

Establishing the Effect of Deixis in Translation

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Introduction

Deixis is viewed as it introduces subjective, attentional, intentional as well as context-dependent properties into natural languages. It can be viewed as a much more pervasive feature of languages than normally recognized one. This may lead to a complicated treatment within formal theories of semantics and pragmatics. Deixis is also critical for our ability to learn a language, which philosophers for centuries have linked to the possibility of comprehensive definition. Despite this theoretical importance, deixis is one of the most empirically understudied core areas of pragmatics that we are far from understanding its boundaries and have no adequate cross-linguistic typology of deictic expression. This article does not attempt to review either all the relevant theory (see, e.g., the collections in Davis 1991, section III, or Kasher 1998, vol. III) or all of what is known about deictic systems in the world's languages (see, e.g., Anderson and Keenan 1985, Diessel 1999). Rather, the researcher attempts to pinpoint some of the most tantalizing theoretical and descriptive problems, to sketch the way in which the subject interacts with other aspects of pragmatics, and to illustrate the kind of advances that could be made with further empirical work. Deixis is reference by means of an expression whose interpretation is relative to the (usually) extralinguistic context of the utterance, such as who is speaking the time or place of speaking the gestures of the speaker, or the current location in the discourse.

English deictic expressions can be viewed as in the following expressions: I, Now, There, That, The following, Tenses:

Deixis can be of different kinds:

What is discourse deixis?

What is empathic deixis?

What is person deixis?

What is place deixis?

What is social deixis?

What is time deixis?

Generally, deixis can be viewed as anaphora

1-1Deixis and Indexicality

The terms deixis and indexicality are frequently used near-interchangeably, and both concern essentially the same idea; contextually-dependant references. However, both have different histories and traditions associated with them. In the past, deixis was associated specifically with spatio-temporal reference, while indexicality was used more broadly. More importantly, each is associated with a different field of study; deixis is associated with linguistics, while indexicality is associated with philosophy

1-2Theoretical Background

Linguists normally treat deixis as falling into a number of distinct semantic fields: person, place, time, etc. Since Bühler (1934), the deictic field has been organized around a "ground zero" consisting of the speaker at the time and place of speaking. Actually, many systems utilize two distinct centers-speaker and addressee. Further, as Bühler noted, many deictic expressions can be transposed or relativized to some other "ground zero", most often the person of the protagonist at the relevant time and place in a narrative (see Fillmore 1997). We can make a number of distinctions between different ways in which deictic expressions may be used.

First, many deictic expressions may be used non-deictically-anaphorically, as in 1-We went to London last weekend and really enjoyed that, or non-anaphorically, as in 2-Last weekend we just did this and that. Second, when used deictically, we need to distinguish between those used at the normal "ground zero" and those transposed to some other "ground zero". It might be thought that the latter are not strictly speaking deictic (since they have been displaced from the time and place of speaking), but consider:

3-He came right up to her and hit her like this here on the arm, in which the speaker pantomimes the protagonists, so licensing the use of come, this, and here. Third, as noted, deictic expressions may be used gesturally or non-gesturally (this arm versus this room), while some like tense inflections may not occur with gestures at all. "Gesture" here must be understood in the widest sense, since pointing in some cultures is primarily with lips and eyes and not hands and since even vocal intonation can function in a "gestural" way (Now hold your fire; wait; shoot *Now*, or I'm over *Here*). Similarly, many languages have presentatives requiring the presentation of something simultaneous with the expression, or greetings requiring the presentation of the right hand, or terms. The deictic categories of person, place, and time are widely instantiated in grammatical distinctions made by languages around the world (see Fillmore 1975; Weissenborn and Klein 1982; Anderson and Keenan 1985; Levinson 1983, chapter 2; Diessel 1999). These are the crucial reference points upon which complex deictic concepts are constructed, whether complex tenses, or systems of discourse deixis. They constitute strong universals of language at a conceptual level, although their manifestation is anything but uniform: not all languages have pronouns, tense, contrasting demonstratives, or any other type of deictic expression that one might enumerate.

Unfortunately, cross-linguistic data on deictic categories are not ideal. One problem is that the meaning of deictic expressions is usually treated as self-evident in grammatical descriptions and rarely properly investigated, and a second problem is that major typological surveys are scarce (but see Diessel 1999, Cysouw 2001). But despite the universality of deictic categories like person, place, and time, their expression in grammatical categories is anything but universal. For example, despite claims to the contrary, not all languages have first and second person pronouns (cf. "The first and second person pronouns are universal": Hockett 1961: 21), not all languages have spatially contrastive demonstrative pronouns or determiners (contra Diessel 1999, who suggests universality for such a contrast in demonstrative adverbs), not all languages have tense, not all languages have verbs of coming and going, bringing and taking, etc. Rather, deictic categories have a universality independent of their grammatical expression—they will all be reflected somewhere in grammar or lexis.

1-3 Deixis in Communication and Thought

Deixis can be used co-extensively with Indexicality because they reflect different traditions (see Bühler 1934 and Peirce in Bühler 1940) and have become associated with linguistic and philosophical approaches respectively. But a clear distinction will be made: indexicality will be used to label the broader phenomena of contextual dependency and deixis the narrower linguistically relevant aspects of indexicality. Students of linguistic systems tend to treat language as a disembodied representational system essentially independent of current circumstances, that is, a system for describing states of affairs in which we individually may have no involvement. "These linguistic properties that have been the prime target of formal semantics and many philosophical approaches—and not without good reason, as they appear to be the exclusive province of human communication. The communication systems of other primates have none of this "displacement,"" Hockett (1958: 579). He presented a good example from vervet monkeys which can produce four kinds of alarm calls: signaling snake, big cat, big primate, or bird of prey. But when the vervet signals big primate, it goes without saying that it means right here, right now, run!

Indexicality is an intrinsic property of the signals, an essential part of their adaptive role in an evolutionary perspective on communication—animals squeak and squawk because they need to draw attention to themselves or to some intruder (Hauser 1997).

The question naturally arises, then, whether in studying indexicality in natural languages we are studying archaic, perhaps primitive, aspects of human communication, which can perhaps even give us clues to the evolution of human language. Jackendoff (1999) has argued that some aspects of language may be residues from ancient human communication systems, but he curiously omits deictics from the list. There would be reasons for caution, because indexicality in human communication has some special properties. For example, take the prototypical demonstrative accompanied by the typical pointing gesture—there seems to be no phylogenetic continuity here at all, since apes don't point (Kita).

Secondly, unlike the vervet calls, demonstrative can referentially identify—as in that particular big primate, not this one. More generally, one can say that whereas other animals communicate presupposing (in a nontechnical sense) the “here and now,” as in vervet alarm calls, humans communicate by asserting the (non-)relevance of the “here and now.”

Thirdly, even our nearest animal cousins lack the complex, reflexive modeling of their partners' attentional states, which is an essential ingredient in selective indexical reference—this is why apes cannot “read” a pointing gesture (Povinelli et al. in press).

Indeed, human infants invariably seem to point before they speak (see E. Clark 1978, Butterworth 1998, Haviland), although we have little cross-cultural evidence here. Philosophers have long taken indexicality as the route into reference—as John Stuart Mill argued, how could you learn a proper name except by presentation of the referent? The view was refined by Russell, who made the distinction between what he called logically proper names (I, this), which require such ostensive learning, and disguised descriptions, like Aristotle, which mercifully don't. Linguists have argued similarly that deixis is the source of reference, i.e. deictic reference is ontogenetically primary to other kinds (Lyons 1975). But the actual facts concerning the acquisition of deictic expressions paint a different picture, for the acquisition of many aspects of deixis is quite delayed (Tanz 1980, Wales 1986), and even though demonstratives figure early, they are often not used correctly (see Clark 1978). This is hardly surprising because, from the infant's point of view, deixis is as confusing as a hall of mirrors: my “I” is your “you,” my “this” your “that,” my “here” your “there,” and so forth. The demonstratives aren't used correctly in English until well after the pronouns I and you, or indeed after deictic in front of/in back of, not until the age of about four (Tanz 1980: 145).

There's another reason that deixis in language isn't as simple as a vervet monkey call signaling *Big Primate Right Here Now!* The deictic system in language is embedded in a context-independent descriptive system, in such a way that the two systems produce a third that is not reducible to either. To use Peirce's terminology, we have an intersection of the indexical plane into the symbolic one—it's a folding back of the primitive existential indexical relation into symbolic reference, so that we end up with something much more complex on both planes. On the one hand, symbolic reference is relativized to time, place, speaker, and so on, so that John will speak next is true now, not later, and on the other, indexical reference is mediated by symbolic meaning, so that this book can't be used to point to this mug. The true semantic complexity of this emergent hybrid system is demonstrated by the well-known paradoxes of self-reference essentially introduced by indexical reference.

Consider the liar paradoxes of the Cretan variety, as in this sentence is false, which is true only if it is false, and false only if it is true: the paradox resides in what Reichenbach called *Token-Reflexivity*, which he considered to be the essence of indexical expressions. There is still no definitive solution to paradoxes of this sort, which demonstrates the inadequacy of our current metalinguistic apparatus (but see Barwise and Etchemendy 1987 for a recent analysis invoking the Austinian notion of a proposition, which involves an intrinsic indexical component). Indexical reference also introduces complexities into the relation between semantics and cognition—that is, between, on the one hand, what sentences mean and what we mean when we say them and, on the other hand, the corresponding

thoughts they express. The idea that the relation between meaning and thought is transparent and direct has figured in many branches of linguistic inquiry, from Whorfian linguistics to Ordinary Language Philosophy. But as Frege (1918:24) pointed out almost a century ago, indexicals are a major problem for this presumption. He was finally led to say that demonstratives, in particular the pronoun I, express thoughts that are incommunicable! Frege found that demonstratives introduced some special problems for the theoretical stance he wanted to adopt (see Perry 1977 for explication), but the general issue is easily appreciated. The question is: what exactly corresponds in thought to the content of a deictically anchored sentence? For example, what exactly do I remember when I remember the content of an indexical utterance? Suppose I say, sweating it out in Town Hall at the City Center, "It's warm here now." and suppose the corresponding thought is just plain "It's warm here now." When I recollect that thought walking in Murmansk in February, I will then be thinking something false, something that does not correspond to the rival Murmansk thought, namely "It's bone-chilling cold here now." So in some way the sentence meaning with its deictics must be translated into a deicticless the City Center specific thought. A candidate would be: "It is warm (over 30 °C) at 3.00 p.m. on July 6, 2001 in room 327 in Clinton Hall on the UCLA campus."

Then when I inspect this thought in Murmansk in February it will look just as true as it did on July 6, 2001 in Clinton Hall. But unfortunately, this doesn't seem to correspond to the psychological reality at all—that's just not what I thought! I might not even know the name of the building, let alone the room number, and perhaps I have failed to adjust my watch for jet lag and so think it is July 7. So we cannot cash out indexicals into absolute space/time coordinates and retain the subjective content of the thought corresponding to the utterance (4). Well, what if the corresponding thought is just "It is warm here now" but somehow tagged with the time and place at which I thought it? Then walking in the City I would think "In the first week of July somewhere on the City Center campus I had the thought 'It is warm here now'." That seems subjectively on the right track, but now we are into deep theoretical water, because now the language of thought has indexicals, and in order to interpret THEM we would need all the apparatus we employed to map contexts into propositions that we need in linguistics but now reproduced in the *lingua mentalis*, with a little homunculus doing all the metalinguistic work. Worse, when we ultimately cash out the indexicals of thought into a non-indexical mental metalanguage of thought to get the proposition expressed, we will have lost the subjective content again (or alternatively, we will have an infinite regression of indexical languages). So we haven't reduced the problem at all. So what does correspond to the thought underlying an indexical sentence? The source of the conundrum seems once again to be the peculiar hybrid symbolic/indexical nature of language—it seems easy enough (in the long run anyway) to model the objective content of symbolic expressions on the one hand and pure indexical signals like vervet monkey calls on the other, but something peculiar happens when you combine the two.

1-5 The Challenge of Deixis

Deixis is the study of deictic or indexical expressions in language, like you, now, today. It can be regarded as a special kind of grammatical property instantiated in the familiar categories of person, tense, place, etc. In what follows, I adhere to this conservative division of the deictic field, because there is much to be said about how linguistic expressions build in properties for contextual resolution. But it is important to realize that the property of indexicality is not exhausted by the study of inherently indexical expressions. For just about any referring expression can be used deictically:

6-He is my father (said of man entering the room)

7-Someone is coming (said ear cocked to a slamming door)

8-The funny noise is our antiquated dishwashing machine (said pointing chin to kitchen)

9-What a great picture! (said looking at a picture)

For most such cases, some gesture or pointed gaze is required, and we may be tempted to think that a demonstration is the magic ingredient, as in the following cases where the demonstration replaces a linguistic expression:

10-The editor's sign for "delete" is [followed by written demonstration]

11-He is a bit [index finger to forehead, indicating "mad"]

But this is not a necessary feature:

12-The chairman hereby resigns (said by the chairman)

13-He obviously had plenty of money (said walking through the Taj Mahal). (after Nunberg 1993).

So what is the property of indexicality? With inherently deictic expressions like the demonstrative pronoun *this*, what is striking is that the referent is provided not by the semantic conditions imposed by the expression but by the context; for example, the speaker may be holding up a pen. It is the obvious semantic deficiency of *this* that directs the addressee's attention to the speaker's gesture. In a similar way, the semantic generality of *he* without prior discourse context (as in (3) or (10)) forces a contextual resolution in the circumstances of the speech event. In this respect, there is a close relation between exophora and anaphora. In both cases we have contextual resolution of semantically general expressions in the physical space-time context of the speech event and in the ongoing discourse respectively (Levinson 2000a: 268ff.). Third-person referring expressions which are semantically deficient, in the sense that their descriptive content does not suffice to identify a referent, invite pragmatic resolution, perhaps by default in the discourse, and failing that in the physical context. But semantic deficiency can't be the only defining characteristic of indexicality. After all, there is a class of referring expressions like *he*, *the man*, *the short man*, *George*, *the President*, *the second President* to be the son of a President (see Abbott, this volume), and unambiguously identifying descriptions are the exception rather than the rule in natural language. Semantic deficiency or vacuity is resolved through the kind of mutual windowing of attention in which the speaker says *I just saw what's-hisname*, expecting the addressee to be able to guess who (for the mechanism see Schelling 1960 and H. Clark 1996). Although such a narrowing of possibilities relies on mutual attention to mutual knowledge in the context, to call such phenomena "deictic" or "indexical" would be to render the label too broad to be useful. Rather, the critical feature that picks out a coherent field is precisely the one that C. S. Peirce outlined, namely an existential relationship between the sign and the thing indicated—so that when *he* is said in the Taj Mahal, or *this* is said when holding a pen, the sign is connected to the context as smoke is to fire (although non-causally). How? The key is the direction of the addressee's attention to some feature of the spatio-temporal physical context (as in the case of *this*, said holding the pen), or the presumption of the prior existence of that attention (as in the *he*, said in the Taj Mahal). Indexicality is both an intentional and attentional phenomenon, concentrated around the spatio-temporal center of verbal interaction, what Bühler (1934) called the deictic origo.

This brings us to gesture, one obvious way of securing the addressee's attention. In philosophical approaches to language, ostension or gestural presentation has been thought crucial for acquisition (try teaching the word *ball* to a two-year-old with no ball in sight), but as both Wittgenstein and Quine have observed, pointing is hardly as self-explanatory as Mill imagined—when I point at a river and say *This is the Thames*, I could be pointing to one square kilometer of map-grid, or just the left bank, the sun sparkling on the ripples, or even the cubic meter of water just then flowing past my index finger on its way to the sea (Quine 1961: chapter 4, Wettstein 1984). Pointing works like inadequate descriptions, through the exercise of a Schelling coordination problem—I plan to pick out with a gesture just what I think you'll think I plan to pick out, given where we are and what we are doing. Thereflexive phrasing here recalls Grice's (1957) theory of meaning, in which when I point and say *I mean that I intend to invoke in you a referent-isolating thought by virtue of your recognizing that that is my intention*.

In this way gesture-and arguably deixis in general-is crucially intentional: you cannot say "False!" to my utterance "I am referring to that." Deictic gestures do seem to be special; for example, they are made further from the body than other kinds of gesture (McNeill 1992: 91), and we now know something about their universal bases and cross-cultural variation (Kita in press). But the role of gesture is a much more complicated business than suggested by the philosophers, who imagine, for example, that demonstratives always require gestures (see e.g. Lewis's 1972: 175 coordinate for "indicated objects"). Not only can gestures be reduced to directed gaze or a nod (or in some cultures to a pursing of the lips-see Enfield 2002), they may be rendered unnecessary by the circumstances (consider "What was that?" said of a noise, or "This is wonderful" said of a room). As Fillmore (1997) points out, demonstratives typically have two uses-this city resists a gesture (symbolic usage), just as this finger requires one (gestural usage), while there are specific expressions (like presentatives or American *ya in ya big*) that always require gestures.

To sum up so far: indexicality involves what Peirce's "dynamical coexistence" of an indexical sign with its object of reference. It is normally associated with linguistic expressions that are semantically insufficient to achieve reference without contextual support. That support is provided by the mutual attention of the interlocutors and their ability to reconstruct the speaker's referential intentions given

clues in the environment. This does not, however, suffice to establish clear boundaries to the phenomena. One problem is what Bühler (1934) called *Deixis am Phantasma* ("deixis in the imagination"), in which one imagines oneself somewhere else, and shifts the deictic origo by a series of transpositions. Suppose I try to describe to you where I left a book, and I say, "Imagine this room were my office. The book would be right here [pointing to the edge of my desk]." As Fillmore (1975) observes, much deixis is relativized to text, as in reported speech or in the opening line of a Hemingway short story: "The door of Henry's lunchroom opened and two men came in," where, as Fillmore notes, the inside of Henry's lunchroom has become the deictic origo. Then there is anaphora, which is so closely linked to deixis that it is not always separable, as in "I've been living in San Francisco for five years and I love it here (where here is both anaphoric and deictic), bridged by the intermediate area of textual deixis (as in Harry said "I didn't do that" but he said it in a funny way, where it does not refer to the proposition expressed but to Harry's utterance itself). An additional boundary problem is posed by the fact that the class of indexical expressions is not so clearly demarcated. For example, in "Let's go to a nearby restaurant," nearby is used deictically, but in "Churchill took De Gaulle to a nearby restaurant" it is not-is this deixis relativized to text, or does nearby simply presume some point of measurement? Suppose we yield nearby up to deixis, then what about enemy in "The enemy are coming"? Enemy seems to presume an implicit agonistic counterpart, which may be filled deictically but may not (as in Hannibal prepared for the onslaught of the enemy; see Mitchell 1986). There is no clear boundary here. Even more difficult, of course, is the point made above: indexicality exceeds the bounds of ready-made indexical expressions, i.e. deictics with in-built contextual parameters, as shown by the indexical use of third person pronouns and referring expressions.

1-6 Deictic Expressions in Semantic Theory

Special-purpose of deictic expression is a linguistic expression that requires indexical resolution. The special semantic character of such expressions is an abiding puzzle in the philosophy of language. Expressions like *today* have a constant meaning, but systematically varying reference. In some ways they resemble proper names, since they often have little descriptive content (and hence resist good paraphrase), but in their constantly changing reference they could hardly be more different (Kaplan 1989a: 562). Above all, they resist eliminative paraphrase into non-indexical objective description

I am Stephen Levinson cannot be paraphrased as Stephen Levinson is Stephen Levinson.

The speaker of this utterance is Stephen Levinson gets closer, but fails to eliminate the indexical component now shifted to this and introduces token-reflexivity. So how should we think about the meaning of indexicals? What is clear is that any sentence with indexicals (and

given person, tense, and spatial deixis, that means nearly every natural language sentence) cannot directly express a proposition, for a proposition is an abstract entity whose truth value is independent of the times, places, and persons in the speech event. If we think of propositions as mappings from worlds to truth values, then whereas we might be able to characterize the meanings of non-indexical expressions in terms of the part they play in such a mapping, there seems no such prospect for indexical expressions. In philosophical approaches to semantics a consensus has now arisen for handling indexical expressions as a two-stage affair, a mapping from contexts into propositional contents, which are then a mapping from, say, worlds to truth values. In Montague's (1970) early theory the content of deictic expressions was captured by mapping contexts (a set of indices for speakers, addressees, indicated objects, times, and places) into intensions. In Kaplan's (1989a) theory, all expressions have this characteristic mapping (their CHARACTER) from contexts into intensions (their proposition-relevant content). The meaning of I is its character, a function or rule that variably assigns an individual concept, namely the speaker, in each context (Kaplan 1978; cf. Carlson, this volume). Non-indexical expressions have constant character, but may (rigid designators) or may not (other referring expressions) have constant content.

Another influential version of the two-stage theory can be found in Situation Semantics (Barwise and Perry 1983). There, utterances are interpreted with respect to three situations (or states of affairs): the *Utterance Situation* (corresponding to Montague's indices), the *Resource Situation* (which handles other contextually determined reference like anaphora), and the *Described Situation* (corresponding to the propositional content). Indexicals and other contextually parameterized expressions get their variables fixed in the utterance and/or resource situations, which are then effectively discarded—it is just the value of the variables, e.g. the referent of I or that, that is transferred to the described situation (e.g. I gave him that has the described content of “Stephen Levinson gave him that book”). Meaning is relational, the meaning of an indexical characterized as the relation between utterance/resource situations and described situations. This large improvement over the Montague theory no longer requires a complete pre-specification of relevant aspects of the context as in Montague's indices—other ad hoc factors can be picked up in the resource situation.

The central property of two-stage theories is that indexicals do not contribute directly to the proposition expressed, the content of what is said, or the situation described. Instead, they take us to an individual, a referent, which is then slotted into the proposition expressed or the situation described, or, as Nunberg (1993: 159) puts it: “The meanings of indexicals are composite functions that take us from an element of the context to an element of a contextually restricted domain, and then drop away.” This kind of treatment of indexicality falls far short of descriptive adequacy.

First, the indexicals which have been the target of most philosophical approaches (sometimes called “pure indexicals”—expressions like I, now, or here), seem to have their semantico-pragmatic content exhausted by a specification of the relevant index (speaker, time, and place of speaking respectively; see Wettstein 1984). But closely related indexicals like we, today, nearby may also express additional semantic conditions (at least one person in addition to the speaker, the diurnal span which contains the coding time, a place distinct from here but close to here, respectively). So deictics may contain both descriptive properties and contextual variables in the one expression. Perhaps a more difficult problem for the view that deictics just deliver referents to the proposition expressed is the fact that they can in fact express quantified variables. For example, in Every time a visiting soprano comes, we sing duets the pronoun we denotes a set consisting of the speaker and a variable (Nunberg 1993). In addition, nearly all deictics are heavily dependent on pragmatic resolution—Come here may mean come to this sofa or come to this city according to context (see Levinson 2000a: 177ff.).

Secondly, the idea that the relevant contextual features can be fixed in advance (as is required by the Montague-style solution) is problematic. Suppose I say, "This is the largest walnut tree on the planet": I could be pointing to a tree some distance away, or we could just be standing underneath it, or I could be touching a picture in a book, or if you were blind I could be running your hand over the bark, or I could be telling you what we are about to see as we walk over the hill. The mode of demonstration just does not seem to be determined in advance (see Cresswell 1973: 111ff.).

Thirdly, there are many aspects of the meaning of demonstratives that exceed any such specification by predetermined index. When Sheila says, "We have better sex lives than men," we doesn't just mean "speaker plus someone"; it denotes the set of women, including the speaker. Such usages exploit indexicality in the Peircean sense, that is, the direct connections between the situation of speaking (here, the fact that the speaker is female) and the content of what is communicated.

Fourth, there is the problem that Quine called "deferred ostension," now familiar through the work of Nunberg (1977, 1993, this volume). Suppose we are listening to a program on a radio station and I say "CNN has just bought this"-I don't refer to the current jingle but the radio station. Or I point at a Coca-Cola bottle and say "That used to be a different shape"-what I refer to is not the current bottle, but the type of container of the holy liquid, and I assert that tokens used to be of a different shape. In these cases, the indicated thing is not the thing referred to, and the Montagovian or Cresswellian mechanism will get us the wrong proposition.

Fifth, these treatments of indexicality presuppose that there is a clear class of indexical expressions with a built-in variable whose value is instantiated in the context. But third-person, nondeictic expressions can have indexical uses, as when I say, pointing to a man in a purple turban, "He is Colonel Gaddafi's nephew." There are then a formidable set of obstacles to the treatment of indexicals as simply a rule-governed mapping from contextual indices to intensions, or utterance-situations into individuals which can then play a role in described situations. The problems in essence are that the context offers Gibsonian *Affordances*, properties of the context which may be creatively exploited for communicative purposes.

1-Deictics have *Attentional*, *Intentional*, and *Subjective* features that resist this cashing out of their content in objective descriptions. The attentional and intentional features were mentioned in the previous section, but the subjective features are worth a special mention. Perry (1977), developing a character of Frege's, invites us to imagine an amnesiac, Rudolf Lingens, lost in the Stanford library, who discovers a complete biography of himself. So he knows everything there is to know about Rudolf Lingens, even that he is an amnesiac lost in the Stanford library, but he does not know that he himself is Rudolf Lingens. In this case, it is clear that when he says, "I am hungry," the corresponding Fregean thought is not "Rudolf Lingens is hungry." Were he to come to his senses and utter "Why, I am Rudolf Lingens!," the force of the realization would certainly not be captured by the proposition "Rudolf Lingens is Rudolf Lingens," or even "The speaker of this utterance is Rudolf Lingens"-for what he would have realized is not the identity of the subject of the sentence, but the identity of his subjective self.

2-Linguists have also noted a subjective quality to deixis, for example an overlap between the subjective aspects of modality and the objective aspects of tense-thus the French *Le premier ministre serait malade* codes both present tense and a lack of subjective certainty, as do grammaticalized evidentials in other languages (Lyons 1982: 111).

3-A final aspect of the semantic character of indexical expressions that should be mentioned is their special PROJECTION PROPERTIES, which follow from the fact that demonstratives and many other deictics have no substantial descriptive content, so that once the contextual parameters have been fixed they are "directly referential" (Kaplan 1989a). A true demonstrative remains transparent in an intensional context-in "Ralph said he broke that" that can only be the thing the speaker is now pointing at, not the thing Ralph pointed at-the speaker cannot withhold a gesture on the grounds that Ralph made it. Further, deictics do not generally fall under the scope of negation or modal operators: That is not a planet cannot be understood as "I am not indicating x and x is a planet" (Enç 1981). Deictics resist attributive or "semantic" readings; thus whereas The man who can lift this sword is our king has both a referential and attributive reading ("whoever can ..."), That man who can lift this sword is our king has only a referential reading. In addition to the paradoxes of self-reference, there are sentences within indexicals which have the curious property of being at the same time contingently true or false, yet upon being uttered are automatically true or self-verifying, as in I am here now or I am now pointing at that (said pointing at something).

4-The Role of Pragmatics in the Resolution of Deictic Expressions: A Close Look at Demonstrative Systems We have seen that indexicality exceeds the bounds of the built-in indexical expressions in any language. Moreover, the field of indexical expressions is not clearly delimited, because insofar as most referring expressions do not fully individuate solely by virtue of their semantic content but rather depend for success on states of mutual knowledge holding between discourse participants, the great majority of successful acts of reference depend on indexical conditions. Still, we may hope to make a distinction between expressions used indexically, and those-let us call them deictic-that necessarily invoke features of the context because of a contextual variable built into their semantic conditions. This distinction will also be plagued by borderline examples, as exemplified above by expressions like nearby or even enemy. Even if we decide that local as in the local pub is an expression with an unfilled variable that is preferentially filled by spatial parameters of the context of speaking, we would be loathe to think that all quality adjectives are deictic just because they have a suppressed comparator as an argument (as in John is tall, implying taller than the average reference population, as supplied by the context). Fuzzy borders to a phenomenon do not make categories useless (otherwise color terms would not exist), so in what follows we will proceed by focusing on deictic expressions which clearly involve inherent contextual variables.

The pragmatic character of indexicality is not the only central issue for a pragmatic theory of deictic expressions, for the organization of the semantic field of contrastive deictic expressions is often itself determined by pragmatic factors. As an illustration of this, we concentrate here on the cross-linguistic comparison of demonstrative systems, which have played a central role in philosophical and linguistic thinking about deixis. The analysis of demonstratives is much complicated by their multi-functional role in language-they are often used not only to point things out, but to track referents in discourse and more generally to contrast with other referring expressions. It has become traditional to distinguish amongst at least some of the uses (Levinson 1983, Diessel 1999) shown in figure 5.1. The relations between these uses are probably more complex than this taxonomy suggests, but it is clearly not sufficient to distinguish simply between exophoric (deictic) and endophoric (non-deictic) at the highest branch as in Levinson (1983: 68) and Diessel (1999: 6), since discourse deixis is intra-text but deictic, and empathetic and recognitional uses are extra-text but non-deictic. The following examples illustrate the distinctions involved:

Figure 5.1 Distinct uses of demonstratives

14-"Give me that book" (exophoric: book available in the physical context)

15-"I hurt this finger" (exophoric gestural: requires gesture or presentation of finger)

16-"I like this city" (exophoric symbolic: does not require gesture)

17-"I broke this tooth first and then that one next" (gestural contrastive)

- 18-“He looked down and saw the gun: this was the murder weapon, he realized” (transposed)
 19-“‘You are wrong’. That’s exactly what she said” (discourse deictic)
 20-“It sounded like this: whoosh” (discourse deictic)
 21-“The cowboy entered. This man was not someone to mess with” (anaphoric)
 22-“He went and hit that bastard” (empathetic)
 23-“Do you remember that holiday we spent in the rain in Devon?” (recognitional)
 Exophoric, gestural, non-transposed uses of demonstratives have usually been considered basic.

Diessel (1999) points out that exophoric gestural uses are the earliest in acquisition, the least marked in form, and the source of grammaticalization chains that run through the other uses. In what follows we shall concentrate on the exophoric gestural uses. Less well supported is the supposition that the basic semantic contrasts between sets of exophoric demonstratives are spatial in nature, encoding degrees of distance from speaker or addressee (cf. Anderson and Keenan 1985). There is no a priori reason why this should be the case, yet grammars of languages almost invariably describe demonstrative systems in this spatial way. There are two major kinds of paradigm: speaker-anchored distance systems, and speaker/addressee-anchored systems (Anderson and Keenan 1985): Spanish Distance from speaker.

Although a few languages may have only one demonstrative pronoun or adjective, this is supplemented in probably most (Diessel (1999: 36) claims all) cases by a proximal/distal contrast in deictic adverbs („here” vs. “there”). Three-term systems may be speaker-anchored (like two-term systems), speaker/addressee-anchored, or both. Systems with more than four terms combine other semantic dimensions, like visibility or vertical distance relative to the speaker, or shape of the referent. A speaker-anchored distance system with three terms is often organized in terms of a binary opposition between proximal and distal, with the distal category permitting finer discrimination (McGregor argues for such an analysis for Warrwa, where the medial is the most marked form; see van Geenhoven and Warner 1999: 60). Some systems combine both speaker- and addressee-anchored systems as demonstrative determiners: If the speaker or addressee is actually holding something, the speaker- or addressee-centered term pre-empts it. Thus the medial interpretation is due entirely to pragmatic pre-emption from the more semantically specified forms. In this semantic generality, the Yeli Dnye medial contrasts with the marked Warrwa medial. Yeli Dnye shows that there are actually at least three kinds of multi-term systems, not just the two posited in the literature: speaker-centered distance systems (with no addressee-centered forms) vs. person-based systems (with no medial-from-speaker forms, and where distal is interpreted as distal from both S[peaker] and A[ddressee]). So far we have taken demonstratives to code spatial discriminations. But this may not always be so (cf. Hanks 1996, Himmelmann 1997). Two systems that have traditionally been treated as addressee-anchored distance systems have on close analysis proved to be less spatial than thought.

A primary opposition here involves not proximity to speaker vs. addressee, but rather shared vs. non-shared attentional focus. This finding fits with the pre-theoretical ruminations above: indexicality crucially involves some link between utterance and context so that the context can be used as an affordance to find the intended reference. Deictic expressions and gestures both do this by drawing the addressee's attention to some feature of the spatio-temporal environment (or of adjacent utterance). Also highlighted is the crucial role gesture plays in deixis, for gesture serves to direct the addressee's attention. The prototypical occurrence of demonstratives with gestures seems crucial to how children learn demonstratives, which are always amongst the first fifty words learned and often the first closed class set acquired; the acquisition of the pointing gesture precedes that of the words (Clark 1978, Tanz 1980).

Finally, it is often suggested that definite articles are simply demonstratives unmarked for distance (Lyons 1977: 653–4, Anderson and Keenan 1985: 280), but this does not fit the fact, above, that many demonstrative systems themselves have unmarked members (like that in English), nor the fact that a number of languages (like German) have only one demonstrative that contrasts with a definite article. There certainly is close kinship between definite determiners and demonstratives, as shown by the frequent grammaticalization of the former from the latter. Both contrast with indefinites (see Diessel 1999), and both share a presumption of uniqueness within a contextually given set of entities (Hawkins 1991; Abbott, this volume). It is the focusing of attention on the physical context that is the special character of demonstratives in their basic use.

1-6 The Fields of Deixis

In linguistics, deixis refers to the phenomenon wherein understanding the meaning of certain words and phrases in an utterance requires contextual information. A word or phrase whose meaning requires this contextual information — for example, English pronouns — is said to be deictic. Deixis is closely related to both indexicality and anaphora, as will be further explained below. Note that this article deals largely with deixis in spoken language, but the same concepts can apply to written language and gestures as well. Also note that though this article is primarily concerned with deixis in English, it is believed to be a feature (to some degree) of all natural languages. The term's origin is Ancient Greek: display, demonstration, or reference, the meaning "point of reference" in contemporary linguistics having been taken over from Chrysippus.

1-7 Traditional deictic categories

Possibly the most common categories of contextual information referred to by deixis are those of person, place, and time — what Fillmore calls the “major grammaticalized types” of deixis.

1-7-1 Person deixis

Person deixis concerns itself with the grammatical persons involved in an utterance, both those directly involved (e.g. the speaker, the addressee), not directly involved (e.g. overhearers — those who hear the utterance but who are not directly addressed) and those mentioned in the utterance. [4] In English, this is generally accomplished with pronouns. The following examples demonstrate this; the person deictic terms are in italics (a notation that will continue through this article).

23-I am going to the movies.

24-Would you like to have dinner?

25-They tried to hurt me, but he came to the rescue.

Person deixis is deictic reference to the participant role of a referent, such as

The speaker

The addressee, and

referents which are neither speaker nor addressee.

Person deixis is commonly expressed by the following kinds of constituents:

Pronouns

Possessive affixes of nouns

Agreement affixes of verbs

Here are some kinds of person deixis:

What is first person deixis?

What is second person deixis?

What is third person deixis?

The grammatical category of person directly reflects the different roles that individuals play in the speech event: speaker, addressee, and other. When these roles shift in the course of conversational turn-taking the origo shifts with them (hence Jespersen's 1922 term *Shifters* for deictic expressions):

A's I becomes B's you, A's here becomes B's there and so forth. The traditional person paradigm can be captured by the two semantic features of speaker inclusion (S)

and addressee inclusion (A): first person (+ S), second person (+ A,-S), and third person (-S,-A), hence a residual, non-deictic category. Most languages directly encode the + S and + A roles in pronouns and/or verb agreement, and the majority explicitly mark third person (-S,-A). But there are clear exceptions to the alleged universality of first and second person marking; in Southeast Asian languages like Thai there are titles (on the pattern of “servant” for first person, “master” for second person) used in place of pronouns and there is no verb agreement (Cooke 1968). Many languages have no third person pronouns, often indirectly marking third person by zero agreement. Thus Yéli Dnye has the following pronoun paradigm (with different paradigms in possessive and oblique cases):

The paradigmatic analysis of person marking, whether in pronouns or agreement, is a more complex area than one might at first suppose. Although the traditional notions first, second and third persons hold up remarkably well, there are many kinds of homophony, or different patterns of syncretism, across person paradigms (Cysouw 2001). Much of this complexity is due to the distinctive notions of plurality appropriate to this special paradigm: first person plural clearly does not entail more than one person in + S role, amounting to a chorus. “We” notions are especially troubling, since many languages distinguish such groups as: +S+A vs. +S+A+O (where O is Other, i.e. one or more third persons), vs. +S-A, vs. +S-A+O. In some pronominal systems “plural” can be neatly analyzed as augmenting a minimal deictic specification with “plus one or more additional individuals” (AUG). Thus the distinction nominative pronouns V Singular Dual Plural between I and we might be analyzed as (+S,-AUG), (+S, +AUG). Additional motivation for such an analysis is the fact that a number of languages treat “I + you”-i.e. speech-act participants-as a singular pronominal package, which is then augmented to form a “I +you +other” pronoun. The following is the paradigm from Rembarnga (Dixon 1980: 352): Rembarnga dative pronouns (after Dixon 1980) Tamil, Fijian, and other languages distinguish INCLUSIVE from EXCLUSIVE we, i.e. (+S, +A) from (+S,-A,+AUG). A few languages (like Pirahã) do not mark plurality in the person paradigms at all (Cysouw 2001: 78–9).

One much studied phenomenon in person deixis is in the effect of reported speech on speakers' self reference-where we say John said he would come many languages permit only in effect “John said ‘I will come’”. In Yéli Dnye thoughts and desires must also retain the correct subjective person: John wants to come must be rendered “John wants ‘I come’”. Then there is the phenomenon of honorifics, which typically make reference to speaking and recipient roles, dealt with separately below under the rubric of social deixis (section 5.5). Yet another important area is the special role that speaker and addressee roles play in typologically significant grammatical hierarchies; many languages have no dedicated reflexives in first and second person, and many treat first and second person as the topmost categories on an animacy hierarchy, overruling case-marking, passivization, and other syntactic processes (see Comrie 1989). In addition, although in the Bühlerian and the philosophical traditions the speaking role is given centrality, the importance of the addressee role is reflected in a number of special grammatical phenomena, e.g. vocative case and special forms for titles, kin-terms and proper names used in address.

Apart from its grammatical importance, person has a special significance because of its omnipresence-it is a grammatical category marked or implicit in every utterance, which inevitably indicates first, second or third person in nominal or verbal paradigms, either explicitly or by contrastive omission.

5.2 Time deixis

Time deixis concerns itself with the various times involved in and referred to in an utterance. This includes time adverbs like “now,” “then,” “soon,” and so forth, and also different tenses. Time adverbs can be relative to the time when an utterance is made (what Fillmore calls the “encoding time,” or ET) or when the utterance is heard (Fillmore's

“decoding time,” or DT).[3] While these are frequently the same time, they can differ, as in the case of pre-recorded broadcasts, or letters. For example, if one were to write

It is raining out now, but I hope when you read this it will be sunny.

the ET and DT would be different, with the former deictic term concerning ET and the latter the DT.

Tenses are generally separated into absolute (deictic) and relative tenses. So, for example, simple English past tense is absolute, such as in

He went.

while the pluperfect is relative to some other deictically specified time, as in

He had gone. Time deixis is reference to time relative to a temporal reference

point. Typically, this point is the moment of utterance.

Examples (English)

Temporal adverbs

now / then

yesterday / today / tomorrow

In Bühler's origo, the temporal “ground zero” is the moment at which the utterance is issued („coding time” of Fillmore 1997). Hence now means some span of time including the moment of utterance, today means that diurnal span in which the speaking event takes place, and is predicated a property that holds at the time of speaking. Similarly we count backwards from coding time in calendrical units

in such expressions as yesterday or three years ago, or forwards in tomorrow or next Thursday. In written or recorded uses of language, we can distinguish coding time from receiving time, and in particular languages there are often conventions about whether one writes “I am writing this today so you will receive it tomorrow” or something more like “I have written this yesterday so that you receive it today”.

The nature of calendrical units varies across cultures. YéliDnye recognizes the day as a diurnal unit, has words for “yesterday” and “the day before,” and special monomorphemic words for tomorrow, the day after tomorrow and so forth for ten days into the future, and thereafter a generative system for specifying days beyond that. It needs such a system because there is no concept of week, or any larger clockwork system of calendrical units that can be tied to coding time as in English next March. But most languages exhibit a complex interaction between systems of time measurement, e.g. calendrical units, and deictic anchorage through demonstratives or special modifiers like next or ago. In English, units of time measurement may either be fixed by reference to the calendar or not: thus I'll do it this week is ambiguous between guaranteeing achievement within seven days from utterance time, or within the calendar unit beginning on Sunday (or Monday) including utterance time. This year means the calendar year including the time of utterance (or in some circumstances the 365-day unit beginning at the time of utterance) but this November tends to mean the next monthly unit so named (or alternatively, the November of this year, even if past), while this morning refers to the first half of the diurnal unit including coding time, even if that is in the afternoon (see Fillmore 1975). However, the most pervasive aspect of temporal deixis is tense. The grammatical categories called tenses usually encode a mixture of deictic time distinctions and aspectual distinctions, which are often hard to distinguish. Analysts tend to set up a series of pure temporal distinctions that correspond roughly to the temporal aspects of natural language tenses, and then catalogue the discrepancies (cf. Comrie 1985: 18ff.). For example, one might gloss the English present tense as specifying that the state or event holds or is occurring during a temporal span including the coding time, the past tense as specifying that the relevant span held before coding time, the future as specifying that the relevant span succeeds coding time, the pluperfect (as in He had gone) as specifying that the event happened at a time before an event described in the past tense, and so on. Obviously, such a system fails to capture much English usage (The soccer match is tomorrow (see Green, this volume), John will be sleeping now, I wanted to ask you if you could possibly lend me your car, etc.), but it is clear that there is a deictic temporal element in most tenses. Tenses are

traditionally categorized as ABSOLUTE (deictic) versus RELATIVE (anterior or posterior to a textually specified time), so that the simple English past (Hewent) is absolute and the pluperfect (He had gone) is relative (anterior to some other, deictically specified point). Absolute tenses may mark just, for example, past vs. non-past, or up to nine distinct spans of time counted out from coding time (Comrie 1985, chapter 4). Yéli Dnye has six such tenses, which—as in other Papuan and some Bantu languages—are interpreted precisely in terms of diurnal units. So counting back from the present, there is (in the continuous aspect) a tense specific to events that happened earlier today, another tense for yesterday, and yet another for any time before yesterday. In the other direction, there is a tense for later today, and a separate tense for tomorrow or later.

Interestingly, the tense particles for tomorrow incorporate those for yesterday (and the word for “the day before yesterday” incorporates the word for “the day after tomorrow”), indicating a partial symmetry around coding time. Yéli Dnye, like a number of Amerindian languages (see Mithun 1999:153–4), also has tensed imperatives, distinguishing “Do it now” from “Do it sometime later.” The interpretation of tenses often involves implicatures, so that e.g. Believe it or not, Steve used to teach syntax implicates that he no longer does so, but this is clearly defeasible as one can add and in fact he still has to do so (see Levinson 2000a: 95 for a relevant analytic framework and Comrie 1985 for the role of implicature in the grammaticalization of tense). Many languages in fact have no absolute deictic tenses (e.g. Classical Arabic; see Comrie 1985: 63), although they may pick up deictic interpretations by implicature. Yet other languages, e.g. Malay or Chinese, have no tenses at all. A specially interesting case in point is Yucatec, which not only lacks tenses but also lacks relative time adverbials of the “before” and “after” kind (cf. Bohnemeyer 1998). How on earth do speakers indicate absolute and relative time? By implicature of course. Bohnemeyer sketches how this can be done: for example, by the use of phasal verbs, so that Pedro stopped beating his donkey and began walking home implicates that he first stopped donkey-beating and then after that proceeded homewards.

However, for languages that have tense, this grammatical category is normally obligatory, and ensures that nearly all sentences (with the exception of tenseless sentences like Two times two is four) are deictically anchored with interpretations relativized to context. Although we tend to think of tenses as a grammatical category instantiated in predicates, some languages like Yup'ik tense their nouns as well, so one can say in effect “my FUTURE-sled” pointing at a piece of wood (Mithun 1999: 154–6). Note that even in English many nominals are interpreted through Gricean mechanisms as tensed; “John's piano teacher was a karate black-belt in his youth” suggests that the person referred to is currently John's piano teacher (Enç 1981). All of these factors conspire to hook utterances firmly to coding time. It is clear that many deictic expressions in the temporal domain are borrowed from the spatial domain. In English, temporal prepositions and connectives like in (the afternoon), on (Monday), at (5.00 p.m.), before and after are all derived from spatial descriptions. The demonstratives in English follow the same pattern (cf. this week) and in many languages (like WikMungan, as described in Anderson and Keenan 1985: 298) “here” and “there” are the sources for “now” and “then.” Many languages work with a “moving time” metaphor, so that we talk about the coming week and the past year—which is natural since motion involves both space and time. In general, the ways in which the spatial domain is mapped onto the temporal domain are quite intriguing, for as Comrie (1985:15) notes, the temporal domain has discontinuities that the spatial one lacks (as in the discontinuity between past and future, unlike the continuity of places other than “here”), while space has discontinuities (like near speaker vs. near addressee) which the temporal one lacks (at least in the spoken medium, when “now” is effectively both coding and receiving time).

5.3 Spatial deixis

Place deixis, also known as space deixis, concerns itself with the spatial locations relevant to an utterance. Similarly to person deixis, the locations can be those of the speaker and addressee, or those of persons or objects being referred to. The most salient English

examples are the adverbs “here” and “there” and the demonstratives “this” and “that”, though they are far from the only deictic words.[3]

Some examples:

I enjoy living in this city.

Here is where we will place the statue.

She was sitting over there.

Unless otherwise specified, place deictic terms are generally understood to be relative to the location of the speaker, as in

The shop is across the street.

where “across the street” is understood to mean “across the street from where I am right now.”[3] It is interesting to note that while “here” and “there” are often used to refer to locations near to and far from the speaker, respectively, “there” can also refer to the location of the addressee, if they are not in the same location as the speaker. So, while

Here is a good spot; it is too sunny over there.

exemplifies the former usage,

How is the weather there?

is an example of the latter.[4]

Languages usually show at least a two-way referential distinction in their deictic system: proximal, i.e. near or closer to the speaker, and distal, i.e. far from the speaker and/or closer to the addressee. English exemplifies this with such pairs as this and that, here and there, etc.

In other languages, the distinction is three-way: proximal, i.e. near the speaker, medial, i.e. near the addressee, and distal, i.e. far from both. This is the case in a few Romance languages and in Korean, Japanese, Thai, Filipino and Turkish. The archaic English forms *yon* and *yonder* (still preserved in some regional dialects) once represented a distal category which has now been subsumed by the formerly medial “there”. [5]

Definition

Place deixis is deictic reference to a location relative to the location of a participant in the speech event, typically the speaker.

Examples (English)

- this (way)
- that (direction)
- here
- there

Here is a kind of place deixis:

- What is boundedness?

We have already examined two of the central kinds of place-deictic expressions, namely demonstrative pronouns and adjectives. But as we noted, there are one-term demonstrative (ad/pro)nominal systems unmarked for distance (German *dies* or *das* being a case in point, see Himmelmann 1997). Thus here and there may be the most direct and most universal examples of spatial deixis (Diessel 1999: 38). As a first approximation, English *here* denotes a region including the speaker, *there* a distal region more remote from the speaker. Languages with a speaker-anchored distance series of demonstrative pronouns will also have a speaker-centered series of demonstrative adverbs. It is clear that there is no necessary connection between the number of pronominal or adnominal demonstratives and demonstrative adverbs—German for example has one demonstrative pronoun (or rather no spatial distinction between *dies* and *das*) but two contrastive demonstrative adverbs. Malagasy has seven demonstrative adverbs, but only six demonstrative pronouns, apparently encoding increasing distance from speaker (Anderson and Keenan 1985: 292–4, although many commentators have suspected other features besides sheer distance). Speaker-centered degrees of distance are usually (more) fully represented in the adverbs than the pronominals, and it may be that no language has a person-based system in the demonstrative adverbs if it lacks one in the pronominal or adnominal demonstratives.

Very large paradigms of demonstratives usually involve many ancillary features, not all of them deictic.

Yup'ik has three sets of demonstratives (31 in all) conventionally labeled "extended" (for large horizontal objects or areas or moving referents), "restricted" (for small, visible, or stationary objects), and "obscured" (for objects not in sight); cf. Anderson and Keenan (1985: 295), after Reed *et al.* (1977). Here the restricted condition is an additional non-deictic condition, but the other two sets involve a visibility feature that is deictic in nature (visible by the speaker from the place of speaking). Visibility is a feature reported for many North American Indian languages, and not only in demonstratives—in Kwakwaka'waka every noun phrase is marked for this deictic feature by a pair of flanking clitics (Anderson and Keenan 1985, citing Boas). But caution is in order with a gloss like "visibility"; Henderson (1995: 46) glosses the Yéli Dnye demonstratives *kî* and *wu* as "visible" and "invisible" respectively, but *wu* is more accurately "indirectly ascertained, not directly perceivable or not clearly identifiable to addressee," while *kî* is the unmarked deictic, pragmatically opposed to *wu* in one dimension and to the proximal/distal deictics in another. Apart from visibility, deictics often contain information in an absolute frame of reference, that is, an allocentric frame of reference hooked to geographical features or abstract cardinal directions. Thus the large Yup'ik series of demonstratives has "upstream"/"downstream"/"across river" oppositions, West Greenlandic has "north"/"south" (Fortescue 1984), and languages used by peoples in mountainous areas of Australia, New Guinea, or the Himalayas often contain "uphill"/"downhill" oppositions (see Diessel 1999: 44–5 for references). Such languages are likely to use absolute coordinates unhooked from the deictic center (as in "north of the tree" (see Levinson 1996 for exposition)). In a crosslinguistic survey of demonstratives in 85 languages, Diessel (1999) attests, in addition to these deictic factors, such non-deictic properties of the referent as animacy, humanness, gender, number, and the boundedness of Eskimo languages mentioned above.

In many kinds of deictic expressions the deictic conditions are indeed backgrounded, and other semantic properties foregrounded. Thus if I say "He didn't come home," you are unlikely (absent contrastive emphasis on come) to read what I said as "He went home, but not toward the deictic center." Verbs of "coming" and "going" are not universal. In the first place, many languages do not have verbs encoding motion to or from the deictic center—they make do instead with "hither"/"thither" particles. Secondly, explicit verbs of "coming" and "going" vary in what they encode (Wilkins and Hill 1995, Wilkins *et al.* 1995). If someone comes toward me but stops short before he arrives at the tree over there, I can say "He came to the tree" in English, but not in Longgu or Italian, where we must say "He went to the tree." In fact we can distinguish at least four distinct kinds of "come" verbs, according to whether they are marked for telicity or require the goal to be the place of speaking, as exemplified below (Wilkins *et al.* 1995): (27) Varieties of COME Verbs. Thus, it turns out there is no universal lexicalized notion of "come," although alignment with the place of speaking is a candidate for a universal feature. The notions underlying "go" may be somewhat more uniform because on close examination they generally do not encode anything about alignment of vectors with the deictic center (contra to, for example, Miller and Johnson-Laird 1976). Rather, "come" and "go" verbs tend to be in privative opposition, with "come" marked as having such an alignment, and "go" unmarked. Scalar implicature can then do the rest: saying "go" where "come" might have been used but wasn't implicates that the speaker is not in a position to use the stronger, more informative "come" because its conditions have not been met, and thus that the motion in question is not toward the deictic center.

4 Variants in "go" semantics should then be the mirror image of variants in "come" semantics, illustrating the point stressed in Levinson (2000a) that many Saussurean oppositions may be as much in the pragmatics as in the semantics. Not all languages lexicalize the "toward the deictic center" feature in their verbs. Consider Yéli Dnye, which has a "hither" feature that can be encoded in invariant forms of the verbal inflectional particles. Now there are irregular verbs that obligatorily take this feature, including a motion verb *pwiyé*. So it is tempting to gloss *pwiyé* "come," but in fact it is perfectly usable to encode motion away from the deictic center (one can say "He *pwiyé*-d off in that direction"), because it is just an

irregular verb with meaning somewhat unrelated to its obligatory inflectional properties. So to say "Come here!" one can either use *pwiyé* or the unmarked "go" verb *lê*, but now marked with the "hither" particle. Note that *YéliDnye* has no "thither" particle—because by privative opposition it is not necessary: any motion verb unmarked for "hither" will be presumed to have a "thither" (or at least not-"hither") interpretation. Once again implicature provides the opposition.

5.4 Discourse deixis

Discourse deixis, also referred to as text deixis, refers to the use of expressions within an utterance to refer to parts of the discourse that contains the utterance — including the utterance itself. For example, in This is a great story.

"this" refers to an upcoming portion of the discourse, and in

That was an amazing day.

"that" refers to a prior portion of the discourse.

Distinction must be made between discourse deixis and anaphora, which is when an expression makes reference to the same referent as a prior term, as in

Matthew is an incredible athlete; he came in first in the race.

Lyons points out that it is possible for an expression to be both deictic and anaphoric at the same time. In his example

I was born in London and I have lived here/there all my life.

"here" or "there" function anaphorically in their reference to London, and deictically in that the choice between "here" or "there" indicates whether the speaker is or is not currently in London.[1]

The rule of thumb to distinguish the two phenomenon is as follows: when an expression refers to another linguistic expression or a piece of discourse, it is discourse deictic. When that expression refers to the same item as a prior linguistic expression, it is anaphoric.[4]

Switch reference is a type of discourse deixis, and a grammatical feature found in some languages, which indicates whether the argument of one clause is the same as the argument of the previous clause. In some languages, this is done through same subject markers and different subject markers. In the translated example "John punched Tom, and left-[same subject marker]," it is John who left, and in "John punched

Discourse deixis is deictic reference to a portion of a discourse relative to the speaker's current "location" in the discourse.

Examples (English)

- Use of this to refer to a story one is about to tell in:
- I bet you haven't heard this story.
- Reference to Chapter 7 of a book by means of in the next chapter or in the previous chapter, depending on whether the reference is made from Chapter 6 or 8.
- Use of this in a creaky-voiced utterance of:
- This is what phoneticians call a creaky voice.

Kinds

Here are some kinds of discourse deixis:

- What is switch reference?
- What is token-reflexive deixis?

Discourse deixis is a kind of

In both spoken and written discourse, there is frequently occasion to refer to earlier or forthcoming segments of the discourse: As mentioned before, In the next chapter, or I bet you haven't heard this joke. Since a discourse unfolds in time, it is natural to use temporal deictic terms (before, next) to indicate the relation of the referred-to segment to the temporal locus of the moment of speaking or the currently read sentence. But spatial terms are also sometimes employed, as with in this article or two paragraphs below. Clearly, references to parts of a discourse that can only be interpreted by knowing where the current coding point or current reading/recording point is are quintessentially deictic in character. A distinction is often made between textual deixis and general anaphora along the following lines. Whereas textual deixis refers to portions of the text itself (as in See the discussion above or The pewit sounds like this: pee-r-weet), anaphoric expressions refer outside the discourse to other entities

byconnecting to a prior referring expression (anaphora) or a later one (cataphora, as in In front of him, Pilate saw a beaten man). Insofar as the distinction between anaphoric and cataphoric expressions is conventionalized, such expressions have a clear conventional deictic component, since reference is relative to the point in the discourse. Thus Yéfi Dnye has an anaphoric pronoun *yi*, which cannot be used exophorically and contrasts with the demonstratives that can be used cataphorically, looking backwards in the text from the point of reading like the English *he* mentioned above.

5 These expressions, with their directional specification from the current point in the text, demonstrate the underlyingly deictic nature of anaphora. Many expressions used anaphorically, like third person pronouns in English, are general-purpose referring expressions—there is nothing intrinsically anaphoric about them, and they can be used

deictically as noted above, or non-deictically but exophorically, when the situation or discourse context makes it clear (as in *He's died*, said of a colleague known to be in critical condition). The determination that a referring expression is anaphoric is itself a matter of pragmatic resolution, since it has to do with relative semantic generality. For this reason, the ship can be understood anaphorically in *The giant Shell tanker hit a rock, and the ship went down, while resisting such an interpretation* in *The ship hit a rock, and the giant Shell tanker went down* (see Levinson 2000a for a detailed Gricean analysis, and Huang 2000a, this volume for surveys of pragmatic approaches to anaphora). An important area of discourse deixis concerns discourse markers, like *anyway*, *but*, *however*, or *in conclusion* (see Schiffrin 1987; Blakemore, this volume). These relate a current contribution to the prior utterance or text, and typically resist truth-conditional characterization. For this reason, Grice introduced the notion of conventional implicature, noting that *but* has the truth-conditional content of *and*, with an additional contrastive meaning which is non-truth conditional but conventional.

5.5 Social deixis

Social deixis concerns the social information that is encoded within various expressions, such as relative social status and familiarity. Two major forms of it are the so-called T-V distinctions and honorifics.

Absolute social deixis is deictic reference to some social characteristic of a referent (especially a person) apart from any relative ranking of referents. Often absolute social deixis is expressed in certain forms of address. The form of address will include no comparison of the ranking of the speaker and addressee; there will be only a simple reference to the absolute status of the addressee.

Examples (English)

- Mr. President
- Your Honor

Generic

Absolute social deixis is a kind of

What is social deixis?

Social deixis involves the marking of social relationships in linguistic expressions, with direct or oblique reference to the social status or role of participants in the speech event. Special expressions exist in many languages, including the honorifics well known in the languages of Southeast Asia, such as Thai, Japanese, Korean, and Javanese. We can distinguish a number of axes on which such relations are defined (Levinson 1983, Brown and Levinson 1987):

Parameters of social deixis

Relational social deixis is deictic reference to a social relationship between the speaker and an addressee, bystander, or other referent in the extralinguistic context. Examples (French, Southeast Asian languages, Dyirbal)

- Distinctions between the French second person pronouns *tu* and *vous*
- Speech levels of Southeast Asian languages that depend on the relative status of the speaker and addressee
- Distinctions between lexical choices made in the presence of certain kin in Dyirbal

Generic

Relational social deixis is a kind of

- What is social deixis?
- Concept module: relational social deixis
- In overview module: Glossary (Linguistics): R
- In modular book: Glossary of linguistic terms, by Eugene E. Loos (general editor), Susan Anderson (editor), Dwight H. Day, Jr. (editor), Paul C. Jordan (editor), and J. Douglas Wingate (editor)

The distinction between (1) and (2) is fundamental in that in (1) "honor" (or a related attitude) can only be expressed by referring to the entity to be honored, while in (2) the same attitude may be expressed while talking about unrelated matters. In this scheme, respectful pronouns like *vous* or *Sie* used to singular addressees are referent honorifics that happen to refer to the addressee, while the Tamil particle *nka* or Japanese verbal affix *-mas* are addressee honorifics that can be adjoined by the relevant rules to any proposition. The elaborate honorifics systems of Southeast Asia are built up from a mixture of (1) and (2)-for example, there are likely to be humiliating forms replacing the first person pronoun (on the principle that lowering the self raises the other) together with honorific forms for referring to the addressee or third parties (both referent honorifics), and in addition suppletive forms for such verbs as "eat" or "go," giving respect to the addressee regardless of who is the subject of the verb (see Brown and Levinson 1987, Errington 1988, Shibatani 1999). The third axis is encoded in BYSTANDER HONORIFICS, signaling respect to non-addressed but present party. In Pohnpei, in addition to referent and addressee honorifics, there are special suppletive verbs and nouns to be used in the presence of a chief (Keating 1998). Many Australian languages had taboo vocabularies used in the presence of real or potential in-laws, or those who fell in a marriageable section for ego but were too close to marry (Dixon 1980: 58–65, Haviland 1979). Yélidnye has a similar, if more limited, taboo vocabulary for in-laws, especially parents and siblings of the spouse.

The fourth axis involves respect conveyed to the setting or event. Most Germans use a system of address with *Du* vs. *Sie* and First Name vs. *Herr/Frau* + Last Name which is unwavering across formal or informal contexts; they find surprising the ease with which English speakers can switch from First Name to Title + Last Name according to the formality of the situation (Brown and Gilman 1960, Lambert and Tucker 1976). Many European languages have distinct registers used on formal occasions, where *eat* becomes *dine*, *home* becomes *residence*, etc., while Tamil has diglossic variants, with distinct morphology for formal and literary uses. Axis Honorific types Other encodings

(1) Speaker to referent Referent honorifics Titles

(2) Speaker to addressee Addressee honorifics Address forms

(3) Speaker to non-addressed participant Bystander honorifics Taboo vocabularies

(4) Speaker to setting Formality levels Register Systems of address of any kind-pronouns, titles, kin-terms-are guided by the social-deictic contrasts made by alternate forms. The contents of honorifics (see Shibatani 1999) should be taken to be conventional implicatures overlaid on the referential content (if any), for the deictic content is not cancelable and does not fall under the scope of logical operators (see Levinson 1979a).

Other categories Though the traditional categories of deixis are perhaps the most obvious, there are other types of deixis that are similarly pervasive in language use. These categories of deixis were first discussed by Fillmore and Lyons.[4]

Tom, and left-[different subject marker]," it is Tom who left.[citation needed]

Main article: T-V distinction

T-V distinctions, named for the Latin "tu" and "vos" (informal and formal versions of "you") are the name given to the phenomenon when a language has two different second-person pronouns. The varying usage of these pronouns indicates something about formality, familiarity, and/or solidarity between the interactants. So, for example, the T form might be used when speaking to a friend or social equal, whereas the V form would be used speaking to a stranger or social superior. This phenomenon is common in European languages.[6]

Main article: Honorifics (linguistics)

Honorifics are a much more complex form of social deixis than T-V distinctions, though they encode similar types of social information. They can involve words being marked

with various morphemes as well as nearly entirely different lexicons being used based on the social status of the interactants. This type of social deixis is found in a variety of languages, but is especially common in South and East Asia.[6]

Anaphoric reference

Generally speaking, anaphora refers to the way in which a word or phrase relates to other text:

- An exophoric reference refers to language outside of the text in which the reference is found.
- A homophoric reference is a generic phrase that obtains a specific meaning through knowledge of its context. For example, the meaning of the phrase "the Queen" may be determined by the country in which it is spoken. Because there are many Queens throughout the world, the location of the speaker provides the extra information that allows an individual Queen to be identified.
- An endophoric reference refers to something inside of the text in which the reference is found.
- An anaphoric reference, when opposed to cataphora, refers to something within a text that has been previously identified. For example, in "Susan dropped the plate. It shattered loudly" the word "it" refers to the phrase "the plate".
- A cataphoric reference refers to something within a text that has not yet been identified. For example, in "He was very cold. David promptly put on his coat" the identity of the "he" is unknown until the individual is also referred to as "David".

Deictic Center

A deictic center, sometimes referred to as an origo, is a set of theoretical points that a deictic expression is 'anchored' to, such that the evaluation of the meaning of the expression leads one to the relevant point. As deictic expressions are frequently egocentric, the center often consists of the speaker at the time and place of the utterance, and additionally, the place in the discourse and relevant social factors. However, deictic expressions can also be used in such a way that the deictic center is transferred to other participants in the exchange, or to persons / places / etc being described in a narrative.[4] So, for example, in the sentence

I'm standing here now.

the deictic center is simply the person at the time and place of speaking. But say two people are talking on the phone long-distance, from London to New York. The Londoner can say

We are going to New York next week.

in which case the deictic center is in London, or they can equally validly say

We are coming to New York next week.

in which case the deictic center is in New York.[1] Similarly, when telling a story about someone, the deictic center is likely to switch to them. So then in the sentence

He then ran twenty feet to the left.

it is understood that the center is with the person being spoken of, and thus, "to the left" refers not to the speaker's left, but to the object of the story's left.

Usages of Deixis

It is helpful to distinguish between two usages of deixis, gestural and symbolic, as well as non-deictic usages of frequently deictic words. Gestural deixis refers, broadly, to deictic expressions whose understanding requires some sort of audio-visual information. A simple example is when an object is pointed at and referred to as "this" or "that". However, the category can include other types of information than pointing, such as direction of gaze, tone of voice, and so on. Symbolic usage, by contrast, requires generally only basic spatio-temporal knowledge of the utterance.[4] So, for example

I broke this finger.

requires being able to see which finger is being held up, whereas

I love this city.

requires only knowledge of the current location. In a similar vein,

I went to this city one time . . .

is a non-deictic usage of "this", which does not reference anything specific. Rather, it is used as an indefinite article, much the way "a" could be used in its place.

6 Conclusions

This chapter has touched on a number of topics that establish deixis as a central subject in the theory of language. Indexicality probably played a crucial part in the evolution of language, prior to the full-scale recursive, symbolic system characteristic of modern human language. The intersection of indexicality and the symbolic system engenders a hybrid with complexities beyond the two contributing systems. These complexities are evident in the paradoxes of token-reflexivity and in the puzzles of the psychological content of indexical utterances. Deictic categories like person are

universal (although variably expressed), demonstrating their importance to the fundamental design of language. Their special role in language learning and differential elaboration in the languages of the world makes a typology of the major deictic categories an important item on the agenda for future research.

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