

INTERACTIONS OF TRAJECTOR AND LANDMARK IN SPATIAL AND TEMPORAL DOMAINS : A COGNITIVE GRAMMAR APPROACH TO *SHANG* AND *XIA* IN MANDARIN CHINESE*

Shaoyi He

0. INTRODUCTION

Shang 'above/up' and *xia* 'below/down' are a common pair of antonyms in Mandarin Chinese.¹ Both of them function as verbs, directional particles and locative particles in various situations, as illustrated in the following sentences :

Verbs :

- (1) a. Tamen yao *shang* lou.
they want up floor
They want to go upstairs.
b. Tamen yao *xia* lou.
they want down floor
They want to go downstairs.

Directional particles :

- (2) a. Ta *chuan* - *shang* wai - yi.
s/he put up coat
S/he puts on a coat.
b. Ta *tuo* - *xia* wai - yi.
s/he take down coat
S/he takes off the coat.

Locative particles :

- (3) a. Shu zai *zhuo* - *shang*.
book at desk on
The book is on the desk.
b. Mao zai *zhuo* - *xia*.
cat at desk under
The cat is under the desk.

As a pair of most commonly used antonyms in Mandarin Chinese, *shang* and *xia* have been mentioned and analysed briefly by grammarians or linguists (e.g. Chao 1968, Chu 1983, Henne et al. 1977, Li and Thompson 1981, Lin 1984, Tien 1986). In respect of the locative features, little work has been done on the semantic characterizations of *shang* and *xia*, though there have been some descriptive treatments in the literature. Li and Thompson have treated *shang* and *xia* as locative particles which specify spatial relationships (1981 : 391). Tien regards *shang* and *xia* as parts of compound prepositions which are usually used with *zai* 'at' to indicate different positions in space (1986 : 128 - 129). Chu (1983 : 11) and Lin (1984 : 185) both have taken *shang* and *xia* as localizers to be used as suffixes to form place words. Nevertheless, the above scholars have neglected the fact that temporal relationships can also be specified by *shang* and *xia*. Henne et al. (1977) have noticed that *shang* and *xia* can both be used to form place words and time words, but they have not investigated the spatial and temporal relationships expressed by *shang* and *xia*, and they have only glossed *shang* and *xia* into different categories: place word suffixes and time word suffixes (p. 210 - 211).² Chao (1968) is the only scholar, as far as I know, who has given a comprehensive consideration to *shang* and *xia* both in spatial and temporal domains. Starting

* This paper is part of my Research Paper I submitted to the Department of Linguistics at the University of California, San - Diego, May 1988.

I am grateful to Stephen R. Poteet, Joganna Rubba, Ricardo Maldonado, Yuchau Hsiao and Teenie Matlock for their helpful comments and discussion on this paper. I would like to thank my wife, Yeqing, for her understanding and support of this paper. Above all, my special thanks go to Professor Ronald W. Langacker for his enlightening teaching of Cognitive Grammar, his valuable advice, comments and insights at every stage of writing this paper. However, all errors and misinterpretations, needless to say, are entirely mine.

with the point of view that "localizers, as the term suggests, usually express the (spatial and temporal) locations (lit. or fig.) of things" (p. 621), Chao has made a good attempt to give an extensive treatment of *shang* and *xia* as localizers (p. 620 - 623) and determinatives (p. 545 - 548). However, his explanation for the use of *shang* and *xia* in spatial and temporal domains has not been satisfactory in general. Therefore, it is natural for us to consider the analyses of *shang* and *xia*, given by Chao and other scholars mentioned above, to be systematically and theoretically superficial concerning the following phenomena:

No attempt has been made to relate *shang* and *xia* to each other and analyse the relationships between them in the spatial and temporal domains; no attempt has been made to give an answer to the question why expressions like *di - shang* 'ground - above' and *di - xia* 'ground - below' can give the same meaning 'on the ground'; no attempt has been made to provide an explanation for the case when *shang* and *xia* are used together as *shang - xia* 'above - below'; *shang - xia* can be interpreted as 'above and below', 'up and down', 'top and bottom', 'more or less', 'thereabouts' and 'all over' in the spatial and temporal domains.

To make an attempt to analyse the above phenomena, in this paper I will present a systematic and theoretical investigation of *shang* and *xia* in locative features with an emphasis on their semantic characterizations.³ Especially, I will investigate the positions of and the relations between *shang* and *xia* in the spatial and temporal domains, using the framework of Cognitive Grammar as presented in Langacker (1986, 1987).

1. THEORETICAL BACKGROUND

Although the framework of Cognitive Grammar has been assumed here, it is still very difficult to give a complete explanation of the theory in such a short paper (more detailed description can be found in Langacker (1986, 1987)). Nevertheless, some basic notions of Cognitive Grammar are particularly relevant and important to the present investigation of *shang* and *xia* in Mandarin Chinese.

1.1 Relevant Aspects of Cognitive Grammar

As a coherent and revelatory linguistic theory departing from most theories of semantics, Cognitive Grammar investigates language and meaning from a

cognitive view equating meaning with conceptualization and regarding grammar as imagery. In the theory of Cognitive Grammar, grammatical structure in a language is no longer considered autonomous but is believed to be inherently symbolic. Thus, conventional imagery is represented by grammatical constructions which are selected appropriately to portray situations in a particular manner for purposes of linguistic expression. The meaning of a linguistic expression is referred to as a predication, and is characterized with respect to one or more cognitive domains, which consist of various kinds of knowledge systems or conceptions. The semantic characterization of a linguistic expression always involves base/profile organization, in which 'base' refers to the set of activated cognitive domains and 'profile' refers to the substructure within the base that is maximally salient in the sense of representing the entity that the expression designates.

1.2 Notions of Trajector and Landmark

In a given relational predication, the trajector is defined as the figure within the relational profile. This notion is applicable to both static and dynamic relations. The landmark is a salient entity which provides a point of reference for locating the trajector (Langacker 1987 : 217). Thus, a trajector and a landmark can be used to illustrate the relation between A and B in the figure below:

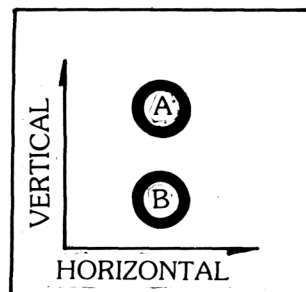


Figure 1.1

If we take A as the trajector and B as the landmark for locating A, we have the following expression:

(4) A zai B - *shang*.

A at B above

A is above B.

If we take B as the trajector and A as the landmark for locating A, we have the following expression:

(5) B zai A - xia.

B at A below

B is below A.

There is another version of relations between a trajector and a landmark marked by *shang* and *xia*, as indicated in the figure below :

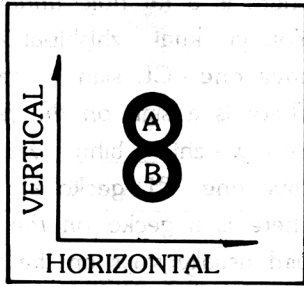


Figure 1.2

Thus, sentences (6) and (7) express the relations between A and B in Fig. 1.2 :

(6) A zai B - shang.

A at B on

A is on B.

(7) B zai A - xia.

B at A under

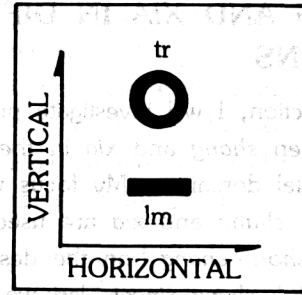
B is under A.

So, concepts like *shang* and *xia* are well described by the relations between a trajector and a landmark :

Shang: The trajector has an upper position relative to the landmark along the vertical axis.

Xia: The trajector has a lower position relative to the landmark along the vertical axis.

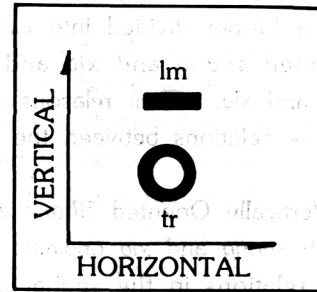
In dealing with the positions and relations of *shang* and *xia* in other cases in Mandarin Chinese, I will mainly use ○ for profile and — for landmark, just for the convenience of illustrating the prototypical value of *shang* and *xia* in different circumstances, which are shown in the following figures :



shang

above/over

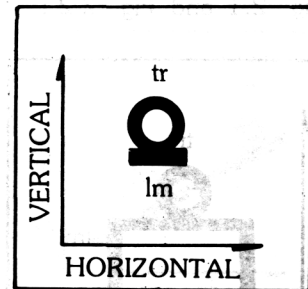
Figure 1.3



xia

down/below

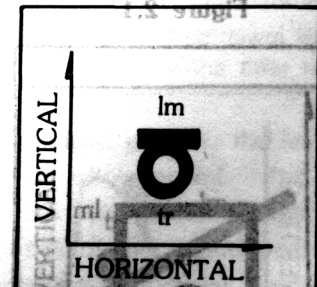
Figure 1.4



shang

on

Figure 1.5



xia

beneath/under

Figure 1.6

2. SHANG AND XIA IN DIFFERENT DOMAINS

In this section, I will investigate positions of and relations between *shang* and *xia* in the spatial, temporal and mental domains. My focus will be on the cases in which *shang* and *xia* are used to form expressions like *zhou - shang* 'on the desk', *zhuo - xia* 'under the desk'; *shang xingqi* 'last week', *xia xingqi* 'next week', and the like.

2.1 Shang and Xia in the Spatial Domain

In the spatial domain, *shang* and *xia* mainly indicate different positions through physical space. These positions can be further divided into two categories: vertically oriented *shang* and *xia* and horizontally oriented *shang* and *xia*. Their relations can be clearly explained by the relations between the trajector and the landmark.

2.1.1 Vertically Oriented Shang and Xia

Since both *shang* and *xia* originate from a vertical axis, their relations in the spatial domain have much to do with the vertical positions. The relations between the trajectors and the landmark in expressions *zhuo - shang* 'on the table' and *zhuo - xia* 'under the table' in sentences (3) a. and (3) b. are illustrated by Fig. 2.1 and Fig. 2.2:

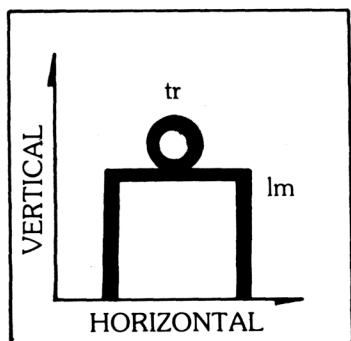


Figure 2.1

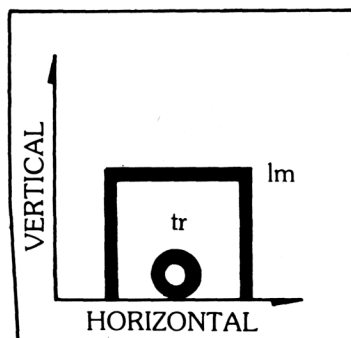


Figure 2.2

The following are some other interesting examples of vertically oriented *shang* and *xia*:

- (8) a. You yi - zhi niao zai liba - shang.
have one - CL bird at fence - on
There is a bird *on the fence*.
- b. You yi - ge laoshudong zai liba - xia.
have one - CL rat hole at fence - under
There is a rat hole *under the fence*.
- (9) You yi - kuai zhishipai zai liba - shang.
have one - CL sign at fence - on
There is a sign *on the fence*.
- (10) You yi - zhi bihu zai liba - shang.
have one - CL gecko at fence - on
There is a gecko *on the fence*.

Since a bird usually stays on the top of a fence, the meaning of *liba - shang* 'on the fence' in (8) a. is described by Fig. 2.3. Also, as the rat hole can only be under the whole of the fence, Fig. 2.4 expresses the meaning of *liba - xia* 'under the fence' in (8) b:

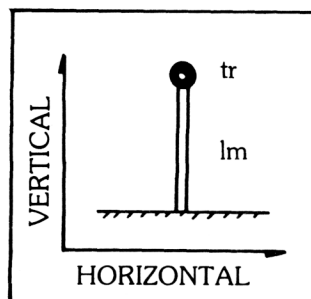


Figure 2.3

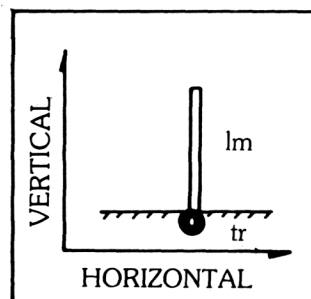


Figure 2.4

Since a sign is always put on the upper part of a fence, *liba - shang* 'on the fence' in (9) can be expressed with Fig. 2.5 :

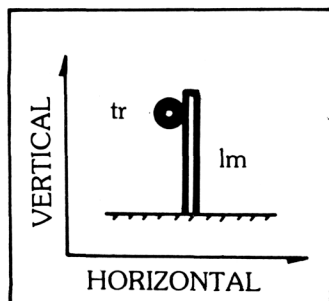


Figure 2.5

Sentence (10) is ambiguous because the *bi hu* 'gecko' could be on any part of the fence : *liba - shang* could be 'on the top of the fence' as in Fig. 2.3 and 'on the upper part of the fence' as in Fig. 2.5. Even when the *bi hu* 'gecko' is on the lower part of the fence, *liba - shang* is still used, for it is actually on the surface of the fence :

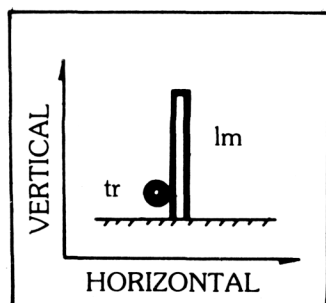


Figure 2.6

In this case, there is an extension of *shang* from the vertical orientation in particular to any orientation. *Shang* has the original value of 'vertically above' or 'on top of' something. Since 'on top of' indicates a vertically higher position as well as surface contact, *shang* expresses 'on the upper part' and 'on the surface of' at the same time, as in Fig. 2.5. Later, *shang* is extended to indicate 'on the surface of' any part of anything, regardless of orientation.

There are many other cases in which the trajector and landmark are not precisely vertically aligned, yet we still describe their relations as *shang* and *xia*. Expressions *po - shang* 'up on the slope' and *po - xia* 'down on the slope' in sentences (11) a. and (11) b. are some examples for this kind of relations :

- (11) a. You yi - ge nanhai zai *po - shang*.
 have one - CL boy at slope - up
 There is a boy up on the slope.
- b. You yi - zhi xiaomao zai *po - xia*.
 have one - CL kitten at slope - down
 There is a kitten down on the slope.

In (11) a., *po - shang* is used to indicate the situation in which the trajector is on the upper part of the landmark as illustrated in Fig. 2.7; in (11) b., *po - xia* is used to express the situation in which the trajector is on the lower part of the landmark as pictured in Fig. 2.8. It is interesting to note that the trajector, in both situations, is not above/below the landmark as a whole, instead it is above/below the most substantial portion of it, and not directly aligned along the horizontal axis.

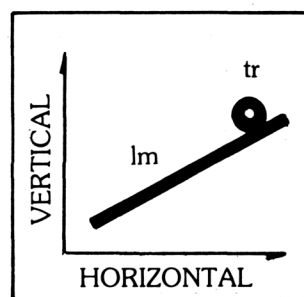


Figure 2.7

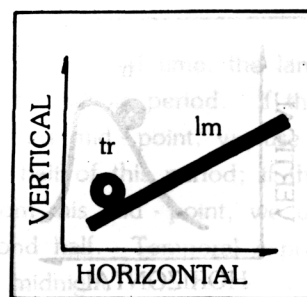


Figure 2.8

Also, the positions of the trajector on the upper part and on the lower part of the landmark could be construed as *shang* and *xia* by their projection onto the vertical axis as shown in Fig. 2.9:

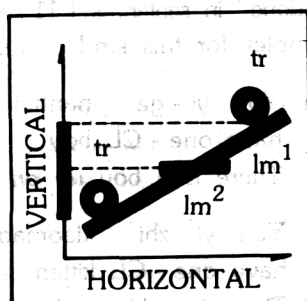


Figure 2.9

There are some more interesting cases of the relations between *shang* and *xia* as shown in the following sentences:

- (12) a. You yi - zuo si - miao zai
have one - CL temple at
shan - shang.
hill - up.
There is a temple on the hill.
- b. You yi - zuo cun - zhuang zai
have one - CL village at
shan - xia.
hill - down.
There is a village at the foot of the hill.
- c. You yi - pian caoyuan zai
have one - CL prairie at
shan - xia.
hill - down.
There is a prairie off the hill.

Shan - shang in sentence (12)a. is schematically represented by Fig. 2.10 in which the trajector is on the upper part of the landmark, and Fig. 2.11 gives a schema for *shan - xia* to indicate that the trajector is on the lower part of the landmark.

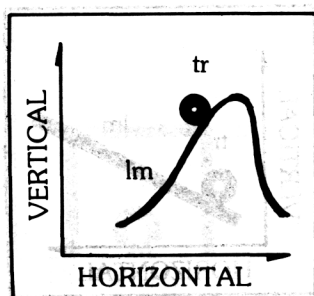


Figure 2.10

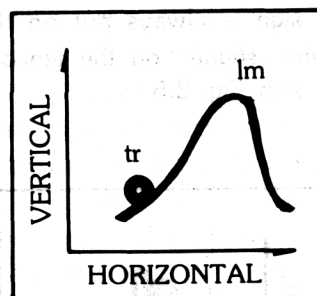


Figure 2.11

But, how to account for the positions of *shang* and *xia* in sentence (12)c? In this case, the trajector is neither on the upper part nor on the lower part of the landmark; it is not on the landmark at all:

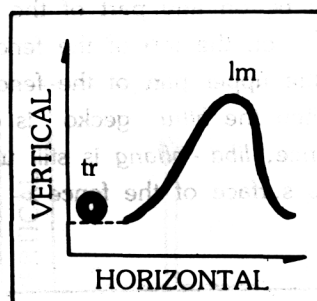


Figure 2.12

Obviously, this is a case in which *shang* and *xia* are not exactly vertically oriented. The transition from *shan - xia* 'on the foot of the hill' in Fig. 2.11 to *shan - xia* 'off the hill' in Fig. 2.12 is based on the relations between these two types of *shan - xia* and *shan - shang* 'on (the upper part of) the hill' in Fig. 2.10. *Shan - xia* in Fig. 2.11 indicates that the trajector is in contact with the lower part of the landmark; *shan - xia* in Fig. 2.12 indicates that the trajector is separated from the landmark. *Shan - shang* in Fig. 2.10, on the one hand, indicates that the trajector is only on the upper part of the landmark, as in comparison with Fig. 2.11; on the other hand, it indicates that the trajector is also in contact with the landmark as a whole, as in comparison with Fig. 2.12. Therefore, *shan - xia* in (12)b. and in (12)c. show a discrepancy in the horizontal dimension in comparison with *shan - shang* in (12)a.

2.1.2. Horizontally Oriented *Shang* and *Xia*.

As illustrated in Fig. 1.5 and 1.6, the *shang/xia* relations could be interpreted as 'on/under (the surface of something)' in some situations. But when we use *shang* and *xia* in the following sentences, their contrast does not pertain to different positions along the vertical axis.

- (13) a. Zai yundongchang - shang you
at playground - on have
jilie de bisai.
gruelling NOM match.
There is a gruelling match *on the playground*.

- b. Zai yundongchang - xia you
at playground - down have
fengkuang de qiumi.
mad NOM sports fans
There are mad sports fans *off the playground*.

- (14) a. Zai gonglu - shang you
at highway - on have
jiaotong zuse.
traffic jam.
There is a traffic jam *on the highway*.

- b. Zai gonglu - xia you
at highway - down have
yi - liang puche
one - CL broken - down car
There is a broken - down car *off the highway*.

Now, how do we explain the relations between *shang* and *xia* in these sentences? Generally speaking, if *shang* refers to a case in which the trajector is on the surface of the landmark, *xia* should logically refer to the opposite case. But since the positions and relations of *shang* and *xia* here are on a horizontal base, it is impossible to have the sports fans in (13)b. under the playground and the broken-down car in (14)b. under the highway. They can only be 'in' and 'out' or 'on' and 'off' the playground and the highway. Therefore, *shang/xia* here functions as 'in/out' and 'on/off'. Under this kind of circumstance, we can have a reasonable explanation for the relations of *shang* and *xia* on a horizontal base. If the trajector is on or attached to the landmark, *shang* can be used; if the trajector is off or apart from the landmark, *xia* can be used. Such horizontally oriented positions and relations in the spatial domain are illustrated in Fig. 2.13 and Fig. 2.14, which also provide a reasonable explanation for sentence (12)c.

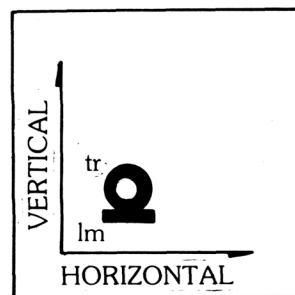


Figure 2.13

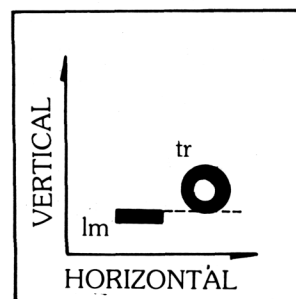


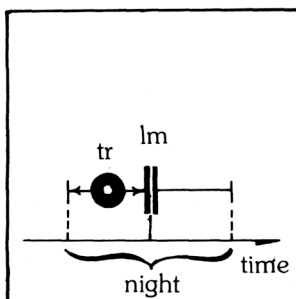
Figure 2.14

2.2 *Shang* and *Xia* in the Temporal Domain

When *shang* and *xia* are used to refer to temporal positions and relations, time is regarded as flowing like a river. Since a river flows from an upper level to a lower level vertically under the force of gravity, there are *shang* - you 'upper reaches' and *xia* - you 'lower reaches'. Any particular bit of water is in the upstream portion of the river earlier than in the downstream portion, with respect to time. Therefore, temporal positions along this 'time - river' can be traced either upstream or downstream, and temporal relations can also be characterized as *shang* 'upstream' and *xia* 'downstream'. This is true for any given period of time or the time relating to the present.

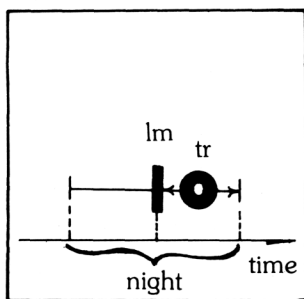
In a given period of time, the landmark is the mid - point of the whole period. If the trajector is upstream from this mid - point, we use *shang* to indicate the first half of this period; if the trajector is downstream from this mid - point, we use *xia* to indicate the second half. Temporal expressions *shang banye* 'before midnight', *xia banye* 'after midnight' in sentences (15) a. and (15) b. are illustrated by Fig. 2.16 below :

- (15) a. *Shang banye* rengran henre.
 up half night still very hot
 It is still very hot *before midnight*.
 b. *Xia banye* kaishi jiangwen.
 down half night begin cool down
 It begins to cool down *after midnight*.



shang banye
before midnight

Figure 2.15

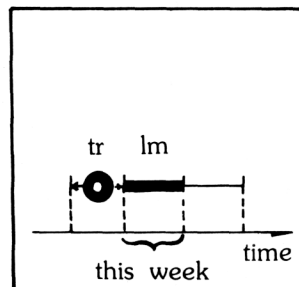


xia banye
after midnight

Figure 2.16

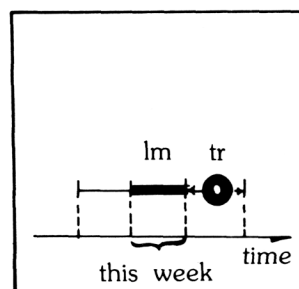
As for the time relating to the present, the landmark is a period that includes the time of the speech event. When the trajector is upstream from this period, *shang* is used to refer to the period of time just passed; when the trajector is downstream from this period, *xia* is used to refer to the period of time that is coming. This phenomenon is illustrated by sentences (16)a. and (16)b. as well as Fig. 2.18.

- (16) a. *Shang xing - qi wo mei qu shangban.*
 up week I not go work
 I did not go to work *last week*.
 b. *Xia xing - qi wo bu lai shangke.*
 down week I not come have class
 I won't come to class *next week*.



shang xingqi
last week

Figure 2.17



xia xingqi
next week

Figure 2.18

In this situation, neither *shang* nor *xia* includes the present time. This phenomenon again coincides with the imagery that time flows like a river. Besides *shang* - you 'upper reaches' and *xia* - you 'lower reaches', a river can also have *zhong* - you 'middle reaches'. When we think that time has past, present and future, there is no reason not to use *shang* to refer to the time that just passed and *xia* to refer to the time that is coming.

3. INTERACTIONS OF TRAJECTOR AND LANDMARK IN DIFFERENT DOMAINS

3.1 Overlapping in the Spatial and Temporal Domains

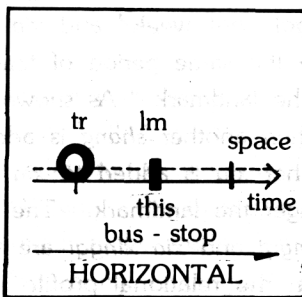
Overlapping in the spatial and temporal domains is shown in the following sentences:

- (17) a. *Shang yi - zhan shi Beijing tushuguan.*
 up one station is Beijing Library.
 The last bus-stop was Beijing Library.

- b. Xia yi - zhan shi guoji julebu.
down one station is International Club
The next bus - stop is International Club.

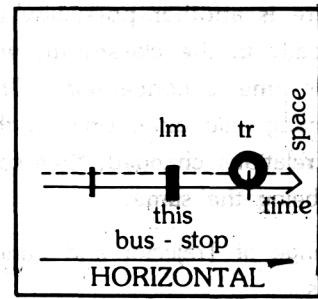
- (18) a. Ketang - shang tamen shi tongxue.
classroom on they are classmate
They are classmates in class.
b. Ketang - xia tamen shi pengyou.
classroom down they are friends
They are friends out of class.

In sentences (17)a. and (17)b., in *shang yi - zhan* 'last bus - stop' and *xia yi - zhan* 'next bus - stop', *shang* and *xia* have their horizontally oriented spatial positions through physical space and their temporal positions through time. As the passing of time is analogous to the flowing of a river, the spatial path of a journey is also analogous to the flowing of a river: the earlier portion of a journey is earlier in space and time, the later portion of a journey is later in space and time. Since the upstream of a river and time can be indicated by *shang*, and the downstream of a river and time can be indicated by *xia*, the journey along the spatial path can also be indicated by *shang* and *xia*: *shang* is earlier in space and time, and *xia* is later in space and time. Therefore, when we say *shang yi - zhan* and *xia yi - zhan*, we refer to both their spatial relations and temporal relations. Between *shang yi - zhan* and *xia yi - zhan*, there is a change of temporal position as well as a change of spatial position. So, in a relational profile, we can use the trajector and the landmark in both spatial and temporal domains at the same time:



shang yi - zhan
last bus - stop

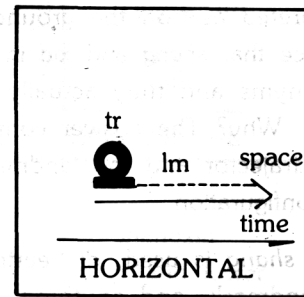
Figure 3.1



xia yi - zhan
next bus - stop

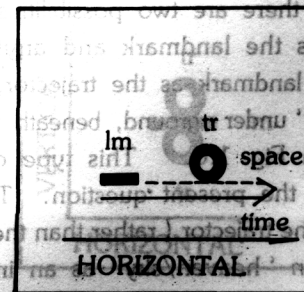
Figure 3.2

The situation with *ketang - shang* and *ketang - xia* in sentences (18)a. and (18)b. is somewhat different. When we take *ketang* as both 'classroom' and 'class', the spatial and temporal relations between *shang* and *xia* indicate a change through physical space and time. For *ketang - shang*, we are both in the classroom and in class, for *ketang - xia*, we are both out of the classroom and out of class. Thus, the trajector and landmark are used to refer to the relation between *shang* and *xia* in both spatial and temporal domains at the same time:



ketang - shang
in classroom/class

Figure 3.3



ketang - xia
out of classroom/class

Figure 3.4

But, there is another possibility that although we are physically in the classroom, we are out of class so far as time is concerned. Then, *ketang - shang* and *ketang - xia* differ only in their temporal positions and relations changed, their spatial positions and relations being the same.

3.2 Change of Trajector and Landmark in Different Domains

Under certain circumstances, the trajector and landmark can be changed in spatial, temporal and mental domains. First consider the following sentences:

- (19) a. *Di - shang* you henduo luoye.
ground on have many fallen leaves
There are many fallen leaves *on the ground*.
- b. *Di - xia* you henduo luoye.
ground below have many fallen leaves
There are many fallen leaves *on the ground*.

In (19)a. and (19)b., the expressions *di - shang* 'ground - on' and *di - xia* 'ground - below' can both be interpreted as 'on the ground'. It is interesting to notice that *shang* and *xia* in the case are no longer antonyms and they actually describe the same situation. Why? The answer comes from the change of the trajector and the landmark in trajector/landmark configuration.

When *di - shang* is used, *di* 'earth/ground' is taken as the landmark, and anything above or on the landmark can be taken as the trajector, as illustrated in Fig. 1.3 and Fig. 1.5. Since the trajector is on the surface of the landmark in Fig. 1.5, *di - shang* here means 'on the ground'. But, when *di - xia* is used there are two possibilities. The first is to take *di* as the landmark and anything below or beneath the landmark as the trajector, thus having *di - xia* indicate 'under - ground, beneath the ground' as illustrated in Fig. 1.6. This type of *di - xia* is not relevant to the present question. The relevant one takes *di* as the trajector (rather than the landmark) while taking *tian* 'heaven/sky' as an implicit landmark. In this situation, the trajector is below the landmark, as illustrated in Fig. 1.1, thus *di - xia* is used to

indicate 'the ground below'. When used to express the concept of 'below', *di - xia* indicates different meanings in different situations:

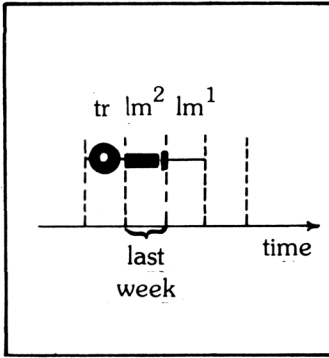
- (20) a. *Di - xia* you yanjiang.
ground - below have magma
There is magma *under the ground*.
- b. *Di - xia* you huangjin.
ground - below have gold
There is gold *on/under the ground*.
- c. *Di - xia* you huichen.
ground - below have dust
There is dust *on the ground*.

Di - xia in (20) a. can only mean 'under the ground' because *yanjiang* 'magma' is usually found under the ground. *Di - xia* in (20) b. is ambiguous and it could be either 'under the ground' or 'on the ground', because *huangjin* 'gold' can be found in both situations. As for *di - xia* in (20) c., as well as that in (19) b., it only has the meaning of 'on the ground'. No one would expect that *huichen* 'dust' and *luoye* 'fallen leaves' could be under the ground. Therefore, things on 'the ground below' can only be 'on the surface of the ground', thus *di - xia* can also mean 'on the ground'.

The change of trajector and landmark in the temporal domain is shown by the following expressions:

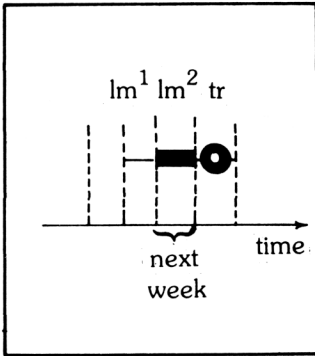
- (21) a. *shang shang xingqi*
up up week
week before last
- b. *xia xia xingqi*
down down week
week after next

As indicated in Fig. 2.17 and Fig. 2.18, expressions *shang xingqi* 'last week' and *xia xingqi* 'next week' both take the same period of time *zhe xingqi* 'this week' as the landmark. As shown in (21) a. and (21) b. when another *shang* is added to *shang xingqi* and another *xia* is added to *xia xingqi*, 'this week' is no longer the landmark. The previous trajectors *shang xingqi* and *xia xingqi* are taken as the landmarks within the relational profile to locate the present trajectors *shang shang xingqi* and *xia xia xingqi*. These situations are pictured in Fig. 3.5 and Fig. 3.6:



shang shang xingqi
week before last

Figure 3.5



xia xia xingqi
week after next

Figure 3.6

This is the same case with *shang yue* 'last month' and *xia yue* 'next month'. So, *shang shang yue* means 'month before last' and, *xia xia yue* means 'month after next'.

3.3 Shang and Xia as Trajectors to the Same Landmark.

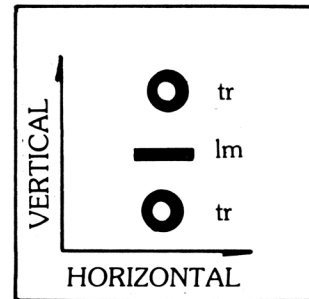
When *shang* and *xia* are used together as *shang-xia* 'above - below', their meanings can be characterized by the relations of two trajectors functioning to the same landmark. The most common and salient examples are found in the spatial domain as follows:⁴

- (22) Zhe zhong chuanglian shangxia
this kind curtain upper and lower
dou you huabian
all have lace
This kind of curtain has laces both at
the upper and lower parts.

- (23) Zhe hang da xietizi, shangxia
this line type italics above and below
ge kong yi hang.
each blank one line
Type this line in italics and leave a blank
line above and below.
- (24) Ta shangxia daliang zhe
s/he up and down look DUR
nage moshengren.
that stranger

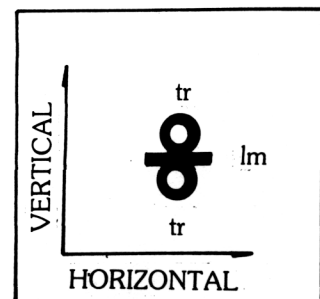
S/he looked the stranger up and down.

The *shangxia* in (22) indicates both the upper and the lower parts of a thing and it is schematically pictured in Fig. 3.9. The *shangxia* in (23) indicates that the trajectors are immediately above and below the landmark, so Fig. 3.10 gives a picture of this relationship. The relationship of the trajectors being *shangxia* as 'up and down' is found in (24) and represented by Fig. 3.11.



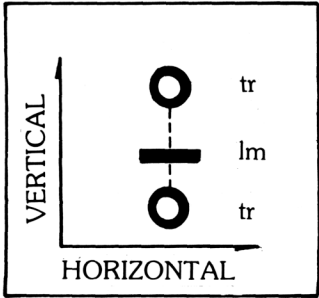
shangxia
upper and lower

Figure 3.9



shangxia
above and below

Figure 3.10



shangxia
up and down
Figure 3.11

In addition, there is an interesting variant of the schematic representation of *shangxia* in Fig. 3.10. giving a reasonable extension of the meaning as ‘more or less, thereabouts’:

- (25) Tade nianling zai sishi shui *shangxia*.
his age at forty year thereabouts
He is forty or so.
- (26) Chanliang zai yiqian bang
yield at a thousand pound
shangxia.
more or less.
- The yield is *about* a thousand pounds.

4. CONCLUSION

The pictographs of *shang* and *xia* in Mandarin Chinese characters are 上 and 下 (cf. Hu et al. 1981 : 172), which coincide with the positions and relations of the trajector and the landmark in the analysis of *shang* and *xia* within the framework of Cognitive Grammar. The similarity of these characters to the schematic diagrams above used to represent the trajector/ landmark relationship in *shang/xia* suggests that image schemas of this sort may be important to our understanding of such notions.

NOTES

1. *Shang* and *xia* do not always function like a pair of antonyms. They sometimes function as synonyms. For instance, *shang guanzi* and *xia guanzi* both mean 'go and eat in a restaurant'; *xie - shang mingzi* and *xie - xia mingzi* both mean 'write down the name'; *di - shang* and *di - xia* both mean 'on the ground'. Also, *shang* and *xia* are not always used in pairs like *shang ban* 'go to work' and *xia ban* 'come off work'; *zhuo - shang* 'on/above the table' and *zhuo - xia* 'under/below the table'. Sometimes, when *shang* is used in an expression, *xia* cannot be used as its pair, and vice versa. For example, *shang biao* means 'wind the watch' but *xia biao* is nonsense, and *xia dan* means 'lay eggs' but *shang dan* is nonsense; people can only *guan - shang men* 'close the door' but can not *guan - xia men*; *ma - shang* is 'immediately' but *ma - xia* is 'under the horse', etc. The idiomatic uses of *shang* and *xia* deserve to be investigated in another paper.

2. Treating *shang* and *xia* differently results in different ways to analyse them. For instance, in Cognitive Grammar, if we take *shang* and *xia* as nouns, they can be analysed by the notion of 'nominal predication'; if we regard *shang* and *xia* as prepositions, then the notion of 'relational predication' is used to analyse them. Since "the distinction between a nominal and relational predication does not necessarily imply any difference in the inventory or the organization of constituent events, but only in their relative prominence" (Langacker 1987 : 215) the analyses of *shang* and *xia* by 'nominal predication' and by 'relational predication' may both be correct in different constructions. *Shang* and *xia* are treated as prepositions here, but a nominal analysis may prove correct for some or all uses. The main concerns of the paper are independent of this difference.

3. The investigation of *shang* and *xia* as verbs and directional particles will be presented in other papers within the framework of Cognitive Grammar.

4. *Shangxia* is not used in temporal domain, but it can be used in the mental domain to represent the relations between the trajector and the landmark :

- (1) Tamen bu fen *shangxia*.
they not distinct superiority and inferiority
There is no *superiority and inferiority* between them.
- (2) Quanjia *shangxia* duo heng gaoxing.
whole family old and young all very happy
The whole family, *old and young*, are very happy.

The metaphorical mapping of vertical scale onto the mental domain is indicated by the use of *shang* and *xia* : *shang* is mapped onto 'superiority' and *xia* 'inferiority' when concerned with degrees in ability and quality; *shang* is mapped onto 'old generation' and *xia* 'younger generation' when talking about status in family and society. The following are more examples of this case :

- (3) Zhiliang bu xiang *shangxia*.
quality not each other *superior and inferior*
The qualities are equally good.
- (4) Quanguo *shangxia* yi - tiao xin.
whole nation, *high and low*, one - CL heart
The whole nation is of one mind.

REFERENCES

- Chao, Yuen - ren. 1968. *A Grammar of Spoken Chinese*. Berkeley and Los Angeles : University of California Press.
- Chu, Chauncey Cheng - hsi. 1983. *A Reference Grammar of Mandarin Chinese for English Speakers*. New - York : Peter Lang Publishing Institute.
- Henne, Henry et al. 1977. *A Handbook on Chinese Language Structure*. United Kingdom : Universitetsforlaget.
- Herskovits, Annette. 1985. Semantics and Pragmatics of Locative Expressions. *Cognitive Science* 9 : 341 - 378.
- Hu, Yu - shu et al. 1981. *Xiandai hanyu (Modern Chinese)*. Shanghai : Shanghai Jiaoyu chubanshe (Shanghai Education Press).
- Lakoff G, and Johnson M. 1980. *Metaphors We Live By*. Chicago : University of Chicago Press.
- Langacker, Ronald W. 1986. An Introduction to Cognitive Grammar. *Cognitive Science* 10 : 1 - 40.
- Langacker, Ronald W. 1987. *Foundations of Cognitive Grammar*, Vol. 1, *Theoretical Prerequisites*. Stanford : Stanford University Press.
- Li, Charles N., and Thompson, Sandra A. 1981. *Mandarin Chinese : A Functional Reference Grammar*. Berkeley and Los Angeles : University of California Press.
- Lin, Helen T. 1981. *Essential Grammar For Modern Chinese*. Boston : Cheng & Tsui Company, Inc.
- Lindner, Susan. 1981. *A Lexico - Semantic Analysis of English Verb - Particle Constructions with UP and OUT*. San Diego : UCSD doctoral dissertation.
- Tien, Teresa. 1986. *Practical Handbook of Modern Chinese Grammar*. The Republic of China : Chinese Materials Center.