8 Yucatec Demonstratives in Interaction: Spontaneous versus Elicited Data

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This chapter compares Hanks' (1990; 2005) "practice" approach to the demonstratives of Yucatec Maya based on the recording of spontaneously occurring interactions to the results obtained by the author with the elicitation questionnaire developed by Wilkins (1999). The study of the meaning and use of demonstratives represents particular challenges to linguistic data gathering because of their context dependency and the role of interactional factors such as attention sharing. The questionnaire study disconfirmed any direct impact of the location of the addressee on the choice of demonstrative and showed a systematic contrast between simple forms used for joint attention and augmented ones used for attention-direction. It is argued that observation of spontaneous interactions and elicitation should be pursued in tandem.

1 Introduction

This chapter discusses the demonstrative system of Yucatec, a Mayan language spoken on the Yucatán Peninsula in Mexico and Belize. The emphasis here is on the uses of these demonstrative forms for *exophoric* reference, i.e. for reference to real or imagined entities or events present in space at the moment of utterance. Other typical uses of demonstratives, e.g. for anaphoric reference tracking, "textual deixis" (Lyons, 1977), and "recognitional" uses (Himmelmann, 1996), are only considered to the extent that they shed light on the question of just how much exophoric reference is actually a semantic property of demonstrative forms rather than the result of pragmatic inferences.

The vantage point from which the discussion proceeds is a comparison of different approaches to the analysis of demonstrative systems. A widely known study of the Yucatec system by Hanks (1990; 2005) is compared with results obtained by the author in fieldwork applying the Demonstrative Questionnaire developed by David Wilkins at the Max Planck Institute for Psycholinguistics (see section 4). The methodological backdrop to this comparison is the lack of

standard techniques for analyzing the semantics of indexical expressions. In the case of spatial deixis, this problem becomes particularly obvious, because the distinctions that are made are more complex than in other deictic domains. Numerous debates over the analysis of particular demonstrative systems bear witness to this; one example is the debate that has gone on for decades over the Turkish demonstrative *šu*. Some (e.g. Kornfilt, 1997) have claimed it to be used to refer to objects at mid-distance from the speaker, while others (e.g. Lyons, 1977) have considered it to be used for reference to objects close to the addressee. However, there never was a methodology in place to settle the question.

Standard techniques of semantic analysis seek to determine an invariant of reference, something that is being referred to across all the contexts in which the particular expression is used, and to extract the meaning of the expression by eliminating all context dependencies. But the meanings of "indexicals" *are* particular kinds of context dependency.[1] What is invariant across the contexts in which indexicals are used is not *what* is referred to but *how* it is referred to (Kaplan, 1989). So what is needed in order to study the use of demonstratives for exophoric spatial reference is a methodology that allows one to keep track of the *interactional* parameters of the speech context in which these forms are used.[2] This includes the participants, their locations in real and in social space, and the location of the reference object (or "denotatum") in these co-ordinate systems; e.g. the attention sharing among the speech act participants and the information status of the referent in discourse, but also possession of the object referred to by one of the participants. For example, Özyürek (1998) presents evidence suggesting that the use of *šu* does not depend on the location of the reference object relative to speaker or addressee, but rather on whether or not a joint focus of attention has been established among the two that includes the referent (see also Küntay and Özyürek, 2002).

The two approaches discussed here attempt to provide a methodology for studying the interactional parameters in the meaning and use of spatial deixis. Hanks' "practice" approach is based on recordings of spontaneous interactions in culturally typical settings such as the household, corn field, religious ceremonies, etc. Hanks developed coding schemas for the participants when deictically referring to places and objects in these settings. These coding schemas showed the spatial layout of the settings, and Hanks assigned numbers to

[1] I use the term "indexical" as a cover term for any kind of expression which triggers retrieval of a referent through a context dependency that is part of the lexical meaning of the expression. This includes deictic expressions, anaphoric expressions, and definite descriptions.

[2] The study of interactional aspects of linguistic meaning is one of the *leitmotifs* of the volume edited by Schalley (2012), where this chapter first appeared; the book is dedicated to Dittmar Zaefferer's work on interaction, a theme to which the present chapter hopes to make a small contribution.

certain prominent locations and objects to code the interactions he recorded in the settings. Based on these data, Hanks carried out a detailed analysis of the *use* of the demonstrative forms in the interactions he had observed. However, Hanks did not attempt to go beyond usage and venture into an analysis of the underlying semantics of the forms.

In contrast, the Demonstrative Questionnaire (Wilkins, 1999; Chapter 2, this volume) gives instructions for the enactment of 25 scenarios, specifying for each scenario the relative locations of the participants and the object to be referred to, but also the referent's status in discourse and the object's status with respect to the interlocutors' focus of attention (see section 4). This is an instance of the method of controlled elicitation with non-verbal stimuli, which plays a crucial role in semantic typology; see Senft (2012) for further examples. Enacting the 25 scenes, usage preferences and judgments of acceptability of demonstrative forms for exophoric reference by adult native speakers of Yucatec were elicited. The results thus obtained do permit a (partial) assessment of the semantics of the demonstrative forms, since they involve systematic contrasts in the elicitation scenarios and *negative* evidence concerning the use of forms in particular scenarios, i.e. evidence of what native speakers do *not* consider acceptable in a particular context. Some of the outcomes of the questionnaire study are surprising from the point of view of Hanks' analysis, in the sense that they would not have been directly predicted from it. However, conversely, many of Hanks' findings concerning the use of the demonstrative forms in spontaneous interactions could not possibly be predicted from the results of the questionnaire study. An analysis of elicited data can only make generalizations over scenarios of the kind that are tested during the elicitation and over the interactional parameters that are controlled for during the elicitation. More generally, meaning is only a partial predictor of use, just as use is only a partial predictor of meaning. Hence, neither the study of spontaneous interactions nor controlled elicitation can provide a complete picture of the meaning and use of demonstratives by themselves. Rather, the combined use of both methods is advocated here. The discussion in section 5 generalizes this maxim beyond the study of indexicals to all forms of the collection of data about languages from their speakers. Researchers are bound to miss important insights if they restrict themselves to either approach.

Section 2 introduces the relevant structural details of the Yucatec expressions used in exophoric spatial reference. The system is a fairly intricate one. Section 3 summarizes Hanks' (1990; 2005) analysis and discusses the evidence for and against a possible addressee-based analysis of some of the forms at the outset of the questionnaire study. In section 4, the Yucatec responses collected with the Demonstrative Questionnaire are discussed. The study has produced three main findings: (a) the location of the addressee does not seem to have a direct impact on the use of Yucatec demonstrative forms; (b) the distal (in Hanks' terms,

"non-immediate") forms are semantically distance-neutral and arguably not even specified for exophoric reference; and (c) the proximal-distal (in Hanks' terms, "immediate" versus "non-immediate") opposition intersects with a contrast between simple forms used with a pre-established focus of attention and augmented forms used for attention-direction. Performance of the two approaches on the Yucatec data is compared in section 5.

2 A Sketch of the Expression of Spatial Deixis in Yucatec

Yucatec is spoken in the northeast of the Mayan area, all across the Yucatán Peninsula, by approximately 759,000 people in Mexico[3] and 6,000 in Belize (Lewis, 2009). Dialect differentiation is low; all contemporary varieties are readily mutually intelligible. On historic and sociolinguistic grounds, a western variety spoken in the outskirts of the cities of Mérida and Campeche and the region between these cities may be tentatively distinguished from an eastern variety spoken everywhere else (Edmonson, 1986; Pfeiler, 1995). On this classification, Hanks' field site in Oxkutzkab in the Mexican state of Yucatán would likely fall in the western dialect region, whereas the author's field site in Yaxley in the Mexican state of Quintana Roo is situated in the eastern region. The two dialects are mutually intelligible without restriction, and the differences between them are quite subtle; they concern only a few lexical items, some morphophonemic processes, and certain grammatical operators, such as aspectual and modal markers. The basic grammatical system, including word order, phrase structure, inflectional and derivational morphology, is the same across the two dialects. The dialect described here lacks the clause-final particle *-be'* for referents that are audible but not visible (see Table 8.1). With this exception, all examples in Hanks (1990, 2005) seem inconspicuous to me, judging on the basis of 20 years of field experience in the eastern dialect region.

To get a first impression of the expression of spatial deixis in Yucatec, consider Table 8.1, based on Hanks (1990: 18–19).[4]

Where Indo-European languages use a single form to mark indexical reference, say demonstratives like *this* and *that* or place adverbs like *here* and *there*, Yucatec uses combinations of two morphemes that occur in different positions in the clause. One part of these combinations occurs in the positions where

[3] 2005 census data shows a decline by more than 40,000 speakers age 5 or older since 2000 (cf. PHLI, 2009 and PerfilMayaweb, 2005).

[4] Hanks' synopsis of Yucatecan indexicals also includes personal pronouns, temporal adverbs, and an indexical manner adverb that translates 'like this/that'. The representation in Table 8.1 is restricted to indexical forms used for reference to places and objects in space, and it is couched in the terminology that is used throughout this chapter; so the labels deviate from Hanks'. Two other studies of deixis in Yucatec should be mentioned here as well: Hanks (1984) studies the interactions of deictic forms with factors of evidentiality, and Vapnarsky (1999: ch. 3) examines the deictic temporal adverbials of the language.

Table 8.1 *Synopsis of Yucatecan spatial indexicals (based on Hanks 1990: 18–19)*

Non-final indexical stem	Clause-final indexical particle					Gloss
	=a'	*=o'*	*-be'*	*=i'*	*=e'*	
Presentative *he'l*	*he'la'* / *he' . . . =a'*					'Here it is'
		he'lo' / *he' . . . =o'*				'There it is'
			he'l . . . -be'			'There it comes (audible)'
Adverbial *te'l*	*te'la'* / *te' . . . =a'*					'Right there/here'
		te'lo' / *te' . . . =o'*				'There'
ti'				*ti' . . . =i '*		'There (anaphoric)'
way					*way . . . = e'*	'(In) here'
tol		*tolo'* / *to . . . =o'*				'(Out) there'
Determiner *le*	*lela'* / *le . . . =a'*					'This'
		lelo' / *le . . . =o'*				'That'
					le . . . =e'	'As for that one'

English speakers expect them: as place adverbs, presentative adverbs like French *voilà*, or determiners. The other component is a clitic particle that always appears in clause-final position. Whenever one of the determiners or adverbs in the leftmost column of Table 8.1 is used, it co-occurs with one of the terminal particles. So the determiners and adverbs are triggers of the terminal particles.

Each triggering adverb or determiner co-occurs only with a subset of the terminal particles. Exophoric spatial reference is largely restricted to the particles *=a'* and *=o'*. Both particles occur with the presentative adverb *he'l*, the locative adverb *te'l*, and the determiner *le*. With the last two, *=a'* and *=o'* may be said in first approximation to distinguish proximal and distal reference. In the same sense, *te'la'* may be glossed as 'here' and *te'lo'* as 'there', and similarly *lela'* as 'this' and *lelo'* as 'that'. However, the discussion in the following sections shows that the proximal-distal characterization is inadequate. I therefore adopt Hanks' (1990; 2005) labels *immediate* for *=a'* and *non-immediate* for *=o'*.

In combination with the presentative adverb *he'*, the contrast is slightly different. In addition, the particle *=e'* needs to be considered, but only in combination with the locative adverb *way* 'here'.

Consider a few examples, starting with the presentative adverb *he'l*. In (1), *he'l* occurs as the main predicate of the clause:[5]

(1) **He'l** hun-p'íit ts'àak=**a**'!
PRSV one-bit cure\ATP=D1
"**Here's** some medicine!"

With these words, the speaker would typically hand over the medicine to the addressee. Note the immediate particle *=a'*, which obligatorily accompanies *he'l* in this function. *He'l* also occurs as a noun-phrase-internal modifier, as in example (2):

(2) *K-u=bin Xokempich* ***le=bèeh*** ***he'l=a'****?*
IMPF-A3=go Xokempich DET=way PRSV=D1
'Does **this way here** go to Xokempich?'

In this case, *he'l* can occur with either *=a'* or *=o'*, and its function is no longer presentative; instead, it is used to call the addressee's attention to the referent. This function is further discussed below. It is also possible to use *he'* nominalized in the same function, as in example (3):

(3) *Ba'x* ***le=he'l=o'?*** *Ba'x*
what DET=PRSV=D2 what(B3SG)
u=k'àaba'?
A3=name(B3SG)
'What's **this**? What's its name?'

[5] Examples (1)–(3), (7)–(8), (11), and (18) are based on Blair and Vermont-Salas, 1965–1967. Examples (4) and (6) are from the unpublished text *Bix u meta'l hump'éel k'axbil nah* by Esteban Pool Kaaw recorded and transcribed by Christian Lehmann with the aid of Ramón May Cupul. In some cases, the examples have been simplified for expository purposes. Examples (5), (8)–(9), (14)–(17), and (20)–(21) were elicited with the Demonstrative Questionnaire (Wilkins, 1999); cf. section 4. The remaining examples have been collected in other contexts. The orthographic representation in this chapter is morphemic rather than morphophonemic. The orthography applied is based on Lehmann (1998). In the interlinear morpheme glosses, the following conventions are used: '-' for affixes; '=' for clitics; '+' for compounding; '\' for subsegmental realization or infixation. Abbreviations in the glosses include the following: 2- 2nd person; 3 – 3rd person; A – set-A ('ergative'/possessor) clitics; ATP – antipassive derivation; B – set-B ('absolutive') suffixes; CAUSE – causal preposition; D1 – immediate clause-final indexical particle; D2 – non-immediate clause-final indexical particle; D3 – text-deictic clause-final particle; DET – determiner stem; EXIST – existential/locative/possessive predicate; F – feminine prefix; IMPF – imperfective aspect; INC – incompletive aspect; INCH – inchoative derivation; INSTR – instrument nominalization; IRR – irrealis modality; NEG – negation; PREP – generic preposition; PROG – progressive aspect; PROSP – prospective aspect; PRSV – presentative stem; PRV – perfective aspect; SG – singular; SR – subordinator.

Moving on to the locative adverb *te'l*, example (4) shows it forming an adverbial expanded by a prepositional phrase:

(4) *U = hòol+nahken u = bin*
A3 = hole+house SR.IRR A3 = go

te'l *t-u = mòoy = **a'**.*
there PREP-A3 = apse = D1
"The door is what will end up **here in the apse**"

Like *he'l*, the stem *te'l* does not by itself have an indexical meaning. The gloss 'there' is thus somewhat misleading. *Te'l* translates as 'there' in combination with the non-immediate particle *=o'*, but as 'here' in combination with the immediate particle *=a'*. This adverb does not modify a noun phrase by itself. However, a relative clause headed by the locative/existential predicator *yàan* can be constructed around it, as in (5):

(5) *le=lìibro* ***yàan*** ***te'l=o'***
DET=book [EXIST(B3SG) there=D2]S
'the book **that's there**' (distal or anaphoric!)

And of course it is again possible to nominalize *te'l* and use it as a noun phrase head itself, as in (6):

(6) ***Le=te'l=a'***, *es que kul-ub*
DET=there=D1 is.which sit-INSTR(B3SG)
'This one here, it's a pillar (lit. thing for sitting)'

Finally, the determiner *le* acts as a proximal demonstrative when combined with the immediate particle =a':

(7) *A = ti'a'l* *le = nah = **a'**?*
A2 = property(B3SG) DET = house = D1
"Is **this house** yours?"

There is an alternative form *lel-* that constitutes a noun phrase head itself, as in (8):

(8) *A=ti'a'l* ***lel=a'***?
A2=property(B3SG) DET=D1
'Is **this** yours?'

Now when *le* is combined with the non-immediate particle *=o'*, it can be used for both distal deictic reference, as in (9), and the marking of definiteness, as in (10):

(9) *A = ti'a'l* ***le*** *= lìibro* ***= o'****?*
A2 = property(B3SG) DET = book = D2
"Is **that** book yours?"

(10) *Káa = h-òok*
káa = PRV-enter(B3SG)

le *= x-ch'úup* *chak* *u = nòok'* ***= o'****, (...)*
DET = F-female red(B3SG) 3 = garment = D2
"(And then) **the woman** dressed in red entered, (...)"

In fact, any definite description whose lexical head is a common noun has to be accompanied by a clause-final particle, and in case the referent has been mentioned before or is assumed by the speaker to be uniquely identifiable to the addressee, the non-immediate particle *=o'* (and some form of the determiner *le(l)*) is used. And similarly, the counterpart *lelo'*, which constitutes a noun phrase (or "determiner phrase") by itself, can be used anaphorically, as in (11):

(11) *Ba'x k'iin k-uy=úuch-ul* ***lel=o'****?*
what sun IMPF-A3=happen-INC DET=D2
'What day does **that** usually happen?'

So effectively, the presence of a clause-final particle indicates that the clause contains an expression other than a pronoun which is used indexically.

It has been shown that the forms that trigger the non-immediate particle *=o'* occur with both deictic (9) and anaphoric (11) reference or as definite markers (10). This is also true of the locative adverb combination *te'lo'* and the manner adverb combination *bèeyo'*. This gives rise to the hypothesis that it is really only the combinations with the immediate particle *=a'* that are semantically specified for exophoric reference, whereas the non-immediate *=o'*-forms merely have a more general indexical meaning which does not *exclude* exophoric use but does not entail it either. This hypothesis is pursued further in section 4.

Since the determiners and adverbials obligatorily co-occur with the terminal particles, it is a non-trivial task to distinguish the contribution of the determiner/adverbial to the meaning of the combination from that of the terminal particle. At this point, I will confine myself to preliminary observations. The adverbs indicate that the referent is a place, the determiner that it is an entity (a person, animal, or object). The different syntactic categories are of course also associated with different ranges of syntactic functions as arguments versus

adjuncts, etc. The adverb or determiner also indicates that the referent is given indexically. However, in the case of the place adverb *te'l* and the determiner *le* it is only the terminal particle that distinguishes between deictic and anaphoric reference.

3 Demonstratives in Spontaneous Interactions: Hanks (1990; 2005)

In this section, I summarize and discuss Hanks' (1990; 2005) analysis of how Yucatec speakers use the demonstrative system for spatial reference in everyday interactions. Of central concern in the following is the question as to the role of the addressee in this system and whether it is semantically encoded.

As mentioned above, Hanks avoids the terms "proximal" and "distal", arguing that these are "obscured in standard approaches to deixis which take as their touchstone 'real' space rather than social interaction" (1990: 488). Instead, Hanks uses the labels "immediate" and "non-immediate", which I adopt here.

Among the determiners, the immediate versus non-immediate opposition is the only opposition there is. But in the adverbial system, the immediate–non-immediate opposition between *te'la'* 'here' and *te'lo'* 'there' semantically intersects with an "inclusive-exclusive" opposition between *waye'* 'here' and *tolo'* 'there'. In other words, there are two *here*s and two *there*s in Yucatec. Hanks calls the "inclusive–exclusive" opposition between *waye'* and *tolo'* "egocentric". This distinction presupposes some kind of perimeter around the speaker, such that *waye'* refers to the inside of that perimeter and *tolo'* to its outside. The perimeter can be defined by the boundaries of for example the house, the field, the village, or the state where the conversation takes place. The addressee is normally inside the perimeter as well. *Tolo'* is used in indiscriminate reference to things that are "out there" in the relevant respect. Table 8.2 summarizes Hanks' analysis of the space-deictic determiners and adverbs of Yucatec.

Waye' 'here' and *tolo'* '(out) there' cannot normally be contrasted in reference to places that speaker and addressee have visual access to, as such places would be within the perimeter and hence entirely inside the domain of *waye'*. Similarly, if there are multiple possible referents for *waye'*, they are concentric and thus cannot easily be distinguished gesturally. Therefore, both terms can be used without accompanying gestures, and the only gestures that do accompany them are gestures that do not point to specific places.[6]

[6] The "egocentric" terms play only a marginal role in responses to the Demonstrative Questionnaire; therefore, they are not discussed further. *Way . . . =e'* 'here' did not occur at all, and *tol . . . =o'* 'out there' occurred only once in a consultant's first response. Interestingly, the two scenes one would predict to be most likely to trigger *tol . . . =o'* based on Hanks' "perimeter" analysis, 20 and 21, failed to elicit *tol . . . =o'*.

Table 8.2 *The semantics of the space-deictic determiners and adverbs of Yucatec according to Hanks (1990)*

	Inclusive		
	Immediate	Non-immediate	Exclusive
Adverbs	*way . . . =e'* 'here'		*tol . . . =o'* 'there'
	te'l . . . =a' 'there'	*te'l . . . =o'* 'there'	
Determiners	*lel=a'* 'this one'	*lel=o'* 'that one'	
	le . . . =a' 'this'	*le . . . =o'* 'that'	

In contrast to the "egocentric" "inclusive–exclusive" distinction, the "immediate–non-immediate" opposition between *te'l . . . =a'* 'here' and *te'l . . . =o'* 'there' and the determiners *lela'/le . . . =a'* 'this' and *lelo'/le . . . =o'* constitutes what Hanks calls a "sociocentric" system. He observes that these forms are used *contrastively* with respect to speaker and addressee, respectively: immediate forms are used for reference to objects or places closer to the speaker than to the addressee, while non-immediate forms are used in reference to objects or places closer to the addressee.

Hanks notes that the usage patterns his analysis ascribes to the immediate and non-immediate forms differ "in two details: (i) the relative remoteness of the (. . .) possible referents, and (ii) the foregrounding of the addressee rather than the speaker. The second feature is motivated by the fairly consistent association between the 'there' of *te'lo'* and the addressee's location" (Hanks 1990: 437). Consider some of the examples that Hanks quotes in support of this analysis. These are examples in which speaker and addressee are in relatively close proximity, such as (12)–(13) in which a child is chided by an adult while both are in the same room and in the second case even less than 2 meters apart. Yet the speaker picks the non-immediate form to refer to the child's location:

(12) *Mak* *a=chi'* ***te'l=o'***, *páal!*
Close(B3SG) A2=mouth there=D2 child
'Shut up **over there**, kid!' (Hanks, 1990: 438)

(13) *Ts'a'* *le=ba'l* ***te'l=o'***!
Give/put(B3SG) DET=thing there=D2
'Put that thing down **there**!' (Hanks, 1990: 438)

The selection of the non-immediate forms – the determiner *lelo'* / *le . . . =o'* and the place adverb combination *te'lo'* / *te'l . . . =o'* – in these examples raises the question as to whether these forms are *semantically* addressee-based; i.e., whether they encode proximity to the addressee, rather than distance from the speaker, or whether the association with the addressee's location Hanks

observed is merely a property of how these forms are used in situations such as those in (12)–(13). Hanks (1990) does not address this question. An example of a language with an addressee-based demonstrative is Japanese. Japanese has a demonstrative *ko* for referents close to the speaker, a demonstrative *so* for referents close to the addressee, and a demonstrative *a* for referents that are in the proximity of neither the speaker nor the addressee.[7] Addressee-based terms like Japanese *so* are found somewhat regularly in three-term demonstrative systems; they compete with other types of three-term systems that distinguish three degrees of distance from the speaker or two degrees plus one distance-neutral term, as in the case of Turkish.

Applying an addressee-based analysis to the immediate–non-immediate contrast in Yucatec straight away runs into the problem that the latter is a binary contrast. So one would have *lela'* / *le . . . =a'* or the adverb combination *te'la'* / *te'l . . . =a'* for entities and places close to the speaker, *lelo'* / *le . . . =o'* or the adverb combination *te'lo'* / *te'l . . . =o'* for entities and places close to the addressee, and then the question arises as to what to use for entities and places that are neither in the speaker's nor in the addressee's zone of proximity. For this reason, a two-term demonstrative or deictic adverb system is not very likely to include an addressee-based term; and indeed, the typological surveys of Anderson and Keenan (1985) and Diessel (1999) do not include a single example of such a system – only three-or-more-term systems may include addressee-based terms. However, a two-term system with one speaker-based and one addressee-based term is by no means *impossible*. One conceivable realization of such a system might be found in a language in which demonstratives or deictic adverbs are simply *not used* in reference to objects that are close neither to the speaker nor to the addressee. The hypothetical language would employ other means to this end, such as explicit locative descriptions. But this is very clearly not the case in the dialect of Yucatec discussed here.[8]

Hanks (1990: 490) in fact observes that the *=o'* forms are used in reference to entities and places in both the addressee's zone *and* the "common field". It is not completely clear to me how this "common field" is to be construed (see Enfield, 2003 for a possibly similar analysis). At any rate, the "common field"

[7] This is a simplified account based on unpublished research by Sotaro Kita. See Kita and Walsh Dickey (1998: 66) and Senft and Smits (2000: 69) for summaries.

[8] As mentioned above, the "egocentric" adverb *tol . . . =o'* 'out there' is according to Hanks used for vague reference to places outside some perimeter around the deictic center. In a hypothetical two-term system with forms for the speaker's and the addressee's zones, this would indeed be a solution to the problem of referring to objects and places that are in neither zone. However, it would be a solution only for those special circumstances in which *tol . . . =o'* is used (i.e., there *is* a salient perimeter around the deictic center, and the reference object/place *is* situated outside it. As likewise mentioned above, *tol . . . =o'* plays only a marginal role in the responses to the Demonstrative Questionnaire.

would presumably cover a significant part of the space outside both speaker's and addressee's "zones" (i.e. areas of proximity).

Leaving aside the issue of how entities outside the "common field" would be referred to, the main question that arises is how to reconcile the "foregrounding" of the addressee by the non-immediate forms with the fact that they are also used for reference to objects and places in the common field outside the addressee's zone. Hanks (2005) suggests that this foregrounding is a pragmatic rather than semantic effect:[9]

> The rule of thumb is therefore simply, in pragmatically contrastive contexts such as greetings and scoldings, to treat [the speaker's] field as *a'* and [the addressee's] field as *o'*. **When I state this association as a rule of thumb I mean to underscore that it is not part of the semantics of Yucatec deixis, since it is easy to find examples in which the association is canceled**. It is, however, part of the routine handling of types of exchange that happen throughout any ordinary day. (Hanks 2005: 206; emphasis mine)

Hanks' use of the term "cancellation" suggests that his "rule of thumb" is a Gricean stereotype implicature, i.e. that the addressee's zone of proximity is in many instances the stereotypical search domain of the non-immediate forms. This, however, implies that those "easy to find" situations in which the non-immediate forms are used in exophoric reference to entities or places outside the addressee's zone of proximity are somewhat less typical. It is one of the strengths of elicitation approaches such as the one presented in the following section that they permit the realization and testing of reference in such atypical situations. This puts the researcher in a position to distinguish between semantic and pragmatic meaning components. In order to determine the role of the addressee's location in the use of the non-immediate forms, their use needs to be examined in contexts in which the relative locations of speaker, addressee, and reference object are systematically varied. Controlling these variables is one of the main goals of the Demonstrative Questionnaire discussed in the following section.

However, the realization of the questionnaire scenes with Yucatec speakers failed to produce evidence of prototype effects associated with the addressee's zone. If the prototypical referent of the non-immediate forms is in the addressee's zone, while entities and places in the common field outside the addressee's zone are more peripheral instances of the extensions of the non-immediate forms, this entails that native speakers use the non-immediate forms more readily and more consistently in reference to objects and places in the addressee's zone than in reference to objects and places in the common ground outside the addressee's zone. This is not consistent with the findings from the Demonstrative Questionnaire study presented in the following section – these

[9] It is unclear whether this clarification was in fact prompted by earlier versions of the present chapter.

data indicate that the addressee's zone plays no *direct* role whatsoever in the use of the spatial deictics. Note that this by no means precludes "indirect" addressee-based effects as discussed by Meira (2003; cf. also Enfield, 2003). That is, the addressee may well have an impact on what counts as immediate or proximal for the speaker. For example, it is argued below that physical accessibility is one of the parameters that determine whether a place is judged as proximal. And the presence of the addressee may of course influence the accessibility of the reference object or location to the speaker. Consider again examples (12)–(13). While the reference entity/place is close to the speaker in both cases, it is not immediately physically accessible to the speaker. This may well be explained in part with reference to the fact that the speake2r is referring to entities and places *controlled* by the addressee. Control – in a sense of the term "control" that still remains to be specified – would then be one possible cause of indirect addressee-based effects.

4 Demonstratives in Elicited Productions: The Questionnaire Study

The Demonstrative Questionnaire (Wilkins, 1999; this volume) was developed by D. P. Wilkins for the Space Project at the Max Planck Institute for Psycholinguistics. Since 1999, it has been applied to the study of spatial deixis in numerous languages spoken around the world. The questionnaire was designed to study the form of utterances that make non-contrastive exophoric reference to single objects present in space at varying degrees of distance from speaker and addressee at the moment of utterance. It describes 25 scenes which the researcher is meant to enact together with native-speaker consultants. The variables controlled in the Demonstrative Questionnaire were of course determined on the basis of prior research both within and outside the Space Project. Hanks' (1990) influential study of demonstrative use in spontaneous interactions in Yucatec was among the sources that were considered in the design of the questionnaire. A major goal of Hanks (1990; 2005) is to show that the meaning and use of demonstratives are primarily governed by interactional variables rather than by purely spatial properties such as in particular measurable distance. In the design of the Demonstrative Questionnaire, both spatial and interactional variables are controlled for. The descriptions specify for each scene a setting (e.g. inside a walled-off space; on a ballgame field); a spatial configuration of speaker, addressee, and reference object, and optionally a bystander, within that setting; the kind of reference object at issue (one of the speaker's teeth, a bug, a radio, book, or ball); and a number of additional properties such as whether joint attention between speaker and addressee is on the referent at the moment of utterance or is rather directed to it by the speaker in the course of the utterance, whether the object has been mentioned before in the course of the conversation, and whether the object is owned by one of the

interlocutors.[10] The spatial configurations vary the distances between speaker, addressee, reference object, and bystander and the visibility and accessibility of the object from the vantage point of speaker and hearer. Distance from speaker and/or addressee is varied in terms of a seven-point scale, according to which the object is a body part vs. in contact with the body vs. within arm's reach vs. within easy access a few steps away vs. tens of meters away vs. more than a hundred meters away vs. several kilometers away.[11] The descriptions are realized as verbal instructions to the researcher supported by diagrams; Figures 8.1–8.4 show examples of these diagrams; the full set is reproduced in the chapter explaining the task. During the enactment, a native-speaker consultant is meant to assume the role of speaker and another or the researcher that of the addressee. The researcher describes the scene for the speaker, records the utterance the speaker considers most appropriate in each scenario and/or the range of utterances the speaker considers acceptable, and optionally asks follow-up questions to clarify properties of the elicited utterances and/or test the influence of additional variables.

The Yucatec questionnaire data were collected in August 1999 with five adult native speakers, four men and one woman, aged between 25 and 52. All speak Yucatec as their first and dominant language but have some command of Spanish as well. The 25 questionnaire scenes were enacted with the consultants as speakers and the author as addressee. The enactments were conducted at the appropriate scale except for the far-distant scenes 13–18 and 24–25, which were enacted at a reduced scale. In order to judge the significance of the data (given the small number of consultants), it will be worth pointing out that the five consultants generally showed a high degree of convergence in their responses. For example, in their first choices between an immediate and a non-immediate form (regardless of whether they also considered a form of the complementary set applicable, and whether they volunteered that other form or merely agreed to its applicability), all five consultants agreed with respect to 15 of the 25 scenes; and only three scenes elicited a two-to-three split in this regard. Moreover, in two of the three scenes that elicited the largest amount of variation, scenes 2 and 4, in fact all consultants agreed that both immediate and non-immediate forms would be applicable, depending on the proximity between the speaker's pointing gesture and the reference object. This suggests that the data do in fact permit viable generalizations about the knowledge of Yucatec native speakers regarding the use of demonstrative forms in exophoric spatial reference.

[10] The questionnaire does not specify the relevant concept of ownership.

[11] Scenes in which the object is equidistant from speaker and addressee vary distance according to the last five of these seven points.

The Yucatec questionnaire study has produced three major findings. First of all, there is no evidence suggesting that the relative location of the addressee with respect to the speaker or the reference object has any direct impact on the selection of forms for exophoric reference (notwithstanding indirect effects such as discussed at the end of section 3). It is not even the case that non-immediate forms are applied more readily and/or consistently in reference to objects and places close to the addressee than in reference to objects or places distant from both speaker and addressee. This finding is somewhat surprising, given Hanks' observation, quoted in the previous section, of a "fairly consistent association between the 'there' of *te'lo'* and the addressee's location" (Hanks, 1990: 437). In particular, the results of the questionnaire study do not support the hypothesis that the addressee's zone of proximity constitutes a focal area within the extension of the non-immediate forms.

Secondly, use of the immediate forms is much more restricted than use of the non-immediate forms. In general, immediate forms may be replaced by non-immediate forms, while the opposite does not necessarily hold. However, the non-immediate forms are not used within very close proximity of the speaker, in particular in reference to his/her body parts, to objects that are attached to his/her body, or to objects (s)he is pointing to at close range.

And finally, there are in fact two overlapping systems for spatial deixis, a simpler one used only under joined focus of attention and a more complex one used for attention-direction. Both systems operate on binary distance distinctions, but the cut-off points on the two distance scales are different. These three findings are now addressed in turn.

4.1 The Impact of the Addressee's Location on Demonstrative Choice

To determine the impact of the addressee's location on the choice of deictic forms, responses to scenes that only differ in the addressee's location need to be compared, such as scenes 13 and 16, depicted in Figure 8.1. In both scenes, the speaker and the reference object are on opposite ends of a football field, but the addressee is very close to the speaker and far away from the object in one case and very close to the object and far away from the speaker in the other case. All five consultants unanimously use non-immediate forms under both conditions, regardless of the location of the addressee. A typical response is (14):

(14) *Le=ràadyo=o'* *(yàan* *te'l=o'),* *hach* *ma'+lóob.*
DET=radio=D2 EXIST(B3SG) there=D2 really NEG+bad(B3SG)
'That radio (that is over there) is really nice'

A non-immediate form is optionally augmented by the deictic locative adverb *te'l*. The choice of whether or not the more complex form is used depends on the attention parameter; this is discussed below. The consultants just as readily

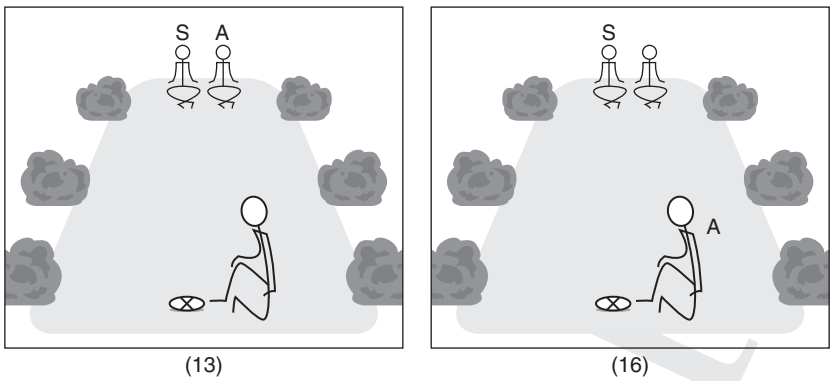


Figure 8.1 Demonstrative scenes 13 and 16

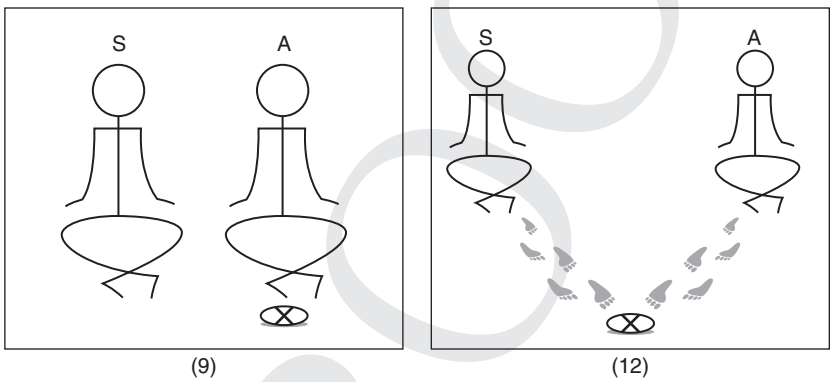


Figure 8.2 Demonstrative scenes 9 and 12

used the non-immediate forms in reference to an object distant from both speaker and addressee in scene 13 than they did in reference to an object close to the addressee in 16; there is thus no evidence suggesting that places and objects in the addressee's proximity play any special role in the reference of the non-immediate forms. A similar point can be made with respect to scenes 9 and 12, depicted in Figure 8.2. In 9, the reference object is close to the addressee and out of the speaker's reach. In 12, the object is equidistant from speaker and addressee and out of either's reach.

Given Hanks' observations of a privileged association between the non-immediate forms and the addressee's zone, it may have been expected that the non-immediate forms are more readily applied in scene 9 than in 12. And on the hypothesis that reference to the addressee's zone is the semantic prototype of

the non-immediate forms, this is in fact clearly predicted. But if anything, the opposite is the case: all five consultants prefer non-immediate forms in scene 12, but only four out of five do so in 9. Again, both simple non-immediate forms and augmented constructions were used, depending on whether the addressee's attention was assumed to be on the object prior to the utterance. Notice, though, that the augmented form in this case is formed with the presentative adverb *he'l*, not with the locative adverb *te'l*. A typical example is (15).

(15) *A=ti'a'l* *le=lìibro* *(he'l)=o'?*
A2=property(B3SG) DET=book PRSV=D2
'Is that book (there) yours?'

4.2 The Semantics of the Non-immediate Forms

Having failed to find a direct addressee bias in the use of the non-immediate forms, the hypothesis that the non-immediate forms are semantically specified for exophoric reference to places and objects outside the speaker's proximity needs to be considered. A glance at the overall distribution of immediate versus non-immediate choices across the 25 demonstrative scenes, as presented in the appendix to this chapter, shows that this cannot be correct. A single scene in which the use of non-immediate forms is excluded – reference to the speaker's own body in scene 1 – contrasts with no less than 12 scenes that exempt the use of immediate forms. A response to scene 1 is reproduced in (16). All five speakers rejected the use of non-immediate forms in this context (see Appendix):

(16) *Tèen=e'* *mu'n* *bèey-tal* *in=meyah,* *tuméen* *túun*
me=D3 NEG.PROSP:A3 thus-INCH.INC A1SG=work CAUSE PROG:A3
ki'nam *in=kohhe'l=a'*
hurt A1SG=tooth PRSV=D1
'Me, I can't work, because this tooth here of mine is hurting'

The 12 scenes that elicited exclusively non-immediate responses are found in the right-most column of the table in the Appendix. An example is (17), a response to scene 10:

(17) *A=ti'a'l* *le=lìibro* yàan te'l=o'?
A2=property(B3SG) DET=book EXIST(B3SG) there=D2
'Is that book over there yours?'

Non-immediate forms infringe on immediate territory all the way up to that first scene, while the immediate forms are clearly confined to the speaker's zone of proximity. This distribution suggests a privative rather than an equipollent opposition, with the immediate forms as the marked terms. Only the immediate forms are semantically specified for exophoric reference to a particular region,

namely, the speaker's zone of proximity. But what, then, is the common denominator in the uses of the non-immediate forms?

Perhaps the non-immediate forms express "neutral deixis", i.e. exophoric reference without restriction to a particular region of space. However, the non-immediate forms are also used for anaphoric reference and definiteness marking, as illustrated in (18) and (19), respectively (repeated from section 2):

(18) *Ba'x k'ïin k-uy=úuch-ul* ***lel=o'****?*
what sun IMPF-A3=happen-INC DET=D2
'What day does **that** usually happen?'

(19) *Káa=h-òok le=x-ch'úup chak u=nòok'****=o'****, (. . .)*
káa=PRV-enter(B3SG) DET=F-female red(B3SG) 3=garment=D2
'(And then) **the woman** dressed in red entered, (. . .)'

The non-immediate particle is obligatory in the contexts illustrated in (18)–(19), although other anaphoric and definite expressions – in particular, third person pronouns and proper nouns – do not trigger it. In light of these endophoric uses of the non-immediate forms, the neutral-deixis hypothesis can only be maintained under an additional assumption of polysemy. Therefore, in the absence of further evidence, Occam's razor appears to favor an analysis of the non- immediate forms as generic indexicals which do not semantically distinguish between exophoric and endophoric reference.

Given that the non-immediate forms are semantically neutral regarding the immediate–non-immediate contrast, why are they dispreferred for reference to objects/places in the speaker's proximity? The semantic analysis just outlined cannot explain this, so the answer has to be sought in the pragmatics of the system. A traditional Gricean analysis would most likely argue for "pre-emption" of the non-immediate forms from the immediate domain, i.e. a generalized conversational implicature based on Grice's (1975) first maxim of Quantity ("Make your contribution as informative as is required") or Levinson's (2000) equivalent "Q-heuristic" ("What isn't said, isn't"). This mechanism yields an inference to the non-applicability of the marked term wherever the marked term is not chosen. In the case of the spatial deictics of Yucatec, preemption generates a default interpretation of the non-immediate forms according to which they do not refer to objects/places in the speaker's proximity, based on the reasoning that if the speaker were in fact referring to his or her region of proximity, why would (s)he not use an immediate form, given that the immediate forms are positively specified for this reference? This mechanism is invoked in the analyses of demonstrative systems proposed by Enfield (2003) and Levinson (2006).[12]

[12] Fillmore (1997) suggests a similar analysis to explain why *Tuesday* is inferred to not mean 'today' in case it is uttered on a Tuesday.

Gricean mechanisms generate the implicatures of an utterance from its entailments, or "what is said" by the utterance, in Grice's parlance, in relation to what else *could have been* said in the same context, loosely speaking. In the case at hand, the implicature of distance attributed to the non-immediate forms is generated on the basis of a putative entailment of proximity by the immediate forms. A preemption analysis presupposes the existence of an "entailment scale" or "Horn scale" (after Horn, 1972; see Levinson, 2000 for discussion): the stronger (marked) term shares the entailments of the weaker (unmarked) term but has additional entailments not shared by the latter. This could be argued in the case at hand along the following lines: the immediate forms entail exophoric reference to the speaker's proximity; the non-immediate forms entail indexical reference; exophoric reference is a special case of indexical reference. But can demonstratives really be said to *entail* proximity or distance of the referent? Suppose I say, pointing to a mountain peak on the horizon, *I've climbed **this** mountain*. Certainly my choice of demonstrative would be pragmatically odd; but would it render my statement *false*? What *are* the truth conditions of demonstratives? Linguists and philosophers have grappled with this question for a long time. One analysis that has been fairly influential in contemporary discussions, summarized, e.g., in Kaplan (1989), stresses that the location of the referent (or even the exophoric–anaphoric distinction) is *not* normally part of the contribution demonstratives make to the truth conditions of an utterance.

Now, it is not too difficult to see how a Gricean preemption analysis could be extended to cases of scales not constituted by entailments, but by mere inclusion of one term's meaning in that of another. Under such an analysis, the immediate forms preempt the non-immediate forms from their domain of use, not because their use in a given utterance affects the truth conditions of that utterance in such a way as to entail the applicability of the non-immediate forms, but merely because they have more narrowly defined meanings and hence are informationally richer. Levinson (2000: 86–104) discusses a variety of applications of such implicatures. However, it remains to be seen how an implicature analysis can be rigorously validated under such circumstances. Implicatures are identified by their defeasibility, i.e. essentially negatively, namely in contrast to entailments. Such a contrast does not appear to apply in the case at hand.

A more specific problem with the preemption analysis of the Yucatec demonstratives is that it fails to account for the exemption of the non-immediate forms from reference to the speaker's own body, as in scene 1. This exemption in fact extends to objects pointed at or touched by the speaker at close range, as in scenes 2 and 4.[13] Consultants consider the use of non-

[13] Intriguingly, Yucatec immediate and non-immediate forms cannot be used *contrastively* within the speaker's zone of proximity. Thus, a Yucatec speaker pointing to two objects in table-top

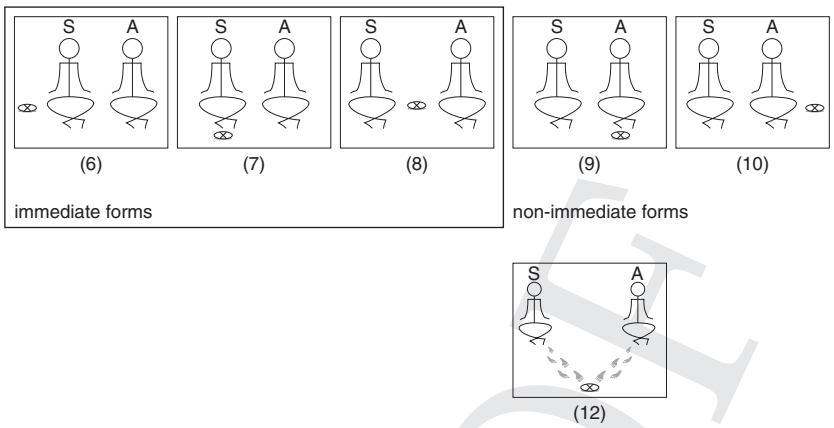
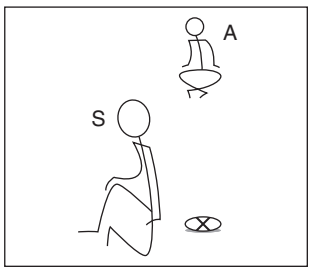


Figure 8.3 Accessibility in the demonstrative scenes

immediate forms in these contexts decidedly odd. However, it seems conceivable that similar phenomena may be encountered in *bona fide* cases of preemption as well. Perhaps the flip side of Grice's "Make your contribution as informative as is required" is that speakers who use a truth-conditionally weaker term where evidence for the validity of the additional conditions of the stronger term is clearly available are felt to not make their contribution *informative enough*. For example, to say *Steve ate some of the cookies* famously implicates but does not entail that Steve did not eat *all* of the cookies. But to say this holding the empty cookie jar (Steve still chewing) might well be interpreted, although not strictly false, as inaccurate in some contexts. In sum, then, a preemption analysis must allow for the stated refinements in order to successfully account for the data.

Before the matter of the immediate–non-immediate opposition in Yucatec can be left, the question of the cutoff point between the immediate and non-immediate domains must be addressed. As Hanks (1990: 488) points out, the knowledge Yucatec speakers have of this cutoff point cannot be represented in terms of measurable spatial distance. One crucial parameter appears to be the accessibility of the reference object from the point of view of the speaker. Consider the sequence of scenes in Figure 8.3: speaker and addressee are sitting next to each other, facing in the same direction, close enough so that both can reach and grab the object in the scene depicted in the central picture (scene 8). In this setting, accessibility is determined by whether the speaker can grab the

space in front of him/her would not say the equivalent of *thís object versus thát object*, but would use proximal forms for reference to both objects.



(11)

Figure 8.4 Demonstrative scene 11

object without having to get up. That is the case in scenes 6–8, but not in 9–10. Immediate forms are used when the speaker can grab the object, and non-immediate forms when (s)he cannot. And in scene 12, depicted in the lower half of Figure 8.3, the object is equidistant from speaker and addressee, as in 8, but this time it is several steps away from both, so that the speaker cannot reach it without getting up. Unanimously, consultants prefer non-immediate forms in this case.

That is the case in scenes 6–8, but not in 9–10. Immediate forms are used when the speaker can grab the object, and non-immediate forms when (s)he cannot. And in scene 12, depicted in the lower half of Figure 8.3, the object is equidistant from speaker and addressee, like in 8, but this time it is several steps away from both, so that the speaker cannot reach it without getting up. Unanimously, consultants prefer non-immediate forms in this case.

There is evidence suggesting that the critical measure of what counts as accessible depends on the setting. For example, Hanks (1990: 432–433) observes that the goal of a motion event which the speaker is en route to is often referred to using immediate forms, irrespective of how far away it is. Also, it is virtually impossible to use the immediate forms in any of the questionnaire scenes without accompanying pointing gestures. Consider also scene 11 (depicted in Figure 8.4), where the addressee is facing the reference object, but the latter is within the speaker's easy reach, although the speaker cannot look at the object without turning around, which (s)he is not supposed to do according to the instructions. All consultants strongly prefer immediate forms here. So manual access apparently overrides visual access.

4.3 The Role of Attention-Direction

Another interesting finding that has come out of the questionnaire study is the consistent use of augmented forms for attention calling. Why does

attention-direction play such a prominent role in spatial deixis? The facts seem quite simple: spatial deictics do not provide *descriptions* of their referents,[14] but merely information about where to look for them. In order to determine the speaker's intended referent, the addressee must attend to what the speaker is attending to, following his or her gaze and point (cf. Diessel, 1999). In short, exophoric spatial reference requires a joint focus of attention. Under these conditions, the speaker may use attention-calling forms to alert the addressee to the effect that the addressee's attention may not be on whatever the speaker has shifted attention to (see Küntay and Özyürek, 2002; Levinson, 2004).

Based on these considerations, two distinct functions may be isolated in spatial deictic reference acts: one may be dubbed *deictic anchoring*, the other one *attention calling*. Deictic anchoring alone is done in Yucatec using the simple immediate and non-immediate forms, at least as far as reference to objects rather than to places is concerned. These forms operate on the accessibility scale, where the cutoff point is between entities/places that are readily accessible to the speaker and entities/places that are not so easily accessible. For attention calling, the augmented forms are used. These are the forms expanded by the presentative adverb *he'l*, where the distinction simply projects down from the accessibility scale (see Figure 8.4), and the form expanded by the deictic locative adverb *te'l*, which requires a relative clause to modify noun phrases (see section 2).

The cutoff point between the forms expanded by the presentative adverb and the forms expanded by the locative adverb seems to be the difference between referents that are easily identifiable in the visual field so that attention is shifted to them easily and referents that are not so easily identifiable. It appears that in the latter case reference is reinforced by the place adverb *te'l* because it is easier in such cases to refer to the location of the referent than to the referent itself. One instantiation of the cutoff point of the attention-calling system emerges from a comparison of the scenes depicted in Figure 8.1 (scenes 13 and 16) with the scenes 14 and 17 (see Appendix). The only difference across these two pairs of scenes is that the reference object is on the far side of the ball park from the speaker's point of view in 13 and 16, but in the center of the ball park in 14 and 17. In the former case, the augmented forms with *te'l* are used for attention calling (see example 14), while in the latter case, the augmented forms with *he'l* are used to this end, as in (20):

[14] Thanks to G. Senft for reminding me that this does not hold for classificatory demonstratives, or, as they are more commonly, though perhaps misleadingly, known, "demonstrative classifiers" (see Klein 1979, Barron and Serzisko, 1982, and, for recent descriptions, Hellwig, 2003; Senft, 2004, and O'Meara, 2010). However, in such expressions, the classificatory meaning is independent of the deictic one, and the two semantic components can often be traced to distinct diachronic sources. The deictic component is, as far as I can see, always non-descriptive.

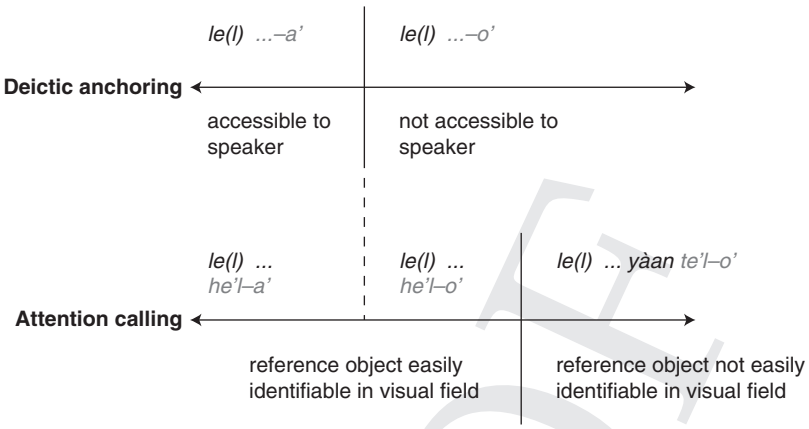


Figure 8.5 Anchoring and attention calling in Yucatec spatial deictics

(20) *A=ti'a'l* *le=ràadyo* *(he'l)=o'?*
A2=property(B3SG) DET=radio PRSV=D2
'Is that radio (there) yours?'

However, the object does not have to be far away to be difficult to attend to. Another possibility is that the object is close by but occluded from vision, as in scene 10, where the addressee's body covers the object from the speaker's sight (this is the rightmost scene depicted in Figure 8.3). Note that the speaker has no problem directing the addressee's attention to the object in this context as long as the speaker knows where the object is, because the object is not blocked from the addressee's vision. Four out of five consultants demand in response to this scene the form used for attention-direction to objects not easily identifiable in the visual field:

(21) *A=ti'a'l* *le= bùulto* *le=* *yàan*
A2=property(B3SG) DET=bag ~~EXIST(B3SG)~~
te'l=o'?
there=D2
'Is the bag that is over there yours?'

Thus, the visibility condition, just like the accessibility condition, refers primarily to the speaker rather than to the addressee. This effectively introduces a kind of evidential aspect to the use of the demonstrative forms: if the speaker has some form of knowledge of the referent being there, but cannot see it, they are required to mark this fact, thereby effectively flagging their knowledge of the existence and/or location of the object as not based on the

strongest possible evidence. This connection between exophoric reference and evidentiality is expanded in the dialect studied by Hanks by the existence of an additional terminal particle used for referents that are audible, but not visible (see Hanks, 1984; 1990; and cf., e.g., Behrens, 2012 and Gärtner, 2012 on evidentiality).

5 Discussion

Hanks' (1990; 2005) "practice" approach is based on the observation of deictic usage in spontaneously occurring interactions. As has been demonstrated here, this approach falls somewhat short of clearly establishing category boundaries or cutoff points. In the case at hand, Hanks observes a frequent association between the use of non-immediate forms and the addressee's location. Hanks (2005) clarifies that this association is not a *semantic* property of the non-immediate forms. The questionnaire study has clearly confirmed this: the non-immediate forms are readily applied to places and entities outside the addressee's proximity and in fact even in the speaker's proximity, right up to the boundaries of the speaker's body. However, Hanks' analysis still suggests that the addressee's zone of proximity plays a privileged role in the *use* of the non-immediate forms. Perhaps the addressee's zone of proximity is a focal area in the extension of the non-immediate forms and their interpretation is therefore biased toward this focal point by stereotype implicatures. But the questionnaire study has also failed to produce any evidence in support of such typicality effects: the non-immediate forms were just as readily and consistently used in reference to entities and places outside the addressee's zone of proximity as they were used with referents that were near the addressee. This suggests that the apparent addressee bias Hanks observed may in fact be nothing more than a statistical correlation: the non-immediate forms were used most frequently with referents close to the addressee simply because Hanks' database of observed interactions is biased toward referents that are close to speaker, addressee, or both. This conclusion should be understood as tentative and preliminary: it should be checked, on the one hand, against a quantitative analysis of Hanks' database and, on the other, against psycholinguistic studies of the production and comprehension of Yucatec demonstrative forms. If there is an addressee bias, it should manifest itself, for example, in word association tests and in faster processing of non-immediate forms when used in reference to the addressee's region of proximity compared to when used in reference to other places.

The Demonstrative Questionnaire approach is based on controlled elicitation of usage under artificial conditions. This method offers the following closely related principal advantages over the observation of spontaneous data:

1. Elicitation can generate evidence of how speakers and hearers behave in situations that occur less commonly or even marginally in spontaneous interactions. Such evidence can provide important clues about the underlying categories, representations, and procedural knowledge speakers and hearers rely on. To put it in more general and abstract terms, any scientific analysis seeks to describe and explain the dependencies between the variables that affect the phenomena at issue. Such an analysis will be incomplete unless it covers all possible variable–value combinations, including combinations that are difficult to study except under artificial conditions. Reference to entities and places that are neither in the speaker's nor in the addressee's zone of proximity in the present study is arguably a case in point.
2. Realization of all possible variable-value combinations in a grid-like design may help avoid misinterpretations of statistical correlations as causal relations. This is exemplified in the present study by the association between the non-immediate forms and the addressee's location in Hanks' analysis, which the questionnaire study has identified as a possible result of a statistical bias in Hanks' database.
3. A grid design may also help uncover systematic relations between variables that otherwise elude the researcher due to their complex nature. A case in point is the systematic correlation between attention-direction and the use of augmented forms the questionnaire study has shown.
4. Finally, the elicitation of native-speaker *judgments* may produce *negative* evidence of particular variable–value combinations not only not occurring spontaneously, but being excluded from occurrence due to ungrammaticality, semantic anomaly, or pragmatic infelicity, or a combination thereof. It may also show certain combinations to be acceptable but non-idiomatic. Conversely, showing that certain infrequent and/or atypical combinations are nevertheless possible may help identify pragmatic implicatures. In the questionnaire study, this latter principle was applied twice. It failed to support a stereotype implicature analysis of the apparent addressee bias in the use of the non-immediate forms in Hanks' data. But it did produce evidence of a scalar implicature or preemption effect pragmatically excluding the non-immediate forms from the speaker's zone of proximity.

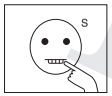
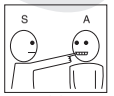
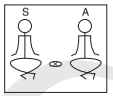
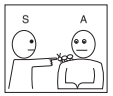
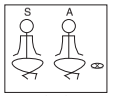
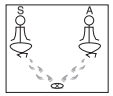
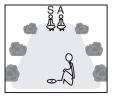
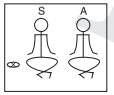
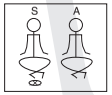
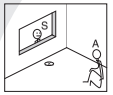
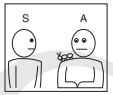
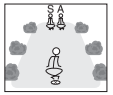
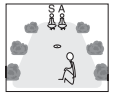
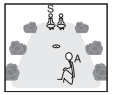
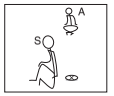
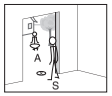
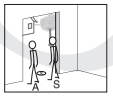
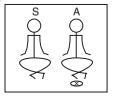
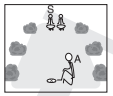
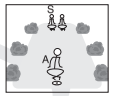
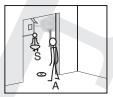
On the downside, one drawback of elicitation is that it is by itself blind, as it were. A questionnaire design such as the one used above needs to be informed by specific research questions and will only provide answers to the questions implemented. As mentioned above, Hanks' meticulous study of demonstrative use in spontaneous interactions was in fact an important source in the design of the Demonstrative Questionnaire. Beyond this, Hanks (1990; 2005) makes a

number of intriguing observations that the questionnaire study failed to replicate, simply because the relevant variable was not implemented in the questionnaire. For instance, many of Hanks' examples refer to motion events rather than stative locations. Hanks (1990: 432–433) notes that speakers consistently use immediate forms in reference to motion goals they are en route to and non-immediate forms in reference to motion sources that they have already left. The Demonstrative Questionnaire has no way of detecting this phenomenon, because motion is not coded in the demonstrative scenes.

The second principled drawback of elicitation is that it determines only what native speakers do under simulated conditions. This immediately raises questions of validity. One aspect where the Demonstrative Questionnaire proves artificial in a way that may well limit the validity of any study conducted with it has to do with the role of joint attention and attention-direction in demonstrative usage. The questionnaire study has produced evidence suggesting that attention-direction is grammaticalized in the Yucatec systems of spatial deixis. While the simple immediate and non-immediate forms are used when a joint focus of attention on the reference object or place has been established prior to the reference act, complex forms augmented with the presentative adverb *he'l* or the place adverb *te'l* are used to direct the addressee's attention to the reference object or place. The choice between the *te'l* forms and the *he'l* forms depends not on the physical accessibility of the reference object or place, as with the choice between immediate and non-immediate forms, but on identifiability of the reference object/place in the visual field. However, attention is coded in the questionnaire in instructions to ask the consultant to *imagine* that the researcher as the addressee is, say, not aware of the reference object, that (s)he may not have noticed it, etc. In essence, this means asking the consultant to imagine that (s)he is not thinking about something! Obviously, this is methodologically unsatisfactory. But controlling the focus of attention under experimental conditions is an extremely difficult task. In the absence of a technique for doing this (see Enfield and Bohnemeyer, 2001 for a possible solution), the observation of natural interactions may be our best bet in the study of the role of attention-direction in spatial deixis.

The upshot of this comparison of the two approaches to the study of spatial demonstratives, observation of spontaneous interactions and controlled elicitation, seems clear enough: to ensure optimal results, the two are best pursued in tandem. Moreover, the observation of spontaneously occurring speech must naturally take the lead role in this combination. Elicitation is essentially a clean-up job that helps to sort out and make sense of the results of spontaneous observation.

Appendix: Distribution of Yucatec immediate and non-immediate preferences across the 25 Demonstrative Scenes

Immediate forms only	Immediate forms preferred; non-immediate forms possible		Immediate and non-immediate forms equally good	Non-immediate forms preferred; immediate forms possible	Non-immediate forms only		
 (1)	 (2)	 (3)	 (8)	 (4)	 (10)	 (12)	 (13)
	 (6)	 (7)	 (19)	 (5)	 (15)	 (14)	 (17)
	 (11)	 (22)	 (20)	 (9)	 (16)	 (18)	 (21)
					 (23)	 (24)	 (25)

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