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Place and distance

Locative expressions in Mandarin and Cantonese¹

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The topic of this chapter is locatives containing a measure expression (like the English *60 yards behind the palace*) in Mandarin and Cantonese. More generally, it is about the structure of locative PPs. The hypothesis in Terzi (2010), which says that locatives are modifiers to an N Place (which itself is the complement to a locative P), offers a helpful framework in accounting for our data. We observe that in Mandarin and Cantonese, the N Place is obligatorily overt if the location denoting expression which modifies it is not an inherent location and not headed by an AxPart. It is optionally overt when it is modified by an inherent location (like a toponym) or by a phrase headed by an AxPart.

1. Introduction

Locative expressions such as *above the table* in languages like English and Dutch can be easily modified by a measure phrase, as in the expressions in (1), which are embedded in a sentence in (2).

- (1) a. ten meters behind the house
b. vijftig centimeter boven de tafel (Dutch)
50 centimeter above DET table
- (2) a. They threw the ball ten meters behind the house
b. Er hing een lamp vijftig centimeter boven de tafel (Dutch)
there hung DET lamp 50 cm above DET table
'A lamp was hanging 50 centimeter above the table.'

1. We are happy to dedicate this chapter to Audrey. She has been a great inspiration to all of us and we would like to express our heartfelt appreciation for everything she has done for the field of Chinese linguistics. Thank you, Audrey! We wrote this article during our stay at UBC as guests of the Linguistics Department. We would like to thank Henry Davis, Lisa Matthewson and Hotze Rullmann for making our stay worth our while despite covid. In sorting out the data for this chapter, we received help from Cheng Hang, Cherry Lam, Chin-hui Lin, Joanna Sio and Yang Zhaole. We acknowledge their help gratefully, as it was not a simple affair. We are also thankful to a reviewer and to Andrew Simpson for comments and helpful suggestions.

Just looking at the surface order, we can describe the addition of the measure phrase to the locative PPs as simply putting the measure phrase right in front of the PP.

In Chinese languages, counterparts of (1) and (2) come in two forms, one that looks as straightforward as the English and Dutch versions in (1) and (2) (illustrated using Mandarin in (3); based on [24b] of Wu 2015), and one, in (4) (also Mandarin), that is much less straightforward, as it obligatorily involves an extra constituent meaning ‘place’. Note the difference in word order between the measure expression *liáng mǐ* ‘two meters’ and *hòutou* ‘behind’ between (3) and (4).

- (3) a. fángwū liáng mǐ hòutou
house two meter behind.head
‘two meters behind the house’
b. nà dòng fángwū liáng mǐ hòutou zhòng-le huā
DEM CL house two meter behind.head plant-PRF flower
‘Flowers grow two meters behind the house.’
- (4) a. fángwū hòutou liáng mǐ de dìfang
house behind.head two meter MOD place
‘two meters behind the house’
b. nà dòng fángwū hòutou liáng mǐ *(de dìfang)
DEM CL house behind.head two meter MOD place
zhòng-le huā
plant-PRF flower
‘Flowers grow two meters behind the house.’

The pattern in (3) is more restricted than the one illustrated in (4) in several respects. Not only do not all native speakers consulted accept it, those who do accept it, judge it more bookish (one reported “less natural”). What is more, its use seems limited to a small number of locative dimensions; for example, it works with *hòutou* ‘behind’, as is clear from (3), and *wàitou* ‘outside’ (as in Wu’s original example), but it does not combine felicitously with *lǐtou* ‘inside’ or *shàngtou* ‘above’, as is shown in (5) for the latter.²

- (5) *nà zhāng zhuōzi wǔshí gōngfēn shàngtou guà-le yì fú huà
DEM CL table 50 cm above.head hang-PRF one CL painting
INTENDED: ‘A picture was hanging 50 cm above that table.’

2. This may or may not be a purely lexical affair, comparable to the fact that in English (and, in fact, many other languages), not all adjectives can combine with a measure expression in their base form, as Grano and Kennedy (2012) point out: *two meters wide* vs. **two dollars expensive*. See also fn. 27 below. In any case, this pattern needs to be looked into more, not only with respect to its distribution and acceptability, but also with respect to its meaning.

The pattern illustrated in (4) does not display these collocational restrictions (compare (5) to (7) below, which is fine). It is also judged more colloquial (and “more natural”). For these reasons, we will focus the discussion in this chapter on the pattern in (4). We briefly turn to the sequence in (3) in Section 8.

The core data we rely on in this paper are drawn from Mandarin and Cantonese (occasionally abbreviated to M and C respectively below), but the pattern in (4) is found in other Chinese languages as well. In (6), we give examples from Mandarin (a), Cantonese (b) and Taiwanese (c). The examples in (7) embed the examples from (6a,b) in a full sentence.

- (6) a. zài zhuōzi shàngmian wǔshí gōngfēn de dìfang
 at table above.surface 50 cm MOD place
 b. hai2 zoeng1 toi2 soeng6min6 ng5sap6 gong1fan1 go2 dou6
 at CL table above.surface 50 cm that place
 c. tī.leh tohá tǐngkuàn gōotsáp konghun ê sóotsāi
 at table above.surface 50 cm MOD place
 ALL: ‘50 centimeters above the table’
- (7) a. zhè fú huà guà zài zhuōzi shàngmian wǔshí gōngfēn
 DEM CL painting hang at table above.surface 50 cm
 *(de dìfang)
 MOD place
 b. lì1 fuk1 waa2 gwaa3 hai2 zoeng1 toi2 soeng6min6 ng5sap6
 DEM CL painting hang at CL table above.surface 50
 gong1fan1 *(go2 dou6)
 cm that place
 BOTH: ‘This painting was hanging 50 cm above the table.’

Our point of departure and the main topic of this chapter is the fact that, as we see in (4b) and (7), in the pattern illustrated in (4a) and (6), the inclusion of a measure phrase into the locative expression leads to the obligatory addition of one more location denoting element at the end. Why is this additional locational element needed? How can we account for this phenomenon?

Since our more general goal is to contribute to the discussion on locative expressions, and, more in particular, on the structure of spatial PPs, we adopt the terminology common in this area of research. Thus, we use Ground to refer to the reference point or landmark (e.g., *the car* in *in front of the car*) and Figure for the in principle moveable object the position of which is expressed in relation to the Ground (*the deer* in *the deer in front of the car*).³ Furthermore, we follow Svenonius (2006) in assuming that the noun-like element *front* in *in front of the car* constitutes

3. See Talmy (1978) and Svenonius (2008) among others.

a functional category, called Axial Part (AxPart), which semantically serves to “identify a region (...) based on the Ground element” (p. 52). The region is connected to the concept of vector space (Svenonius 2006; Jackendoff 1996), as we will see in sections 2 and 3.

Given these terms, we can schematically represent Mandarin (6a) as in (8):⁴

(8)	P	Ground	AxPart	Measure		Place
	zài	zhuōzi	shàngmian	wǔshí gōngfēn	de	difang
	at	table	above.surface	50 cm	MOD	place

In Section 2, we discuss the different components in (8) and reach a preliminary conclusion with respect to the relations that exist between them. After discussing the AxPart in more detail in Section 3, we zoom in on the relations it entertains with Measure and with Ground (in sections 4 and 5 respectively). The conclusions we draw in these sections enable us to turn to the component Place (in (8)) in Section 6 and answer the question why it is obligatorily present in locative expressions that contain a measure. Sections 7 and 8 contain additional discussion on the nature of Place and its relation with the rest of the phrase and a short note on the alternative locative *cum* measure pattern which was illustrated in (3) respectively. The conclusions follow in Section 9.

2. Preliminaries

In this section we take a closer look at the components in the sequence in (8), repeated here as (9), with Cantonese added, and investigate the possible interrelationships among them:

(9)	P	Ground	AxPart	Measure		Place	
M:	zài	zhuōzi	shàngmian	wǔshí gōngfēn	de	difang	
	at	table	above.surface	50 cm	MOD	place	
C:	hai2	zoeng1	toi2	soeng6min6	ng5sap6	gong1fan1	
	at	CL	table	above.surface	50	cm	go2 dou6
						that place	

As, from a descriptive perspective, Measure and Ground are straightforward, we don't need to dwell on the nature of these constituents here; we will turn to them and, more particularly, their relation with the other elements, in the more analytical discussions in sections 4 and 5 respectively. We can be equally brief on P, which

4. For the element *de*, glossed as ‘MOD’ (modification marker) here, see Section 2.

is realized as *zài* ‘at’ in (7a) (M) and as *hai2* ‘at’ in (7b) (C), these being the most neutral prepositions expressing location.⁵ We return to P in Section 6.

The elements that we label AxPart here have generally been called “localizers” in Chinese linguistics (Chao 1968, Li 1990). In Mandarin, but not in Cantonese (see (10a) and (10b) respectively), they come in two forms, a simplex one and a complex one; Cantonese only features the complex one. The complex form consists of the simplex form, denoting the vector space (‘front’, ‘back’, ‘inside’; cf. Wu 2015)⁶ plus a morpheme which means something like ‘surface’ (M *miàn*, C *min6*), ‘side’ (M *biān*, C *bin6*), ‘place, orientation’ (M *fāng*) or ‘extremity, head’ (M *tóu*):⁷

- (10) a. *zài zhuōzi shàng* (mian/bian/fang/tou) *wǔshí gōngfēn de dìfang*
 at table above surface/place/side/head 50 cm MOD place
 b. *hai2 zoeng1 toi2 soeng6-*(min6/bin6) ng5sap6 gong1fan1 go2 dou6*
 at CL table above-surface/side 50 cm that place
 BOTH: ‘50 cm above the table’

Even though in (10a), the simplex and complex forms are in free variation, this is not always the case (as we will see in Section 3). Some informants report a slight preference for the use of the complex counterpart in sentences like (10a). As is often the case in Mandarin, prosody may play a role here, because there seems to be a weak preference to combine monosyllabic Grounds with the simplex (monosyllabic) AxPart and disyllabic Grounds with the complex (disyllabic) counterpart. It is important to emphasize that these preferences are slight and weak and that all informants judge sentences with both forms fully grammatical. In labeling them AxPart we follow Svenonius (2006, 2008). More recently, Wu (2015) also argues that, rather than treating the localizers as nouns, postpositions or clitics, as has

5. *Cóng* ‘from’, *wǎng* ‘towards’, *dào* ‘to’ and possibly one or two others “compete for the same structural position” as Wu (2015: 217) phrases it. See also Paul (2015: 124). For Cantonese, the other Ps for this position are *cung4* ‘from’ and *wong5* ‘towards’.

6. We gloss these elements with English prepositions, even though it may be more appropriate (in any case historically) to gloss them with nouns; see below for some discussion.

7. A few comments are in order. First, it must be noted that Cantonese and Mandarin differ in which elements they have available for this function. Secondly, note that these elements are not always in free variation; aside from idiosyncrasies, issues like whether the Figure is in contact with the Ground also play a role in determining which of these elements is appropriate in a given context. Also, so as to not make the reading of this chapter too cumbersome, we will, in the running text (but not in the examples), use one uniform gloss/translation for both the simplex and complex forms, unless there are reasons to distinguish them. Furthermore, the Mandarin elements are listed here with the tone they have as a full form; as part of the complex form, they tend to lose their tone, as represented in the examples. In Cantonese, the tone remains. Finally, for Mandarin, we ignore the rhotacized and phonologically reduced variant forms.

been done in the past, they should be identified as AxParts. She argues that this applies to both simplex and complex forms. We discuss this further in Section 3.

Let's now consider Place in the schematic representation in (9). The example in (11a) illustrates that in Mandarin, Place is instantiated in different forms too: *difang* 'place', *chù* 'place' and *nàr* 'there' (to name but a few); note that, of these, only *difang* 'place' is preceded by modification marker *de* (an element that signals that what precedes it modifies the noun that follows it). Cantonese (see (11b) = (6b)) just has one option for this category (viz., *go2 dou6* 'that place'), at least in expressions like these; as we will see in Section 7, in certain other cases, *dou6* 'place' appears without the demonstrative.⁸

- (11) a. zài zhuōzi shàngmian wǔshí gōngfēn nàr/chù/de-difang
 at table above.surface 50 cm there/place/MOD-place
 b. hai2 zoeng1 toi2 soeng6min6 ng5sap6 gong1fan1 go2 dou6
 at CL table above.surface 50 cm that place
 BOTH: '50 cm above the table'

With respect to Mandarin (11a), the variant with *chù* 'place' is more formal (from the written register) than the ones with *difang* 'place' and *nàr* 'there'. Although only *difang* 'place' is preceded by the marker of modification, we assume that *chù* 'place' and *nàr* 'there' are similarly modified by the preceding constituent (after all, as a rule, *de* is not always obligatory in nominal modification).⁹ In (11a), *chù* 'place', *difang* 'place' and *nàr* 'there' are in free variation (ignoring matters of style and register), but there are cases in which they are not (we will see examples as we go along; in general, *nàr* 'there' is more flexibly employed than *difang* 'place'; it is not the goal of this paper to determine the precise distribution of these individual elements).

In the discussion in this chapter, we take, for ease of explication, the variant in (6a) as our point of departure, that is, the most elaborate and explicit one, with the complex AxPart and with *difang* 'place' preceded by modification marker *de* as Place.

8. Note that, just like Cantonese *go2 dou6* 'that place', which is the Cantonese equivalent of 'there' (*li1 dou6* 'this place' is 'here'), Mandarin *nàr* 'there' also consists of DEM and place: *nà* 'that' and *r* presumably 'place' (cf. *zhè-r* 'here' containing the proximal demonstrative *zhè* 'this'). Despite their potential equivalence, we will continue to gloss Cantonese *go2 dou6* as 'that place' and Mandarin *nàr* as 'there'.

9. In the case of *nàr* 'there' and Cantonese *go2 dou6* 'that place' in (11b), it is, on the face of it, also possible that we are dealing with apposition. A modification relation can, however, not be excluded. See Section 7 for discussion on this point.

In Section 1, we pointed out that the presence of Place is obligatory in locative expressions that include a measure. Location denoting phrases without a measure expression, however, can also be accompanied by one of the elements that can fill the Place slot in (9). In such cases, however, it is optional, as the following examples show (M (a,b), C (c,d)).

- (12) a. *zhuōzi shàngmian (nàr/ de-difang) guà-zhe yì fú huà*
 table above.surface there/ MOD-place hang-DUR one CL painting
 ‘A painting is hanging above the table.’
- b. *wǒ de fángzi zài gōngdiàn hòumian (nàr/ de-difang)*
 1s MOD house at palace behind.surface there MOD-place
 ‘My house is behind the palace.’
- c. *zoeng1 toi2 soeng6min6 (go2 dou6) gwaa3-zo2 fok1 waa2*
 CL table above.surface that place hang-PRF CL painting
 ‘A painting hung above the table.’
- d. *ngo5 uk1kei2 hai2 tou4syu1gwun2 hau6min6 (go2 dou6)*
 I home at library behind.surface that place
 ‘My home is behind the library.’

The fact that Place is obligatory when we have Measure suggests an underlying structure as in (13), in which Measure and Place form a constituent or are in any case connected directly one way or another:

- (13) P Ground AxPart [Measure Place]

However, not only does a phrase like *wǔshí gōngfēn de dìfang* (lit.) ‘a place of 50 cm’ from (6a) not form a constituent in the face of the standard constituency tests, the parse in (13) does not reflect the semantic relations either. Just considering the semantic relations, it is clear that Measure *wǔshí gōngfēn* ‘50 cm’ expresses (or measures out) the degree (distance) to which the painting in (7a) hangs above the table. In other words, it is related to *shàngmian* ‘above’ (or, possibly, just to *shàng* ‘above’ in it), thus suggesting the parse in (14):

- (14) P Ground [AxPart Measure] Place

The bracketings in (13) and (14) are not compatible and when we take Ground into consideration as well, things become even more interesting. Whatever the categorial status of elements like *shàngmian* ‘above’ and *soeng6min6* ‘above’ will turn out to be, N, adposition or AxPart (see Section 3), they will always be most closely related to the Ground. After all, as AxPart, it specifies the vector space of the Ground (see Section 1), as adposition, the Ground will be its complement and as N, it is generally considered to be modified by the Ground (in (6a), the phrase

zài zhuōzi shàngmian ‘above the table’ would then literally mean something like ‘at the top of the table’).¹⁰ In any case, the parse would be as indicated in (15), thus complicating the picture we already have even further.

(15) P [Ground AxPart] Measure Place

To resolve the contradictions in the bracketings in (13)–(15) and to lay the groundwork for the rest of this chapter, we take the presence of the modification marker *de* preceding *difang* ‘place’ as an important cue. As we noted earlier on, *de* indicates that whatever precedes it modifies the noun following it. We also saw in (12) that *de + difang* ‘MOD + place’ or its variants in Mandarin and Cantonese can also be present when there is no Measure. In other words, locational expressions can in general enter a modification relationship with an element meaning ‘place’. In (12b), for instance, *gōngdiàn hòumian* ‘behind the palace’ can be followed by *de + difang* ‘MOD + place’, suggesting that Ground + AxPart modifies *difang* ‘place’ (‘the place behind the palace’). This is reminiscent of the conclusion Terzi (2010) reaches after analyzing locative expressions in Greek, Spanish and English. She concludes that most locatives are modifiers to a (covert) noun Place. This N is the complement of a D, the head of a DP, which is in turn the complement of a functional head, P_{Loc}. For the languages she considers, Terzi concludes that the N Place is always “nonphonologically realized” (p. 217). However, if we abstract away from (and further ignore) details in her analysis like the DP and the AgrP that she assumes, her analysis throws a clarifying light on Chinese locatives like those in (6) and (12), with, for Mandarin (6a) and (12b), *zài* ‘at’ in P_{Loc}, with *difang* ‘place’ as the overt realization of the N Place and with the rest of the phrase as the modifier to the N Place. In other words, the N Place, which is phonologically empty in the languages Terzi looks at, is sometimes optionally, sometimes obligatorily phonologically filled in Chinese languages. We will discuss this further in Section 6, but, for now, we can say that, in view of Terzi’s proposal and of what we concluded earlier on about the semantic relations between Ground and AxPart and AxPart and Measure, we arrive at the following structure for the locative expression in (6a):¹¹

10. In fact, in formal terms, in all the cases the “localizer” would be the head of the phrase containing the Ground DP. The Ground DP is its modifier if the localizer is an N and its complement, if it is a postposition. Below we will see that the Ground DP occupies the specifier position of the projection headed by AxPart (AxPartP).

11. Others have also postulated empty Place nouns in their structure of locatives: Kayne (2004), of course, and several contributions in Cinque and Rizzi (2010) and Wu (2015), to name just a few.

- (16) [P [[Ground AxPart Measure] Place]]
 [zài [[zhuōzi shàngmian wǔshí gōngfēn] de dìfang]]¹²
 at table above.surface 50 cm MOD place

Although this bracketed structure displays a number of properties of the locative phrases of this type, it does not say anything about the structural relationship of *shàngmian* ‘above’ with the measure expression *wǔshí gōngfēn* ‘50 cm’ on the one hand and that with the Ground *zhuōzi* ‘table’ on the other. We will delve into these issues, after a short discussion on the status of the AxPart.

3. The AxPart

As mentioned above, the nature and categorial status of what we called “AxParts” above and what is more generally referred to as “localizers” in Chinese linguistics, have been under debate for a long time. In this section, we only address the issues that are crucial to our analysis; for more elaborate discussion and an evaluation of previous literature, see Paul (2015) and Wu (2015); for a recent contribution, see Nie and Liu (2021), which came to our attention too late to weave the results into this section.

So far, we have seen only two such elements, the Mandarin and Cantonese counterparts of ‘above’ and ‘behind’, *shàng(mian/tou)/soeng6min6* and *hòu(mian/tou)/hau6min6* respectively (see (12)). We present some more examples in (17) (M) and (18) (C).

- (17) a. tā bǎ hézi fàng zài zhuōzi xià(mian).
 3s BA box put at table down.surface
 ‘He put the boxes under the table.’
 b. gōngdiàn qián(bian) méiyǒu chē le.
 palace front.side not.have car PRT
 ‘There are no cars anymore in front of the palace.’
 c. zhè-xiē dōngxī fàng zài mén wài(tou) ba.
 DEM-PL thing put at door outside.side PRT
 ‘Just put these things outside the door.’
 d. wǒmen jīntiān zài dàkètīng lǐ(mian) chīfàn ba.
 1PL today at living.room inside.surface eat PRT
 ‘Let’s eat in the living room today.’

12. We leave *de* outside the bracket for the sake of consistency in the presentation and argumentation. There is, however, every reason to include it in the phrase preceding it, as is done in most analyses of this element that are available in the literature; see Cheng (1986), Cheng and Sybesma (2009), S.Z.Huang (2006), Paul (2005, 2015), Simpson (2002), Zhū (1961); for more references, see Paul (2015: 100, fn. 6).

- e. bǎihuòdàlóu páng(bian) yǒu chūzūchēzhàn.
 department.store side.side have taxi.stand
 'There is a taxi stand next to the department store.'
- (18) a. keoi5 baai2-zo2 go3 soeng1 hai2 zoeng1 toi2 haa6min6
 he put-PRF CL box at CL table down.surface
 'He put the box under the table.'
- b. tou4syu1gwun2 ngoi6min6 jau5 hou2do1 jan4
 library outside.side have lots person
 'There are lots of people outside of the library.'
- c. hok6haau6 lei5tau4 hou2 ngam3
 school inside.head very dark
 'It is dark inside the school.'

An important factor in the discussion concerning AxParts, here conducted primarily on the basis of Mandarin data, is the existence (in Mandarin) of the two forms alluded to above, simplex and complex, which are freely interchangeable in the examples in (17), but which can be found not to be in free variation in other instances. As Paul (2015: 93) points out, the free interchangeability is only observed in purely spatial environments, like all the examples we have seen so far. As soon as we enter temporal or otherwise more abstract domains, she observes, only the simplex form is possible:

- (19) a. huiyì shàng(*bian)
 meeting above.side
 'at the meeting'
- b. lìlùn shàng(*bian)
 theory above.side
 'in theory'

Interestingly, in Cantonese, in which, as we have noted, the simplex form is not used, the use of AxParts/localizers is avoided in cases like (19). For (19a), speakers will say *hoi1wui2 ge3 si4hau6* 'at the time of the meeting' and 'in theory' will come out as *gan1ziu3 lei5luon6 lei4 gong2* 'with respect to theory'.¹³ This confirms Paul's claim that the complex forms are exclusively locative.¹⁴

13. Of course, *lei5leon6 soeng6*, the literal translation of (19a), can be used, but that is, indeed, a literal translation of Mandarin and is clearly so perceived.

14. A reviewer notes that exceptions to this claim can be found, like *dàodé shàngmian wǒ ràng yìxiē rén shīwàng le* 'when it comes to virtue, I have disappointed some people'. Not all native speakers of Mandarin we have consulted agree that sentences like this one are (fully) grammatical.

Li (1990) and Huang, Li and Li (2009) classify both complex and simplex forms as nouns (cf. McCawley 1992). This can be motivated historically, but Huang, Li and Li point at the syntactic distribution of phrases containing them, which is like that of DPs and unlike that of PPs in that they are restricted to case positions, such as subject position (as in (17b)) and as the complement of a P (see (17d)) (for discussion of this argument, see Paul 2015, Wu 2015). Another reason for treating these elements as nouns is that the complex form can be separated from the preceding noun by *de* ‘MOD’, which is a property typical of Ns, as only N is ever preceded by this element (similar facts are available for Cantonese):

- (20) zhuōzi de shàngmian
 table MOD above.surface
 ‘the top of the table’

Huang, Li and Li (2009: 17) treat the simplex form, which does not allow for insertion of *de*, as belonging to a “categorial deviate” subclass of N (labeled “L”). Huang (2009) treats both forms as they appear in sentences like (17) as “light nouns”.

Ernst (1988) takes the fact that the simplex and complex forms behave differently with respect to *de*-insertion (which had been noted before, e.g., Chao 1968: 620–627) as a cue for treating them differently, categorizing the complex forms as Ns and the simplex forms as postpositions (a conclusion also reached in Peyraube 1980). Another difference Ernst notes, is that the simplex form never occurs by itself, just like prepositions in Chinese (which cannot be stranded), while the complex form can occur on its own, just like nouns, a fact that Huang (2009) explains by taking the simplex form as a clitic. Paul (2015) also treats the simplex forms differently from the complex forms, categorizing the former as postpositions and calling the latter “location nouns” (p. 99); see also Djamouri, Paul and Whitman (2013).

On the basis of the fact that in the structures that are the focus of this paper, the simplex and complex forms are in free variation and *de* insertion is not possible with either form, as illustrated in (21), we conclude that in contexts like this one, the complex forms belong to the same category as their simplex counterpart. This, of course, does not exclude the possibility that they behave differently (e.g., more like nouns) in other contexts.

- (21) a. zhè fú huà guà zài zhuōzi (*de) shàng(mian) wǔshí gōngfēn
 DEM CL painting hang at table MOD above.surface 50 cm
 de difang.
 MOD place
 ‘The painting was hanging 50 cm above the table.’ (cf. (7a))

- b. wǒmén zài gōngdiàn (*de) qián(fang) / hòu(mian) shí mǐ
 1P at palace MOD front.place / behind.surface 10 meter
 de difang tíngxià.
 MOD place stop
 ‘We stopped 10 meters in front of / behind the palace.’
- c. zài chuán (*de) qián(mian) liáng mǐ de difang wǒmén
 at boat MOD front.surface two meter MOD place 1P
 kànjiàn-le yì zhī hánjiàn de yāzi.
 see-PRF one CL rare MOD duck
 ‘Two meters in front of the boat we saw a rare duck.’

Wu (2015) also comes to the conclusion that there are good reasons to treat the simplex and complex forms alike.¹⁵ Like Svenonius (2006, 2008), she takes them as part of the spatial projection, and categorizes them as AxParts. We adopt this idea. We return to this issue in Section 5, when we discuss the relation between the AxParts and the Ground. We first look at the relation they have with Measure.

4. The AxPart and Measure

For the discussion and the analysis presented below, our point of departure is the observation that in the locative expressions which contain a Measure, the measure phrase (*wǔshí gōngfēn/ng5sap6 gong1fan1* ‘50 cm’ in (9)) follows the AxPart (*shàngmian/soeng6min6* ‘above’) to which it is related semantically. The fact that the measure phrase follows the AxPart means that it is not a modifier, because in Chinese languages, a modifier precedes the constituent it modifies. This also applies to locatives, as the following examples from Mandarin (22) and Cantonese (23) illustrate, in which the adverbs *zhènghǎo* ‘exactly’ and *ngaam1ngaam1* ‘exactly’ respectively modify and precede the PP:

- (22) a. zhènghǎo zài xìyuàn duimian
 exactly at theatre opposite.surface
 ‘right across from the theatre’
- b. zhènghǎo zài sānhàoxiàn shàng
 exactly at line.nr.3 above
 ‘right at (bus) line 3’

15. See Hsieh and Sybesma (2011) for a different type of argument against the idea that localizers belong to the same category as adpositions such as *zài* ‘at’.

- (23) a. ngaam1 ngaam1 hai2 hei3jyun1 cin4min6
 exactly at theatre front.surface
 ‘right in front of the theatre’
 b. ngaam1 ngaam1 hai2 ngo5 deoi3min6
 exactly at 1s opposite.surface
 ‘right opposite me’

Rather than simply modifying the locative, in the examples under consideration here, the measure phrase seems more like a complement in that it measures out the extent to which the Figure (*zhè-fú huà* ‘this painting’ in (21a)) is removed from the Ground (*zhuōzi* ‘table’) in the region (*shàngmian* ‘above’) indicated by the AxPart. This semantics is consistent with what we see in other parts of Chinese grammar involving measures or degrees, as illustrated in the two Mandarin sentences in (24):

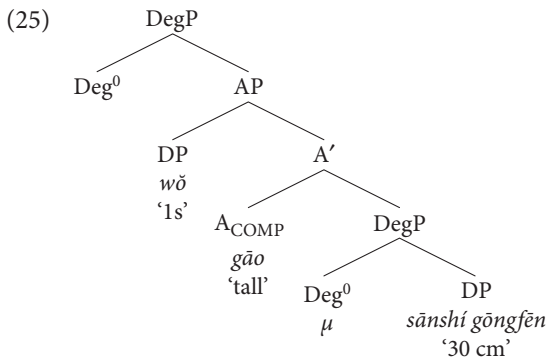
- (24) a. tā bí wǒ gāo sānshí gōngfēn.
 3s COMP 1s tall 30 cm
 ‘She is 30 cm taller than me.’
 b. tā kàn shū kàn-le sān ge xiǎoshí.
 3s read book read-PRF three CL hour
 ‘She read for three hours.’

In both (24a) and (24b), the quantifier phrase follows the predicative element, i.e., *gāo* ‘tall’ in (24a) and *kàn* ‘read’ in (24b).¹⁶ In (24b), it expresses the duration of the reading (*sān ge xiǎoshí* ‘three hours’) and in (24a) it measures out the extent to which the figure is taller (*sānshí gōngfēn* ‘30 cm’) than the Standard (*wǒ* ‘1s’).

To understand the structure of measure phrases as complements, we first discuss Grano and Kennedy’s (2012) analysis of comparatives in Mandarin. One of the structures they entertain for Mandarin comparative sentences which contain a measure phrase is given in (25) (their [45]). It is based on Xiang’s (2005) “DegP Shell” proposal. The lexical items are taken from our (24a).¹⁷

16. We will not go into the question of where the comparative reading in Chinese adjectives comes from. See Grano (2012) for an overview and discussion. For references on comparatives in Chinese, see Grano and Kennedy (2012).

17. Grano and Kennedy (2012) eventually go for a different structure (their [47]) in which μ is affixed to A. The basic reasoning and motivation for (25) stay intact. μ , by the way, can in Grano and Kennedy’s view under certain circumstances be overtly realized with *chū* ‘exit, go beyond’.



In this structure, Grano and Kennedy (2012: 242) “[separate] the semantics of comparison from the syntax of measurement”. As they explain (e.g., p. 232), since adjectives do not select for degree arguments, these must be introduced by a separate functional layer, which, in fact, consists of two layers. In a way that is reminiscent of how Voice and ν are thought to play different but mutually complementary roles – the one (i.e., ν) providing the semantics (transitivity or causativity), the other, Voice, being responsible for the syntax necessary to realize the external argument (Harley 2013, 2017, Pyllkkänen 2008) –, they propose two layers: one (the higher DegP in (25)), which takes care of the comparative semantics, and another one, the lower DegP (headed by μ), which provides the structure necessary to introduce the measure expression.

In English comparatives, both DegPs dominate the AP, but in (25), the Mandarin structure, the semantic one is higher and its syntactic counterpart is lower than the AP. This is motivated, not only by word order considerations, but also because Xiang (2005) has shown that the measure phrase must be lower in the structure than the Standard as the latter has scope over the former. As a consequence, in (25), the lower DegP is realized as a complement to A.

In deriving a sentence like (24a) on the basis of (25), Grano and Kennedy argue that μ raises to A to form the complex head $\mu+A$, and the element *bǐ* is inserted in the head of DegP, primarily to check the case of the Standard (*wǒ* ‘1s’ in (24a)). Another way of forming a comparative (the “transitive comparative” in their terms, exemplified in (26)) is by moving $\mu+A$ into the higher DegP. The Standard is then assigned case by μ .

- (26) tā gāo wǒ sānshí gōngfēn.
 3s tall 1s 30 cm
 ‘She is 30 cm taller than me.’

For Grano and Kennedy, μ does two things: it introduces the measure phrase and it has case checking abilities. This explains, they argue, why the transitive comparative

is only possible when there is a measure phrase: without μ , there is no measure phrase and also no case for the Standard. As a result, raising the A to Deg⁰ when there is no measure does not yield a grammatical sentence, as is shown in (27).

- (27) *tā gāo wǒ.
 3s tall 1s
 INTENDED: ‘She is taller than me.’

Even though the locative expressions we focus on here (illustrated once more in (28)) and comparatives discussed in Grano and Kennedy (2012) are quite different, what they have in common is the presence of a measure phrase expressing the extent to which two participants (Figure vs Standard/Ground) are related to (or removed from) one another.

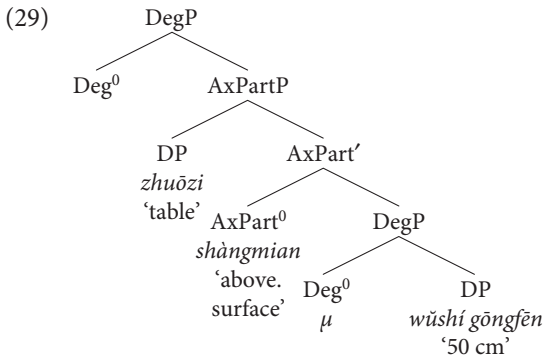
- (28) zhuōzi shàngmian wǔshí gōngfēn
 table above.surface 50 cm
 ‘50 cm above the table’

Recent analyses of locative expressions with measure phrases all involve a DegP one way or another (e.g., Koopman 2010, Den Dikken 2010). However, in analyzing locative expressions like the one in (28) (ungrammatical in isolation, as we have seen), we adopt the idea that the AxPart (i.e., *shàngmian* ‘above’) is accompanied by not just one, but two functional elements which in combination provide the semantics as well as the structure necessary for the introduction of a measure phrase. This is in line with Grano and Kennedy’s structure in (25), and also with ideas expressed more directly related to locatives in Svenonius (2010).

With respect to the semantics, Svenonius (2010: 131–133) explains that AxParts can be seen as projecting a space (the vector space) from the DP that serves as Ground.¹⁸ For instance, *behind the palace* refers to a space that is located at the back of the palace. This space starts from the back wall of the palace and how far it extends is largely determined by pragmatic considerations, such as the size of the Ground (the space behind a large object, a palace, for instance, will typically extend further backwards than the space behind a smaller object such as one’s uncle). This space is measurable. When it comes to the syntax, Svenonius (2010: 133) associates different categories to the function of projecting and the function of measuring; in his terms, one category creates the space (which he calls “LocP”), the other category (“DegP”) restricts it. This is quite similar to Grano and Kennedy’s (2012) proposal for comparatives with a measure.

18. This is, of course, a simplification of Svenonius’ work. For the complete version, and references to the works that he bases himself on, see Svenonius (2010) as well as Svenonius (2008).

The structure we arrive at for (28) is given in (29). It is indeed like a “shell” structure, consisting of a spine containing several heads: higher Deg⁰ (which corresponds to Svenonius’ Loc⁰), AxPart⁰ and μ , in the head of the lower DegP.



Just like adjectives do not themselves select for a measure phrase, AxParts also don't, and that is why they both need the extra functional layers to add the necessary semantics as well as the necessary structure. Without the higher DegP in (29), AxParts would not be measurable and without the lower one, no measure could be expressed overtly.

The structure in (29) has a lot in common with VP-shell structures that have been proposed for prepositional dative sentences like (30a,b), the relevant part of which is schematically given in (30c) (cf. Larson 1988), with the similarities in spinal structure made visible in (31).

- (30) a. John gave a gold watch to his mother.
 b. John sòng-le yì zhī jīnbiǎo gěi tā māmā.
 John present-PRF one CL gold.watch to 3s mother
 'John gave gold watch to his mother.'
 c. [_{VP} <John> [_V [_V ν] [_{VP} watch [_V' [_V give] [_{PP} [_P' [_P to] [_{DP} his mother]]]]]]]]]
- (31) a. [Deg [AxPart [μ]]] (28)/(29) Locative expressions
 b. [ν [V [P]]] (30) Prepositional datives

The sentence in (24b) (a so-called verb-copying sentence containing a durational expression) must be analyzed differently;¹⁹ the relevance of this sentence was that the durational phrase follows V, just like the measure phrases in the locative and comparative sentences. A durational sentence with an underlying structure that is

19. See Cheng (2007) and references cited therein for sentences with verb copying and suggestions for their analysis.

similar to the ones under discussion here is given in (32) (Sybesma 1992: 115). The underlying structure is given in (31c).

- (32) wǒ kàn-le zhè běn shū yǒu sān ge xiǎoshí.
 1S read-PRF DEM CL book have three CL hour
 ‘I read this book for three hours’

- (31) c. [_v [V [_{yǒu}]]] Durational expressions

Even though the details and some other issues will be discussed further below, the structure in (29) clarifies the structural relationship of the AxPart *shàngmian* ‘above’ with the measure expression *wǔshí gōngfēn* ‘50 cm’: the latter is the complement of the former, be it indirectly, through the intermediary in the form of the lower DegP. The same analysis applies to the Cantonese counterparts to the phrases discussed in this section.

5. The AxPart and Ground

If (29) is the correct analysis of (28), it confirms the conclusion drawn by Wu (2015) that the AxPart cannot be a regular adposition (postposition), at least not in locative expressions containing a measure as the examples in (6): in (29), the Ground, normally the complement of an adposition, is not the complement of the AxPart, which we concluded above is complemented by the lower DegP. Rather, the Ground seems to occupy the specifier position of AxPartP.²⁰

Let’s look at this hypothesis a bit more closely, also taking the issue of formal licensing into consideration. Consider once more the “shell” structures in (31), repeated and expanded here as (33), with the structure of the comparative added in (33d).

- (33) a. [Deg [Ground AxPart [_μ Measure]]] (28)/(29) Loc. expressions
 b. [_v [DO V [P IO]]] (30) Prep. datives
 c. [_v [DO V [_{yǒu} Duration]]] (32) Dur. expressions
 d. [Deg [Standard A [_μ Measure]]] (24) Comparatives

There are many differences between these structures and the derivations that take place on the basis of these structures are also not uniform. What they have in common is that, as is typical for “shell” structures (by definition), every DP, regardless of

20. Wu (2015), who does not analyze cases with measure phrases, generates the Ground DP as the complement of a null Place N. The Ground DP subsequently moves to a DP position higher than AxPartP. However, she provides no motivation for either assumption.

whether it is a DO, an IO, a measure or a durational expression, is associated with its own head. When it comes to formally licensing the DPs, the lower heads (μ , P and $y\ddot{o}u$) precede their complements and (presumably) check their case features. The formal licensing of the DPs in the specifiers of AxPartP, VP and AP is taken care of by another head. How the case features of these DPs are checked is one of the points on which the structures in (33) differ. As we saw above, Grano and Kennedy (2012) assume that in (33d), the Standard's case is checked from Deg, either by moving μ to A to Deg or by inserting *bǐ* 'than, compared to' into it. In (33c), V moves to ν and in (33b) we again have two options: we either move V to ν or we insert the element *bǎ* into ν .²¹

How is the case of the Ground DP in (33a) checked? It is clear that the AxPart does not move: after all, the Ground always precedes it. Is anything inserted into Deg? *Zài* 'at' maybe?

To answer this question, we have to go back to the sentences in (17) and (18), with the locative expressions without a measure. Note that the sentences in (17a) and (18a) (along with some of the other examples) contain an AxPart as well as *zài* 'at' (M) or *hai2* 'at' (C). In (17b) and (18b), the locative expression contains no *zài* 'at' or *hai2* 'at', but it occupies a case position, as we have seen. In other words, phrases like the one in (34a) and (35a) need an external case checker.

- (34) a. dākètīng lǐ (cf. (17d))
 living.room inside
 'in the living room'
 b. zài dākètīng lǐ
 at living.room inside
 'in the living room'
- (35) a. zoeng1 toi2 soeng6min6
 CL table above.surface
 'on the table'
 b. hai2 zoeng1 toi2 soeng6min6
 at CL table above.surface
 'on the table'

In the literature, there is disagreement on the question as to the case features of which constituent need to be checked by the external case checker. This disagreement results from the disagreement on the categorial status of what we call the AxPart. Let's consider (34b) more closely. Li (1990: 33) proposes that the two

21. This is a simplification and only one view on this type of sentences; see Sybesma (2021) for a recent view on Voice and ν in Chinese languages (where it is actually argued that *bǎ* occupies Voice⁰). For excellent overview articles on *bǎ* see Li (2006, 2017).

In short, for simple locative phrases like (34b), all agree that *zài* ‘at’ fulfills a case checking function. Since we have adopted the hypothesis that AxParts are not nominal, we conclude that the case features checked by *zài* ‘at’ are the ones of the Ground DP, configurationally similar to the scenario sketched in Djamouri et al. (2013), but then applied to (38) rather than to (37) (there is no movement in our view).

- (38) P [Ground AxPart]
 [PP [P *zài* [AxPartP [DP *dàkètīng* [AxPart *lǐ*]]]]]
 at living.room inside

Note (and this is very important) that we reach this conclusion for phrases like (34b) (and (35b)). The question is whether the same conclusion can be drawn with respect to the examples in (6) ((6a) repeated here as (39)), the main topic of this chapter so far.

- (39) *zài zhuōzi shàngmian wǔshí gōngfēn de difang.*
 at table above.surface 50 cm MOD place
 ‘50 cm above the table’

The structure we proposed for these expressions was schematically represented as in (16), repeated here as (40).

- (40) [P [[Ground AxPart Measure] Place]]
 [*zài* [[*zhuōzi shàngmian wǔshí gōngfēn*] de *difang*]]
 at table above.surface 50 cm MOD place

In this structure, the essence of which was adopted from Terzi (2010), Place is the complement of P (i.e., *zài*). This structure makes the tacit assumption that P is responsible for the formal licensing of Place. This assumption is justified because the phrase in (41), which is (39) without *zài* ‘at’, has the same distribution as (33a), i.e., (33b) without *zài* ‘at’, as is illustrated in (42b) ((42a) = (7a)). This can also be illustrated with Cantonese examples (cf. (18b)).

- (41) *zhuōzi shàngmian wǔshí gōngfēn de difang.*
 table above.surface 50 cm MOD place
 ‘50 cm above the table’
- (42) a. *zhè fú huà guà zài zhuōzi shàngmian wǔshí gōngfēn*
 DEM CL painting hang at table above.surface 50 cm
de difang.
 MOD place
 ‘The painting was hanging 50 cm above the table.’

- b. zhuōzi shàngmian wǔshí gōngfēn de dìfang guà-zhe yì
 table above.surface 50 cm MOD place hang-IMP one
 fú huà
 CL painting
 ‘Fifty centimeters above the table a picture was hanging.’

The generalization is the same as the one formulated by Huang (1982) and Li (1990) on the basis of sentences such as the ones in (17) and (18) for phrases like (34a) and (35a): they need to occupy a case position. As to expressions containing a measure such as (41), in view of the fact that *dìfang* ‘place’ is the head noun (everything that precedes it modifies it; see (40)), we conclude that it is this DP whose case features are checked by P (*zài* ‘at’ in (39)). If this is correct, the Ground DP preceding the AxPart is not case checked by *zài* ‘at’ in phrases containing Measure like (39). We assume (inspired by Li 1990; see above) that in such cases, the case features of the Ground DP are checked the way in which the case features of possessors are checked (the inherent possessive case mentioned above).

Now that we have acquired a better understanding of the status and function of the different components in (16)/(40) and the configurational relations between them, we are finally in a position to answer the question of why we need Place in locative expressions with Measure.

6. Place and the N Place

Now we turn to the main question of this chapter: Why is it the case that when we add Measure, we also need to add Place? This is all the more interesting in view of the fact that Measure and Place are not directly related, as we have seen: as the complement of a DegP, which is in turn the complement of the AxPart, Measure is quite deeply embedded in the phrase that, as a whole, functions as a modifier to Place.

Before we answer the question, it is necessary to make a distinction between words and expressions that denote a location on the one hand and locatives on the other. Words and expressions that denote a location are just that, while we define locatives as words and expressions that denote a location which can *grammatically* function as a location denoting constituent. Formally, we would like to incorporate the core of Terzi’s (2010) proposal and define locatives as constituents which contain a (covert or overt) N Place, which is modified by a word or expression that denotes a location.

Our answer to the question of why we need Place (in (9)) when we have introduced Measure is that Place is Terzi’s N Place: without it, we may be dealing with an expression that denotes a location, but that is not a locative.

It is a general property of Chinese that most nouns cannot function as a locative, not even nouns that denote possible locations, like *zhuōzi* ‘table’ and *fángjiān* ‘room’. Huang (2009) argues that this is the reason why the elements that we call AxParts are added to nouns (i.e., to provide the relevant features), when they appear in syntactic slots that are reserved for locations, such as when they are the complement of *zài* ‘at’. As we have seen, in Huang’s analysis, the AxParts are light nouns. They head an LP (presumably LocationP or LocalizerP) and select the Ground DP, thus providing the latter with the necessary locational features (for further details with respect to the derivation, see fn. 21). As Huang notes, some DPs “already inherently denote a location” (p. 99) and they can appear without an overt AxPart/Localizer/L. He mentions geographical names like New York as an example and assumes that they are also embedded in an LP, just like *zhuōzi* ‘table’ in *zhuōzi-shàng* ‘on the table’ and *zhuōzi-xià* ‘under the table’, except that the L is empty.

Although we agree with the gist of this approach, we disagree on some of the details. As just mentioned, we adopt Terzi’s (2010) idea that locatives involve an N Place. As is clear from the previous sections, the elements that we call AxParts do not instantiate N Place. In our view, Huang’s inherent locations are not followed by an empty L/AxPart, but by an empty N Place, a point also made in Wu (2015). As we suggested in Section 2, this N Place can (and sometimes must, as we will see shortly) be phonologically realized in Mandarin using words like *dìfang* ‘place’, *chù* ‘place’, *zhèr* ‘here’, *nàr* ‘there’ and a few others.²⁴ In (43), *nàr* ‘there’ has been added to phrases that seem to function as locative expressions in and of themselves, a place name (43a), an institution and this same institution followed by an AxPart (43c). Note that the N Place and the AxPart can co-occur.

- (43) a. *zài Táiběi nàr*
 at Taipei there
 ‘in Taipei’
 b. *zài túshūguǎn nàr*
 at library there
 ‘in/at the library’
 c. *zài túshūguǎn pángbian nàr* (cf. (12c))
 at library beside there
 ‘beside the library’

As a consequence of these data, we take it that not only Huang’s inherent locations are followed by an empty N Place, but that the same applies to locations that contain (in fact, are headed by) an AxPart.

24. In this section, we only use Mandarin examples. We return to Cantonese in Section 7.

Huang (2009) is right, of course, that an AxPart can (apparently) turn a common noun into a locative (as in (44)), but so can the addition of *nàr* ‘there’, when the region is not specified (see (45)):²⁵

(44) zài zhuōzi *(shàng)
at table above
‘on the table’

(45) zài zhuōzi *(nàr)
at table there
‘at/by/on the table’

This locative forming function of *nàr* ‘there’ is not only observed with common nouns, but also with pronouns and proper/personal names. These can also not function as locatives without overt elements like *zhèr* ‘here’ or *nàr* ‘there’ (as in (46)) or *jiā* ‘home’.

(46) a. zài tā nàr
at 3s there
‘there where she is; with him’
b. zài wǒmen zhèr
at 1P here
‘here where we are; with us’
c. zài Zhāng Sān nàr
at Zhang San there
‘there where Zhang San is; with Zhang San’

(47) a. zài tā jiā
at 3s home
‘at her place’
b. zài wǒmen jiā
at 1P home
‘at our place’
c. zài Zhāng Sān jiā
at Zhang San home
‘at Zhang San’s place’

Considering the examples with *nàr* ‘there’ and its co-functionaries above, we see that they co-occur both with expressions that are inherent locations or are headed by an AxPart and with expressions that are non-inherent locations and are not headed by an AxPart. With the former, *nàr* ‘there’ and its counterparts are optional,

25. “Apparently” because in our view it is the N Place which does the job. For relevant discussion, see Zhang (2002).

with the latter, i.e., with the non-inherent locations without an AxPart, the elements like *nàr* ‘there’ are obligatory. As we mentioned above, we take *nàr* ‘there’, *zhèr* ‘here’, *chù* ‘place’ and *difang* ‘place’ to be instantiations of Terzi’s (2010) N Place.

We can now, finally, return to the question of why we need to add Place once we have introduced Measure, as we saw was the case in (6a). The answer is that Place must be added as a consequence of the operations that need to be performed in order to make the introduction of a measure phrase possible. As we have argued, in this process, the AxPartP is embedded into a DegP. In other words, we are dealing with an expression which is not an inherent location and is not headed by an AxPart. As a result, like common nouns, pronouns and proper names in (45) and (46), such expressions can function as a locative only after it has been incorporated in the phrase headed by the N Place, which, in this case, must be overt. In other words, prepositions or verbs which select locatives must be combined with locatives, i.e., phrases headed by an N Place, and when an expression is not grammatically a locative, the N Place must be added. Technically, the location denoting expression is a modifier to the N Place. Without the N Place, the expression may denote a location, but functionally and grammatically, it is not a locative.

7. Modification or apposition

In this section we briefly discuss the nature of the relation between the N Place and the preceding location denoting phrase. As we noted in Section 2, in the case of *difang* ‘place’ it is clear that we are dealing with a modification relation as it is preceded by modification marker *de*. Even though *chù* ‘place’ (see Section 2) is not similarly accompanied by *de*, in view of its categorial status as a noun (and the fact that a modification relation can be established without *de*), it seems straightforward to assume that it is in a modification relation with the preceding phrase as well. The same would hold for *jiā* ‘home’ in (47), if it is indeed an instantiation of the N Place as well. These examples are in line with the assumption, which is part of the analysis we have presented in previous sections, that the N Place is modified by the preceding constituent.

However, in other cases we have seen (such as (43)), Mandarin *nàr* ‘there’ and *zhèr* ‘here’ and Cantonese *go2 dou6* ‘that place’ seem to “double” the location denoting constituent that precedes it, in which case we may think of the relation between the two constituents as one of apposition rather than modification. After all, both the location denoting constituent and *nàr* ‘there’ and *go2 dou6* ‘that place’ have the same reference, a defining property of appositive constructions (Heringa and De Vries 2008). Even though in yet other cases, such as the ones in (46), the situation

(apposition or modification) is less clear (it depends on whether a person can be a location), examples like the ones in (43) seem to suggest that we have to keep open the possibility that not all is modification. This would, however, make the analysis developed so far, with as a crucial part of it the explanation of the obligatoriness of N Place in locatives which include Measure, less straightforward.

As it turns out, evidence from Cantonese shows that it is not necessary to keep open the option that not all is modification. As pointed out in fn. 7, the Cantonese *go2 dou6* consists of the demonstrative *go2* ‘that’ and *dou6* which we gloss as ‘place’; its proximal counterpart is *li1 dou6* ‘this place’ or ‘here’. As we have seen, both forms appear in the locatives we have investigated. Note that the element *dou6* can also occur without a demonstrative prefix (e.g., (48a,e)).

- (48) a. hai2 ngo5 dou6
at 1s place
‘at my place’
- b. hai2 ngo5 li1 dou6
at 1s this place
‘here where I am; here at my place’
- c. hai2 ngo5 go2 dou6
at 1s that place
‘at my place’ [where we are not right now]
- d. lei4 ngo5 dou6 / li1 dou6
come 1s place / this place
‘come to my place/come here’
- e. keoi5 heoi3-zo2 a3-John (go2) dou6 sik6faan6
he go-PRF PRFX-John that place eat
‘he went to John’s place to eat’
- (49) a. hai2 cong4 (soeng6min6) dou6 / go2 dou6 tiu3
at bed above place / that place jump
‘jump on the bed’
- b. hai2 tou4syu1gun2 (go2) dou
at library that place
‘at the library’
- c. hai2 tou4syu1gun2 hau6min6 (go2) dou
at library behind that place
‘behind the library’
- d. jau5-mou4 haau2leoi6-gwo3 hai2 Victoria (*go2) dou6 mat6jyut6?
have-have.not consider-EXP at Victoria that place honeymoon
‘have you thought about honeymooning in Victoria?’

This is not the place to investigate in detail the distribution of *go2 dou6* ‘that place/there’, *li1 dou6* ‘this place/here’ and *dou6* ‘place’.²⁶ What the examples in (48), (49) and elsewhere in this chapter show is that the distribution of these elements is the same as that of *nàr* in (46)–(47). In fn. 7, we also pointed out that Mandarin *nàr* ‘there’ and *zhèr* ‘here’ can be considered to also consist of DEM plus ‘place’: *nà* ‘that’ and *zhè* ‘this’ plus *r*.²⁷ In Cantonese, then, the N Place position is filled by either bare ‘place’ or by ‘DEM place’. While the former does not seem compatible with the apposition scenario, the latter is (as we have seen), but at the same time gives us a handle to analyze sentences containing them as involving modification. Let’s start with bare *dou6* ‘place’.

The element *dou6* is distributionally restricted (cf. Cheung 2007) to the two contexts we have reviewed above: as part of ‘here’ and ‘there’ (*li1 dou6* and *go2 dou6* respectively) and as part of locative expressions such as the relevant examples in (48) and (49). It never appears in any other context and it cannot be modified. As a bare element, it is non-referential, as is the case for all Cantonese common nouns when they are bare (Cheng and Sybesma 1999).

In their overview of the semantics of appositive constructions, Heringa and De Vries (2008) point out that, typically, the two elements in an apposition have the same referential properties: they are either both specific or both non-specific. In the examples with bare *dou6* that we have seen, such as the ones in (49), it is preceded by specific locational expressions: on the bed, by the library, behind the library and the city of Victoria. This mismatch could be interpreted as pointing against the apposition analysis in such cases. Rather, *dou6* simply occupies the N Place position.

Turning to the examples that include *dou6* preceded by DEM, we see a match in referential properties, which would, as mentioned above, be compatible with an appositive analysis. Note that in many of the cases in which we allow DEM-*dou6*, bare *dou6* is also allowed (but see fn. 23). Although it is true that it is in principle

26. The distribution of bare *dou6* is similar but not entirely the same as the *dou6* preceded by a demonstrative. Sometimes the one is preferred over the other (as in (49d)) and sometimes the meaning is different depending on whether bare *dou6* is used or DEM-*dou6*. There are other factors that influence the distribution of all these elements. For instance, although the example in (48e) with *heoi3* ‘go’ is fine and although a geographical name can be followed by *dou6* when preceded by *hai2* ‘at’ (as in (49d)), such a geographical name cannot be followed by *dou6* when it is the object of *heoi3* ‘go’. This is very interesting and must be looked into.

27. For ‘place’, Mandarin has other options, such as *lǐ* and *biān*: *nàlǐ* and *nàbiān* ‘there’, *zhèlǐ* and *zhèbiān* ‘here’ (contra Wu 2015: according to us the morphs *lǐ* and *biān* are not the AxParts/localizers; see Section 2). Note that in Mandarin, the ‘place’ part never occurs without a demonstrative: **wǒ-r*, **wǒ-lǐ*, **wǒ-biān* ‘1s-place’; cf. the discussion on the Cantonese demonstrative pronoun in (50)–(51).

possible that the examples with bare *dou6* must be analyzed differently from those with DEM-*dou6*, there is one fact of Cantonese (observable in Mandarin to a lesser extent) which points towards an across-the-board modification analysis. This fact is the following.

Although Cantonese has a modification marker like *de*, namely *ge3*, in certain cases, as illustrated in (50), it uses the demonstrative to link the modifier and the modifiee; see Sio (2006) and Cheng and Sybesma (2009). Note that modification marker *ge3* cannot be inserted in such cases, as is shown in (51), which is (50b) with *ge3*.

- (50) a. ngo5 (li1) bun2 syu1 / keoi5 (go2) bun2 syu1
 1s DEM^{PROX} CL book 3s DEM^{DIST} CL book
 ‘my book / her book’
 b. lei5 cam4jat6 m4 seung2 sai2 (go2) di1 hau2zaau3 m4-gin3-zo2
 2s yesterday NEG want wash DEM^{DIST} CL face.mask NEG-see-PRF
 ‘the face masks that you did not want to wash yesterday have disappeared’
- (51) lei5 cam4jat6 m4 seung2 sai2 (*ge3) go2 di1 hau2zaau3 m4-gin3-zo2
 2s yesterday NEG want wash MOD DEM^{DIST} CL face.mask NEG-see-PRF

These facts suggest that a parallel analysis of *dou6* ‘place’ and *go2 dou6* ‘that place’ is feasible if not the most straightforward.

The phenomenon illustrated in (50) for Cantonese can also be observed in Mandarin, except that modification maker *de* can still be inserted and is often preferred (Sio 2006; Cheng and Sybesma 2009):

- (52) a. Zhāng Sān (de) nà běn shū
 Zhang San MOD DEM^{DIST} CL book
 ‘Zhang San’s book’
 b. nǐ zuótiān bù xiǎng xǐ ??(de) nèi xiē kǒuzhào nǎr
 2s yesterday NEG want wash MOD DEM^{DIST} CL face.mask where
 qù le?
 go PRF
 ‘What happened to the face masks that you didn’t want to wash yesterday?’

In short, we conclude that in locatives with *go2 dou6* ‘that place’ (C) or *nàr* ‘there’ (M), these elements occupy the N Place position and are modified by the preceding phrase (see also Section 6).

8. A brief note about the alternative form

In a few final paragraphs before the paper's conclusions, we would like to discuss very briefly the "other" way in which a measure can be added to a locative expression, which was illustrated in (3a) repeated here as (53).

- (53) fángwū liáng mǐ hòutou
 house two meter behind.head
 'two meters behind the house'

This section will be short because (as we mentioned in Section 1), much is still unclear about this form (its acceptability, for a start, and its distribution). We simply wish to point out one thing, which bears directly on the analysis developed above.

The form in (53) is different from the form we have investigated so far (the one illustrated in (6)), first, because the measure precedes the AxPart and, second, because there is no obligatory N Place. This second difference is understandable, indeed, expected, in light of the discussion in the previous sections: for phrases headed by an AxPart, the addition of an N Place is optional.

The first difference is more interesting. While discussing the forms in (6), we pointed out that the measures in post-AxPart position cannot be modifiers, because in Chinese languages, modifiers precede rather than follow the constituent they modify. In (53), the measure precedes the AxPart, so it is a modifier. Is there a difference in meaning between (53) and the cases in which the measure follows the AxPart?

With adjectives there is a difference (cf. (24a) and see fn. 15):²⁸

- (54) a. tā yì mǐ bā gāo
 3s one meter eight tall
 'she is 1.8 meter'
 b. tā gāo sān gōngfēn
 3s tall three cm
 'she is 3 cm taller'

28. See Liu (2007), where it is actually claimed that sentences like (54b) also have a non-comparative reading (his fn. 16); for this, see also Chao (1968: 315); for discussion of the ambiguity, see Wiedenhof (1993). Note further that facts like those in (54) make us wonder whether Grano and Kennedy (2012) are right in treating the addition of measure expressions to base adjectives (e.g., *two meters wide*) and comparatives (*two meters wider*) in the same way. In any case for Chinese languages, more needs to be said if only to get the word order right. Grano and Kennedy mention and briefly discuss the word order variation in their Section 5.

When the measure expression precedes the adjective, as in (54a), it modifies it: in this case, it specifies the height of the subject. When the measure follows the adjective, in (54b), it measures out the difference between the subject and a (non-expressed) standard: it starts out from the standard and then measures out how big the difference is.

Considering the minimal pair in (55) (cf. (53)) and assuming that AxParts behave in the same way as adjectives, the meaning of (55a) would modify (rather than measure) ‘behind the house’ (the behindness): we are talking about the space that extends two meters, directly behind the house, that is, starting from the wall of the house. The phrase in (55b), on the other hand, would mean something else. Akin to the comparative in (54), it refers to a space which is located two meters away from (“more behind” than) the house: this space does not start from the wall, it begins two meters away from the wall.

- (55) a. fángzi liáng mǐ hòu
house two meter behind
b. fángzi hòu liáng mǐ nàr
house behind two meter there

This is, in fact, what expressions like the one in (55b) mean: the picture in (7) hangs 50 cm “more above”, i.e., higher, than the table; it does not fill the space between the table and 50 cm up. No native speaker consulted conceives of the tent in (56) as being right behind the palace, filling a space of four meters starting at the wall of the palace; for all, there is a space of four meters between the palace and the tent.

- (56) gōngdiàn hòu sì mǐ nàr dāqǐ-le yí gè zhàngpéng
palace behind 4 meter there set.up one CL tent
‘Four meters behind the palace a tent had been set up’

And the flowers in (57b) (cf. (4b), (55b)) find themselves three meters away from the back of the house; there is a corridor between the back wall of the house and the flowers. But where are the flowers in (57a) (cf. (3b), (55a))?

- (57) a. fángzi sān mǐ hòu zhòng-le huā
house three meter behind plant-PRF flowers
b. fángzi hòu sān mǐ nàr zhòng-le huā
house behind three meter there plant-PRF flowers

We tested this, but the results were inconclusive, because, as already noted, we have not come across many speakers who actually accept sentences like (57a) to start with. However, one informant, who accepts both forms, confronted with the minimal pair in (58) (slightly different from (57)) confirmed our hypothesis. He commented: “For [(58a)], I have the feeling that everywhere, as long as it is 3 meters

behind the house, it is full of flowers. What [(58b)] says is that there are flowers in an area that starts exactly 3 meters away from the house.”

- (58) a. fángzi sān mǐ hòu zhòng-mǎn-le huā
 house three meter behind plant-full-PRF flowers
 b. fángzi hòu sān mǐ nàr zhòng-mǎn-le huā
 house behind three meter there plant-full-PRF flowers

Even though the overall picture confirms the idea behind the analysis of the format in (4) (the measure is not a modifier but a complement of the AxPart), it is clear that more research is necessary. We have not looked seriously at these issues in relation to Cantonese, because the facts in that language are more complicated than in Mandarin.

9. Conclusion

In this chapter we investigated locatives which contain a measure expression in Mandarin and Cantonese. The conclusions we draw, however, are about the structure of locative PPs more generally. In particular, we have found that the hypothesis in Terzi (2010), which says that locatives are modifiers to an N Place (which itself is eventually the complement to a locative P), has helped us account for the data that constituted the main focus of this chapter, concluding that Place in the schema in (9) is an instantiation of the N Place. The consequence of this conclusion is that in Mandarin and Cantonese, the N Place is sometimes optionally and at other times obligatorily overt. It is obligatorily overt if the location denoting expression which modifies it is not an inherent location and not headed by an AxPart. It is optionally overt when it is modified by inherent locations (like toponyms) or phrases headed by an AxPart. We leave for future research the question why it is optional and not obligatory in these two cases.

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