MATAPHORICAL EXTENSION AND LEXICAL MEANING

Lily I-wen Su and Laura Hsiu-min Liu

Graduate Institute of Linguistics
National Taiwan University, Taipei, Taiwan
Iwensu@ccms.ntu.edu.tw, r4142001@ms.cc.ntu.edu.tw

ABSTRACT

Metonymy and metaphor reflect an important part of the way people ordinarily conceptualize of themselves, events, and everyday world [1]. We will argue for this position via the lexicalization process of two linguistic items in Chinese: shang and zai, and demonstrate that grammatical meaning develops from lexical meaning by a process of "generalization or weakening of semantic content," which is in fact metaphorical in nature. The purpose of this paper is to ascertain into the nature of metaphorical extension (via metaphor and metonymy) and the creation of lexical meaning as they are seen in the two lexical items mentioned. Though data gathered from corpus, dictionaries and native speaker intuition, we wish to examine the relationship between conversion, metaphor and metonymy, and understand better 1) the driving force for polysemy in Chinese lexicon; 2) the different driving forces, concerning metaphor and metonymy, for prototypical categories and grammaticalization.

1. Introduction

The term "metaphor" has been used with a variety of senses, which accounts for many of the controversies and misunderstandings surrounding this term. For example, "metaphor" is employed on the one hand as a genetic term for any figure of speech which includes figures such as metonymy, synecdoche, hyperbole, etc. On the other hand, there are more narrow definitions, according to which metaphor contrasts with alternative figures such as metonymy.

One of the most influential linguistic treatments of metaphor and metonymy as distinct, mutually exclusive types of expression is that of Jakobson and Halle [2], who describe the dichotomy between these two kinds of tropes as reflecting a "bipolar structure of language" that appears to be of "primal significance and consequence for all verbal behavior and for human behavior in general". They claim that, according to the metaphorical way, one topic leads to another through their similarity, whereas according to the metonymic way, discourse is developed along the lines of topic contiguity.

The focus of this paper will be on a different perspective of the relation between metaphor and metonymy. We maintain that the more common paradigm to be observed in human language appears to be one where the two are not mutually exclusive but rather complement one another. As observed in Goossens [3], two main patterns are said to be associated with the ways in which metaphor and metonymy interact: 1) Metonymy functions within a metaphor; and 2) Metaphor and metonymy coexist in some uses of a figurative expression. We agree with Goossens in that although metonymy and metaphor are "clearly distinct in principle, they are not always separable in practice." This is especially true with the conceptualization of grammatical structures.

We will adhere to Goossens' view and apply it to the processes known as grammaticalization,

which is believed to be metaphorically structured [4]. Grammaticalization in our study is considered as a subtype of metaphor, which can be defined as "a metaphorical shift toward the abstract" [5]. We also accept Bybee and Pagliuca's idea [6] that grammatical meaning develops from lexical meaning by a process of "generalization or weakening of semantic content," which naturally leads to the claim, made by Claudi & Heine [4], that metaphorical extension is one important mechanism in the grammaticalization process:

A concrete lexical item is recruited to express a more abstract concept ... this emptying of lexical content is a prerequisite to grammaticalization because grammatical functions in themselves are necessarily abstract.

The purpose of this paper is therefore to ascertain into the nature of metaphor extension and the creation of lexical meaning by examining closely two Chinese lexical items: 在 zai "to be (here)" and 上 shang "up". Specifically, we will address the following questions:

- 1. What is the driving force for polysemy in Chinese lexicon? That is, are the meaning chains of polysemic words motivated by metonymies and metaphors in Chinese? And if so, how?
- 2. What metaphorical or metonymic device can, if any, be said to be responsible for the conversion between different parts of speech (noun to verb, noun to adjective, etc.) in Chinese?
- 3. Is metaphorical transfer the driving force for prototypical categories? Is grammaticalization more suggestive of a metonymic structure regarding its continuum nature?

2. Literature Review

The contemporary theory of metaphor claims that abstract concepts are at least in part understood and expressed metaphorically in spatial terms and that abstract reason is achieved by suing certain mechanisms for the perception of spatial relations. This is seen as the consequence of the Invariance Principle, which states that metaphor projects the image-schematic structure of the source domain onto the target domain in a way that is consistent with inherent target domain structure. In this theory, metaphor is the locus for abstract reason. It casts the abstract and the nonphysical into the concrete and the physical, usually with spatial dimensions.

2.1. Metaphor and Metonymy

It has been argued that metaphors and metonymies are powerful cognitive tools for our conceptualization of abstract categories [7]. They are not just figures of speech in literature. Pauwels [8] supports this view by proposing the notion of 'recoverability' of donor domain (i.e., metaphoricity) in order to describe the extent to which a specific donor concept or any of its related metaphorical expression is salient for a linguistic community (the present-day average language users). He suggests that the dimension of specificity may distinguish different types of metaphors. Some metaphors rely on clearly recoverable, highly specific, situations, which are salient because of their visual or sensory imminence. Other metaphors rely on the recoverability of image schematic structures, which are salient because of their pervasiveness.

Metaphor and metonymy can be distinguished by the scope of conceptualization. In metaphorical mapping, two domains are involved and the two are related analogically (e.g., Time is money; Life is a journey), while the two items in the case of metonymy is related via their contiguity and

only one domain is involved (e.g., The president of the United States is the White House).

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Concerning the interplay of metaphor and metonymy, Goossens [10] has investigated the interaction of metaphor and metonymy in the expressions for linguistic action from three donor domains: violent action, sound, and body parts. Two types of interaction were found to predominate: metaphor from metonymy and metonymy within metaphor. The cognition-based perspectives were given to explain away why the other types (i.e. metonymy from metaphor, metaphor within metonymy and demetonymization in a metaphorical context) are rare or impossible in general. He observed that metonymy and metaphor, though clearly distinct in principle, are not always separable in practice, which is the position we shall take here for its relevance to the conceptualization of grammatical structures.

2.2. Categorical Metaphors and Conceptual Metaphors

Categorical metaphor [3] should be distinguished from the conceptual metaphors proposed by Lakoff and Johnson [11]. The former are more inclusive than the latter – one categorical metaphor typically includes several clusters of conceptual metaphors. Special orientation may, for example, be employed in order to conceptualize physical, social, mental, moral or other qualities. That is, the location of X serves as a metaphorical template in order to understand how X feels or is. This cluster of conceptual metaphors appears, on the other hand, in one of the categorical metaphors: the SPACE-TO-QUALITY metaphor, whereby situations, states, or qualities are metaphorically rendered in terms of locative concepts.

With reference to the terminology introduced by MacCormac [12], categorical metaphors are "root metaphors" while conceptual metaphors are typically "conveyance metaphors" – the former are used to comprehend an entire area of human experience or of the physical world, whereas the latter tend to be based on isolated experiences and offer a metaphorical insight that is limited in scope.

The arrangement of categories is unidirectional; it proceeds from left to right and can be defined in terms of "metaphorical abstraction," where a given category is "more abstract" than any other category to its left and "less abstract" than anything to its right. In terms of the relative degree of metaphorical "abstraction," source structures may develop into grammatical structures along the following scale, as argued by Heine, Claudi & Hunnemeyer [13]:

Underlying the chain of metaphorical categories, there appears to be a cognitive activity that can be described in terms of egocentric distance, proceeding from the category that is closest (PERSON) to human experience to one that is most remote (QUALITY). This is in line with our claim that grammaticalization is the result of a problem-solving strategy according to which concepts that are more immediately accessible to human experience are employed for the expression of less accessible, more abstract concepts.

These categories represent prototypical entities, each of which includes a variety of perceptually

and/or linguistically defined concepts and represents a domain of conceptualization that is important for structuring experience. The above arrangement of categories may be interpreted as consisting of a number of "categorical metaphors," such as OBJECT-TO-SPACE or SPACE-TO-TIME, where the first category forms the metaphorical vehicle and the second the metaphorical topic. For example, the lexeme for the body part \mathcal{M} tou "head" is used as a metaphorical vehicle to express a spatial concept "top" (OBJECT-TO-SPACE), which serves as a vehicle for a temporal concept, "beginning" as in \mathcal{M} kai-tou (SPACE-TO-TIME).

3. Methodology

Two main problems should be pointed out with reference to the metaphorical approach sketched here. One is the coexistence of a less and a more grammaticalized meaning, both being expressed by the same linguistic form, which gives the impression of a continuum of meaning. The second is that the transition from a less to a more grammatical meaning is gradual, whereas metaphor suggests a discrete transfer from one conceptual domain to another. The first problem can be ignored since it is an inherent property of metaphor that it may introduce ambiguity between the literal and the transferred meaning. The second, however, is hard to reconcile with common notions of metaphor. However, lexicalization and grammaticalization should be taken as a gradual, not an abrupt process.

3.1. Delimitation

Two kinds of metaphor are distinguished in Heine et al [13]: creative metaphor and emerging metaphor. It is hard to tell, on synchronic grounds alone, the order of the lexicalization process; it is even harder to tell whether a given metaphor is of the creative or the emerging kind. A creative metaphor is a case when a new expression is formed containing a false predication and involving a willful violation of conceptual rules. Emergent metaphors, on the other hand, do not form new expressions when they arise; they are built on predication that were already present. What is responsible for their rise is that an existing predication is introduced into new contexts or applied to new situations, thereby acquiring an extended meaning. They are in fact pragmatically motivated. They owe their existence to forces such as conversational implicatures and context-specific reinterpretation. Emerging metaphors present the only type of metaphorical transfer that can be observed in the process of lexicalization and is thus the only type to be considered here.

3.2. Data and Method

Taking the viewpoint that metaphor and metonymy are two important cognitive tools by which we understand, think, and reason about the world around us, we are intrigued to ask how they get realized as lexical phenomena and how they facilitate meaning extension or modification of lexical items via conversion and compounding. All the data used here comes from three sources: corpuses, examples from native speakers, and dictionaries. Corpus-wise, the balanced corpus of the Academica Sinica and our own corpus which consists of hours of oral data are used. We at the same time rely heavily on examples produced by native speakers of the Chinese language. Both the Chinese and the English dictionaries are also consulted for additional examples and for deciding the meaning. We assume that what is listed earlier under the entry would be the more basic meaning, and could be used as the core by which new senses of the linguistic item examined are created.

The decision to pursue our research interest based on the two lexical entries \bot shang "up" and \npreceq zai "to be (here)" should be explained before we go on with the method used for the present study. As Sinha [14] has pointed out, the spatial domain is a particularly rich one for empirical investigation both of possible linguistic and cognitive universals, and of possible cross-linguistic and cross-cultural cognitive differences. The spatial domain is important not only in its own, but because it is commonly mapped into other more abstract domains in a metaphorical fashion. We therefore choose two basic, frequently used linguistic items that are confined to strategies for encoding adpositional concepts such as the basic one that signals spatial relations. These two items are chosen also because they are of different parts of speech, i.e., noun and verb, which we suspect might reveal different reality regarding the prevalent word formation principle known as zero derivation in Chinese.

In analyzing the semantics of \bot shang "up" and \rightleftarrows zai "to be (here)", the first step is to identify their meanings as used in the context. Then we work with the relationships between the various occurrences in terms of meaning and try to establish the semantic relationship among them by appealing to the two cognitive mechanisms, metaphor or metonymy, that make possible the semantic extensions.

4. Findings

4.1 在 Zai "to be (here)"

Ransom [15] has pointed out that metaphorical extension is responsible for the development from concrete lexical referents to abstract grammatical markers such as complementizers, in that certain semantic fields such as definiteness and existence are associated cognitively with truth and direction with futurity, possibility, or purpose. Thus, metaphorical transfer forms one of the main driving forces in the development of grammatical categories; that is, in order to express more "abstract" functions, concrete entities are recruited.

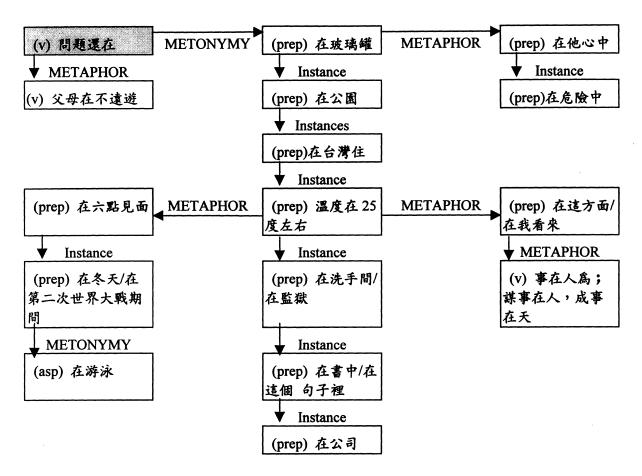
According to Zhongzheng Dictionary³, the original sense of 在 zai is 'to be (here)' or 'to exist.' It can mean 'to hold a position,' 'to examine,' 'to ask,' and 'to depend.' It can also serve as a temporal, spatial, or positional preposition. From our database, we have found that 在 zai "to be (here)" functions more as a preposition (66%) than as a verb (11%).⁴ Through metonymy, the meaning of 在 zai changes from a concrete stative 'to be/exist' to a less concrete notion, i.e., spatial preposition '(to be) at/in/on some place'. There are various types of spatial usage of 在 zai, in terms of the characteristics of the location where a certain object is grounded. It can show a position within an enclosed space (e.g., 在玻璃罐 zai bo-li guan 'in glass bottle'), surrounded by an area (e.g., 在公園 zai gueng-yuan 'in the park'), and occur with the names of locations, meaning 'within', (e.g., 在台灣 zai taiuan 'in Taiwan').

Interestingly, 在 zai may refer to the activity taking place in a certain place, for example, 在洗手間 zai xi-shou jian 'in the restroom' or show an area of employment like 在這家公司 zai zhe jia gueng-si 'in this company.' Furthermore, the physical location can be extended to conceptual space, showing a more abstract position of a thing (e.g., 在他心裡 zai ta xin-li 'in his mind') or the situation one is in (e.g., 在危險中 zai wei-xian zhueng 'in danger').⁵

When the spatial domain is mapped onto the temporal domain, $\angle zai$ extends its meaning through metaphor and refers to 'at the time of \sim ' or 'at some time during \sim ', as in the examples

like 在六點 zai liou-dian 'at six o'clock' or 在第二次世界大戰zai di-er-ci shijie-dazhan 'during the World War II'. 在 Zai can be used in an abstract sense as progressive aspect marker denoting a continuation of action at some time, such as 他在游泳 ta zai yiou-yong 'He is swimming.' The various uses of 在 zai is illustrated in Table 16:

Table 1. Sense extension of 在 zai "to be (here)"



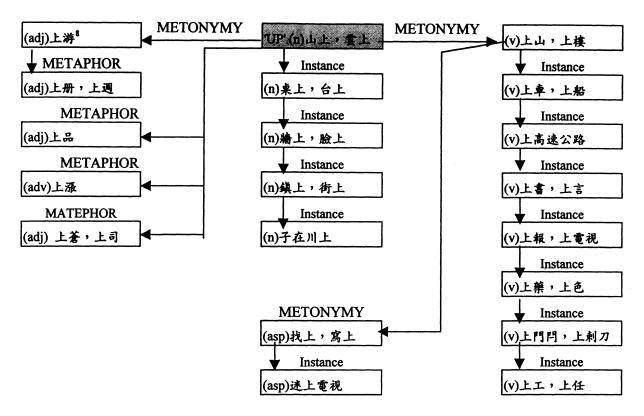
4.2 上 shang "up"

It is proposed here that the basic meaning of 上 shang "up" comes from up-down orientation, such as 山上shan-shang 'up in the mountains'. Contacts begin when the distance between the object and the landmark is reduced to zero, as in 桌上zhuo-shan 'on the table'. When the object becomes a part of the whole, 上 shang refers to the 'upper part of something.' This shows the flexibility of human cognition: one entity can be viewed as two sub-entities when it is convenient or useful for us to talk or think about it, as shown in 上身shang-shen 'the upper part of the body'.

The types of 上 shang's contiguity relations in metonymies include Location-Source (e.g., 上蒼 shang-cang 'Heaven/God'), Location-Agent (e.g., 皇上huang-shang 'king of an empire'), and Location-Action (e.g., 上接shang-lou 'go upstairs', 上顏色shang yian-se 'color', and 上課 shang-ke 'attend classes', etc.) The perfective sense of 上 shang probably emerges from the central meaning of 'attaining a goal' or 'achieve something', as in the case of 頻上門suo shangmen 'The door is locked' and 他當上會計 ta dang shang kuai-ji 'He has become an

accountant. 'Table 2 illustrates the various senses of \bot shang "up":

Table 2. Sense extension of \bot shang "up"⁷



The metaphorical extension of 上 shang "up" concerns three major conceptual metaphors: the domains of quality (UP is GOOD) as in the case of 上 策shang-ce 'the best/better plan', quantity (UP is MORE) as in the case of 物價上漲wu-jia shang-zhang 'The prices are going up', and power (UP is POWERFUL) as in the case of 上 意shang-yi 'commands of higher authorities'.9

Another metaphorical expression derived from physical space is temporal conceptualization of 上 shang, as seen in 上游shang-you 'upper streams.' As is generally assumed, the upper stream is geographically higher than its lower counterpart, which lows into the ocean. Since what is higher is also what is earlier in terms of its water flow, 上 shang, the meaning is now extended from the spatial sphere into the temporal sphere, as seen in examples such as 上個月shang-gevue "last month."

5. Discussion

What can metaphorical mapping of conceptualization tell us about human cognition? People tend to create language from concrete objects and extend meanings for more abstract concepts. It is truly a process of metaphorization. The core meaning of Æ zai is "to exist," which necessarily entails a location of its existence. The spatial meaning varies according to the relationship between the object and the location, whether physically or conceptually although represented by the same linguistic form. However, the spatial concept can transfer to time in that there is frequently an activity or event connected with a location, which is often carried out with time. The continuation of acts or events, which occupies a period of time, results in the aspectual meaning, as shown in 他在看書 ta zai kan-shu 'He is reading.'

5.1 Polysemy via Conversion

A word often has more than one meaning, in a semantic or a pragmatic sense, as is clearly shown from our illustration of sense extension for \bot shang "up" and Ξ zai "to be (here)". One way to create a new sense may involve a simple shift of its original part of speech to another without changing the form of the word, i.e., zero conversion. Laugh, run and buy are used both as nouns and as verbs, while position, process, and contrast are nouns from which verbs have been formed.

Zero conversion is, as shown from our data, mostly driven by metonymy, one of the cognitive tools to extend senses where the mapping between the source and the target is built within the same domain. For example, 上 shang as a verb meaning "to ascend" as in 上樓 shanglou derives its meaning from 楼上lou-shang, where 上 shang is a noun. Such conversion is made possible through the metonymy, which involves mapping of LOCATION to ACTION. 在 zai works the same way: its existential meaning (as a verb) may be extended to indicate locative relation (and functions as a preposition), as in 她在厨房煮菜 ta zai chu-fang zhu-cai 'She is cooking in the kitchen.'

Metaphorical mapping between the source and the target cuts however across different domains, such as, SPACE, TIME, and QUALITY, which is a way of thinking that embodies our conceptualization of abstract categories. The conceptualization process begins with a more concrete one: space, physically visible and sometimes touchable, as represented in 上面shangmian 'on top'. It is then mapped onto the temporal aspect, which is not as concrete in terms of human cognition since it cannot be seen or felt but by observing the activities displaying with time, as in 上個月shang-ge-yue 'last month'. When it is mapped onto Quality, a even more abstract domain difficult to be measured or calculated, we have expressions like 上品 shang-pin 'things of utmost quality.'

Semantic chain of meaning begins with on one extreme of the continuation a more concrete meaning, and extends into an abstract sphere of application. Abstract reasoning is, to a great extent, "a metaphorical version of imagistic reasoning" (Lakoff 1990) and the result is reflected in polysemy as we witness nowadays.

5.2 Grammaticalization

As discussed previously, the basic meaning of $\not \equiv zai$ is 'to exist,' and may shift to become a preposition via metonymic mapping. The transition from $\not \equiv zai$ as a verb to $\not \equiv zai$ as a preposition involves the existence of a coverb, which functions both as a verb and a preposition, as in the case of $\not \equiv \not \equiv (iia)$ 'He is home'. When the spatial domain is mapped onto the temporal domain, $\not \equiv zai$ is also used as preposition to show some time or some period of time, and then the temporal usage of $\not \equiv zai$ further grammaticalized as a progressive aspect marker to refer to a continuation of action taking place during some time. The gradual shift of grammatical chain is from concreteness to abstractness, and from content to function words. The driving force of grammaticalization is metaphorically motivated in human cognition. The process of grammatical chain of $\not \equiv zai$ can be figured as followed:

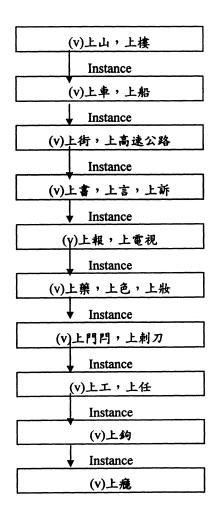
V > coverb > preposition > aspect marker 'to exist' 'to exist somewhere' 'in/at/on ~' (progressive)

The motion verb in English undergoes a similar linguistic process. The verb "go' can also be used as a modality verb (*She went on to hit the wall*) and carries with it a non-progressive sense. As such, the verb seems to have undergone a metaphoric shift – from motion in physical space to motion in event time (*She went on hitting the wall*.) Such a shift is characteristic of the gradual change from motion verb to tense-aspect marker.

From the investigation of the two lexical items, it is evident that metaphorical transfer involves often times the mapping between two prototypical categories such as SPACE and TIME, as in the examples of 溫度在25度左右 wendu zai 25 du zjoyou (SPACE) to 在六點見面 zai lioudian jian-mian (TIME); 上游 shang-you (SPACE) to上週 shang-zhou (TIME). The nature of metaphorical mapping is more of a discrete nature; that is, the transfer may be viewed as non-continuous in nature. We thus see the mappings from location to quantity (山上 shan-shang>上品 shang-pin), from location to power (山上 shan-shang>上司 shang-si), from location to time (山上 shang-shan>上週 shang-zhou) as three self-contained processes. The same applies to the transfer as reflected by 在 zai: the shift from existence to the status of existence, i.e., living, as in 問題這在 wen-ti hai zai >父母在,不達遊 fu-mu za bu yuanyou, is a complete process without any gradational possibilities in between.

Grammaticalization is however more of a metonymic structure regarding its continuum nature. Take the various instances under the box of $\bot \bot$ shang-shan (the right hand column of Table 2, repeated here as Table 3) as our example:

Table 2. Sense extension of \bot shang "up" as a verb



The various manifestations of 上 shang "up" here reflect a chain of meaning, from the more concrete to the more abstract, from more spatial to action of present relevance to prospection, which is non-spatial. The same process could be said of 在 zai, where 在玻璃罐中 zai bou-liguan zhueng is definitely more physical and spatial than 在這個句子中 zai zhe-ge ju-ze zhueng, than 在公司上班 zai gueng-si shang-ban. 10

Grammaticalization from Æ zai as a verb to Æ zai as an aspect marker involves change of a similar nature. What begins with a verbal meaning is gradually shifted to the status of a coverb, than to an aspect marker, where the semantic content of the verbal meaning is getting weaker and weaker via a series of pragmatic devices involving human cognition. Thus, both metaphorical and metonymic mapping may contribute to the lexicalization process, but such grammaticalization process is more suggestive of a metonymic structure regarding its continuum nature.

6. Conclusion

Metaphor and metonymy are considered by many as mutually exclusive phenomena of human conceptualization. We however have demonstrated that, with reference to the structure of grammatical concepts, metonymy and metaphor, at least metaphor of the "emerging" type, are not mutually exclusive but rather complement each other. That is, a development from a lexical item to a grammatical marker may be possible unless there is an intermediate stage whereby distinct conceptual domains are bridged by means of a metonymical understanding (e.g. 上在讀書 zheng zai du-shu;迷上了跳舞 mi shang-le tiaowu).

We have further shown that metaphorical transfer is the driving force for prototypical categories whereas grammaticalization is more suggestive of a metonymic structure regarding its continuum nature. Huang [16] has distinguished between two types of language in terms of the way lexical senses are structured: a metaphoric language and a metonymic language. The former is represented by English, which extend lexical meanings more often through metaphorical mappings, leading to a greater degree of verb polysemy. In his study, a metonymic language like Chinese operates chiefly through metonymic shifts to create lexical meanings, and thus results in a greater degree of noun polysemy. Huang's claim of Chinese as a metonymic language is indirectly supported by our qualitative investigation of \bot shang and \beth zai. This can be viewed in conjunction of our claim of the metonymic structure, in terms of its continuum nature, in the lexicalization of the Chinese language.

Notes

⁴ Frequency Distribution of 在 zai "to be (here)" in spoken data

Types of senses	N	%
1 Verb 'being'	11	11
2 Preposition	67	66
(a) Locative	59	58
(b)Temporal	7	7
(c) Prep 'to'	1	1
3 Aspect	24	23
Total	102	100

⁵ This is related to the event structure metaphor STATES ARE LOCATION, which deserves a thorough study and will not be discussed in detail here.

- 7 This is a preliminary sketch of the \perp shang's conceptualization and it will be revised in final version with further detailed explanation.
- 8 上游 shang-you may have a literal sense, meaning "upper stream" as illustrated in this box. 上 游 shang-you may also be used metaphorically, which should be clustered together in the box for "上品" shang-pin instead.
- 9 A person or a group with power is higher than those without power. Besides, a powerful person take some stand and holds the speech floor so that he can talk 'about' some issues.
- 10 There is of course possible to assign a physical sense to this phrase, but we are using its more abstract meaning here, where it means working for a company rather literally in the company.

¹ From a cognitive point of view, the notion of "dead" (i.e. conventionalized) metaphors is rejected since they are so alive, so deeply entrenched, automatic, and efficient as to be unconscious and effortless [17].

² In dealing with the English translation, I will follow Malotki's (1983) practice of translating the Hopi examples. That is, preference is given to a rather literal rendition which may be awkward from a stylistic point of view, but may be more revealing of the Hopi thought patterns involved.

³ 中正形音義綜合大字典。台北:中正書局,1970。

⁶ It is worth noting that both Table 1 and Table 2 are not meant to be an exhaustive listing of all the senses related to 在 zai "to be (here)" and 上 shang "up". We simply wish to show the metaphorical and the metonymic forces at work here regarding the creation of new meaning associated with the two words.

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