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The Jahai multi-term demonstrative system

what's spatial about it?

Burenhult, Niclas

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17 The Jahai Multi-term Demonstrative System: What's Spatial about It?

Niclas Burenhult

1 Introduction

Demonstratives are considered to be a well-defined and cross-linguistically pervasive (even universal) class of words dedicated to coordinating the interlocutors' focus of attention (Diessel, 2006). Yet there is a growing body of work suggesting that the semantic parameters operating within this well-established category vary greatly and are notoriously difficult to pin down. For example, the descriptively entrenched distance-based analyses of the commonly occurring "here versus there" type of distinctions have been challenged for a number of systems in recent years. The assumed spatial encoding has been shown to be heavily influenced or overridden by pragmatic factors pertaining to the attentional relationship between addressee and referent (Özyürek, 1998; Burenhult, 2003; Küntay and Özyürek, 2006), or by the social or interactional context of the speech situation (Enfield, 2003; Jungbluth, 2003; Hanks, 2005).

There is also a budding theoretical interest in multi-term demonstrative systems with parameters which are cross-linguistically uncommon but add a range of diverse semantic dimensions to the class, such as visibility, elevation, and motion of the referent (Burenhult, 2008; Schapper and San Roque, 2011). Existing typologies of demonstrative systems tend to regard such parameters as "special" (Diessel, 1999: 42–47) or "ancillary" (Levinson, 2006: 117), implying that they somehow form a qualitatively distinct phenomenon tangential to the core theoretical issues. However, their functional relationship with, and relevance to, the more commonly theorized parameters of distance, participant-anchoring, and attention remains largely unexplored. Are there, in fact, major insights to be gained into demonstrative function generally from in-depth analysis of multi-term systems?

In this chapter I investigate a system full of such seeming exoticness, namely that of Jahai, an Austroasiatic language spoken by groups of subsistence foragers in the Malay Peninsula. Jahai has no less than nine demonstrative distinctions, each with both a nominal and an adverbial reflex. In addition to the

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more familiar distance-related distinctions, this system contains a number of unusual (even unique) distinctions pertaining to the referent's status: cognitively accessible to the addressee; cognitively inaccessible to the addressee; located above the deictic center; located below the deictic center; located outside the speaker's side of the speech dyad; located outside the addressee's side of the speech dyad; and perceived through its emissions (smell, sound, temperature, etc.) rather than direct visual or tactile experience of its inherent physical properties.

Thus, semantic dimensions of accessibility, elevation, exteriority, and perception are intricately cross-cut by binary contrasts in the form of participant, attentional, and directional oppositions, producing considerable distinctional richness (see Table 17.1 below).

I present detailed data and analysis of exophoric usage of demonstrative forms – based on Wilkins' Demonstrative Questionnaire (1999; this volume) and supporting data from previous studies – to show that a multi-term demonstrative system with unusual distinctions can offer unique opportunities for exploring and understanding indexical principles in languages at large. I will argue that the fine-grained semantic encoding of the distinct Jahai forms partly unpacks functional dimensions proposed to be relevant by current theory but which are typically obscured in systems with less elaboration. In particular, the Jahai system sheds light on what is fundamentally versus symptomatically spatial in demonstratives; it helps to characterize and typologize the speaker's management of the addressee's attention; and it demonstrates that, far from being tangential phenomena, crosslinguistically unusual demonstrative parameters are tremendously relevant to core issues in deictic theory.

2 Background

2.1 Jahai: People and Language

The Jahai are approximately 1,000 mobile subsistence foragers in the mountain rainforests of northern Peninsular Malaysia and southernmost Thailand. Their economy is based on the hunting and gathering of wild animals and plants, supplemented by trade in forest products as well as occasional wage-labor and slash-and-burn horticulture. Traditionally, bands of between 10 and 50 individuals dwelled in temporary camps of lean-tos or huts, moving every few days or weeks (sometimes months) depending on the sustenance circumstances. Nowadays most Jahai are resettled in regroupment villages, but some groups still pursue a nomadic existence. The majority of Jahai uphold their traditional animistic belief system, rituals, and egalitarian ideology.

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The Jahai language belongs to the Northern Aslian clade of the Aslian branch of the Austroasiatic language family. Like other Aslian languages, it has a fairly rich sound system and displays complex paradigms and processes of derivational morphology (Burenhult, 2005). The lexicon is imbued with unanalyzable monolexemic forms encoding fine semantic detail in diverse domains like anatomy, biology, perception, motion, and ingestion. Such lexical specificity is a systematic principle of the language. While many children today receive basic schooling in Malay (the surrounding Austronesian majority language), most Jahai are non-literate, and Jahai is an unwritten language.

2.2 Previous Analyses

Multi-term demonstrative systems, and arguably any demonstrative system, hardly lend themselves to easy functional description. If my own experiences are anything to go by, anyone aspiring to come close to understanding a complex demonstrative system should be prepared to be in it for the long haul. Despite 15 years of research on the language, my comprehension of the Jahai demonstrative system is still developing. Now and again it teasingly dishes up new surprises. New methodological approaches (and not necessarily ones that target demonstratives) suddenly challenge what seemed to be wellestablished principles. And during the course of my publishing of results, I have twice had to amend the number of distinctions upwards, due to the discovery of new forms. For example, this chapter introduces a ninth distinction to the paradigm: the emission-perceptible. It was only in 2009 that the formal morphological evidence for the demonstrative status of this distinction emerged from a new type of data. The present account is therefore to be considered as work in progress, and the data reported represent just another piece of a complex puzzle.

An early hint at the functional complexity of the Jahai system was provided by Schebesta (1928), who postulated a basic system of three distance-based distinctions and an additional pair of locatives signifying location upstream and downstream, as well as four forms corresponding to the four cardinal points.¹

¹ Although linguistically well ahead of his time, Father Paul Schebesta clearly did not pursue Jahai demonstratives in any depth. Judging from his short description, he did discern their basic formal properties but did not identify the paradigmatic systematicity, functional characteristics, or magnitude of the system. Six of the forms given clearly bear a resemblance to forms described in the present work. One of them provides a revealing accidental glimpse into an undocumented elicitation situation of nearly a hundred years ago. Thus, Schebesta glossed the form *ano* as 'south'. This form is undoubtedly the addressee-anchored exterior *2ni2*, meaning 'there, outside your side of our speech dyad' (see section 3 and Figure 17.2).

Cardinal directions are never used for everyday spatial reference by present-day Jahai speakers, and there are no indigenous terms for 'north' and 'south'. Schebesta likely asked for the Jahai equivalent of the Malay term for 'south' (*selatan*), and, thinking he was asking for the direction, the unknown Jahai language consultant probably gestured beyond the researcher and replied

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My own initial analyses of the system (Burenhult, 2002), based on interviews and participant observation, identified seven distinctions and involved four distance-based definitions (speaker-anchored proximal, addressee-anchored proximal, medial, and distal), two forms encoding elevation (superjacent and subjacent), and one form erroneously defined as encoding invisibility of the referent (later redefined as a speaker-anchored exterior).²

My subsequent analyses were based on tasks featured in the field manuals of the Language and Cognition Group at the Max Planck Institute for Psycholinguistics, such as the "Hidden colour-chips task" (Enfield and Bohnemeyer, 2001), "Demonstrative Questionnaire" (Wilkins, 1999; this volume, explored in section 4), and "Shape Classifier Task" (Seifart, 2003). These prompted a fundamental reinterpretation of the distance-based parts of the system (Burenhult, 2003) and provided further hints as to the function of the elevation- and exteriority-encoding forms. I also targeted the exterior distinctions, unique to Jahai, by means of specially designed elicitation tasks and analyses of usage in natural conversation captured on video (Burenhult, 2008; see also Terrill and Burenhult, 2008). My current interpretation of the system, based on this diverse set of data types, is explained in detail in section 3 and summarized in Table 17.1.

2.3 Definitions, Terminology

Demonstratives form the most prominent exponent of spatial deixis in language. Following Burenhult (2008: 100–101), *demonstrative* is defined generally here as any member (in the form of a word or a bound morpheme) of a closed grammatical class of expressions serving to narrow the contextually relevant search domain in the locational relativization of a referent to the deictic center (the speech situation or either of its two components, speaker and addressee). This definition incorporates not only concrete spatial (situational or exophoric) uses of demonstratives, but also abstract discourse-internal (or endophoric) uses. Thus, *locational relativization* may pertain to a referent's location in actual space, or its location in discourse. The definition includes both nominal and adverbial demonstratives (e.g. English 'this' versus 'here'). The formal, language-specific definition of Jahai demonstratives is given in section 3.

² A common location of referents of this form is behind the speaker's back, which in face-to-face conversation means that the referent is typically out of sight for both speaker and addressee.

[&]quot;?ni?!", "There, away on your side of our speech dyad!". Provided his consultant was familiar with cardinal directions, we can be reasonably confident that Father Schebesta was sitting south of his Jahai teacher during this conversation! This possibility to reconstruct the spatial layout of Schebesta's interview underscores the profoundly angular meaning of some of the Jahai demonstratives.

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Multi-term demonstrative system is a label sometimes given to systems which comprise more distinctions than the more commonly occurring two- or three-term systems (see, e.g., Jungbluth, 2003: 29; Levinson, 2006: 110; Schapper and San Roque, 2011: 387). Such systems typically exhibit cross-linguistically unusual distinctions, encoding parameters like elevation, visibility, and movement of the referent (Anderson and Keenan, 1985: 291–292; Hyslop, 1993; Diessel, 1999: 42–47, 50–51; Dixon, 2003: 89). A subset of such distinctions has the function of projecting angular search domains and thus invokes spatial frames of reference. These are referred to here as *spatial-coordinate demonstratives* (Burenhult, 2008).

Diessel (2006) defines demonstratives functionally as *attention*coordinators, dedicated to creating (or manipulating) joint focus of attention. For the present purpose I prefer to characterize demonstratives as *attention*managers, underscoring their role as tools for the speaker to manage the addressee's attention. The data to be reported further require us to subclassify attention managers into three functional categories: *attention-drawers*, which draw the addressee's attention to a referent; *attention-correctors*, which shift the addressee's inaccurate attention to the correct referent; and *attentionconfirmers*, which verify that the addressee attends to the intended referent (see further below).

3 Form and Function: An Outline

Jahai demonstratives are a morphosyntactically uniform and easily defined form class. Nine roots, all of which begin with a glottal stop /?/, are used adverbially, typically in adjunct adpositional phrases headed by prepositional proclitics encoding distinctions like location, source, and goal ('at here', 'from there', etc.). Each root can be turned into a nominal demonstrative through the replacement of the initial glottal stop with the voiceless alveolar stop /t/. This process of initial phonemic supersession is a morphological strategy unique to this set of roots. It does not exist in other parts of the grammar. The derived forms are either used adnominally as modifiers of nouns or pronouns and then occur in a single, post-nominal NP slot, or used pronominally and then represent full NPs themselves. Demonstratives cannot modify each other. This mutual syntactic exclusivity, together with the unique and identical morphophonemic behavior, is what makes the nine distinctions a straightforwardly identified form class. Examples (1) and (2) illustrate adverbial and adnominal usage, respectively:

(1) $2o^2$ cip $ba=2\tilde{b}h$ 3S to.go GOAL=DEM 'S/he came here.'

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(2) 202 de2 hayẽ2 tõh 3S to.make hut DEM 'S/he built this hut.'

Their uncomplicated structural classification notwithstanding, the nine demonstrative distinctions encompass a number of diverse semantic dimensions. Firstly, they can be broadly grouped into three semantic "supercategories". One such category is *accessibility*: four of the distinctions encode the accessibility and inaccessibility of a referent in relation to speaker and addressee, respectively. These are akin to the distance-related distinctions commonly found in demonstrative systems (see further in section 3.1).

The second semantic supercategory is spatial frames of reference (see Levinson, 2003). Four distinctions encode such frames. This means that they invoke full-fledged spatial coordinate systems, whereby the demonstrative signifies a Figure in the form of a referent which is located angularly in relation to a Ground in the form of the speech dyad (or a part of it). Such distinctions are cross-linguistically unusual and still underexplored. Burenhult (2008: 109-114) identifies two subtypes among existing systems: absolute distinctions, which rely on a spatial asymmetry external to the deictic Figure-Ground constellation to project search domains, and *intrinsic* distinctions, which rely on spatial asymmetries internal to the deictic Figure-Ground constellation. Jahai exhibits both subtypes: two of the distinctions involve the absolute frame of reference, signifying referents which are found in search domains above and below the speech dyad, respectively: 'that/there, up' and 'that/there, down'. These distinctions typically invoke elevation as manifested geophysically - topographically (uphill/downhill) or hydrologically (upstream/downstream) - but can also involve more general search domains above or below the deictic center (a semantic subtype termed global elevation in the typology of Burenhult, 2008: 110).

The other two distinctions signify referents found in search domains that project away from the speaker's and addressee's positions in the speech dyad, respectively: 'this/here, outside my side of the speech dyad' and 'that/there, outside your side of the speech dyad'. They cannot be used for reference between the interlocutors, hence they are called exterior demonstratives. The distinctions are conveniently described as invoking an intrinsic frame of reference, since the speech dyad is conceptualized as a whole entity (Ground) with two facets in the form of speaker and addressee, and the search domains in which the referent (Figure) is found project away from those facets. The meaning, logic, and usage of these distinctions are described in detail in Burenhult (2008).

The third supercategory pertains to *perceptual modality*. This contains only one form which encodes that the referent is perceived only through its

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emissions, not through direct visual or tactile experience of its inherent physical properties. This can involve a referent which at the time of the utterance is (or has just been) heard, smelled, or felt in the skin, or one which produces a vague body-internal sensation or pain experienced by the speaker. It brings to mind the cross-linguistically unusual distinction of "invisible" described for some demonstrative systems. However, it is not invisibility as such which is in focus in the Jahai form, but rather the indirect, emitted characteristics of the experience. Evidentiality also comes to mind as a potential parameter of relevance to the distinction between this and the other demonstrative forms (cf. Meira this volume; Levinson, this volume). However, there is no evidence at present that it encodes anything beyond experience through a particular set of sensory modalities other than vision and touch.

Secondly, as is evident from the above, the semantic supercategories are partly cross-cut by a binary distinction, creating semantic opposites for each category involved. In the accessible/inaccessible and exterior categories, this opposition involves the parameter of participant-anchoring, which distinguishes speaker-anchored versions from addressee-anchored ones. The semantic opposition in the elevation category distinguishes between superjacency and subjacency. The perception-encoding category is the only one which does not make such a binary distinction and thus contains only one form.

The forms and functions of the full system are summarized in Table 17.1.

3.1 The Accessibility Parameter

The four accessibility-related distinctions have presented particular challenges for the semantic analysis of Jahai demonstratives. In the tentative analysis in Burenhult (2002), I considered distance to be a key parameter on the basis of the prevailing spatial distribution of referents, as well as consultants' typical judgments of meaning. However, it was clear already from the outset that actual usage was far more varied and complex. For example, it was evident from participant observation that the forms displayed considerable flexibility with respect to the location and distance of referents in relation to speaker and addressee.

Accumulating additional data prompted me to reassess the fundamental parameters of the system. For example, an analysis of demonstrative usage in a Director-Matcher game designed to probe shape distinctions in classifiers revealed that the addressee-anchored accessible *ton* was exclusively associated with referents which had the addressee's attention (Burenhult, 2003).³

³ The game in question was the Shape Classifier Task (ShaClaTa), developed by Seifart (2003). Another Director-Matcher game – Man & Tree, designed to elicit spatial frames of reference – similarly generated abundant use of demonstratives in the Jahai setting (Terrill and Burenhult, 2008).

Supercategory	Parameter	Oppositions	Adverbial	Nominal	Referent characteristics in exophoric use	Attention-managing properties in exophoric use
Accessibility	+ACCESS	Speaker-anchored	hết	tãh	Accessible to speaker (proximal, perceptible, reachable,	
		Addressee-anchored	Pon	ton	approachable, etc.) Accessible to addressee (familiar, established, attended to,	Confirms that addressee's attention is on referent
	-ACCESS	Speaker-anchored	Pani?	tani?	Inamputated) Inaccessible to speaker (distal, imperceptible, unreachable,	
		Addressee-anchored	Pũn	tũn	inapproachable, etc.) Inaccessible to addressee (unfamiliar, unestablished,	Shifts addressee's inaccurate attention to
Spatial frame of	EXTERIOR	Speaker-anchored	Padeh	tadeh	undentified, unattended to) Located outside speaker's side of	correct reterent
		Addressee-anchored	2 _{Jni} 2	tpi?	Located outside addressee's side of	
	ELEVATION	Superjacent	Pitih	titih	speech perimeter Located above speech situation (overhead unhill or unstream)	
		Subjacent	Puyih	tuyih	(Located below speech situation (underneath, downhill, or	Draw addressee's attention to referent
Perceptual modality	EMISSION- PERCEPTIBLE	I	2ne2	tne?	Perceived only through its Perceived only through its emissions, not through direct visual or tactile experience of its inherent physical properties (heard, smelled,	
					felt in the skin or body)	

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Table 17.1 The Jahai demonstrative system

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Specifically, the speaker used *ton* to indicate to the addressee that the attention of the latter was on the correct object among a pile of wooden shapes competing for reference in the game. Other demonstratives used in the task (which included speaker-anchored accessible, speaker-anchored inaccessible, addressee-anchored inaccessible, addressee-anchored exterior) always had the function of diverting the addressee's attention elsewhere.

This and some further observational data also indicated that the addresseeanchored inaccessible form *tũn* (then thought to encode medial distance) was consistently used to divert the addressee's attention to an object not attended to, irrespective of distance from the addressee.⁴ Thus, in these studies the addresseeanchored forms ton and tũn were interpreted to function primarily as attention-confirmer and attention-drawer, respectively. However, other observational data show that ton may also involve referents about which the addressee is considered to have prior knowledge but is not necessarily currently attending to, e.g. his or her dwelling, or an object recently manipulated by him or her. Furthermore, additional data suggest that the attentiondrawing function of tũn is restricted to situations in which the addressee's attention is on the wrong entity (from the speaker's perspective) or where he or she is explicitly asking for guidance. For example, *tũn* is frequently used in reply to location- and item-questioning. It is thus not simply an attentiondrawer but rather attention-corrector, intended to help the addressee shift attention to the intended referent.

Taken together, these results and observations showed that the addresseeanchored forms handle the distinction between "shared knowledge" and "new information". They were therefore reinterpreted to encode the speaker's construal of the addressee's cognitive accessibility to the referent (cf. Hanks, 2011: 330–331). The speaker-anchored forms $t\tilde{a}h$ and tani? similarly required a reappraisal. Here, the observational data suggested that physical distance from the speaker is an important factor in the choice of demonstrative form but hardly one that fully predicts which one is used. Several other semantic parameters play a role, including visual access, reachability, approachability, possession, and social relationships. For example, the presence of an obstacle between speaker and referent tends to occasion use of speaker-anchored inaccessible *tani*? at the expense of accessible $t\tilde{a}h$, even in proximal table-top space (a pattern evident in the Director-Matcher game described above; Burenhult, 2003). This has clear parallels in large-scale geographic space, where, for example, referents located in the same river valley as the speech situation, although physically distant, may be denoted by speaker-anchored accessible tõh. Referents located inaccessibly on the other side of a topographical divide

⁴ The reanalysis and re-interpretation of the medial was initially inspired by its spatial flexibility, as revealed by the results of the Demonstrative Questionnaire, explored in section 4.

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are more likely to be referred to by means of inaccessible *tani?*, whether or not they are physically distant. The opposite side of a stream or river is referred to as *sir tani?* 'that side', as opposed to *sir tõh* 'this side'. So whereas the parameter of physical distance is unable to fully predict referent location, the wider (and vaguer) notion of physical accessibility seems to be able to account for most of the analyzed instances of the speaker-anchored forms.

4 The Questionnaire Study

As part of the refined analysis, I conducted an in-depth study of native speaker judgment of demonstrative meaning among Jahai speakers in 2002 with the help of the Demonstrative Questionnaire (Wilkins, 1999; this volume), an elicitation tool developed specifically for the detailed study of the extensional range of demonstrative pronouns in exophoric, non-contrastive spatial use. The study remains the only attempt I have made so far to characterize the full set of Jahai demonstratives with a single method; previously published work provides in-depth analyses of subsets of distinctions (Burenhult, 2003; 2008).

The questionnaire data were collected with three adult male consultants. Interviewing took the form of enactments in Jahai of each of the 25 questionnaire scenes, where I asked the consultant to judge the acceptability of forms suggested by myself. I thus enacted the role of speaker. The role of addressee was enacted by a third person (native Jahai speaker). In other words, the consultant took on the participant role of observer and evaluator of a foreign language learner. This line of approach had practical advantages: me having greater control over the different parameters involved in the scenes and a better possibility to probe the full range of demonstrative distinctions in a systematic manner. It was also the approach I deemed easiest to comprehend and execute for the native speakers, who are not accustomed to prompted role-playing. The participants quickly grasped this format and the observing consultant produced judgments without difficulty.

For each questionnaire scene, the eight known demonstrative forms were presented for judgment, and the consultant was asked (1) which forms were possible and (2) which form was the preferred one.⁵ Yes/no judgments were documented on paper in a pre-prepared form with a simple +/- value, each scene matched with the full set of demonstratives (creating a total of 200 judgments per consultant). Preferred forms were marked as such in the same form. Sessions were not audio- or video recorded. Interviewing could not be done in secluded settings, which meant that onlookers regularly took part in the elicitation. Thus, judgments by a consultant were frequently preceded by

⁵ The emission-perceptible $tn\epsilon^2$ was not tested in this study. Note that at the time of data collection, this distinction had not yet been formally identified as a demonstrative.

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discussion among native speakers. However, the main consultant was always asked for a final say in each case. The questionnaire focuses on exophoric object-referential usage and the objects used here included a book (in two of the three elicitation sessions) and a jungle knife (in one elicitation session). Elicitation always involved the pronominal/adnominal demonstratives and suggested forms were presented in a sentence like "_jungle knife is a good one".

The questionnaire revealed a clear split in the demonstrative system in terms of the specificity and uniformity of responses. The subset of distinctions involving spatial frames of reference (including the speaker-anchored exterior, addressee-anchored exterior, superjacent and subjacent forms) exhibited clear spatial limitations as to the location of referents and a marked consistency in judgments between consultants. The accessibility-related distinctions (including the speaker- and addressee-anchored accessible and speaker- and addresseeanchored inaccessible) did not exhibit well-defined spatial limitations, and consultant judgments for these forms were less homogeneous. The following outline of the results reflects this division.

4.1 Accessible and Inaccessible Forms

The aim of the Demonstrative Questionnaire is to facilitate the differentiation and comparison of demonstrative distinctions pertaining to participantanchoring, distance and visibility, parameters which are considered central to demonstrative meaning. An interesting fact about the Jahai results is that the questionnaire encounters difficulties in uncovering clear patterns with respect to those parameters in forms where they would be most expected, namely the speaker- and addressee-anchored accessibles and inaccessibles. More specifically, it does not straightforwardly separate these four forms because they are all judged to be fully acceptable in most scenes of the questionnaire. As noted, judgment varies somewhat for the forms across the three consultants, but, as far as acceptability is concerned, the overall impression is that there is considerable overlap between them across the whole set of scenes. Judgments of preferred rather than acceptable forms reveal clearer patterns.

To illustrate with two extremes: the first two scenes of the questionnaire pertain to demonstrative reference to body parts; in scene 1 the referent is one of the speaker's teeth and in scene 2 one of the addressee's teeth. Although consultants were occasionally hesitant with regard to some of the forms presented in this context, the overall pattern is clear: given the right circumstances, the full system of demonstrative distinctions may be used to refer to both the speaker's and the addressee's teeth. The only forms that display a clear, scene-related restriction are the speaker-anchored and addressee-anchored exteriors (discussed in more detail in section 4.2), the former unacceptable for reference to the addressee's teeth (scene 2), the latter unacceptable for reference to the

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speaker's teeth (scene 1). There are differences relating to which tooth is referred to: thus, whereas the speaker-anchored accessible, addresseeanchored accessible and inaccessible can be used to refer to any tooth of both speaker and addressee, the speaker-anchored inaccessible is judged acceptable only if referring to a back tooth (as are the speaker-anchored and addresseeanchored exteriors; also, the superjacent and subjacent forms can be used only to refer to a tooth in the upper and lower jaw respectively; see section 4.2). At the other end of the distance scale, scenes 24 and 25 pertain to reference to a distant object in large-scale geographic space. Here, the speaker- and addresseeanchored accessibles and inaccessibles can all be used. These two extreme examples just serve to illustrate that there is no clear correlation between the distance-related demonstrative distinctions and physical distance.⁶

Looking at the whole range of scenes, one pattern of divergence appears clearly discernible: the speaker-anchored inaccessible is judged to be unacceptable by all three consultants in most scenes in which an object is located closer to (but not on) the speaker than to the addressee (scenes 6, 7, 11, 19). The speaker-anchored inaccessible is also determined by two consultants to be inappropriate in some other scenes where the referent is located relatively close to the speaker, irrespective of proximity to addressee (scenes 3, 9, 20). However, it is acceptable in two scenes where the referent is located near a distant addressee (scenes 16, 18). The speaker-anchored accessible is judged by at least two consultants to be inappropriate if the referent is located near a third person far from speaker and addressee (scenes 13, 15) or near a distant addressee (scenes 16, 18).

As far as the addressee-anchored accessible and inaccessible are concerned, both are generally judged by at least two consultants to be acceptable over the whole set of scenes. There are a couple of exceptions for each distinction: only one consultant accepts the addressee-anchored accessible for scenes 3 and 11, both of which involve a referent located close to the speaker; and only one consultant accepts the addressee-anchored accessible for scenes 13 and 21, two out of several scenes in which the referent is located away from both speaker and addressee.

Consultants' judgments of preferred (rather than acceptable) forms for each scene reveal a somewhat clearer picture. The speaker-anchored accessible is now preferred by at least two consultants for scenes in which the referent is located close to the speaker (scenes 1, 2, 3, 6, 7) or between speaker and addressee (scenes 8, 22); the addressee-anchored accessible is preferred by at least two consultants for scenes in which the referent is located close to the

⁶ My suggested initial reference for all demonstrative forms in the tooth examples was invariably an upper front tooth, but consultants spontaneously explained which teeth would go with each form, providing interesting contrastive data.

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addressee (scenes 4, 5, 9, 10, 16, 23) or, in one case, close to both speaker and addressee (scene 20). The addressee-anchored inaccessible is never chosen as the sole preferred form; in the few cases where it is judged as preferred, it is always equally preferable as some other form, and then only judged as such by one consultant (these instances appear to be associated with equidistance from speaker and addressee: scenes 12, 14, 17, 19, 20). The speaker-anchored inaccessible, finally, is the preferred form for at least two consultants for scenes in which the referent is located at a distance from speaker and addressee (scenes 13, 14, 15, 24, 25).

It should be noted that if speakers are asked to state their reasons for choosing one of these distinctions as a preferred form, they will justify their choice with reference to proximity/distance. The speaker-anchored accessible is then associated with referents which are $pd_{\partial h}$ 'to be near' and the inaccessible is associated with referents which are mnji2 'to be distant'. The addressee-anchored accessible and inaccessible do not have such distance-related connotations.

4.2 The Exteriors, Superjacent and Subjacent

In the second set of demonstrative forms – which consists of the frame-ofreference-encoding speaker- and addressee-anchored exteriors, the superjacent and the subjacent – consultant judgments of acceptability reveal significant restrictions. These forms encode angular distinctions which are not targeted by the questionnaire; yet their distribution is clearly identifiable by it, albeit not exhaustively. Take the exteriors, for example: the speaker-anchored exterior is considered fully acceptable in scenes 6 and 11; it is also acceptable in scenes 1 and 3 if the referent is located on the side of the speaker's body that is facing away from the addressee. For other scenes it is generally judged as unacceptable.

Similarly, the addressee-anchored exterior is considered fully acceptable in scenes 10 and 18, but in scenes 2, 4, and 5 only if the referent is located on the



Figure 17.1 Scenes 1, 3, 6, and 11: Speaker-anchored exterior acceptable. The added arrow indicates the required position of the referent, if different from that indicated in the questionnaire.

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Figure 17.2 Scenes 2, 4, 5, 10, and 18: Addressee-anchored exterior acceptable. The added arrow indicates the required position of the referent, if different from that indicated in the questionnaire.

side of the addressee's body that is facing away from the speaker. For other scenes it is generally judged unacceptable. These results conform to the spatial distribution of exteriors outlined in section 3.

As for the superjacent and subjacent forms, these are judged acceptable in scenes 1 and 2 if the referent (a tooth) is located in the upper or lower jaw respectively, and in scenes 3, 4, and 5 if the referent (a leech) is located on the participant's head or lower extremities respectively. In other cases, acceptability is dependent on features of the local environment. One of the elicitation sessions was conducted in a slightly inclined setting with the enacted speaker at the higher end of the incline, and in scenes where the referent was located at the lower end of the incline the subjacent form was judged acceptable. Another elicitation session took place beside a stream with the enacted speaker frequently in an upstream position in relation to the referent. Again, the subjacent form was judged acceptable in these situations, although there was no perceptually recognizable difference in elevation between speaker and referent. Finally, the superjacent form was judged acceptable for distant referents in

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large-scale geographic space (scenes 24 and 25) if they were located saliently higher than the speaker. These results conform to the spatial definitions of the superjacent and subjacent given in section 3.

Another feature that appears to set these forms apart from the accessibilityrelated forms described in section 4.1 is that the three consultants are more unanimous in their judgments of acceptability of them. This is consistent with their restricted and well-defined spatial distribution. Also, they are only sporadically judged to be a preferred form: two consultants give the speakeranchored exterior as the preferred form for scene 11; one consultant gives the addressee-anchored exterior as the preferred form for scene 18.

5 Discussion

5.1 Speaker-anchored Accessible and Inaccessible

The questionnaire data provide ample support to a number of earlier assumptions and hypotheses about the speaker-anchored accessibility distinctions.

Firstly, they show that the speaker-anchored inaccessible *tani?* is acceptable in scenes where the referent is addressee-proximal but not speaker-proximal (e.g. scenes 16 and 18). This provides further support for the notion that this form is clearly participant-anchored to the speaker alone and not to the speaker and addressee as a dyadic unit.

Secondly, the data confirm that the speaker-anchored forms are suitably defined in terms of "accessibility" rather than, say, "distance", with a binary distinction between what is accessible and what is not. Accessibility is to be understood in a very wide sense as the speaker's notion of the current relationship between participants and referent, taking a number of factors into account: distance, visual access, reachability, approachability, possession, manipulation, familiarity, etc. It is to be taken as devoid of primary spatial meaning.

Positing accessibility as key meaning has several advantages. Firstly, in relation to the questionnaire data, it does a good job at encompassing the full range of acceptability these terms enjoy with respect to the spatial location of their referents. Given the right circumstances, most referents can be conceptually accessible or inaccessible irrespective of their spatial location. Yet the restrictions in their acceptability that do exist are also explicable: for example, the speaker-anchored inaccessible may be judged as unacceptable for speaker-proximal referents to be out of access; similarly, an object located near a distant third person may be difficult to conceptualize as accessible and therefore not considered a suitable referent of the accessible form. The accessibility-based approach is also successful in coping with the inconsistencies in consultant judgments of acceptability: the many factors that form notions of accessibility

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are exceedingly difficult to control for within the framework of the questionnaire. Small and unintentional differences in the elicitation setting are certain to influence judgments, and variation in responses to what is meant to be an identical scene then comes as no surprise.

In a wider perspective, accessibility-based definitions have no trouble explaining the spatial patterns that do exist in the usage of these forms. Recall that the distinctions show some spatial tendencies as to locations of referents. Recall also that consultant judgments of preferred forms show a clearer spatial distribution than acceptable ones, and that consultants typically justify their choice of form with reference to proximity or distance. But these are symptomatic in the sense that they reflect the fact that some locations are conceptually more typical and more commonly encountered than others in relation to the notion of accessibility. Thus, the most typical location for a referent which is conceptually speaker-accessible is one in close proximity to the speaker; the most typical location for a referent which is speakerinaccessible is one distant from the speaker. Note again that I do not consider distance to be a primary semantic dimension in the speaker-anchored forms. But it is evident that notions of distance are a significant factor in consultants' conceptualization of whether a referent is accessible or not. The apparent spatial patterning of referents is a most notable consequence of the wider notion of accessibility. Possibly, the impalpability of the general notion of accessibility is the reason why native speakers and researcher alike are tempted to resort to this much more tangible spatial symptom in their metalinguistic endeavor to define demonstrative meaning.

5.2 Addressee-anchored Accessible and Inaccessible

The addressee-anchored accessible *ton* behaves like the speaker-anchored distinctions in displaying considerable flexibility with regard to spatial location of its referent while still having a pattern of spatial bias, now centering on locations near the addressee.

However, as noted in section 3.1 and Burenhult (2003), the addresseeanchored accessible exhibits pragmatic restrictions: it is associated with referents considered by the speaker to represent "shared knowledge". Hence it is dedicated to referents conceptualized by the speaker as cognitively accessible to the addressee. Why this pragmatic specialization? An important factor to consider is that an addressee-anchored form encodes the speaker's real-time impression of the addressee's relation to the referent. Since the speaker does not have first-hand experience of the many factors that may determine whether a referent is considered accessible or not by the addressee, the functional nature of the addressee-anchored form

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is certain to be different from that of the speaker-anchored counterpart. Speakers use the addressee-anchored form to indicate what they perceive the addressee's cognitive relationship to the referent to be like. A referent interpreted as perceptually and cognitively accessible to the addressee is then likely to be referred to with the addressee-anchored accessible form. A natural consequence of this is that the addressee-anchored accessible form is used for referents considered by the speaker to have the addressee's attention or prior knowledge. This goes a long way in explaining why the addressee-anchored form appears to have such strong pragmatic character-istics related to "shared knowledge".

The addressee-anchored inaccessible $t\tilde{u}n$ presents a partly different picture. Its distribution is very flexible in relation to the questionnaire scenes, and neither preferred nor accepted uses display any distinguishable spatial patterning. Referents spread out along the distance dimension from proximal to distal locations, and there is no observable spatial anchoring to either speaker or addressee. As noted in other types of data (see, e.g., Burenhult, 2003), it patterns with the addressee-anchored accessible in that it has pragmatic restrictions: it is associated with referents considered by the speaker to represent "new information" and to be "cognitively inaccessible" to the addressee (not known, not previously introduced, not attended to). This is in accordance with its function as attention corrector (see section 3.1). Although the questionnaire data do not expose attention correction as such as a parameter of $t\tilde{u}n$, its revealed spatial flexibility is certainly consistent with such encoding.

5.3 Summary

The Demonstrative Questionnaire study provides the first data set and in-depth portrayal of the Jahai demonstrative system as a whole. As employed here, it lays bare the fundamental distinction within the Jahai demonstrative system between forms which show flexibility with respect to spatial parameters (represented by the speaker- and addressee-anchored accessible and inaccessible) and those which are rigidly associated with certain angular contexts (represented by the speaker-anchored and addressee-anchored exteriors, the superjacent and the subjacent). The questionnaire does not effectively differentiate members of the former group from each other on spatial grounds, although judgments of preference show a higher degree of spatial differentiation than judgments of acceptability. The results support the hypothesis that accessibility, not physical distance, is the primary semantic dimension in this part of the system. Cambridge University Press

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6 Conclusions

Exophoric demonstratives manage attention in actual space. Yet neither attentional nor spatial factors, alone or in combination, can fully account for all exophoric demonstrative usage in Jahai. Their ability to predict choice of demonstrative form or the location of a referent is partial, at best. Instead, a predictive model ought to set out from the language-specific semantic dimensions that emerge from the analysis, and it is such a model that I propose here. While this model has yet to be put to the test on a large-scale corpus, the semantic unpacking done so far on the system does allow us to draw some conclusions of wider significance.

Firstly, as argued in Burenhult (2008), space *can* be a fundamental and inviolable semantic parameter in demonstratives (see Schapper and San Roque, 2011). The "spatial-coordinate demonstratives" of the Jahai system project angular search domains from the deictic center on the basis of spatial asymmetries (and thus invoke spatial frames of reference). These distinctions are directional indicators with as much precision as a pointing gesture. The spatial inflexibility of the Jahai forms comes out clearly in the questionnaire data. This is in stark contrast to the accessibility-related forms, whose indistinct distance patterning is an effect of the primary dimension of accessibility. The Jahai data here offer an illuminating distinction between primary spatial encoding and secondary spatial symptoms, of potential relevance cross-linguistically.

Secondly, the Jahai system provides new albeit tentative clues to the attentionmanaging role of demonstratives, and it seems to underscore the need for a more thorough typology of such management. In particular, it suggests that attention-managing can be broken down into at least three functional subtypes: attention-drawing, attention-correcting, and attention-confirming. In Jahai, attention-drawing is the general purpose of seven of the demonstratives. Attention-correcting and attention-confirming, on the other hand, are associated with dedicated individual forms. Again, however, the pragmatic specialization of these forms does not represent primary encoding but rather a secondary effect resulting from the addressee-anchoring of the primary semantic dimension of accessibility.

Thirdly, as is evident, cross-linguistically unusual distinctions are inextricably entwined in issues of core concern to current theorization of demonstratives. Apart from elucidating the role of space and helping towards a typology of attention management, they further highlight the proposed significance of binary contrast in demonstrative systems (Diessel, 2006: 469). They show that such contrast can structure a variety of dimensions beyond the well-known parameters of distance and participant: accessibility can be contrasted with inaccessibility, attention with non-attention, and directional opposites can surface in both absolute and intrinsic form. Cambridge University Press 978-1-108-42428-8 — Demonstratives in Cross-Linguistic Perspective Edited by Stephen C. Levinson , Sarah Cutfield , Michael J. Dunn , N. J. Enfield , Sérgio Meira <u>More Information</u>

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It is not the multitude of distinctions as such that makes the Jahai demonstrative system remarkable, nor is it the semantic parameters themselves (although some of those have yet to be documented elsewhere). For example, other languages add a variety of more or less optional auxiliary devices to demonstratives (e.g. adverbs, particles) to create angular contrasts akin to those in Jahai. But what is noteworthy is the way the language packages these functional dimensions into distinct and semantically compact forms, where each form encodes a complex configuration of space, access, or perception. Recall also the formal distinctiveness of the set and its internal equivalence: all nine distinctions converge with mutual exclusivity on a single syntactic slot. Their functional properties are thus formally equal and all deeply grammaticalized. These characteristics make Jahai demonstratives particularly helpful in our efforts to disentangle the semantic and pragmatic dimensions that matter in human attention-managing.

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