THE CHINESE LEXICON

A COMPREHENSIVE SURVEY

YIP PO-CHING

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CONTENTS

PREFACE

Since I embarked on the study of my own native language when I came to Britain in 1981, I have always dreamed of writing a book on the Chinese lexicon: not a purely lexicological study or a work of practical lexicography, but a *sensible* combination of the two. This work is to be read as *thesis* and used for reference, by specialists, students and interested lay readers alike. A hybrid, yes, but an exploratory journey into the constitution of the Chinese verbal repertory. Thanks to the enthusiasm of my previous editor Mr Simon Bell and my present editor Miss Sophie Oliver at Routledge, my dream has finally come true. I hope I have lived up to their expectations.

The present book is in fact based on my original doctoral thesis for the Department of Linguistics and Phonetics at the University of Leeds. But, as so many years have passed in the meantime, the book and the thesis are now very different. However, throughout the whole period of writing the book, whenever I referred back to what I had written for my dissertation, I could still vividly recall the many fruitful hours I spent with my two remarkable supervisors, Dr A. T. C. Fox and Mr D. Barber, and the many invaluable pieces of advice they gave me.

The book in its present form has an organisational advantage. Each chapter stands on its own and approaches the lexicon from a particular perspective: each can therefore be read as a separate topic. The appendix entitled 'Intra- and Inter-lexical Strategies of the Chinese and English Lexicons' zooms in on the vagaries as well as the regularities of Chinese lexemes alongside their English counterparts and may be browsed through as an independent summary recapitulation of the Chinese lexicon.

To conclude, I must not forget to mention how deeply indebted I am to Mr David Arrandale of the Brotherton Library, the University of Leeds, who read my entire manuscript and made valuable suggestions. I am equally grateful to Mr Kaiying Yang of Praetorius, who helped me in every way he could to solve my computer and software problems. Last but not least, my gratitude goes to my wife Quzhen Li, who, using much of her spare time and annual leave, helped to key the whole book into the computer and painstakingly proofread every single entry whilst facing with me the enormous pressure of meeting the publisher's deadlines. Without her dedication and wholehearted support, it would have been impossible to complete this book at all.

The errors which remain are, of course, the author's sole responsibility.

YIP Po-Ching
April 1999

ABBREVIATIONS

adj.	adjective/adjectival
adv.	adverb/adverbial
AE	American English
BE	British English
biol.	biological
bot.	botanical
colloq.	colloquial
contem.	contemporary
conj.	conjunction
def.	definite
dial.	dialectal
derog.	derogatory
fig.	figurative
honor.	honorific
humor.	humorous
incompl.	incomplete
indef.	indefinite
med.	medical
meta.	metaphorical
mil.	military
mw	measure word
n	noun
offens.	offensive
onom.	onomatopoeic
palaeontol.	palaeontological
pl.	plural
pop.	popular
pred.	predicative
sb	somebody
sing.	singular
sth	something
tech.	technical/technological
v	verb
vs	versus
zool.	zoological

INTRODUCTION

The purpose of this introduction is threefold: first, to define the general properties of a language's lexicon as we see it, which will serve as the backdrop to our description of the Chinese lexicon in particular; second, to provide a holistic view of the organisational features of the Chinese lexicon, which will be discussed in detail in the body of the book; and third, to relate, where possible, these lexicalisation strategies of Chinese to those of English so that our readers, who are speakers of English, may identify for themselves the similarities and differences which exist between the two lexicons.

LEXICON IN GENERAL

The lexicon of a natural language may be understood as all its words and their set combinations in synchronic use (and open to diachronic change when unique situations in future provide the catalyst). Lexicon, in linguistic parlance, is synonymous with the more usual term vocabulary.

From the viewpoint of linguistic studies, lexicon is the analytic target of lexicology (i.e. the combined study of word structure, word-formation and semantics), which constitutes part of the tripartite schema of the language proper, being complementary to syntax and phonology. It can therefore be seen as part of a system, a sub-structure in itself, an indispensable cogwheel built into the language's coordinated whole. It is the best testimony to a language's intrinsic property of simultaneous continuity and change, stability and flux. The traditional misconception that it is but 'an unrelated aggregate of words'[1] is perhaps due to the imperceptible influence of the conventional practice of a dictionary's organising its entries in an alphabetical way, which only highlights the seemingly unsystematic nature of the lexicon. In fact, ordinary dictionaries, which depend very much on the arbitrary decision or intuition of the lexicographer concerned and do not usually base themselves on systematic analysis or differentiation of a language's lexical units and their meaningful relationships, are but practical aids to language learning; they are certainly not intended as a systematic representation of the inherent organisation of a language's lexicon.

Viewed in its totality, a language's lexicon should have at least the following properties:

[1] Kempson 1977: 83.

(1) being open-ended, i.e. containing an ever-increasing set of words to keep pace with the ever-changing environment – this is particularly true of such major classes as nouns, verbs, adjectives and adverbs;
(2) taking words (or their archetypical representations – lexemes) as its basic constituents, which can be further broken down into morphemes, sub-morphemes or symbolic phonaesthemes (but the differentiation must stop short of phonemes, which belong to the realm of phonology) or amalgamated into compounds, set expressions, idioms or formulaic patterns or sentences (though the amalgamation must stop short of free grammatical constructions, phrasal or sentential, which belong to the realm of syntax);
(3) representing only the semantic content of the above-mentioned lexical units in themselves or, in other words, only the semantic (and perhaps cultural) content of these items in their paradigmatic contrasts with one another in the light of their syntagmatic co-selectional potentiality and no more, i.e. not representing the semantic content which naturally accrues in the process of free syntactic configuration of these units or the semantic content which is derived pragmatically from paralinguistic or extralinguistic contexts in which these items are used in keeping with the speaker-hearer's intention, past experience, knowledge of the world or power of logical inference;
(4) revealing the organisation of the whole lexicon in such a way that crucial information on the systematic and significant relationships within and between different units of the lexicon can be disclosed by reference to their structural characteristics, formal properties, collocational potentialities, meaning relations, usage conventions, registral differences, stylistic nuances, affective overtones, and possibly even semantic components;
(5) being able to relate the lexicon's own properties systematically to those of phonology and syntax so that a coherent, coordinating picture of the whole linguistic system can be established. The indication of pronunciation and word class of lexical units in a dictionary is merely a rudimentary step.

It must, however, be pointed out that though the lexicons of all languages share similar properties, they do not necessarily contain similar lexical items: the lexicalization of the objective world with its multifarious phenomena and relations and that of the imaginary products of the more capricious subjective (and collective) consciousness of different speech communities is always an arbitrary language- and culture-specific process. Any lexicon is therefore a unique realization of those shared properties outlined above.

Open-Endedness of a Lexicon

That the lexicon of a language is open-ended can perhaps be accounted for in terms of the language's lexical development, its semantic change, and the

individualistically creative and transient nature of a speaker-hearer's verbal repertoire.

A language's lexical development can be regarded as a never-ending process. Compared with the near-closedness and almost glacial nature of its phonological and syntactic systems in a given synchronic stage, a language's lexicon is indeed a fast-flowing river, whose fountainhead seems to be perpetually fed by the human need to cope with the unceasing change and development in the physical and social environment and the human race's ever-deepening understanding of it.

Semantic change in a language's lexicon is inevitable owing to the ever-expanding experience of a speech community. A semantic change in any individual item of a lexicon may take the form of minor deviations, i.e. progressive minimal meaning contaminations resulting from use in ever-varying linguistic co-texts or that of major departures, i.e. figurative breakaways from normal literal usage either as metaphor (i.e. paradigmatic association of similarity) or as metonymy (i.e. syntagmatic association of contiguity).

The individualistic and transient nature of a speaker-hearer's verbal repertoire can be understood as, first, that no two speaker-hearers of a given language ever share precisely the same verbal repertoire; as, second, that no one speaker-hearer ever retains precisely the same verbal repertoire throughout his life; and as, third, that every speaker-hearer in his lifetime will invariably stumble upon occasions where he needs to make himself understood by perhaps unwittingly resorting to impromptu, makeshift coinages to supplement the verbal repertoire at his command. Linguistic phenomena like these are too obvious to need any substantiation or proof.

To review our view of this open-ended nature of a language's lexicon, we may fairly conclude that lexical development and semantic change in the lexicon are the main characteristics of the objective lexicon alive in the public consciousness or cultural heritage of a given speech community, while difference in size, transience in nature, and originality in propensity characterise an individual speaker-hearer's subjective lexicon.

While the subjective lexicon, by its very nature, is smaller in size and less stable in denotative precision than the objective lexicon, it is nevertheless richer in connotation and perhaps more imaginative in its expressiveness. It forms only part of the objective lexicon, yet by necessity the most essential part; otherwise, any communication between one speaker-hearer and another within the same community, if not totally impossible, will be extremely difficult. However, the relationship between the two lexicons is far more dynamic than one of inclusion. The objective lexicon in a way channels the flow of the subjective lexicon whereas the latter (as an 'inbuilt dictionary'[2]) modifies and enriches the former in the most diverse and inventive ways.

[2] Leech 1981: 204.

The open-endedness of the lexicon can therefore be taken as the ultimate cause of productivity on the part of the speaker and miscomprehension on the part of the hearer; and as a speaker-hearer of a given language, a person will often find himself, in any normal instance of communication, playing the dual yet alternating role of a speaker and a hearer: on him is equally bestowed the proclivity to create and to misinterpret.

The main task of the lexicologist is, of course, to describe the existing structure of the objective lexicon; but he must not lose sight of the rule-governed creativity inherent in the subjective lexicon, which to some extent reveals the rule-governed fluidity of the objective lexicon itself.

Though it seems unnecessary to make too fine a distinction between the two lexicons, it might be true to say that the objective lexicon seems more amenable to a static analysis – in terms of structural features – whereas the subjective lexicon is more amenable to a dynamic approach – in terms of generative rules.[3] It must nevertheless be borne in mind that any positive notion of structure must necessarily stem from the notion of generation. In other words, only patterns which can only be generated in terms of rules can be recognized as systematic structures, despite the fact that some of the rules might operate only at certain synchronic stages in the life of a lexicon.[4]

A lexicon's open-endedness certainly does not invalidate its overall systematic nature, for the continual mapping or remapping taking place in the lexicalization and semantic redistribution process is but a homomorphic replication of our orderly yet imperfectly understood world.

Constituent Units of a Lexicon

Words are usually taken as the basic constituents of the lexicon. But 'word' is too loose a word. Is it supposed to mean only the conventional unmodified entry form in a dictionary (e.g. 'speak' – but of course different dictionaries decide on different entry forms) or does it include all inflected forms (e.g. 'speak', 'spoke', 'spoken', etc.) or even derivatives (e.g. 'speaker', 'bespeak', etc.)? In present-day lexicographical practice, it is generally accepted that all grammatical declensions or inflected forms are taken as word-tokens belonging to the same word or lexeme; and all derivations are taken as belonging to separate words or lexemes. Therefore, 'speak' and 'spoke' are of the same lexeme; and 'speak' and 'speaker' are two separate lexemes. Theoretically, the demarcation is clear but in practice lexicographers are often more flexible and less consistent. For example, 'spoke' and 'spoken' may sometimes be listed as separate entries to refer back to 'speak' (perhaps for the convenience

[3] Cf. Aronoff 1979.

[4] For example, before disyllabification became the main driving force of word-formation, the Chinese lexicon used to increase its word stock by incessantly coining new characters.

of language beginners), while 'slowly', 'slowness' and even 'slowish' may well be listed in the same entry under 'slow'.

But 'words' alone do not tell the whole lexical story. In any natural language, there are discernible sub-word-level lexemes and hyper-word-level lexemes, i.e. units of meaning which are smaller or bigger in size than words.

There can be such sub-lexemic units as (a) bound morphemes (e.g. in the lexeme 'speaker' 'speak' is a free morpheme whilst '-er' is a bound morpheme); (b) sub-morphemes (e.g. '-ceive' in 'receive', 'conceive' or '-tain' in 'retain', 'detain', etc.), which are obviously word-building primes but have no generalisable meaning as ordinary morphemes do; and (c) phonaesthemes, which are only faintly suggestive of certain meaning associations (e.g. 'sl-' in 'slow', 'slack', 'slur', etc. suggests a kind of 'sluggishness'), perhaps more manifest in poetry.

Hyper-lexemic units are units larger in size than ordinary words. They can be such lexical composites as (a) compounds, consisting of at least two free morphemes (e.g. 'bookmark', 'happy-go-lucky', 'loudspeaker', etc.); (b) collocations, i.e. phrases consisting of words which are strictly co-selectional but transparent in meaning (e.g. 'blond hair', 'addled mind', 'take the risk', 'have a go', etc.); (c) set expressions, i.e. phrases in which words are in a fixed order signifying meanings unpredictable from the constituent elements (e.g. 'white elephant', 'in view of', 'set up', 'spill the beans', etc.), usually called 'idioms', with different degrees of idiomaticity; (d) formulaic sentences, which include proverbs, quotations, as well as everyday sentences conventionalised for certain situations (e.g. 'actions speak louder than words', 'to be or not to be – that is the question', 'How are you?', etc.); and (e) phrase or sentence schemata, i.e. set constructions of a phrasal or sentential nature which are readily reformulatable with different elements of a certain grammatical class (e.g. 'for __'s sake', 'what's the use of __ ing . . . ?', etc.).[5]

Such a scheme of lexical differentiation, as we can see, fits in with the multi-layered or stratal properties of a natural language, ranging from the most arbitrary to the most free. At the phonemic level, every phoneme is learned and used by the speaker of the language with conscious or unconscious effort and no intentional innovation or violation is usually allowed; at the lexemic level, however, arbitrariness is often tempered with creation, which, if not often encouraged or always accepted, is never forbidden; while at the sentential level, free construction tends to be the general rule.

The birth of a lexical unit, however, is always motivated by the need for a concise and untrammelled communication of meaningful information and experience. We will therefore turn our attention first to the formulation of meaning.

[5] Lyons 1968: 178.

Semantic Categories in Communication

To start with, one important distinction must be made in defining the semantic content of a lexicon, that is, the semantic content of a language's lexicon is in no way the same as that of the language itself. In other words, the semantic dimension which the lexicon of a given language is capable of is different from and, in a sense, smaller than the semantic dimension which the language itself is capable of.

The word 'knowledge' in the English lexicon, for example, despite its polysemic capacity, does not seem to be able to mean 'ignorance'. Yet in actual communication, it is not uncommon that when said with a sarcastic intonation, it can be made to stretch its meaning to this very semantic opposite.[6] Such a potential twist in the meaning of the word does not arise totally from the word itself but also partly from the systematic workings of the language's phonological properties and, therefore, cannot be readily explained by analysing the word or looking into the lexicon alone; it is to be accounted for by looking into the very complex linguistic mechanism of a language as a whole.

In a like manner, syntactic structure also adds vastly and systematically to the total meaning of the elements which constitute a concatenation. The semantic value of a syntactic structure is therefore always greater than the sum value of its constituent parts. This extra semantic input, again, cannot be very well accounted for by just analysing the words in question or looking into the lexicon alone; it can only be accounted for by taking into consideration the grammatical devices involved or the syntactic relationships present between the constituent elements.

Similarly, a word in actual use constantly undergoes a semantic growth, nourished by the underlying intention, knowledge, experience and inferential capability of its users. Any additional contribution to the original meaning comes not from the word itself but from the linguistic maturity, life experience, cultural background and encyclopaedic knowledge of the user concerned. An account of semantic underpinnings of this kind must therefore have recourse to sources outside the word proper or the lexicon to which it belongs.

To duly represent the semantic properties of a lexicalized unit in the lexicon, one important decision must therefore be taken; that is, should the uncontaminated semantic value of the unit be accounted for alone or should it also include all or part of the semantic value obtained from phonological, syntactic and pragmatic sources? If part, which part?

The inclusion of semantic contributions from all or part of the sources mentioned above involves a process of integration. And all integration, as we know, begins with differentiation, like the 'dispersing' of light waves in a secondary colour by means of a prism.

[6] Cf. Palmer 1981: 39–41.

To recapitulate the points already made, we should perhaps see how different sources come together to signify the value of a semantic unit in use. As we know, any semantic unit can be said to divide its value between its meaning proper – called *denotation* (not to be equated with *reference*, which is to be taken as only part of denotation in some lexemes) and its additional overtones – called *connotation*. The denotation of a semantic unit seems to be generally a shared property, more stable and less vulnerable to dramatic changes within a short period of time; its connotation, however, varies from case to case and from individual to individual. There might be parts of the connotative meaning of the semantic unit in question which are more or less uniform in the public consciousness of a given speech community at a given period of time;[7] yet situational and idiosyncratic associations may be quite often present.

In deciding the meaning of a semantic unit, denotation, as a less wayward property, is therefore more essential than connotation. However, when the latter is emphasised, it invariably overrides the former and pushes it to the background (cf. the example of 'knowledge' vs 'ignorance' quoted earlier).

Denotation is encoded in the semantic unit itself when it stands in potential paradigmatic contrasts with other units in the lexicon. It can perhaps be referred to as *semantic constant*; whereas connotation is more often conditioned by the phonological variations, paralinguistic features and any pragmatic and cultural underpinnings which are brought into association with the unit concerned. It can therefore be called the *semantic variable*.

Standing aloof from a linguistic *co-text* or extralinguistic *context*, a semantic unit is usually more manifest in its 'denotative meaning', which can be aptly described in paradigmatic or syntagmatic terms. Paradigmatic relations with other semantic units not only differentiate its meaning from that of others but also reveal its *registral contrasts* (i.e. neutral vs technical, etc.), *stylistic differences* (i.e. formal vs informal, etc.), *affective implications* (i.e. commendatory vs derogatory) and *figurative nuances* (i.e. literal vs metaphorical, etc.); whereas potential syntagmatic relations with other semantic units reveal its *collocational restrictions*, reflecting the unit's conventional co-usage with other units (e.g. have a go vs *take a go; a tattered shirt vs *a broken shirt) or its *collocational areas*, which bring to light the unit's systematic semantic association with other units (e.g. sweet/sugar vs sour/vinegar), or even its *collocational violations*, producing, either intentionally or unintentionally, an out-of-the-ordinary, jokey, or nonsensical effect (e.g. green ideas). But such unusual structures are anormal in nature and may always be counted as an unpredictable variable. Under normal circumstances, syntactic relations add systematically to the lexical meaning of a semantic unit in free and regular combinations with other units. This is called *grammatical meaning* by some linguists;[8] it forms a constant part of the meaning of all

[7] Cf. Osgood and Tannenbaum 1957.
[8] Lyons 1968: 435–8.

lexical items and even the whole of that of some. Grammatical meaning is also commonly expressed in inflexions, inside derivations and compounds, or in sequences (i.e. word order). But difference in syntactic sequence does not always encode difference in grammatical meaning: it may sometimes only indicate different emphasis of the same grammatical meaning. This difference in emphasis actually overlaps with *focal meaning*, which as part of connotation, can be similarly encoded in phonological terms.

Phonologically speaking, the semantic unit usually picks up extra connotation in keeping with extra stress or prominence, which we have referred to as 'focal meaning', or with specific intonation, which we might call *tonal meaning*. Focal meaning serves to call the hearer's attention to a particular paradigmatic contrast implied by the semantic unit in use in the utterance (e.g. for *your* good, i.e. not for mine) whereas tonal meaning is particularly versatile as a means of 'irony' and 'satire' or any unspoken 'implication' deducible from the context.

Phonaesthetic meaning is the potential meaning carried by sound clusters in comparison or syllabic patterns in alternation, which are usually foregrounded when certain regular associations of meaning are discovered and fully exploited through immediate contrasts in the utterance. *Rhythmic meaning*, for example, gives pace and tempo to speech patterns while *harmonic* shows up rhyme, consonance and alliteration; *onomatopoeic* is imitative of real life acoustics, however crude and language-specific the imitation, while *symbolistic* is only partially suggestive.

Paralinguistically, facial and gestural expressions often strengthen or offset the actual words used in communication, which we might call *paralinguistic hints*.

Pragmatically, *referential meaning* builds a bridge for the speaker-hearer to cross from the linguistic world to the actual world of life. While *presuppositional meaning* helps to refer to previous experience or events, true or untrue, *inferential* points to the future. *Intentional meaning* reveals the underlying *motive* of the speaker, which may sometimes be different from the superficial *motif* expressed in verbal terms. Linguistic manoeuvres of such a kind sometimes coincide with *functional meaning*, which tacitly suggests what speech-acts the speaker commits himself to and how he wishes the hearer to respond to their illocutionary force rather than propositional content (e.g. It's hot in here → Open the window, please).[9] *Attitudinal meaning*, through the choice of words or intonation, betrays or conveys the attitude of the speaker towards the hearer or the topic of his conversation. *Phatic meaning*, in particular, signals the speaker's desire to keep open future communication channels with the hearer.[10] *Cultural meaning* reflects the speaker-hearer's awareness of the traditions and customs of his speech community at a given period, e.g. the word 富 **fù**

[9] Austin 1962; Grice 1975; Zgusta 1967: 578: identity of function versus divergence of form.
[10] Malinowski 1923.

'rich' bears drastically different cultural meaning in present-day China from, say, that of twenty years ago;[11] whereas *encyclopaedic* displays the speaker-hearer's degree of specialised knowledge concerning the topics dealt with by the semantic unit, whether in terms of extension or intension.[12] *Idiosyncratic* is the most wilful (even ungrounded) association on the part of the individual speaker-hearer regarding the semantic unit in use. Language, in fact, provokes not only sound-waves for the ear but also the contemplation of the pragmatic world it describes. Hand in hand, they coordinate to enrich the meaning for the hearer of what is being said. Generally, one over-understands what is said rather than under-understands it, which happens only when one is too ignorant of a situation or too immature about life.

Diagrammatically, the above-mentioned units of meaning may be classified as follows, based on the four-dimensional perspective of the average communicative act, i.e. the speaker, the audience, the verbal message and its environs, where meaning is being issued, construed and transacted:

verbal message (meaning per se*)*	*verbal/non-verbal environs (genre-related and extralinguistic)*	*speaker (pragmatic and paralinguistic)*	*audience (interpretation)*
denotation	registral contrasts	+ stylistic differences	*connotation*
referential	+ stylistic differences	affective implications	+ presuppositional
functional	figurative nuances	focal	+ inferential
phatic	collocational restrictions	tonal	cultural
	collocational areas	paralinguistic hints	encyclopaedic
	grammatical	+ presuppositional	+ idiosyncratic
	phonaesthetic	+ inferential	
	rhythmic	intentional	
	harmonic	attitudinal	
	onomatopoeic	+ idiosyncratic	
	symbolistic		

+ indicates the type of meaning that recurs in more than one domain

We can well imagine that lexemes or similar categories of lexical units in the lexicon will be able to denote only part of these meanings, especially when the items each stand by themselves. When linked together in linguistic co-texts (which are what we call verbal environs) or extralinguistic contexts (which will naturally include the non-verbal environs, the speaker and the audience), these items not only increase but also become more sophisticated and refined in their communicative power: they invariably take on additional meaning, which is expressed through phonological, paralinguistic or pragmatic means.

In an actual act of communication, certain meanings will no doubt stand out more prominently than others depending on the occasion. The resynthesis

[11] Cf. Lyons 1968: 432; Makkai 1972: hypersememic.
[12] Evans et al. 1980: 4.

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	symbolistic		

+ indicates the type of meaning that recurs in more than one domain

We can well imagine that lexemes or similar categories of lexical units in the lexicon will be able to denote only part of these meanings, especially when the items each stand by themselves. When linked together in linguistic co-texts (which are what we call verbal environs) or extralinguistic contexts (which will naturally include the non-verbal environs, the speaker and the audience), these items not only increase but also become more sophisticated and refined in their communicative power: they invariably take on additional meaning, which is expressed through phonological, paralinguistic or pragmatic means.

In an actual act of communication, certain meanings will no doubt stand out more prominently than others depending on the occasion. The resynthesis

[11] Cf. Lyons 1968: 432; Makkai 1972: hypersememic.
[12] Evans et al. 1980: 4.

or integration of meanings relevant to the situation instinctively happens with every speaker-hearer involved in any particular verbal exchange. It is certainly an undeniable responsibility on the part of the lexicologist to reveal in a more or less systematic way every strand of the 'semantic variable' as well as that of the 'semantic constant' built into the lexemes of a language. This is not, of course, to say that a lexicon is capable of codifying every category of meaning we have so far identified.

Nevertheless, every lexicon, in its formulation of meaning, makes full use of the semantic potentialities inherent in every aspect of the language of which it is a part. In the following section we shall be able to see how a lexicon taps, with or without conscious design,[13] a language's linguistic resources to their very limits.

Formal Categories of a Lexicon

The formally definable units of a lexicon do not occur at will or at random: they are inventions of necessity, dictated by the need for effective communication (e.g. basic terms for prototypes) or for linguistic flexibility or aesthetic diversity (e.g. peripheral terms for subtypes). Metaphorically speaking, linguistic brainchildren as such are all traceable to their line of descent or their diverse kindred relationships with one another, differentiable by virtue of their intra- and inter-lexical connections in terms of paradigms or syntagms.

To explain this systematic nature of intra- and inter-lexical relations in a lexicon, we will have to begin with a detailed examination of the lexical formation process itself. In other words, we will need to find out if there is any correlation between meaning and sound, between meaning and script, between basic forms and their derivations or combinations, and so on. In what follows, we will focus on exploring the motivation behind the linguistic artefacts[14] specific to a given lexicon and attempting to arrive at an explanatory understanding of their relationships whilst leaving the exhaustive cataloguing of a lexicon's formal categories to the appendix.[15]

It is true to say that there is a universal consensus among linguists that the sound-and-meaning relationship is generally arbitrary. That is the conventional side of a language. But language is at the same time systematic. It will therefore also be unreasonable to ignore obvious sound-and-meaning correlation in words like: flip and flop, drip and drop, hustle and bustle, burst and bust, splash and splotch, stalactite and stalagmite, and slow, slur, slack and sluggish, etc. in the English lexicon and 叽哩咕噜 **jīligūlū** 'talking indistinctly' and 叽哩呱啦 **jīliguālā** 'talking loudly', and 细 **xì** 'slender', 小 **xiǎo** 'small', 稀 **xī** 'scarce', 鲜 **xiǎn** 'rare', 狭 **xiá** 'narrow', etc. in Chinese.

[13] The occurrence of homophones, for example, is certainly not a conscious design of a language.
[14] Leech 1981: 41.
[15] A complete inventory of lexical categories in Chinese and English can be found in the Appendix on p. 348.

Onomatopoeia goes still further. It is not only employed for the imitation of natural sounds (e.g. 咪咪 **mīmī** 'mew', 怦怦 **pēngpēng** 'pit-a-pat', 喔喔喔 **wōwōwō** 'cock-a-doodle-doo', 嘻嘻哈哈 **xīxīhāhā** 'laughing merrily', etc.) but also for the coinage of names for sound-related entities: e.g. 知了 **zhīliǎo** 'cicada' is supposed to be a sound representation of the insect, and 布谷 **bùgǔ** 'cuckoo' that of the bird. 娃娃鱼 **wáwayú** 'giant salamander' (lit. 'baby fish') is so called in Chinese for the noise it makes: to the ear of the Chinese, the noise resembles that made by a 'baby' 娃娃 **wáwa**, which is itself derived from the way it cries.

Semantic affinity through sound resemblance becomes even more evident when a change of word class or a shift of meaning takes place within a lexical item, when, for example, 钉 **dīng** 'nail' changes to its related verb 钉 **dìng** 'drive in a nail'; 'to nail', 凉 **liáng** 'cool'; 'cold' changes to its related verb 凉 **liàng** 'to let something cool', 量 **liàng** 'quantity' changes to its related verb 量 **liáng** 'to measure', 吐 **tǔ** 'spit (voluntarily)' changes to a meaning-related verb 吐 **tù** 'vomit (involuntarily)', and so on.

Once it is clear that phonic motivation behind and between lexical items does exist, it is not totally implausible to find even more subtle sound-and-meaning correlations between, for example, the following pairs of words in Chinese:

牙 **yá** 'front tooth'/咬 **yǎo** 'bite'
齿 **chǐ** 'tooth'/吃 **chī** 'eat'
咽 **yān** 'pharynx'/咽 **yàn** 'to swallow'
喉 **hóu** 'throat'/喝 **hē** 'drink'
唇 **chún** 'lip'/吮 **shǔn** 'suck'

We are not saying that such sound-and-meaning correlation may be found everywhere, but there is little doubt that such a correlation is a sub-system built into a lexicon's integrated whole.

We will now turn to our second question on the correlation between meaning and script. It is, of course, too far-fetched to say that meaning and script have an inherent correlation. Written forms, particularly in European languages, are direct replicas of sounds. In their relation to meaning, they are just as arbitrary as the sounds they represent. However, when we examine the lexicon of a language like Chinese, we will be surprised to find that quite a number of script forms were originally created with reference to the meaning intended: e.g. 山 **shān** 'mountain'; 'hill' is a pictorial representation of three towering peaks while 川 **chuān** 'river' is a picturesque depiction of flowing waters. If 大 **dà** 'big' draws its inspiration from a person standing with his arms stretched out to their full length and 小 **xiǎo** 'small' from grains of sand, then 尖 **jiān** 'sharp'; 'pointed', formed with the concept of 'small' at the top and 'big' at the bottom, will certainly call up the image of a pointed object. When 上 **shàng** 'above' and 下 **xià** 'below' are joined together in 卡 **qiǎ** 'get stuck', the script amusingly calls forth the notion of 'neither up nor down'.

It would, of course, be misleading to conclude that all Chinese script bases its formation on these principles alone,[16] but they are undoubtedly the very foundation on which the whole of Chinese script is built.

If we go a step further, we will see that in Chinese script, sound and form representations sometimes work hand in hand to relate themselves to the prescribed meaning: e.g. 浅 **qiǎn** 'shallow', 钱 **qián** 'copper coin (originally of little value)', 贱 **jiàn** 'cheap', 笺 **jiān** 'commentary (usually quite short)', and so on, all sharing a diminutive connotation; and 蒙 **méng** 'to cover', 朦 **méng** '(of moonlight) hazy', 曚 **méng** '(of sunlight) dim', 濛 **méng** 'drizzly'; 'misty', 矇 **méng** 'drowsy', 懵 **měng** 'muddled', 梦 **mèng** 'dream', etc., all associated with the notion of non-clarity.

Finally, if we probe into the relationship between various forms and their derivations and combinations, we shall find even more regular and systematic correlations in terms of meaning and form.

Semantically speaking, words often contract a varying yet consistent sense or field[17] relationship with one another: e.g.

synonym:

界说 **jièshuō** (classic, obsolete)/定义 **dìngyì** (contemporary) 'definition'
南瓜 **nánguā** (neutral lit. 'south gourd')/北瓜 **běigua** (dialectal lit. 'north gourd') 'pumpkin'
搬家 **bānjiā** (neutral)/挪窝儿 **nuówōr** (dialectal) 'move (house)'
拨冗 **bōrǒng** (polite)/抽时间 **chōu shíjiān** (colloquial) 'find time'
贻贝 **yíbèi** (zoological)/淡菜 **dàncài** (food) 'mussel'
沥青 **lìqīng** (technical)/柏油 **bǎiyóu** (popular) 'asphalt'; 'bitumen'
有了 **yǒu le** (euphemistic lit. 'have got it')/怀孕 **huáiyùn** 'pregnant'
诸位 **zhūwèi** 'ladies and gentlemen' (very formal)/各位 **gè wèi** 'everybody' (formal)/大家 **dàjiā** 'everyone' (informal)

periphrasis: the same idea expressed in different derivatives or clusters of words

不禁 **bùjīn**/禁不住 **jīnbuzhù** 'can't help (doing)'
不得了 **bùdéliǎo**/了不得 **liǎobude** (as a complement) 'extremely'; 'exceedingly'
好容易 **hǎo róngyi**/好不容易 **hǎo bù róngyi** 'not at all easy'; 'with great difficulty'

antonym:

大 **dà** 'big'/小 **xiǎo** 'small'
买 **mǎi** 'buy'/卖 **mài** 'sell'
旺季 **wàngjì** 'busy season'/淡季 **dànjì** 'slack season'
微观 **wēiguān** 'microcosmic'/宏观 **hóngguān** 'macroscopic'
男女老少 **nán nǚ lǎo shào** 'men and women, old and young'

[16] Cf. Chapter 2 on the graphetic composition of the Chinese lexicon.
[17] The word 'field' is used here to mean 'lexical field', groups of words that belong together.

hyponym:
花儿 **huār** 'flowers'/玫瑰 **méigui** 'rose'; 郁金香 **yùjīnxiāng** 'tulip'; etc.
车 **chē** 'vehicle'/汽车 **qìchē** 'motor-car'; 火车 **huǒchē** 'train'; 电车 **diànchē** 'tram'; 自行车 **zìxíngchē** 'bicycle', etc.

meronym:[18] words with a part–whole meaning relationship
树 **shù** 'tree'/树干 **shùgàn** 'tree trunk'; 树枝 **shùzhī** 'branch', 'twig'; 树根 **shùgēn** 'root'; 树叶 **shùyè** 'leaf'; 树皮 **shùpí** 'bark', etc.

consecutives: words belonging to a hierarchy or series
星期一 **xīngqī yī** 'Monday', 星期二 **xīngqī èr** 'Tuesday', etc.
一月 **yīyuè** 'January', 二月 **èryuè** 'February', etc.
班 **bān** 'squad', 排 **pái** 'platoon', 连 **lián** 'company', 营 **yíng** 'battalion', etc.

polyseme:
脚 **jiǎo** 'foot'/墙脚 **qiángjiǎo** 'foot of a wall'
杜鹃 **dùjuān** (zoology) 'cuckoo'; (botany) 'azalea'

Morphologically speaking, words related in meaning seem to be often mutually derivable. In one way or another they bear some kind of formal resemblance to each other: e.g.

morphemic derivation:
speak/speaker; dine/dinner; love/lovely; top/atop
学 **xué** 'study'; 'learn'/学者 **xuézhě** 'scholar'; 爱 **ài** 'love'/可爱 **kě'ài** 'lovely'

submorphemic derivation:
retain/detain/contain
领子 **lǐngzi** 'collar'/袖子 **xiùzi** 'sleeve'/里子 **lǐzi** 'lining'
凉丝丝 **liángsīsī** 'coolish'/甜丝丝 **tiánsīsī** 'pleasantly sweet'
兴冲冲 **xìngchōngchōng** 'animatedly'/怒冲冲 **nùchōngchōng** 'furiously'

morphological analogy:
路透社 **lùtòushè** 'Reuter's News Agency'; 'Reuters'/路边社消息 **lùbiānshè xiāoxi** 'grapevine news' (路边 **lùbiān** 'wayside'; 社 **shè** 'news agency'; 消息 **xiāoxi** 'news')
促进 **cùjìn** 'promote'; 'advance'/促退 **cùtuì** 'help to retrogress'
气力 **qìlì** 'effort'; 'energy'/力气 **lìqi** 'physical strength'
直率 **zhíshuài** 'frank'; 'candid'/率直 **shuàizhí** 'straightforward'; 'blunt'
空闲 **kòngxián** 'idle'; 'free'/闲空 **xiánkòng** 'spare time'; 'leisure'

morphological oddity: where words are interrupted by other elements for the sake of emphasis
absolutely/abso-posi-lutely; fantastic/fan-damn-tastic
滚蛋 **gǔndàn** 'beat it'; 'scram'; 'piss off'/滚你妈的蛋 **gǔn nǐ māde dàn** 'get lost'
喝醉 **hē zuì** 'get drunk'/喝他一个醉 **hē tā yī gè zuì** 'have a drinking spree'

[18] Carter 1987: 21.

Syntactically speaking, words are not always born of derivation or root creation: compounding, for example, particularly in the lexicon of a morphologically deficient language like Chinese, is a common word-formation device where the language's syntax is exploited to the full to tailor-make not only words but also concatenations longer than words: e.g.

compound: words of various syntactic relationships between the components, usually disyllabic in Chinese
killjoy; user-friendly
扫兴 **sǎoxìng** 'dampen one's spirits' (lit. 'sweep off one's interest')
有钱 **yǒu qián** 'rich' (lit. 'have money')
足球 **zúqiú** 'football'; 'soccer'
地震 **dìzhèn** 'earthquake'

situational formula:
你好 **nǐ hǎo** 'how are you'; 'how do you do'
再见 **zàijiàn** 'goodbye'
一路平安 **yī lù píng'ān** 'a safe journey (home)'

set expression:
依我看 **yī wǒ kàn** 'in my opinion'
换句话说 **huàn jù huà shuō** 'in other words'
总而言之 **zǒng ér yán zhī** 'all in all'

vernacular idiom: trisyllabic expression, especially with a verb + object structure
开绿灯 **kāi lǜdēng** 'give the go-ahead' (lit. 'switch on the greenlight')
吃豆腐 **chī dòufu** (dialectal) 'flirt with a woman' (lit. 'eat beancurd')
磨洋工 **mó yánggōng** 'dawdle over one's work' (lit. 'waste time on a foreign job')

classical idiom: fixed quadrisyllabic expression
两面三刀 **liǎngmiàn sāndāo** 'double-dealing' (lit. 'two faces and three knives')
一箭双雕 **yī jiàn shuāng diāo** 'kill two birds with one stone' (lit. 'one arrow two vultures')
趁热打铁 **chèn rè dǎ tiě** 'strike the iron while it is hot'

proverbial saying: a single or parallel saying of any length
a friend in need is a friend indeed; no pains, no gains
礼多人不怪 **lǐ duō rén bù guài** 'nobody will blame you for being too polite'
人要脸, 树要皮 **rén yào liǎn | shù yào pí** 'face is as important to man as the bark is to the tree'
千里之行, 始于足下 **qiān lǐ zhī xíng | shǐ yú zú xià** 'a thousand-mile journey begins with the first step'

So we see that all items in a lexicon (here taking English and Chinese as examples) are in fact intra- or inter-related in diverse ways, their well-formedness somewhat dictated by their paradigmatic and syntagmatic association with other items in synchronic use. For example, even in the making of the term, 'funfair' becomes more acceptable than 'pleasure-fair' just as 'pleasure park' than 'fun park', following the syntagmatic awareness of alliteration; and one can hardly say there is no paradigmatic influence between 'shrink', 'shrank', 'shrunk' on the one hand and 'drink', 'drank', 'drunk' on the other. However, such etymological reflections, like metanalysis or the reshaping of words (e.g. an eke-name → a nickname or an ewt → a newt) seem to be more relevant for diachronic studies.[19]

In a different lexicon from that of English or Chinese, we might discern a different set of comparable items, but the point is that if any valuable differentiations are to be made, we must first of all know where and how to look. The present book will only survey part of the comparable set from the list relevant to the Chinese lexicon.

THE CHINESE LEXICON IN BRIEF

Viewed in the light of these organizational features of a lexicon in general, the Chinese lexicon has properties which it shares with and in which it differs from those of other languages.

The distinctive semantic significance of tones associated with a syllable and the determinedly logographic nature of its written symbols contribute to the unique system of its lexicon, which differs vastly from the spelling and non-tonal system of most European languages. Taking into account these specific features will enable us to make a more penetrating study of the lexicon and reveal its peculiar aspects.

(a) Mononymic Nature

As we shall see, a lexicon of this nature constitutes a set of monosyllabic word-building primes, which we would like to call *mononyms*. With the introduction of the concept of mononym, we can in most cases therefore dispense with that of morpheme in our analysis and that will greatly facilitate our description of the lexical structure of Chinese. A mononym will then differ from a morpheme in the sense that (i) it can be not only a meaningful morpheme, free or bound, but also a meaningless sub-morpheme; (ii) it is exclusively monosyllabic; and (iii) it is always potentially separable from other mononyms and formally deployable in its own right.

[19] Ullmann 1962: 41.

Being deficient in consonant clusters in its syllabic structure, Chinese abounds in homophonic monosyllables. But to maintain maximal possible differentiation between them, these homophonic monosyllables are usually made heterotonic; and homophonic, homotonic monosyllables, fully or partially heterographic. But it must be clearly understood that not every heterographic monosyllable will necessarily be a different mononym. Quite often, more than one heterographic monosyllable (particularly so with the introduction of simplified characters) can represent the same mononym in particular contexts if they are semantically indifferentiable, e.g. 押韵 = 压韵 **yāyùn** 'to rhyme'; 踉跄 = 踉蹡 **liàngqiàng** 'stagger'; 烂漫 = 烂熳 **lànmàn** 'bright-coloured'; 轶事 = 逸事 **yìshì** 'anecdote'; 仿佛 = 彷彿 **fǎngfú** 'seem'; 'as if'; etc. This can be compared to the relationship between morphemes and their contextual allomorphs. On the other hand, homographic symbols are not necessarily the same mononyms. They can in fact represent quite different, and sometimes quite unrelated, meanings and must therefore be counted as totally different mononyms. For example, 降 **jiàng** in 降落 **jiàngluò** 'descend'; 'land' is phonetically and semantically different from 降 **xiáng** in 投降 **tóuxiáng** 'surrender'; 'capitulate'; and so is 乐 **lè** in 快乐 **kuàilè** 'happy' from 乐 **yuè** in 音乐 **yīnyuè** 'music'. This can be compared to a situation where the same surface morph represents different underlying morphemes like the English '-s' for either 'plural' or 'third-person singular, present'. The fact that there are more characters than mononyms, apart from time-honoured written variants, may also stem from the simplification process, so that the simplified and the original unsimplified characters coexist: e.g. (i) with a different positioning of the radical, e.g. 峰 and 峯 **fēng** 'peak' and 够 and 夠 **gòu** 'enough'; (ii) using different but equally logical radicals for the same purpose, e.g. 愿 and 願 **yuàn** 'willing' (the former incorporating 心 the 'heart' radical, the latter, 頁 the 'head' radical, as 'willingness', can associate itself equally with 'heart' or with 'head'), and 捆 and 綑 **kǔn** 'bind'; 'tie' (the former incorporating 扌 the 'hand' radical, the latter 纟 the 'silk' radical for 'rope', as 'binding' may be made to associate with either 'hand' or 'rope'); and (iii) owing to folk simplification, e.g. 夕 for 餐 **cān** 'meal', 祘 for 算 **suàn** 'calculate', etc.[20]

(b) Disyllabic Tendencies

We know that since the Yuan Dynasty (1206 AD), Mandarin has gradually lost its consonantal endings like **-t**, **-k**, **-p**, **-m**, retaining only **-n** and **-ng**. This has greatly reduced the usable number of monosyllables in the language whilst, on the other hand, new mononyms had to be created to cope with the more and more sophisticated requirements of verbal communication. This state of affairs invariably brought about an increase in homophonic clashes.

[20] Cf. Zhou, Zumo (周祖谟) 1983: 290.

For the language to find a way out of this dilemma, disyllabification naturally becomes the device to resolve these homophonic clashes. Once this tendency sets in, it cuts across the lexicon in both directions – it goes on to disyllabify not only monosyllables but also polysyllabic constructions. For example, a quadrisyllabic verbal phrase like 互相帮助 **hùxiāng bāngzhù** (in which 互相 **hùxiāng** means 'mutual'; 'each other' and 帮助 **bāngzhù** means 'help'; 'assist') is shortened to a disyllabic lexeme 互助 **hùzhù** (meaning: 'help each other'), taking the first and the last mononym of the original structure; and similarly, a quadrisyllabic nominal phrase like 化学工业 **huàxué gōngyè** (in which 化学 **huàxué** means 'chemistry' and 工业 **gōngyè** means 'industry') is abbreviated into a disyllabic noun 化工 **huàgōng** (meaning: 'chemical industry'), retaining only the first and the third mononyms for the new structure.

Thus condensation works hand in hand with expansion to disyllabify every possible lexical structure that comes its way.[21]

According to one set of statistics,[22] in the polysyllabic component of the sampled texts, the proportion of different polysyllabic structures is as follows:

disyllabic:	49,938	86%	– on its own
trisyllabic:	6,786	14%	– all other multisyllabic words taken together
quadrisyllabic:	1,401		
pentasyllabic:	69		
hexasyllabic:	19		
heptasyllabic:	12		
octosyllabic:	5		
nonasyllabic:	0		
decasyllabic:	1		

According to other sample statistics we have taken from the MSC Dictionary (1983), where in Section B 500 mononyms are registered, which become the first syllable of approximately 2,500 polysyllabic items, the proportion of different polysyllabic structures is:

disyllabic:	1,791	72%	– on its own
trisyllabic:	396	27%	– all other multisyllabic words taken together
quadrisyllabic:	288		
pentasyllabic:	15		
hexasyllabic:	6		
heptasyllabic:	1		
octosyllabic:	3		

These statistics should give some idea of disyllabic predominance either in actual usage or in the lexicon proper.

[21] Lü, Shuxiang (吕叔湘) 1963: 13.
[22] Yi, Xiwu (易熙吾) 1954: 10–11.

In Eric Shen Liu's *Frequency Dictionary of Chinese* (1973), which lists 3,000 lexemes, we find 2,076 polysyllabic lexemes, amongst which only 29 items are non-disyllabic while the other 2,047 are all disyllabic. So we see that disyllabic lexemes account for 98 per cent of the 3,000-lexicon's polysyllabic component and 68 per cent of the whole of the 3,000-lexicon.[23]

We have also noted that an increase of disyllabic lexemes can be detected as the vocabulary moves further away from the more common and basic everyday words. The following table shows the number of disyllabic lexemes in every 300 units:

1st 300 units:	126 disyllables
2nd 300 units:	188
3rd 300 units:	218
4th 300 units:	210
5th 300 units:	216
6th 300 units:	242
7th 300 units:	203
8th 300 units:	206
9th 300 units:	223
10th 300 units:	244

From the table, we find that from the second 300 units upwards (i.e. after the first 600 items) disyllabic lexemes remains well above 200, accounting for more than two-thirds of the vocabulary quoted in each instance.

Disyllabification has not only the passive role of fighting homophonic clashes but also the dynamic role of creating new lexemes in Modern Standard Chinese. Some sinologists[24] attribute the situation mainly to the influence of other languages on Chinese. What we can clearly see is that in the monosyllabically oriented classical lexicon, the increase in words is reflected in the increase in written symbols, whereas in the modern lexicon, the increase in words corresponds directly with the increase of disyllabic combinations, whilst the number of individual characters employed for the purpose has not only been vastly reduced but has subsequently remained constant. The following statistics will indicate the gradual increase of the lexicon's mononyms in the period from 206 BC up to AD 1915. After that the main concern of the lexicon is reflected in the use of a more or less fixed set of mononyms with a drastic increase in their disyllabic combinations in the form of words:[25]

[23] Cf. Beijing Yuyan Xueyuan (北京语言学院) 1985.
[24] Kratochvil 1968: 141.
[25] The statistics were collected from the following three sources: Lin, Yushan (林玉山) 1992; Liu, Yeqiu (刘叶秋) 1992; Chen, Bingtiao (陈炳迢) 1985.

dictionary	*author(s)*	*year*	*characters*
Erya (尔雅)	Qin-Han Scholars (秦汉学者)	206 BC[a]	2,091
Fangyan (方言)	Yang Xiong (扬雄)	53 BC–18 AD	9,000
Shuowen Jiezi (说文解字)	Xu Shen (许慎)	100 AD	10,516
Zi Lin (字林)	Lü Chen (吕忱)	265 AD[b]	12,824
Guang Ya (广雅)	Zhang Yi (张揖)	227–32 AD	18,150
Yu Pian (玉篇)	Gu Yewang (顾野王)	519–81 AD	16,917
Jinben Yu Pian (今本玉篇)	Chen Pengnian et al. (陈彭年)	1013 AD	22,561
Guang Yun (广韵)	Chen Pengnian (陈彭年)	961–1017 AD	26,194
Lei Pian (类篇)	Wang Zhu et al. (王洙)	1039–66 AD	31,319
Zi Hui (字汇)	Mei Yingzuo (梅膺祚)	1615 AD	33,179
Kangxi Zidian (康熙字典)	Chen Yushu et al. (陈玉书)	1710–16 AD	47,035
Zhonghua Da Zidain (中华大字典)	Lu Feikui et al. (陆费逵)	1909–14 AD	48,000
Ciyuan (辞源)	Lu Erkui et al. (陆尔奎)	1908–15 AD	87,790
			words
Xinhua Zidian (新华字典)	Wei Jiangong et al. (魏建功)	1901–80 AD	3,500
Xiandai Hanyu Cidian (现代汉语词典)	Ding Shusheng et al. (丁树声)	1961 AD	60,000
Xinban Cihai (新版辞海)	Xia Zhengnong et al. (夏征农)	1989 AD	120,000
Hanyu Da Cidian (汉语大词典)	Luo Zhufeng et al. (罗竹风)	1993 AD	300,000

[a] The year is actually made up to indicate approximately the time when the dictionary was compiled. It is no exact indication of the year.
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A thorough analysis of disyllabic structures in the Chinese lexicon will therefore be a representative account of the lexicon as a whole.

1 THE PHONOLOGICAL MAKE-UP OF THE CHINESE LEXICON

Items in the Chinese lexicon, compared with their counterparts in European languages, have vastly different representations in speech as well as in writing. Here we shall first look at the phonological make-up of these lexical entities before delving into their graphetic compositions in chapter 2.

THE SYLLABIC STRUCTURE

The foundation of a Chinese word is the set of monosyllables available to the language. All words in the vocabulary are built on these monosyllables. That is to say, a word in Modern Standard Chinese is represented by one, or by a combination, of these monosyllables.

The phonological structure of such a monosyllable is extremely simple. There are only four possibilities:

(1) V
(2) CV
(3) VC
(4) CVC[1]

where C signifies a consonant and V signifies a full vowel, which may, of course, be either a simple vowel or a diphthong or a triphthong.

There are, however, three additional points to note regarding these rudimentary syllabic constructions:

(1) The initial consonant does not allow a cluster, that is, CCV, etc. does not occur in the language;
(2) The final consonant is limited to either *n* or *ng*;[2]
(3) A tone (i.e. one out of four tones[3]) must be assigned to a syllable unless it is unstressed.

[1] There are 5 'nasalised' syllables in the language, namely *hm*, *hng*, *m*, *n* and *ng*, which can be said to be mere C enjoying a syllabic property. They are, however, only exceptions to the general rule.

[2] The present book is concerned with the description of Modern Standard Chinese or Mandarin in common parlance. Other dialects of Chinese (e.g. Cantonese) do have consonantal endings other than *n* and *ng*, such as *p*, *t*, *k*, *m*, etc.

[3] Again, Modern Standard Chinese or Mandarin is limited to four tones plus an unstressed tone. Other dialects (e.g. Cantonese) may have more than four tones.

We shall now look at the total entry of C, i.e. consonants which form the initials of such a syllable, and then that of V, i.e. vowels which form the finals of such a syllable.

THE CONSONANTS

The consonants used in the language are listed in the Table below in terms of the relevant parts of the oral or nasal cavity involved and also the manner in which these consonants are pronounced. The grid which each of the consonants falls into should, therefore, be able to encapsulate the essential phonological characteristics of the particular consonant in question by reference to the parameters provided by their place and manner of articulation:

	plosive unaspirated/ aspirated	*affricate unaspirated/ aspirated*	*fricative*	*nasal*	*lateral*	*voiced continuant*
bilabial	b [p] /p [p'] ㄅ / ㄆ			m [m] ㄇ		
labio-dental			f [f] ㄈ			
alveolar	d [t] /t [t'] ㄉ / ㄊ			n [n] ㄋ	l [l] ㄌ	
alveo-dental		z [ts] /c [ts'] ㄗ / ㄘ	s [s] ㄙ			
retroflex		zh [tʂ] /ch [tʂ'] ㄓ / ㄔ	sh [ʂ] ㄕ			r [ɹ] ㄖ
palatal		j [tɕ] /q [tɕ'] ㄐ / ㄑ	x [ɕ] ㄒ			
velar	g [k] /k [k'] ㄍ / ㄎ		h [χ] ㄏ	ng* [ŋ] ㄫ		

* *ng* is included to make the set of consonants used in the language complete. *ng*, however, is not used as the initial consonant of a syllable in Mandarin though it is in some dialects.

As we can see from the table above, what have been given as direct phonemic representations are actually *pinyin* (拼音) romanisations,[4] which, in the author's view, with the help of a few mappings and rules, may just as well be used to outline the phonological system of the language and in a most neat and illuminating way at that. The corresponding IPA[5] equivalents of these *pinyin*

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alveolar	d [t] /t [t'] ㄉ / ㄊ			n [n] ㄋ	l [l] ㄌ	
alveo-dental		z [ts] /c [ts'] ㄗ / ㄘ	s [s] ㄙ			
retroflex		zh [tʂ] /ch [tʂ'] ㄓ / ㄔ	sh [ʂ] ㄕ			r [ɹ] ㄖ
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symbols, however, are given next to each of them within square brackets to help determine their phonological values. *Zhuyin fuhao* (注音符号), a set of notations still in use in Taiwan for the purpose of standardising pronunciation (which was first published in 1918, amended in 1920 and later authorised by the Nationalist government in 1930) is also included alongside the *pinyin* romanisations for cross references. However, only *pinyin* will be used to indicate the pronunciation of the illustrative words throughout the book.

The slash / used in the table indicates 'unaspirated/aspirated' distinctions and the expression 'alveo-dental' was coined particularly for the description of a set of sibilants articulated somewhere behind the gums and the front teeth. All the consonants are invariably employed as initials, except for *ng*, which may only occur at the end of a syllable.

THE VOWELS

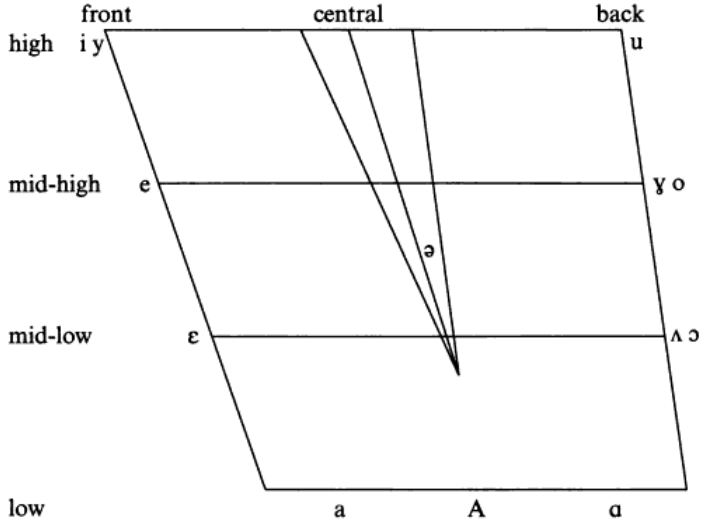
The simple vowels or monophthongs used in the language are given below by reference to the position of the highest point of the tongue in relation to the oral cavity and also to the shape of the lips in the process of enunciation. Again, *pinyin* romanisations will be taken as direct indications of the phonemes. Corresponding international phonetic symbols are given next to the romanisations within square brackets and *zhuyin fuhao* is also provided:

	front *spread/rounded*	**central** *neutral*	**back** *spread/rounded* *otherwise rounded*
high	i [i] /ü [y] ㄧ / ㄩ		u [u] ㄨ
mid–high			e [ɣ] /o [o] ㄜ / ㄛ
mid			
mid–low			
low		a [A] ㄚ	

The slash / in the table indicates the 'spread/rounded' distinctions of the lips. The values ascribed to each vowel are to be taken as of an archi-phonemic nature since most of them (i, e, o, a) have regular allophonic variants in designated phonetic contexts. The variations on *i* are caused by the nature of the consonant that precedes it, e.g. [ɿ] when preceded by the alveo-dental consonants z, c, s, [ʅ] by the retroflex consonants zh, ch, sh, r, and [i] by the others. The variations on *e*, *o* and *a* occur in their nasal or diphthongic

combinations, e.g. *e* is pronounced as [ɣ] on its own, as [e] in *-ei*, as [ə] in *-en*, *-eng*, as [ɤ] in *er*, as [ɛ] in *-ie*, *è* and as [ʌ] in *-eng* and *-ueng*; *a* is pronounced as [A] on its own, as [a] in *-an*, *-uan*, as [ɛ] in *-ian*, as [ʌ] in *-uang*, and as [ɑ] in *-ang*, *-iang*; *o* is pronounced as [ɔ] in *-uo*, as [u] in *-ao*, and as [o] on its own and in *-ong*.

The positions of the simple vowels and their contextual variants relative to the highest point of the tongue in the oral cavity are summarised in the following diagram in terms of IPA. Where a pair of vowels is given side by side, the first of the two is pronounced with spread lips and the second with rounded lips:



(cf. 钟梭: 关于汉语语音的若干问题 in 语言教学与研究 No. 3, 1978, 北京语言学院)

The simple vowels as summarised in the Table on page 22 may combine in various ways to form *diphthongs*:

	a	**e**	**i**	**o**	**u**
a-			ai [ai] ㄞ	ao [ɑu] ㄠ	
e-			ei [ei] ㄟ		
i-	ia [iA] ㄧㄚ	ie [iɛ] ㄧㄝ			
o-					ou [ou] ㄡ
u-	ua [uA] ㄨㄚ			uo [uɔ] ㄨㄛ	
ü-		üe [yɛ] ㄩㄝ			

Four of the diphthongs as seen in the above table may be preceded by either *i* or *u*, which serves as a *medial*, to form the four *triphthongs* of the language:

	ao	ou	ai	ei
i-	iao [iɑu] ㄧㄠ	i(o)u [iou] ㄧㄡ		
u-			uai [uai] ㄨㄞ	u(e)i [uei] ㄨㄟ

* Note the orthographic convention of the triphthongs *iu* and *ui*. See section on *pinyin* orthography.

The consonants *n* and *ng* are suffixable to most simple vowels and also some vowel combinations (not necessarily diphthongs) begun with *i*, *u*, and *ü*, forming an independent set of *nasal finals* in the language:

	a	e	i	o	ü	ia	io	ua	ue	üa
-n	an [an] ㄢ	en [ən] ㄣ	in [in] ㄧㄣ		ün [yn] ㄩㄣ	ian [iɛn] ㄧㄢ		uan [uan] ㄨㄢ	u(e)n [uən] ㄨㄣ	üan [yan] ㄩㄢ
-ng	ang [ɑŋ] ㄤ	eng [ʌŋ] ㄥ	ing [iŋ] ㄧㄥ	ong [oŋ] ㄨㄥ		iang [iɑŋ] ㄧㄤ	iong [ioŋ] ㄩㄥ	uang [uɑŋ] ㄨㄤ	ueng [uʌŋ] ㄨㄥ	

INITIALS AND FINALS

Owing to the peculiar behaviour of the nasal endings *n* and *ng*, as we have seen from above, syllabic structures in Chinese may perhaps be more aptly redefined as sequences of *initials* and *finals*. All the consonants in the language (except *ng*) may constitute the initial of a syllable and if the syllable begins without a consonant, it is counted as having a *zero initial*. This gives a total of 22 (including the zero initial). The finals of a syllable, on the other hand, will comprise all the simple vowels, diphthongs, triphthongs and nasal endings, totalling 35 (not including variants of *i*, which only occur after the retroflex and alveo-dental fricatives, and *e* and the *er*ised vowel *er*). At this point one may probably assume that the 22 initials and the 35 finals will then combine variously to form a syllable in the Chinese language. This is, however, far from being the case. The general picture, in fact, is:

The palatal fricatives *j*, *q*, *x* are always in *complementary distribution* with their retroflex and alveo-dental counterparts *zh*, *ch*, *sh*, *r* and *z*, *c*, *s*. As a result, *j*, *q*, *x* may only precede finals beginning with *i* and *ü*, whereas the other fricatives may only precede the other finals. The velar set *g*, *k*, *h* behaves similarly to those non-palatal fricatives and shuns finals beginning with *i* and *ü*; whereas the retroflex and alveo-dental fricatives are always in complementary distribution with all the other consonants when preceding the simple vowel *i*: in the former case, the retroflex fricatives may only be followed by the variant [ɻ] and the alveo-dental by the variant [ɿ], whereas all the other consonants may be followed by the normal *i*.

The labial and labio-dental set *b*, *p*, *m*, *f* seems to stay idiosyncratically away from finals begun with *u* and *ü*, except for *u* on its own.

Apart from these *systematic gaps* in the syllabic structure of the language, there are *accidental gaps*. For example, only the labial and labio-dental set *b*, *p*, *m*, *f* comes into combination with the single-vowel final *o* while all the other consonants keep themselves away from it, and both the labial and the alveolar set *b*, *p*, *m*, *f* and *d*, *t*, *n*, *l* (with the exception of a few instances) seem to avoid the finals *ia*, *iang*, and *iong*. The alveolar set *d*, *t*, *n*, *l* feels generally uncomfortable with finals begun with *u* and *ü* (with the exception of *u* itself) and there are more gaps than realisations. The alveo-dental fricatives *z*, *c*, *s* are choosy customers, they miss out such finals as *ei*, *ua*, *uai*, *uang*, and *ueng* besides all those beginning with *i* and *ü* as mentioned earlier. The final *ueng* (like the *e* variant and the erised vowel *er*) may only be used on its own.

All the finals may be preceded by a zero initial except *ong*.

PINYIN ORTHOGRAPHY

As *pinyin* symbols are used in the present book as notational representations of the language's phonological system, we are in this section concerned with their orthographical conventions.

In actual phonetic reproduction, whether spoken or written, of all finals beginning with *i* when preceded by a zero initial, the *semi-vowel* symbol *y* is introduced in *pinyin* to replace this *i* (e.g. *ia* → *ya*, *iong* → *yong*) except in the case of a single-vowel *i* or *ü* or finals begun with *i* or *ü* where the semi-vowel *y* is added to the syllable and the umlaut above *u* is no longer necessary (e.g. *i* → *yi*, *ü* → *yu*, *ün* → *yun*). Similarly, in all finals beginning with *u* when preceded by a zero initial, the semi-vowel symbol *w* is introduced to replace this *u* (e.g. *ua* → *wa*, *ueng* → *weng*) except in the case of a single-vowel *u* itself where the semi-vowel *w* is added to the syllable (e.g. *u* → *wu*).

As we have already mentioned briefly in a footnote, *pinyin* orthography also requires that the triphthongs *iou* and *uei* become respectively *iu* and *ui* when initialised (e.g. 'diou' → *diu*, 'kuei' → *kui*) and respectively *you* and *wei* when zero-initialised. Apart from these two triphthongs, the nasal final *uen* also needs to change orthographically into *un* when initialised (e.g. 'kuen' → *kun*) and to *wen* when zero-initialised.

In line with general *pinyin* orthographical tradition the umlaut over *ü* naturally disappears (as in the case of *yu*) when *ü* comes after *j*, *q*, and *x* (e.g. *ju*, *que*, *xuan*). In fact, the umlaut is only retained in the following four syllables: *nü*, *nüe*, *lü*, *lüe* in the entire lexicon.

To recapitulate the syllabic structure table in terms of *pinyin*, we will quote here a few examples of actual monosyllabic words containing simple vowels:[6]

[6] The examples given are unspecified for tones. The English annotations are given only to indicate the first (or level) tone realisations of these syllables.

(1) V **a** 'an interjection'
(2) CV **ta** 'he'; 'she'; 'it'
(3) VC **an** 'peaceful'
(4) CVC **tang** 'soup'

In the case of a disyllabic word, an *apostrophe* is introduced between the two syllables if the second syllable begins with a vowel rather than a consonant: e.g.

(5) CV + V **bei'ai** 'sorrowful'
ping'an 'safe and sound'[7]

If no apostrophe is present in a disyllabic word, then it is taken for granted that the second syllable begins with a consonant rather than a vowel, e.g.

fangan is **fangan** 'disgust' rather than **fang'an** 'programme'

In *pinyin* orthography, capital letters are also adopted to indicate proper names, e.g. *Beijing* 'Beijing'. However, as we use *pinyin* only for phonetic notation purposes in this book, we will not use capitals.

TONES AND TONE SANDHI

Chinese has always been a tone language. Modern Standard Chinese has four word tones. Being differentiators of meaning, their association with individual monosyllables is determined by convention. In *pinyin*, these tones are specified by a tone mark (or diacritic) over the *main vowel* of the syllable.[8] If no tone mark appears over a syllable, it means that the syllable is unstressed. For example, the same syllable *ma* may occur in any of the four tones or have no tone at all. The four tones always appear in the following order and can, therefore, be labelled respectively as the first, the second, the third and the fourth tone:

1st tone (**yīnpíng** 阴平)	**mā** 'mother'
2nd tone (**yángpíng** 阳平)	**má** 'hemp'
3rd tone (**shǎngshēng** 上声)	**mǎ** 'horse'
4th tone (**qùshēng** 去声)	**mà** 'scold'
unstressed (**qīngshēng** 轻声) (non-tone)	**ma** end-of-sentence particle for the formulation of a general question

If we adopt Chao Yuen-ren's five-level differentiation (which does not specify absolute values and is relative to individual speakers), the contour of each of the four tones in Chinese may be represented thus:

[7] The English phrasal annotation 'safe and sound' does not alter the fact that *ping'an* is a disyllabic word (rather than an expression) in Chinese.
[8] In diphthongs and triphthongs, the main vowels are always *a*, *e*, *o*, while *i*, *u*, *ü* are usually medials. The tone diacritics therefore invariably fall on *a*, *e*, *o* except in the cases of *ao*, where the tone mark is to be placed over *a*, and *iu*, where the tone mark is to go over *u*, and *ui*, where the tone mark is to go on *i*, since the latter two are actually standard *pinyin* orthographical abbreviations of *iou* and *uei*.

	1st tone *level*	**2nd tone** *rise*	**3rd tone** *fall-rise*	**4th tone** *fall*
5 high 4 mid-high 3 mid 2 mid-low 1 low				
numerical tonotation:[9]	5–5	3–5	2–1–4	5–1

Despite the fact that tones are word-specific, *tone sandhi* may still occur between two consecutive tones in a disyllabic word or expression. It usually takes place in a third tone followed by another tone or non-tone (i.e. an unstressed syllable) or between two consecutive third tones. In the former case, the preceding third tone loses its rising inflection and becomes a low tone (i.e. 2–1–4 → 2–1), e.g. **lǎoshī** 'teacher', **yǔyán** 'language', **bǐjiào** 'compare', **lǐbian** 'inside'; and in the latter case, the preceding third tone becomes a second (i.e. 2–1–4 → 3–5), e.g. ***shuǐguǒ*** 'fruit' becomes ***shuíguǒ***, and ***yǒuhǎo*** 'friendly' becomes ***yóuhǎo***. When there are three successive third tones in a word, the first two third tones must both be rendered as second tones while the tone of the last syllable remains unchanged, e.g. **zhǎnlǎnguǎn** 'exhibition hall' → **zhánlánguǎn**, **xiǎozǔzhǎng** 'group leader' → **xiáozúzhǎng**, etc.

Tone sandhi also occurs between two consecutive fourth tones. Under such circumstances, the fall in the preceding fourth tone is truncated (i.e. 5–1 → 5–3), e.g. **diànhuà** 'telephone', **zhàoxiàng** 'take a photograph', **mìmì** 'secret', **lìyì** 'benefit', **shìjiè** 'world', etc.

Apart from these systematic tone changes, tone sandhi may also happen by convention in a specific set of words in the lexicon when they are followed by words of different tones. This set includes numericals: **yī** 'one', **qī** 'seven', **bā** 'eight', and the negator **bù** 'not'. For example,

yī	on its own or not followed by other tones	**dì yī** 'first'
yī → yí	when followed by a fourth tone	**yí yàng** 'the same'
yī → yì	when followed by other tones	**yì tiān** 'one day' **yì nián** 'a year' **yì běn** 'a copy'
qī/bā	on their own or followed by tones other than a fourth	**qī/bā tiān** '7/8 days' **qī/bā nián** '7/8 years' **qī/bā běn** '7/8 copies'
qī/bā → qí/bá	when followed by a fourth tone	**qí/bá cì** '7/8 times'
bù	on its own or followed by tones other than a fourth	**bù duō** 'not much' **bù xíng** 'won't do' **bù hǎo** 'not good'
bù → bú	when followed by a fourth tone	**bú duì** 'incorrect'

[9] Tonotation is a coined abbreviation of 'tone notation'.

Tone sandhi may also occur by choice in adverbial or adjectival reduplications: e.g.

màn 'slow'	→ **mànmàn** 'slowly'	→ **mànmān(r)**
gānjìng 'clean'	→ **gāngānjìngjìng** 'neat and tidy'	→ **gānganjīngjīng**
jímáng 'hurriedly'	→ **jíjímángmáng** 'in a hurry'	→ **jíjimāngmāng**

where we can see that in a disyllabic reduplication, the second syllable may choose to become a first tone (usually with some kind of erisation[10] at the speaker's discretion), and in a quadrisyllabic reduplication, the second syllable often becomes unstressed and the last two syllables may become first tones no matter what tones they were originally in.

All these tone sandhi applications are actually more or less rule-governed and will not generally be reflected in the *pinyin* or phonetic notations of the disyllabic words or expressions in question.

WORD STRESS

Word stress in Chinese coincides with tones. An unstressed syllable naturally loses its tones. Generally speaking, all monosyllabic words which have lexical meanings are tonal and therefore stressed (e.g. **dà** 'big', **xiǎo** 'small', etc.) and only those monosyllabic words which are grammatical or functional in nature are toneless and therefore unstressed (e.g. **de** 'a particle introducing an attributive', **ne** 'an indicator for special questions', etc.). In any disyllabic word, if there is an unstressed syllable present, it is always the second and never the first. In other words, the two syllables of a disyllabic word are either evenly stressed or tied in with a trochaic rather than iambic rhythm. For example,

xiūxi to rest	**shétou** tongue
dǎsuan to plan	**lìhai** terrible

Unstressed syllables do not have a tone yet they acquire a *pitch* with reference to the preceding tone in accordance with the five tone-level scheme. When an unstressed syllable follows a first (level) or second (rising) tone, it is pitched at mid (i.e. 3) level; when it follows a third (falling-rising) tone, it is pitched at mid-high (i.e. 4) level; when it follows a fourth (falling) tone, it is pitched at low (i.e. 1) level.[11]

Loss of stress in a word is more often not only the loss of tone but also the abbreviation or *schwarisation*[12] of originally fuller vowels in the unstressed syllable.[13] For example,

[10] See section on *er*isation and sound assimilation.
[11] Hu, Yushu (胡裕树) 1981: 131.
[12] 'Schwarisation' was coined to mean that a full vowel is reduced phonetically to [ə].
[13] Hu, Yushu (胡裕树) 1981: 132.

zuǐba 'mouth'	→	**zuǐbə**
ěrduo 'ear'	→	**ěrdo**
xǐhuan 'to like'	→	**xǐhuə**
chūqu 'go out'	→	**chūqə**

Schwarisation is, in fact, often accompanied by the *vocalisation* of the consonant in the unaccented syllable.

Unstressed syllables with nasal or fricative initials (involving simple vowel finals like *i*, *u*, *e*) tend to lose their vowel quality altogether and retain only the nasal and fricative elements, particularly in quick delivery:

bízi 'nose'	→	**bíz**
yìsi 'meaning'	→	**yìs**
dōngxi 'thing'	→	**dōngx**
dòufu 'beancurd'	→	**dòuf**
wǒmen 'we'; 'us'	→	**wǒm**

Unstressing usually occurs with functional words or mononyms like the following:

(1) grammatical particles:
ba an imperative marker
le a sentence particle
guo experiential aspect indicator
ge a common measure word for nouns

(2) suffixes:
nǎr 'where'
háizi 'child'
shítou 'stone'
shénme 'what'

(3) some location or direction indicators:
jiā li 'at home'
tiān shang 'in the sky'
lǐbian 'inside'
zǒu jìnqu 'walk in'

(4) second syllable of a reduplication:
māma 'mother'
bàba 'father'
kànkan 'have a look'
xiǎngxiang 'consider it for a moment'

Stress or non-stress in the second syllable of a disyllabic word may sometimes differentiate meaning:

duìtóu 'on the right track'	**duìtou** 'adversary'
lìhài 'advantages and disadvantages'	**lìhai** 'devastating'
dàyì 'gist'	**dàyi** 'careless'

Otherwise, unstressing is just a question of convention or non-emphasis derived from the context, e.g.:

pútao 'grape'	**yǎnjing** 'eye'	**shìqing** 'affair'
dìfang 'place'	**yuèliang** 'moon'	**nuǎnhuo** 'nice and warm'

yī:	**kàn yi kàn** 'have a look'	**xiǎng yi xiǎng** 'think about it'
bù:	**chībukāi** 'unpopular'	**qù bu qù** 'would like to go or not'

*ER*ISATION AND SOUND ASSIMILATION

By '*erisation*' is meant the potential addition of an unstressed 'r' at the end of all finals (except the variant *e* and the simple vowel *er*, where *r* has already been built in), e.g.

huà	→	**huàr**	'picture'
gē	→	**gēr**	'song'
niǎo	→	**niǎor**	'bird'
yīdiǎn	→	**yīdiǎnr**	'a little'

In the case of *n* or *ng* finals, *n* and *ng* are sometimes dropped to give way to *r*: e.g.

huāyuán	→	**huāyuár**	'garden'
bāngmáng	→	**bāngmar**	'to help'

Apart from being a distinctive habit of speakers from the Beijing area, erisation generally serves to encode syntactic, semantic and stylistic differences, e.g.:

xìn 'letter'	vs	**xìr** 'oral message'	semantic
tóu 'head'	vs	**tóur** 'ringleader'	semantic
gài 'to cover'	vs	**gàir** 'a cover'	syntactic
huà 'to draw'	vs	**huàr** 'a drawing'	syntactic
xiǎohái 'child'	vs	**xiǎoháir** (endearing) 'little child'	stylistic
gùnzi 'a stick'	vs	**gùnr** (diminutive) 'small stick'	stylistic

In rapid speech, *sound assimilation* is more likely to occur. For example, when spoken quickly, ***guǎngbō*** 'broadcast' may become ***guǎmbō***, and ***shénme*** 'what' may become ***shém***.

A most prevailing phenomenon of such assimilation in Chinese is the phonological adaptation (with accompanying graphetic changes[14]) of the exclamatory

[14] The graphetic changes of **ā** 啊 are: **yā** 呀, **wā** 哇, **lā** 啦, **nā** 哪.

particle ā at the end of a sentence in keeping with the nature of the sound that precedes it. For example,

-ng, [ŋ], [ɳ]	+	ā	=	ā
-a, -o, -e, -i, -ü	+	ā	=	yā
-u	+	ā	=	wā
-le	+	ā	=	lā
-n	+	ā	=	nā

DIALECTAL INTERFERENCE

In Modern Standard Chinese, the retroflex consonants *zh*, *ch* and *sh* are clearly differentiated from the alveo-dental set *z*, *c*, and *s*. However, whilst the distinction is important for the learner-speaker of the language, he or she must also be prepared to accept the fact that native speakers, particularly those from the south of the country or Taiwan and who are originally other dialect speakers, might not, through carelessness or ignorance, make any difference in pronunciation between words beginning with *zh*, *ch* and *sh* and their non-retroflex counterparts *z*, *c*, *s*.

South of Yangtse dialect speakers may also mix up *n* and *ng* endings, pronouncing all *n* finals as *ng* finals, and Cantonese speakers do not usually distinguish between *n* and *l* and will, like other dialect speakers, more often than not, literally replace *r* initial with the semi-vowel *y*, and replace *h* with *f*.

Tones present even greater problems for native speakers from different regions, whether they are educated or not. The non-native-speaking learner will soon have to learn to deduce meaning from the context rather than from the actual pronunciation or tonalisation of the words dropped from a native speaker's lips.

SYLLABLES VERSUS WORDS

Phonological habits of the language make use of only 413 actual syllables through the combination of the language's existing initials and finals. If a few exceptional syllables like *hm*, *hng*, *m*, *n*, *ng* are added, the actual number of monosyllables used by the language is (413 + 5 =) 418 in total.[15]

In theory, the potential number of tonal syllables available for the language should come up to at least (418 × 4 =) 1,672 and with the addition of unaccented syllables, the total usable syllables should be (1,672 + 418 =) 2,090.

[15] Cf. Zhong, Qin (钟梫) 1978; Hu, Bingzhong (胡炳忠) 1978.

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