

Some considerations on indexicality and deixis

Diana HORNOIU
"Ovidius" University of Constanța

Abstract

The aim of this article is to outline some of the most intriguing theoretical and descriptive problems related to the phenomenon of indexicality. The article addresses the way in which deixis interacts with other aspects of pragmatics and illustrates the kind of advances that could be made with further empirical work.

The terms 'deixis' and 'indexicality' are used co-extensively. However, a distinction is made between indexicality, used to label the broader phenomena of contextual dependency, and deixis, used to label the narrower linguistically-relevant aspects of indexicality (Levinson 2004).

Key Words: *indexicality, deixis, deictic projection, conventional implicature, anaphora.*

1. Introduction

The term deixis comes from the Greek word for 'pointing'. Its equivalent philosophical term indexicality comes from the corresponding Latin word. Deixis is the phenomenon whereby some linguistic expressions are systematically dependent on the context for their interpretation. Consider the utterance in (1):

(1) Put this book over there.

Establishing the identity of the referent, i.e. which book is being referred to, and which place it is to be put, depends on features of the context outside the utterance itself. In this particular case the features of the context are typically gestures pointing to the referent of this and there.

A similar point could be argued about the personal pronoun in the example in (2):

(2)

A: Who's there?

B: It's me.

The utterance 'It's me' is always true but is totally uninformative when it comes to establishing the speaker's identity. The referent of the pronoun *I* changes with the person uttering it. Everybody can say *I* and whoever says it points to another object than everybody else. Just the same point could be made about first- and second-person pronouns *we* and *you*, about demonstratives and specific time and place adverbs like *now*, *here* or *there*, to mention just a few. These lexical items are referred to as *deictic terms/indexical expressions* or simply *indexicals*. They are a particular kind of referential expressions where the reference is not just semantic but includes a reference to a particular context in which the semantics is put at work. In

other words, one should always refer to the context if in order to establish the proper reference of deictic words.

The terms ‘deixis’ and ‘indexicality’ will be used co-extensively, since they simply come from different traditions (Bühler 1934; Peirce 1955) and have become associated with linguistic and philosophical approaches respectively. However, a technical 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 (Levinson 2004).

2. Deictic expressions in semantic theory

Deictic expressions are one of the abiding puzzles in the philosophy of language. Expressions like *today* have a constant meaning, but on the other hand their referent constantly changes (since the reference of today will always be different tomorrow). To a certain extent, they resemble proper names due to their little descriptive content and resistance to paraphrase. On the other hand, deictic expressions differ from proper names in their constantly changing reference (Kaplan 1989:562).

In philosophical approaches to semantics, handling indexical expressions is a two-stage process involving a mapping from contexts into propositional contents, followed by a mapping from, say, worlds to truth-values. In Montague’s (1974) early theory the content of deictic expressions was captured by mapping contexts (reduced to a set of indices for speakers, addressees, indicated objects, times and places) into intensions. In Kaplan’s (1989) theory, all expressions have this characteristic mapping (their character) from contexts into intensions (their proposition-relevant content), but only indexicals have variable character, which can be thought of as their meaning. Thus the meaning of *I* is its character, which is a function or rule that variably assigns an individual concept, namely the speaker, in each context (Kaplan 1978). Non-indexical expressions have constant character, but may (rigid designators) or may not (other referring expressions) have constant content, as illustrated in (3) below:

(3)

	constant character	variable character
constant content	proper names	indexicals
variable content	definite descriptions	‘deferred ostension’

Situation semantics (Barwise and Perry 1983) provides us with another version of the two-stage theory. Within the framework of situation semantics 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 such as anaphora) and the ‘described situation’ (corresponding to the propositional content). Indexicals get their variables fixed in the utterance and/or resource situations. The value of the variables (e.g. the referent of *I* or *that*) is then transferred to the described situation (e.g. “I gave him that book” has the described content, say, ‘Bill gave him that book’). Meaning

is relational, and the meaning of an indexical is characterized as the relation between utterance/resource situations and described situations.

The central tenet 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 (1998:159) 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”.

The literature lists several empirical properties of indexicals. Firstly, Wettstein (1984), among others, argued that pure indexicals such as *I*, *now*, *here* have their semantico-pragmatic content exhausted by a specification of the relevant index (speaker, time and place of speaking respectively). However, if one considers closely related indexicals such as *we*, *today*, *nearby*, it becomes apparent that these deictic expressions convey 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). Thus, deictic expressions may exhibit both descriptive properties and contextual variables. In addition, nearly all deictic expressions heavily depend on pragmatic resolution (Levinson 2000:177ff). Consider the example in (4):

(4) Come here.

The place deictic item may refer, say, to this sofa or to this city according to context.

Secondly, Cresswell (1973:111ff) points out that the relevant contextual features cannot be determined in advance. Consider the example in (5):

(5) This is the largest walnut tree on the planet.

In various contexts, the speaker can uniquely establish the referent of this by pointing to a tree some distance away, or while standing underneath it, or by touching a picture in a book, or, if the addressee were blind, by running the addressee’s hand over the bark. The mode of demonstration, if any, just does not seem to be determined in advance.

Thirdly, there is the feature which Quine called ‘deferred ostension’ and which has become familiar especially through the work of Nunberg (1978, 1998). Suppose the participants in the situation of utterance are listening to a program on a radio station and one of them says:

(6) CNN has just bought this.

In delivering the utterance in (6) in that particular context, the speaker doesn’t refer to the current program but the radio station.

Similarly, in a context in which the speaker points to a Coca-Cola bottle and says:

(7) That used to be a different shape.

In (7) the speaker doesn't refer to the current bottle, but the type of container, and asserts that tokens used to be of a different shape. Thus, in both (6) and (7) the object the speaker is pointing to is not the object referred to.

Another empirical feature would be that third-person, non-deictic expressions can have indexical uses, as when the speaker says, pointing to a man in a black tuxedo, "He is President Linton's nephew".

Indexicals have projection properties which follow from the fact that demonstratives and many other deictic expressions have no substantial descriptive content, so that once the contextual parameters have been fixed they are 'directly referential' (Kaplan 1990). A true demonstrative remains transparent in an intensional context. Consider the utterance in (8):

(8) John said he broke that

In (8) the referent of *that* can only be identified as the object the speaker is pointing at, at speaking time, and not the object John pointed at.

Deictic expressions cannot be assigned attributive meanings. Compare the utterances in (9):

(9a) The man who can lift this sword is our king.

(9b) That man who can lift this sword is our king.

The utterance in (9a) has both referential and attributive reading (i.e. "Whoever can lift this sword is our king"). By contrast, the utterance in (9b) has only a referential reading.

Finally, deictic expressions do not generally fall under the scope of negation or modal operators. The utterance in (10) cannot be understood as 'I am not indicating X and X is a planet' (Enç 1981).

(10) That is not a planet.

These treatments of indexicality considered so far demonstrate that there is a clear class of indexical expressions, which have an inbuilt variable whose value is instantiated in the context.

3. Types of deixis

In the European linguistic and philosophic traditions one usually mentions the categories of person, place and time in this connection. The explanation for this tripartition is that all indexing/pointing is done by living human beings and therefore all indexical expressions have to be related to:

- the person who has uttered them
- pointing in a particular place
- and at a particular time.

Before embarking on a detailed analysis of the major categories of person, time, place, social and discourse deixis, let us consider the lesser-known categories of empathic and reminder or recognitional deixis.

Emphatic deixis concerns the use of *this* in context where the first option would be *that* to signal empathy. Similarly, it involves the shift from *this* to *that* to signal emotional distance (Lyons 1977). Consider the example in (11):

(11) Tell that bastard to shut up!

Pragmaticians (Mey 1993; Horn and Ward 2004) also mention the case of reminder or recognitional deixis. Consider the examples in (12):

(12a) I met *this* girl the other day.

(12b) Do you remember that holiday we spent in the rain in Devon?

In the utterance in (12a) *this girl* is used to refer to ‘a certain young lady’ whose identity needs no further introduction because either her identity is of no interest to the story, or because her identity has already been established in some other way.

3. 1 Person deixis

The grammatical category of person directly reflects the different roles that individuals play in the speech event: speaker, addressee and audience. When these roles shift in the course of conversational turn-taking the deictic centre 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.

Person deixis concerns the encoding of the role of participants in the speech event in which the utterance is delivered. The category first person is the grammaticalization of the speaker’s reference to himself, the second person is the encoding of the speaker’s reference to one or more addressees¹, the third person is the grammaticalization of the speaker’s reference to persons and entities that are neither speakers nor addressees of the utterance in question². The traditional paradigm of first, second and third persons 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], which is therefore a residual, non-deictic category. Most languages directly encode these participant-roles in pronouns and/or verb agreement, as well as vocative. The majority explicitly mark third person [-S, -A].

Although the traditional notions 1st, 2nd and 3rd 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 how the notion of ‘plurality’ is conceptualized

¹ There are also exceptions to the alleged universality of 1st and 2nd person marking. For instance, in some S. E. Asian languages like Thai there are titles (on the pattern of ‘servant’ for 1st person, ‘master’ for 2nd person) used in place of pronouns and there is no verb agreement (Cooke 1968).

² Some languages have no third person pronouns, although they often indirectly mark third-person by zero agreement markers. Yéli Dnye, a Papuan, i.e., non-Austronesian language, is a case in point.

within the paradigm: first-person plural clearly does not entail more than one person in [+S] role. ‘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 persons that are neither speakers nor addressees), 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 between *I* and *We* might be analyzed as (+S,-Aug), (+S,+AUG). In some contexts, the English personal pronoun *we* may be ambiguous between an inclusive (i.e. including the addressee) or an exclusive (i.e. excluding the addressee) interpretation.

Most languages evince a number of intriguing details that show that the roles of speaker and addressee roles can be motivated by such grammatical detail (Levinson 1983; Goffman 1981). Consider the utterance in (13):

(13) Bill is to get ready now.

The utterance in (13) is appropriately said to a person who will then run along and tell Bill “Get ready now!”³. In such a scenario, the speaker is analytically dividing the notion of an ‘addressee’ into two distinct sub-roles: a person actually spoken to by the speaker, and an illocutionary target of the utterance, who, as with any imperative, is expected to perform the action. In a similar way, some languages have specific ways of indicating that the speaker is merely the mouthpiece for someone else, thus distinguishing the actual speaking role from the illocutionary source of the message. Compare the utterances in (14):

(14a) You are to hand in your paper now.

(14b) Hand in your paper now.

The imperative form in (14a) indicates that the speaker is not the originator of the message, but rather the speaker conveys the message on someone else’s behalf.

Another important phenomenon related to person is the whole field of honorifics, which typically make reference to speaking and recipient roles, but which will be dealt with under social deixis. Last but not least, in some contexts third-person pronouns are *distal* forms in terms of person deixis; using a third-person pronoun where a second-person one could be possible is a way of communicating distance, not necessarily spatial, but emotional and social distance.

3.2 Time deixis

Within the deictic centre the central time, i.e. the temporal ‘ground zero’, is the moment at which the utterance is issued or the ‘coding time’ in Fillmore’s (1997) terminology. Time deixis concerns the encoding of temporal points or spans relative to the time at which an utterance was spoken, that is relative to coding time. Time deixis is grammaticalized in the system of tenses deictic adverbs of time, such as *now*, *yesterday*, *this week*, *last year*, etc.

Thus, *now* means some span of time including the moment the utterance is delivered, *today* refers to that diurnal span in which the speaking event takes place. Similarly we count backwards from coding time in calendrical units in such expressions as *yesterday*, *three weeks*

³ Some languages have a category of 3rd person imperative covering such a scenario.

ago, or last years or forwards in *tomorrow*, or *next Friday*. These deictic expressions of time depend for their interpretation on knowing the coding time. In written or recorded uses of language, a distinction is made between coding time and receiving time⁴.

If we don't know the coding time of a note on an office door such as the one given in (15) we won't know if we have a short or a long wait ahead:

(15) Back in an hour.

In English, units of time measurement may either be fixed by reference to the calendar, or not. Consider the utterance in (16):

(16) He'll do it this week.

The deictic expression *this week* may refer to a span of seven days from utterance time or to the calendar unit beginning on Sunday (or Monday) including utterance time. Similarly, this year means the calendar year including the time of utterance, but *this May* tends to mean the next monthly unit so named (or alternatively, the May 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 (Fillmore 1975).

The most pervasive aspect of temporal deixis is the system of tenses. The grammatical categories called tenses usually encode a mixture of deictic time distinctions and aspectual distinctions. Linguists tend to set up a series of pure tense grammatical distinctions that roughly correspond to the extra-linguistic time distinctions, 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 preterite (as in *He had gone*) as specifying that the event happened at a time before an event described in the past tense. It is clear that there is a deictic temporal element in most of the grammatical distinctions linguists call tenses, although the system of tenses captures only partially the English usage (*The soccer match is tomorrow; John will be sleeping now; I wondered whether you were free now*, etc.). Tenses are traditionally categorized as 'absolute' (deictic) versus 'relative' (anterior or posterior to a textually specified time), so that the simple English past (*He went*) is absolute and the preterite (*He had gone*) is relative (anterior to some other, admittedly deictically specified, point). Absolute tenses may mark two (e.g. past vs. non-past) or they may mark up to nine distinct spans of time counted out from coding-time (Comrie 1985).

The interpretation of tenses often involves Gricean implicatures⁵. The example in (17a) implicates that that he no longer does so, although this is clearly defeasible as shown in (17b):

⁴ In some 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 wrote this yesterday so that you receive it today'.

⁵ See Levinson (2000: 95) for a relevant framework of analysis, and Comrie (1985) for the role of implicature in the grammaticalization of tense.

(17a) Believe it or not, Mike used to teach semantics.

(17b) Believe it or not, Mike used to teach semantics and in fact he still has to do so.

Many deictic expressions in the temporal domain are borrowed from the spatial domain. In English, the temporal prepositions and connectives like *in* (e.g. *in the morning*), *on* (e.g. *on Tuesday*), *at* (e.g. *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 some languages (Anderson and Keenan 1985:298) ‘here’ and ‘there’ are the sources for ‘now’ and ‘then’.

3.3 Spatial deixis

Place deixis concerns the encoding of spatial locations relative to the location of the participants in the speech event. Such deictic adverbs like *here* and *there* are the most direct and most universal examples of spatial deixis (Diessel 1999:38). Most languages grammaticalize at least a distinction between *proximal* (i.e. close to speaker) and *distal* (i.e. non-proximal to speaker, sometimes close to addressee). In English, this distinction is encoded in demonstratives (*this*, *that*), the deictic adverbs of place *here* (proximal) and *there* (distal) and in the demonstrative pronouns *this/these* and *that/those* and in some verbs such as *come* and *go*. Verbs of ‘coming’ and ‘going’ encode motion to or away from the deictic center⁶. Consider the examples in (18):

(18a) Come to bed. – *come* signals movement towards the deictic centre/central place, i.e. the speaker’s location

(18b) Go to bed. – *go* signals movement away from the deictic centre/central place

However, not all cases when the ‘towards the deictic center’ feature is lexicalized in verbs of coming are crystal-clear. Firstly, speakers may project themselves into other locations prior to their actually being in those locations, as shown in (19):

(19) I’ll come later – *come* signals movement towards the addressee’s location

Secondly, there are cases when what they encode turns out to be quite differentiated (Wilkins and Hill 1995, Wilkins, Hill and Levinson 1995). If someone comes towards the speaker but stops short before he arrives at the tree which is near the speaker, the speaker can say ‘He came to the tree’ in English, but not Italian, where he would say the equivalent of ‘He went to the tree’.

There is another aspect that is relevant to place deixis. Many analysts have drawn attention to the ambiguity of the utterance in (20):

(20) The dog is behind the television.

The dog could be at that side of the television opposite from the screen, or it could be on the other side of the TV from the speaker, whichever side the speaker is on. The former interpretation is called the ‘intrinsic’ frame of reference or perspective in the literature, and the latter mostly ‘deictic’.

⁶ However, not all languages lexicalize the ‘towards the deictic center’ feature in their verbs.

3.4 Discourse deixis

Discourse deixis concerns the use of expressions within some utterance to refer to earlier or forthcoming segments of the discourse containing that utterance. Consider the examples in (21):

- (21a) I bet you haven't heard *this story* – *this story* refers to a forthcoming portion of discourse
 (21b) *That* was the funniest story I've ever heard – where *that* refers to a preceding portion of discourse.
 (21c) “‘You are wrong’. That’s exactly what she said” – *that* refers to a preceding portion of discourse.
 (21d) “It sounded like this: whoosh” – this refers to a forthcoming portion of discourse

Since discourse unfolds in time, time-deictic and place-deictic expressions can be used to refer to portions of discourse, as in: *in the last/next chapter/paragraph, in this chapter, two paragraphs below*. Clearly, in the examples in (21) the reference to parts of a discourse can be established only on the basis of knowing the current coding point or current reading/recording. Such reference is quintessentially deictic in character.

An important area of discourse deixis concerns discourse markers, like *anyway, but, however, actually, in conclusion* (see Schiffrin 1987). These relate a current contribution to the prior utterance or portion of text. For instance, the discourse marker *anyway* indicates that the utterance that contains it does not address preceding discourse, but it addresses one or more steps back.

3.5 Social deixis

Social deixis concerns the marking, in linguistic expressions, of the social relationship holding between speaker and addressees or speaker and some other referent. This marking is reflected in direct or oblique reference to the social status or role of participants in the speech event. It is encoded throughout the morphological system in honorifics and in choices regarding the use of pronouns, summon forms, vocatives and titles of address. It essential to distinguish a number of axes on which such relations are defined (Levinson 1983, Brown and Levinson 1987). **Table 1** summarizes the relations that typically encoded in social deixis.

Table 1. Relational social deixis

	Axis	Honorific types	Other linguistic 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; diglossia

Table 1 shows that the distinction between (1) and (2) is crucial. In (1) ‘honour’ (or a related attitude such as respect, deference) can only be expressed by referring to the entity to be ‘honoured’, i.e. the referent. In (2), on the other hand, the same deferential attitude may be expressed while talking about unrelated matters. Thus, the relation in (2) encodes respect to the addressee without referring to him. In this scheme, respectful pronouns like *Vous*, *Sie*, *dumneavoastră* used to when addressing singular addressees are referent honorifics, which happen to refer to the addressee. In S. E. Asian languages the elaborate honorifics systems are built up from a mixture of (1) and (2). Examples include humiliating forms replacing the first person pronoun (on the principle that lowering the self raises the other) honorific forms for referring to the addressee or third parties (both referent honorifics), and suppletive forms for such verbs as eating or going, which give respect to the addressee regardless of who is the subject of the verb (see Brown and Levinson 1987, Errington 1988, Shibatani 1999)⁷.

The relation between speaker and bystander, given in (3), is encoded in ‘bystander honorifics’, used to convey respect to a non-addressed party who is, nevertheless, present in the interaction. In some Australian languages there are taboo vocabularies used in the presence of real or potential in-laws (Dixon 1980:58-65, Haviland 1979). The Papuan language Yéli Dnye, a Papuan language, evinces a similar taboo vocabulary related to in-laws, especially parents and siblings of the spouse. This involves a replacement vocabulary for body-parts and items like clothing and baskets associated with the taboo person, and special indirect ways of referring to such people in their presence (Levinson 1983).

The relation between speaker and setting, given in 4, involves respect – or some other special attitude – conveyed to the setting or event. The German system of address includes the following options *Du* vs. *Sie* and First Name vs. *Herr/Frau* + Last Name which hold across formal or informal contexts. By contrast, British English speakers generally switch from First Name to Title + Last Name according to the formality of the situation (see Brown and Gilman 1960, Lambert and Tucker 1976). Although most languages are used differently in formal settings (e.g. *eat* is replaced by *dine*, *home* becomes *residence*, etc), in some the distinction formal vs. informal is firmly grammaticalized in the existence of high and low diglossic variants, with distinct morphology for formal and literary uses. The relations mentioned in (1), (2) and (3) concerns relative rank and respect.

The second type of socially deictic information is is not relational but absolute and concerns the use of (a) the forms reserved for certain speakers, i.e. authorized speakers (e. g. the British royal *we*, the Thai the morpheme *khrob* as a polite particle that can only be used by male speakers, or the Japanese Emperor’s special first-person pronoun) and (b) forms reserved for authorized recipients (e.g. restrictions on most titles of address such as *Your Honour*, *Mr President*).

Levinson (1979) argues that the social deictic contents of honorifics should be considered to be conventional implicatures overlaid on the referential content, since the deictic content is not deniable and does not fall under the scope of logical operators.

4. The deictic centre

⁷See Errington (1988), Agha (1993) for a detailed account of the ten-level of Javanese etiquette.

Deixis is generally, but not invariably organized in an egocentric way, i.e. the speaker and the referent of *I* are identical (Levinson 1983). If we think of deictic expressions as anchored to specific points in the communicative event, then the unmarked anchorage points that make up the deictic centre are assumed to be as follows:

- the central person – the speaker
- the central time – the time at which the speaker produces the utterance, i.e. the coding time
- the central place – the speaker’s location at utterance time
- the discourse centre – the point which the speaker is currently at in the production of his utterance
- the social centre – the speaker’s social status and rank, to which the status and rank of the addressee(s) or referents is relative

However, deictic words may be used in ways that shift this deictic center to other participants. This state of affair is referred to as *deictic projection* (Lyons 1977) or *shifts in point of view* (Fillmore 1971). Contrast the utterances in (22):

(22a) I am going to London.

(22b) I am coming to London.

In (22b) the deictic centre is organized around the addressee, since the verb *come* indicates movement towards the deictic centre and the speaker is clearly outside London. Moreover in some languages distal terms can be used to distinguish between ‘near to the addressee’ and ‘away from both the speaker and the addressee’.

5. Deictic usages

Peirce pointed out that indexicality involves “the 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. These expressions have, therefore, as basic a deictic usage. Fillmore (1971) distinguishes between symbolic and gestural usages. Some deictic expressions such as *this city* resist a gesture (i.e. they have symbolic usage), while *this finger* requires one (i.e. it has a gestural usage). Fillmore (1971) defines deictic terms used in a gestural deictic way as deictic expressions whose reference depends on an audio-visual-tactical and, in general a physical, monitoring of the speech event. Consider the examples in (23) which illustrate a gestural deictic usage:

(23a) *This* one’s genuine, but *this* one is a fake.

(23b) *He*’s not the Duke, *he* is. *He*’s the butler.

In the examples above, some kind of selecting gesture or pointed gaze is required in order for the addressee to correctly identify the referent of the deictic expressions given in italics.

It should be pointed out that the property of indexicality is not exhausted restricted to the use of inherently indexical expressions. Just about any referring expression can be used deictically, as illustrated by the examples in (24):

- (24a) The funny noise is our old dishwashing machine – said pointing chin to kitchen
(24b) What a great picture! – said looking at a picture

By contrast, symbolic usages of deictic expressions generally require for their interpretation only knowledge of the basic spatio-temporal parameters of the speech event or, in the case of person deixis, knowledge of participant-roles. Thus, it is sufficient to know the location of the participants in order to interpret (25a), or to know the set of potential addressees in the situation in order to interpret (25b), or to know the non-addressed participant in the speech event in (25c), or to know when the interaction is taking place in order to know which calendar year is being referred to in (23d).

- (25a) *This* city is really beautiful.
(25b) *You* can all come the party tonight.
(25c) *He* is my father – said of man entering the room
(25d) They can't afford a holiday *this* year.

6. Non-deictic usages

In non-deictic usages, the deictic terms are interpreted relative to the text and not relative to the situation of utterance. Central to non-deictic usage is the phenomenon of anaphora. An anaphoric usage is when some term picks out as referent the same entity or class of objects that some prior term in the discourse picked out. Consider the sentence in (26):

- (26) Susan came in and *she* turned on the music.

Thus, in (26) *she* is interpreted as referring to whoever it is that Susan refers to.

There are cases when anaphora is so closely linked to deixis that it is not always separable. Consider the sentence in (27):

- (27) I've been living in Vienna for 5 years and I love it there.

In (27), *here* is used both anaphorically and deictically. It is used anaphorically because it refers back to whatever place Vienna. At the same time it contrasts with *here* on the deictic dimension of space, locating the utterance outside Vienna. Similarly, it is possible for gestural usage to combine with an anaphoric usage, as in (28):

- (28) I hurt a finger: *this one*.

In the utterance in (28), *this one* refers picks out the same referent as *a finger* does, which accounts for its anaphoric non-deictic usage. However, the utterance should be simultaneously must be accompanied by a presentation of the relevant finger, if it is to be felicitously used.

Another boundary problem is posed by contexts where indexical expressions are not so clearly demarcated. Consider the example in (29):

(29) Let's go to a nearby restaurant.

In the example in (29) nearby is clearly used deictically, since it locates the utterance close to the speaker's location. However, in (30) nearby is used non-deictically since it may be interpreted relative to some preceding portion of the discourse text or it may presume some point of measurement in the same way in which the adjective *tall* is relative to some implicit standard.

(30) Churchill took De Gaulle to a nearby restaurant.

7. Conclusions

This article has addressed a number of topics that establish deixis as a central subject in the theory of language. At first sight deixis seems to be a simple phenomenon, reminiscent of the direct 'here and now' relevance of animal communication systems. However, the intersection of this context-dependence with the property of abstract symbolic representation in language leads to deep complexities. Deixis turns out to be very puzzling both philosophically and psychologically, since it introduces context-dependency into almost every utterance.

Research has focused on understanding how deixis works and on how it can be incorporated into a formal theory of meaning. However, the complexity and pervasiveness of deictic phenomena makes it difficult for most of the theoretical models proposed to account for the richness of the underlying contextual systems.

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