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On the Typology of Basic Locative Constructions in Sinitic Languages

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Abstract

This paper aims to study the Basic Locative Constructions (BLCs) in Cantonese and Shanghainese by using a standardized picture elicitation method. Results show that BLCs in both Cantonese and Shanghainese adopt 4 strategies: locative copular, locative inversion, postural verbs and resultative complements. The latter two strategies are less frequently used, if not unacceptable, in Mandarin BLCs. The results suggest that the position of Southern Sinitic languages differs quite substantially from Mandarin in spatial typology. Moreover, locative inversion and resultative complements are strategies previously unaccounted for in existing typological frameworks. This experimental work endeavours to further our understanding of Sinitic typology and the typology of spatial language in general.

Keywords: Cantonese, Shanghainese, Postural Verbs, Locative Constructions, Spatial Typology.

1. Introduction

Spatial orientation is a cognitive skill that is not unique to *homo sapiens*. However, articulatory linguistic ability is a special talent gifted to our species. Hence, cognitive linguists and psycholinguists generally believe the understanding of the connection between spatial organization and the expressed speech forms of spatial reference, is an advancement of our knowledge in the disciplines of linguistics and cognitive science. Previous descriptive work on spatial referencing has often focused only on temporal space rather than the discussion of physical space in Sinitic languages. This legacy is to be addressed in order to obtain a fuller picture of the typology of space across human languages.

In pursuit of our comprehension of spatial grammar, Levinson and Wilkins (2006) have identified and summarized several subdivisions to help systemizing our investigations. At the top tier, spatial language can be divided into static or kinetic domains. Directly under the kinetic domain, we are most likely to be looking at motion expressions. Complex predications are the syntactic elements often scrutinized hand-in-hand with this branch of spatial study. On the other hand, within static spatial reference, angle is a locus of concern. When dealing with angular expressions, the establishment of the frame of reference would be necessary. For instance, by saying ‘We are standing in front of the house.’ is differentiated from saying ‘We are standing to the East of the house’ where the former requires reference to a part of an object, and the latter requires an arbitrary fixed bearings for referencing. On the other hand, non-angular expressions denote the topological relations of the subject matters. This relationship is often communicated through basic locative expressions.

1.1. Basic Locative Constructions

According to Levinson & Wilkins (2006), basic locative constructions (BLCs) are the expressions that are predominantly used in response to a ‘where’-question in delivering the basic locative function. The inclusion of the word “basic” is essential because many languages allow an array of constructions to meet a certain pragmatic purpose, yet they do not constitute a natural response to the fundamental where-questions. (1) illustrates the BLC in English in replying the question, ‘Where is the cup?’

(1) The cup is on the table.

Yet in artistic works, a postural verb could be used in replacing the copula *be* as in (2):

(2) "...she might lie by an emperor's side and command him tasks." (*Othello*, line 198, Act IV Scene I),

Because (2) is completely grammatical and sentences of this kind serve the function of denoting spatial information, it could be legitimately regarded as a locative construction. Nevertheless, it is reiterated that the interest of this paper is to look at the basic locative structure. One would not normally answer, 'the cake sits on the table' when asked 'where is the cake?'

1.2. Theoretical Framework

In previous research, Ameka and Levinson (2007) have come up with a taxonomy that groups languages according to the type of verb used in the BLC. Their model is illustrated in Table 1.

Table 1. Basic Types of Locative Predication

Type 0	No verb in basic locative construction
Type I	Single locative verb
	Ia: Copula
	Ib: Locative (+ Existential) verb
Type II	A small contrastive set of locative verbs (3–7 verbs)
	IIa: Postural verbs
	IIb: Ground space indicating verbs
Type III	Multiverb Positional verbs (a large set of dispositional verbs, 9–100)

Existing in the literature the term "postural verb" does not seem to be distinguished from "positional verb". It is perhaps the opportunity to differentiate one from another. Postural verbs, with German examples shown in (3), are those that denote human postures used in expressing location. 'Stand', 'lie', 'sit' or 'hang' are instances of this. Positional verbs, another German example as in (4), are functionally similar to postural verbs, but go beyond human postures in indicating the position of subjects. Hence, positional verbs are more inclusive that they cover not only postural verbs, but also other verbs that are used in describing location. In current literature, German is described to be a Type III language that are said to have a large inventory of "positional verbs". In other words, the typology above uses the term "multiverb" to avoid making further distinctions. It is, nonetheless, necessary at this stage to highlight the distinction, as it would be useful in the discussion of Sinitic languages.

(3) Die bücher **liegen** auf der erde (from *Kutscher & Schultze-Berndt, 2007*)
 the books lie:3PL:PRS on the ground
The books are (lit. 'are lying') on the ground.

(4) Die marmelade **klebt** am messer (from *Kutscher & Schultze-Berndt, 2007*)
 the jam stick(glue):3SG:PRS at:the knife
The jam sticks on the knife.

In summary, this classification reasonably assumes that verbs used in the locative phrase must be describing the position the object is at. As a result, it only focuses on the number of verbs of a kind in the inventory of a language, but minimally on the nature of the verb.

On the other hand, Durst-Andersen (2011) has made a typological distinction between position focus and existence focus. Position focus languages prefer the use of positional verbs, German, once again, belong to this type. Existence focus languages, such as English, prefer to employ a copula or existential expression in denoting unspecified existence of the target object. Although, this typology analyses spatial constructions with similar terminology to that of Ameka & Levinson (2006), it pays more attention to the semantics of the verbs in BLCs. The use of copula entails that a figure exists at

a certain place; whereas the use of positional verbs describe the position of the figure in relation to a ground object.

Under this framework, the possibility of including positional verbs in English locative sentences does not make English a position focus language, for two-fold reasons. First, in line with the previous argument, the construction that involves a copula is a more natural answer, which makes it the BLC of English. Secondly, the frequency of occurrence of positional verbs in a locative construction is significantly less than that of the alternative constructions (Durst-Andersen, 2011). Essentially, this typological framework considers not only the nature of the verb used, but also the frequency of constructions and the preferences of speakers.

1.3. Current Research

Further on Durst-Andersen (2011)'s framework, it follows with an assumption that languages would exhibit a dominant structure. However, it is logically possible to have languages not showing preference for either option, or demonstrating equal favour towards the two. The former possibility entails the use of a structure to indicate space that has not previously been accounted for. The second possible outcome can be detected when the occurrence of both locative structures are roughly equally frequent. In fact, Ameka & Levinson (2006)'s typology faces the same problem of exclusivity. Languages are expected to demonstrate preferred type of verb in their BLC.

As discussed earlier, a very limited amount of work has been dedicated to the study of BLCs of Southern Sinitic languages. This research will discuss the nature of verb used in BLCs in Cantonese and Shanghainese. It would be logical to follow Durst-Andersen's model in the two languages, although Ameka & Levinson (2006)'s typology would also be discussed briefly. The choice of framework is justified by the simplicity of a bipolar classification, which allows better flexibility. As a matter of fact, the two models are by no means incompatible. We can view a Type 0 language as standing stand at the very extreme pole of existence-position focus on the continuum; whereas, a Type III language would be at the opposite pole of position focus. The goal of the current research is to examine whether the existing model is able to describe Sinitic languages, and if necessary, to improve on the existing typology.

2. Methodology

This experimental research employs standardized picture elicitation stimuli for controlled comparison between Cantonese and Shanghainese. The stimuli come in two sets: the Topological Relations Picture Series (TPRS; Ameka, et. al., 1999) and the Picture Series for Positional Verbs (PSPV; Bowerman & Pederson, 1992), consisting of 71 line drawings and 68 pictures respectively. The elicitation tools are designed at the Max Planck Institute for Psycholinguistics (MPI), Nijmegen, specifically for the study of basic locative expressions.

Following in the footsteps of what has been done at the MPI, 3 consultants who are native speakers of Cantonese and Shanghainese are invited to participate in this study. As the sets of tools are not meant to be a mechanical elicitation procedure, Levinson & Wilkins (2006) believe that their chosen sample number of 3, or possibly more, would allow for both qualitative and quantitative analysis of preferred solutions. In justifying such an approach, consultants are encouraged to provide a range of answers. Investigators are required to note the order of occurrence. Consultants will also be asked which construction is preferred or most normal.

In the present study, responses from 3 speakers of Shanghainese and 3 speakers of Cantonese are analysed. The speakers were chosen on the basis of convenience sampling, as Shanghainese speakers are not readily available in Hong Kong. To match with that, even though the majority in Hong Kong are Cantonese speakers, the same size and sampling method were used. In order to be invited to join this research, all consultants are required to be native speakers of the respective language and family

communication must also be done in that target language.

In the briefing session, the investigator gave instructions to the consultants in a mutual language, mainly Cantonese and/or Mandarin. Consultants are asked to give as many as possible answers to ‘Where is (figure)?’ in the target language. They were also reminded to give responses by using the ground object as a point of referencing. The elicitation pictures were then shown to the informants on a laptop computer one by one and the figures are both marked by an arrow and repeated by the investigator. Responses were recorded using a Tascam DR-07-mkII solid-state recorder. Data was transcribed by the author. Transcription for Cantonese was done following the Jyutping convention set up by the Linguistic Society of Hong Kong (LSHK). As for the data for Shanghainese, transcriptions are represented by IPA phonemically¹.

Although the stimuli employed are intended for one-tool-serve-all in investigating languages across the world, difficulties may arise coming for a variety of good reasons, notably cultural and socio-economic ones. Hence, investigators may also need to substitute alternative items to be found in similar configurations. For example, a certain vegetable depicted in the picture set was not identifiable to the Chinese informants, who referred to it variously as a sweet potato or ‘that thing’.

3. Results

This section is dedicated to discussion of the elicited responses in Cantonese and Shanghainese. Surprisingly, four types of constructions have been identified from the pilot studies: single locative copula, postural verb (PV), resultative complement (RC) and locative inversion. Each of them will be explicated in further details. For easier referencing, constructions used are illustrated respectively by the following schemata of Cantonese and Shanghainese BLCs:

(5) a.	([Figure])		hai	[Ground]	dou/PP
b.	([Figure])	PV/ RC	hai	[Ground]	dou/PP
c.	[Ground]	(LOC/PP)	RC/EXT		[Figure]
(6) a.	[Figure]		lɛ	[Ground]	PP
b.	[Figure]	PV/ RC	lɛ	[Ground]	PP
c.	[Ground]	PP	RC/EXT		[Figure]

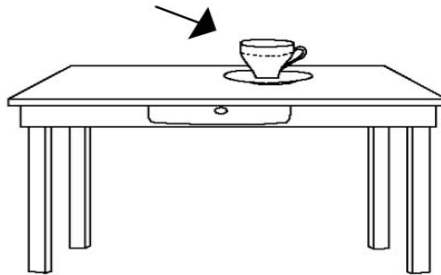
3.1 Locative Copular Strategy

(7-8) exhibit the locative copular strategy from an elicited response, exemplifying (5a) of Cantonese and (6a) of Shanghainese respectively. To put the data into statistics, this strategy of using the locative copula makes up 36% of the Cantonese BLCs, constituting the most widely used strategy in the language. On the other hand, only 15% of BLCs are expressed with the Shanghainese locative copula *lɛ* as in (8).

(7) zek bui hai zoeng toi soeng-min
 CL cup LOC.COP CL table up.face.PP
The cup is on the table.

¹ Transcription conventions for Shanghainese do not seem to be very well established, as I found it hard to come across a convention that authors generally refer to. Hence, resorting to the IPA is a reasonably convenient way of representation. Tones were not transcribed in the Shanghainese data as Shanghainese has a complicated tone sandhi system that does not seem to affect the grammatical structure under discussion.

- (8) si-peɪ lə te- ʈsə ko-tʰu
 water-cup LOC.COP table-DIM high-head.PP
The cup is on the table.



1

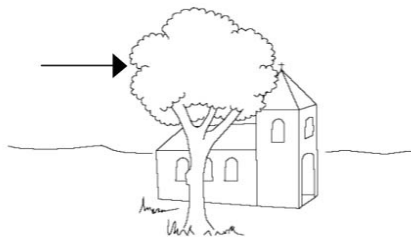
Figure 1. TPRS #1 picture used in eliciting (7-8).

The usage of locative copula in both languages is similar: to indicate the figure being at its canonical position. However, from the statistics, this strategy is less commonly used in Shanghainese than in Cantonese. This phenomenon is relevant to the discussion in the next session.

3.2 Postural Verb Strategy

The locative copular strategy is less frequently used in Shanghainese than in Cantonese because of the higher acceptance of the insertion of a positional verb in Shanghainese as shown in (6b). For instance, one can use insert the postural verb ‘stand’ before the locative marker in referring to a figure being at its canonical position, even though the locative marker is still obligatory in the locative phrase. Compare the Shanghainese sentence (9) with (10) in Cantonese:

- (9) jɛʔ k^hu zi lɛʔ lə vaon- ʈsə baon-pi
 one CL tree stand LOC² house-DIM near-side.PP
A tree is standing near the house.
- (10) po syu hai gaan uk ceot-min
 CL tree LOC.COP CL house out-face.PP
The tree is outside the house.



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Figure 2. TPRS #49 picture used in eliciting (9-10).

² The locative marker is no longer glossed as a locative copula because it is not predicating the subject by linking it to the location any more. Rather, it functions as a marker in introducing the locative phrase that follows.

To show how the Cantonese grammar differs from that of Shanghainese, (11) provides a literal translation of (9) from Shanghainese to Cantonese. Native speakers of Cantonese find (11) slightly unnatural as standing and sitting are already considered to be “natural” positions for inanimate objects.

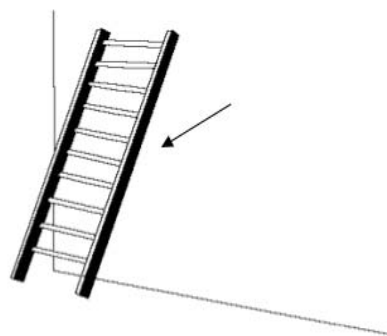
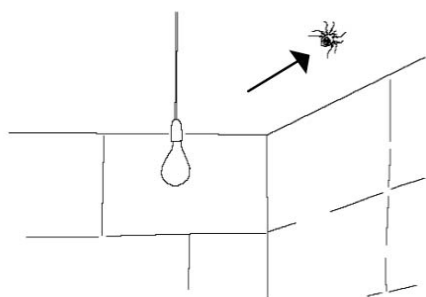
- (11) ?po syu **kei** hai gaan uk ceot-min
 CL tree stand LOC CL house out-face.PP
The tree is standing outside the house.

Because of the reason we have just discussed, postural verbs are more heavily used in Shanghainese (41% of all responses) than in Cantonese (15%). This also comes back to explain the reverse preference of the use of locative copular in as discussed in 3.1. By the same token, even a motionless spider in a typical position would be able to elicit the postural verb strategy (using *bu* ‘lie’) in Shanghainese (12a). However, in the case of Cantonese, it is only when highly non-canonical positions, such as *leaning*, are involved, that this strategy would be elicited as in (13).

- (12)a. ʃi.ʃi **bu** lɛ ti.ho.pe laon (Shanghainese)
 spider lie LOC sky.flower.board on
The spider is lying on the ceiling.

- b. zek zizyu **hai** buk coeng soeng-min (Cantonese)
 CL spider LOC CL wall up-face.PP
The spider is on the wall.

- (13)tiu tai daa-ce gam **ngaai** zyu hai buk coeng dou
 CL ladder hit-slant like lean PROG LOC CL wall there
The ladder is leaning on the wall in a diagonal plane.



7

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Figures 3 (left) & 4 (right). TPRS #7 and #58 pictures used in eliciting (12) & (13) respectively.

3.3 Resultative Complement Strategy

In addition to the locative copular and the postural verb configuration, data from both languages do exhibit the resultative strategy in denoting topological relationships, as in (14). This strategy actually counts as the second most popular one, comprising 34% and 35% of BLCs respectively, in both Cantonese and Shanghainese. Although a similar structure (14) in Japanese has been discussed by Kita (2006), the conclusion shows the resultative construction of Japanese is used in limited

context. Above all, the resultative strategy does not give a felicitous answer to the ‘where’-question, rather it focuses on the change of state of the figure. This point is emphasized with the example in Cantonese. In (15a), the change of state is reinforced by the perfective marker *zo* attached to the verb. Interestingly, both non-felicitous answers (15a) and (15b) constitute the BLC of their language, although (15b)’s structure resembles that of a postural verb strategy.

- (14) *kitte -wa fuutoo -ni hat -te -a -ru*
stamp-TOP envelope-DAT adhere(transitive)-CONN-RSMD-PRS
That stamp is in the state of having been stuck to the envelope (by someone).
- (15) a. *bun syu baai zo hai syu-gaa soeng-min (Cantonese)*
CL book put PERF LOC book-shelf up-face.PP
The book is placed on the bookshelf.
- b. *si pa læ si-ka ko-truu (Shanghainese)*
book put LOC book-shelf high-head.PP
The book is placed on the bookshelf.

In fact, this is precisely where the “postural verb” and “positional verb” distinction comes in. The postural verb *liegen* ‘lie’ is differentiated from that of positional verb *hängt* ‘hang’. By the same token, postural verbs such as *ngaai* ‘lean’ in Cantonese and *bu* ‘lie’ in Shanghainese are different from ‘put’ *baai* in Cantonese and *pa* Shanghainese. Since it will be recognized as a different strategy, postural verbs and positional should be distinguished. In summary, verbs that express human postures are postural verbs, and positional verbs, including postural verbs, are those that indicate the spatial position of the figure object.

From the German example in (4), it is explicit that the subject and the agent of the sentence is *die marmalade* ‘the jam’ because *klebt* is morphologically marked. On the other hand, both Cantonese and Shanghainese are analytical languages, on top of their pro-drop nature. This imposes difficulty in identifying whether sentences such as (15) refer to the situation that *the book is being placed by someone on the shelf* or *it is at the state of being placed on the shelf*. Likewise, it is ambiguous for the German sentences like (16) to be addressed in Cantonese (17) and Shanghainese (18).

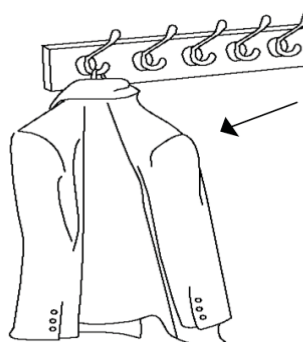
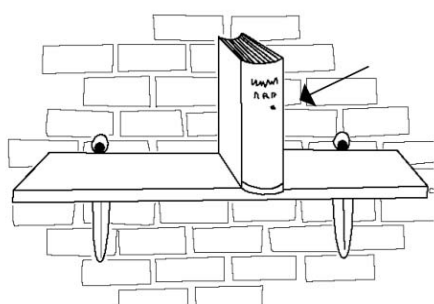
- (16) *Deine jacke hängt am haken*
POSS:2SG coat hang:3SG:PRS on:the hook
Your coat is (lit. ‘hangs’) on the hook.
- (17) *gin saam gwaa zyu zo hai go gaa soengmin*
CL coat hang PROG PERF LOC CL hanger up.PP
The coat has been hung and is at the position of hanging on the hanger.
- (18) *ku kin saon ku læ ku laon-ɕiã*
DEM CL coat hang LOC hanger on-towards.PP
The coat is at the position of hanging on the hanger.

To give further semantic account on justifying the setup of a resultative strategy in existing framework, consider again sentences (16-18). The perfective marker of Cantonese presupposes the coat was not originally in that position and that an event was taken place. In (17), the ‘coat’ is the patient of the sentence. On the other hand, the ‘coat’ in (16) takes up the theme role. Although the Shanghainese sentence (18) does not provide an explicit aspect marker, it is well acknowledged that aspect marking does not come necessarily within the sentence. For this reason, the difference between the German positional verbs and the positional verbs in a resultative strategy should be highlighted.

To carry on the discussion of Shanghainese, as there is no syntactic clue or cue from the word order to identify *pa* ‘put’ as a postural verb or a positional verb, it relies largely on the semantics of the verb to identify which strategy is being used. Consider the following. Even though (19) and (20) are responses to a same picture, (19) employs the verb *le?* ‘stand’, demonstrating a postural verb strategy, while (20) exemplifies a resultative construction. In (20), it is obvious that the ‘tree’ is the patient but not the agent, whereas the ‘tree’ in (19) is the theme of the sentence.

(19) *jε?* *k^hu zi le?* *le se ko-txu*
 one CL tree stand LOC hill high-head.PP
A tree is present and is standing on the hilltop.

(20) *zi fson le se-tin laon-eiã*
 tree plant LOC hill-top on-towards.PP
The tree is present on the hilltop. It was planted in this location earlier.



Figures 5 (left) & 6 (right). TPRS #8 & #9 pictures in eliciting (15) and (16-18) respectively.



Figure 7. TPRS #65 picture used in eliciting (19-20).

3.4 Locative Inversion

There is yet the locative inversion configuration to be discussed. When we consider a phrase to be a locative inversion, the ground object, instead of the figure, must occupy the subject position as what were shown in (3c) and (4c). In fact, the exchanging the figure and ground in the syntactic position does not provide a felicitous answer either, even though they are once again the BLCs of Cantonese and Shanghainese. This strategy is intriguingly one as commonly used in Cantonese as the postural verb strategy, in which they both make up equally the same 15% of all Cantonese BLCs. In Shanghainese, however, it only constitutes 9% of the BLC. This strategy is adopted quite consistently in negative spaces, for example holes or cracks, in both languages. To explain the difference in the statistics, locative inversion is used in Cantonese under other contexts as well, such

as the distant relationship between ground and object. (21) reflects the responses to a picture that has a hole (the figure) on the towel (the ground).

(21)a. *tiu mou-gan cyun zo go lung* (Cantonese)
 CL fur-towel drill PERF CL hole
A hole has been drilled in the towel.

b. *mo-f̄sin ko-tʰu p^hu lɛ f̄sɛʔ don* (Shanghainese)
 fur-towel high-head.PP break EXT CL hole
The towel has been drilled and there is now a hole in it.

4. Conclusion

This paper has shown how Cantonese and Shanghainese structure spatial information in their BLCs. In a nutshell, they both use a diversity of strategies as their BLC while other languages that are researched on have shown a predominant preference for one or another. See table 2 for a summary of the frequency of each strategy used in this pilot study.

Table 2. A Comparison of the Basic Locative Constructions in Cantonese and Shanghainese

	Cantonese	Shanghainese
Locative Copula Construction	36%	15%
Postural Verb Strategy	15%	41%
Resultative Construction	34%	35%
Locative Inversion Strategy	15%	9%

I have discussed that Cantonese and Shanghainese demonstrate structure that vaguely resembles that of German in terms of the use of postural and resultative strategy, as German sentences are using the present tense to indicate, while a perfective aspect in the Sinitic languages in denoting the location of the figure. On the plus, there are other configurations, namely the locative copula and locative inversion readily accessible for speakers of these two Sinitic varieties. It is unclear yet when a certain strategy would be picked instead of the others. A larger sample size in a follow-up study could contribute more knowledge on this.

In summarizing the data into the typological framework illustrated earlier, Shanghainese has demonstrated a higher percentage of the use of postural verbs. As for Cantonese, speakers are found to use the locative copula in a larger ratio. In fitting them into Durst-Andersen (2011)'s model, Cantonese would be conveniently classified as the existence focus type, and Shanghainese the position focus. Nonetheless, the statistics denoting the current trend in both languages do not seem to show a predominant preference towards a single strategy. By framing them into either category would essentially undermine the resultative strategy, which constitutes the second most-frequently used construction and is unique to the two Sinitic languages.

Although I have referred the verbs used in the resultative strategy as positional verbs, it is perhaps more proper to set up a new element in the existing model because these verbs do not seem to only tell the position of the figure, they also entail what has been done to the figure in order to achieve its current position. For another, we have also discussed that the positional verbs in this construction assign semantic roles differently from the 'positional verbs' in German. Therefore, to reflect what is given from the Sinitic data, both Durst-Andersen (2011)'s model, and Ameka and Levinson (2007)'s model need to be extended.

The significance of these findings is once again to suggest that the distinction of language types is not always categorical; rather, it is more properly described by a multidimensional continuum as

illustrated in Figure 8. Also, typology of languages has also once again been shown to be a classification of strategies, which leads to the possibility of overlapping.

In terms of the bigger picture of Sinitic typology, Sinitic languages once again illustrate the fact that languages with close genetic affiliation are not obliged to adopt a universal strategy in denotation. While examples shown in this paper demonstrate the use of postural verbs or positional verbs in answers to where-questions, such constituents are not commonly recognized as part of a natural answer in Mandarin. The typological implication of this study reconfirms Chappell (2006)'s suggestion that properties of the standard or predominant form should not be presupposed when doing Sinitic linguistics.

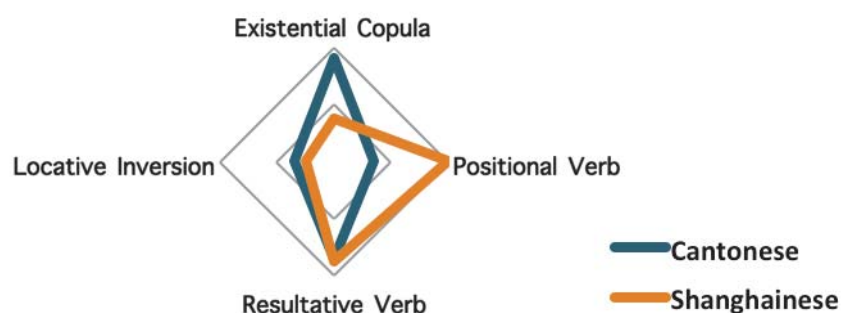


Figure 8. A multidimensional continuum of strategies used in BLC spatial typology.

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