Givenness, Implicature, and the Form of Referring Expressions
Author(s): Jeanette K. Gundel, Nancy Hedberg, and Ron Zacharski
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Givenness, Implicature, and the Form of Referring Expressions in Discourse

Jeanette K. Gundel
University of Minnesota

Nancy Hedberg
Cornell University
Simon Fraser University

Ron Zacharski
University of Minnesota

Grice's Cooperative Principle and the associated maxims attempt to provide an explanation for how it is that we can communicate more than we literally say. In this paper, we outline a theory that builds on Grice's work as a basis for explaining the choice of coding for referents in natural language discourse.

It is generally recognized that the form of natural language expressions correlates with cognitive statuses such as givenness, topic and presupposition, which a cooperative speaker can assume on the part of the addressee. In two previous papers (Gundel, Hedberg and Zacharski 1988, 1989), we proposed that there are five cognitive statuses relevant to the form of referring expressions in English discourse, and that these are related in the Givenness Hierarchy shown in (1). In the present paper, we extend the investigation to six additional languages - Arabic, Chinese, Japanese, Korean, Russian, and Spanish.

(1) **The givenness hierarchy**[1]

in focus	>	activated	>	familiar	>	uniquely identifiable	>	type identifiable
{*it*}		{*that* / *this* / *this* N}		{*that* N}		{*the* N}		{*a* N / indefinite *this* N}

1. The Givenness Hierarchy

Each status on the hierarchy is a necessary and sufficient condition for the appropriate use of the English form or forms listed under it. Use of these forms thus conventionally implicates that the associated cognitive status is met and, since each status entails all lower statuses, it also conventionally implicates that all lower statuses (i.e. statuses to the right) have been met. Thus, the definite article *the* conventionally implicates 'you can identify this', the demonstrative determiner *that* conventionally implicates 'you are familiar with this', and therefore can identify it, and so on. The statuses are briefly characterized below.

type identifiable In the weakest case, a form is appropriate only if the speaker can justifiably assume that the addressee is able to identify the type of entity referred to, i.e. the class of objects described by that expression. This status, which we refer to as 'type identifiable', is necessary for appropriate use of any referring expression and it is sufficient for indefinite reference. Thus, *a dog* or *this dog* in (2) is appropriate if the addressee can be assumed to know the meaning of the word *dog*.

(2) I couldn't sleep last night. {**A** / **This**} **dog next door** kept me awake.

uniquely identifiable Definite descriptions differ from indefinite ones in that their appropriate use requires that the addressee can not only identify the **type** of entity being referred to, but can also associate a representation with the particular entity or entities that the speaker has in mind. This status, which we refer to as 'uniquely identifiable', is a necessary condition for all definite reference, and it is both necessary and sufficient for appropriate use of the definite article *the*. Identifiability may be based on previous familiarity with the referent, but, as Hawkins (1978) and others have pointed out, it doesn't have to be. The basis for identification may be fully encoded in the form itself. Thus, the phrase *the dog next door* in (3) is perfectly felicitous even if the addressee has no previous knowledge that the speaker's neighbor has a dog.

(3) I couldn't sleep last night. **The dog next door** kept me awake.

familiar Although identifiability doesn't require previous knowledge of the referent, it is usually the case that the referent of an identifiable noun phrase is identifiable because both speaker and addressee are already familiar with it, and thus have some mental representation of it. This status, which we refer to as 'familiar', is a necessary condition for use of all definite demonstratives and pronouns, and it is sufficient for the demonstrative determiner *that*. Thus, (4) unlike (3) is felicitous only if the addressee already knows that the speaker's neighbor has a dog.

(4) I couldn't sleep last night. **That dog next door** kept me awake.

activated The set of familiar entities includes those which the speech participants are currently aware of, i.e. have access to, due to their presence in the immediate discourse context. We refer to this status as 'activated'. Activated entities may have been linguistically introduced, or they may be activated by virtue of their presence in the extralinguistic context. Activated entities, therefore, always include the speech participants themselves.

Activation is necessary for all pronominal forms, and it is sufficient for appropriate use of the demonstrative pronoun *that* as well as for stressed personal pronouns. The pronoun *that* in (5) can thus be used appropriately to refer to the barking of a dog only if a dog has actually been barking during the speech event or if barking had been introduced in the immediate linguistic context.

(5) I couldn't sleep last night. **That** kept me awake.

Activation is also necessary for the demonstrative determiner *this*.

Both determiner and pronominal *this* have the additional condition that the referent be not only activated, but speaker-activated, by virtue of its inclusion in the speaker's context space (cf. Fillmore 1975, 1982, Lakoff 1974). For example, the phrase *this dog* in (6) is inappropriate in the context of A's question.

(6) A: Have you seen the neighbor's dog?
B: Yes, and **that dog** kept me awake all night.
B': ?? Yes, and **this dog** kept me awake all night.

But in (7), where the dog has been introduced by the speaker, either *this dog* or *that dog* is appropriate.

(7) My neighbor has a dog. {**This** / **That**} dog kept me awake.

in focus Finally the most highly activated entities are not only in the speaker's and hearer's awareness but are also at the center of attention at the current point in the discourse. This status, which we refer to as 'in focus', includes activated entities which are likely to be continued as topics of subsequent utterances. The status 'in focus' thus not only involves the assumed status of an entity in memory but also its relative importance at a given point in the discourse. In focus is a necessary condition for appropriate use of zero and unstressed pronominals.

Thus, since the Bull Mastiff is the topic of (8a), it can be appropriately referred to with either *that* or *it* in (8b). But in (9), where the Bull Mastiff has been introduced in a phrase that functions primarily to restrict the referent of the direct object, reference with the unstressed pronoun *it* is inappropriate.[2]

(8) a. My neighbor's Bull Mastiff bit George.
b. {**It's** / **That's**} the same dog that bit Mary Ben.

(9) a. Sears delivered new siding to my neighbors with the Bull Mastiff
b. **That's** the same dog that bit Mary Ben.
b'. **#It's** the same dog that bit Mary Ben.
c. Anyway, this siding is real hideous and...

2. The Givenness Hierarchy and Grice's Maxim of Quantity

Since each of the cognitive statuses in the Givenness Hierarchy entails all lower statuses, reference with a particular form also implies the possibility of reference with forms associated with lower statuses. In our earlier examination of definite referring expressions in English data drawn from a variety of spoken and written genres, we found, as predicted, that forms are distributed across all statuses which meet necessary conditions for their appropriate use. For example, there were some tokens of *the N* for all statuses to the left of uniquely identifiable and some tokens of demonstrative pronoun *that* for both activated and in focus.

However, the distribution across statuses varies considerably for different forms, and in many contexts a given form is inappropriate, or conveys some special effect, even when sufficient conditions for its use have been met. We argued that such facts follow naturally from interaction of the givenness hierarchy with Grice's maxim of quantity, stated in (10).

(10) **Maxim of Quantity** (Grice 1975)
Q1 Make your contribution as informative as required (for the current purposes of the exchange).
Q2 Do not make your contribution more informative than is required.

Thus, as Grice himself noted, an indefinite article, which requires only that the referent be type identifiable, conversationally implicates by Q1 (make your contribution as informative as required) that the referent is not uniquely identifiable and hence also not familiar to the addressee. Similarly, even though all referents in focus are also activated, use of a demonstrative pronoun, which requires only activation, generally implicates by Q1 that the referent is not in focus. This

accounts for the frequently noted function of demonstrative pronominals to signal a shift in focus.

On the other hand, use of a particular form doesn't always conversationally implicate that necessary conditions for a form requiring a higher status don't obtain. Over half the tokens of definite article *the* in the English data we examined occur with phrases whose referents are not only identifiable, but also familiar and even activated or in focus, and the overwhelming majority of noun phrases whose referents are familiar but not activated are referenced with *the* N rather than *that* N. Thus, a definite article clearly doesn't implicate that the referent is not familiar. We have argued that this is due to the fact that for full definite NPs, signalling identifiability is sufficient for associating a representation of the referent and an explicit signal of a more restrictive cognitive status is therefore unnecessary. In other words, it is Q2 (don't give more information than required) which applies here.[3] This is especially true when there is a coreferring phrase in the immediate discourse context which is at least partially identical in form, as in (11).

(11) "How in the world," demanded Harriet, "did *you* get here?"
"Car," said Lord Peter, briefly. "Have they produced the body?"
"Who told you about **the body**?"

When the demonstrative determiner *that* is used, it often facilitates comprehension by serving as an explicit signal to the addressee to search long-term memory for a a familiar referent. In such cases, which we have referred to as 'reminder *that*'s, determiner *that* signals (i.e. conventionally implicates) that the referent is familiar and conversationally implicates by Q1 that the referent is not activated. An example is given in (12).

(12) Exxon oil claims it will take several million dollars to clean up **that oil spill off the coast of Alaska**. [beginning of radio newscast]

Other special effects associated with demonstratives, such as emotional uses discussed, for example, in Lakoff 1974, may also be attributed to quantity implicatures.

3. Universality of the Givenness Hierarchy

The research described above was based entirely on English, and it is not clear to what extent it can be generalized to other languages. The purpose of our current research is to extend the investigation to six additional languages: Arabic, Russian, Japanese, Mandarin Chinese, and Spanish. The following questions are addressed:

1. Are the five statuses on the givenness hierarchy necessary and sufficient for describing conditions on the appropriate use of different types of referring expressions in all languages?

2. Are necessary conditions for the appropriate use of analogous forms the same across languages, or do these differ depending on what forms are available in the languages in question?

3. When necessary conditions for the use of more than one form are met, does the Givenness Hierarchy interact with the Maxim of Quantity in the same way across languages?

Our data for Russian comes from published transcripts of casual conversation. For the other six languages (including English) we have narrative film descriptions which were collected for another study.[4] These data were supplemented by native speaker judgments and from whatever relevant information we were able to collect from grammars and scholarly articles. Our findings regarding necessary and sufficient conditions for the appropriate use of different forms in these languages are given in the chart in (13) (capitals indicate a stressed pronoun).

(13)

	in focus	activated	familiar	unique ident.	type ident
Arabic	ø, *hua*	*HUA, haadaa, ɗaalika, haadaa* N	*ɗaalika* N	*al* N	ø N
Chinese	ø, *ta*	*TA, zhè, nèi, zhè* N	*nèi* N		ø N (*yi* N)
English	ø, *it*	*HE, this, that, this* N	*that* N	*the* N	*a* N
Japanese	ø	*kare, kore, sore, are, kono* N, *sono* N	*ano* N		ø N
Korean	ø	*i, ku, cə,i* N	*ku* N, *cə*N		ø N
Russian	ø, *on*	*ON, ètot, tot*	*ètot* N, *tot* N		ø N
Spanish	ø, *él*	*ÉL, éste, ése, aquél, este* N	*ese* N, *aquel* N	*el* N	*un* N

Demonstrative Forms

	proximal	medial	distal
Arabic	*haadaa*	*ɗaalika*	
Chinese	*zhè*	*nèi*	
English	*this*	*that*	
Japanese	*kore, kono* N	*sore, sono* N	*are, ano* N
Korean	*i*	*ku*	*cə*
Russian	*étot*	*tot*	
Spanish	*éste, este* N	*ése, ese* N	*aquél, aquel* N

As seen in the chart, the cognitive statuses posited for English appear to be sufficient for describing conditions on the appropriate use of demonstratives, articles and pronouns in the other six languages we examined. However, not all five statuses are necessary for Chinese, Japanese, Korean and Russian, the languages which lack distinct forms for articles. As illustrated in (14)-(17), a noun with no preceding determiner in these languages can be interpreted as either uniquely identifiable (i.e. definite) or merely type identifiable (ie. indefinite).

(14) *Ta zai* ***bisai*** *zhong huojiang*
he in game during win-prize
"He won a prize in **a/the game**.

(15) *kare wa **akai** **kingyo** o hoshii*
he TM red goldfish OM want
"He wants **a/the red goldfish.**"

(16) *Ku-nun **pul-un** **kumpungo-lul** won-ha-n-ta*
he-TM red-REL goldfish-OM want-PRE-D
"He wants **a/the red goldfish.**"

(17) *V ruke derzhali **bilety***
in hand held 3pl tickets
"In their hands, (they) held **tickets/the tickets**"

These languages differ, however, with respect to which status is unnecessary. As seen in the chart in (13), Japanese, Korean and Russian have no form for which the status uniquely identifiable is both necessary and sufficient. In Chinese, on the other hand, familiarity appears to be both necessary and sufficient for appropriate use of the distal demonstrative determiner *nei*; but Chinese apparently has no determiner which requires that the referent be familiar, but not necessarily activated.

Thus, according to the Chinese speakers we consulted, example (18), unlike its counterpart in the other languages, is appropriate even if the addressee has no previous knowledge that the speaker's neighbor has a dog.

(18) *tsuotian wanshang wo shui-bu-zhao*
yesterday evening I sleep-not-
*gebi-de **nèi** **tiao** **gou** jiao de lihai*
next.door that clf dog bark prt extremely
"I couldn't sleep last night. **The (lit "that") dog** next door was barking."

This supports the observation, made for example in Li and Thompson 1981, that the unstressed distal demonstrative in Chinese is beginning to function like a definite article.

We turn now to our second question - are necessary conditions for use of corresponding forms the same across languages? The answer here appears to be yes, for all forms except demonstrative determiners.[5] Thus, in all these languages, unstressed personal pronouns and zero anaphora require that the referent be in focus; demonstrative pronouns and stressed personal pronouns require only activation; the definite article requires only unique identifiability; and the indefinite article requires only type identifiability.

For demonstrative determiners, on the other hand, the situation is more variable across languages. As we already noted, the distal demonstrative determiner *nei* in Chinese is less restricted than its counterpart in the other languages since it only requires that its referent be identifiable, but not necessarily familiar. The languages also differ with respect to which demonstrative determiners, if any, require that the referent be activated. In Korean and Spanish, which have a three-way distinction in demonstratives, activation is a necessary condition only for the proximal determiner. Thus the medial as well as the distal demonstrative determiner is possible in (19) and (20).[6]

(19) *Na-nun cinan pam cam-ul cal-su-ka ʌp-ʌss-ta.*
I-TM last night sleep-OM sleep-could- neg-past-dec

yʌp cip {*kū* / *cə*} ***kae-ka*** *cam-ul mot-ca-ke hʌe-ss-ta.*
next house that dog-SM sleep-OM neg-sleep-caus do-past-dec
"I couldn't sleep last night. **That dog** next door made me not sleep"

(20) *No pudo dormir a noche.*
NEG could sleep last.night

{***Ese*** / ***Aquel***} ***perro*** *de al lado no me dejó dormir*
that dog of to.the next.door NEG clitic let sleep
"I couldn't sleep last night. **That dog** next door kept me awake."

But in Japanese, which also has three demonstratives, both the proximal and medial determiners, like the demonstrative pronouns, require activation. Thus, although the facts are not entirely clear, the medial demonstrative *sono* appears to be inappropriate in an example like (21), where the dog can be assumed to be familiar but not activated.[7]

(21) *Kinoo wa hitobanjuu remurenakatta*
yesterday TM all.night couldn't.sleep

{?***Sono*** / ***Ano***} ***inu*** *no sei de*
that dog reason
"I couldn't sleep last night. **That dog** is the reason."

While the languages with three demonstratives differ as to whether the distal determiner alone (Japanese) or the medial as well as the distal determiner (Korean and Spanish) require that the referent be familiar. In all three languages as well as in Chinese, English and Arabic, the proximal demonstrative determiner requires that its referent be activated. Russian, however, differs from the other languages in lacking the activation condition on the proximal determiner. Thus either the proximal *eta* or the distal *ta* is possible in (22), even if the dog has not been mentioned in the immediate discourse context, i.e. if the dog is familiar, but not activated.

(22) {***Eta*** / ***Ta***} ***sobak*** *u soseda menja*
{This / That} dog at neighbor me
vsju noch' ne davala spat'
all night not allow to.sleep
"**That dog** next door kept me awake all night."

Finally, the languages appear to differ in whether one or more demonstrative forms require not only that the referent be activated, but that it be speaker

activated. We noted that in English both pronominal and determiner *this* require speaker activation. Speaker activation also appears to be required for the proximal demonstratives *kono* and *kore* in Japanese and *i* in Korean. However, our data suggest that proximal demonstratives in the other languages don't have a speaker activation restriction.

Since the statuses on the givenness hierarchy are implicationally related, a status which meets necessary conditions for the use of a particular form will also meet necessary conditions for the use of all forms associated with statuses lower on the hierarchy. As we showed above for English, choice among forms when necessary conditions for the use of more than one form are met can, in many cases, be shown to follow from interaction of the givenness hierarchy with Grice's maxim of quantity. The final question we address, then, is whether the hierarchy interacts with the maxims in the same way across languages.

For all the languages we examined, we found, as we did for English, that if a referent was in focus the strongest possible form (i.e. a zero or unstressed pronominal) was generally used. This is shown in the tables in (23).[8]

(23)[9]

Arabic	focus	act	fam	unique
ø	44			
hua (sbj)	2			
hua (obj)	16			
ɬaalika		3		
haaɬaa N	1	1		
ɬaalika N		1	1	
al N	3	22	34	37

Chinese	focus	act	fam	unique
ø	35			
ta	23	4		
zhè		1		
zhè N	5	27		
nèi N		1	1	
ø N	9	12	14	17

Korean	focus	act	fam	unique
ø	20			
ku		4		
ku N	4	8	4	
ø N	4	2	11	2

English	focus	act	fam	unique
it,he	38	1		
this N	2	1		
that N	2	2		
the N	12	26	23	22

Japanese	focus	act	fam	unique
ø	59			
kare		2		
kore	1	2		
sore		1		
sono		8		
kono N	1			
sono N	3	14		
ano N			1	
ø N	8	32	14	10

Spanish	focus	act	fam	unique
ø	66	2		
él (sbj)	28	2		
él (obj)	32			
éste		1		
ése		6		
ese N		3	1	
el N	27	36	34	29

Use of a form that requires only activation generally implicates by Q1 that the referent is not in focus, i.e., it implies a focus shift , as in (24) and (25).

Chinese

(24) a. ... *xiao haizi hen gaoxing suoyi ta ba ta dai gei*
small child very happy so he OM he bring give
hong jinyu de yizhi hua fang zai yugang limian.
red goldfish nom one flower put in bowl loc
"(The) small child was very happy. So he put a flower he had brought for (the) goldfish into (the) bowl."

b. ***zhe*** *jiu shi zheige gushi*
This then be this story
"**This** then is the (lit. this) story."

Japanese

(25) a. *toori e dete shibaraku hashitteku*
street to go.out for some time run
"He goes out onto the street and runs for some time."

b. *to nanka yatai mitai na omise ga atte de*
and something stall seem shop SM be and
"There is a shop like a stall."

c. ***kare*** *wa soko e sono omise no toko e itte iku to*
he TM there to that shop GM place to go go and
"**He** goes to that shop."

Similarly , for the languages with an indefinite article, use of this form implicates by Q1 that the referent is not uniquely identifiable and hence not familiar to the addressee. Thus, the five languages we examined are similar to English in that use of a particular form typically implicates that necessary conditions for a form associated with a higher status don't obtain. That is, the form that gives most information about cognitive status is the one that is generally used

We also found, however, that for full definite NPs, Q2 rather than Q1 was applicable in most contexts. As in English, when a full NP was used to refer to something at least uniquely identifiable, it was generally the weakest possible form. For Spanish and Arabic this was the definite article. For the other four languages, which lack a definite article, a noun without a determiner was used in most contexts where the referent was at least identifiable, and a demonstrative determiner in such cases often serves as an explict signal to the addressee to search memory for a familiar referent. Thus, the Russian example in (26) is analogous to the English 'reminder that's' discussed above.

(26) *a soshli my na ostanovke kotoraja nazyvalas'*
and went we to stop which was.called
sorok *vtoroj kilometr a spustilis' v* ***etot kan'on***
forty second kilometer and went.down in this canyon
"And we went to a stop which was called forty second kilometer. And (we) went down into **that (lit. this) canyon**"

But if the referent of a full definite NP was activated or in focus, a demonstrative determiner was used more often in the languages which lack a separate definite article than in the languages which have a definite article. An example of such a use, from Japanese, is given in (27).

(27) *otokonoko ga modotte kite de sono otoko no*
boy SM return come and that male GM
hito tachi ga kake o yatte ano kingyo ga
person pl. SM gambling OM do that goldfish SM
toreruttе iu koto ga wakatte
be able to gain say fact SM learn
*sorede **sono otokonoko** mo yaroo to suru n desu ne*
then that boy also try N be EM
"After a while the boy comes back. He learns that those men are gambling to get that goldfish. And then that boy also gives it a try."

Demonstrative determiners thus occur more frequently in these languages than in English, Spanish and Arabic, since they are the only determiners that explicitly signal identifiability.

The research reported on here was not based on as large and varied a corpus as our previous work on English, so any conclusions we draw will necessarily be tentative. But it does appear that, despite obvious structural differences, the maxim of quantity interacts with the Givenness Hierarchy in a similar way across languages.

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[1] A number of authors have proposed that different senses (or degrees) of givenness are correlated with different forms of reference (e.g. Chafe 1987, Gundel 1978a, 1978b, 1985, Lambrecht 1986, Prince 1981). See Gundel, Hedberg and Zacharski 1989 for discussion of differences between the Givenness Hierarchy and Prince's 1981 Familiarity Scale.

[2] To the extent that the syntactic and prosodic form of an utterance encodes its topic-commment structure and the relative importance of its constituents, membership in the in-focus set is partially determined by linguistic form. However, the actual inclusion of elements in the set depends ultimately on pragmatic factors, and is therefore not uniquely determinable from the syntax. See Gundel, Hedberg and Zacharski 1989 for further discussion.

[3] Since familiarity is the most common basis for identifiability, the application of Q2 here is predicted by the claim that the second part of the quantity maxim induces stereotypical interpretations (cf. Atlas and Levinson 1981, Horn 1984 and Levinson 1987). Thus, while some researchers consider familiarity to be part of the conventional meaning of the definite article and treat the non-familiar cases as exceptional (cf. Heim 1982) , we propose that only identifiability is conventionally signalled by the definite article and that familiarity is conversationally implicated by Q2.

[4] The methodology here was similar to that of the Pear Stories (see Chafe 1980). Speakers viewed a silent film, called the *The Golden Fish*, and, immediately after viewing the film, described it to another native speaker of their language.

[5] We are only talking about cognitive status here; there are, of course, other conditions such as structural restrictions on the distribution of personal pronouns vs. reflexives and restrictions on the use of definite determiners with generics and proper names which differ across languages.

[6] Although both forms require only familiarity, it is not the case that they are equally appropriate in all contexts. For the languages which have two demonstratives that require only familiarity, the more distal form is generally restricted to contexts where distance (either spatial or cognitive) is

being emphasized. Thus, Spanish speakers find the medial *ese* to be more natural than the distal *aquel* in an example like (20).

[7] There has been considerable debate among Japanese linguists regarding conditions on the appropriate use of *sono* and *ano* (cf. Hinds 1973, Kuno 1973, Kitagawa 1979 and Kuroda 1965). Our claim that *sono* requires activation whereas *ano* requires only familiarity appears to be at least consistent with all positions. But it is not clear whether this distinction is sufficient for explaining all differences in the distribution of these two forms.

[8] While all the languages but English are 'pro-drop', we find some interesting differences among them in the distribution of pronoun vs. zero. Chinese, Japanese, Korean and Russian allow zero in all argument positions (excluding objects of prepositions). But while the overwhelming majority of referents in focus were coded with zero in Japanese and Korean, almost half of the referents that were in focus in Chinese and Russian were coded with overt pronouns. Arabic and Spanish, on the other hand, allow zero in subject position only. But in Arabic, zero was used in almost all possible contexts (i.e. almost all in focus subjects were zero), whereas in Spanish (contrary to the often-stated claim that subject pronouns are used only for emphasis) we find pronouns used in almost half the contexts where zero would have been possible. The Japanese and Korean facts are predicted by our analysis since only a zero argument requires the referent to be in focus in these languages (i.e. Japanese and Korean have no unstressed pronouns, as seen in table 13). The facts in the other languages are consistent with our analysis, but we have no expanation for the differences in frequency of zero vs. overt pronoun.

[9]Table abbreviations are as follows: focus = in focus, act = activated, fam = familiar, unique = uniquely identifiable.

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