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Toward a dynamic grammar of Chinese

Zhang, Yiming, M.A.
Rice University, 1990
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TOWARD A DYNAMIC GRAMMAR OF CHINESE

by

YIMING ZHANG

A THESIS SUBMITTED
IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE
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May, 1990
Toward a Dynamic Grammar of Chinese

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Yiming Zhang

Abstract

This thesis is a description of basic Chinese grammar. Unlike traditional methods, the descriptions uses the Dynamic Grammar Notation System, a tool designed by Sydney M. Lamb for language description and language processing. All of the syntactic and semantic description is formalized into rules, so the grammar can be used either to understand basic Chinese syntax or as a rule base in natural language processing. Some issues related to machine implementation are also discussed in the first part of the thesis.
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This thesis is a partial description of Chinese grammar using the techniques of Dynamic Grammar. Dynamic Grammar (DG) has been designed by Sydney Lamb for two purposes: (a) Language Description; (b) Language Processing. Although the two approaches employ the same notation system, there are differences between them. If we take DG as a kind of software, then for approach (a), the processor is a human being. Thus in addition to correctness, readability is an important requirement. Great attention must be paid to organization, examples, and explanations for syntactic rules, and other documentation which can help to understand the grammar. For approach (b), the processor is a computer, and a DG specification will act exactly as a programming language. So a grammar for this purpose must emphasize precision, and quality of an implementation of DG would be evaluated by some general standards used for programs, such as run time efficiency, space efficiency, error recovery etc.

The present grammar is a compromise between the two approaches. On the one hand, I attempt to convince my readers that as a description tool, DG has advantages over traditional formats; on the other hand, I hope that my grammar can be
tested and practically used. It may be next to impossible to 
write an executable program without a proper compiler or 
interpreter. I have attempted to limit the necessity of future 
modification to a minimum. The following two sections describe 
considerations on achieving the above goals.

0200 The Form of the Description

0210 Assumptions about the Notation System

This thesis is written under the assumption that the 
readers are acquainted with DG and its notation system. 
However, it may be convenient for some readers to provide a 
summary of some of the features of DG here. Additional 
information is found in S.M. Lamb, 1989, "Notes on Dynamic 
Grammar" (unpublished).

The notation system of DG uses rule-like statements which 
are similar to dictionary entries. The essential function of 
an entry is to connect a unit of expression to its meaning or 
other function. The connection sign is "\". Its left side is 
called the expression side and right side is called the 
meaning side. If the connection sign is written as "/", the 
definition of the two sides is reversed.

DG divides a language into levels. But the processing 
does not go level by level in the way of a traditional 
stratified system. Any unit from the morphemic or higher 
levels may be connected directly with the conceptual level.
Thus most entries have conceptual information on the meaning side. Since English is the language of the documentation, English words are used as labels for concepts.

0220 Organization

1. The contents of the grammar are grouped in conventional ways. For example, sections are organized in the order of words, phrases, and sentences. This may aid readers, but rule base organization in the computer may be different for the sake of efficiency;

2. Examples and comments are given for all syntactical rules;

3. The notation system of DG is quite powerful. In many cases, there is more than one potential way to describe a phenomenon. The choice is always to favor to the most readable expression regardless of run time complexity;

4. Since a DG interpreter is not available, DG documentation provided by Lamb is the only tool currently available in developing a Dynamic Grammar implementation. The notation I have used is the 1989 version;

5. The most essential part of the grammar is its rule base. The base has two kind of rules: (a) entries for lexemes; (b). all others. We will discuss this in following section. Every entry of the rule base has a label. The label for a lexical entry begins with 'L', and those for all other rules begin with 'R';

6. To maintain coherence, each rule has only one entry in the
grammar. A rule may be copied elsewhere to clarify examples and comments, but such the copied rules are only part of the comments. They don't have labels, and are thus not entries.

0300 Consideration On Engineering Implementation

0310 Some Definitions

Parse Tree  If a DG interpreter successfully parses an input, a parse tree can be constructed by all the rules matched with last matched rule as its root.

Entries  Lexemic entries of DG are represented by leaves of a parse tree. All other rules can be represented by interior nodes of a parse tree.

Rule base  A rule base of DG, or dictionary, consists of lexemic entries and all other rules. Comments are not part of a rule base.

Transfer  When the left side of a rule is matched by an input, all variables are transferred to right side of the rule. The right side of the rule will be used as input of next round of matching.

Shift  The interpreter puts some combinations of input into its temporary data structure; this process is called shift.
The primary principle of selecting an lexical entry as given by Lamb is that a lexical entry must describe a lexeme. To apply this principle, we need to consider the question of productivity.

The Distinction between lexeme and non-lexeme is sometimes fuzzy. So one should be careful when deciding whether or not a combination of characters represents a lexeme as opposed to a productive construction. For example, the combination structure ㄈㄆㄤ 'liberation' + Noun is quite productive in mainland China.

1) 'Noun of liberation' ㄈㄆㄤ ㄓㄢㄓㄥ
   'war of liberation'
   ㄈㄆㄤ ㄐㄢ
   'liberation army'

2) 'liberated Noun' ㄈㄆㄤ ㄑㄢ
   'liberated area'
   ㄈㄆㄤ ㄅㄧㄥ
   'liberated soldier' (captured)

3) A brand name ㄈㄆㄤ ㄒㄧㄝ
   'liberation shoes'
   ㄈㄆㄤ ㄑㄨㄚ
   'liberation watermelon'

4) A style name ㄈㄆㄤ ㄓㄨㄤ
   'a suit in liberation style'
jīefáng tóu
' hair in liberation style'

So for each group of such words, one may find a certain kind of relation which can be described by a rule. But it is difficult to find a general rule(s) to describe the combinations.

0330 Semantic Representation

A dynamic grammar entry (lexical or syntactic consists of two sides. The left side is oriented towards expression, and right side towards meaning. The processing of to input is a bottom up parsing. A successful processing should end at the root of the input's parse tree, the intermediate representation (IR) of the input. The machine independent IR can be used either as input for translation to another language or directly interface with an application system such as an intelligent database. When considering the intermediate representation, there are two problems:

a) How much original information should be kept in IR?

First, it may be inevitable that we have to sacrifice some information. Because language is a dynamic system, no matter how hard we try, we can never reach completeness. We can find several books devoted to discussion of the Chinese particle de. But even if we input those books into our grammar, we may still find-counter examples out there.

Second, for practical application, it may not be necessary
to keep all information in IR. For example, if the grammar will be interfaced with a database about American's geography, it may be not necessary to keep information about tenses or aspects in IR.

b) Which form should IR have?

This question is directly related to application. Certain forms of IR may make the interfacing process easier than others. Take the link verb shi as an example, We have rule RSIII:

\[ NP:X1 \ V:LINK:Y \ NP:X2 \ \text{CL:DEC:}(REL:Y \ P1:X1 \ P2:X2); \]

| Li | shi | Zhōngguó rén |
| Li | shi | xùeshēng |
| Li | (shi) | shíbāsui |

In the IR, the link verb is treated as a relation which relates P1 and P2. This relation is quite simple so it is easy to be implemented. But if the grammar will interface with a relational database which provides three kind of information: age, occupation, and citizenship, it is worthwhile to consider more efficient IR forms. It is obvious that the relation of the IR forms provided by the above rule can not be matched with the relations the database might use because it is not specific enough. When the database gets the above IR form, it has to translate it again to get deeper semantic information. One way to
improve the procedure is to put relational information in
the noun entries such as:

\[ \text{sui \ N:(REL:age P1:Noun:person:< > P2:Num:< >)}; \]

Taking this form, the relational information is easy to be
transferred into a final IR. If the database get a form
like
\[ \text{CL:DEC:(REL:age P1:Li P2:18), it can be used directly to} \]
derive the desired data form the database.

0340 Recursion

In present grammar, some rules can recursively applied,
such as RNP401(section 2400): (VQ:X NP:Y \ NP:X:Y ;). If a
noun phrase is modified by more than one qualitative verb,
this rule will be applied several times. The result is still
noun phrase. Some rules can not be recursed. For example, a
noun phrase with determiner can not be directly modified by
another determiner.

Theoretically, dynamic grammar allows any kind of
recursion. But in this grammar, I have avoided left recursion
because it may cause troubles for some styles of parser.

0350 Ambiguity

The grammar has ambiguous rules. The reason we let the
ambiguities exist is that a) the natural language itself is
ambiguous b) certain types of ambiguous rules provide a
shorter, more natural specification than any equivalent unambiguous rules (see reference 1, page 247). Ambiguous rules result in conflicts in parsing an input. There are two kinds of conflict:

1. Transfer/transfer (t/t) conflicts

   When an input matches more than one rule but the interpreter cannot decide which is the correct choice for further processing, it causes a t/t conflict. For example: a zai phrase can be used as a verb phrase as in rule RV321, or as a prepositional phrase as in rule RQ101. This is a typical t/t ambiguity.

2. Transfer/shift (t/s) conflicts

   When an interpreter cannot decide whether to match a rule or to put more input into temporary data structure for a more proper match, it causes (t/s) conflicts. For example:

   If we have the input sentence:

   \[
   \text{Zhōngguó rénmíng jīfāngjūn shā Zhōngguó rénmíng.}
   \]

   Chinese people liberation army kill Chinese people

   'The people's liberation army of China kills Chinese people'

   Constituents A, B, C, D, E, and F are all NPs. When the interpreter sees the input Zhōngguó rénmíng in its temporary data structure, and next input jīfāngjūn, it can not decide whether it should use rule RNP401 to group A and B first, or whether it should shift C into the temporary
storage for a more proper NP search. The underlines shows the correct grouping.

There are several ways to handle the ambiguity:

a) Self termination

The interpreter will try all possible matches, usually only one possibility can successfully reach a final IR. All others will be ruled out sooner or later along the way. The trade-off for this method is that if the number of ambiguous rules is large we will spend too much time on ambiguity handling.

b) Context Sensitive Checking

The function of some structures can be decided only after we go through whole input. For the example of the zai phrase, we can go through rest of input to check if there is an other possible main verb. If there is, the zai phrase is a prepositional phrase, otherwise it is verb phrase.

c) The largest match has priority

d) The first match has priority

For c) and d), the interpreter may need backtracking.

e) Complex lexemes

Such forms as rénmíng jiěfāngjūn 'people's liberation army' can be treated as a complex lexeme.

0360 Heuristic Ways to Improve Complexity

Complexity discussion of a dynamic grammar should be also
related to the algorithm of the interpreter. It is beyond the topic of this thesis. I just provide here a heuristic way to organize the rule base, which may greatly affect the complexity of dynamic grammar.

Suppose the grammar has $n$ entries and $k$ rules; for a sentence at length of $i$, the average number of the rules needed for a successful match is $r$. If we have a single dictionary for both entries and rules, the time needed for a successful sentence parsing is thus an arithmetic average of following:

$$(n + k)i + (n + k)r$$

If we separate the dictionary into two bases, one for entries and another for all other rules, the above number will be reduced to:

$$ni + kr$$

0400 Coverage
--------------

The grammatical information covered by the grammar is approximately that of the teaching grammar "Chinese For Americans" by Ching-Yin Dougherty (1981). To avoid lengthily listing, the number of lexical entries in this grammar is not very large. It is easy to put more entries in the dictionary if one follows the principles discussed above.

0500 Acknowledgements
-----------------------
I am deeply grateful to my advisor Sydney M. Lamb. I especially appreciate both the amount of time that he spent with me, and the incomparable expertise that he has contributed to the solution of my problems.

I also appreciate all of the assistance and attention that my committee has given.
Pronouns And Nouns

Pronouns

Pronouns --- Singular

wǒ \ PN: I ;
nǐ \ PN: you ;
tā \ PN: (he, she, it ) ;

Pronouns --- Plural

PN: (I, you) -men \ PN: (we, you_pl) ;
PN: (he, she, it) -men \ PN: they ;

wǒ men ' we '
nǐ men ' you '
tā men ' they '

PN by itself can be used as noun phrase.

PN: X1 V: Y PN: X2

tā jiao nǐ. ' He calls you. ' 

Nouns

Human Nouns
Vocabulary

LN101 rén \ N:HUMAN:person ;
LN102 xūesheng \ N:HUMAN:student ;
LN103 xiānsheng \ N:HUMAN:(teacher, Mr.) ;
LN104 lǎoshī \ N:HUMAN:teacher ;
LN105 xiǎojie \ N:HUMAN:Miss ;

1220 Inanimate Nouns
---------------------

Vocabulary

LN201 zhúōzi \ N:INMT:table ;
LN202 diànsī \ N:INMT:TV ;
LN203 zhōngwén \ N:INMT:Chinese_laguage ;
LN204 shìqīng \ N:INMT:(business,matter) ;

1230 Time Nouns
---------------

Vocabulary

LN301 zuòtīān \ N:TIME:yesterday ;
LN302 jīntīān \ N:TIME:today ;
LN303 shāngwǔ \ N:TIME:morning ;
LN304 xiàwǔ \ N:TIME:afternoon ;
LN305 qúnián \ N:TIME:last_year ;
LN306 jīnnián \ N:TIME:this_year ;

1240 Locative Nouns
-------------------
Vocabulary

LN401 Zhōngguó \ N:LOC:China ;
LN402 xuéxiào \ N:LOC:school ;
LN403 bāngōngshǐ \ N:LOC:office ;
LN404 jīchǎng \ N:LOC:airport ;
LN405 jiāoshǐ \ N:LOC:classroom ;
LN406 gōngyuán \ N:LOC:park ;

1250 Generic Locative Nouns

-----------------------

Vocabulary

LN501 lóu \ N:GLOC:building ;
LN502 lu \ N:GLOC:road ;
LN503 jīe \ N:GLOC:street ;
LN504 shān \ N:GLOC:mountain ;
LN505 hé \ N:GLOC:river ;
LN506 wūzi \ N:GLOC:room ;

The difference between N:LOC and N:GLOC is that the former includes all the places one can 'go' to, that is, they occur in the verb frame dào...qu. For example, (LV401)

VL:go_to N:LOC:X \ VP:(Proc:go_to P2:X) ;

dào Zhōngguó qu 'go to China'

But one can not say 'go to building' by dào lóu qu.
However, when an N:GLOC is modified by a proper name, a determiner, a possessive adjective or a number then the combination is a location N:LOC which one can actually 'go to'

(see section 2700 RNP702, RNP703)

1260  Positional Locative Noun and Positional Suffix

Vocabulary

LN601  shäng \  N:PLOC:top ;
LN602  xia    \  N:PLOC:below ;
LN603  zūo    \  N:PLOC:left ;
LN604  you    \  N:PLOC:right ;
LN605  páng   \  N:PLOC:side ;
LN606  lǐ      \  N:PLOC:inside ;
LN607  wai    \  N:PLOC:outside ;
LN608  qián   \  N:PLOC:front ;
LN609  hou    \  N:PLOC:back ;
LN610  (mian,tóu,biān) \  N:PSFX:-side ;

N:PLOC purely indicates a position, direction etc. Elements in N:PLOC usually are monosyllabic. An N:PLOC is usually not used as a noun phrase by itself. They should be followed by the positional suffix N:PSFX. The following rules capture the relations among N:LOC, N:GLOC and N:PLOC:
RN601 N:LOC:X \ N:PSFX:Y / N:LOC:X ;

shang  mian  'top'
li     tou    'inside'
you    bian   'right side'
Determiners, Numbers, Classifiers, and Noun Phrases

Determiners --- DD

Vocabulary

LNP101  zhe  \  DD: this ;
LNP102  na  \  DD: that ;

Determiners are demonstrative adjectives which usually precede a number and a classifier. If the number is yi ('one'), it may be omitted.

RNP101  DD: X1  [NUM: Y]  MSR: X2  \  DDP: [Y]: X1 ;
         na                  ge  ' that one'

DD or DDP can act as NP, like pronouns, or modify NP:

RNP102  DD: X  \  NP: X ;
RNP103  DDP: X  \  NP: X ;
         zhe   shi  shenme   'what is this ?'

RNP104  (DD, DDP): X  \  NP: Y  \  NP: DD: Y & Y !> DD

         (Y can not include DD)
         zhe  liang ge  zhungguo ren   'these two Chinese'

(see 2500)
2200  
**Simple Noun Phrases**

All pronouns, determiners, and nouns can function as NPs.

RNP201  \[ N: X \setminus NP: X \ ];

RPN202  \[ PN: X \setminus NP: X \ ];

(see also RNP102, RNP103 above)

2300  
**Noun Phrase Modified by Another Noun Phrase**

A noun may be modified by another noun if the two are related in some sense. The first noun usually delimits the second noun, which is generic.

RNP301  \[ NP: X \setminus NP: Y \setminus NP: X: Y \ ];

zhōngguó  rén  \[ 'Chinese' \]
měiguó  xúesheng  \[ 'American student(s)' \]

2400  
**Noun Phrases with Adjective Modifiers**

We class adjectives as qualitative verbs, VQ. We will discuss this in section 3220. Like other noun modifiers, an adjective always comes before the head noun.

RNP401  \[ VQ: X \setminus NP: Y \setminus NP: (VQ: X): Y \ ];

hǎo  rén  \[ 'good person' \]
da  guó  \[ 'big country' \]
The head of a NP is always last. The closer the semantic relationship between the head and modifier, the closer the physical distance between the two lexemes. The semantic relations are conventionally built in the speaker's linguistic system. For example, the order of adjectives designating shapes, colors and sizes is SIZE-COLOR-SHAPE-NOUN. That is,

$$\text{RNP402}$$

$$[\text{VQ:SIZE:X1}] [\text{VQ:CLR:X2}] [\text{VQ:SHP:X3}] \text{NP:Y} \ \backslash$$

$$\text{NP: [SIZE:X1]:}$$

$$[\text{CLR:X2}]: [\text{SHP:X3}]: \text{Y}$$

da bái fāng zūozi 'big white square table'

The elements inside the square brackets can end with 'DE'.

$$\text{RNP403} \ \text{VQ:Y:X DE } \backslash \text{ VQP:Y:X ;}$$

$$\text{RNP404} \ \text{VQP:X } \text{NP:Y } \backslash \text{NP: (X): Y ;}$$

da de bái fāng zūozi 'big white square table'

2500 Noun Phrase Modified by a Number and a Classifier

Typically in Chinese NP can be modified by a number and a classifier to form NPM. But the NPM can not recur by itself like NP, i.e. NPM can not be directly modified
by another measure word.

yī zhāng da bái fāng zhūōzi 'a big white square table'

A NP or NPM can be further delimited by a determiner.

zē yī zhāng da bái fāng zhūōzi 'this big white square table'.

A pronoun followed by a de may modify a NP to form a possessive relation. The modified NP may only be implied. The resulting phrase is labeled as NPP. NPP is different from NP in that NPP can not be further modified by pronouns, measure words or other noun phrases.

wǒ de shū 'my book' ;
nǐmén de (bǐ) 'your pens' ;
(NP,NPD):X VC:be (NP,NPD):Y

nǐ de bǐ shì wǒ de 'your pen is mine'


wǒ de wūzi 'my room'

RNP703


na jiān wūzi 'that room'
yī jiān wūzi 'one room'

wǒ de na jiān wūzi 'my (that) room'

The relations treated by RNP201 to RNP703 can be summarized as follows,
zhōu zi 'table'
fāng zhōu zi 'square table'
bái de fāng zhōu zi 'white square table'
da de bái fāng zhōu zi 'big white square table'
yī zhāng da bái fāng zhōu zi 'a big white square table'
wǒ de zhē zhāng da bái fāng zhōu zi 'This big white square table of mine'

2800 Numbers

Vocabulary

LM801 yī \ NUM:one ;
LM802 èr \ NUM:two ;
LM803 sān \ NUM:three ;
LM804 sì \ NUM:four ;
LM805 wù \ NUM:five ;
The number system in Chinese is comparatively simple. In English there may be more than three ways to say a number. For example, number 1,505 can be said as 1.'fifteen O five', 2.'fifteen hundred and five', 3.'one five zero five' and 4.'one thousand five hundred and five' and so on. But in Chinese typically there are only two ways to denote a number, the short way and the formal way, which are similar to 3 and 4 above.

a. To say a number in the short way

   i) A number that can be said in the short way should have more than two digits. For example, the number 25 can not be said as er wu, which would be confused with ten, because er wu is interpreted as 'two by five'.
ii) A number can not be said partly in the formal way and partly in the short way, i.e. expression such as shí wù línɡ wù does not occur.

b. To say a number in the formal way

To read a number formally from left to right, one reads the leftmost number, then its weight, then the next right number and its weight, and so on. For a two-digit number, the left number may be omitted if it is one, that is, we may say shí wù 'fifteen' instead of yī shí wù. But the weight can not be omitted.

```
RM801
[NUM:one],NUM:X1) NUM:WEIGHT:ten [NUM:X2] \n
NUM:(10(one,X1)+[X2])
& X2 != zero
X1 != one;
```

<table>
<thead>
<tr>
<th>Number</th>
<th>Formal Representation</th>
</tr>
</thead>
<tbody>
<tr>
<td>yī shí wù</td>
<td>'fifteen'</td>
</tr>
<tr>
<td>bā shí sān</td>
<td>'eighty three'</td>
</tr>
<tr>
<td>jiǔ shí</td>
<td>'ninety'</td>
</tr>
</tbody>
</table>

However, zeros between non-zero digits are read out, with weight omitted.
RM802

NUM:X1  NUM:WEIGHT:hundred  NUM:zero  NUM:X2  \ 
NUM:(100X1+X2) &
X2 != zero;

qī  bāi  lǐng  sì  '704'

Ordinal numbers

Ordinal numbers are derived from cardinal numbers by compounding with di:

LM817  di  \  prefix:-th  ;
RM103  prefix:-th  NUM:X  \  NUM:ORD:X-th  ;

di  sān  'third'
di  shíyī  'eleventh'

Numbers used as adjectives

A number can occur in adjective position. When numbers are used as adjectives, they are usually followed by measure words or classifiers. Examples are given in 1350
and following section.

2900 Classifiers
-----------------

Vocabulary

<table>
<thead>
<tr>
<th>LM901</th>
<th>gē</th>
<th>MES:ge</th>
</tr>
</thead>
<tbody>
<tr>
<td>LM909</td>
<td>zhāng</td>
<td>MES:zhāng</td>
</tr>
<tr>
<td>LM903</td>
<td>tóu</td>
<td>MES:tóu</td>
</tr>
<tr>
<td>LM904</td>
<td>jiān</td>
<td>MES:jiān</td>
</tr>
<tr>
<td>LM905</td>
<td>kuai</td>
<td>MES:kuai</td>
</tr>
</tbody>
</table>

Classifiers are also called measure words. They must be used between a number and a noun phrase. The classifier, which may have reference to some attributes of the noun with which it occurs, often has no translation in English. A noun is associated with one or more specific classifiers. Agreement between classifier and noun is very important. A misused classifier may cause serious misunderstanding. For example, rén, 'person', uses gē as its measure word; and zhū, 'pig', uses tóu. One may measure pig with gē which sounds a little odd, but it is very insulting to measure a person with tóu. Although some measure words are in some sense related to the noun, there are others whose relationship can not be logically explained. Take several common measure words for example:
<table>
<thead>
<tr>
<th>MEASURE WORDS</th>
<th>CORRESPONDING THINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>gē</td>
<td>person, word, degree etc</td>
</tr>
<tr>
<td>zhī</td>
<td>mouse, tiger, box, stool etc</td>
</tr>
<tr>
<td>pǐ</td>
<td>horse, cloth etc</td>
</tr>
<tr>
<td>tóu</td>
<td>cow, pig, garlic etc</td>
</tr>
<tr>
<td>tiáo</td>
<td>dog, snake, experience etc</td>
</tr>
</tbody>
</table>

So it is impossible to find semantic or syntactic rules to relate a noun with its measure words. The only way to combine them correctly is by means of measure word information in every specific noun entry. For the same noun, different combinations with different measure words may have differences in meaning. So a noun may have several alternatives. This is not done in the preceding section. It is trivial to put measure word information in noun entries. Examples are given below:

```
LM906  zhī \ NOUN:((MSR:zhāng):sheet_of_paper
\ , (MSR:dīe):stack_of_paper
\ , (MSR:tōng):roll_of_paper
\ , (MSR:túan):wad_of_paper) ;

RM901  NUM:X  MSR:X  NP:Y \ NP:(NUM:X):Y ;
yī zhāng zhūozi 'one table'

si dīe zhī 'four stacks of paper'
```
shi in many cases is similar to English 'to be'.

NP:X  V:\be \  NP:Y

wǒ  shí  zhōngguó rén  'I am Chinese'

NP:X  V:\be \  VQP:Y

zhōuzi  shí  hěn dà de  'The table is
indeed very big'

zhōuzi  shí  huai de  'The table is broken'

Vocabulary

LV211  lái  \  V:INT:come;
LV212  shanglái \  V:INT:come_up ;
LV213  jinlái  \  V:INT:come_in ;
LV214  zǒu  \ V:INT:walk :
LV215  fēi  \ V:INT:fly :
LV216  qù  \ V:INT:go :

RV211  NP:X  V:INT:Y  \  CL:DEC:(Proc:Y P1:X) :

nǐ  lái  'you come'
tā  qù  'he goes'

3220  Intransitive Verbs II  --- Qualitative Verbs

Vocabulary
LV221  da  \ VQ:SIZE:big :
LV222  hóng  \ VQ:CLR:red :
LV223  fāng  \ VQ:SHP:square :
LV224  hǎo  \ VQ:QLT:good :
LV225  dài  \ VQ:QLT:right :
LV226  xíng  \ VQ:QLT:ok :

Qualitative verbs and Adjectives are the same class. As discussed in (2400), qualitative verbs can be sub-grouped by size, color, shape, and quality etc. Qualitative verbs can be modified by the adverb of degree hěn:

RV222  ADV:X  VQ:Y  \  VQP:(ADV:X):Y :
hœn da 'very big'

Qualitative verb phrase (VQP) can also be followed by the particle le to indicate inchoative aspect:

RV223 VQP:X PTCL:LE \ VQP:X ASP:comp ;

hœn da le 'become very big'

Qualitative verbs can be negated by ba. However, as ba can also negate adverbs, the meaning is quite different for different positions of ba.

RV224 [NEG:ba] VQP:Y \ VP:(CL:[NEG]: (REL:YP1:<>));

ba hœn 'not good'

RV225

NEG:bu VQP:(ADV:very):Y \ VP:(CL:NEG: (REL: (ADV:very):YP1:<>));

ba hœn hœn 'he is not very good'

RV226


hœn ba hœn '(he) is very bad'
Transitive Verbs

---

Transitive Verb I --- V:TR

Vocabulary

LV311  nían  \ V:TR:read_aloud ;
LV312  chǐ  \ V:TR:eat ;
LV313  xǐe  \ V:TR:write ;
LV314  zào  \ V:TR:do ;
LV315  chang  \ V:TR:sing ;
LV316  dōng  \ V:TR:understand ;

V:TR is a transitive verb which usually takes one noun phrase as its object.

RV311  V:TR:X  NP:Y  \ VP:(PROC:X
P1:< >
P2:Y) ;

nían  shū  'read book'

nían  zhōngwén shū  'read a Chinese book'

nían  hěn xǐng de zhōngwén shū  'read a brand new Chinese book'
Transitive Verbs II --- V:TL

Vocabulary

V:TL is a transitive verb that takes only a locative noun or a time noun as its object.

There are syntactic differences between zai and dao. dao may or may not be followed by suffix le, depending on the aspect. On the other hand, zai is an existing condition, it is never followed by le in Mandarin. (This is not true in the Wu dialect, however)
Transitive Verbs III --- VTT

Vocabulary

LV331  zū \ V:TT:rent ;
LV332  jie \ V:TT:borrow ;
LV333  huáng \ V:TT:teach ;

Similar to verbs with two objects in English, a V:TT can have both direct and indirect objects.

RV331

V:TT:X  NP:Y1  NP:Y2 \ VP:TT:(Proc:X  P1:< >  P2:Y1
                 P3:Y2);

huán  tā  zhe běn shū  'return him this book'
jie  wǒ  yī bǎi yuán  'lend me a hundred dollars'

Transitive Verb IV --- V:TS, V:TSC

Vocabulary

LV341  shūo \ V:TS:(say,talk) ;
LV342  kān \ V:TS:watch ;
LV343  tīng \ V:TS:listen ;
LV344  tīngshūo \ V:TSC:heard_about ASP:comp ;
LV345  tīngjian \ V:TSC:listen ASP:comp ;
LV346  juéde \ V:TS:feel ;
LV347  xīwang \ V:TS:hope ;
LV348  kanjian \ V:TSC:see ASP:comp ;
The object of V:TS may be either a noun phrase or a whole clause.

NP:X1 V:TS:Y (NP,CL):X2 \ CL:DEC:(Proc:Y P1:X1 P2:X2);

tā shuō zhōngguó hua 'he speaks Chinese'
tā shuō lǎoshī lái le 'he said, the teacher is coming'
tā shuō tā bìng le 'he said he was ill'

V:TS is negated by bu. But in the case of kanjian, tīngjian and tīngshuō above, the complement jian or shuō indicates a completed action. Therefore it may be better to include them into class V:TSC which is negated by méi or méiyōu.

RV312 NEG:(méi,méiyōu) VP:Y \ NEG:VP:(Y ASP:comp) ;
méiyōu kanjian tā 'have not seen him'

3350 Transitive Verbs V --- V:TO
--------------------------------

Vocabulary
LV351 qǐng \ V:TO:(invite, ask) ;
LV352 ràng \ V:TO:allow ;
LV353 bāng \ V:TO:help ;
LV354 bāngzhā \ V:TO:help ;
LV355 quàn \ V:TO:persuade ;
LV356 shǐ \ V:TO:make ;
The class V:TO includes transitive verbs that can take a dual complement consisting of both a noun phrase and a verb phrase; the noun phrase functions both as subject of the verb phrase and as the object of the V:TO. We label the clause following the V:TO as a special participant PS.

RV351
V:TO:X NP:Y (,VP:Y1) \ VP:(Proc:X
P1:< > P2:X
(,(P3:CL:(P1:Y VP:Y1)));
jiāo  tā  'teach him'
jiāo  tā  xué yīngyǔ 'teach him to learn English'
qǐng  nǐ  'invite you'
qǐng  nǐ  chīfan 'invite you to (have) dinner'

3360  Transitive Verbs VI--- V:TTIC
-------------------------------------

Vocabulary
LV361  gàozì \ V:TTIC:tell ;
LV362  wèn  \ V:TTIC:ask ;
LV363  gěi  \ V:TTIC:give ;
LV364  sōng  \ V:TTIC:send ;

Similar to V:TT, V:TTIC may also take two objects.
The difference between them is that the direct object of V:TTIC may be expanded into a sentence.

RV361
gaosu wǒ yī jiā huà 'tell me a sentence'
gaosu tā wǒ jiāo Líming 'tell him I am Líming'

V:TT in 3330 can compound with gēi, the resulting compound word syntactically functions as V:TTIC with the meaning from V:TT part.

RV362 V:TT:X V:TTIC:give \ V:TTIC:X_to ;
 sòng gēi 'give to'

3370 Possessive Verb 'yǒu'
-----------------------------

LV371 yǒu \ V:TRY:(have, there_be) ;

yǒu can be considered as a transitive verb because it always implies an object. The main difference between yǒu and other verbs is that yǒu should be negated by méi when yǒu is the main verb of the clause.

RV372 NP:X1 V:TRY:X2 NP:Y \ CL:(REL:X2 P1:X1 P2:Y) ;

tā yǒu xiōngdì 'he has brother(s)'
RV373
NP:X1 NEG:mei V:TRY:Y NP:X2 \ CL:NEG:(REL:Y P1:X1 P2:X2);

 ámb méi yōu xiāngdi 'he doesn't have brothers'

But when méi negates a verb other than yōu, méi equals to méi yōu. Here, the actual semantics of méi or méi yōu is 'not' + 'past tense or perfect aspect'

RV373
NP:X NEG:(méi,méiyōu) VP:Y \ CL:NEG:(PROC:Y ASP:pst P1:X);
wūmén (méi,méi yōu) qū 'we didn't go'

3400 Other Verb Phrases
--------------------

Verb types and their related phrases are described in the above sections. Included here are some fixed verb patterns in a selected corpus in the text. They may be thought of as 'frames' rather than as phrases.

dào..qù (see 3320,1250)
LV401  dao..(qù,lái) \ V:TL:go_to ;

dào  jiaoashi qù 'go to class room'
zai..VP

RV402

V:TL:be_in [N:LOC:X] VP:Y \ VP:(Proc:Y Loc:X Tns:ing);

zai xúexiao xúexí 'studying in the school'

v yī v, v yīxia

yī or yīxia mean 'one' or 'once', so this type of phrases means 'do something once' or 'do something leisurely'. There is no direct English counterpart for this type. At the semantic level, the phrase can be converted into an intransitive verb.

RV403  v:X yī v:X \ v:INT:X ;
RV404  v:X yīxia \ v:INT:X ;

nian yī nian 'read (once)'
kan yīxia 'glance at (once)'

3500  Verb Suffix
----------
A verb suffix usually indicates aspect.

3510  Verb Suffix I --- le
----------
LV511 le \ :LE
a. 'le' immediately following transitive verb

RV511  V:TR:X :LE \ V:TR: ( PROC:X ASP:perfect ) ;

dú le 'have read'
xiě le 'have written'

RV512


[ASP:Y2]
P1:X1 P2:X2 )

wó dū le yī běn shū ' I read a book '
tā xiě le wǔ ge zi ' he wrote five words '

b. 'le' occurring at the end of a verb phrase

'le' may occur at the end of a verb phrase to indicate a change of state or inchoative aspect or a new situation, which may also be considered as an aspect state.

RV513  VP:X :LE \ VP:X ASP:comp

xia yǔ le ' It's starting to rain '
(tā) lái le ' (He) is on the way ' 
When *le* occurs at the end of a negated clause or verb phrase, it has same meaning, and so the clause indicates a transition to the negated state.

(RV514)

(\text{CL,VP):NEG:DEC:X} :LE \ \ (\text{CL,VP):NEG:DEC:X} \ \text{ASP:comp}

- tā ba chōu yān \ le \ 'He is no longer smoking'
- wǒ ba néng chī \ le \ 'I can not eat any more'

3520 \ Verb suffix II --- guo

LV521 \ guo \ :GUO

The suffix *guo* indicates that action has been experienced before.

(RV521)

\text{V:X} \ :GUO \ \ V:X \ \text{ASP:expd ;}

- qu \ guo \ 'have been to'
- chī \ guo \ 'have eaten'

(RV522)

\text{V:X} \ \text{ASP:expd} \ \text{NP:X2} \ \ \text{VP:( CL:(PROC:X P1:< > P2:X2}
\ \ \ \text{ASP:expd })}

- qu \ guo \ yīng \ guo \ 'He has been to England'
- chī \ guo \ zhōngguó fàn \ 'I have eaten Chinese food before'
The suffix *zhe* is used to indicate continuous action, equivalent to the English progressive marker *be...ing*.

```
RV531  V:X    :ZHE  \  V:X    ASP:ing ;
  shuo    zhe    ' is speaking '  
  tang    zhe    ' is lying '    
  zhan    zhe    ' is standing '  
```

```
RV532  V:Y [ASP:ing] NP:X2  \  VP:(CL:DEC:( PROC:Y  
P1:< > P2:X2  
ASP:ing ))
  chi    zhe  fan    ' be eating rice '  
  kai    zhe  chao    ' be driving '  
```

In Chinese, a tense marker is not necessary to indicate progressive action, so unless emphasized, *zhe* is often not used. If verb + *zhe* is followed by another verb phrase, it serves to describe the manner in which the verb phrase is carried out:
RVS533

NP: Y  VP: X1 : ZHE  VP: X2 \ CL: DEC: ( PROC: X2

MANNER: X1

ASP: ing

P1: Y )

tā  zhan zhe  shūō 'He is speaking standing up'

tā  tǎng zhe  kānshū 'He is lying and reading'

tā  xiao zhe  chāng 'She is singing with a smile'
4000  Prepositions and Prepositional Phrases

A preposition is a word that combines with a noun phrase to form a prepositional phrase. The latter serves as an adverbial adjunct to the main verb phrase or to the whole clause.

4100  Preposition I — zai

LQ101  zai \ Prepl:ZAI

(also occurs as verb, see 3320)


zai       chéng lǐ        'in the city'
zai       zúotiān        'yesterday'

zai indicates a location in space or time.
The zai phrase may occur in three positions in a sentence

---- before subject
---- after subject
---- after verb

The following rule is written with "/" in the middle instead of "\". That is, the two sides are opposite from those of other rules.
English translations of the three sentences above are: 'I have a car in the city.' The last one means 'I have a car left in my friend's home who lives in the city. In fact, the placement of the prepositional phrase is associated with subtle distinctions of meaning, but they are not described by the rule.

**gěi** can be a main verb as in section 3330. When it occurs as a preposition, the *gěi* phrase may occur before or after the main verb. When it occurs before the main verb, it means 'for'(benefactor); when it occurs after main verb, it means 'to'(receiver):
RQ201  prep2:GEN NP:X \ PREP2:X

gěi  wǒ  'give me' or 'for me'

RQ202  PREP2:X VP:Y \ VP:Y Bnfr:X

gěi wǒ chǎng ge gě  'singing a song for me'
gěi tā zuo shì  'doing things for him'

RQ203  VP:X PrepP2:Y \ VP:X Rcvir:Y

mai chē  gěi tā  'sell the car to him'
dā diànhua gěi wǒ  'ring the phone to me (call me)'

4300  Preposition III --- gēn and tóng
-----------------------------------------------
LQ301  (gēn,tóng) \ Prep3:GEN ;

Prepositions of class Prep3 phrase have a
comitative function and can be translated 'with' or
'and'.

RQ301  NP:X1 prep3:Y NP:X2 \ NP:(X1 and X2)
wǒ  gēn  wǒ de péng yǒu  'I and my friends'
zhe jiān shì tóng  na jiān shì  'this thing and
that thing'
Preposition IV --- ná and yěng

These prepositions have an instrumental function.

Prepositional phrases with Prep5 indicate type of conveyance.
4600 Preposition VI
-------------

Vocabulary

LQ601 cónɡ \ Prep6:from
LQ602 lí \ Prep6:from
LQ603 xiānɡ \ Prep6:to
LQ604 wānɡ \ Prep6:to

The object of prep6 is always a location, a time noun or a number + measure. 'xiānɡ' and 'wānɡ' are actually interchangeable.

RQ601

Prep6:X (N:LOC, N:TIME, NPM):X1 \ PrepP6:(X):X1

cónɡ zhōnɡ qúo 'from China'
cónɡ yī jiōu qī sì nián kāi shǐ 'beginning from 1974'
cónɡ bā shí dà qǐ 'start from 80 degrees'
lí dà xūe 'from the university'
xiānɡ dōnɡ 'to the east'
xiānɡ xī 'to the west'

RQ602

NP:X PREP6:X2 V:INT:Y2 \ CL:DEC:(PROC:Y2
P1:X
LOC-TIM:X2 )
wǒ  cóng zhōngguó  lái  'I come from China

tā de jiā  lí xué xiao  hěn yuǎn  'His home is very far from the school'

tā  xiàng dōng  zǒu qù  'He walks toward the east'
Adverbs are those words which modify verb phrase or other Adverbs.

Negative Adverb --- ba, mei you

ba can negate verbs and adverbs. But if (a) the verb indicates a complement or experienced aspect, or (b) the verb is you, then the negative adverb should be mei or mei you.

(see section 3370)

wò ba lái 'I will not come'

Adverbs I

ADV1 adverbs are those occur before a verb.

Vocabulary

jia \ ADV1:soon
dōu \ ADV1:entirely ;
jīng cháng \ ADV1:frequently

dōu qu ' all go '
jīng cháng lái ' frequently come '

The above rule can be applied recursively. There are semantic differences when two or more ADVs occur in different orders. This can be illustrated as follows, where ADV can be both negative adverb or ADV:

```
S
  \ VP
  \ VP
  \ VP
  NP ADV ADV ADV VP
```

tā mén lái ' They are coming '
tā mén bu lái ' They are not coming '
tā mén dōu bu lái ' They are not coming at all'  
tā mén bu dōu lái ' Not all of them are coming'  
tā mén dōu bu jīng cháng lái ' They all do not come frequently'
5200 Adverb II

Vocabulary

LA201  hūrán  \  ADV2:suddenly ;
LA202  like   \  ADV2:immediately ;
LA203  běnlái  \  ADV2:originally ;
LA204  yǐqián \  ADV2:formerly ;
LA205  qīchū \  ADV2:at_first ;

The time nouns in section 1230 are also adverbs of this type. So we have:
RA201    N:TIME:X \  ADV2:X ;

An important syntactic feature of ADV2 is that they can occur either before or after the subject.

RA202


hūrán  dianhua  xiǎng le. 'Suddenly the telephone rang'
dianhua  hūrán  xiǎng le. 'The telephone suddenly rang'
jīntiān  wǒ  qǐngke  'today is on me'
wǒ  jīntiān  qǐngke

5300 Adverb III --- Adverbs of degree

----------------------------------------
Vocabulary

LA301 hěn \ ADV3:very ;
LA302 zuì \ ADV3:most ;
LA304 gen \ ADV3:more ;
LA305 fēicháng \ ADV3:extremely ;
LA306 jí \ ADV3:extremely ;
LA307 shìfān \ ADV3:quite ;

Adverb ADV3 can only modify qualitative verbs. A qualitative verb can only be modified by a single ADV3, that is, the rule with ADV3 is not recursive.

RA301 ADV3:Y VQ:X \ VQP:(ADV:Y):X ;
  hěn lěng 'very cold'
  zuì lěng 'coldest'
  gen lěng 'colder'
(fēicháng,jí) lěng 'extremely cold'

5400 Adverb IV
-------------

LA401 jí \ ADV4:extremely-n ;
LA402 tou \ ADV4:extremely-b ;

A distinct feature of ADV4 is that they may immediately follow a VQ. Notice that although jí and tou both mean 'extremely', the former is neutral, and can modify all VQs, the latter is used mainly with a pejorative VQ.
nǎo ji 'extremely good'
huái tou 'extremely bad'
6100 Basic Sentence Patterns

A basic sentence is a sentence with only one clause. All clauses in Chinese are built upon one of the five patterns. Actually, we have met all of them in the previous discussions. So the following is a summary.

6110 Basic Sentence Pattern I

A clause with two nominal or noun phrases optionally linked by a linking verb.

RS111

Washington shí Měiqúó rén 'Washington was an American'

tā shí bā suí 'he is eighteen years old'

6120 Basic Sentence Pattern II

A clause with a noun phrase as subject and an intransitive verb.

RS121 NP:X V:INT:Y \ CL:DEC:(PROC:Y P1:X) ;
niǎo  fēi  'bird fly'
tā  lái  'he come'
na ge rén  pāo  'that man run'

6130  Basic Sentence Pattern III

This pattern is a clause with a qualitative verb or qualitative verb phrase. Note that the role of the qualitative verb here to the subject is more a relation than a process.

RS131  NP:X  (VQ,VQP):Y  \  CL:DEC:(REL:Y  P1:X);
jīejie  gāo  'elder sister is taller'
zhuōzi  hěn da  'the table is very big'

6440  Basic Sentence Pattern IV

These clauses have a subject, a transitive verb, and a direct object. The VP structure RV311 discussed in 3220 is an example:

V:TR:X  \  NP:Y  \  VP:(PROC:X
        P1:< >
        P2:Y)  ;

nian  shū  'read book'
nian  zhōngwén shū 'read Chinese book'
So the sentence structure is:

RS141

NP:X  VP:(..P1:< >..)  \  CL:DEC:(..P1:X..);

Wáng xiānshēng  jiāo  zhōngwén  'Mr. Wang teaches Chinese'

xuéshēng  zuò  wénzhāng  'student(s) are writing papers'

tā  kànjiān  wǒ  'he saw me'

6150  Basic Sentence Pattern V

The clauses of this pattern have two objects. They use the VP structure RV331 discussed in 3330; for example:

RV331

V:TT:X  NP:Y1  NP:Y2  \  VP:TT:(Proc:X P1:< > P2:Y1 P3:Y2);

huángěi  tā  zhè běn shū  'return this book to him'

jiēgěi  wǒ  yī bǎi yuán  'lend me a hundred dollars'

RS131

NP:X  VP:(..P1:< >..)  \  CL:DEC:(..P1:X..);

Wáng taitai  gěi  tā  shū  'Mrs. Wang gives him the books'
wǒ huángǎi nǐ qián 'I return the money to you'

6160 Sentences With Adverbial Structures
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All the sentence types listed above may also include adverbial structures that give the predicate a setting in time or space, or indicate a condition, reason, cause, manner of action, etc. The clause structure of these types is already discussed above in the sections on adverbs.

6200 Interrogative Forms of Basic Sentences
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6210 Interrogative Forms I
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The Simplest question form in Chinese is marked by a rising pitch at the end of a declarative sentence. The intonational distinction between a statement and a question seems to be universal in all languages. In written form, the intonational difference can be indicated by a question mark.

RI210

CL:DEC:X ? \ SEN:QUE:POL:X ;

tā lái ? 'Is he coming?'

tā shì Lǐ xiānshēng ? 'Is he Mr. Li?'
This type of question is formed by adding the interrogative final particle ma. Structures of RI210 and RI221 are almost interchangeable. That is, they really refer to the same question if they apply to the same declarative clause, with only a very subtle difference in meaning.

RI221 CL:DEC:X ma ? \ SEN:QUE:POL:X ;
tā lái ma ? 'Is he coming?'
tā shì lǐ xiānshēng ma ? 'Is he Mr. Li?'

This type of question may be considered a tag question. It can be further divided into two constituents:

A. Tag shì bù shì

The tag form shì bù shì has three alternative positions of occurrence: at the beginning of a declarative sentence, at the end of a declarative sentence, or immediately before the predicate.

LI231 shì bù shì \ QV:TAG:shi ;
shi bu shi wǒ qua? 'I go, don't I?'
wǒ qua shi bu shi?

B. Other Tags

There are several other commonly used tags. Unlike shi bu shi, these tags can only appear in the end of a declarative clause.

LI232 dui bu dui \ QP:TAG:dui ;
LI232 hǎo bu hǎo \ QP:TAG:hao ;
LI233 xǐng bu xǐng \ QP:TAG:xǐng ;
( see section 3220 for entries for dui, hǎo and xǐng)

nǐ chang qǐ hǎo bu hǎo? 'You sing, could you?'

6240 Interrogative Forms IV

Similar to English, Chinese has a set of lexemes which request specific information.
A. Information Questions with Interrogative Pronoun

LI241  shuí \ QN:?who \\
LI242  shénme \ QN:?what \\

A.1  QN as Subject

RI2401  QN:?X  VP:CL:(..P1< >..) \ CL:QUE:INF:(..P1:?..); \\
        shuí  kū ?  ' Who is crying? ' \\
        shuí  dù shū ?  ' Who is reading? ' \\
        shénme  shì Rodeo ?  ' What is a Rodeo? ' \\

A.2  QN as object or complement

RI2402  V:TR:X  QN:?Y \ VP:CL:QUE:INF:(PROC:X  P1:< > P2:?); \\
RI2403  NP:X  VP:CL:QUE:(..P1:< >..) \ CL:QUE:(..P1:X..); \\
        tā  zuò shénme ?  ' What is he doing? ' \\
        tā  kanjian shuí ?  ' Who did he see? ' \\
        Rodeo  shì shénme ?

A.3  Noun Phrase Modified by QN

shuí followed by de can modify an NP to form a possessive relation. The object possessed may not appear in the position of complement,

(see also section 2700 for corresponding noun phrase)

RI2404  QN:?who  de (,NP:Y) \ NIP:(of ?):(,Y) ; \\
        shuí  de  ' whose ' \\
        shuí  de  shū  ' whose book'
'shénme' can directly modify an NP.

RI2405

QN:?what
NP:Y \ NIP:(of ?):Y ;
shénme shū 'what kind of book'

RI2406


zhe běn shū shi shuí de ? 'Whose book is it?'
zhe shi shénme shū ? 'What book is it?'

B. Information Questions with Interrogative Determiner

LI243 nǎ \ QDD:?which ;

Unlike the determiner DD, nǎ by itself can not act as subject or object. It usually modifies a noun phrase.

RI2407 QDD:?which (NP,NPM):Y \ NP:QUE:?(which Y) ;
nǎ ge rén 'which person'

RI2407

xiǎhuán nǎ ge rén 'like which person'
C. Information Questions with Interrogative Location Noun

LI244  (nǎli, nǎer) \ QN:LOC:?where ;

RI2410

QN:LOC:?where V:LINK:X NP:Y \ CL:QUE:INF:(REL:X P1:?where P2:Y);

nǎer shì shū diàn 'Where is the bookstore?'

RI2411

V:TL:Y QN:LOC:?where \ VP:QUE:INF:(REL:Y P1:< > P2:?where) ;

zài nǎer 'in where'

RI2412

D. Information Question with Interrogative Adverb or Phrase

LI245 (zěnme, zěnmeyang) \ QAD:?how ;
LI246 weishénme \ QAD:?why ;

QAD is usually used before predicate.

RI2412

NP:X QAD:Y VP:((PROC,REL):X2 P1:< >..) \ CL:QUE:INF:
((PROC,REL):Y X2)
P1:X..) ;
nǐ zěnme qa ? 'How do you go ?'
nǐ weishénme qa ? 'Why do you go ?'
tā zěnme jiāo zhōngwén ? 'How does he teach Chinese ?'
tā weishénme xué zhōngwén ? 'Why does he study Chinese ?'

QAD:?why may also appear before or at the end of a clause. In that case, the requested information is not only about the predicate, but may also be about the subject, so this type of question is about the whole sentence.
D. Information Questions with Interrogative Number

LI247  jǐ \ QNUM: (?how_many, a few) ;

jǐ by itself can be an object.

When jǐ modifies a noun phrase, its position is same as that of number.

A clause with jǐ may also be a declarative clause. The decisive feature is the intonation on the clause. A pitch rise at the end of the clause indicates a question. A question mark is used here to denote the
pitch rise. The following example, with no pitch rise at the end of clause, means 'The teacher has a few students.'

RI2416


Zhēnlǎoshī yǒu jǐ ge xūeshēng? 'How many students does the teacher have?'

6250 Interrogative Forms V

This type of question is called the alternative question. The speaker gives two possibilities and expects the listener to indicate which of them is true or appropriate.

A. Clause Alternates

The question is formed by two declarative clauses connected by the conjunction háishi.

LI251  háishi \  CONJ:or ;

RI251  CL:DEC:X  CONJ:or  CL:DEC:Y  \  SEN:QUE:ALT:(X OR Y) ;

nǐ qu háishi wǒ qu? 'You go or I go?'

nǐ qu háishi tā lái? 'Are you going or is he coming?'
If two clauses have the same subject, the second occurrence is usually omitted.

RI252

NP:X VP:(Y1 P1:< >..) CONJ:or VP:(Y2 P1:< >..)\SEN:QUE:ALT:

((Y1 P1:X..)

OR

(Y2 P1:X..));

nǐ zǒu háishi páo ? 'Are you walking or running ?'

nǐ kānsū háishi kān diānshī ? 'Are you reading a book or watching TV ?'

B. V bù V alternates

This is also a kind of polarity question. But its structure is similar to that of alternative sentences. The speaker gives out both the positive and the negative possibilities of a process and demands that the listener confirm one of them. The question is formed by alternative predicate V (,háishi) (bù,méi) V, 'V (,or) (not,haven't) V'. Note that the relational verb yǒu can only be negated by méi. For the other verbs, if using méi as the negative marker, the speaker is asking the state of the process.
RI253  v:x  (,conj:or) (měi, bú) v:x \ v:que:alt:x ;
zǒu  bú zǒu  'to go or not to go'
xǐe  bú xǐe  'to write or not to write'
da  háishi  bú da  'big or not big'
xǐe  háishi  méi  xǐe  'written or haven't written'
yǒu  méi  yǒu  'possess or not possess'

RI254
v:que:alt:x

np:y \ vp:cl:que:alt:(proc:?x pl:< > p2:y) ;

xǐe  bú  xǐe  baogào  'to write or not to write the report'
xǐe  háishi  méi  xǐe  baogào  'written or haven't written the report'

RI255
np:x

vp:cl:que:alt:(..pl:< >..) \ cl:que:alt:(..pl:x..);

nǐ  yǒu  méi  yǒu  biǎo  ?  'Do you have a watch ?'
zhǔozi  dá  háishi  bú  da  ?  'Is the table big or not?'
REFERENCES


