CHAPTER 34

SINO-TIBETAN

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Although there is a fairly wide consensus on the existence of a Sino-Tibetan family of languages, there is considerable disagreement among scholars regarding its exact internal structure and the hierarchical relations between its members (Jacques forthcoming: 1, van Driem 2011). Many languages in this family are furthermore not well documented or studied. This chapter will not attempt to address or take a stand on genetic affiliations, but will instead simply outline the derivational morphology of three representative Sino-Tibetan languages: Standard Chinese, standard written or Classical Tibetan, and Rgyalrong, a minority language spoken in Sichuan province, China. Perhaps the most high-profile Sino-Tibetan language besides Chinese and Tibetan is Burmese, the national language of Myanmar, which is, however, not treated in this volume. For detailed information on the morphology of Burmese, see Okell and Allott (2001). For recent overviews of the Sino-Tibetan family, see Thurgood and LaPolla (2003), van Driem (2003), and Handel (2008).

Part 1 Standard Chinese

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34.1 Introduction

Standard Chinese, also called Mandarin Chinese, is the national language of both the People's Republic of China and Taiwan, and one of the official languages of Singapore. It belongs to the Sinitic sub-family of Sino-Tibetan, which includes all Han Chinese dialects. Standard Chinese is based on the Northern Han dialect spoken in and around Beijing. Ethnologue cites a 2000 census giving the number of speakers as 840,000,000 and increasing.

Typologically, Chinese is perhaps the most representative and also one of the most extreme examples of an analytic, isolating language. It is often classified as "monosyllabic," though some disagree with this description (e.g. DeFrancis 1984: 177–188, Duanmu and Zhang 2010), in that a large proportion of the lexical items in use in modern spoken Chinese tend to be polysyllabic, often disyllabic; for example, 帽子màozi 'hat,' 電腦 diànnǎo 'computer' (n.); 檢討 jiǎntǎo 'to examine, to take stock of,' 申請 shēnqǐng 'to apply for' (v.); 聰明cōngmíng 'intelligent,' 辛苦xīnkǔ 'arduous, with difficulty' (adj./stative verb/adv.); 雖然 suīrán 'although,' 但是 dànshì 'but' (conj.). Compound nouns are the most likely to have more than two syllables: 洗髮精 xǐfǎjīng/xǐfàjīng [to wash + hair + essence] 'shampoo,' 百貨公司 bǎihuògōngsī [hundred + goods + company] 'department store,' 健康證明書 jiànkāngzhèngmíngshū [health + proof + document] 'health certificate'; also some foreign-influenced verbs: 再投資 zàitóuzī [again + to put-in + capital] 'to reinvest.'[1]

Y. R. Chao, however, says that the "'monosyllabic myth' is in fact one of the truest myths in Chinese mythology" (1968: 139). This is because in the vast majority of cases, each syllable is a morpheme, very often a free morpheme, or a morpheme that is only semi-bound; fully bound morphemes are not that frequent in Chinese. In a 200-character survey, DeFrancis (1984: 184) found that 44% of the total were free morphemes, of which 7% were literary forms; 45% were semi-bound; and only 11% were completely bound. Examples of the relatively small store of completely bound syllables include the [+human] plural suffix -們men, which must be attached to a pronoun or noun, and the clitic particle 著zhe, a progressive aspect marker, which can only occur after a verb.

The status of each syllable as a morpheme has enormous consequences for the structure of the language. Unlike English, and particularly unlike its heavy layer of Romance, Chinese does not have many reduced forms that are a close structural match for bound English affixes, stems, roots, and combining forms. In addition, Chinese has one of the lowest ratios of foreign loans—one source puts it at about 1.2% (Wiebusch and Tadmore 2009: 582)—preferring by far loan translations to phonetic loans. Moreover, the foreign origins of phonetic loans that manage to survive beyond an initial burst of popularity are not always apparent to all speakers, since the phonetically similar syllables chosen will frequently also express the meaning of the original to some extent; for example, a popular fast-food chain's Chinese rendering of "drive-thru" is 得來速 déláisù, [to get + to come (marks motion toward speaker) + fast], or 'get it fast' (Mandarin has no interdental fricatives and no consonant clusters). Some Mandarin speakers were totally surprised when they first saw the English source of the expression—they had no idea that it was in fact a phonetic loan.

This explains two key features of Chinese: (1) a high semantic density per syllable; and (2) high transparency, due to its use of mostly native components—including archaisms

[1] The Hanyu Pinyin Romanization system with citation tones is used in all examples; tone sandhi are not indicated.

from classical Chinese—rather than foreign ones in word formation. One index of this higher per-syllable semantic density is speech rate. Mandarin was found by Pelligrino and Marsico (2011: 545) to have a very high per-syllable information density index,.94, and a correspondingly lower average rate of syllables spoken per second, 5.18, compared to Spanish and Japanese, with information density indices of.63 and.49, and rates of syllables per second at 7.82 and 7.94 respectively.

So if the conventional definitions of an affix are strictly adhered to, then Chinese has very few affixes indeed, and a number of the ones that qualify are in fact foreign loans, usually calques. Packard (2000: 174), for example, lists only seven prefixes, and some of these are sometimes used as free morphemes. The application of Western European language-based definitions to Chinese not only results in a highly lopsided system, but it also means that many of the native patterns that occur in Chinese will be passed over and perhaps not even recognized at all. For this reason, it makes sense to first describe the patterns observed to occur in Chinese, next to compare them with Western European-type structures, and then to determine whether some adjustments in the definitions might not be in order to better represent the rich morphological patterns of Chinese on their own terms.

34.2 Morphosyntactic Features

Chinese is an uninflected language; it does not mark for person or tense, and only marks gender and number in some instances lexically; but it does have aspect-marking particles. Adjectives also function as stative verbs, that is, they can be sentence predicates without a "be" verb, for example 好神奇！ hǎo shénqí [very + amazing] 'That's amazing!' It has some, mostly lexical, remnants of honorific and deferential speech. Northern Mandarin has an inclusive "we," 咱們zámen.

The most common method of word formation is compounding. Attempting to distinguish derivation from compounding is not at all straightforward, and is very much open to varying interpretations and approaches. In Chinese, the two are in fact part of the same continuum, rather than cleanly separable domains.

Rather than relying on word endings or internal vowel changes, key parameters in Chinese morphology and morphosyntax are: (1) morpheme/word order; (2) inseparability; (3) word-internal grammatical relations; and (4) syllable count. These will be discussed in turn below.

(1) **Morpheme/word order**: Assuming a Bloomfieldian definition of morphological "head" as that which is ultimately modified in a subordinative formation or construction, and that belongs to the same part of speech as the whole (Bloomfield 1984: 195), Chinese is a head-final language—modifiers *always* precede what they modify, both in the syntax and in the morphology. The ordering of modifiers in Chinese follows basically the same rules in the morphology as in the syntax, with elements describing more

inherent qualities coming closer to the head, and more alienable ones progressively distanced, similar to English, for example 一隻大黑狗yī zhī dàhēigǒu [one + one-of-a-pair (classifier) + big + black + dog] 'a big black dog' ('black' is more inalienable than 'big'). Chinese is also basically an **SVO language**; it is at the same time a **"topic–comment" language**, in which background information comes first, and new information is utterance-final.

(2) **Inseparability**: Because, aside from a small number of particles, there are so few overt grammatical markings of any kind in Chinese, and no spaces are left between words in the Chinese writing system, some other means of distinguishing "words" and other morphological formations from syntactic constructions is required. The most consistent and reliable feature marking a word, as opposed to a phrase or other syntactic formation, is *inseparability*. This clearly excludes VO phrases such as 吃飯chīfàn [to eat + rice] 'to eat' and 念書n°iànshū [to read + book] 'to study.' While Chinese does very often prefer a VO construction for many notions that in English would be expressed with a bare verb, these are clearly syntactic phrases and not compounds, since they are as separable as *eat (some) rice* and *read (a few) books* are in English, and certainly no one would call these "compounds."

Two other common types of syntactic phrases as opposed to compounds in Chinese (mentioned here because like VO phrases, they are erroneously called "compounds" in some accounts) are resultative constructions such as 吃光chīguāng [to eat + bright/bare] 'to eat something completely up,' and directional constructions like 走上去zǒushangqu/zǒushàngqù [to walk + up + to go] 'to walk up.' These types of constructions are very similar to English phrasal verbs such as *to give up* and *to run away*. Potentiality in Chinese can be expressed with one variety of these phrases, by inserting the particle 得de 'to get' for "ability" or 不bu 'not' for "inability"; for example, 走得動zǒudedòng [to walk + to get + to move] means 'able to walk,' 走不動zǒubudòng [to walk + not + to move] means 'unable to walk.' While these constructions are highly cohesive, they are also easily separable, and they thus belong to the syntax, and/or perhaps to a category midway between syntactic phrases and compounds, which we may call "collocations." But they are not "words," any more than the phrase *to hurry up* is a single word in English (Chung 2006: 23–5).

(3) **Word-internal grammatical relations**: Since there is mostly no morphosyllabic reduction in Chinese to form truly bound morphemes like English *pre-*, which could be used as one of the benchmarks of affixation, and since boundness does not seem to form a consistent or meaningful natural category in Chinese, the next logical place to look is word-internal grammar. Doing so will help uncover the systematic, native patterns of word formation in Chinese rather than only those structures that resemble what we expect to find, based on currently established models of morphological derivation.

One feature that yields consistent results is that of subordination, that is, identifying modifier–head relationships, as opposed to coordination, in which two elements have equal status and there is therefore no head. This approach will help unveil a widespread

system of something like prefixation, but with many semantically strong "prefixes," which Chao calls "versatile first morphemes in compounds" (1968: 211). These are closer in nature to Greek and Latin combining forms in English, such as *homo-* and *iso-*. These "first morphemes" may in the case of verbs, for example, add information regarding intensity, manner, or direction of an action, but they are usually not as semantically specific as forms like *cardio-* and *astro-*. Combining forms are in fact thus far quite ill-defined in morphology in general—as are these "prefixal" forms in Chinese—and may tend to be lexical in nature. Yet in Chinese they also exhibit considerable productivity (see Section 34.4.2 on verb prefixation for examples). Data and findings from Chinese could perhaps introduce new approaches for the morphological analysis of English and other languages.

(4) **Syllable count**: There is no set number of syllables required to form a word in any part of speech in isolation, but there are very marked tendencies regarding syllable count, less so for nouns, but very strongly so for verbs, adjectives, adverbs, pronouns, and conjunctions—all of these tend to be either one or two syllables in length. Most classifiers are monosyllabic; there are a very few disyllabic compound classifiers, like 回合huíhé 'a round [in a fight]'; these are more common in the Beijing dialect than in general standard Mandarin. The most basic, common verbs tend to be monosyllabic, for example 吃chī 'to eat,' 跑pǎo 'to run.' True compound verbs—not syntactic collocations—in general tend to be disyllabic. The disyllabic template is a tightly integrated and inseparable unit which plays an indispensable, central role in all of Chinese morphology.

A given syllable is often bound, in that, in order to be used at all, it needs to occur in a disyllabic expression. The other syllable may be a modifier, a head, or a postposition—the important thing is that the disyllabic template be filled out. 桌zhuō 'table,' for example, does not usually appear alone, but 桌子zhuōzi [table + (nominal particle)] 'table,' 桌上zhuōshang [table + top (postposition)] 'on the table,' and 飯桌fànzhuō [cooked grain/rice + table] 'dining table' are all fine. As Duanmu and Zhang (2010) put it: "The apparent 'boundness' of many morphemes, therefore, [is] not morphological but phonological, the avoidance of a monosyllabic foot."

In addition, Chinese has a form of "syllable harmony," in which it is often preferred to match the number of syllables in, for example, the object according to the number of syllables in the verb, or the number of syllables in the adjective or adverb to that of the noun or verb it modifies. The monosyllabic attributive 互hù 'mutually, each other' appears in the compound verb 互打hùdǎ [mutually + to hit] 'to hit each other.' When a disyllabic verb like 毆打ōudǎ 'to beat up' is used, it will often be matched with the disyllabic form of the adverb, 互相hùxiāng, also 'mutually, each other'; thus互相毆打hùxiāngǒudǎ 'to beat each other up' instead of 互毆打hùōudǎ, which is also possible but less preferred.

With the above as a bare-bones understanding of how words are constructed in Chinese, we will now describe some of the key patterns of morphological derivation in Mandarin.

34.3 Reduplication

Reduplication is used extensively in Chinese, and has several different uses and meanings.

34.3.1 Nouns

(a) Some nouns can be reduplicated to mean "every": 人人rénrén [person + person] 'everybody'; 時時shíshí [time + time] 'at all times, at any time'; this can also be done with some classifiers, e.g. 條條(道路) tiáotiáo (dàolù) [strip + strip (+ road)] 'every road'; 層層céngcéng [layer + layer] '[at] every level, every layer.' Reduplication of pairs of related nouns or classifiers can add emphasis: 分分秒秒fēnfēnmiǎomiǎo [minute + minute + second + second] 'every minute and every second, at all times.' This pattern may have the extended meaning of 'many' or 'one thing happening after the other, one at a time': 層層疊疊céngcéngdiédié [layer + layer + fold + fold] 'having many layers, layer by layer'; 點點滴滴diǎndiǎndīdī [dot + dot + drop + drop] 'bit by bit, slowly.'

(b) Some reduplicated nouns are fixed lexical items rather than on-the-spot output of a morphological pattern or rule. Reduplication is sometimes used, for example, in the names of animals: 猩猩xīngxīng 'gorilla,' 狒狒fèifèi 'baboon,' 蟈蟈兒guōguor 'cricket' (N. Mandarin; this seems to be onomatopoeic; alliteration and rhyme are also common in disyllabic names of plants and animals.) In some cases, lexical reduplication has the meaning of 'many,' as in (a), e.g. 星星xīngxīng 'stars.'

(c) Many words for family relationships are reduplicated, and suggest intimacy: 姐姐jiějie 'elder sister'; 爸爸bàba 'father.'

(d) Nouns are reduplicated and form diminutives in baby talk: 車車chēchē [car + car] 'little car'; 鞋鞋xiéxié/xiěxié [shoe + shoe] 'little shoe'; also playfully, in adult speech: 東東dōngdōng [east + east] 'thing, thingie,' playful variant of 東西dōngxi [east + west] 'thing, object' in which the first element is reduplicated.d) Some nouns are reduplicated simply to fill out the disyllabic template; this form may in some cases also add a slightly diminutive or tongue-in-cheek flavor to the expression, as in (d): 包包bāobāo [package + package] 'purse, bag'; 叉叉chāchā [cross + cross] 'an X'; 調調diàodiao [tune + tune] 'overall style'; 頭頭tóutou [head + head] 'leader, chief.'; 渣渣zhāzhā [dregs + dregs] 'dregs, debris, trash, junk.' These may take an 兒er suffix in Northern Chinese (see Section 34.5.1).

34.3.2 Verbs

Reduplication of verbs usually means "to try to do something, to do something casually or tentatively, not seriously": 試試看shìshìkàn [to try + to try + to see] 'try it and see'; 走走zǒuzǒu [to walk + to walk] (or: 走一走zǒuyīzǒu [to walk + one + to walk) 'to take a leisurely walk, to walk a bit.' 'Thank you' in Mandarin is a reduplication of the verb "to thank," 謝謝xièxie.

Disyllabic compound verbs may follow an ABAB pattern: 慶祝慶祝qìngzhùqìngzhù [to celebrate + to celebrate] 'to celebrate a bit,' though AABB is used for copulative compound verbs: 吃吃喝喝chīchīhēhē [to eat + to eat + to drink + to drink] 'to have a good time eating and drinking'; 進進出出jìnjìnchūchū [to enter + to enter + to exit + to exit] 'to be constantly coming and going'; these are basically the reduplication of two individual monosyllabic verbs.

34.3.3 Adjectives and Adverbs

Reduplication of adjectives and adverbs usually adds a sense of "quite, rather": 高高的gāogāode [tall + tall + (particle of manner)] 'rather tall'; 好好的hǎohǎode [good + good (particle of manner)] 'just fine, properly.' Disyllabic adjectives tend to follow an AABB pattern of reduplication: 高高興興gāogāoxìngxìng [high + high + excited + excited] 'quite happy/happily.' (高興高興gāoxìnggāoxìng also occurs, but in this case it is a **verb**, meaning 'to experience feelings of pleasure'). This is an example of an expansion through reduplication of a adjective/adverb often used in the non-reduplicated form 高興gāoxìng 'happy' as well. But some reduplicated modifiers may be compounded from expressions that do not exist or are uncommon in the simplex form. In this example the reduplication acts as an intensifier and stresses the disparate nature of a referent: 花花綠綠huāhuālǜlǜ [patterned + patterned + green + green] 'with gaudy patterns and colors'; the non-reduplicated form *花綠huālǜ is not used. There are also ABB-type adjective and adverb formations, for example 冷冰冰lěngbīngbīng [cold + ice + ice] 'cold as ice' and 黑漆漆hēiqīqī [black + lacquer + lacquer] 'pitch black'; and AAB-type modified nouns, such as 毛毛蟲máomáochóng [furry + furry + insect] 'caterpillar' and 甜甜圈tiántiánquān [sweet + sweet + circle] 'doughnut.'

34.3.4 Onomatopoeia

As mentioned in passing in Section 34.3.1 (b), reduplication is frequent in onomatopoeia, for example 哈哈笑hāhāxiào [*hā* + *hā* + to laugh] 'to laugh out loud'; 嗶嗶叫bībījiào [*bī* + *bī* + to call out] 'to beep'; 嘰嘰呱呱jījīguāguā 'to chatter endlessly'; 咔嚓咔嚓kāchākāchā 'click, click.'

34.4 Affixation: Prefixation

Chinese has formations such as 反恐怖主義者fǎnkǒngbùzhǔyìzhě [anti- + terror + -ism + -er/-ist] 'anti-terrorist,' which seem to display a pattern of affixation tidily similar to English—except that words like these are very modern ones, in which the "affixes," while all formed from native Chinese elements, are in many cases simply loan translations from English or other Western languages, often with Japanese as a middleman. The danger in trying to impose a pre-established system of affixation on Chinese is that the examples that best fit the requirements looked for will be ones that were borrowed from the language on which the classical prefixation model was based in the first place. So the search becomes a circular one, going from an English system to a parallel borrowed English-based system, while more native Chinese patterns with much deeper roots, such as Chao's "versatile first morphemes in compounds," are passed over.

34.4.1 Nouns

There is only a small number of widely-recognized noun prefixes in Chinese following the conventional definitions. Even these often do not strictly meet the usual criteria, in that some, such as 老lǎo 'old,' can be used as free morphemes. Here are some examples:

1. 阿ā: A fully bound prefix for nicknames and certain family relationships; e.g. 阿姨āyí [ā (noun prefix) + mother's sister] 'Auntie'; 阿強āqiáng 'A Qiang,' nickname for someone with "Qiang" as the third character of his name.
2. 老lǎo 'old': This is a marginal noun prefix with bleached meaning used in just a few established nouns; e.g. 老師lǎoshī [old + teacher] 'teacher,' 老虎lǎohǔ [old + tiger] 'tiger,' 老鼠lǎoshǔ [old + mouse/rat] 'mouse, rat.' It is also used as a term of friendly respect before family names and certain family relationships: 老王lǎowáng 'Old [Mr.] Wang,' 老哥哥lǎogēgē [old + elder brother (reduplicated)] '[dear] big brother.'
3. 第dì: A bound prefix used to form ordinal numbers, e.g. 第一個dìyīgē [(ordinal number marker) + one + (classifier)] 'first.'
4. 前qián 'former, ex-' and
5. 副fù 'deputy, vice-'; e.g. 前副總統qiánfùzǒngtǒng [previous + vice- + president] 'former vice president'—an example with two prefixes used together.
6. 準zhǔn 'future, -to-be, quasi-': 準媽媽zhǔnmāmā [future + mother] 'mother-to-be'; 準媳婦zhǔnxífù [future + daughter-in-law] 'daughter-in-law-to-be'; 準貨幣zhǔnhuòbì [quasi- + currency] 'quasi-money.'
7. 迷你mínǐ 'mini': An example of a recent disyllabic prefix that is a phonetic foreign loan; e.g. 迷你裙mínǐqún *mí* + *nǐ* + skirt] 'miniskirt'; 迷你火鍋mínǐ

huǒguō *mí* + *nǐ* + fire + pot] 'mini-hotpot, individual chafing dish stew.' This prefix is now semantically empty in most formations. The two syllables, however, may have originally been chosen to add semantic content to what is probably the earliest loan using them, 迷你裙mínǐqún 'miniskirt,' which could be glossed as [to dazzle + you + skirt] 'skirt that will dazzle/stun you.'

34.4.2 Verbs

There is an extensive system of Chao's prefix-like "versatile first morphemes" in Chinese that form compound verbs. Some examples:

1. 預yù 'pre-, beforehand': 預熱yùrè [beforehand, pre- + to heat] 'to preheat'; 預付yùfù [beforehand, pre- + to pay] 'to pay in advance, to prepay.'
2. 複or 復fù 're-, again': 複查fùchá [again, re- + to examine] 'to reexamine'; 復發fùfā [again, re- + to erupt] 'to have a relapse.'
3. 誤wù 'mis-, mistaken': 誤導wùdǎo [mistaken, mis- + to lead] 'to mislead'; 誤診wùzhěn [mistaken, mis- + to diagnose] 'to misdiagnose.'
4. 合hé 'co-, together, jointly': 合作hézuò [together, co- + to do] 'to cooperate'; 合辦hébàn [jointly + to hold, to administer] 'to jointly hold (an event)'; 合唱héchàng [together + to sing] 'to sing in chorus' (Chung 2006: 33–73).

34.5 Affixation: Suffixation

34.5.1 Nouns

1. Bound plural marker 們-men: This straightforward example of a suffix is added to the three singular pronouns, 我wǒ 'I', 你 nǐ 'you' (the /-n/ of the formal您nín originated in the plural 們-men form, and is limited in use), 他 (general) /她 (marked as feminine, 'she')/它 (neuter, 'it')/牠 (for animals)/祂 (for deities), all pronounced tā, 'he/she/it', for the corresponding plural forms: 我們wǒmen 'we, us,' 你們nǐmen 'you (pl.),' 他們tāmen 'they, them.' It can also be added to [+human] nouns in some cases, e.g. 孩子們háizimen [child + (noun suffix) + (plural marker)] 'children'; 同學們tóngxuémen [same + to learn + (plural marker)] 'fellow students'; this form is often used in appeals or calls to action.
2. 子zi: This nominal suffix (original meaning: 'child') is added to many nouns or other formations to make them disyllabic or polysyllabic free morphemes, most of which are lexical; e.g. 袋dài 'bag, pocket' is mostly a bound morpheme; with the addition of 子zi it becomes the free morpheme 袋子dàizi 'bag'; 扇子shànzi

[fan + (nominal particle)] 'fan'; 包子bāozi [package + (nominal particle)] 'steamed filled bun.' It is also used to form some tongue-in-cheek nouns such as 左撇子zuópiězi [left + left-falling-brush-stroke + (nominal particle)] 'leftie, southpaw, left-handed person' and 嘴皮子zuǐpízi [mouth + skin + (nominal particle)] 'lips (of a glib speaker).'

3. 頭tou 'head' (cf. English 'to come to a head', i.e. this suffix suggests the culmination, concentration or crystallization of the essential elements of a thing or notion): 頭tou, like 子zi, creates free morphemes from certain bound nouns, or expresses a concrete aspect of a monosyllabic noun, e.g. 石頭shítou [stone + *tou*] 'stone'; 鐘頭zhōngtou [clock + *tou*] 'hour'; it can also nominalize certain verbs, e.g. 念頭niàntou [thought + *tou*] 'idea, notion'; 玩頭wántou [to play + *tou*] 'something fun to do.' It is usually pronounced in the neutral tone, though it may receive its full second tone value in southern and other varieties of Mandarin.
4. 兒er: In the Mandarin spoken in Beijing and environs, a subsyllabic /-r/ suffix is frequently added to content words, especially nouns, but also verbs, modifiers, and even suffixes, like 頭tou. It often changes the meaning of the non-rhoticized form in a subtle way, e.g. 肝gān 'liver' refers to the organ in a living being; 肝兒gār refers to liver as an organ meat for food (cf. Spanish *pez* 'fish [in the water]' vs. *pescado* 'fish [out of the water, as food]'). In some cases it makes a free morpheme of a bound one, e.g. the semi-bound morpheme 味wèi 'flavor,' which usually appears in a polysyllabic compound like 味道wèidào [flavor + way] 'taste,' is often expressed as the monosyllabic 味兒wèr 'taste' in Northern Chinese. 兒er may also mark part of speech, e.g. a noun as opposed to a verb, as in 蓋gài 'to cover' (v.) and 蓋兒gàr 'a cover, a lid' (n.). And it can function as a diminutive or hypocoristic suffix: 寶貝bǎobèi is 'treasure,' 寶貝兒bǎobèr is 'little darling.' It has high but not unlimited productivity in Northern Chinese. It never adds an additional syllable when used as a suffix, and it often causes a final nasal to be dropped and a vowel change in addition. Suffixal 兒er is not much used in southern and certain other varieties of Mandarin; when written, it is often "incorrectly" read as a separate syllable in these varieties.

As can be seen from the 孩子們háizimen 'children' example above, more than one suffix at the end of a word is possible, though not extremely common. More than two suffixes is much rarer; a historical example with three suffixes is 小丫頭子們xiǎoyātouzimen [little + lass + *tou* + *zi* + *men*] 'young servant girls.'

34.5.2 Agentives

The agentives 者zhě 'one who…' and 家jiā 'person, family' are highly productive, but somewhat marked, beyond established compounds like 作者zuòzhě [create/write + -er] 'author' and 音樂家yīnyuèjiā [music + person] 'musician.'

34.5.3 Individuation

While Chinese does not usually mark plurality, it does have a form that emphasizes a referent as being composed of individual parts, similar to English *hair/hairs, fish/fishes*. To specify a certain quantity of a noun, normally a number is followed by a classifier, then the noun, for example 三張紙 sānzhāngzhǐ [three + sheet + paper] 'three sheets of paper.' 紙zhǐ 'paper' by itself is a mass noun suggesting no form or number; however, placing the classifier after the noun yields 紙張zhǐzhāng [paper + sheet] 'papers,' stressing its concrete form in sheets, rather than just the notion of 'paper'; 一隻船yīzhīchuán 'a boat' becomes 船隻chuánzhī, a collective of individuated 'boats.' These forms are lexically determined and the pattern has limited productivity. Chinese also has a number of mostly lexical duals and plurals, such as 雙親shuāngqīn [pair + parent] '[both] parents'; and 對筆duìbǐ [pair + pen] 'paired pen set'; and the literary classifier used as polite form of address 諸位zhūwèi [all + (honorific measure word)] 'all of you esteemed people.'

34.5.4 Verbs

The most productive verbal suffix is 化huà. It was first coined by the Japanese in the 19th century as a translation for English *-ize* (*sanitary/sanitize*), *-ify* (*mystery/mystify*), and *-ate* (*automatic/automate*), and was then later borrowed into Chinese for the same purpose. This set of English suffixes is subject to various morphophonemic constraints; in Chinese, however, the 化huà suffix has virtually unlimited productivity. For example: 全球化quánqiúhuà [entire + globe + -ize] 'to globalize/globalization'; 數位化shùwèihuà [digital + -ize] 'digitize'; 西化xīhuà [west + -ize/-ization] 'to Westernize'/'Westernization'; 少子化shǎozǐhuà [few + children + -ize/-ify] 'tendency for the birth rate to drop.'

34.6 Affixation: Circumfixes and Infixes

Chinese does not seem to have circumfixes per se, but infixation is found as a marginal phenomenon in certain set expressions, mostly onomatopoeic and colorful, humorous ones, the prime example of an infix being 裡li, also written 哩or 里, as in 傻裡傻氣shǎlishǎqì [silly + *li* (particle) + silly + air] = 'rather silly'; 小裡小氣xiǎolixiǎoqì 'rather stingy', and the very common 糊裡糊塗húlihútú 'confused, in a jumble', all of which combine infixation with reduplication in an A *li* A *qì* or A *li* AB pattern. Various sets of numbers can be used as infixes, or in other patterns, to express set conventional meanings, for example 'seven' used with 'eight,' or sometimes 'eight' alone, suggests 'chaos, confusion': 亂七八糟luànqībāzāo [chaotic + seven + eight + mess] 'chaotic, in a jumble'; the 裡li type form can sometimes be combined with numbers to produce expressions such as 囉裡八嗦luōlibāsuō [(first half of) to nag + *li* (particle) + eight + (second half of) to nag] 'to nag, to carry on tediously', a further intensification of the more common 囉裡囉嗦luōliluōsuō [(first half of) to nag + *li* (particle) + (second half of) to nag], which has the same meaning. Infixation is more common in Northern Mandarin.

34.7 Conversion

Conversion is common in Chinese. Most content words can easily be used as nouns, and may be preceded by the possessive enclitic particle 的de, for example 漂亮piàoliang is 'pretty'; 她的漂亮tāde piàoliang 'her prettiness.' Nouns are often used as adjectives, sometimes poetically; one commonly-cited example is 今天的天空多麼希臘jīntiān de tiānkōng duōmo Xīlà "How 'Greece' the sky is today," suggesting a sky that is a deep Mediterranean blue. Nouns are less often borrowed directly for use as verbs; incorporation is preferred—see examples below. In a few cases, tone distinguishes nouns from verbs, for example the noun "nail" is pronounced in the first tone釘dīng, as in 釘子dīngzi 'a nail,' while the verb "to nail" is pronounced with the fourth tone 釘dìng, thus the cognate VO phrase 釘釘子 dìng dīngzi, 'to pound in a nail'; the noun for "drill" is pronounced in the fourth tone: 鑽zuàn, as in 電鑽diànzuàn 'electric drill,' while the verb is pronounced in the first tone, zuān 鑽, as in 鑽洞zuāndòng 'to drill a hole'; and 處chù, in the fourth tone, is 'place,' while 處chǔ, in the third tone, is 'to be located at/in, to manage.'

34.8 Incorporation

Verbs with an incorporated noun may be literal, for example 手洗shǒuxǐ [hand + to wash] 'to hand wash'; 目睹mùdǔ [eye + to see] 'to witness with one's own eyes'; 面議miànyì [face + to discuss] 'to discuss in person, face-to-face'; or metaphorical, like English 'to pinpoint,' 'to cherry-pick': 冰釋bīngshì [ice + to release] 'to melt/dissolve away like ice'; 瓜分guāfēn [melon + to divide] 'to divide up as though cutting a melon, to divvy up, to share the pie'; 蜂擁fēngyōng/yǒng [bee + to crowd together] 'to swarm' (Chung 2006: 74–82).

For more comprehensive coverage of derivational morphology in Chinese, the reader is referred to Chao (1968).

Part 2 Tibetan

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34.9 Background and Introduction

In the 7th century the Tibetan empire expanded across the Tibetan plateau and eventually throughout Central Asia (Beckwith 1993). In 650 writing was introduced as