

# Pragmatic effects in the Chinese lexicon

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This paper discusses the relationship between pragmatic contextual information and complex word meaning in the Mandarin Chinese lexicon. It is argued that although pragmatic information serves to enrich semantically underspecified lexical entries, such information has no access to the internal constituents of lexical items once they have entered the lexicon of the hearer. Using two types of Mandarin Chinese complex words – words containing the agentive suffix *-zhe* and words that are polysemous – as examples, I argue that underspecified lexical entries are enriched by contact with pragmatic context, but that the individual components of complex words are opaque to pragmatic effects once those words are part of the hearer's lexicon. In addition, I use word pairs distinguished by the presence of right-hand stress to argue that pragmatic contextual effects cause originally homophonous word pairs to become phonologically distinct in the Mandarin lexicon. It is suggested that the opacity of word-internal information to pragmatic enrichment may be considered an instantiation of the Lexical Integrity Hypothesis broadly interpreted to include pragmatics.

## 1. Background

In many theories of lexical semantics (e.g., Cruse 1986, 2000, Poesio 1996), lexical items are considered semantically underspecified. That is, the semantic representation of lexical entries includes variable information that is not supplied until the lexical item occurs within a pragmatic context, at which point the underspecified information is filled in. This is perhaps most easily demonstrated in the case of polysemy, since the context specifies which of the polysemous senses of a single word is intended. For example, the intended sense of *newspaper* (as 'object that we read' or 'corporation that publishes the object' or 'building in which the object is published') is not discernable until context is provided. The context provided by the sentence 'The *newspaper* went bankrupt' clearly specifies the sense of *newspaper* that denotes 'corporation that publishes the object'.

Pratt (2001), in an article on the role of pragmatics in the interpretation of morphologically complex words, discusses whether underspecification and pragmatic enrichment operates at the level of complex word components. Pratt proposes a three-way distinction for complex words in the lexicon: COMPOSITIONAL, INCREMENTED and

DECREMENTED. Compositional indicates that the meaning of a complex word is transparent, and derives from the combined meanings of the word components. Incremented indicates that in addition to INTRINSIC semantic features (roughly, features inherited from the constituents), the complex word has additionally specified EXTRINSIC (roughly equivalent to 'real world') semantic features, which add information to the compositional sense of the word to make it more restricted in scope. An example given by Prince is *escapee*, since an additional extrinsic feature [+ from prison] is included in its lexical entry. Decrementated refers to a complex word that is opaque, having lost the intrinsic features normally contributed by its word components, and having added extrinsic features relevant to knowledge of the real world. An example given by Prince is *reader* ('a teacher in a British university who has the rank just below professor'), which has lost the intrinsic features contributed by its component morphemes and added the extrinsic features relevant to its actual meaning.

According to Prince, these meaning shifts that result in the three-way complex word distinction occur as a result of contact of these words with pragmatic context. In compositional complex words, little or no pragmatic inference is necessary since the meaning of the word is more or less the sum of the meaning of its parts. Incremented words add extrinsic semantic features adduced from the pragmatics of real world knowledge, based upon conversational implicature, at the level of the utterance (Prince 2001:232). Decrementated words lose intrinsic features and add extrinsic features, following the maxim of relevance (Grice 1975), acting as a lexical counterpart of conversational implicature (Prince 2001:232). In other words, the decrementated word *reader* is heard in a context relevant to 'a teacher in a British university' and so the usual (intrinsic) meanings of *read* and *-er* are lost, and the proper (extrinsic) meaning is inferred and entered into the lexicon.

The system proposed by Prince appears to be one of LINGUISTIC REPRESENTATION that makes no commitment to real-time language processing. This seems to leave open the question to what extent the analysis is intended to apply to novel words as compared with words that are already part of the hearer's lexicon. In this paper I would like to argue that pragmatic conditions on complex word interpretation apply to the componential analysis of words by the hearer only when they are encountered and analyzed as novel lexical items. After such words have entered the lexicon of the hearer, then pragmatic enrichment conditions apply to the complete complex word, with no pragmatic enrichment affecting word-internal components. In other

words, I will argue that contact with pragmatic context is how complex words obtain their 'decremented/incremented' status in the first place, but that in subsequent encounters with these words, there are no pragmatic procedures that access the internal constituents of the words.

I begin by presenting words with the Mandarin Chinese agentive suffix *-zhe*, and polysemous words in Mandarin to argue that the components of complex lexical entries are opaque to pragmatic effects once they are part of the hearer's lexicon.

## *2. Pragmatic opacity of complex words*

### *2.1. Words with the suffix -zhe*

In this section I demonstrate that the three-way distinction of compositional, incremented and decremented that Pr&Ecirc; proposes for complex words in the lexicon is present in Mandarin as represented by words formed using the agentive <sup>1</sup> suffix *-zhe*, and I argue that the constituents of complex words formed with *-zhe* are opaque to pragmatic enrichment effects once they have entered the hearer's lexicon.

The Mandarin suffix *X-zhe* means 'one that does or is X', as seen in the following examples: *duzhe* ('read-SUFF' <sup>2</sup>) 'reader', *dazhe* ('big-SUFF') 'the big one', *bianzhe* ('edit-SUFF') 'editor', *qiangzhe* ('strong-SUFF') 'the strong', *zhuzhe* ('write-SUFF') 'author', *sizhe* ('wait:upon-SUFF') 'one who waits upon others', *pinzhe* ('poor-SUFF') 'the poor', *qianzhe* ('front-SUFF') 'former; the one in front', *erzhe* ('two-SUFF') 'the second', *gongzuozhe* ('work-do-SUFF') 'worker', *daijunzhe* ('carry-bacteria-SUFF') 'carrier (of disease)', *wuchanzhe* ('no-property-SUFF') 'one without property', and *chubanzhe* ('emit-edition-SUFF') 'publisher'. These complex word examples presented above all fit into the category compositional, since their meanings are a straightforward compositional function of the meanings of their components.

The following group of words may be considered incremental, because extrinsic semantic features supplement their meanings to restrict scope more than implied by a simple compositional analysis of the components: *bizhe* ('write-SUFF') 'I, the writer'(restricted to first person singular reference), *zuozhe* ('make-SUFF') 'author/artist'(what is 'made' is restricted to a work of writing or art), *xuezhe* ('study-SUFF') 'scholar' (not simply a generic student) and *laozhe* ('old-SUFF') 'old man' (gender restricted to male).

The following complex word examples are decremental, because

they have lost the intrinsic meanings contained in their component morphemes, and have taken on additional, extrinsic meanings not (directly) related to the meanings of the word components: *jizhe* ('write:down-SUFF') 'reporter', *xingzhe* ('travel-SUFF') 'a Buddhist monk', *disanzhe* ('ORD-three-SUFF') 'the third party (in a relationship triangle)'.

The point to observe in considering these examples using *-zhe* is that in the case of the incremental complex words (in the compositional words, pragmatic enrichment fails to obtain at all), the restricted interpretation is part of the lexical entry, and the extrinsic, 'real-world' information that results in the restricted scope interpretation came as a result of contact with the pragmatic context AT THE TIME THE WORD FIRST UNDERWENT ANALYSIS BY THE HEARER. At that time, when the word was a novel lexical item, the pragmatic context is what enabled the hearer to infer that the scope was restricted to a certain domain. Pragmatic context in subsequent encounters with the words may play a role in their lexical selection, but contextual pragmatic effects at the level of the word component morphemes need not occur for the proper pragmatic interpretation of the word.

This situation is much the same in the case of decrementals: the extrinsic semantic features present in these highly lexicalized, opaque lexical items was inferred from the pragmatic context when they were first encountered by the hearer, and such pragmatic analysis is not subsequently necessary, and is certainly not necessary at the level of the word component morphemes.

While the precise effects of pragmatic context in the selection and retrieval of complex lexical items is a matter of debate, it is surely beyond doubt that pragmatic context has no role in the interpretation of individual word component morphemes after the words containing them have become part of the hearer's lexicon. After a complex word enters the lexicon, no subsequent pragmatic enrichment is posited to occur except at the level of the word.

## 2.2. Polysemous Words

In this section I will show that, as expected, Mandarin polysemous complex words possess two distinct but related senses, but that while the semantically underspecified senses are distinguished by pragmatic context, such discernment does not occur at the level of word component interpretation.

In polysemous complex word pairs, pragmatic context distinguishes the two word senses but does not affect the individual mean-

ings of word component morphemes. For example, the word *jiedao* (the second entry in Table 1) can mean either ‘street; road’ or ‘residential district; neighborhood’, a polysemous pair that is distinguished by context. For example, the meaning ‘street’ arises in a context referring to a concrete, physical road, as seen in the following sentence (a):

- a.     *tamen zhu zai tong yitiao jiedao*  
      they live at same one-CL street  
      ‘they live on the same street’

The meaning ‘neighborhood’ arises in a context referring to a small, local (often administrative) district or the group of people that live there (b):

- b.     *jiedao       weiyuanhui hai mei tanwan       zhege   wenti*  
      neighborhood committee still not discuss-finish this-CL problem  
      ‘The neighborhood committee hasn’t finished discussing this problem’

In the word *jiedao*, the morpheme *jie* means ‘street’, and the morpheme *dao* means ‘road’ or ‘path’. However, neither of these word component morphemes in any sense individually means ‘neighborhood’, nor do either of them individually undergo a pragmatically-enriched shift toward the meaning of ‘neighborhood’ when the word *jiedao* occurs in the ‘neighborhood’ pragmatic context. For this reason, alternative word component meanings are not enriched by the respective pragmatic contexts that elicit the polysemous variants of the word *jiedao*. To take another example, in the case of the word *kaixin* (the fourth entry in Table 1), when the pragmatic context specifies selection of the ‘tease’ meaning of *kaixin*, neither *kai* nor *xin* are individually enriched to have a ‘tease’ interpretation as a way of deriving the ‘tease’ reading of the complete word *kaixin*.

Note that the pragmatic specification of underspecified polysemous word senses remains at the level of the word even when the word component morphemes do happen to possess meanings that correspond to the two polysemous word senses: the polysemous meanings of the component morphemes are still pragmatically specified via the word level.

For example, *kongpa* (the sixth entry in Table 1) is a polysemous Mandarin word that means either ‘to fear; be afraid that’ or ‘maybe;

**Table 1.** Polysemous complex Mandarin words

<i>word</i>	<i>component 1 meaning</i>	<i>component 2 meaning</i>	<i>word meaning 1</i>	<i>word meaning 2</i>
<i>huangse</i>	yellow	color	‘yellow’	‘pornographic’
<i>jiedao</i>	street	way, path	‘street’	‘neighborhood’
<i>jueji</i>	decide	plan	‘to have	‘definitely’ ‘decided’
<i>kaimu</i>	open	curtain	‘curtain rise’	‘inaugurate’
<i>kaixin</i>	open	heart	‘happy’	‘to tease’
<i>kongpa</i>	fear, perhaps	fear, perhaps	‘fear’	‘perhaps’
<i>lianpi</i>	face	skin	‘feelings’	‘sensitivity to embarrassment’
<i>niantour</i>	year	nom. suffix	‘year’	‘time period’
<i>shengdai</i>	sound	belt	‘vocal cords’	‘audio track’
<i>shengli</i>	win	advantage	‘to defeat (an opponent)’	‘to achieve (an objective)’
<i>shouru</i>	receive	enter	‘receive’	‘income’
<i>suzhi</i>	element	quality	‘quality’	‘cultural sophistication’
<i>yaoming</i>	want	life	‘nuisance-like’	‘extremely’
<i>yingzi</i>	shadow	nom. suffix	‘shadow’	‘reflection’
<i>yinsu</i>	cause	element	‘matter’	‘factor’

perhaps’. The first meaning arises in a context in which something is viewed by the speaker with a modicum of trepidation or concern (c):

- c.     *Zheyang zuo, xiaoguo kongpa bu hao*  
          this-manner do     result *kongpa* not good  
          ‘I’m afraid that in doing it this way the result won’t be good’

The second meaning arises in a context in which something is viewed by the speaker as uncertain or open to estimation (d):

- d.     *Ta zoule kongpa you ershi tian le*  
          he go-ASP *kongpa* have twenty day ASP  
          ‘He’s been gone for maybe twenty days’

The morpheme *kong* means ‘fear’ and also means ‘maybe’ (Wu 1982). The

morpheme *pa* also means either 'fear' or 'maybe' (Modern Chinese Dictionary 1988). While these word component morphemes may be considered to have the appropriate meanings when used in their respective polysemous senses, the morphemes as word components undergo no meaning shift DIRECTLY AT THE INDIVIDUAL MORPHEME LEVEL when selected by the speaker. For, whether the meaning of the word *kongpa* is 'to fear' or 'perhaps', the possible alternative meanings of the word components *kong* and *pa* are selected only via their identities as conferred by the meaning of the complete word *kongpa*. The same may be said for all of the other polysemous complex words listed in Table 1. In each case, there is no reason to believe that the word component morphemes undergo meaning shift directly as a result of contact with pragmatic context.

In sum, polysemous complex words may be considered multi-morpheme entities bracketed as single words in the lexicon of the hearer, and any pragmatic interpretation or enrichment of these words takes place at the word rather than word component level. While pragmatic access to morphemes may well occur in the analysis of novel complex words by the hearer, it does not happen once words have entered a hearer's lexicon.

### *3. Pragmatically-induced lexical distinction*

In this section I argue that, as with the *-zhe*-suffixed and polysemous examples presented in the previous sections, the semantic contrast that exists between the members of stress-related word pairs occurs as a feature of the complete listed words rather than as a feature of the word component morphemes. Further, I argue that it is contact with pragmatic context that causes erstwhile polysemous words to become phonologically distinct in Mandarin.

### *4. Contrastive stress pairs*

In Mandarin, there are pairs of two-syllable words that are distinguished phonologically solely by the presence or absence of stress on the right-hand syllable. To give an example, the two-syllable word *lái wîng* (come-go, 'coming and going') has a full lexical tone <sup>3</sup> on each syllable. In the two-syllable word *lái wang* (come-go, 'dealings'), however, the second syllable is destressed, causing the lexical tone to be phonologically reduced, yielding a 'neutral' tone <sup>4</sup> on that syllable <sup>5</sup>.

Several more examples of the same phenomenon may be seen in

Table 2, in which the first member of each pair under the ‘word’ column has a fully stressed second syllable, and the second member has a destressed second syllable. The first member therefore has one of the four Mandarin tones on the second syllable, and the second mem-

**Table 2.** Examples of stress-contrasted Mandarin word pairs

<i>word</i>	<i>component 1 meaning(s)</i>	<i>component 2 meaning(s)</i>	<i>fully-stressed word meaning</i>	<i>destressed word meaning</i>
<i>bàdào / bàdao</i>	dominate	way	‘rule by force’	‘overbearing’
<i>bīnshì / bīnshi</i>	original	matter	‘original story’	‘ability’
<i>biérén / biéren</i>	other	person	‘other people’	‘someone else’
<i>bìhuì / bìhui</i>	avoid	taboo	‘taboo’	‘taboo word’
<i>chāishì / chāishi</i> ‘official post’		dispatch	send	‘to appoint’
<i>dàrén / dàren</i>	big	person	‘great one’	‘adult’
<i>dàyì / dàyi</i>	big	intent	‘general idea’	‘careless’
<i>láiwāng / láiwang</i>	come	go toward	‘come and go’	‘dealings’
<i>ròushí / ròushi</i>	meat	eat	‘carnivorous’	‘meat’
<i>ròutóu / ròutou</i>	meat	head	‘stupid’	‘plump and soft’
<i>sàngqì / sàngqi</i>	lose	breath	‘depressed’	‘unfortunate’
<i>s · ngsîn / s · ngsan</i>	loose	come loose	‘loose’	‘relax’
<i>yānhuǎo /</i>	smoke	fire	‘smoke and	‘fireworks’

ber has a ‘neutral’ tone on that syllable. Table 2 provides merely a representative sample of such word pairs – there are scores more in Mandarin.

The first point to notice about these word pairs is that the semantic contrast between the members of the pairs does not inhere in the constituents that make up the words, but rather in the identities of the entire words as complete lexical entries. Take for example the pair *yānhuǎo* ‘smoke and fire’ and *yānhuǎo* ‘fireworks’ (the latter with a neutral tone on the second syllable). The contrast between these two words occurs at the level of the lexical entry, and not at the level of the word constituents. To argue the latter, we would have to

presume either that there is a meaning contrast between the *yān* that occurs in the word ‘smoke and fire’ and the homophonous *yān* that occurs in the word ‘fireworks’, or that there is a meaning contrast between the *hu%* that occurs in the word ‘smoke and fire’ and the *huo* that occurs in the word ‘fireworks’. Neither of these presumptions can be shown to be true, and in particular there is no demonstrable meaning contrast between *hu%* and *huo* – the two components of the word pair that phonologically contrast.

A second point to observe about the word pairs is that the members of each pair ostensibly at some point in time were phonologically identical (i.e., they were homophonous polysememes), and came to be phonologically distinct as the result of a lexical pragmatic process. We might ask: what are the characteristics of the lexical pragmatic process by which this occurred? I would suggest that the process may be most easily understood in terms of three distinct factors: 1. pragmatically-induced polysemy, 2. linguistic system-internal pressure for phonological distinctness, and 3. destressing of lexicalized words. Each of these is discussed briefly below.

In pragmatically-induced polysemy, the sense differences of polysemous words arise through contact with the pragmatic context. The different senses of polysemous words emerge when interlocutors interactively negotiate word meaning in varying contexts, with the different contexts giving rise to the different word senses (polysememes). The differences in lexical meaning that diverge into polysemous word senses result from the same general contextual effects that also enable pragmatic enrichment of underspecified lexical items. So, pragmatic contextual effects are not limited to the enrichment of underspecified lexical items, but are part of a larger, more enveloping general contextual effect that also results in the emergence of polysemous words.

System-internal pressure for phonological distinction occurs when polysemous words invite potential ambiguity, thereby inhibiting efficient communication. This is explained by the Gricean conversational maxim of manner – ‘avoid ambiguity’ (Grice 1975). The tendency for speakers to avoid ambiguity results in a pressure for polysemous words to be pronounced differently. While it is true that polysemous words generally do not automatically become phonologically distinctive in the languages of the world, the reason why it takes place in Mandarin is because the language is equipped with a simple but powerful phonological distinguishing process that is built in to the lexicon, namely, the loss of stress on the right-hand syllable of lexicalized two-syllable words.

The destressing of two-syllable words readily occurs in Mandarin when compositional words become lexicalized, i.e., incremented or decremented. This process readily affects polysemous words in Mandarin because it is an established phonological process that involves minimal change. 'Minimal phonological change' means that no consonant or vowel phonemes lose their contrastive roles as a result of such destressing. Loss of stress, then, provides a ready mechanism for distinguishing polysemous words that, phonologically speaking, is relatively simple and quite well established in the Mandarin lexicon.

In sum, we see that the creation of stress-contrasted word pairs in Mandarin is the result of pragmatic contextual enrichment that affects the meanings of word pairs, but that the semantic feature shifts that affect the meanings of the words do so by operating at the level of the word rather than at the level of the word component morphemes.

##### *5. Summary and conclusion*

I have argued that in the lexical pragmatics of Mandarin Chinese, morpheme-by-morpheme pragmatic effects take place in the lexicon when the hearer encounters and analyzes a word for the first time, and that otherwise pragmatic modulation of lexical meaning occurs at the word rather than the morpheme level. The identities of morphemic elements may vary as a function of pragmatics, but they are not pragmatically negotiated as a word-internal process. Words come to have multiple senses in a process that involves Gricean pragmatic principles. For example, the principle "be relevant" is used by the hearer to impute relevance to a word used with a new, polysemous sense, and the principle "avoid ambiguity" results in pressure on speakers to phonologically distinguish polysemous items. But critically, the imputing of pragmatic effects by the hearer (and use by the speaker) involves the whole word as a lexical entry, and does not entail decomposing the word and performing a pragmatic analysis of the word constituents.

This argument in its more general form involves the nature of the lexicon and the words it contains in human natural language. It is a strongly modular theory of the lexicon, in which once linguistic elements achieve word status they resist subsequent attempts at internal analysis. Words occupy a privileged status in natural language, in that once a linguistic element is ordained as a word, its

boundaries resist incursion by further (see Packard 2000:237-265) phonological, morphological, syntactic, semantic, and now, I argue, pragmatic analytical processes. In essence, to say that pragmatic information has no access to word-internal constituents is really nothing more than a restatement of the Lexical Integrity Hypothesis (Di Sciullo & Williams 1987, Bresnan & Mchombo 1995) construed more broadly to include pragmatics.

In conclusion, I have argued for the existence of pragmatic effects in the Mandarin lexicon, and while they do not normally operate analytically on word-internal constituents, they may indeed significantly affect the form and use of Mandarin words.

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#### *Notes*

<sup>1</sup> Although the suffix *-zhe* is commonly called ‘agentive’, the relation it marks is not always one of agency, as may be seen in many of the cited examples.

<sup>2</sup> I use the following grammatical abbreviations in the meaning glosses in this paper: SUFF = ‘suffix’, ORD = ‘morpheme indicating ordinal numeration’, CL = ‘classifier’, ASP = ‘aspect marker’.

<sup>3</sup> In Mandarin, there are four phonologically contrastive tones (high-level, mid-rising, low fall-rising and falling) that distinguish lexical word meaning.

<sup>4</sup> Neutral tone is a phonologically reduced tone whose phonetic quality is determined by the lexical tone of the syllable that precedes it.

<sup>5</sup> On the surface, the phenomenon appears similar to right-hand stress reduction in English compound modifier-head word pairs such as *blue bird* vs. *bluebird* and *white house* vs. *White House*, since in both languages the right-hand member of an otherwise phonologically identical word pair is destressed and the destressed member of the pair is more highly lexicalized. One difference however is that in English, unlike Mandarin, the destressing of the right-hand member can cause the remaining stress on the left-hand member to serve as contrastive stress, emphasizing the attributes of the left-hand member.

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