear-cut in this case, I choose to assume that there are other reasons for his different stress pattern citation.

70 For example: 茶几 *chájī* “tea table” vs. 红糖 *hóngtáng* “red sugar”: There are many types of sugar, and so it may be accompanied by a range of semantically restricting attributives, but *jī* is used exclusively with *chá*; there are not, commonly, several different kinds of *jī* in the lexicon, even though the meaning of the character is quite general.

The examples and counter-examples are quite numerous and I only discuss a handful here, but in the comparison chart I have given the number “2” to all of the words which I think this rule applies to, and the list may be consulted. I have added and X besides to number to the cases where the rule should theoretically apply but does not according to the cited word form⁷¹.

Other examples:

bái-lí' / bá'i-lí, bá'i-rì, bá'i-tiān (all taken from Arendt; conform to rule)

dà'-yé, lǎ'o-yé, hó'u-yé (all taken from Arendt; conform to rule)

chā'i-shǐ: tiān'shǐ, gōng'shǐ (last two taken from Qingzhong Geshi Cidian; conform to rule)

chū'n-tiān: dōng'tiān, xià'tiān, qiū'tiān (last three from Qingzhong Geshi Cidian; conform to rule)

3. Verb-object constructions (be they morphological or not, functioning verbally or nominally) have stress on all non-pronominal objects:

Only one single real exception in the entire Comparison Chart (qǔ'-qī: stress on verb and not object, though it is a common verb-object construction collocation; probably just a typographical error or unusual sentence prosody causing influence). This indeed a true

⁷¹ In the cases where there is a divergence between the rule and the cited word, this may be due to the influence of the full sentence prosody in the environment from which the word has been extracted. Arendt's texts are perhaps most valuable because he indicates stress assignment in sentential context, allowing us to better understand the principles which govern such assignments in a natural linguistic context. But my focus here is word-stress in isolation, as is the focus of my other sources, and so I have extracted words mainly from his glossaries. There will still be the odd word taken from a lesson text whole sentence context, in which cases there may be influence from other constituents causing the cited form to diverge from the rule I analyze it based on. This may or may not be the only reason, but I nonetheless mark these words with a X next to the rule number for reference.

rule, not just a pervasive tendency, and is hardly very controversial. The three following examples should be noted, however, due to their being able to function both as verb-object construction and disyllabic nouns, depending on context and syntax:

管家 guǎ'n-jīā

开水 kāi'shuǐ

听差 tīng-chāi

What strikes me is that Harbsmeier's rule that stress usually falls on all non-pronominal objects, whether used verbally or nominally, does not seem to apply here. In fact, the three examples above, all able to be and indeed are cited as nouns in Arendt (even though they may also occur elsewhere as V.-O. constructions) have front-heavy stress in their, here, nominal usage. I propose that it is in fact a general tendency for V.O. constructions in nominal usage to be front-heavy.

4. Place nouns and time nouns after classical "empty words" receive stress:

No appropriate examples in Comparison Chart.

5. Resultative verbs have stress on the final resultative complement:

I am often unsure of what path is the right one to take when attempting to unravel the underlying reasons for for a specific stress pattern in terms of grammar: Should one simply look at the syntactic function of word constituent, or are there deeper semantic factors that often underpin the resulting pattern? Using modern Chinese grammatical analysis, zháo-jí' is perhaps not a case of VERB + RESULTATIVE COMPLEMENT⁷², but if one looks closer at the semantics of each constituent, and views jí "anxious" as the result of the verb zháo⁷³, one may arrive at a similar type of innate logic as with the VERB+RESULTATIVE COMPLEMENT, even if the overt grammatical structure is not as clear in terms a strictly modern Chinese grammatical view⁷⁴.

72 The criteria for whether or not a it is case of VERB+RESULTATIVE COMPLEMENT in modern Chinese is usually if one may place a *bu* 不 or a *de* 得 between the verb and its complement.

73 着[著] zháo v. ①touch; come in contact with ②feel; be affected by (cold/etc.)

74 Since the underpinnings of stress patterns in Chinese are as of yet still far from being

zháo-jí' (see above)

yù'-jiàn, tī'ng-jiàn, kà'n-jiàn: jiàn is the resultative complement in all three cases, and is unstressed (may also be toneless) throughout. Perhaps more generic complements like jiàn or dào are more commonly unstressed than more semantically specific complements like dǒng, bǎo, huài etc.

chō'ng-zhuàng: I would like to attempt to use the same kind of logic here as with zháojí, but the stress pattern does not correspond since it is front-heavy.

bìng-gù': "To sick-die" (pass away as a result of illness). Gù is explicitly a resultative complement to bìng, though this word is usually relegated to more formal, written language.

6. Adverbially modified verbs (as well as the nouns derived from these) tend to have final stress:

Ex. for: chū-bì'n, guì-xì'ng, hài-pà' (perhaps belongs to rule 8?)

Ex. against: dǎ'-suàn*, ē'n-ài, jī'ng-guò, lǎ'o-shí*, lì'-hài*, té'ng-ài, zhuā'n-guǎn

*Unsure if these are appropriate to this category or not.

7. Verbs or stative verbs with postposed multisyllabic adverbs receive stress:

hǎ'o-xiē / hǎ'o-xiē': In this example (single one available) here, the postposed adverb is unisyllabic, but the rule seemingly applies to the alternative citation of the word (obviously not enough evidence to draw any tentative conclusion in this case).

worked out, I would like to at least ask the question if one can afford to, in a language as diachronically fluid in terms of semantic and syntactic structure as Chinese, to overlook a possible explanation for a word stress pattern simply because a narrow modern interpretation of the word does not easily allow for it?

8. Verbal as well as nominal synonym compounds tend to have stress on the second synonym, although this pattern has too many exceptions to be of much use:⁷⁵

For this rule I could have cited a host of examples, as a very large portion of the vocabulary in the Comparison Chart adheres to this principle. Due to the rule's pervasiveness, I discuss below ten examples I feel illustrate the rule very well. I also believe that this is the best general rule for stress pattern behavior we have, which I interpret and paraphrase like this: In composite words where there is one element (either mono or polysyllabic) which may be considered general, and one element (also either mono or polysyllabic) which may be considered contextually special, there special element receives the stress⁷⁶.

However, although rules for stress in chinese are not necessarily the easiest task to identify always, one should not therefore assume that there are none. One the other hand, on should not assume either that all word stress patterns are they way there are because of some rule; it could just be convention.

A quick glance at the Comparison Chart suggests that this is barely the case:

For: à'n-zhào, cì'-dì, dā'n-wù, dì'-xiōng, fù'-guì (all synonym compounds)

Against: bàn-lǐ', bǐ-mò', dà-xiǎ'o, duō'-shǎo / duō-shǎ'o (synonym/antonym compounds)

In light of this rule, I would like to again discuss my previously discussed example of 地方. Harbsmeier admits that this rule has too many exceptions to be of much use, and this much discussed favorite example of mine does not seem to not conform to this rule. There

⁷⁵ I assume that this applies to antonym compounds as well, such as duōshǎo 多少. On a related note Duanmu (2007: 149) says: "When a disyllabic compound is frequently used, (such as those surveyed by Xu), they are treated as words and follow the pattern of word stress, (which can be (HL), (HH), or H(HØ))."

⁷⁶ In longer and complex words, I assume this principle should work according to a hierarchical descending order of some kind. However, the corpus I have compiled for this thesis limits itself to di- and trisyllabic simple words and I therefore have no empirical basis on which to analyze the larger kind of words.

are many factors to take into consideration here: First of all, although Harbsmeier states that the principles of stress assignment may also generally extend to vocabulary of a more classical flavor⁷⁷. Many words of the type (near)synonym-(near)synonym compounds seem to adhere to his rule, but one must first review whether or not the words making up the synonym compound in fact are synonyms in modern Chinese in their (usually) monosyllabic form, and also whether or not, if this is the case, their respective meanings are current. In the word 地方, 地 dì more or less has the meaning of the whole lexeme 地方 difang (noun: "place"), but 方 fāng by itself only quite remotely has this sense in the examples 方言 fāngyán, or xīfāng etc. The most common meaning of 方 fāng when used alone is the adjective meaning "square", and in more written usage it has the sense of "just now", as in 方才 fāngcái. The only conclusion I thus feel it is responsible to draw on the basis of this, is that, as mentioned, the fluid boundaries of word meanings and usages across time and space in Chinese may account for a word's inherent stress pattern, but this internal structure may or may not be visible to a modern reader based on a strictly current usage and semantic of the monosyllabic word / character in question. This may account for a portion of the stress patterns of words that are hard to explain in modern Beijing Mandarin, but this is just a theory; I find myself often leaning towards simple idiom in many cases where there seems to be no logical explanation for why a stress pattern is regularly the way it is.

9. Semi-grammaticalised prefixed passivising main verbs like kě 可, gòu 夠, zú 足 are unstressed in the binomes or idiomatic phrases they form:

kě'-yǐ: 可 kě is *not* unstressed. In fact, 以 yǐ is often also neutral.

好 hǎo is not *passivising*, but it does function as a prefix:

FOR: hǎo-bà'n, hǎo-jiǎ'ng, hǎo-kà'n, hǎo-mǎ'i, hǎo-qí', hǎo-xiě', hǎo-zhù'

⁷⁷ In his elaboration of rule 3, he states: "And the general rule remains that we have *yīncǐ* 因此 "therefore", *rúcǐ* 如此 "like this", and *yóucǐ* 由此 "from this" even in literary or bookish expressions. The stress patterns of modern Chinese are naturally transferred to literary Chinese."

AGAINST: hǎ'o-tīng, hǎ'ochī / hǎochī', hǎ'o-hē

No other appropriate examples in the Comparison Chart.

10. Place names that end in generic nouns, surprisingly, seem to have regular final stress:

For: Zhè'-jiāng, Sì'-chuān, Shā'n-dōng-rén, Shā'n-dōng, Mǎ'n-zhōu, Guǎ'ng-xī, Guǎ'ng-dōng, Guā'n-dōng, dō'ng-biān, Bě'i-jīng-ché'ng, Bě'i-jīng, bě'i-biānr

Against: Jiāng-ná'n, Hēi-lóng-jiā'ng, Dōng-yá'ng

Harbsmeier notes that this type “surprisingly, seem to have regular final stress”: Arendt's citations seem to suggest the opposite.

As mentioned in the beginning of this paper, one textbook which partially includes the analysis of stress in its graded lessons is the *Practical Chinese Reader* from 2004, Volume 1 and 2 (see bibliography). The majority of content in these two books relating to stress focuses on what it calls “sense group stress” and “sentence tunes”, summarized as being the inherent meanings of the components in a sentence, how they relate, and how this is manifested in the relative emphasis they are given in a sentence (i.e. closer to the field of sentence prosody, which is not my main focus) and the degree to which pragmatic markers influence the pitch pattern in a sentence, respectively. Though I can not vouch for the general pervasiveness of these principles as they are presented in these books, I nonetheless am happy that there is at least one modern textbook in English which deals with the matter, and I have reproduced below the portions related to word-stress in it. They mainly deal with “stress rules”, or rather, pervasive phenomena as I see it, but on a much more basic level than those of Harbsmeier. I nonetheless feel they are worth a brief mention⁷⁸, though I have not analyzed content from the Comparison Chart in light of them.

78 On a similar note as these very basic rules, I could for instance remind the reader that the character bù 不 is usually unstressed in all compound usages (everywhere except when it stands by itself). This may be useful information to some people, though it is hardly

Rules from the Practical Chinese Reader series:

1. When a noun is formed of reduplicated characters, the first character receives a strong stress and the second one is pronounced in the neutral tone. E.g. 爸爸, 姐姐, 哥哥⁷⁹
2. When a monosyllabic word is reduplicated, the main stress falls on the first syllable, and the syllable that followed is pronounced in the neutral tone. E.g. 看看, 听听, 想想
3. The numeral “十” is uttered with a strong stress when standing alone. When “十” is combined with other numerals, it is not stressed if it forms the first element, as in “十二”, but it is stressed when it is the second element, as in “三十”. When “十” is followed by a measure word, it is pronounced with a weak stress, as in “三十个”, “四十本”. When “十” is sandwiched between other numerals, it is also pronounced with a weak stress, as in “九十三个”.⁸⁰
4. When “一” is inserted between a pair of reduplicated monosyllabic verbs, it is pronounced in the neutral tone. The stress pattern of this type of construction is STRONG-weak-weak. E.g. 等一等, 想一想, 谈谈
5. When a numeral is combined with a measure word, the numeral generally has a strong stress and the measure word is pronounced with a weak stress. E.g. 三个, 七本
6. The first syllable of a disyllable formed with the suffix “子” is stressed, and “子” is pronounced in the neutral tone. E.g. 裙子, 裤子, 孩子

on the level of the more complex analyses that I try to grapple with here.

79 Hardly a steadfast rule as much as a common tendency in Beijing Mandarin, but still a useful pointer for students encountering new words of this type the.

80 Obviously, this type of analyses would prove to be very taxing if it should be done thoroughly. The books says no more than is reproduced here, but it is still a nice though only sketchy summary of the rather fickle behavior of the character YI in various contexts.

7. Most words of three or four syllables have a main stress falling on the last syllable. The usual stress pattern of the trisyllables is MEDIUM-WEAK-**STRONG**. E.g. 咖啡馆, 中文系, 留学生. The usual stress pattern of the trisyllables is MEDIUM-WEAK-MEDIUM-**STRONG**. E.g. 外语学院, 汉语词典⁸¹

8. In disyllabic words, the length of the stressed syllable is twice as long as that of the unstressed one. Assuming the time needed for uttering a certain word is 6, and the word is pronounced in the medium-strong pattern, then the distribution of time should be 2:4, e.g. 生命. In the strong-weak pattern, the distribution of time would be 4:2, e.g. 眼睛

Trisyllabic (medium-weak-strong): 2:1:3, e.g. 收音机, 天安门

Quadrisyllabic (med.-weak-med.-strong): 1.5:0.5:1:3, e.g. 北京大学, 社会主义^{82 83}

As a continuation of the final part of the rules sketched out above, I here also include a simplified representation of Monique Hoa's generalizations on stress in longer words with

81 I would argue that which characters are stressed in three or four-character compound terms is not determined by their numerical order in the term, but rather by the relative semantic load of the characters making up the composite again making up the expression as a whole, cf. Harbsmeier's rule number 2.

82 Harbsmeier (2009): "In more complex words or word-like expressions, the system operates consistently at different levels of analysis. The stress in **shè"huìzhǔyì** 社會主義 has to be on *shè'huì* 社會, and this example shows how a detailed treatment of stress patterns must take account of the constituent structure of complex words and recognize different levels of stress assignment according to different levels of immediate constituent analysis. (Note the prosodic complexities in *shè"huìzhǔyìzhě* 社會主義者 "socialist" which instantiates the very general tendency for long words or idiomatic expressions to be bounded by stressed syllables.)"

83 I think the method of representing the relative length of heavy-stressed, medium-stressed, and unstressed parts of a word using a fixed value, in this case 6, the other respective numbers and the colon is very precise, intuitive, and should be adopted for others attempting similar analyses.

full syllables:

W = weak (full tone, not neutral), S = strong

Length	Hoa's pattern
2 syllables	WS
3 syllables	SWS
4 syllables	SWWS
5 syllables	SWSWS
6 syllables	SWSWWS
	SWWSWS
7 syllables	SWSWSWS
	SWWSWWS

I limit myself to shorter words in this thesis, and have not tested Hoa's patterns empirically. I include them only for reference here, to show that some work has been done on identifying tendencies of stress patterns in longer words as well, though these are much less common than disyllabic words, which constitute the majority of modern Mandarin vocabulary.

Discussion of selected illustrative vocabulary:

事情 / 东西

事情 *shìqing* and 东西 *dōngxi* are two good examples of how the very non-transparent written Chinese language can confuse students. As the Comparison Chart shows, both of these two-character words actually stand for *two words each*. For *dōngxī*, where both syllables are read in full first tones⁸⁴, the meaning is “east and west”, i.e. two nouns

⁸⁴ In collocations where two equal (conceptually parallel) words are juxtaposed like this, it is not uncommon for there to be a *double peak* stress structure, such as in for instance 中挪关系 *Zhōng-Nuó guānxi*, “Sino-Norwegian relations”. The double peak pattern in *Zhōng-Nuó* is caused by an equivalence in semantic load among the two morphemes.

juxtaposed in a complex expression (i.e. in modern Chinese *dōngbian hé xībian*). The noun “thing”, *dōngxi* and why it consists of two morphemes separately meaning *east and west* is interesting in itself, but it nevertheless means something entirely different when read *dōngxi*, even though it happens to be “clothed” in the same characters⁸⁵. Also, Oshanin in his Great Russian-Chinese Dictionary has prescribed a meaning for the characters 事情 transcribed as *shì-qíng*, “the fact of the matter” (notice the hyphen between the characters), i.e. 事(之)情. This meaning is not common in modern colloquial Chinese, but is still a logical usage of this particular character string. However, both *shìqing* and *shìqíng* are common for the most usual meaning: “thing, matter”.

大人

大人 is also a case of the same two characters clothing different words. To place all of the transcriptions of these two characters in the different sources into the Comparison Chart therefore presents a problem: Do these different words which happen to be written with the same characters have distinct and consistent stress patterns associated with them that separate them clearly in speech? If so, I must make sure that I do not assign the transcription of one of the sources to a specific meaning without first making sure which word the source actually refers to (if there is more than one) when giving *that* specific transcription. The entries for 大人 in the ABC Dictionary are:

大人 *dàren* n. adult; grown-up > See also *1dàrén*

大人 *1dàrén** n. <trad.> ① respectful salutation for one's parents/seniors/etc. ② Your Excellency or His Excellency ③ man of great virtue/character; accomplished person ④ great personage M:²wèi > See also *dàren*

The distribution of these two stress patterns and these two meanings is as follows in my six different sources: Arendt has *dà'rén* for the title only and does not mention any other

⁸⁵ In southern varieties or Taiwan Mandarin, even when meaning “thing” the word may sometimes be read *dōngxī*, with two full tones. I assume that in these instances the stress pattern will still be front-heavy, even with a full tone on the second syllable, but I have no evidence to support this claim in my Comparison Chart.

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meaning, *Spoken Chinese* has this pattern for “adult” and does not mention the title, i.e. it is the opposite of Arendt. Oshanin has the reading *dà'ren* for both meanings, and Kuraishi has *dàrén* for the title and **dàrén** for “adult”. Isaenko only has *dà'ren* for the meaning “adult”, and the Qingzhong Geshi Cidian has *dàren* for both meanings. This much is clear: 大人 has two meanings, one which is readily deducible from the meanings of the individual characters (which are also whole one-character words in their own right) having the meaning of “adult”. The other is the gestalt word which is the title for a certain type of official. The evidence in the Comparison Chart is not conclusive, however, with regards to the distribution of the neutral second syllable, and I am left to assume that the distinction suggested by the ABC dictionary is not consistent. Thus, there is obviously no clear-cut distinction in usage for this particular arbitrary minimal pair; the only thing which is stable is that this character string is not back-heavy⁸⁶ under normal circumstances, regardless of meaning.

7. More on Minimal Pairs: The ABC Dictionary Homophone List

The ABC Dictionary Homophone List is an independent scientific work done by former M.A. student at the University of Oslo, Mr. Wang Lei. His work has been to extract all the words listed as homophonous according to the ABC Chinese/English Dictionary (as it stands in the dictionary program Wenlin®) and mark them for stress as he, a native of Dalian, hears them. In this sense similar to the Tang Yunling files in that it records the observations of *one* native speaker only, it nonetheless provides valuable raw data for analyzing the speech patterns of one northern mandarin speaker in light of the proposed underlying regularities discussed in this thesis.

⁸⁶ As the Comparison Chart shows, Arendt actually has *dà-ré'n* as an alternative transcription for the title, but due to the consistency of all the other sources in refuting the prevalence of this, I choose to regard it as an anomaly.

What I have done is to take a small selection of frequent and convincing minimal pairs⁸⁷ and look at the systematicity underlying them. I believe that in these cases of minimal pairs stress is not only present but distinctive and therefore relevant for proper comprehension, and I discuss Mr. Lei's notations based on what I have learned so far:

Case 1

变位 biànwèi' v.o. ① displace; deflect ② biàn'wèi <lg.> conjugate

变位 biàn'wèi n. conjugation

变味 biànwèi' v.o. taste unpleasant; spoiled

There is a tendency for the stressed syllable in V.O. constructions to shift from the second syllable (the object) to the first syllable (the verb) when it occurs in nominal usage. The previously discussed examples guǎn-jiā'/guǎn'-jiā, kāi-shuǐ'/kāi'-shuǐ, tīng-chāi'/tīng'-chāi all support this. I note with surprise that Mr. Lei has noted 变位 biàn'wèi in the verbal usage "to conjugate" with stress in the first syllable. He himself comments on this in the following manner: "In this case, I prefer to note which function the v.o. construction has, and roughly divide them into "verbal" and "nominal", two groups. If the construction is in a verbal function, it will emphasize action, so the stress is on the verb part of the construction. On the other hand, if the construction is in nominal function, the stress is on the noun, to emphasize the whole affair." He continues: "Like I said with 辨色 biàn'sè (see below), when 变位 means "displace; deflect", the word is in a verbal function, so the stress is on the verbal root or part of the word. When it means "conjugate" it is in a nominal* function, so it has the same pronunciation as when it is a noun."⁸⁸:

*Obviously a misunderstanding.

87 Wang Lei's homophone list does *not* limit itself to homographic homophones/minimal pairs only, as my list does.

88 To account for this phenomenon, one might propose something that for lack of a better word I can call *idiomatic fossilization*. It is not uncommon for words that represent such static groupings that they eventually come to function as a fixed unit. The predictable stress patterns resulting from the grammatical thrust in a given phrase or sentence may cease to behave predictably when the internal grammatical properties of a phrase begin to act more as a static unit which, which behaves as a whole in the same way *Son of a gun* would be pronounced differently from the same words in a sentence like *That man is a son-a-gun*.

Case 2

变色 biànsè' v.o. ① change color; discolor; fade ② change countenance

辨色 biànsè' v.o. ① read another's facial expressions ② distinguish colors

辨色 biàn'sè n. twilight

I do not know if I agree with Wang Lei here, nor does his comments fit our conclusions so far, but I am nonetheless hesitant to simply disregard what he is trying to explain. He is, after all, a native speaker, and his inability to sufficiently explain the phenomenon he manifests does not mean that the phenomenon itself has no relevant basis. Still, I cannot seem to find any logical explanation for why the verb conjugate 变位 biàn'wèi has the stress on the first syllable when 辨色 biàn'sè meaning the noun “twilight” also does⁸⁹.

Case 3

编成 biānchéng' r.v. ① have compiled; finish compiling ② 〈mil.〉 form (a unit)

边城 biān'chéng p.w. border/frontier town

编成 biānchéng' rightfully has the stress on the second syllable because 成 chéng acts as a resultative complement, at least in the word's most common meaning. The second meaning of 编成 biānchéng is much rarer, and I insist that regardless of its stress pattern (which may or may not only apply to the first definition), it is a noun, as in 战斗编成 "battle formation".

The word 边城 biān'chéng fits nicely with the principle of Nonhead stress and Harbsmeier's rule that the specifying and modifying part of a disyllabic composita receives the main stress.

Case 4

⁸⁹ The tendency for a V.O. construction to go from back-heavy to front-heavy when used nominally is not sufficiently documented in my mind, and I do not regard it as a hard rule.

编著 biānzhù' v. compile; write

边注 biān'zhù n. marginal notes

The head in 编著 biānzhù' is 著 zhù, and according to Harbsmeier's rule no. 8, "Verbal as well as nominal synonym compounds tend to have stress on the second synonym, although this pattern has too many exceptions to be of much use", suggests that this is as it should be. The characters 编 biān and 著 zhù are near-synonyms, and so this is therefore not an exception.

边注 biān'zhù conforms to Harbsmeier's rule no. 2: "biān" specifies the type of "zhù" and is thus stressed.

Case 5

标志 biāozhì n. ① sign; mark; symbol ② characteristic

标志 biāozhì' v. indicate; mark; symbolize

Classic example of the front-heavy nominal usage and back-heavy verbal usage of the kind of word in Chinese which undergoes internal morphology and may be used as both verb and noun equally frequently.

Case 6 and 7

绊倒 bàndǎo' v. trip over; trip; stumble

半岛 bàn'dǎo n. peninsula

办事 bànshì' v.o. handle affairs; work

半世 bàn'shì n. half a lifetime

Harbsmeier's rule no. 8 applies to 绊倒 bàndǎo': the second syllable of this (near-)synonym compound is stressed. Rule no. 2 applies to 半岛 bàn'dǎo: 半 bàn specifies the kind of 岛 dǎo. Also, 办事 bànshì' is as it tends to be, with the object as the stressed element. 半世 bàn'shì belongs to the same class as 半岛 bàn'dǎo.

Case 8

- 报道 bàodào' v. report (news)
报道 bào'dào n. news report; story
报到 bàodào' v. report for duty; check in; register

Here we have a minimal “trio”, all of which are in very use common. It goes without saying that as far as distinguishing minimal pairs are important for proper understanding, those cases with three, four, or even five homophonous or near-homophonous words are even more so. 报道 bàodào' / bào'dào conforms to the back heavy verbal usage and front-heavy nominal usage, but the verbal 报道 bàodào' also conforms to rule 8 (heavy second syllable in disyllabic synonym compounds⁹⁰). In the case of 报到 bàodào', I interpret the 到 dào “to arrive” as a nominalized object; “to bào *report* one's dào *arrival*”.

Case 9

- 暴力 bà'oli n. violence; force
暴利 bà'oli n. sudden huge profits
暴戾 bào'li' s.v. <wr.> ruthless and tyrannical

Another “trio”, but the third word 暴戾 bào'li' is not common in colloquial language. This is in my mind an important point, because the relevance of stress does in most cases not go beyond spoken language⁹¹, and in this instance supposedly a case of double peak structure anyway. In a dictionary listing words from all levels of formal and informal language in Chinese, homophones will of course be much more numerous than if one were to only consider those that are common in everyday language. As mentioned earlier

90 报 bào (to report) and 道 (to state/speak) dào are not really synonyms, but I still think that they are semantically related enough in the context of this word for Harbsmeier's rule to be applicable.

91 Of course, very often more formal, “bookish” vocabulary is employed in speeches, news reports and academic discussions etc.. However, there is still a clear (though somewhat flexible) demarcation between the type of language which lies at the boundary of what is acceptable in ceremonial and ornate, yet still fundamentally spoken language, and what is only intelligible in the written form (or when said out loud but only understandable in the context of the written word it refers to).

in reference to the case of the Great Chinese-Russian Dictionary, minimal pairs and their respective distinguishing stress patterns are really only relevant, as well as empirically identifiable, when analyzed from *spoken* language. That does not mean that the stress pattern in 暴戾 *bào'li'* is not real or inferable, simply that any distinguishing difference in pronunciation between 暴力 *bào'li* n. *violence; force* and 暴利 *bào'li* n. *sudden huge profits* is much more relevant in colloquial communication. In the case of these two, though, there *isn't* any phonemic distinction, and we have therefore encountered a true homophonic pair, the semantic distinctions of which are only deducible from context.

Case 10

- 病例 *bìng'li* n. <med.> case (of illness)
病历 *bìnglì'* n. <med.> medical record; case history
并立 *bìng'li* v. coexist
并力 *bìnglì'* v.o. join forces; pool efforts
病粒 *bìng'li* n. <agr.> virus seeds

Here we have five segmentally (same syllabic combinations of vowels and consonants) identical words, the first four of which are all common and current in Beijing Mandarin. I posit that while context undoubtedly may also be a major factor in distinguishing these words, (which may all be naturally employed in the same short conversation or long sentence!) the stress patterns given here by Mr. Lei are equally important and do also aid clarity in a given sentence.

病例 *bìng'li* (like 成例 *chéng'li* or 旧例 *jiù'li* ⁹²): Front-heavy because 例 *lì* is a general element, “case, example”, whose particular type needs to be further designated.

病历 *bìnglì'*: Should be front-heavy based on the same principle applied above, but is apparently not in Wang Lei's idiolect. Still, I get the sense from attempting to analyze the structure of the word that what is emphasized is the 历 *lì* “experience, history”, or the whole process of one's subjection to the illness, not the history of the illness itself. If ⁹² However, according to the Qingzhong Geshi Cidian, the words 事例 *shìlì'*, 案例 *àn'li'*, 条例 *tiáolì'*, 范例 *fàn'li'*, 定例 *dìng'li'* all have stress on the second syllable, which seems to be more common.

anything, supposing that Wang Lei's intuition is correct, this shows that syntactic analysis may not always provide the full picture of a word's stress pattern, and that a word's deeper semantic substance may dominate even despite overt grammatical clues being present.⁹³

并立 bìng'lì: “Adverbially modified verbs (as well as the nouns derived from these) tend to have final stress.” (rule no 6.). However, 并 bìng is a verb and I am not satisfied with applying this rule to this example, even if the stress pattern would constitute an exception anyway. Harbsmeier's rule no. 2 is more suited. We have two verbs forming a compound, the first modifying the other: 并 bìng (here: “standing abreast”) specifies a way of 立 lì “standing erect”, and 立 lì, like in 独立 dúlì or shùlì 树立, is general and thus not stressed.

并力 bìnglì: Simple V.O. construction. Object is stressed.

8. Simplifications in Transcription and the Question of Homophony

“For a phonetic transcription of Chinese, which abounds in bewildering homonyms, we must be careful to render adequately the distribution of stress over the different syllables, for this is of the utmost importance if the transcription is to be perfectly understood. In my opinion it is by no means sufficient to mark only the strong-stressed syllables and group all the rest under the heading of unstressed syllables.” (Karlgren 1936)

For any foreigner attempting to learn Chinese, a solid understanding of the transcription system most relevant to him or her is essential. If its orthographic principles are properly

93 I do not wish to insinuate that syntactic structure is not primary for the majority of inferable stress patterns, but the average native speaker is not overtly aware of the grammatical structure of all the words he or she utters. Logical, contrastive stress may apparently also seep into a word itself, and not just govern the inter-relationship *between* words.

understood, most common transcription systems should give fairly accurate⁹⁴ rendering of the pronunciation of the language. Of course, in most cases learning an authentic and precise pronunciation of any language cannot be divorced from extensive exposure to the language in real use as well as proper listening training at the beginner and often also intermediate level, but once the learner has internalized the often counter-intuitive spellings a given transcription system may possess for him or her, the good news is that due to the relative phonetic poverty of Chinese in terms of vowel and consonant combinations, most new vocabulary will be easily acquired and reproduced correctly due to its predictable patterns⁹⁵. To most modern learners of Putonghua, the *Pinyin* system has quite thoroughly supplanted all other systems, and it is therefore relevant to comment on some of the simplifications this system possesses in light of my thesis question, and in doing so I will also briefly compare with some other transcription systems. As the point of departure of this thesis is to attempt to find and discuss pertinent nuances of pronunciation in Chinese, the phenomena observed below should also be a part of it although it is not its main focus.

As evident from Arendt's transcription, as well as some other transcription systems, the syllable which in Pinyin transcription is written as *zǐ*, is transcribed using only Z. In my opinion, there is phonetically no “i” in this syllable and it is therefore misleading to

94 Karlgren states, however: “...earlier researches on the Peking pronunciation have been carried out in a way which is far from satisfactory and current transcriptions only give an extremely primitive idea of the sounds they pretend to represent.” David Moser adds: “There are probably a dozen or more romanization schemes out there somewhere, most of them mercifully obscure and rightfully ignored. There is a standing joke among sinologists that one of the first signs of senility in a China scholar is the compulsion to come up with a new romanization method.”

95 I am thinking here of the system of initials and finals that all syllables in theory conform to phonetically. I say “most” because there are a limited number of syllables that in reality are pronounced slightly differently from what conventional transcription found in most dictionaries and textbooks would have one believe. For instance, 看报纸 *kàn bàozhǐ* is in my experience pronounced closer to *kàm* bàozhǐ, 很好 *hěn hǎo* is closer to *hǎng* hǎo, and 不行 *bù xíng* is closer to *ḅ* xíng, etc. (this is a simplified representation). It is usually thought that in Mandarin no consonants other than N and NG may occur in syllable-final position.

transcribe it as containing an “i”. Both the Bopomofo system and the modified version of pinyin used in Kuraishi, as well as that used in Isaenko, all reflect this, and understand the suffix 子 as a pure consonantal final, with no ensuing vowel -i [i]. I think this applies similarly to 的, 得, and 地 as well, which more correctly could be transcribed as just a “D”. Consult the following comparison of transcription system for these syllables:

Pinyin⁹⁶	Zhuyin	Wade-Giles	Yale	Gwoyeu Romatzyh
拼音	注音	韋式	雅禮	國語羅馬字
zi	ㄗ	tzu	dz	tzy tzyr tzyy tzyh
de	ㄉㄛ	te	de	de der dee deh

From the comparison table above we can see that none of these five most common⁹⁷ transcription systems for Chinese transcribe the syllables zi and de as pure consonants. IPA transcription however, makes it obvious that there is indeed no vowel present in neutral tone grammatical function, i.e. when zi functions as a neutral-tone word suffix or de functions as for instance an associative particle (的).

For reference, I include a brief factual overview of the most common transcription systems here:

Pinyin

Pinyin (拼音, “spelling sounds”) was created in the 1950s in Mainland China. It has

⁹⁶ In a comparative context like this, what is almost universally referred to as simply Pinyin could rather be designated by its official name, Hanyu Pinyin, to clearly distinguish it from its slightly different and simplified “sister system” used mainly in Taiwan, *Tongyong Pinyin*.

⁹⁷ Actually, all of these systems are much less common than Hanyu Pinyin, which in fact has quite successfully supplanted all previous and parallel systems in recent years. The only one of the systems mentioned here, only the Wade-Giles system has been in any common use in non-specialist contexts, and indeed played much the role Pinyin does now before the 1950s in academic circles.

recently been adopted by international news agencies and official publications. Most library systems are in the process of converting to Pinyin, and it is the one heavily promoted in Mainland China and used in almost all modern teaching of Putonghua.

Zhuyin Fuhao

Zhuyin Fuhao (注音符号, ‘sound transcribing symbols’, also called *Bopomofo*) was created in 1918 and used in China until around 1950. It is still partially used on Taiwan and Chinese overseas communities. It does not use the Latin alphabet, and its main special feature is that it divides the syllable into an initial and a final.

Wade-Giles

Wade-Giles was created by Sir Thomas Wade (1818-1895) and revised by Herbert A. Giles (1845-1939), and later further modified by R.H. Matthews in his *Matthew's Chinese-English Dictionary* (1963). Until recently it was used by the Library of Congress and all news organizations. It is the most common system in older China-related publications.

Gwoyeu Romatzyh

Gwoyeu Romatzyh (国语罗马字) was created by the linguist Y. R Chao (赵元任) and adopted by the Chinese government in 1932. It is used in such dictionaries as *Kuo-yin Ch'ang-yung Tzu-hui* (国音常用字汇, *Dictionary of Frequent Characters with the National Pronunciation*). Its main characteristic is that it spells tones using letters instead of diacritic marks.

Yale

Yale was created at the Institute of Far Eastern Languages of Yale University during World War 2 and has been used in all Chinese textbooks published by Yale University. A modified version of it (with stress indication) is used in the *Dictionary of Spoken Chinese*. While in my mind a term which is used much too often in the case of Chinese, the issue of homophony nonetheless presents problems not often encountered in other languages (except for maybe Japanese). It is also a crucial aspect of learning Chinese properly⁹⁸. I

98 In the same chapter, it is stated: *“There are no data on Chinese homophones in Chinese dictionaries. People merely talk about homophones without really observing*

discuss here an excerpt from a book devoting a chapter to the subject, partially reproduced below.

More on homophony

In the chapter entitled *Breakup of Homophones* in the book *The Historical Evolution of Chinese Languages and Scripts* (see bibliography) one may read the following regarding the problems related to homophony in Chinese:

Homophones are a problem of language, not “script.” The root of this problem lies in the pronunciation of the language (yǔyīn), not in the different ways of spelling the words (cíxíng). If we consider only the “different ways of spelling,” while neglecting the pronunciation of the language (the properly organized words), we will never be able to solve the Chinese homophone problem in Pinyin writing.

How can homophones be transferred into words of with different pronunciations? The methods are:

(1) Changing the Pronunciations of Synonyms

(Switching to usage of words with the same meaning but with different pronunciations.) For example, “cancer” (癌症) and “inflammation” (炎症) were both pronounced as yánzhèng in the past. Now in hospitals, “cancer” is pronounced as áizhèng and has the same meaning as when it was pronounced yánzhèng in the past, but it has acquired a different pronunciation and is, thus, differentiated from “inflammation” (yánzhèng). Another example is qīzhōng (期中), the middle of a semester, and qīzhōng (期末), the end of a semester. Like the Modern Chinese Dictionary (Xiàndài Hànyǔ Cídiǎn), many Chinese dictionaries arrange all the entries according to the traditional “phonetic order based on the head characters.” Homophones are separately listed under different “head characters,” and the result is that homophones are scattered. Chinese Pinyin Vocabulary (Hànyǔ Pīnyīn Cíhuì) adopts the “single-sort alphabetical order” and lists all homophones together. Thus, it provides raw data for comparing and studying homophones. Once the dictionaries’ users gain knowledge about the homophones by seeing and sensing their existence, they can start to figure out ways to reduce the number of homophones.”

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semester, were very confusing. Now “the end of a semester” has been changed to “qīmò
(期末).”

(2) Selecting a Different Synonym

(Switching to use words that have the same meaning but different ways to write.) For example: *chūbǎn* (出版), to publish, and *chūbǎn* (初版), the first issue (of a book/magazine/etc), were very confusing. Now “the first issue (of a book/magazine/etc.)” is written as *dì-yī bǎn* (第一版). These are the rules set up by the publication department in Beijing.

These propositions of course neglect entirely the relevance of stress when differentiating “homophones”. I have therefore consulted a dictionary called 易混同(近)音词辨析手册, *Differentiating Manual of Easily Confused Homophones and Near-homophones*, and cite a few examples found in it in light of the complex nature of homophony. Words underlined are those that according to the *Manual* are easily confused and must be differentiated, the others are segmentally identical words extracted from the ABC Homophone List, cited for reference. The relative higher frequency of certain of these lexical items of course mediate the problem to some extent, but the picture is still obviously much more confusing than the *Manual* would have you believe:

Instance One

公立 *gōng'li* attr. public; established and maintained by the government

功力 *gōng'li* n. ① efficacy; effect ② skill; craftsmanship ③ manpower (for a project)

功利 *gōng'li* n. ① efficacy and interest ② utility; material gain ③ fame and money

公例 *gōng'li* n. general rule; convention

公历 *gōng'li* n. ① Gregorian calendar ② Christian era; Common Era

工力 *gōng'li* n. ① skill; craftsmanship ② utility; material gain

Instance Two

视力 *shì'li* n. vision; sight

事例 *shì'li* n. example; instance; precedent

市立 *shì'li* attr. city-established; municipal

示例 shì'lì n. example

示例 shìlì' v.o. give typical examples; give demonstrations

侍立 shìlì' v. wait upon elders/superiors

势利 shì'lì s.v. <derog.> greedy; money-hungry; selfish ◆n. ① power and wealth ② favorable situation/circumstances | See also ²shìlì : 势利 ²shìlì s.v. snobbish

恃力 shìlì' v.o. rely on one's power; rely on force

释例 shì'lì n. explanatory specimens

世吏 shì'lì n. <trad.> hereditary office M:²wèi

势力 shìlì n. refers to political, economic, military power and strength⁹⁹

Instance Three

终止 zhōngzhǐ' v. stop; end ◆v. ① termination; annulment; abrogation ② <mus.> cadence

中止 zhōngzhǐ' v. discontinue; suspend; break off; stop halfway

中指 zhōng'zhǐ n. middle finger

中趾 zhōng'zhǐ n. middle toe

9. Sentence Prosody: A Large and Fertile Field

Though beyond the scope of this thesis, the analysis introduced here is intended to serve as a preface to a potential future study of the pattern that govern stress at the sentence level¹⁰⁰. In this thesis I have chosen to mainly focus on words as they occur in the sentences in Arendt's lesson texts, and how these are marked for stress in the other sources, but the sentences from which this vocabulary has been extracted may again themselves be the object of a different kind of stress analysis: Instead of, or rather parallel

⁹⁹ " 名词，指政治，经济，军事方面的权力和力量。"

¹⁰⁰ A sequence of morphemes often needs context and intonation to be made clear. However, the fixed stress patterns of combined morphemes at the word level precedes the study of these very same words in context, at the sentence level, which can be seen as the macro-context, partly governing but not independent from the micro-level.

with (for the two are intimately intertwined), one may shift the focus of analysis to the macro-level. Instead of emphasizing why one word is pronounced the way it is, one may attempt to unravel the principles of why a word is pronounced the way it is in relation to the other words in the sentence. This is done by analyzing the logical structure of the sentence's argument and the syntactical manifestation, or rather phonetic manifestation of the contrastive syntax¹⁰¹, of the constituents in the sentence.

Below I will analyze some fundamental stress structures in basic sentence types as well as identify stress patterns in individual words in a handful of sentences found in Arendt's textbook. Note that although the vocabulary in some of his lessons are perhaps somewhat antiquated to modern readers, this does not in any way impinge on the relevance of his observations as evident from these sentences.

Reproduction of example sentences from lesson 50 in Arendt, sentences 1-5

Note: As is the convention, an apostrophe “ ’ ” is placed after the main vowel of the stressed syllable and should not be confused with the apostrophe separating syllables, such as for instance Xī-ān 西安 and xiān 先. Though converted into the modern Hanyu Pinyin, sentences are reproduced exactly as they occur in Arendt's texts. Footnotes highlight significant differences in “his” versus standard contemporary usage but the pinyin reflects his notations accurately. For simplicity's sake, and because most learners will probably limit themselves to discerning which whole syllable is stressed and not which *part*

101 In a basic sentence like 我爱她 wǒ ài tā, “I love her”, the syntax is clear-cut. But depending on which element is stressed in this sentence, it may have radically different meanings. If it is wǒ that is emphasized it means that *I* am the one who loves her, if it is ài, the meaning is that I *love* (not, say, *hate*) her, if it is tā, the meaning is that I love *her*, and not someone else. When a simple enough sentence consisting of only three elements may have so many different meanings, it goes without saying the more complex sentences will lend themselves to exhausting analysis. But, uncovering the logical and cognitive rules governing the manifestation of thought in the phonetic structure of a sentence is a very exciting, if daunting, task. Therefore the term logical syntax is one based on the syntax, but which is dependent on phonetic information and manifestation to be understood properly.

of the syllable (i.e. the intra-syllabic stress contour), I could have placed the stress-indicating apostrophe simply after the final letter of the syllable. However, as Arendt himself was cleverly interested in this very fine point, there seems no reason to simplify and not include this information here, since it is already there in the source material and may be interesting to some readers. Examples from p. 278, lesson 50 in Arendt's textbook:

1.

那	—	條	褲子	贜 ¹⁰²	得	利害。 ¹⁰³
Nà	yi	tiáo	- kù'-zi	zā'ng	-de	lì'-hài. ¹⁰⁴
THAT	ONE	CLASS.	TROUSER	DIRTY part.		TERRIBLE

“That pair of pants is terribly dirty.”

The first syllable of the word 褲子 is stressed, since the second syllable 子 is a morphological suffix¹⁰⁵ and is therefore always read in the neutral tone (i.e. is consequently unstressed, though the pitch and tone contour of such a non-primary syllable is always influenced by the preceding syllable's tone and whether *it* is stressed or not). But, taken as one syntactical unit, the whole word 褲子, regardless of the word-internal stress pattern, is

102 The original character used in Arendt's text is 月+贜. This character is dated and is not in the current character set. It has been replaced by 贜, which has 贜 instead, the difference being 𠂔 as opposed to 𠂔, with which it is interchangeable according to *Wenlin*.

103 The adjective “lihai” is usually written 厲害. The characters here, 利害, in fact usually refers to a different compound word in Modern Chinese, meaning “advantages (利) and disadvantages (害)”. They are supposedly interchangeable according to *Wenlin*, and anyhow refer to the same word in this instance.

104 Interestingly, Arendt transcribes 利害 lihai with a full tone also on the second syllable, which is not common in modern Mandarin for this usage. As touched upon throughout in this thesis, the actual word, the psychological “real” lexical item if you will, and the characters which “clothe” that word sometimes have an inconsistent relationship.

105 Aspects particles such as *le* 了, *guo* 过 and *zhe* 着 are sometimes interpreted as the manifestation of morphology in Chinese. This is irrelevant to phonological aspects of these particles when they occur in sentences, and they are for simplicity's sake referred to as affixes here.

still the recipient of primary stress in the sentence, being the subject¹⁰⁶ as well as the topic. It is not, however, the only word to be so, as is clearly indicated. From a semantic *and* pragmatic point of view, there are three focal points in the sentence: Not only is the sentence about a *pair of pants*, it is about a *dirty pair of pants*, and also a *dirty pair of pants that is terribly so*. The fact that it is *terribly dirty* is also primary information (as opposed to “that one pair“: 那一條), which is secondary in this regard, and the structural particle DE 得, which is always unstressed¹⁰⁷). Still, the fact that 褲子, 臟 and 利害 are all stressed syntactical units, does not influence¹⁰⁸ the stress pattern of the individual words here, despite one lexical unit receiving stress at two levels at the same time, namely word-level *and* syntactic level.

2.

套褲 ¹⁰⁹	是	中國人	穿	的。
Tà'o-kù	shì	Zhō'ng-guo-rén	chuān -	di (sic!). ¹¹⁰

106 The grammatical subject of sentence receives primary stress since the adjectival predicate refers to it. However, despite the object of the sentence consistently receiving primary stress (although sometimes along with other syntactical units as well, as shown in this particular sentence), what other items receive primary stress depends on other factors.

107 Of course, if one is uttering a Chinese sentence as an example when teaching Chinese grammar, for instance, and is attempting to illustrate the usage of the particle 得, it may be stressed in an attempt to emphasize its placement in the sentence. This, however, is also an example of *logical contrastive stress*.

108 The relative internal stress structure of the word will remain constant, but the actual pitch (compared to normal tone of voice, for instance, may of course be influenced by many things, most importantly the speaker's tone of voice.

109 袴 is simply a variant of 褲, which is not commonly used anymore. Why Arendt is seemingly inconsistent in his use of the characters when they obviously mean the same thing, (various types of) *pants*, is unclear. It poses no particular problem for our analysis here, however, to which variant characters are irrelevant; the *actual words* are important, not the characters used to write the words.

110 The structural particles 的, 得, and 地 are all occasionally read as “di”, particularly in the early vernacular, though this is not considered standard today.

ENCASE-TROUSERS BE CHINA-PEOPLE WEAR part.

“Leggings are worn by the Chinese”.

In the case of tàokù 套裤, it is natural that tà 套 is the stressed syllable because, if one looks at the internal structure of the lexeme, 套 modifies kù 裤; What *kind* of 裤 is it? It is the 套 kind, which one “套's” (verb: to *encase*) onto one's legs, i.e. “leggings”. It also seems that this sentence is the reply to the question of what kind of people tend to wear leggings, and the answer is *the Chinese*. And it is not logical to assume that the stress should be on “wear”, as opposed to “eat”, for instance. Also, for the word “Zhō'ng-guo-rén” 中国人, as in many similar words, Tàiguórén 泰国人 or Yīngguórén 英国人 etc., the words guó and rén nearly act as suffixes, as they represent the general element in these compound words and are thus not stressed.

3.

馬褂兒 ¹¹¹	短,	褂子 ¹¹²	長。
mǎ'guàr	duǎ'n,	guà'zi	chá'ng.
JACKET	LONG	ROBE	SHORT

Mandarin jackets are **short**, gowns are **long**.

馬 mǎ is stressed because it modifies 褂 guà, and 短 duǎn because it is the *comment* to the *topic* 馬褂 mǎguà. The interplay between the stressed elements in the words mǎguà and guàzi (micro-level) as well as the stressed parts of the sentence (macro-level) makes it difficult to transfer the stress indications into the English translation. Ideally, one could devise a system where word-level stressed elements are marked using different symbols than those used for denoting stressed sentence elements. Thus one could have a intuitive way of dissecting the sentence and making clear the different levels that all interact. Needless to say, this might end up becoming quite complex, not to mention subject to various types of influence in practice. However, it is my opinion that this kind of analysis may not only help us discern stress patterns in word and prosodic templates but through

111 马褂[馬-] mǎguà n. men's short coat; mandarin jacket; jacket M:ʔjiàn

112 褂子 guàzi n. ①Chinese-style unlined upper garment; short gown ②overcoat; gown; robe M:geʔjiàn

these can also help us ascertain the nature of Chinese syntax and grammar.

The study of stress is therefore not simply a superficial aspect of Chinese limited to nuances of pronunciation, these *nuances* offer direct insight into logical and grammatical structure. These structures become explicit when speaking Chinese aloud, and is also present when reading (but not necessarily reading aloud), and is an essential part of the argumentative thrust of any sentence. To choose not to include the wealth of sub-specifying information that stress patterns provide for the student is to deprive that student of essential knowledge that we in studying other languages take for granted. In a language like Chinese, learning about how the syntax of elements particularly at the word-level govern the semantic composition (as well as often, consequently, the stress patterns) of phrases and expressions has been an invaluable part of my own language-learning experience. I hope this thesis may inspire other students to consider incorporating the same into their own studies.

Appendices:

- 1. Excerpt from Arendt's lesson textbook and accompanying character text¹¹³**
- 2. The Stress Assignment Comparison Chart**

113 In this excerpt one may see how I have used a marker pen to highlight relevant vocabulary later imported into the Comparison Chart; I have primarily reviewed the lexical items in the glossaries, but have also taken words directly from the text if not found there.

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Appendix 1:

Vocabeln zur 26. Lektion.

- 出去 (chū' - chū') «ausgehen».
大夫 (dà' - fū) «Arzt».
找 (zhǎo) «suchen; aufsuchen, besuchen».
接 (jiē) «abholen».
告訴 (gào' - sù) «Jemandem sagen».
出門 (chū' - mén) «aus (der Thüre) gehen».
出 (chū) «aus (der Thüre) gehen».
門 (mén) «aus (der Thüre) gehen».
子 (zǐ) «heiraten» (von Mädchen gebraucht).
飯 (fàn) «gekochter Reis»; Essen überhaupt.
紅 (hóng) «roth».
文書 (wén' - shū) «Depesche, Note».
記 (jì) «sich erinnern».
身 (shēn) (auch mit 子 zǐ) «der Körper».
膀 (páng) «Schulter».
正 (zhèng) «aufrecht».
勸 (quàn) «ermahnen».
貪 (tān) «begehren»; 貪心 (tān' - xīn) «begehrlich sein»; 心 (xīn) «das Herz».
生氣 (shēng' - qì) «zornig werden»; 生閒氣 (shēng' - xián' - qì) «unnöthiger (müsziger) Weise zornig werden».
生 (shēng) «geboren werden; gebären, erzeugen; in sich entstehen lassen».
閒 (xián) «müszig».
平 (píng) «eben, glatt, gleich hoch».
自然 (zì' - rán) «natürlich, ungezwungen».

Umschreibung zur 26. Lektion.

- 1. Nǐ fù' - zīn chū' - chū' - lǎ meì' - yǎo? 2. chū' - chū' - lǎ. 3. tso' - sēm - mǒ chū' - lǎ? 4. tā māi' túng' - hsi' chū' - lǎ. 5. wó' - ti kó' - kó' píng' - ti hēn' - lǎ' - hāi'; ní' kó' - i' cing' - tǎi' - fū' chū'. 6. i' - cing' - yǎo' - zēn' cing' - chū' - lǎ. 7. wó' cáo' fā' chū'. 8. wó' hǎo' - cǐ' - tsǐ' chū' - cáo' ní' chū' - lǎ. 9. wó' cǐ' ní' - lái' - lǎ. 10. wó' māi' - kei' - fā' - lǎ. 11. ní' māi' - kei' - sù' (sèi?) - lǎ? 12. wó' cǐ' - kei' - fā' - lǎ. 13. wó' kǎo' - su' - fā' - lǎ. 14. tā meì' kǎo' - su' wó'. 15. tā' chū' - mén' lǎ.

Table with 26 numbered items and their Chinese text for Lektion 26. Items include phrases like '我父親出去了', '我接您來了', '我告訴他', etc.

- 16. tā' chū' - lǎ - mén' māi' túng' - hsi' chū' - lǎ. 17. láo' - yǎo' chū' - lǎ mén' - lǎ. 18. ní' - mén' chū' - lǎ fán' - lǎ meì' - yǎo? 19. tā' cé' - kó' kú' - niang' chū' - lǎo mén' - tsz' - lǎ meì' - yǎo? 20. wó' māi' - lǎ líang' - pí' má' - lǎ, i' - kó' hēi' - ti, i' - kó' hún' - ti. 21. wó' kei' - lǎ fā' - lǎ. 22. tā' kēi' - wó' - lǎ. 23. fān' - tǎ' - lǎ meì' - yǎo? 24. hāi' meì' - tǎ'. 25. ná' - kó' có' - tsz' - tso' - wán' - lǎ meì' - yǎo? 26. tso' - tǎ' - lǎ. 27. wó' tou' hsi' - wán' - lǎ. 28. wó' - mén' chū' - wán' - lǎ fán' - lǎ. 29. lí' - tōu' chū' - méi' - lǎ - mǒ? 30. mā' - tōu' māi' - méi' - lǎ. 31. ná' - kó' wén' - sū' hsi' - hǎo' - lǎ meì' - yǎo? 32. hsi' - hǎo' - lǎ. 33. hāi' meì' hsi' - hǎo'. 34. sī' - cing' - pan' - wán' - lǎ. 35. ní' - ting' - tǎ' - lǎ. 36. wó' cǐ' - tǎ' - lǎ. 37. ní' - pan' - tǎ' - lǎ cé' - kó' sī' - lǎ. 38. cé' - kó' tsz' - hsi' - tǎ' - lǎ. 39. wó' chū' - tǎ' - lǎ túng' - hsi' - lǎ. 40. wó' meì' - tǎ' - rh'. 41. cé' - kó' sū, tǎ' - tsz' - hēn' - tó'. 42. cé' - kó' sū' meì' - yǎo' - tsz' - tsz'. 43. tā' yāo' cǐ' - lǎ. 44. tā meì' - yāo' cǐ' - lǎ. 45. tā pú' - yāo' cǐ' - lǎ. 46. tā kēn' - chū' - mǒ? 47. tā pu' - kēn' - chū'. 48. tā pú' - yāo' chū'. 49. ní' meì' māi' - cé' - kó' sū' mǒ? 50. wó' meì' yāo' māi'. 51. wó' meì' - sū' yāo' - mái'. 52. tā pu' - kēn' kēi' - wó'. 53. ní' pu' - yāo' māi' - cé' - kó' sū' mǒ? 54. cé' - sī' cǐ' - lǎ - cǐ' - lǎ - pu' - yāo' - fān' - hsi' - ti - i' - tsz'. 55. cé' - sī' cǐ' - lǎ - cǐ' - lǎ - pu' - yāo' - cǐ' - lǎ - ti - i' - tsz'. 56. chū' - tsz' yāo' - cǐ' - lǎ, páng' - tsz' yāo' - píng', i' - sēn' yāo' kēn' - tsz' - fān'.

Übersetzung.

1. Ist dein Vater ausgegangen? 2. Ja. 3. Um was zu thun ist er gegangen (zu welchem Zweck)? 4. Er ist gegangen, um Sachen zu kaufen (er ist Einkäufe machen gegangen). 5. Mein älterer Bruder ist sehr heftig krank; du könntest wohl gehen, einen Arzt zu bitten (einen Arzt holen gehen). 6. Es gibt schon einen Menschen, welcher ihn holen gegangen ist (es ist schon Jemand ihn holen gegangen). 7. Ich gehe ihn suchen (ihn aufzusuchen, ihn zu besuchen). 8. Ich wer weisz wie oft (hāo' - cǐ' - tsz') gehend Sie zu besuchen bin gegangen. (ich bin wer weisz wie oft bei Ihnen gewesen, um Sie zu besuchen). 9. Ich bin gekommen, um Sie abzuholen. 10. Ich habe es ihm (an ihn) verkauft. 11. An wen hast du es verkauft? 12. Ich habe es ihm geliehen. 13. Ich habe es ihm gesagt. 14. Er hat es mir nicht (mir ...

Table with 29 numbered items and their Chinese text for Lektion 26. Items include phrases like '是勸人不要生閒氣的意思', '你沒有買這個書麼', '他不要錢', etc.

ABSTRACT

The pronunciation of Beijing Mandarin, which is the basis for Modern Standard Mandarin, is in reality not as straightforward as it is usually presented. General books on the language and common textbooks in English on the subject commonly only give very basic, prescriptive (though supposedly *descriptive*) analyses of the basic features of pronunciation. Finer points are generally not discussed in any detail. The treatment of amongst other things the aspect of *word stress* (the parts of words that are emphasized in speech) in mastering and indeed properly understanding Chinese is thus neglected. It has not yet acquired the position in Chinese language-teaching it arguably needs, so that the language may begin to be taught and indeed learned in a more comprehensive manner. This thesis will take a basic analytical approach to the phenomenon of word stress in Beijing Mandarin. It compares and discusses available meta-information on the topic, as well as its theoretical underpinnings and practical applications, and from a pedagogical starting point aims to bring attention to these important nuances in the Chinese language.

Appendix 2:

(Symbol legend at bottom)

Stress Assignment Comparison Chart

LEXEME		Arendt Einführung	Spoken Chin.	Oshanin Chin. - Russ.	Kuraishi	Isaenko	Qingzhong Geshi		
Characters	Sect.		Page		Place				
A									
阿哥	2X	ā'-gē	129	n/av		n/av	n/av		
阿老爺	2X	ā'-lǎo-yé	55	n/av	n/av	n/av	n/av		
按照	8X	à'n-zhào	157	àn'-zhào	ànzhào	n/av	àn'zhào		
B									
霸道	2	bà'-dào	80	bà'-dào	bàdào'	bà'dào	bà'dào, bàdào', bàdao		
>					bà'dao				
拜客	3	bài-kè'	124	n/av		bàikè	n/av	bàikè'	
百官	2	bǎi-guān'	74	n/av	n/av	n/av	n/av	n/av	
百花	2	bǎi-huā'	74	n/av	bǎihuā	n/av	n/av	n/av	
白梨	2	bái-lí' / bá'i-lí	44	n/av	báilí	n/av	n/av	n/av	
白日	2	bá'i-rì	31	n/av	báiri	2, 599, B	báiri	n/av	báiri'
白糖	2X	bái-tá'ng	97	n/av	báitáng	2, 599, B	báitáng	n/av	báitáng'
白天	2	bá'i-tiān	30	n/av	bái'tian	2, 601, A	báitian	bái'tiān	n/av
百萬	?	bǎi-wàn	70	n/av	bǎiwàn	2, 610, B	bǎiwàn	n/av	bǎiwàn'
白洋布	2X	bái-yá'ng-bù	48	n/av	n/av	n/av	n/av	n/av	n/av
幫廚的	1, 3	bāng-chú'-de	192	n/av		n/av	n/av		bāngchú'

Sheet1

辦理	8	bàn-lǐ	160	bàn-lǐ			bànlǐ	bànlǐ	bànlǐ
報官	3	bào-guā'n	185	n/av			n/av	n/av	bàoguān'
北邊兒	2, 10	bě'i-biānr	125	n/av			n/av	n/av	n/av
北京	2, 10	Běi-jīng	137	Běi-jīng'			n/av	n/av	Běijīng'
北京城	2, 10	Běi-jīng-ché'ng	137	n/av			n/av	n/av	n/av
本朝	?	bě'n-cháo	159	n/av			n/av	n/av	n/av
本錢	?	bě'n-qián	92	běn'-qián	běn'qián / běn'qian	3, 743, B	bě'nqián	běn'qián	běn'qián
本章	?	bě'n-zhāng	144	n/av			n/av	n/av	n/av
本事	?	bě'n-shì	87	n/av	bě'n'shi běnshì'	3, 742, C	bě'nshi	běnshi	bě'nshi, běnshì'
>									
別處	?	bi'é-chù	153	n/av			biéchù	biéchù	bié'chù
別怕	?	bi'é-pà' DP?	74	n/av	n/av		n/av	n/av	n/av
變戲法兒	3	biàn-xì-fǎ'r	195	n/av			biàn xìfǎ	n/av	biàn xìfǎ'
筆墨	8	bǐ-mò'	124	n/av			bǐmò	n/av	bǐmò'
兵部	2	bī'ng-bù	75	n/av	bīng'bù	4, 627, C	n/av	n/av	n/av
病故	5	bìng-gù'	132	n/av			bìnggù	n/av	bìnggù'
波斯	?	Bō-sī	169	n/av			n/av	n/av	n/av
百獸園	?	(bó)-shòu-yuá'n	76	n/av	n/av		n/av	n/av	n/av
百姓	?	(bó')-xìng	75	bǎi-xìng'	bǎi'xìng	2, 609, A	bǎixìng	n/av	bǎixìng'
不愛	?	BU-AI	44						
不長	1	bù-chá'ng	42						

不很	? BU-HEN							
不高	? bù-gā'o	42						
不管	? bù guǎ'n	50	bù-guǎn'	bùguǎn'	4, 588, A	bùguǎn	n/av	bùguǎn'
不貴	? bú-guì'	48	n/av	búguì'	4, 583, B	n/av	n/av	n/av
不過	? bú-guò'	66	bú-guò'	bùguò'	4, 596, B	búguò	buguò	búguò'
布國	? bù'-guo	35	n/av	n/av		n/av	n/av	n/av
布國人	2 Bù'-guo-ren	35	n/av	n/av		n/av	n/av	n/av
不好	? bù-hǎ'o	42	n/av	bùhǎo'	4, 591, A	bùhǎo	n/av	n/av
不肯	? bu-kěn	194	bù-kěn'			bùkěn	n/av	n/av
不怕	? bú-pà'	74	n/av	n/av		n/av	n/av	n/av
不是	?X bú'-shì	50	bú'-shì	bù'shi bùshi / bùshì'	4, 595, B	búshì búshi	búshi	búshi
>								
不要	? BU-YAO		n/av	búyào'	4, 600, A	búyào	n/av	búyào'
不用	? BU-YONG		n/av	bú'yòng	4, 592, B	búyòng	buyòng	búyòng'
不止	? bù-zhǐ'	66	n/av	bùzhǐ'	4, 585, C	bùzhǐ	buzhǐ	bùzhǐ'
C								
曾經	? cé'ng-jīng	102	céng-jīng'	céng'jīng	2, 570, C	céngjīng	céngjīng	céngjīng'
差不多	1 chà-bu-duō'	186	n/av			chàbuduō	chàbuduō	chàbuduō'
差使	2 chā'i-shǐ	199	n/av			n/av	n/av	chāishǐ', chāishi
茶几兒	? chá-jī'r	20	n/av	chájī'	4, 830, A	chájīr	n/av	chájī'
唱曲兒	3 chàng-qǔ'r	125	n/av			chàngqǔ	n/av	n/av

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抄写	2	chā'o-xiě	144	n/av			chāoxiě	n/av	chāoxiě'
尺寸	?	chǐ'-cùn	97	chǐ'-cùn'	chǐcùn'	3, 610, A	chǐcùn	n/av	chǐ'cùn
吃東西	3	chī dō'ng-xī	123	n/av			n/av	n/av	n/av
吃飯	3	chī-fà'n	123	chī-fàn'			chīfàn	chī fàn	chīfàn'
衝撞	5	chō'ng-zhuàng	157	n/av			chōngzhuàng	chōngzhuàng	chōngzhuàng'
窗戶	?	chuā'ng-hù	144	chuāng'-hu			chuānghu	chuānghu	chuānghu
穿衣裳	3	chuān yī'-shāng	123	n/av			n/av	n/av	n/av
出殯	6	chū-bì'n	193	n/av			chūbìn	n/av	chūbìn'
出家	3	chū-jiā'	183	n/av			chūjiā	n/av	chūjiā'
出力	3	chū-lì'	160	chū-lì'			chūlì	n/av	chūlì'
出門	3	chū-mé'n	108	chū-mén'			chūmén	n/av	chūmén'
出名	3	chū-mí'ng	182	chū-míng'			chūmíng	chūmíng'	chūmíng'
春天	2	chū'n-tiān	154	chūn'-tian			chūntian	chūntian	chūn'tiān
出死力	3	chū sǐ'-lì	160	n/av			n/av	n/av	n/av
次第	8	cì'-dì	72	n/av	cìdì'	3, 594, A	cìdì	n/av	cìdì'
聰明	?	cō'ng-míng	72	cōng'-ming	cōng'míng	4, 827, B	cōngmíng	cōngming	cōng'míng
錯字	2X	cuò-zì'	109	n/av			cuòzì	n/av	cuò'zì
D									
大臣	2X	dà-chén	55	n/av	dàchén'	3, 619, C	dàchén	dàchén'	dà'chén
打穿兒	3	dǎ-chuā'nr	154	n/av			dǎchuān	n/av	n/av
大島	2X	dà-dǎ'o	48	n/av	n/av		n/av	n/av	n/av

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大兒子	2	dà' ér-zi	58	n/av			dà-érz	n/av	n/av
打更	3	dǎ-gē'ng	192	n/av			n/av	n/av	n/av
大姑娘	2	dà'-gū-niáng	72	n/av	dàgū'niang	3, 620, B	dàgūniang	dàgū'niang	n/av
大孩子	2	dà'-hái-zi	16	n/av			dàháiz	n/av	n/av
大老爺	2	dà'-lǎo-yé	14	n/av	dàlǎo'ye	3, 629, A	n/av	n/av	n/av
帶路	3	dài-lù'	193	n/av			dàilù	n/av	dàilù'
大馬	2X	dà-mǎ'	20	n/av	dà-mǎ	3, 625, B	n/av	n/av	n/av
當兵	3	dāng-bī'ng	183	dāng-bīng'			dāngbīng	dāngbīng'de	n/av
當日	2	dā'ng-ri	47	n/av	dāng'ri	2, 645, B	dāngri	n/av	dāngri'
>					dàngri				
耽誤	8	dā'n-wù	102	dān'-wù	dānwù'	4, 508, B	dānwu	dānwù	dānwu
擔心	3	dān-xī'n	160	dān-xīn'			dānxīn	dānxīn'	dānxīn'
道路	2	dào'-lù	124	dào'-lù			dào'lù	dào'lù	dào'lù
大錢	2	dà'-qián	34	n/av	dàqián'	3, 628, C	n/av	n/av	dàqián'
>		(dà-qián)			dà - qián				
大清國	2	Dà-qī'ng-guó	30	n/av	n/av		n/av	n/av	n/av
打人	3	dǎ-ré'n	125	n/av			n/av	n/av	n/av
大人	2	dà'-rén	54	dà'-rén	dà'ren	3, 626, A	dàrén	dà'ren	dà'rén, dàren
>		(dà-ré'n)					dàrén		
大事	2	dà'-shì'	15	n/av	dà'shì	3, 623, B	dàshì	n/av	dàshì'
>					dà - shì	3, 623, C			

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打算	6	dǎ'-suàn	144	n/av			dǎsuàn	dǎ'suàn	dǎ'suàn
大小	8	dà-xiǎ'o	125	dà'-xiǎo			dàxiǎo	n/av	dàxiǎo'
大爺	2	dà'-yé	118	n/av			dàyé	n/av	dàyé'
>							dàye		dàye
打雜	3	dǎ-zá'	194	n/av			dǎzá	n/av	dǎzá'
德國	2	Dé'-guó	30	Dé'-guo	Dé'guó	4, 848, B	n/av	n/av	n/av
德國船	2	Dé'-guó-chuán	30	n/av	n/av		n/av	n/av	n/av
德國人	2	Dé'-guó-ren	35	n/av	Déguórén'	4, 848, B	n/av	n/av	n/av
點燈	3	diǎn-dē'ng	138	diǎn-dēng'			diǎndēng	n/av	n/av
地方	8	dì'-fāng	75	dì'-fang	dì'fāng / dì'fang	4, 394, B	dìfāng	dìfang	dìfāng', dìfang
>					dìfangr	4, 394, C	dìfangr		
地方官	2	dì'-fāng-guān	186	n/av			n/av	n/av	n/av
地面	?	dì'-miàn	185	n/av			dìmiàn	dìmiàn'	dìmiàn'
頂戴	?	dǐ'ng-dài	72	n/av	dǐng'dài / dǐng'dai	4, 735, B	n/av	n/av	dìmiàn'
頂好	6	dǐ'ng-hǎo	40	dǐ'ng-hǎ'o	dǐ'ng'hǎ'o	4, 734, C	dǐnghǎo	n/av	n/av
定錢	2	dì'ng-qíán	114	n/av			dìngqian	n/av	dìng'qián
弟兄	8	dì'-xiōng	129	n/av			dìxiong	dì'xiōngmen	dì'xiong
第一	1	dì-yī'	71	dì-yī'	dìyī	3, 547, A	dìyī	dì-yī	dìyī'
東邊	10	dō'ng-biān	123	dōng'-bian			dōngbiān	n/av	dōngbian
冬天	2	dō'ng-tiān	152	dōng'-tian			dōngtian	dōngtian	n/av
東西	8	dō'ng-xi	14	dō'ng-xi	dō'ngxi	3, 774, A	dōngxi	dōngxi	dōngxī', dōngxi

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	>				dōng - xī		dōngxī		
東洋	2X, 10	Dōng-yá'ng	34	n/av	Dōngyáng	3, 774, B	Dōngyáng	n/av	Dōngyáng'
東洋車	2X	dōng-yáng-chē'	35	n/av	dōngyángchē'	3, 774, B	n/av	n/av	n/av
東洋人	2	dōng-yáng-rén	35	n/av	dōng'yánggrén	3, 774, B	n/av	n/av	n/av
多多	?	duō-duō'	60	n/av	duō'duō	3, 391, A	n/av	n/av	n/av
多少	8	duō'-shǎo (duō-shǎ'o)	34	duō'-shǎo (duō'-shao)	duō'shǎo duō - shǎo	3, 391, A	duōshao	duōshao	duō'shǎo, duōshao
肚皮	2X	dù-pí'	171	n/av			dùpí	n/av	dùpí'
讀書	3	dú-shū'	185	dú-shū'			dúshū	n/av	dúshū'
E									
二百	2	è'r-bǎi	28	n/av			èrbǎi	n/av	n/av
二等	2	è'r-děng	72	n/av	èr'děng	2, 23, B	èrděng	n/av	n/av
俄國	2	É'-guo	54	É'-guo			n/av	n/av	n/av
俄國人	2	É'-guo-ren	54						n/av
恩愛	6X	ē'n-ài	183	n/av			ēn-ài	n/av	ēn-ài
二年	2	è'r-nián	27	n/av			n/av	n/av	n/av
二千	2	è'r-qiān	28	n/av			n/av	n/av	n/av
F									
法場	2X	fǎ-chǎ'ng	159	n/av			fǎchǎng	n/av	fǎchǎng'
發抄	?	fā-chā'o	144	n/av			n/av	n/av	n/av
法國	2	Fǎ'-guo	54	Fǎ'-guo			n/av	n/av	n/av

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番話	2X	fán-huà	138	n/av			n/av	n/av	n/av
佛經	2X	Fó-jī'ng	138	n/av			n/av	n/av	Fójīng'
佛國	2X	Fó-guó'	138	n/av			n/av	n/av	n/av
富貴	8	fù'-guì	130	n/av			fùguì	n/av	fùguì
父親	2	fù'-qīn	56	fù'-qin			fùqīn	fùqin	fù'qīn
G									
該當	?	gā'i-dāng	184	n/av			gāidāng	gāidāng'	gāidāng'
該管	?	gāi-guǎ'n	184	n/av			n/av	n/av	n/av
趕車	3	gǎn-chē'	193	gǎn-chē'			gǎnchē	n/av	gǎnchē'
告假	3	gào-jià'	161	gào-jià'			gàojià	n/av	gàojià'
高山	2X	gāo-shā'n	21	n/av	n/av		n/av	n/av	n/av
膏藥	2, 8	gā'o-yào	119	n/av			gāoyào	n/av	gāo'yào
告示	8	gà'o-shì	136	gào'-shì			gàoshì	n/av	gàoshi
哥哥	?	gē'-gē	64	gē'-ge			gēge	n/av	gēge
各國	1	gè-guó'	192	n/av			gèguó	n/av	n/av
跟班兒	3	gēn-bā'nr	191	n/av			gēnbānrde	n/av	gēnbān', gēnbān'r
閣下	1	gé'-xià	53	n/av	géxià	3, 129, B	géxià	n/av	géxià'
工部	2	gō'ng-bù	75	n/av	gōng'bù	2, 61, B	n/av	n/av	n/av
公道	2	gō'ng-dào	160	gōng'-dào			gōngdào	gōngdào	gōngdào', gōngdao
工夫	?	gō'ng-fū	67	gōng'-fu	gōng'fu	2, 62, B	gōngfu	gōngfu	gōngfū', gōngfu
>					gōngfū				

>				gōng-fū					
工匠	2	gō'ng-jiàng	183	n/av		gōngjiàng	n/av	n/av	
工錢	2	gō'ng-qián	114	gōng'-qián		gōngqian	gōng'qián	gōngqian	
公事	2	gō'ng-shì	184	gōng-shì'		gōngshì	gōngshì	gōng'shì	
公主	2	gō'ng-zhǔ	168	n/av		gōngzhǔ	n/av	gōngzhǔ'	
狗熊	2	gǒ'u-xióng	150	n/av		gǒuxióng	n/av	gǒuxióng'	
逛燈	3	guàng-dē'ng	192	n/av		n/av	n/av	n/av	
關東	10X	Guā'n-dōng	75	n/av	n/av	n/av	n/av	n/av	
廣東	10X	Guǎ'ng-dōng	75	Guǎng-dōng'	Guǎng'dōng	4, 765, B	n/av	n/av	
廣西	10X	Guǎ'ng-xī	75	Guǎng-xī'	n/av	n/av	n/av	n/av	
管家	3, 3X	guǎ'n-jiā	191	guǎn-jiā'		guǎnjiā	n/av	guǎn'jiā	
>						guǎnja			
關門	3	guān-mé'n	138	guān-mén'		guānmén	n/av	guānmén'	
管事	3	guǎn-shì'	193	guǎn-shì'		guǎnshì	n/av	guǎn'shì, guǎnshì'	
官員	2	guā'n-yuán	184	n/av		guānyuán	n/av	guān'yuán	
貴幹	?	guì-gà'n	146	n/av		guìgàn	n/av	guìgàn'	
貴姓	6	guì-xì'ng	130	n/av		guìxìng	n/av	guìxìng'	
估摸	8	gū'-mō	169	n/av		gūmō	n/av	gūmo	
姑娘	2	gū'-niáng	43	gū'-niang	gū'niang	2, 487, C	gūniang	gū'niáng	gūniang
>					gūniáng'				
>					gūniangr				

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骨肉	8X	gǔ'-ròu	136	n/av			gǔròu	n/av	gǔròu'	
過冬	3	guò-dō'ng	171	n/av			guòdōng	n/av	guòdōng'	
國家	?	guó'-jiā	160	guó'-jiā'			guójiā	guó'jiā	guójiā'	
國王	2X	guó-wá'ng	145	guó-wáng'			guówáng	n/av	guówáng'	
H										
海口	?	hǎi-kǒu DP?	182	hǎi-kǒu'			hǎikǒu	n/av	hǎikǒu'	
害怕	6	hài-pà'	76	hài-pà'	hàipà	2, 501, A	hàipà	hàipà'	hàipà'	
還是	?	hái'-shì	-	hái'-shì	hái'shi	4, 157, B	háishi	háishi	háishi	
孩子	?	há'izi								
好辦	9	hǎo-bà'n	44	hǎo-bàn'	hǎobàn'	2, 1089, A	hǎobàn	hǎobàn'	n/av	
好吃	9	hǎ'ochī hǎochī'	44	hǎo-chī'	hǎochī'	2, 1091, A	hǎochī	hǎochī'	n/av	
好歹	8	hǎo-dǎi	122	hǎo-dǎi'			hǎodǎi	hǎodǎi hǎo-dǎi	hǎodǎi'	
>										
好好	?	hǎo-hǎ'o	42	n/av	hǎohǎo'r	2, 1089, B	hǎohāor	hǎohǎo	hǎohāor'	
好喝	9	hǎ'o-hē	44	n/av	n/av		hǎohē	n/av	n/av	
好幾	?	hǎo-jǐ'	32	hǎo-jǐ'	hǎo'ji / hǎo'jǐ	2, 1090, B	hǎojǐ	hǎojǐ'	hǎojǐ'	
好講	9	hǎo-jiǎ'ng	48							
好看	9	hǎo-kà'n	43	hǎo-kàn'	hǎokàn'	2, 1088, C	hǎokàn	hǎokàn'	hǎokàn'	
好馬	2X	hǎo-mǎ'	21							
好買	9	hǎo-mǎ'i	48							

Sheet1

好騎	9	hǎo-qí'	48						
好人	2X	hǎo-ré'n	35	n/av	hǎo'ren / hǎo'rén	2, 1090, A	hǎorén	n/av	hǎo'rén, hǎorén'
好聽	9	hǎ'o-tīng	44	hǎo-tīng'	hǎotīng'	2, 1091, A	hǎotīng	hǎotīng'	hǎotīng'
好些	7	hǎ'o-xiē	63	hǎo-xiē'	hǎo'xie	2, 1088, C	hǎoxiē	n/av	hǎoxiē'
>		(hǎo-xiē')			hǎoxiē'				
好寫	9	hǎo-xiě'	48						
好住	9	hǎo-zhù'	50						
黑龍江	10	Hēi-lóng-jiā'ng	79	Hēi-lóng-jiāng'	n/av		n/av	n/av	n/av
喝酒	3	hē-jiǔ'	54	n/av	n/av		hē jiǔ	n/av	n/av
很不	?	HEN-BU							
和尚	?	hé'-shàng	136	hé'-shang			héshang	n/av	héshang
合眾國	2	Hé-zhò'ng-guo	82	n/av	Hézhòngguó	2, 452, A	n/av	n/av	n/av
侯爺	2	hó'u-yé	105	n/av	hóu'ye	3, 678, B	n/av	n/av	n/av
皇上	1	huá'ng-shàng	70	huáng'-shàng	huáng'shang	2, 161, C	huángshàng	huáng'shàng	huángshang
戶部	2	hù'-bù	75	n/av	hù'bù	3, 383, B	n/av	n/av	n/av
會典	2X	huì-diǎ'n	179	n/av			n/av	n/av	huìdiǎn'
湖廣	?	Hú'-Guǎng	185	n/av			n/av	n/av	n/av
回國	3	huí-guó'	161	n/av			huíguó	n/av	n/av
回家	3	huí-jiā'	161	huí-jiā'			huíjiā	n/av	n/av
活佛	2X	huó-Fó'	171	n/av			n/av	n/av	n/av
糊塗	?	hú'-tu	59	hú'-tu	hú'tu / hú'tú	3, 161, C	hútu	hútu	hútu

Sheet1

糊塗人	2	hú'-tu-rén	60					n/av	n/av
J									
家裡	1	jiā'-lǐ	194	jiā'-li			jiālǐ	n/av	n/av
將軍	?	jiā'ng-jūn	47	n/av	jiāngjūn' / jiāng'jun	3, 63, C	jiāngjūn	jiāngjūn'	jiāng'jūn, jiāngjūn'
>					jiāng - jūn				
江南	10	Jiāng-ná'n	185	n/av			n/av	n/av	n/av
匠人	2	jià'ng-rén	64	n/av	jià'ngrén	2, 322, B	jiàngrén	n/av	jiàng'rén
見效	3	jiàn-xià'o	162	n/av			jiànxiào	n/av	jiànxiào'
轎夫	2	jià'o-fū	193	n/av			jiàofū	n/av	n/av
轎子	?	jià'-ozi							
價錢	2	jià'-qián	92	jià'-qián	jià'qian	4, 693, A	jiàqián	jià'qián	jià'qián
加上	?	jiā'-shàng	130	n/av			jiāshàng	n/av	jiā'shang
甲魚	2	jiǎ'-yú	169	n/av			jiǎyú	n/av	jiǎ'yú
解悶兒	3	jiě-mè'nr	192	jiě-mèn'			jiěmèn	n/av	jiěmèn'
幾個	?	Ji-GE							
幾何	?	jǐ-hé'	130	n/av			jǐhé	n/av	jǐhé'
脊梁	?	jǐ'-liáng	169	jǐ'-liang			jǐliang	jǐliáng	jǐliang
吉林	?	Jí-lín'	79	Jí'-lín	n/av		n/av	n/av	n/av
京報	2	jī'ng-bào	144	n/av			n/av	n/av	n/av
經過	6	jī'ng-guò	162	jīng'-guò			jīngguò	jīngguo	jīng'guò, jīngguò'
敬重	8X	jì'ng-zhòng	75	jìng-zhòng'	jìngzhòng'	3, 1085, C	jìngzhòng	n/av	jìng'zhòng

Sheet1

幾年	?	jǐ-nián	27	n/av			jǐnián	n/av	n/av	
今年	2	jī'n-nián	130	jīn'-nian			jīnnian	jīnnián	jīn'nián	
今天	2	jī'n-tiān	144	jīn'-tian			jīntian	jīntian	jīn'tiān	
金銀財寶	?	jī'n-yín-cái-bǎ'o	178	n/av			n/av	n/av	n/av	
金盅子	2X	jīn-zhō'ng-zi	170	n/av			n/av	n/av	n/av	
幾匹	?	JI-PI								
幾歲	?	JI-SUI								
幾天	?	jǐ-tiān	30	n/av	jǐ'tiān	4, 263, A	jǐtiān	n/av	n/av	
酒錢	2	jiǔ'-qián	114	n/av			jiǔqián	n/av	jiǔqian	
就是	?	jiù'-shì	33	jiù'-shi	jiù'shì	4, 503, A	jiùshì	jiùshì	jiù'shì, jiùshì'	
幾位	?	JI-WEI								
K										
開口	3	kā'i-kǒu	137	kāi-kǒu'			kāikǒu	n/av	kāikǒu'	
開水	2, 3	kā'i-shuǐ	170	kāi-shuǐ'			kāishuǐ	kāishuǐ'	kāi'shuǐ	
看官	2	kà'n-guān	188	n/av			kànguān	n/av	n/av	
看見	5	kà'n-jiàn	102	kàn'-jiàn	kàn'jian / kàn'jiàn	2, 623, A	kànjian	kànjian	kànjian	
看門	3	kān-mé'n	192	n/av			kānmén	n/av	n/av	
看書	3	kàn-shū'	103	n/av	kànshū	2, 622, B	kànshū	n/av	n/av	
可以	9X	kě'-yǐ	102	kě'-yǐ / ké'-yi	kěyǐ	2, 1061, A	kěyǐ	kéyi	kě'yǐ, këyǐ'	
口袋	2	kǒ'u-dài	169	kǒu'-dài			kǒudai	n/av	kǒudai	
口音	2	kǒ'u-yīn	50	kǒu'-yīn	kǒu'yin	2, 406, B	kǒuyīn	n/av	kǒuyīn', kǒuyin	

L										
癩蛤蟆	?	lài-há'-ma	64	n/av	lànhá'ma	4, 708, A	lànháma	n/av	lànhá'ma	
老鴿	2X	lǎ'o-guā	48	n/av	lǎoguā'	4, 313, B	lǎoguā	n/av	n/av	
老花子	2	lǎo-huā'-zi	177	n/av			lǎohuāz	n/av	n/av	
老實	6X	lǎ'o-shí	56	lǎo'-shí	lǎo'shí	4, 315, C	lǎoshi	lǎoshí	lǎoshi	
老太太	2X	lǎo-ta'ì-tai	18	n/av	lǎota'ìtai	4, 314, A	lǎo'tai'tai	lǎotai'tai	lǎotai'tai	
老爺	2	lǎ'o-yé	18	lǎo'-yé	lǎo'ye / lǎoyé'	4, 312, A	lǎoye	lǎoyé	lǎoye	
落下	1	là'-xià	145	n/av			làxià	n/av	n/av	
臘月	2	là'-yuè	25	là'-yuè	là'yuè	4, 186, A	làyuè	n/av	n/av	
兩廣	?	Liǎng-Guǎ'ng	75	n/av	Liǎng-Guǎng	3, 319, A	n/av	n/av	Liǎng Guǎng'	
兩口子	?	liǎng-kǒ'u-zi	74	n/av	liǎngkǒ'uzi	3, 317, A	liǎngkǒuzi	n/av	liǎngkǒ'uzi	
兩年	2	liǎ'ng-nián	27	n/av			n/av	n/av	n/av	
兩千	2	liǎ'ng-qiān	28	n/av			n/av	n/av	n/av	
糧食	2	liá'ng-shí	178	liáng'-shí			liángshi	n/av	liángshi	
兩天	2	liǎ'ng-tiān	30	n/av	liǎngtiā'nr	3, 318, B	liǎngtiān	n/av	n/av	
蓮花	2	liá'n-huā	193	n/av			liánhuā	n/av	liánhuā'	
倆人	2	liǎ'-rén	21	liǎ'-rén	n/av		liǎrén	n/av	n/av	
禮部	2	lǐ'-bù	75	n/av	n/av		n/av	n/av	n/av	
吏部	2	lì'-bù	75	n/av	n/av		n/av	n/av	n/av	
利害	6	lì'-hài	64	lì'-hài	lì'hài	2, 1023, B	lìhai	lìhai	lìhai	
令愛	?	lìng-à'i	130	n/av			lìng-ài	lìng-ài'	lìng-ài'	

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令郎	?	lìng-lá'ng	130	n/av			lìngláng	lìngláng'	lìngláng'
領事	?	lǐ'ng-shì	192	n/av			lǐngshì	n/av	lǐngshì'
利錢	2	lì'-qián	114	lì'-qián			lìqian	n/av	n/av
六部	2X	liù-bù'	75	n/av	n/av		n/av	n/av	n/av
溜踏	?	liū'-dā	145	liū'-da			liūda	liūda	liūda
羅馬國	2X	Luó-mǎ-guó'		n/av	n/av		n/av	n/av	n/av
≈ 羅馬			49	Luó'-mǎ	Luó'mǎ	2, 355, B	n/av	n/av	n/av
駱駝	?	luò'-tuó	20	luò'-tuo	luò'tuo	2, 525, A	luòtuo	luòtuo	luòtuo
驢子	?	luó'-zi	1						
律例	2	lù'-lì	179	n/av			n/av	n/av	n/av
M									
馬夫	2	mǎ'-fū	114	n/av			n/av	n/av	mǎfū'
馬克	?	mǎ'-kè	87	n/av			n/av	n/av	mǎkè'
買賣	8X	mǎ'i-mài	119	mǎi'-mai			mǎimai	mǎi'mài	mǎimai
滿洲	10X	Mǎ'n-zhōu	114	n/av			n/av	n/av	Mǎnzhōu'
毛病	2	má'o-bìng	124	máo'-bìng			máobing	máobing	máo'bìng
馬上	1	mǎ'-shàng	162	mǎ'-shàng mǎ-shàng'			mǎshàng	mǎshang	mǎshàng'
馬錢	2	mǎ'-qián	114	n/av			mǎqian	n/av	n/av
美國	2	Měi'-guo	54	Měi'-guo			n/av	n/av	n/av
煤黑子	?	méi-hē'i-zi	194	n/av			méihēiz	n/av	n/av

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妹妹	?	mè'i-mèi	56	mèi'-mèi			mèimei	mèimei	mèimei
煤錢	2	mé'i-qián	114	n/av			n/av	n/av	n/av
沒事	3	méi-shì'	88	n/av			méishìr	n/av	méishì'
沒有	?	mé'i-yǒu	84	méi-you			méiyǒu	n/av	méi'yǒu
蜜蜂	2	mì'-fēng	127	mì-fēng'			mìfēng	n/av	mìfēng'
明白	?	mí'ng-bái	183	míng'-bai			míngbai	míng'bái	míng'bai
名醫	?	míng-yī'	165	n/av			míngyī	n/av	n/av
木頭	?	mù'-tóu	59	mù'-tou	mù'tou	3, 701, B	mùtou	n/av	mù'tou
母親	2	mǔ'-qīn	56	mǔ'-qin			mǔqīn	mǔ'qīn	mǔ'qīn
N									
南邊兒	10X	ná'n-biānr	125	n/av			nánbiānr	n/av	nánbian
內閣	?	nè'i-gé	150	n/av			nèigé	n/av	nèigé'
能耐	?	né'ng-nài	185	néng'-nai			néngnai	n/av	néngnai
娘娘	?	niá'ng-niáng	183	n/av			niángniang	n/av	niángniang
年號	2	niá'n-hào	26	n/av			niánhào	n/av	niánhào'
年間	?	niá'n-jiān	154	n/av			niánjiān	n/av	niánjiān'
年年	?	nián-nián	30	n/av	niánnián	2, 891, C	niánnián	nián'nián	n/av
念書	3	niàn-shū'	122	niàn-shū'			niànshū	n/av	niànshū'
你老	?	nǐ-lǎ'o	60	n/av			nǐlǎo	n/av	n/av
牛肉	2	niú'-ròu	91	niú-ròu'			niúròu	n/av	n/av
女人	2	nǚ'-rén	184	nǚ'-rén			nǚrén	nǚ'rén	nǚ'rén, nǚren

						nǚren		
P	>							
跑堂的	3	pǎo-tá'ng-de	193	pǎo-táng'gr-de		pǎotáng'grde	n/av	pǎotáng'gr-de
跑信的	3	pǎo-xì'n-de	193	n/av		n/av	n/av	n/av
朋友	?	pé'ng-yǒu	67	péng'-you		péngyou	péngyou	péngyou
憑據	2	pí'ng-jù	193	n/av		píngjù	píng'jù	píngjù'
脾氣	?	pí'-qì	56	pí'-qi	píqi	2, 814, A	píqi	píqi
蘋果	2	pí'ng-guǒ	118	píng'-guo		píngguo	n/av	píngguǒ'
Q								
千金	?	qiān-jī'n	75	n/av	qiānjīn	1, 823, B	qiānjīn	qiānjīn'
錢糧	?	qiá'n-liáng	183	n/av		qiánliang	n/av	qiánliáng'
千萬	2	qiā'n-wàn	70	qiān-wàn'		qiānwàn	qiānwàn	qiānwàn'
悄悄	?	qiāo-qiā'o	162	n/av		qiāoqiāor	n/av	qiāoqiāo'r
乞丐	?	qǐ'-gài	192	qǐ'-gài'		qǐgài	n/av	qǐgài'
騎馬	3	qí-mǎ'	50	qí-mǎ'	qímǎ	2, 1074, C	n/av	n/av
欽差	?	qī'n-chāi	72	n/av	qī'nchāi	3, 595, A	n/av	n/av
青春	?	qīng-chū'n	130	n/av		qīngchūn	n/av	qīngchūn'
親戚	?	qī'n-qì	184	qīn'-qi		qīnqi	qīn'qi	qīnqi
親王	2	qī'n-wáng	81	n/av		n/av	n/av	qīnwáng'
秋天	2	qiū'-tiān	154	qiū'-tian		qiū'tian	qiū'tiān	qiū'tiān
豈有此理	?	qǐ-yǒ'u-cǐ-lǐ'	119	n/av		qǐyǒucǐlǐ	n/av	qǐ'yǒucǐlǐ

娶妻	3X	qǔ'-qī	162	n/av			n/av	n/av	n/av
R									
熱鬧	?	rè'-nào	184	rè'-nào			rè-nao	rè'nào	rè-nao
人家	?	ré'n-jiā	135	rén'-jia			rénjia	rénjiā	rénjiā', rénjia
>							rénjiār	rénjiār'	
人人	?	rén-ré'n	86	rén'-rén	rén'rén	3, 588, c	rénrén	rén'rén	rénrén'
人熊	2X	rén-xió'ng	145	n/av			n/av	n/av	n/av
日本	?	Rì-bě'n	34	Rì-bě'n'			n/av	n/av	n/av
日本國	2	Rì-bě'n-guo	35	n/av	n/av		n/av	n/av	n/av
如今	?	rú'-jīn	114	rú'-jīn'			rújīn	n/av	rújīn'
閏月	2	rù'n-yuè	23	rùn'-yuè			rùnyuè	n/av	rùn'yuè
S									
撒謊	3	sā-huǎ'ng	199	sā-huǎ'ng'			sāhuǎng	n/av	sāhuǎng'
三等	2	sā'n-děng	72	n/av	n/av		sānděng	n/av	n/av
三月	2	sā'n-yuè	24	sān'-yuè			sānyuè	n/av	n/av
山東	10X	Shā'n-dōng	58	Shān-dōng'	n/av		n/av	n/av	n/av
山東人	2, 10X	Shā'n-dōng-rén	59						
上等	2	shàng-děng	132	shàng'-děng			shàngděng	shàngděng	shàng'děng
上帝	?	Shàng-dì	132	Shàng-dì'			Shàngdi	n/av	Shàngdì'
上海	?	Shàng-hǎi	132	n/av			n/av	n/av	n/av
上馬	3	shàng-mǎ'	162	n/av			n/av	n/av	shàngmǎ'

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上司	?	shàng-sī	133	shàng'-sì			shàngsī	n/av	shàngsì
殺人	3	shā-ré'n	123	n/av			shārén	n/av	n/av
省份	?	shě'ng-fèn	74	n/av	shěngfè'n	2, 628, A	shěngfèn	n/av	shěngfèn'
牲口	?	shē'ng-kǒu	193	shēng'-kou			shēngkǒu	n/av	shēngkou
生氣	3	shēng-qì DP?	108	shēng-qì'			shēngqì	shēngqì	shēngqì'
生子	3	shēng-zǐ'	162	n/av			n/av	n/av	n/av
生閒氣	3	shēng xiá'n-qì	108	n/av			n/av	n/av	n/av
時候	?	shí'-hòu	145	shí'-hou			shíhour	shíhou	shíhou
史記	2	Shǐ'-jì	135	n/av			n/av	n/av	n/av
十一月	2	shí-yī'-yuè	24	n/av			n/av	n/av	n/av
十二月	2	shí-èr'-yuè	24	shí-èr'-yuè			n/av	n/av	n/av
十分	2	shí'-fēn	67	n/av			shífēn	shí'fēn	shí'fēn
事情	?	shì'-qíng	14	shì'-qing	shì'qing shì - qíng	3, 102, B	shìqing	shìqing	shìqing
>									
失事	3	shī-shì'	184	n/av			shīshì	n/av	shīshì'
獅子	?	SHI-ZI							
收稅	3	shōu-shu'ì	185	n/av			shōushuì	n/av	n/av
手套	2X	shǒu-tà'o	177	shǒu-tào'			shǒutào r	n/av	shǒutào'r
手藝	2	shǒ'u-yì	183	shǒu'-yì			shǒuyì	n/av	shǒu'yì
書房	2	shū'-fáng shū-fá'ng	160	n/av			shūfáng	shūfáng'	shūfáng'

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睡覺	3	shuì-jià'o	168	shuì-jiào'			shuìjiào	shuìjiào	shuìjiào'
水手	2	shuǐ-shǒu	64	shuǐ-shǒu'	shuǐshǒu	3, 807, C	shuǐshǒu	n/av	shuǐshǒu
樹林子	?	shù-lín'-zi	179	shù-lín'-zi			shùlínz	n/av	shùlín'
數目	?	shù'-mù	67	shù'-mu			shùmù	shùmù	shù'mu
說合	1, 5	shuō-hé DP?	199	n/av			shuōhe	n/av	n/av
說話	3	shuō-huà'	125	shuō-huà'			shuōhuà	n/av	shuōhuà'
說書的	3	shuō-shū'-de	192	n/av			shuōshū	n/av	shuōshū'
梳頭	3	shū-tó'u	127	shū-tóu'			shūtóu	n/av	shūtóu'
四川	10X	Sì'-chuān	185	Sì'-chuān'					
死尸	2X	sǐ-shī'	185	sǐ-shī'			sǐshī	n/av	sǐshī'
四時	2X	sì-shí'	154	n/av			sìshí	n/av	sìshí'
四書	2X	sì-shū'	74	n/av			n/av	n/av	Sì Shū'
		sì'-shū							
四月	2	sì'-yuè	24	n/av			sìyuè	n/av	n/av
送信的	3	sòng-xì'n-de	192	n/av			sòngxinde	n/av	sòngxìn'
算盤	2	suà'n-pán	130	n/av			suànpán	suànpán	suàn'pán
I									
太太	?	tà'i-tài	14	tài'-tai	tài'tai	3, 646, A	tàitai	tài'tai	n/av
貪心	?	tān-xī'n	108	n/av			tānxīn	n/av	tānxīn'
疼愛	6	té'ng-ài	75	n/av	téng-ài'	4, 1054, B	téng-ài	n/av	Téng-ài
天津	?	Tiā'n-jīn	113						

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天倫	?	tiān-lú'n	129	n/av			tiānlún	n/av	tiānlún'
天氣	2	tiā'n-qì	153	tiān'-qì			tiānqi	tiānqi	tiān'qì
天天	?	tiā'n-tiān	30	tiān'-tian	tiān'tiān	3, 671, C	tiāntiān	tiāntian	tiāntiān'
天下	1	tiā'n-xià	182	tiān'-xia			tiānxià	tiānxià'	tiānxià'
天主	2	Tiā'n-zhǔ	136	n/av			n/av	n/av	Tiānzhǔ'
鐵甲	2	tì'ě-jǐǎ-chuán	60	n/av	n/av		n/av	n/av	n/av
≈ 鐵甲				n/av	tiějiǎ'	4, 239, C	tiějiǎ	n/av	n/av
替工兒的	3	tì-gō'ngr-de	192	tì'-gōng			n/av	n/av	tìgōngr'
聽差	3X	tī'ng-chāi	191	tīng-chāi'			tīngchāi	n/av	tīngchāi'
聽話	3	tīng-huà'	44	tīng-huà'			tīnghuà	n/av	tīnghuà'
聽見	5	tī'ng-jiàn	102	n/av			tīngjian	tīng'jiàn	tīng'jiàn
踢人	3	tī-ré'n	125	n/av			n/av	n/av	n/av
替身	?	tì'-shēn	199	n/av			tìshēn	n/av	tìshēn'
同居	?	tóng-jū	162	n/av			tóngjū	n/av	tóngjū'
頭品	2	tó'u-pǐn	73	n/av	tó'upǐn	4, 723, A	n/av	n/av	n/av
頭等	2	tó'u-děng	73	tóu-děng'	tó'uděng	4, 723, C	tóuděng	n/av	tóu'děng
妥當	?	tuǒ'-dàng	135	tuǒ-dàng'			tuǒdang	tuǒdàng	tuǒdang
W									
外國	2	wà'i-guó	34	wài'-guo			wàiguó	wài'guó	wài'guó
外國人	2	wà'iguoren	35	wài'-guo-rén	wà'iguoren	2, 714, B	wàiguorén	n/av	n/av
王八	?	wá'ng-bā	169	n/av			wángbā	n/av	wángba

Sheet1

王爺	2	wá'ng-yé	83	n/av		wángyé	n/av	wángye
萬國	?	wàn-guó'	74	n/av		wànguó	n/av	wànguó'
頑戶	?	wá'n-hù	185	n/av		n/av	n/av	n/av
萬歲爺	2X	wàn-suì-yé'	71	n/av		n/av	n/av	n/av
萬萬	2	wà'n-wàn	70	n/av		wànwàn	wànwàn'	wàn'wàn
文書	8	wé'n-shū	108	n/av		wénshū	n/av	wén'shū, wénshū'
蚊帳	8	wé'n-zhàng	146	wén-zhàng'		wénzhàng	n/av	wénzhàng'
五經	2X	wǔ-jī'ng	77	n/av		n/av	n/av	Wǔ Jīng'
我們	?	WO-MEN						
X								
險處	2	xiǎ'n-chù	146	n/av		n/av	n/av	n/av
賢惠	?	xiá'n-huì	129	n/av		xiánhui	n/av	xián'huì
鄉村	2	xiā'ng-cūn	145	xiāng-cūn'		xiāngcūn	xiāng'cūn	xiāngcūn'
向來	?	xiàng-lái	135	xiàng'-lái		xiànglái	xiànglái	xiàng'lái
先生	2	xiā'n-shēng	102	xiān'-sheng		xiānsheng	xiānsheng	xiānsheng
笑話	2	xià'o-huà	47	xiào'-hua	xiào'hua	xiàohua	xiào'huà	xiàohua
>						3, 666, B	xiàohuà	
小驢兒	2X	xiǎo-lú'r	49	n/av	n/av	xiǎolú	n/av	n/av
小馬兒	2X	xiǎo-mǎ'r	49	n/av	n/av	n/av	n/av	n/av
小廟	2X	xiǎo-mià'o	21	n/av	n/av	n/av	n/av	n/av
寫字	3	xiě-zì'	123	xiě-zì'		xiězì	n/av	n/av

喜歡	?	xǐ'-huān	113	xǐ'-huan			xǐhuan	xǐhuan	xǐhuan
洗臉	3	xǐ-liǎ'n	123	xǐ-liǎn'			xǐliǎn	n/av	n/av
信本子	?	xìn-bě'n-zi	178	n/av			n/av	n/av	n/av
刑部	2	xí'ng-bù	75	n/av	n/av		n/av	n/av	n/av
興旺	?	xī'ng-wàng	153	n/av			xīngwàng	n/av	xīngwàng'
醒悟	?	xǐng-wù DP?	159	n/av			xǐngwù	n/av	xǐngwù'
新喜	?	xīn-xǐ'	129	n/av			xīnxǐ	n/av	n/av
兄弟	2	xiō'ng-dì	56	n/av	xiō'ngdì	4, 441, A	xiōngdì	xiōngdì	xiōngdì', xiōngdì
>							xiōngdì		
洗澡	3	xǐ-zǎ'o	192	xǐ-zǎo'			xǐzǎo	n/av	xǐzǎo'
Y									
衙門	?	yá'-mén	17	n/av			yámen	yámen	yámen
洋布	2	yá'ng-bù	47	n/av	yángbù	2, 881, C	yángbù	n/av	yángbù'
養馬	3	yǎng-mǎ'	193	n/av			n/av	n/av	n/av
洋人	2	yá'ng-ren	35	n/av	yáng'ren	2, 882, A	yángren	n/av	yáng'rén
羊肉	2	yá'ng-ròu	91	yáng-ròu'			yángrou	n/av	yángqián
洋錢	2	yá'ng-qián	86	yáng-qián'			yángqián	n/av	yáng'qián
洋銀	2	yá'ng-yín	88	n/av			n/av	n/av	n/av
硯台	2	yà'n-tái	118	n/av			yàntai	n/av	yàntai
言語	8X	yá'n-yǔ	124	yán'-yǔ			yányǔ	n/av	n/av
要緊	?	yào-jǐn'	75	yào'-jǐn'			yàojǐn	yàojǐn'	yào'jǐn

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要錢	3	yào qián	37	n/av	n/av	yào qián	n/av	n/av
咬人	3	yǎo-ré'n	127	n/av		n/av	n/av	n/av
丫頭	?	yā'-tóu	145	n/av		yātou	yātou	yātou
夜里	1	yè'-lǐ	119	yè'-li		yèli	yèli	yè'lǐ
野豬	2X	yě-zhū'	162	n/av		yězhū	n/av	yězhū'
一百	2X	yī-bǎi	28	n/av		yībǎi	n/av	n/av
一輩子	?	yí-bèi'-zi	106	yí-bèi'-zi		yíbèiz	n/av	yíbèi'zi
一定	?	yí-dì'ng yí'-dìng	96	yí-dìng'		yídìng	yídìng'	yídìng'
已經	?	yǐ'-jīng	84	yǐ'-jīng		yǐjīng	yǐjīng	yǐ'jīng
已故	?	yǐ-gù'	132	n/av		n/av	yǐgù'	n/av
英國	2	Yī'ng-guó	30	Yīng'-guo		n/av	n/av	n/av
英國人	2	Yī'ng-guo-ren	35	Yīng'-guo-rén	Yīng'guórén	n/av	n/av	n/av
引水人	2	yǐ'n-shuǐ-rén	193	n/av		n/av	n/av	yǐn shuǐ'
殷勤	?	yī'n-qín	193	yīn'-qín		yīnqín	n/av	yīn'qín
一千	2X	yī-qiā'n	28	n/av		yìqiān	n/av	n/av
意思	?	yì'-sī	75	yì'-si		yìsi	yìsi	yìsi
一天	2X	yì-tiā'n	106	yì-tiān'	yìtiān	yìtiān	n/av	n/av
一同	?	yì-tóng	162	n/av		yìtóng	yìtóng'	yìtóng'
一直	?	yì-zhí'	159	yì-zhí'		yìzhí	yìzhí'	yìzhí'
椅子	?	yǐ'-zi		yǐ'-zi	n/av			

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有病	3	yǒu-bì'ng	84	yǒu-bìng'	n/av		n/av	n/av	n/av	
憂愁	8X	yō'u-chóu	114	n/av			yōuchóu	yōu'chóu	yōu'chóu	
有零	3	yǒu-lí'ng	66	n/av		yǒulíng	3, 175, C	n/av	n/av	yǒulíng'
憂慮	8X	yō'u-lǜ	159	n/av				yōulǜ	n/av	yōulǜ
有名	3	yǒu-mí'ng	182	yǒu-míng'				yǒumíng	yǒumíng'	yǒumíng'
有氣	3	yǒu-qì'	57	n/av	n/av			yǒuqì	n/av	n/av
有事	3	yǒu-shì'	55	n/av		yǒushì'	3, 176, A	yǒushì	n/av	n/av
猶疑	8X	yó'u-yí	168	yóu-yí'				n/av	n/av	yóu'yí
元寶	2	yuá'n-bǎo	92	n/av				yuánbao	n/av	yuánbǎo'
遠近	8	yuǎ'n-jìn	122	n/av				yuǎnjìn	n/av	yuǎnjìn'
元年	2	yuá'n-nián	25	n/av		yuánnián'	4, 412, A	n/av	n/av	yuán'nián
願意	?	yuà'n-yì yuàn-yì'	81	yuàn'-yì		yuànyì'	4, 753, B	yuànyì	yuànyì'	yuàn'yì
月光	2	yuè-guā'ng	146	n/av				yuèguāng	n/av	yuèguāng'
遇見	5X	yù'-jiàn	136	yù'-jiàn				yùjian	n/av	yù'jiàn
雲彩	?	yún'-cǎi	136	yún'-cai				yúncai	yún'cǎi	yúncai
Z										
造化	?	zà'o-huà	182	n/av				zàohua	n/av	zàohuà', zàohua
早已	?	zǎ'o-yǐ	153	n/av				zǎoyǐ	zǎo'yǐ	zǎo'yǐ
章程	2	zhā'ng-chéng zhāng-ché'ng	193	n/av				zhāngcheng	n/av	zhāng'chéng

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掌櫃	?	zhǎng-guì'	193	zhǎng-guì'			zhǎngguì	zhǎngguì'de	zhǎngguì'
着急	5	zháo-jí'	145	zháo-jí'			zháojí	zháojí	zháojí'
照樣兒	3	zhào-yà'ngr	161	zhào-yàng'r			zhàoyàngr	zhàoyàng'r	zhàoyàng'r
照章	3	zhào-zhā'ng	161	n/av			n/av	n/av	n/av
浙江	10X	Zhè'-jiāng	185						
正月	2	zhē'ng-yuè	24	zhēng'-yuè	zhēng'yuè	2, 226, B	zhēngyuè	zhēng'yuè	zhēng'yuè
蟄人	3	zhē-ré'n	125						
中國	2	Zhō'ng-guó	34	Zhōng'-guo	Zhōng'guó	2, 922, B	n/av	n/av	n/av
中國人	2	Zhō'ng-guo-rén	59	n/av	Zhōngguórén'	2, 922, B	n/av	n/av	n/av
中國字	2	Zhō'ng-guó-zì'	178	n/av			n/av	n/av	n/av
中堂	2	zhō'ng-táng	113	n/av			zhōngtáng	n/av	zhōng'táng, zhōngtang
知道	1	zhī'-dào	87	zhī'-dào			zhīdào	zhī'dào	zhī'dào
至多	4?	zhì-duō'	66	zhì-duō'	zhìduō'	1, 136, A	zhìduō	zhìduō'	zhìduō'
至少	4?	zhì-shǎo'	66	zhì-shǎo'	zhìshǎo'	1, 136, A	zhìshǎo	zhìshǎo'	zhìshǎo'
至好	4X?	zhì'-hǎo	68	n/av	zhìhǎo	1, 135, C	zhìhǎo	zhìhǎo'	zhì'hǎo
重地	3	zhòng-dì'	190	zhòng-dì'			zhòngdì	n/av	zhòngdì'
眾人	2	zhòng-rén	82	n/av	zhòng'rén	3, 831, C	zhòngrén	n/av	zhòng'rén
>					zhòng - rén				
眾位	2	zhòng-wèi	82	n/av	zhòngwèi'	3, 831, B	zhòngwèi	zhòngwèi	n/av
咒語	2	zhò'u-yǔ	136	n/av			zhòuyǔ	n/av	n/av
專管	6	zhuā'n-guǎn	185	n/av			n/av	n/av	n/av

主顧	8X	zhǔ'-gù	185	zhǔ'-gù		zhǔgù	n/av	zhǔ'gù
桌子	?	zhuō'-zi						
自己	?	zì-jǐ'	169	zì'-jǐ'		zìjǐ	zìjǐ	zìjǐ
自然	?	zì'-rán	108	zì'-rán'		zìrán	zìrán	zìrán', zìran
>						zìran		
字眼兒	?	zì-yǎ'nr	177	n/av		zìyǎnr	n/av	zìyǎnr'
坐車	3	zuò-chē'	124	zuò-chē'		zuòchē	n/av	n/av
坐船	3	zuò-chuá'n	124	n/av		n/av	n/av	n/av
做官	3	zuò-guā'n	101	zuò-guān'		zuòguān	n/av	n/av
總辦	2, 9	zǒ'ng-bàn	17	n/av		zǒngbàn	n/av	n/av
走路	3	zǒu-lù'	123	zǒu-lù'		zǒulù	n/av	zǒulù'

Legend

Section: Indicates numbered analysis section of grouped lexemes in thesis text body.

Page: Page number where the selected word citation instance occurs (either taken from glossary or first occurrence in lesson text).

Place: Indicates volume number, page number, as well as column A, B or C (each page has three columns, starting from the left) where word is found.

Other notational conventions:

1. "n/av" means that the lexeme in question is not to be found in the corresponding source.
2. An empty cell in the Oshanin column means that the lexeme has not been looked up, but may be in the dictionary.
3. The symbol ">" under a lexeme means that there is a minimal pair written with the same characters. It may be found in one or more of the compared sources, and is marked in blue if that is the case.
4. An empty space under a lexeme or the symbol "/" between two citations means that two variant stress patterns have been cited in the source, but that no minimal pair with differing meanings is implied.
5. The symbol "≈" + *lexeme* refers to what is only a partial match to the word found in Arendt, and that the subsequent string of comparisons is based instead on this partial match.
6. "DP?" after a word citation queries if the lexeme either has a Double Peak stress pattern, or if it lacks stress indication due to clerical error or omission.