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Spatial and conceptual demonstratives in Dutch¹

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1. Studying the variation of demonstratives

As far as we know, all languages have demonstrative elements that can be used to 'verbally point' at objects. Moreover, all languages have more than one pointing variant. Dutch, for example, has two demonstrative variants, proximal 'dit/deze' *this* and distal 'dat/die' *that*, which are typically used for near and far objects respectively, but languages can show additional variants (e.g. Diessel, 1999; Levinson, 2004). From a historical point of view, pointing words are fairly 'invariable' elements, not derived or emerged from other elements or linguistic categories, as it is pointed out by Deutscher (2005: 228):

No matter how hard one tries to trace their historical origin, the pointing words in any language never seem to emerge from anything that was not a pointing word to start with. Unlike grammatical words, which over and over again can be seen to develop from nouns and verbs, pointing words appear to have been pointing words all along.

Pointing words also play an important role in language acquisition, in particular in the development and understanding of a "joint attentional frame" (Tomasello, 2003), which enables children to engage in 'triadic' social interaction with other humans and objects. Pointing devices are crucial in developing the humans' ability to jointly attend to the outside world, and thus in the development of language, both phylogenetically and ontogenetically.

This suggests that pointing words are very basic in terms of human evolution and may well have emerged directly as vocal accompaniments to an actual pointing gesture. In an epical frame of mind, one may think of pointing words as being the crucial intermediate step in mankind's evolution from "iconic" (e.g. pointing, roaring, grunting and howling) to "symbolic" communication. In more analytical terms, the variation of demon-

¹ I should like to thank Sarah van Vliet and Emiel Krahmer for their valuable comments on an earlier version of this article.

stratives in human language, in particular the *proximal distal* dichotomy captures the basic coordinates of how humans perceive and conceptualize their own environment. For example, Kemmerer (1999) reviews studies which offer ample evidence that the difference between 'graspable' and 'non graspable' distance (or: within and outside arm reach) is deeply encoded in the human brain. Likewise, the proximal distal dichotomy captures the coordinates of each communicative situation. Conversants attribute the value proximal or distal to objects, dependent on the literal or conceptual nearness of objects to speaker and hearer. Languages show an interesting variation of how they associate demonstratives to the coordination points of a communicative situation (Diessel, 1999; Enfield, 2003; Levinson, 2004). Demonstrative variants can express the connection with the speaker (I here) and the hearer (you there). The proximal term tends to be associated with the speaker and nearby objects, the distal terms with the conversant or far away objects. A third demonstrative variant can express the distance between speaker or hearer, or the location of objects in a more fine-grained way (near – intermediate – far), or can be used to express more fine-grained perspectives between participants and objects.

In sum, demonstrative variation is an important topic in understanding human communication, given the assumed early emergence of demonstrative variants in language evolution and acquisition, their omnipresence in languages all over the world, their capacity to capture basic spatial experiences of humans and to shape the architecture of communicative interaction.

However consistent and important demonstrative variation may be in language, it is less consistently represented on the linguistic research agenda. As a research topic, demonstrative variation is almost absent in areas of linguistics where one would expect it to be relevant. Despite vivid discussions on demonstratives (and especially complex demonstratives) in renowned journals (such a *Nous*, *Synthese*, *Erkenntnis*, *Mind* or *Linguistics* & *Philosophy*), demonstrative variance is given hardly any attention in philosophy of language. The reason may be that there is hardly any logical calculation involved in the difference between demonstratives (see e.g. Kaplan, 1978). Or perhaps the realm of demonstrative variance is tied up too much with pragmatic contingencies of human communication. Similarly, there is ample experimental work in psycholinguistics and cognitive psychology on the production and processing of different types of referential expressions (bound vs. unbound pronouns, marked vs. unmarked pronouns, pronouns vs. nominal expressions etc.) based on theories and assumptions about how expression types indicate different degrees of referent availability or different discourse structural constellations. To my knowledge, however, there is no experimental evidence on the production or processing of different demonstrative variants. Apparently, these differences are either too obvious or too subtle to be appropriate variables in psycholinguistic experiments. They are too obvious in the case of spatial demonstratives, i.e. demonstratives used exophorically or contrastively in a space based setting. One does not need a full-fledged experimental set up to conclude that a task sentence like (1) is processed and executed more efficiently in a setting with the *this* entity nearer to the speaker than the *that* entity, rather than the other way around.

(1) Give me *this* and then *that*.

On the other hand, interpretation differences are extremely subtle in the case of what will be termed here 'conceptual' demonstratives, i.e. demonstratives used to refer or point to entities which are somehow part of the discourse (i.e., anaphoric demonstratives, discourse deixis, indirect anaphors). It is difficult to come up with an experimental set up that is able to elicit production or processing differences between the two versions of a simple novel or newspaper sentence like (2) or (3).

- (2) He asked for *a painkiller*, knowing that *this (medicine) / that (medicine)* would be very helpful in the hours to come.
- (3) And Madonna will certainly *die a little bit* on the stage in Carnegie Hall tonight, if *this/that* is possible, of course.

What is lacking here is not only a suitable experimental methodology, but also credible hypotheses about the (pragmatic?) differences between the demonstrative variants, as a starting point for psycholinguistic experimentation.

Fortunately, there is linguistic life in between or next to language philosophy and psycholinguistics. Roughly speaking, there are two research lines within the field of pragmatics, in which demonstrative variance is studied. First, there is the study of demonstrative variation from a crosslinguistic point of view, predominantly focusing on the way in which demonstrative variants are used in different languages as the basic equipment to conceptualize space and in particular to organize the attention space in interactive communicative situations (Diessel, 1999; Dixon, 2003; Enfield, 2003; Levinson, 2004). The goal of this type of research is to study the coded semantics of demonstrative variants from a cross-linguistic point of view, by using examples from grammars or from more or less controlled data collections which enable researchers to explain demonstrative variation in terms of exophoric factors, such as the position of objects in relation to the position and perspective of conversants).²

The second research line is located in the realm of discourse studies. Its ambition is to find out how demonstrative variants can differentially contribute to or enrich the conceptual world evoked in written discourse or spoken interaction. Most of this work is based on the analysis of a small number of languages, mostly collections of mono- or bilingual written corpora, or attested examples of specific instances of demonstratives, such as recognitional *that*, cataphoric *this* or indefinite *this*.

These studies largely conclude that distance or space is hardly ever relevant in the interpretation of conceptual demonstratives, as they are hardly ever used to express a contrast between objects or differences in physical location or distance. As I pointed out for Dutch demonstratives previously, the only possible interpretation of distance, i.e. the distance between an anaphoric demonstrative and its antecedent, is not able to explain the differential distribution of proximal and distal elements in written discourse (Maes, 1996: 114). Instead, a large number of factors are brought to the fore to claim or explain the functional variance of demonstratives. Roughly speaking, and disregarding a considerable degree of overlap, two types of explanatory notions can be distinguished.

First, there are notions that express the position of the entity referred to within the dynamic development of discourse. Thus, Ariel (1990) attributes a higher degree of accessibility to *this* than to *that* entities and for Gundel, Hedberg and Zacharski (1993), *this*-NPs are more 'given' than

² See for example the field manual developed by Wilkins (mentioned in Van Geenhoven & Warner, 1999), which enables researchers to elicit controlled and comparable data based on the same set of spatial situations.

that-NPs. A notable exception is the indefinite use of *this*, which allows speakers to introduce new entities vividly (Prince, 1981). Other authors attribute more saliency to *this* entities than to *that* entities, capturing the difference in terms like focus (Gerner, 2003; McCarthy, 1994; Sidner, 1983; Webber, 1991), markedness (Halliday & Hasan, 1976), figure-ground (Hanks, 1992), or deictic force (Kirsner, 1979).

The second series of notions explains demonstrative variation in terms of different conceptual associations or dissociations between entities and communication partners, thus relating the variation to undeniable but at the same time hard to control socio-cognitive, relational and perspectival subtleties. For example, *this* and *that* are often considered to express some type of association with speaker or listener, or a shared assumption about the entity (e.g. Cheshire, 1996; Glover, 2000; Kamio, 2001; Laury, 1997; Maes, 1996; Marchello-Nizia, 2005). Likewise, particular instances of *that* are said to indicate shared knowledge about entities (e.g. reminder or recognitional 'that' Cornish, 2001; Himmelmann, 1996), or to express a mental distance between speaker and entity (e.g. modal or emotional 'that' Cornish, 2001; Lakoff, 1974). Particular instances of *that* have been interpreted as turn-construction devices in interaction, projecting entities to the front of an interaction turn (Hayashi, 2004).

In sum, the two fields of research have their own partial view on the use and function of demonstratives, either focusing on the 'original' function of spatial demonstratives or on the gamut of fine-grained interactional and discourse structural functions of what is called here conceptual demonstratives. This divide is further emphasized by differences in the (predominantly analytical) methods used: spatial demonstratives are mainly studied across languages using elicited conversational data, whereas conclusions about conceptual demonstratives are mainly based on the in-depth analysis of attested specific examples coming from a wide realm of contexts or the quantitative analysis of larger corpora of written data in one or a few languages.

2. The spatial meaning of demonstratives

Scholars in the field of spatial cognition, who study demonstrative variation from a universal and cross linguistic point of view, may consider the discourse dynamic and socio-cognitive aspects of demonstratives too secondary, opaque and fragmented to be helpful in understanding how humans use demonstrative elements in conceptualizing the world. Conversely, researchers who study the wealth of pragmatic contexts in which demonstratives play their part, may well believe that "space is just one, perhaps even a secondary or derived dimension of deictic reference" (e.g. Blühdorn, 1995; Matras, 1998). This way of presenting things threatens to introduce a false dichotomy and to obscure an important generalization in the understanding of demonstratives, i.e. that all demonstratives are rooted in one cognitive source of interpretation which is based on space.

Different arguments can be put forward for such a spatial meaning of demonstratives. Despite the fact that word forms for spatial and conceptual demonstratives may differ (superficially) in a few languages, as e.g. in Romani (Matras, 1998), languages overwhelmingly use the same word forms for spatial and conceptual demonstratives. In all languages, the spatial interpretation of demonstratives is clear-cut and uncontroversial, and so is the class of 'situational' or 'exophoric' demonstratives in linguistic taxonomies of demonstratives. Moreover, spatial demonstratives tend to be morphologically less complex and syntactically less restricted than other deictic forms in language (Diessel, 1999).

The crucial argument for a unified account comes from the observation that space is an extremely strong template for the conceptualization of meaningful things, not only in contemporary language use (e.g.Gibbs, 2005; Lakoff & Johnson, 1980) but also in language evolution, because "metaphors have drifted from the domain of space into absolutely everywhere in language" (Deutscher, 2005: 138). The application range of spatial metaphors is extremely wide; it starts with the spatial origin of grammatical elements (like *in* or *back*) and ends up in a mass of conceptualizations in which spatial experiences are used to create instrumental or rhetorically appealing metaphors which enable humans to understand the invisible and the abstract (*life is a journey, hyperspace, Lebensraum, top sport, far-fetched arguments, my path of life, a near or far away friend,* etc.).

The strong coding of spatial demonstratives in all human languages, together with the cognitive preference of humans to package and understand abstract concepts in terms of spatial bodily experiences (Glenberg, 2002; Zwaan, 2004; Zwaan & Madden, 2005; Zwaan & Pecher, 2005),

make it plausible that in any context demonstratives bring in spatial meaning, and with it the capacity to metaphorically extend and apply this meaning to a wide range of conceptualizations.

3. Presence presupposition and the *near-far* image scheme

The spatial source of demonstratives can be accounted for by two theoretical vehicles: demonstratives presuppose the presence of the object referred to, and they activate the *near-far* image scheme. The presence presupposition states that demonstratives presuppose the presence of the object referred to in a referential domain which is accessible to the participants³. This domain can be conceptualized using the physical environment or any other conceptual space evoked in the discourse.

On this view, differences between demonstrative terms can be interpreted as associations of objects with different referential domains.

- (4) Presence presupposition of Demonstratives in Dutch
 A demonstrative requires the object to be present in a referential domain which is relevant and accessible to the participants
- (5) This $\sim NEAR$

This expresses the association of the entity with one or more coordination point(s) of the discourse deictic referential domain (speaker, time, place, discourse)

That ~FAR

That expresses the association of the referent with one or more coordination point(s) of another referential domain (reader, time, place, discourse)

Differences between *this* and *that* domains can be conceptualized using the *near-far* image scheme. The notion of image scheme is used in cognitive linguistics as a powerful tool to explain the way in which we conceptualize events and experiences in language. Image schemes are schematic representations of bodily experiences (Croft & Cruse, 2004). Applied to the *near-far* image scheme, this means that we attach 'embodied' meaning to demonstratrives on the basis of our every day multisensory experiences, not only spatial experiences (e.g. *near* is graspable, vs. *far* is not graspable) but

³ For the application of this presupposition to demonstrative nominal anaphors in written Dutch, see Maes (1996).

also derived experiences that we tend to conceptualize in terms of space (near is now, important, precise etc., vs. far is then, less-important, vague etc.). The strong tendency of humans to conceptualize abstract meaning in terms of concrete experiences (e.g. Barsalou, 1999; Gibbs, 2005; Zwaan & Madden, 2005), and the primary nature of *near* and *far* as experiential categories make a strong case for such a unified account of demonstratives. Moreover, the *near-far* scheme is basic and strong enough to cover the different conceptualization processes associated with demonstratives in various contexts. In terms of cognitive linguistics, the *near-far* image scheme explains the productivity of demonstratives in terms of the major 'linguistic construal operations' as they are distinguished in cognitive linguistics (Croft & Cruse, 2004: 46): they play a part in processes of attention/saliency (e.g. *this* is more in the attention or engagement space than that), judgment/comparison (e.g. this is more associated with the figure, that with the ground) or perspective/situatedness (e.g. this is associated with the perspective of the speaker).

The *near-far* image scheme is cognitively relevant in that *near-far* is part of the experiential gestalt of our sensorimotor/bodily activities: in many of our daily actions and experiences, distance is a core ingredient (e.g. *giving a kiss* vs. *waving to someone*). Furthermore, the *near-far* axis is implemented in our visual system (e.g. in the process of stereopsis), and our brain contains separate mechanisms for representing peripersonal (within arm reach) and extra personal (outside arm reach) space (Kemmerer 1999).

The relative nature of *near* and *far* as spatial terms is crucial in capturing the pragmatics of demonstratives in terms of the *near-far* image scheme. It correctly predicts that demonstratives never code absolute space or distance, for example *this* or *that* meaning more or less than 1 yard away from me. As Kemmerer correctly points out, demonstratives are strong enough to escape from any absolute distance interpretation, even the one which is cognitively most plausible, i.e. 'within or outside arm reach⁴:

⁴ This, however, does not exclude the possibility that arm reach may well be a relevant parameter in opting for proximal or distal demonstratives.

There is abundant evidence that the referential scope of proximal and distal demonstratives is not restricted by the boundaries of immediate motor behavior; rather, these terms encode an abstract language-specific semantic distinction that can be used to express a potentially unlimited range of spatial distance contrasts by virtue of being modulated by particular pragmatic contexts. (Kemmerer 1999: 46).

There are many natural occurrences of *this* demonstratives referring to objects outside arm reach and *that* demonstratives referring to objects within arm reach (or any other absolute distance parameter). But the relative nature of *near* and *far* also predicts that in using demonstratives the 'literal' distance axis can be overruled by other conceptualizations of the *near-far* scheme. Take example (6), in which the demonstratives are inconsistent with literal distance in that the doctor uses *this* to refer to an object which is further away from him than from the patient, and the patient uses *that* to refer to his own head⁵. The example shows that even in their most typical and literal distance interpretation, demonstratives require space to be conceptualized in a *near* and *far* region, relative to a particular perspective.

 (6) Doctor: Is *this* where it hurts? (pushing with his thumb on the forehead of the patient)
 Patient: Yes, *that* is where is hurts.

In sum, a unified account as suggested above starts from a double assumption: (i) each occurrence of a demonstrative carries a spatial meaning, based on the *near-far* image scheme, and (ii) no occurrence of a demonstrative directly expresses space. Instead, a demonstrative requires a (physical or conceptual) domain to be conceptualized in (at least) two regions. Or put lapidarily, all demonstratives are spatial, and no demonstrative is just spatial. So, if we use *that* to refer to a far away person, to a nearby third person in the communicative situation or to a person we hate, different conceptualizations of the same near-far scheme are involved.

The next section demonstrates how different metaphorical extensions of the *near-far* scheme capture different conceptualizations associated with demonstratives. In the final section, methodological considerations are given first to explain why current data and methods are not able to unambi-

⁵ The example is a variant of an example of Theo Janssen (p.c.).

guously falsify or test the proposed account, and second to outline an experimental setup shedding more light on the interaction of spatial and conceptual aspects of demonstratives

4. Conceptual extensions of the near-far image scheme

The *near-far* image scheme consists of basically one experiential ingredient, i.e. the existence of two values or regions on a distance scale. This scheme can be metaphorically extended to a large number of scales with (at least) two values or regions conceptually corresponding to the original distance scale.

- perspective (*near-far* with respect to)
- speaker-hearer orientation (speaker vs. hearer, speaker vs. not speaker, not hearer vs. hearer, etc.)
- direction (from *near* to *far* or vice versa)
- time (now vs. not now (earlier/later)
- temporal order (first vs. second)
- nuclearity (nucleus vs. satellite)
- extension (punctual vs. regional)
- depth (surface vs. deep)
- uniqueness (unique vs. multiple)
- importance (important vs. less important)
- centrality (central vs. less central)
- visibility (visible vs. invisible less visible)
- accuracy (accurate vs. vague)
- emotional closeness (close vs. distant)
- concreteness (concrete vs. abstract)

None of these notions is encoded directly in demonstratives. Instead, context creates natural conditions for the extension of the initial encoded meaning (*near* vs. *far*) to these notions.

The strong part of this proposal is its intuitive plausibility. As we will see in the concluding section, the weak part is the lack of incontestable empirical validation of the proposal. Thus far, we only have analytical regularities suggesting the validity of the proposal, as well as cases where only one demonstrative variant is acceptable. In the following we present a selection of these cases, applied to Dutch.⁶

Near-far and speaker-hearer orientation

Conceptual relations between speaker and hearer offer the most productive extensions of the *near-far* image scheme, thus accounting for most of the socio-cognitive pragmatic functions of demonstratives mentioned in section 1. Face-to-face interaction provides the basis for the natural associations near-speaker and far-hearer. On the basis of the analysis of demonstrative noun phrases in a large corpus of Dutch written discourse, I have suggested an explanation for the distribution of demonstratives in different discourse genres, based on the assumed 'relational mode' between speaker and addressee (Maes, 1996): the Dutch proximal is assumed to express an unequal relational mode between speaker and addressee, as it is typically realized in discourse contexts where the speaker takes the podium, communicates from an instructional or expository top-down position to the addressee or argues with the addressee assuming that the addressee's agreement or collaboration is not taken for granted⁷ or expressing that (s)he will take responsibility for the way the entity is described. An example in which this unequal relational mode is realized is given in (7)

(7) Deze sprankelende wereld van passie, zoals ik dat zou willen noemen, is eigen aan de schrijver.This sparkling world of passion, as I would like to call it, is peculiar to the writer.

The distal demonstrative, on the other hand, expresses the speaker's move towards the addressee, who is regarded as an equal partner, collaborative, friendly and understanding. The speaker expects the addressee to know what (s)he is talking about, or to be so polite as to agree with the way in which the referent is described. These are typical examples fitting in with this equal relational mode

⁶ We will only use Dutch examples if there are relevant interpretation differences between Dutch and English.

 $^{^{7}}$ A similar idea can be found in the difference between negotiable (proximal) and received (distal) orientation in Glover (2000)

- (8) Do you remember those trees standing in the back of our garden?"
- (9) All that bullshit, you know.
- (10) Die spanning van die twee werelden, begrijp je. That tension of those two worlds, you understand
- (11) Ken je die grap van de oude zeeman met zijn rode hoed? Do you know that joke of the old sailor with his red hat?

This interpretation is related to so-called recognitional *that* demonstratives, although there is more involved than simply indicating that the addressee has common knowledge about the entity, as is witnessed in (11), where the speaker typically does not expect the hearer to know the entity referred to. Instead, the use of distal demonstratives can best be seen as a general strategy to establish or to express an equal partnership with the addressee. This relational idea is congruent with the proportions of demonstrative variants in a large number of corpora in Dutch, presented in Table 1 (see for more data Maes, 1996: 152).

discourse genre (number of demonstra- tives)	% this
formal instructive leaflet (n=222)	83
formal instruction manual (n=291)	77
formal recipes (n=53)	66
informal instructive writing (n=91)	36
magazine columns (n=262)	18
novel (n=328)	12
informal chat (n=49)	0

Table 1. Percentages of *this* demonstratives in different discourse genres in Dutch

Near-far and time

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Demonstrative variance is often explained by temporal extensions of the *near-far* scheme. Most typically, this is illustrated in proximal demonstratives being associated with the moment of speech, as in (12) and (13).

- (12) You can not trust anybody these (*those) days
- (13) *Those (??these)* were the days.

A related interpretation can be found in the temporal order of the objects referred to by demonstratives. There is a strong association between *near-far* and *first-second*, witness the following examples:

- (14) We just talked about *this* and *that* (**that* and *this*).
- (15) *Here* and *there* (**There* and *here*) there were bodies lying on the street.

The acceptability judgments in (14) and (15) are congruent with the observation in my Dutch data that all intrasentential contrastive demonstratives have the *this-that* order.

Near-far vs. unique-multiple

From an embodiment perspective on language and meaning, the *near-far* scheme naturally extends to scales indicating differences in uniqueness, centrality, accuracy, concreteness and visibility. *Near* objects are by default more central, the *near* region is smaller and unique compared to all possible peripheral regions, and *near* objects are more visible and can be viewed more accurately than *far* objects.

The uniqueness of the *near* region is reflected in the absence of contrastive intrasentential *this+this* demonstratives in the corpus, and in the presence of *that+that* combinations. Likewise, *that+that*, but not *this+this* can be used to refer to the same object in the same unit, as is demonstrated in (16) and (17), which are part of a thinking aloud protocol in which hypertext users were asked to verbalize their computer task.

- (16) Oh, *dit* kan ik aanklikken, dus *dat* klik ik maar aan (MW-7-155) Oh, I can click on *this (that)*, so I click on *that (*this)*.
- (17) He, he, dat (*dit) was dat (*dit).Well, that (*this) was that (*this).

In a large number of cases, demonstratives can be claimed to express differences in accuracy or concreteness. But these cases require rhetorical support and analytical explanation, as they are not based on (un)acceptability judgments like in most examples above. For example, in the Dutch corpus, *that* is almost exclusively used when the object is vague (e.g. cases like 'and all *that*'), but in most of these cases, the proximal variant is possible as well.

Near-far vs. surface-depth

An interesting extension can be found in the discourse deictic use of *this* and *that*. In many of these cases, *this* and *that* do not produce clear-cut acceptability differences. But the clear cases reveal an interesting association of *this* with surface pointing and *that* with deep(er) processing.

- (18) <caption of picture in newspaper> *This* (**That*) photograph shows Mbeki together with Jacob Zuma.
- (19) *This* (**That)* table shows the average conditions in South Africa.
- (20) *This (??That)* title refers to the early years of Apartheid.
- (21) *This (*that)* book, section, chapter, sentence is about sex.
- (22) *This* (**that*) is the list of ancestors of Jesus Christ, a descendant of David, who was a descendent of Abraham: ..." (gospel according to Matthew.
- (23) *This (*that)* is what we shall do:
- (24) Ik was helemaal van de kaart of hoe zeg je *dat (??dit)*. I was really flabbergasted or how do you say *that (??this)*.
- (25) En Douglas Hurd zal in Cannes dus zeker een beetje sneuvelen, als *dat (??dit)* tenminste kanAnd Douglas Hurd will certainly die a little bit in Cannes, if that is possible.
- (26) H.R. is barkeeper-op-rust en ervan overtuigd *die/??deze* te vinden onder de vliegtuigen.
 H.R. is barkeeper-on-rest (retired) and convinced to find *that* (**this*) [that rest, AM] underneath the air planes
- (27) [Interview with Jonathan Porritt, then leader of the environmental pressure group Friends of the Earth, by Nicholas Witchell, BBC Radio 5, 16 October 1994]
 NW: do you think that he [Prince Charles] will become a green monarch ?
 JP: well, yes, but I don't think that everyone necessarily subscribes to *that/??this*

NW: -- what, that he will ever one day become king? JP: yes (Cornish, 2001)

As (18)-(23) show, *this* (and not *that*) is able to point at the surface representation of an information object in discourse, be it a photograph, a table, a paragraph title, a part of the discourse or a discourse chunk that is coming up (i.e. the cataphorically used discourse deixis). In (24)-(27) discourse deictic *that* tends to refer to deeper levels of processing (propositions, events, inferences) and invites the activation of additional knowledge to solve the reference. These interpretations live on the *surface-deep* extension of the *near-far* scheme.

These examples are not exhaustive, and they are not conclusive. Still they strongly suggest the relevance of metaphorical extensions of the *near-far* image scheme as cognitive basis for the interpretation of demonstratives.

5. Investigating the interaction of spatial and conceptual interpretations of demonstratives

Despite the plausibility of analyzing demonstratives in terms of metaphoric space, existing data and methods used in the two research traditions are not able to ultimately test how spatial and conceptual interpretations interact, i.e. to find conceptual (social, relational, emotional etc.) sediments in spatial demonstratives, as well as spatial relics in non-space based demonstratives.

Cross-linguistic research largely relies on explicit intuitions of native speakers or descriptions of grammarians, the accuracy of which is not always guaranteed. Explicit elicitation, e.g. on the basis of field manual instructions, is fairly reliable when demonstratives are only dependent on the spatial configuration of objects and participants. More fine-grained factors, such as the attitude of participants towards each other or towards objects, can hardly be elicited systematically that way, not only because the elicitation tools do not take these factors into account, but also because the judgments on pragmatic associations are too subtle to be explicitly answered by naïve language users.

The grammars, on the other hand, do not provide a refined enough registration of the pragmatic associations attached to demonstratives. Even for a well-recorded language like Dutch, the pragmatic associations as described in Kirsner (1979) or Maes (1996) are largely absent in Dutch grammars, which I presume applies a fortiori to linguistically less well chronicled languages in the world.

The claims about derived pragmatic functions of demonstratives are mainly substantiated by expert analyses of attested or constructed examples, often complemented by quantitative evidence. Despite the frequent spatial metaphors used to explain these pragmatic functions, there is no conclusive evidence about the spatial sediment in these demonstratives.

The interaction of spatial and conceptual interpretation aspects of demonstrative meaning needs to be studied in a more controlled setting, in which language users are asked to refer to objects which not only differ in terms of space, but also in terms of prominence. In a series of experiments which are currently being carried out, we use a simple game to create a natural environment for such a set up. We ask children to find differences in two apparently identical visual scenes. The two visuals have a different distance to the viewer (one right in front of the child, the other further away either within or outside arm reach). The scenes represent different conceptual distances (nearby vs. further away perspective). And the differences are either normal (e.g. a shirt with horizontal or vertical stripes), or marked (e.g. an elephant with four or five legs), thus inducing a difference in object prominence between the two visuals. In a next phase, the attitude towards objects will be manipulated systematically (e.g. the evil witch vs. the good fairy) using the same task. That way, we hope to gradually unravel the interaction of spatial and conceptual interpretation aspects of demonstratives.

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