

# The *De Dicto* Domain in Language

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## 1. PURPOSE AND SCOPE OF THE PAPER

I take the notion of grammaticalization in both diachronic and synchronic sense. Although I am interested in how grammatical morphemes emerged from individual lexical items, I am more interested in the question of what semantic and pragmatic functions are encoded in the grammatical system of language. The means of grammatical encoding, including the lexical sources of grammaticalization, will emerge as a by-product of such an approach. The purpose of the present paper is to show that languages make a distinction between the domain of reality and the domain of speech and also to show how this distinction is encoded. In the study of language the domain of speech as opposed to the domain of reality has only been implicitly invoked, mainly for the distinction between anaphoras and deictics, in both formal and functional studies. However, certain notions to be discussed in this paper have been raised in one form or another by other scholars, especially in connection with the development of definite articles (Greenberg, 1985). Traugott, 1980 makes a distinction between 'the world being talked about' and 'the speaker's organization of that world in the act of speaking' (Traugott, 1980:47). In various papers one may also find scattered usage of the terms 'linguistic', 'metalinguistic', in reference to some antecedent of the anaphora, but these terms have too wide a scope (cf. Dubois et al., 1973:317) to be of use in the present paper. I propose that the distinction between the domain of reality and the domain of speech is marked in at least two areas of language structure: In the marking of embedded clauses and in the system of reference, where languages differentiate between sets referring to the domain of reality and sets referring to the domain of speech. Usually, the set referring to the domain of reality encodes more distinctions than the set referring to the domain of speech.

Using the notion of the domain of speech, one can explain functional syncretisms and provide an explanation for the similarity of various morphemes considered hitherto as unrelated. The explanation that I will provide will account for several of the phenomena discussed by Anderson and Keenan, 1985 as a 'relativization of deixis'. Although I draw data and examples from a variety of languages, I do not want to claim that the distinction is universal. It is entirely possible that not all languages encode this distinction in their grammatical systems.

For the sake of brevity I will refer to the domain of speech as the domain *de dicto* and to the domain of the real world as the domain *de re*. The domain *de dicto* in the present paper includes the hypothetical mood. Justification for this inclusion will be provided later in the paper. The terms *de dicto* and *de re* are used here with the meaning such expressions have in Latin, and independently of various interpretations they have had since middle ages in philosophical literature (cf. Hughes and Cresswell, 1968:183ff; Parsons, 1971; and also Wright and Givón, 1987). I do not intend in this paper to reconcile the differences between the philosophical and linguistic understanding of the terms that I am going to propose, nor will I consider the points in which philosophical and linguistic interpretations may overlap.

Arguments in support of the proposed distinction between the *de dicto* and *de re* domain in language are discussed in two sections. In the first section I provide an explanation for the development of demonstratives into complementizers. One of the results of this explanation will be an answer to the question why the forms of the definite article and the complementizer after verbs of saying are similar in many unrelated languages. Note that the two morphemes belong to different syntactic categories, one of them, the complementizer, has no independent lexical meaning (at least according to the current literature) and therefore, a metaphorical extension is not a good explanation for the two morphemes having the same form. In this section I will also provide an explanation for the relationship between complementizers and relative clause markers. In the second section I discuss some of the properties of the systems of reference with respect to a hypothetical mood. In particular I will show that in some languages the system of reference with respect to the *de dicto* domain has a reduced number of distinctions when compared with the system of reference to the domain *de re*.

The following problems will be discussed in the paper: 1. An explanation of how demonstratives become complementizers; 2. A connection between the *de dicto* domain and the 'hypothetical' mood; 3. A speculation on the

relative clause markers; 4. Properties of the referential system in the *de dicto* domain.

## 2. FROM DEMONSTRATIVE TO COMPLEMENTIZER

### 2.1. What needs to be explained

It is a well-known fact that in many languages complementizers are identical with or derived from demonstratives (cf. Noonan, 1985). Why a demonstrative is used in the function of complementizer has not, however, been adequately explained. Lockwood, 1968:222ff. proposes for Germanic that the demonstrative was first the object of the verb 'say' in the main clause, and later became a constituent of the complement clause, becoming thus a complementizer (conjunction in his terminology). Thus there was an evolution from: 'He said that: he will come' to 'He said that he will come'. As evidence for his hypothesis Lockwood provides the following examples from Faroese: (Traugott (in press) gives similar examples from Old English.)

- (1) *eg sigi at hann kemur*  
'I say that he comes'
- (2) *eg sigi tað: hann kemur*  
'I say that: he comes' (Lockwood, 1968:223)

Sentence (1) contains complementizer *at*, which derives from demonstrative *tað*, whose full form may be seen in sentence (2). I think that the weakness of this explanation lies in the unmotivated form of the presumable source for (1): It is not clear why there should be a demonstrative in the object position in sentence (2).

### 2.2. Hypothesis

I would like to propose that the demonstrative is used as a complementizer because it indicates that the following clause belongs to, or should be interpreted as belonging to, the domain *de dicto*. The evidence for this hypothesis will consist of the following:

- Showing that the demonstrative has become an anaphora referring to a proposition, a propositional anaphora, further in the present paper.

- Showing that clauses following the demonstrative belong primarily (in the historical sense) to the domain *de dicto*.
- Showing how an essentially *de dicto* complementizer comes to mark the hypothetical mood.
- A case study of complementation in Mupun in which I will show systematically the development of the function of anaphora into complementizer.

### 2.3. Evidence

#### 2.3.1. *Demonstrative and propositional anaphora*

A propositional anaphora refers to a proposition as a whole rather than to only one of the components of a proposition. In English this function is performed by the remote demonstrative 'that', as in the following examples, discussed from a different point of view in Channon, 1980:

- (3) 'We should have champagne and caviar at the party after CLS. That's (\*It's) a good idea'.  
'Fred doesn't want to go, and that's (\*it's) the problem.' (Channon, 1980:107)

The pronoun 'it' may be used in *de dicto* reference as an anaphora referring to an NP previously mentioned in speech, e.g.:

- (4) John bought a car last year. It proved to be a lemon.

The remote demonstrative 'that' has constraints that set it apart from the pronoun 'it'. In particular 'that' is constrained in its use in reference to an NP in the clause, but it is not so constrained in its use as a propositional anaphora, e.g.:

- (5) John bought a car last year. That proved to be a disaster.  
\*That proved to be a lemon.

The remote demonstrative may be used in reference to a nearer of two possible antecedents,<sup>1</sup> e.g.:

- (6) John bought a car last year and another car just last week. THAT proved to be a lemon.

Virtually the same situation obtains in other IE languages, where the neutral rather than non-neutral pronoun is used as propositional anaphora, e.g.:

- (7) French: *F. ne veut pas aller, mais ça ne me derange pas.*  
 Russian: *F. ne xočet idti, no éto (\*étot/éta) menja ne volnuet.*  
 NEG want go but that that(m)/(f) me NEG bother  
 Polish: *Fred nie chce iść ale to (\*ten/\*ta) mnie nie martwi.*  
 Fred doesn't want to go, but that doesn't bother me.

### 2.3.2. *Definite article*

The purpose of this section is to claim that the definite article has a function linked with the *de dicto* domain.

The primary function of the definite article remains somewhat controversial. The question is whether the definite article marks an NP as a known or as mentioned previously in speech. Greenberg, 1985: 282 states: 'In the case of the [definite] article, besides this anaphoric use, we have rather more frequently reference to what is known from the situational context or general knowledge than speech context.' While Greenberg has provided convincing arguments to show that this claim is true in English, there are equally convincing arguments to show that in some languages the definite article may be used only when a noun has been previously mentioned in speech. The evidence for this claim is provided by the following facts from Mupun. The definite marker in Mupun *nə* is identical with the non-human anaphora. It may occur after any noun, including proper names and toponyms. If it were indeed true that the primary function of the definite is to mark a noun that is known, then we would expect the definite to be used with the first occurrence of a toponym in the text, at least with those toponyms that are significant for a given culture, hence assumed to be known to the speakers and hearers alike. And yet this is not the case. When a toponym occurs for the first time in a text, it does not have a definite article, e.g.:

- (8) *yaksə n-yit vom di del n-siam n-jos*  
 then 1SG-leave Vom there pass 1SG-descend PREP-Jos  
 'Then I left Vom and went down to Jos.'

After the toponym was mentioned in conversation its subsequent mention in the text may be followed by a definite article, e.g. in a sentence that in the text is separated from the preceding one by five sentences:

- (9) *to, lokaci dā an n-jos nā*  
 well time REL 1SG PREP-Jos DEF  
 'Well, when I was in Jos.'

Compare also the following example, with the toponym 'Rome', without the definite article:

- (10) *to, n-bit (1975) be n-dām n-rom*  
 well PREP-year CONS 1SG-go PREP-Rome  
 'OK, in 1975 I went to Rome.'

Four sentences later, the toponym 'Zaria' has a definite article because it has been previously mentioned in speech:

- (11) *n-dām n-kes be wa ba n-dām dī n-Zaria nā*  
 1SG-go 1SG-finish COMP return go 1SG-go there PREP-Zaria DEF  
 'I went, finished [the school] and then returned to Zaria.'

Several sentences after somebody was characterized as German, the following sentence was produced:

- (12) *yak sā mu dām dī n-Germany nā*  
 then 1PL go there PREP-G. DEF  
 'Then we went to Germany.'

Compare also the following sentences. In the first, three toponyms are introduced into the discourse, and none of them has a definite article. When a reference is later made to those toponyms they all occur with definite articles:

- (13) *pak mo dām Dortmund, pak mo dām Essen, pak*  
 some PL go some PL go some  
*mo kuma Würzburg.*  
 PL also  
 'Some went to Dortmund, some went to Essen, some went to Würzburg.'

- (14) *to, wen an meme n-but pak nen dā mo*  
 well, 1SG 1SG some PREP-inside some people REL 3PL  
*dām Würzburg nā*  
 go DEF  
 'I was among those who went to Würzburg.'

- (15) *wur kə toŋ n-Essen nā ji*  
 3M COMPL stay PREP-Essen DEF come  
 'He came from Essen.'

For at least one language, it has been shown that being mentioned previously rather than previous knowledge is the necessary condition for the use of the definite article. In this language the article thus marks the noun that belongs to the *de dicto* domain. I do not have necessary cross language information to assert that in all languages that have a definite article, it will be used to mark a noun mentioned previously in speech, and not necessarily a noun that is known, but not mentioned in the preceding discourse.

There are languages in which there are two definite articles: One to mark a noun that is known and the other to mark a noun that has been mentioned in speech. Thus in Fering ( a North-Frisian language) we have the following paradigm:

<i>a maan</i>	'the man'	<i>at wuf</i>	'the woman'
<i>di maan</i>	'the man'	<i>di wuf</i>	'the woman'

The article *a* refers to a generally known referent, and the article *di* refers to a referent mentioned in a previous or following context (Karen Ebert, p.c.).

### 2.3.2. Complements of the *verba dicendi*

The fact that elements introduced by complementizers after verbs of saying belong to the domain of speech is true analytically, i.e. it follows from the fact that the complementizers follow verbs of saying. Additional evidence is provided by the fact that if a language has a complementizer derived from a demonstrative, such a complementizer will mark the complements of the verbs of saying and thinking, while the sentential complements of other verbs may be marked by other complementizers or by other means. The complementizer derived from demonstratives does not carry a modal function when occurring after *verba dicendi*. In Slavic languages the simple form of complementizer (*čto* in Russian, *że* in Polish) after *verba dicendi* does not carry a deontic modality. If deontic modality is intended after *verba dicendi* or other verbs, the complementizer occurs with the particle *by*, e.g. *čto-b(y)* in Russian and *że-by* in Polish. Although in many languages the complementizer used to introduce complements of the *verba dicendi* is also used to introduce other complements, there seems to be little doubt that its primary function was, synchronically and diachronically, to introduce complements of the *verba dicendi*.

The third part of the evidence is provided by the many languages in which complementizers are derived from *verba dicendi*, such as Hausa *cewa* 'saying', Yoruba *pe*, Gã *ake*, and other African languages (cf. Lord, 1976),

English-based creoles (cf. Frajzyngier, 1984). The importance of this argument rests on the fact that it is the verbs of saying rather than some other verbs that were chosen to serve as complementizers. The following sample of languages with complementizers derived from verbs of saying is far from complete, but the fact that the same process has occurred in different families indicates that it is by no means accidental: Kwa languages (Niger-Congo), Hausa (Chadic), Amharic (Semitic), Dargua, Tabasara, Xinalug (Dešeriev, 1959) (Caucasian).

As admittedly fragmentary data show, complementizers derived from demonstratives occur primarily after *verba dicendi* to indicate that what follows belongs to a *de dicto* category.

#### 2.4. Complements of *verba dicendi* as complements of other verbs

It is a fact that demonstratives do not only serve as complementizers after verbs of saying but also after other verbs. There is, however, a difference in the function of the complementizer, partially depending on the verb of the main clause. When the complementizer derived from demonstratives occurs after a verb of saying, it does not carry a modal function. When it occurs after other verbs, it does carry a modal function. Kirsner and Thompson, 1976 noted that after verbs of perception, the complementizer 'that' indicates an indirect evidence, e.g.:

- (16) I saw that he was sleeping  
cf. I saw him sleeping

Here is an additional illustration of this fact from Polish:

- (17) *Powiedziałem że spał*  
say-1SG.M.-PAST COMP sleep-3SG.M.-PAST  
'I said that he slept.'
- (18) *Widziałem że spał*  
see-1SG.M.-PAST COMP sleep-3SG.M.-PAST  
'I saw that he slept.'
- (19) *Widziałem jak spał*  
see-1SG.M.-PAST how sleep-3SG.M.-PAST  
'I saw him sleeping.'

Although Kirsner and Thompson have observed the function of 'that' they did not explain why it rather than some other complementizer is used

to mark the indirect evidence. I would like to propose that the *verba dicendi* complementizer is used to indicate inference because of the strong sense that information obtained through speech is not as reliable as information obtained through direct observation. After *verba dicendi* the complementizer does not carry any information about the epistemic value of the complement clause. The complementizer is associated, however, with verbs of saying, which intrinsically have epistemic value, such that the information obtained through hearsay is less reliable than the information obtained through direct perception (see, hear, feel). The complementizer acquires thus the same epistemic value as the verb that automatically triggers complementizer's presence, i.e. the verb 'say'. The complementizer is now available to serve a function of indicating less than direct evidence with other verbs, including the verbs of perception.

The association between the domain of speech and the hypothetical mood is quite widespread across languages. Verbs of saying are used to indicate less than complete evidence (Frajzyngier, 1985b). In Czech 'doubt in truth' modality is marked by the morpheme *prý* which derives historically from verb *pravý* 'he says'; in Slovak the marker of 'doubt in truth' is *vraj*, historically derived from the verb *vraý* 'he says' (cf. Stieber, 1979: 247ff), e.g.:

- (20) *On vraj bol v Bratislave*  
 he was in Bratislava  
 'Apparently he was in Bratislava.' (Stieber, 1979: 248)

cf.

- On bol v Bratislave*  
 'He was in Bratislava.'

Finally, the association between domain of speech and hypothetical is evinced by the fact that in a number of languages an introduction of a hypothetical situation is realized periphrastically by preceding the hypothetical proposition with a phrase equivalent to English 'Let's say: ...'. Further in the paper I will be treating hypothetical mood as an instance of the *de dicto* domain with respect to its semantic properties.

## 2.5. A case study: Complementizer in Mupun

The evidence for the function of demonstrative as a *de dicto* marker for NPs and clauses was based so far on fragmentary information taken haphazardly from a variety of languages. The purpose of the present section is to

provide evidence based on a systematic analysis of relevant phenomena in one language.

### 2.5.1. *The form of the complementizer*

I will be concerned here only with one complementizer *nə*, which is phonologically identical with the non-human anaphora and with the definite article discussed earlier. Unlike similar morphemes in other languages, *nə* does not have in contemporary language a deictic function. Thus one cannot use *nə* while pointing at something either close or remote. Its function is thus limited to an NP or a propositional anaphora. As the anaphora for non-human NPs, *nə* can function as subject, object, and prepositional phrase complement, e.g.: (antecedent bold, anaphora underlined)

Subject:

- (21) *ama yil də get n-yam nə nə kə kwance*  
 but world REL PAST PREP-time DEF ANAPH ASSOC quiet  
*rai met də n-yak sə*  
 life surpass REL PREP-time DEM  
 'the world of the past had a much quieter life than the present world.'

Object and prepositional phrase:

- (22) *səm bature mo an mbə tu nə n-ba*  
 name European PL ISG FUT kill ANAPH ISG-throw away  
*kə nə*  
 PREP ANAPH  
 'European names, I would eliminate them, throw them away.'

Prepositional phrase:

- (23) *jiraap mo yak am mo loom ji kə nə*  
 girls PL fetch water 3PL approach come PREP ANAPH  
 'girls fetch water and they approach with it...'

Recall from a previous discussion that the anaphoric *nə* also functions as the definite marker, e.g.:

- (24) *n-naa jiel wur dafuan nə*  
 1SG-see pity 3M hare DEF  
 'I pity him, the hare.'

2.5.2. *Anaphora nə as complementizer*

The anaphora occurs as a complementizer after *verba dicendi* *sat* 'to say', *tal* 'to ask', and also after verbs denoting mental activity, equivalents of 'know', 'think', 'remember', 'recall'. The complementizer *nə* carries neither an epistemic nor a deontic function after these verbs. The deontic value of the complement clause depends to a large degree on the verb of the main clause, e.g.:

- (25) *wu sat nə n-nas mo*  
 3M say COMP 1SG-beat 3PL  
 'He said that I beat them.' or  
 'He said that I should beat them.'
- (26) *mo sat nə de pa se*  
 3PL say COMP CONS 3F eat  
 'They said that she should eat it.'
- (27) *wa daar nə de man pa*  
 3F scream COMP 3FL know 3FL  
 'She screamed that she knows her.'
- (28) *wu suun nə di naa pa*  
 3M dream 3ML see 3FL  
 'He dreamed that he saw her.'
- (29) *wu ben nə wu pan an*  
 3M think COMP 3M remember 1SG  
 'He thinks he remembers me.'
- (30) *n-pan nə man wur*  
 1SG-think COMP know 3M  
 'I think that I know him.'
- (31) *n-man nə ba wur kə haa n-mapun kas*  
 know COMP NEG 3M PERF return PREP-NEG  
 'I know that he didn't return to M.'
- (32) *n-kak nə a səm n-Mupun-é*  
 1SG-think COMP COP name PREP-M.-Q  
 'I think it is a name in Mupun, isn't it?'

The fact that *nə* has no modal function after *verba dicendi* provides evidence that its primary function within a given language is to mark the complement as belonging to the *de dicto* domain. The primacy of this function is further reinforced by the fact that, unlike in Indo-European languages, the interrogative sentences with the main verb *tal* 'to ask' have the same complementizer as indicative sentences with the verb *sat* 'to say'. And the reason they have the same complementizer is that both are verbs of saying. The modality of the complement clause after the verb *tal* is marked by one of several clause final interrogative markers, but it may also be marked by an additional modal complementizer *két* 'whether' (not illustrated here), e.g.:

- (33) *mo tal pə an nə n-man pa-e*  
 3PL ask PREP 1SG COMP 1SG-know 3FL-Q  
 'They asked me whether I know her.'
- (34) *a man nə ta n-kat me gwar si pə*  
 2M know COMP fall 1SG-meet QUANT man QUANT PREP  
*swup as fin-on*  
 wash dog 3M-Q  
 'Can you imagine that I came across a man washing his dog?'
- (35) *mo mbə tal pə mis nə nə niwa siak -é*  
 3PL FUT ask PREP man DEF COMP 3PL.L together-Q  
 'They will ask the husband: are you together?'

Additional evidence for the function of *nə* as a marker of a *de dicto* complement is provided in the next section.

### 2.5.3. Complementizer *nə* as the sole marker of *de dicto*

Complementizer *nə*, without any modal function, can also occur in sentences whose main verbs cannot be characterized as *verba dicendi*. The importance of this fact for the proposed hypothesis is the following: If it is indeed true that *nə* marks the complement clause as being a *de dicto* category, how does one explain sentences with modality neutral complementizer *nə* but without a verb of saying in the main clause. I would like to propose that such sentences, rather than weakening the hypothesis, provide additional support for it. Consider the following sentences:

- (36) *n-sin takarda n-ya nə a la a taŋ*  
 1SG-give book PREP-2M COMP 2M take 2M read  
 'I gave you a book to read.'
- (37) *kadə mu cin krismas kes be wu ji kə me*  
 when 1PL make Christmas finish CONS 3M come ASSOC QUANT  
*jarida n-an nə n-la n-taŋ*  
 paper PREP-1SG COMP 1SG-take 1SG read  
 'When we finished celebrating Christmas he brought me a newspaper to read.'

These sentences were interpreted as containing, in the embedded clause, an underlying verb *sat* 'to say'. In order to check the native speakers' intuition with respect to these sentences, I asked for and obtained the following sentence:

- (38) *wa cet lua n-an nə n-se*  
 3F cook meat PREP-1SG COMP 1SG-eat  
 'She cooked meat for me and told me to eat.'

This sentence cannot be used if there is no actual contact between the person who cooked the meat and the speaker. Thus it cannot be used felicitously if the speaker returns home, finds the meat, but the cook is not there. Sentence (38) is therefore not an equivalent of 'she cooked meat for me to eat' because the felicity of the English clause does not depend on the participants' being in the same place at the same time. Without the complementizer *nə*, there is no requirement of direct contact between the subject of the main clause and the subject of the embedded clause, and the following sentence is grammatical in the situation in which the previous one is ungrammatical:

- (39) *wacet lua n-an n-se*  
 3F cook meat PREP-1SG 1SG-eat  
 'She cooked meat for me and I ate it.'

Thus the complementizer *nə* serves as the only marker of the *de dicto* category. Additional evidence for this claim comes from sentences of the structure: NP *nə* S, i.e. sentences without any verb in the main clause. The 'missing' verb is *sat* 'say'. In elicited sentences the verb *sat* is most often present. In conversations, however, the verb *sat* is most often omitted, e.g.:

Elicited:

- (40) *n-sat nə i*  
 1SG-say COMP yes  
 'I said yes', 'I agreed.'
- (41) *wu sat nə i*  
 3M say yes  
 'He said yes', 'he agreed.'
- (42) *a sat n-wurnə əŋ*  
 2M PREP-3M COMP yes  
 'Tell him yes.'

Conversations:

- (43) *wur nə i*  
 'He said yes', 'he agreed.'
- (44) *npuun fen nə*  
 father 1SG COMP  
 'My father said that...'
- (45) *an nə niwa maŋ can nua ji n-mun baa*  
 1SG COMP 3PL take hoe 3PL come PREP-1PL come  
 'I told them to take a hoe and come to join us.'
- (46) *an nə gwar taŋ me me mbi n-an*  
 1SG COMP 3ML find QUANT thing PREP-1SG  
 'I told him that he should find something for me.'

The verb *sat* 'to say' may of course appear in natural conversations, e.g.:

- (47) *wur pə sat nə dəm du bal kawey*  
 3M PREP say COMP go 3PL.L marry anyhow  
 'He will tell them to go and marry anyhow.'

From the syntactic point of view, the sentences with the missing main clause verb are interesting because they cannot be analyzed as cases of simple deletion of the phonetic form of the verb. The pronominal subject in the 'missing' verb clauses does not occur in the preverbal form but rather in the independent form, i.e. the form in which it occurs following prepositions, verbs, and as subject in equational sentences. Sentences without the main clause verb of saying provide one more piece of evidence that the comple-

mentizer is used as an independent marker of the *de dicto* category. The presence of the complementizer *nə* is not evoked by the main clause verb.

An additional piece of evidence that *nə* marks a *de dicto* category is provided by the following consideration. The verb *dém* means 'want' and also 'agree'. This polysemy is known to occur in other African languages (Bernd Heine, p.c.). When this verb is followed by the complementizer *nə* it means 'agree'. When *dém* is followed by the deontic complementizer *kə* the verb means 'want', e.g.:

- (48) *n-dem nə wacet mbise n-darap*  
 1SG-agree COMP 3F cook food PREP-Darap  
 'I agree that she cook for Darap.'

cf.

- (49) *n-dem kə n-war cet mbise di n-darap*  
 1SG-want COMP PREP-3F cook food Anaph PREP-Darap  
 'I want her to cook for Darap.'

#### 2.5.4. Epistemic modality after *verba dicendi*

Recall that the complementizer *nə* does not have a modal function when it occurs after verbs of saying. An epistemic modality after *verba dicendi* is marked through the use of the marker *paa*, which indicates 'doubt in truth'. The marker is derived most probably from the verb *paa* 'to think'. The modal *paa* has all the characteristics of an auxiliary verb: The first and second person pronouns follow *paa* and precede other verbs in the clause, while third person pronoun precedes *paa*.

The modal *paa* can not be used with the first person subject of the main clause because the speaker cannot doubt the truth of his own proposition (cf. Frajzyngier, 1985b), e.g.:

- (50) *a sat nə wu paa mbə yo muan*  
 2M say COMP 3M FUT go trip  
 'You said that he will go on a trip (but he may or may not go).'
- (51) *n-sat yanə wur mbə yo muan*  
 1SG-say 2MCOMP  
 'I told you that he is going on a trip.'
- (52) *\*n-sat ya nə wur paa mbə yo muan*  
 for 'I told you that he is going on a trip but I don't think so.'

If the subject of the embedded clause is first person, then the proposition of the embedded clause marked by the complementizer *paa* is interpreted as false, e.g.:

- (53) *wu sat nə a mun paa mu can əɣ nə*  
 3M say COMP COP 1PL 1PL cut goat DEF  
 'He said that it was we who slaughtered the goat (but we didn't).'

cf.

- (54) *wu sat nə diŋ paa di cin hankuri*  
 'He said that he was patient (but I have my doubts).'

- (55) *wu sat nə a yi paa yi-can əɣ nə*  
 3M say COMP COP 2F 2F-cut goat DEF  
 'He said that it was you who slaughtered the goat (but I doubt it).'

More evidence that the modal *paa* indicates doubt in truth is provided by the fact that it cannot be used after the main clause verb *yen* 'to think', e.g.:

- (56) \**n-yen wu paa siwa təbaa*  
 1SG-think 3M drink tobacco  
 for 'I thought that he smoked tobacco.'

The explanation for the ungrammaticality of the above sentence rests in the fact that the verb *yen* 'think' intrinsically indicates doubt in truth. The construction *n-yen -S* 'I think that S' in Mupun as in English is used as a device to mark doubt in truth. It is entirely possible, that using two devices whose primary function is to mark the same semantic category is considered superfluous and therefore sentences such as (54) are ungrammatical.

#### 2.5.5. *De dicto and the hypothetical: Complements of verbs of perception*

After verbs of perception, such as *nāa* 'see', *klāŋ* 'hear', the complementizer *nə* indicates that the evidence for the event is indirect, that the event itself has not been observed, e.g.:

- (57) *n-naa nə wu ta n-yil*  
 1SG-see COMP 3M fall PREP-ground  
 'I saw that he fell down.'

- (58) *n-naa nə wu pəsiwa təbaa*  
 COMP PREP smoke tobacco  
 'I saw that he smoked tobacco.'
- (59) *wu kləŋ nə n-ta n-yil*  
 3M hear COMP 1SG-fall PREP-ground  
 'He heard that I fell down.'

Similarly to English (cf. Kirsner and Thompson 1976), the difference between sentences without and sentences with a complementizer is that the former indicate direct evidence, while for the latter the evidence is indirect. Thus the verb *kləŋ* 'hear' indicates only hearsay when followed by the complementizer *nə*.

- (60) *wu kləŋ n-taa n-yil*  
 1SG-fall PREP-ground  
 'He heard me fall down.'
- (61) *wu kləŋ nə n-taa itn-yil*  
 'He heard that I fell down.'

An indication of the function of *nə* after verbs of perception is provided by spontaneous translation of the verb *naa* 'to see' evoked by the presence of the complementizer, viz.:

- (62) *n-naa a can əγ*  
 1SG-see 2M slaughter goat  
 'I saw you slaughter a goat.'
- (63) *n-naa nə a can əγ*  
 'I thought that you slaughtered a goat.'

An additional piece of evidence for the function of *nə* is provided by essentially negative information: The doubt in truth marker *paa* cannot be used as a complementizer with the verbs of perception, hence this functional gap is filled by the complementizer *nə*, e.g.:

- (64) *\*n-naa wu paa ta n-yil*  
 1SG-see 3M fall PREP-ground  
 for 'I saw that he fell down.'
- (65) *\*n-naa wu paa pə siwa təbaa*  
 PREP drink tobacco  
 for 'I saw that he smoked tobacco.'

- (66) \**wu kləŋ paa n-ta n-yil*  
 3M hear 1SG-fall PREP-ground  
 for 'He heard that I fell down.'
- (67) \**war kləŋ wur paa can əy*  
 3F hear 3M slaughter goat  
 for 'She heard that he has slaughtered a goat.'

We see therefore a systematic relationship between the verbs of the main clause, the function of the complementizer, and the modality of the embedded clause. The complementizer *nə* occurring after *verba dicendi* has no modal function. The epistemic modality after such verbs is marked by the modal *paa*. When the complementizer *nə* occurs after other verbs it acquires the function of epistemic modality marker. Modal *paa* cannot be used after *non verba dicendi*. I believe that a similar development of the function of the complementizer derived from demonstrative occurred in other languages as well.

### 3. RELATIVE CLAUSES

There is a partial or complete overlap in the forms that function as complementizers, definite markers, and relative clause markers. In many languages the forms of these markers are similar to remote demonstratives or neutral pronouns, as the following data from a selection of languages from various families indicate:

Table 1.

Language	Demonstrative	Definite	Complement	Relative
German	das/die/der	das/die/der	dass	das/die/der
Yiddish			vos	vos
English	that	the < that	that	that/wh
Ge'ez	za	Ø	za	za
Amharic	ya	u/w	ya/ala	ya
Beja	ūn/tún	ū/tū	Ø	ū/tū
Mupun	<i>nə</i>	<i>nə</i>	<i>nə</i>	<i>də</i>
Ewe	si/sia	a/lá	be/béna	sì
Toba Batak	na	na	na	
Yurok		ku/k'i		ku/k'i
K'ekchi		li		li
Drehu	la	la	la-ka	

It is tempting to use the notion of *de dicto* domain as a common element that would explain the formal similarity among the three grammatical categories. What follows is then a speculation on the possible connection between the relative clause formation in some languages and the demonstrative, definite, and complementizers after *verba dicendi*.

I would like to consider an analysis whereby, in some languages relative clauses have been conceptualized as a comment interjected into another proposition. With respect to the proposition into which it is interjected, the relative clause is a *de dicto* category. Hence there is the option of marking by the same marker that is used as the complementizer or by the same marker that marks the definite, i.e. by markers that elsewhere mark other *de dicto* categories in the language. If we assume that the relative clause is marked as an interjected proposition with respect to the sentence in which it is embedded, we can explain why it is that the demonstratives occur as relative clause markers predominantly in post-nominal relative clauses (cf. Keenan, 1985). In such sentences, the main proposition has already begun, and it is interrupted by the relative clause, which is essentially a comment on one of the components of the main proposition or a modification of one of the components. In pre-nominal relative clauses, the main proposition will usually start after the relative clause has ended, hence there is no interjection, and thus no motivation to treat any element of the utterance as being more remote, *de dicto*, than the other. In languages in which both pre-nominal and post-nominal relative clauses occur, the post-nominal relative clauses must have the demonstrative preceding them, while the pre-nominal clauses may or may not have the demonstrative, e.g.:

(68) *der Mann, der in seinem Büro arbeitet*  
 ART man who in his study works  
 'The man who is working in his study.'

(69) *der in seinem Büro arbeitende Mann*  
 ART  
 'The man who is working in his study.' (Keenan, 1985:144)<sup>2</sup>

(70) *ein in seinem Büro arbeitender Mann*  
 ART(INDEF)  
 'A man who is working in his study.'

(71) *poika joka tanssi poydalla oli sairas*  
 boy REL dance on-table was sick  
 'The boy who danced on the table was sick.'

- (72) *poydalla tanssinut poika oli sairas*  
 'The boy who danced on the table was sick.' (Finnish, Karlsson, 1972:106 ff.)

Relative clauses in Amharic, which are introduced by the morpheme *ya-*, may serve as possible counter-evidence for the lack of demonstratives in pre-nominal relative. The morpheme *ya-* which at least historically is derived from a demonstrative precedes the prenominal relative clause:

- (73) *ya-matta saw*  
 REL came man  
 'A/the man who came.' (Cohen, 1936:115)

Since this morpheme is also a marker of the genitive construction, the relative clause in Amharic may be seen as a variant of the genitive construction, with the relative clause being a syntactic equivalent of the 'possessor' phrase, e.g.:

- (74) *ya-šum baqlo*  
 chief mule  
 'A/the mule of the chief.'
- (75) *ya-baqlo əgər*  
 foot  
 'The foot of the mule.' (Cohen, 1936:78)

Many Tibeto-Burman languages also have genitive constructions used to form relative clauses (Scott De Lancey, p.c.).

#### 4. DE DICTO REFERENCE SYSTEMS

##### 4.1. Two properties

The existence of two sets of pronouns, one of which refers only to the *de re* objects and the other only to the *de dicto* objects, is the most obvious evidence for the validity of the *de re-de dicto* distinction. The best known examples of the existence of two sets of pronouns are in languages with logophoric systems. Logophoric systems, whether identified as such or not, have been described with various degrees of completeness in Jungraithmayr, 1963/64; Cloarec-Heiss, 1969; Burquest, 1973; Hagège, 1974, who coined the term; Clements, 1975; Ebert, 1979; Hyman and Comrie, 1981; Stanley, 1982;

and Frajzyngier, 1985. As the term was originally used by Hagège, it designated pronouns occurring in the embedded clauses whose referent was the subject of a *verbum dicendi* in the main clause, e.g.:

- (76) *wu sat nə di nas an*  
 3M say COMP 3MLOG beat 1SG  
 'He<sub>1</sub> said that he<sub>1</sub> beat me.'
- (77) *wu sat nə wu nas an*  
 3M 3M  
 'he<sub>1</sub> said that he<sub>2</sub> beat me.' (Mupun)

A less well-known phenomenon is the existence of a formal distinction between the addressee of a current discourse (a *de re* addressee) and the addressee of a reported discourse (a *de dicto* addressee), e.g.:

- (78) *ca, peemu ta kayu laa mu mijiba*  
 say 2P FUT drive-out man REL stranger  
 'He said that you (reported speech addressee) will drive the stranger away.'
- (79) *ca, ka (2M) ta kayu laa mu mijiba*  
 'He said that you(m.) are going to drive the stranger away.' (Pero, Frajzyngier, 1985)

Since such systems have been described in the references listed, I will take their existence as a proof of the distinction between *de dicto* and *de re* reference and not dwell on it anymore.

#### 4.2. Locative anaphora

In some languages there exists a formal distinction between demonstratives referring to a *de re* location and demonstratives referring to a location mentioned in speech, e.g.:

- (80) *wu wa di*  
 3M come home there (Anaph.)  
 'He came back from there.'
- (81) *wu wa sə*  
 3M return there (Deictic) (Mupun)  
 'He came back from there.'

The *de dicto* demonstrative refers only to a locative argument mentioned in speech. The deictic demonstrative refers only to a location that can be pointed to. Note that (81) with a deictic demonstrative is ungrammatical if referring to a location mentioned in speech. Similarly (80) is ungrammatical if accompanied by some kind of a gesture pointing to a place (for a description of this type of anaphora see Frajzyngier, 1989).

In many languages the locative anaphora is derived from a remote demonstrative:

- (82) Put the book here  
Put the book there  
If you took the book from a box put it back there /\*here
- (83) *Položi etu knigu syuda*  
put this book here  
'Put this book here.'
- (84) *Položi etu knigu tuda*  
there  
'Put this book there.'
- (85) *Esli ty vzjal knigu iz jaščika tak položi eo obratno tuda/*  
if 2M take book from box then put it back there  
*\*sjuda*  
here (Russian)  
'If you took a book from the box put it back there.'
- (86) *Mets cet livre ici*  
*Mets cet livre là*  
*Si tu as pris le livre d'une boite remettre le là.* (French)

The use of the remote rather than the proximate deictic in the anaphoric function is not accidental, as shown by the sample in Table 2:

The fact that in many languages the anaphoric locative is derived from a remote deictic can be explained by metaphoric extension, i.e. in the way in which Greenberg, 1985 explained emergence of the discourse deixis.

#### 4.3. Formal distinctions in the *de dicto* referential systems

In the discussion to follow I consider that the *de dicto* category and the hypothetical mood overlap semantically in that neither of them refers to a domain of reality. As has been pointed out already in many languages, the

Table 2. *Locative demonstratives*

	Proximate	Remote	Anaphoric
English	here	there	there
German	hier	da	da
French	ici	là	là
Spanish	aquí	allá, allí/ahí	allí/ahí
Russian	здесь	там	там (Stative)
	туда	туда (Movement)	
Polish	tutaj	tam	tam
Hausa	nan	can	can

hypothetical mood is encoded as a *de dicto* category. It appears that the number of formal distinctions encoded in the *de re* reference system is different from the number of formal distinctions encoded in the *de dicto* reference system. Typically the *de dicto* reference system will have fewer distinctions than the *de re* reference system. In the following sections I will consider distinctions made within the systems addressee pronouns, interrogative pronouns, and quantifiers.

#### 4.3.1. Addressees in the *de dicto* and *de re* domains

In many languages the gender of the addressee is formally encoded, e.g.:

(87) *kogo widziałeś*  
 whom-ACC see-PAST-2M  
 'Who did you (m.) see?'

(88) *kogo widziałaś*  
 who-ACC see-PAST-2F  
 'Whom did you (f.) see?' (Polish)

In a hypothetical discourse, the addressee is always second person masculine, as in the following fragment from Szymborska's 'Pisanie życiorysu' where the poet talks to a hypothetical addressee:

(89) *Pisz tak jakbyś ze sobą nigdy nie*  
 write-IMPER-SG SO as if with REFL never NEG.  
*rozmawiał i omijał z daleka*  
 talk-2SG-M-PAST and avoid-2SG-M-PAST from afar  
 'Write as if you have never talked with yourself, and avoided yourself from afar.'

The sentence as it stands indicates an addressee that could be either masculine or feminine. If Szymborska were to use verbs in the feminine rather than masculine form, the addressee would be interpreted as a concrete woman whose identity happens to be unknown rather than a hypothetical addressee that may be a man or a woman. Compare the following sentences built on the constituents of the line from Szymborska:

- (90) *z kim rozmawiałeś a kogo omijałeś*  
 with whom talk-PAST 2M-SG CONJ who-ACC avoid-PAST-2M-SG  
*z daleka*  
 from afar  
 'With whom did you (m.) talk and whom did you (m.) avoid from afar?' (may be interpreted as having a *de dicto* or a *de re* addressee)
- (91) *z kim rozmawiałaś a kogo omijałaś*  
 with whom talk-PAST 2F-SG CONJ who-ACC avoid-PAST-2F-SG  
*z daleka*  
 from afar  
 'With whom did you (f.) talk and whom did you (f.) avoid from afar?' (can be interpreted as having only a *de re* addressee)

Striking evidence for the distinction between a *de dicto* reference system and a *de re* reference system exists in Mupun. The language has a formal distinction between the second person masculine and second person feminine singular addressee of an actual speech event, e.g.:

- (92) *ya pə dem a mi*  
 2M PREP want COP what  
 'What do you (m.) want?'
- (93) *yi pə dem a mi*  
 2F PREP want COP what  
 'What do you (f.) want?'

In a hypothetical event this distinction does not exist, and instead there is only one form for the addressee, second person masculine. In the next four examples a female speaker talks about obviously female participants in hypothetical events, and yet she refers to those participants by second person masculine *a/ka* rather than by second person feminine *yi*, which she would have used were she to talk in the situation with real, rather than hypothetical, addressees of the propositions involved:

- (94) *gaskiya, get kadan ka kə ak ba də mo pə*  
 truly PAST if 2M with pregnancy NEG PAST 3PL PROGR  
*bal dik n-ka*  
 marry PREP-2M  
 'Truly, in the past if you were pregnant they wouldn't marry you.'
- (95) *mo yap wur fua mo we mo sei mo man nə*  
 3PL check breast 2M PL thing PL till 3PL know COMP  
*ka nəən ak daŋ sə mo bal n ka*  
 2M lack pregnancy before they marry PREP 2M  
 'Before they marry you, they will check your breasts, etc., till they are satisfied that you are not pregnant.'
- (96) *kat naan get sin anjirem məə n-ya məndon dak sə i*  
 if God PAST give placenta ANAPH PREP-2M one only  
 'If God gave you only one placenta...'
- (97) *a da sian kə sə daŋ*  
 2M go remove PREP DEM like that  
 'You go and get an abortion just like that.'

These sentences are not grammatical errors, slips of the tongue, or some other 'exceptional' utterances. Their analyses with other native speakers, confirmed every single one of them, not only as grammatical, but actually as the only possible variant in the context of the conversation.

It appears that in a hypothetical event there is also no number distinction. In the following sentence, the topicalized subject is marked for plural, and it is inherently feminine. And yet the pronominal form preceding the verb is *a*, the second person masculine singular subject pronoun:

- (98) *jirap dā n-yak sə mo a vwan sar vwan daa*  
 girls REL PREP-time DEM PL 2M wash hand wash dish  
 'The girls of nowadays, just wash their hands, wash dishes.' (the modern girls do not want to do anything dirty)

#### 4.3.2. Interrogative pronouns

The distinction between *de re* and *de dicto* reference systems can explain at least one phenomenon that has not been explained so far. It is well known that interrogative pronouns in many languages trigger only one verb

'agreement' while non-interrogative pronouns may trigger more than one agreement, e.g.:

- (99) *Kto to kupił*  
 who it buy-PAST-3M-SG  
 'Who bought it?'

cf.

- \**Kto to kupiła*  
 who it buy-PAST-3F-SG (Polish)

The non-interrogative usage of the 'interrogative' pronoun has the same properties as the interrogative usage, viz., there is only one system of agreement, e.g.:

- (100) *Białe plamy jak by kto wapnem*  
 white stains as if somebody whitewash-INSTR  
*pochlapał*  
 splash-PAST-3M-SG  
 'White stains, as if somebody splashed whitewash all over.' (Polish)

cf.

- \**Białe plamy jak by kto wapnem*  
 white stains as if somebody whitewash-INSTR  
*pochlapała*  
 splash-PAST-3F-SG

If one accepts the distinction between *de dicto* and *de re* reference, the explanation of why the interrogative should have no gender distinction becomes straightforward: *kto* 'who' and *co* 'what' are not identified until the answer is provided. They are thus not *de re* but rather *de dicto* elements. Therefore they have a reduced system of distinctions like other *de dicto* elements in Polish. If, however, an interrogative is used with respect to a specific group of people, i.e. when we know at least one element of the possible answer, then instead of the general interrogative the so-called relative pronouns are used. Thus if one were to address a group of boys and suspected that one of them bought the given object, one would say:

- (101) *który*        *kupil*  
 who (M-SG.) buy-PAST-M-SG  
 'Which one bought (it)?'

Addressing a group of girls in similar circumstances one would say:

- (102) *która*        *kupila*  
 who (F-SG.) buy-PAST-F-SG  
 'Which one bought (it)?'

The gender distinction is also made in plural pronouns referring to the actual participants, viz. *którzy* (M.PL) and *które* (F.PL). No number distinction is made in interrogative pronouns when the answer is completely unknown.

Invoking the notion of *de dicto* domain we can perhaps explain the often noted but left unexplained syncretism of the interrogative and indefinite pronouns, such as in English clauses:

- (103) Watch what you eat  
 Watch who you talk to

This syncretism is known in many Indo-European languages (ex. 100 above in Polish) and was already a feature of Proto-Indo-European (cf. Meillet, 1937). But it occurs also in other languages, e.g. in Hungarian, Uto-Aztecan, Chadic, to name just a few of the unrelated families in which the indefinite and interrogative pronouns have an identical form. The indefinite pronouns refer to some person, thing, place, etc. whose further identity is unknown, hence very much an argument belonging to a hypothetical domain, the same domain to which interrogative pronouns belong. The identical coding of the two interrogative and the indefinite pronouns in so many languages suggests that rather than having two different sets, we have only one set, which is used in different syntactic environments, but always in the same function. This conclusion is especially evident where specific questions are encoded by other means along with the interrogative pronouns (cf. Frajzyngier, 1985c).

#### 4.3.3. *Plural verb in an interrogative clause*

There is a verbal prefix *po-* in Polish. With many verbs this prefix indicates plurality of object and plurality of action, e.g.:

(104) *Piotr otworzył okno*  
 Peter open-3M-past window  
 'Peter opened the window.'

(105) *Piotr pootwierał okna*  
 Peter PL-open-PAST-3M-SG window-PL  
 'Peter opened up the windows.'

In interrogative sentences the plural form of the verb is felicitous only as an echo question. Thus the following sentence would not be felicitous unless it is preceded by some proposition in which the verbs have the plural form, such as 'X opened up windows, Y opened up doors':

(106) *Co Piotr pootwierał?*  
 what Peter PL-open-3M-SG  
 'What did Peter open?'

The analogous question with a singular verb, however, is felicitous in situations in which the plural form is not:

(107) *Co Piotr otworzył*  
 open-PAST-3M-SG  
 'What did Peter open?'

A possible explanation of the different felicity conditions for the singular and plural form of the verb in interrogative sentences lies in presuppositions one has to make before asking the question. The important fact is that for a speaker to use the plural form of the verb in an interrogative sentence, he has to assume that the object is plural. The speaker does not have to make any assumptions about the number of the object in order to use the singular form of the verb. The link between interrogative and hypothetical (i.e. *de dicto*) is that in the interrogative we refer to an object whose characteristics are not as fully known as in a *de re* reference.

#### 4.3.4. *Quantifiers and de dicto referents*

In some languages quantifiers make a distinction between masculine and feminine forms. Thus in Polish an appropriately coded quantifier has to be used with masculine and feminine nouns, or when addressing somebody, e.g.:

(108) *każd-y chłopiec*

every (M) boy

'Every boy.'

*každ-a dziewczyna*

every (F) girl

'every girl.'

(109) *każd-y z was i każd-a z was*

each (M) PREP you(PL) CONJ each (F) PREP you(PL)

'Every one of you (M) and every one of you (F).'

In a reference to hypothetical persons only the masculine form is used, e.g.:

(110) *dla każdego coś innego*

for everybody-DAT something different

'Something different for everybody.'

A similar situation obtains in German. Ulrike Claudi has drawn my attention to the following perfectly grammatical sentence once used on a tampon package. The quantifier in this sentence is in the masculine form:

(111) *Die Menstruation ist bei jedem etwas anders*

DEF menstruation is for everybody (M) a little bit different

'Everybody has a slightly different menstruation.' (Pusch, 1984)

Yet if one were to address a group of girls, one would use the feminine form of the quantifier, *jeder*.

#### 4.3.5. *Gender in the de dicto domain in English*

I would like to claim that the *de dicto*–*de re* distinction is/was also encoded in the reference system of English and that, in particular, for many speakers of English the system of reference to the *de dicto* domain is reduced when compared to the system of reference to the *de re* domain. Let us take a typical sentence from contemporary academic English (all underlining mine).

(112) "The reader will find in this superb volume almost anything he/she might wish to know about English grammar and its rules."  
(Reference Book Review)

And now two typical sentences from academic English of some fifty years ago:

- (113) “. . . and in both cases I have given references, in the Notes and Bibliography, which will enable the reader to look into things, and, if he chooses, to arrive at an opinion of his own.” (Bloomfield, 1933:VII)
- (114) “The ultimate success of the worker in Africa, whether he be trader, settler, missionary, anthropologist, educator, or administrator, depends to a large extent upon his language performance.” (Ward, 1937:6).

As examples from Bloomfield and Ward indicate, the system operated and for many speakers still operates in the following way: If a reference is made to a [+human] noun from a *de dicto* domain, and that noun is not inherently feminine, the form used is the third person pronoun ‘he’. It is important that the reference is made to an element from the *de dicto* domain rather than to an element that one could consider to be a ‘generic’. In recent times we have seen a change, at least in some varieties of English, whereby a reference is made as in the quote from Reference Book Review (ex.112). Whatever was the social motivation for this change, it reflects an analysis that did not take into account the *de dicto–de re* distinction. The sporadic acceptance of this change reflects a small triumph of social pressure over language structure.

## 5. CONCLUSIONS

I have shown that *de dicto–de re* distinction may be usefully applied to explain several apparently unrelated phenomena in language structure. Invoking this distinction, one can provide a motivated explanation of why definite articles, complementizers after *verba dicendi*, and postnominal relative clauses have similar markers in a number of unrelated languages. Lack of demonstratives as markers of prenominal relative clauses follows naturally from the proposed hypothesis. I have provided an explanation for the use of demonstrative pronouns as complementizers after *verba dicendi*, and their use as inference-only markers after verbs of perception. The explanation implies that a rather abstract notion of reference to an element from the domain of speech emerged independently in a number of unrelated languages. I have shown that in a number of languages there exist two sets of pronouns, one referring

to *de re* elements and the other to *de dicto* elements. The set referring to the *de dicto* domain does not encode so many distinctions as the set referring to the domain *de re*.

## ABBREVIATIONS

ANAPH	anaphora
ART	article
CONS	consecutive
F	feminine
FL	feminine logophoric
M	masculine
ML	masculine logophoric
PL.L	plural logophoric

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## NOTES

1. The following analysis and example is due to Dwight Bolinger in private correspondence.
2. Although Keenan, *op cit.* considers sentence (69) to be an instance of the relative clause, this analysis is not shared by other linguists (Ulrike Claudi and Bernd Heine, *p.c.*). The force of my argument here hinges not on the status of this sentence but on the fact that it represents a pre-nominal rather than a post-nominal modification of a noun by a clause.

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