

Referential Properties of Generic Terms Denoting
Things and Situations

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Abstract

Generic terms can be divided into two referentially different groups. Generic term of the first group is a name (or a definite description) of the corresponding class of objects (cf. Jaguars in South America are extinct; The whale is a mammal). As for generic terms of the second group, we propose to treat them as general terms (in the sense of W.O. Quine): they are considered to be referentially incomplete expressions which, when constituting the theme of a generic proposition, undergo quantification which is expressed, explicitly or implicitly, inside the verb phrase.

1. Introduction

One of the most important aspects of language comprehension is comprehension of r e f e r e n c e - i.e. of a correspondence between a sentence (and some of its constituents) and reality, which is brought about by the speaker in the speech act. As is usual for a logical approach to language, all types of reference, with the exception of concrete reference, are reduced to quantification of different kinds, and quantification can be defined, with a sufficient degree of precision, by stating truth conditions for sentences with the corresponding quantifier. Meanwhile generic expressions (in particular, generic terms) constitute a puzzle for a theory of reference, for any proposed formulation of truth conditions for sentences with generic terms is easily refuted by contradicting examples. Thus, an attempt to reduce referential meaning of the generic indefinite article in English to that of the quantifier adjective any (made in Jespersen 1927) can be demonstra-

ted to be futile; in fact, statement (1a), for example, is usually considered to be true, while (1b) is definitely false (though any and all are synonyms):

- (1) a. N o r v e ž c y vysokogo rosta
'N o r w e g i a n s are tall'.
b. V s e n o r v e ž c y vysokogo rosta
'A l l n o r w e g i a n s are tall'.

An attempt to capture referential aspects of the meaning of a generic term with the help of a "quantifier of majority" (Parsons 1970) or a quantifier 'usually' may be, perhaps, successful for sentence (1a), which is approximately synonymous to sentence (2):

- (2) N o r v e ž c y obično vysokogo rosta
'N o r w e g i a n s are usually tall';
but the idea of majority has nothing to do with the meaning of such sentences as

- (3) Kit - mlekopitajušćee
'The whale is a mammal'
(indeed, (3) ≠ (3)*) A whale is usually a mammal); or with the meaning of sentence
(4) A t o m sostoit iz jadra i elektronov
'A t o m consists of the nucleus and electrons'.

A suggestion was made to the effect that generic terms do not refer to entities of the real world at all. Thus, according to Wierzbicka 1980, in such sentences as (1) tallness is attributed not to a norwegian (i.e. not to a real person), but to our i m a g e of a norwegian. However, this claim, even if it is true, cannot be true for all species of generic expressions. For one thing, generic terms can occur in the context of identity sentences, cf.

- (5) Deti - što budušćie ljudi
'Children are men to be'.

And what is identity if not identity of reference?

From a formal point of view, what characterizes generic noun phrases, at least in languages without articles, such as Russian, is the fact that they do not comprise any determiners or quantifier adjectives, not only in the explicit but in the implicit form as well. In other words, generic NPs evade referential characterization: no words explicitly expressing the mode of reference of a noun phrase (cf. Padučeva 1985) can occur within a generic NP; moreover, no words can be added to a generic NP to make clear its referential meaning or meanings, as is obvious from examples (1) - (5). The analysis which follows aims at providing generic NPs with such an interpretation of their referential import that would match this formal characterization. Our direct aim is to provide an analysis for generic NPs of Russian, but many of the problems discussed are semantic in nature and thus language independent.

2. Generic phrases denoting situations

Generic use is common not only for noun phrases denoting objects, like those in (1) - (5), but also for noun phrases with propositional meaning, cf.

- (6) C v e t e n i j e r ž i v s e g d a n a p o m i n a e t m n e n a č a l o v o j n y
'Flowering of rye always reminds me of the beginning of the war'.
(7) U b i j s t v o o t v r a t i t e l ' n o
'Assassination is abominable'.

Moreover, generic uses are possible also for predicative denominations of situations:

- (8) I t o f t e n h a p p e n s t h a t a y o u n g m a n o v e r e s t i m a t e s h i s r e s o u r c e s .
(9) O p e r a t i o n i s a l w a y s d a n g e r o u s w h e n t h e p a t i e n t i s m o r e t h a n 7 0 .
(10) H e d i n e s a l w a y s i n a h u r r y .
(11) S h e u s u a l l y g o t f r i g h t e n e d w h e n h e b r o u g h t h e r f l o w e r s .
(12) R y b a g n i e t s g o l o v y
'A fish rots beginning with its head'.
(13) J o h n b e a t s h i s w i f e i n t h e y a r d .

Study of generic reference is usually confined to one particular class of generic

terms - to those denoting objects. What we claim is that at least in this case broadening the object of investigation will not complicate the whole picture; just the opposite, it may contribute to its clarification.

3. Generics as a grammatical problem

Generic use is a problem not only for referential semantics but also for a descriptive grammar of a language. To mention just two points.

a) In the context of a generic NP grammatical Number (i.e. the opposition of Singular vs. Plural) cannot retain its usual meaning. However, on the one hand, the choice of Number in generic NPs is not rigidly regulated, i.e. synonymous variation of Number is possible, cf.

- (14) a. L o š a d ' - u m n o j e ž y v o t n o j e
'A horse is a clever animal'.
b. L o š a d i - u m n y j e ž y v o t n y j e
'Horses are clever animals'.

On the other hand, Singular and Plural in generic NPs are not freely interchangeable; thus, it is impossible to say

- (15) U n a s v d o m e z a v e l s ' a t a r a k a n
(Sg)

in the meaning 'There are cockroaches in our house', if only in the context of a "language game", and it is absolutely impossible to use sentence

- (16) *G l a z u è t o j r y b y i m e e t f o r m u
g r u š (Pl)

in order to convey the meaning 'The eye of this fish has the shape of a pear'. There is a strong feeling that the choice of grammatical Number in generic NPs is dependent upon their referential properties; in other words, it seems that different classes of generic NPs can be delimited with different requirements as for the choice of Number.

b) Another grammatical problem connected with generic expressions, concerns the choice of Tense and Aspect of the verb in a generic proposition. In Lyons 1978 it is suggested that generic propositions lie out of the scope of the Tense opposition (i.e. that they are omnitemporal). Lyons claims that this thesis is not disproved by such examples as

- (17) D i n o s a u r s w e r e p e a c e f u l
animals ,

because Past Tense in such sentences corresponds only to the fact that dinosaurs are extinct and not to the fact that they have stopped being peaceful, as would be the case if Past Tense had been used here in its usual meaning. Still for such sentence as

(18) *D i n o s a u r s* died out (became extinct)

it would be absurd to maintain that it is omnitemporal: in (18) Past Tense has its most common meaning.

4. Generic term and generic proposition

The main conclusion that can be drawn from the existing literature on generics (cf. a substantial review in Carlson 1978) is that generic expressions are heterogeneous (NB that in Russian even less information can be got from the grammatical form of a generic term than in English, because of the lack of articles). Thus the line of analysis which we follow in this study consists in making a series of delimitations that would divide generic expressions into several different groups so that each statement would apply only to that group of generic expressions for which it is true.

First of all, it is necessary to separate generic NPs when used in the context of a generic proposition (or generic statement) from their occurrences in all other contexts. We propose the following definition: A proposition is called generic if a generic noun phrase G constitutes its notional theme (topic), i.e. if this proposition is about G. Thus, in (19) proposition is generic:

(19) *P r o f e s s i o n a l m a t h e - m a t i c i a n* will read the book by M.Atja with pleasure.

Indeed, (19) is a statement about professional mathematicians. Meanwhile, (20) is not a generic statement:

(20) The book by M.Atja will be of interest for professional mathematicians.

In fact, (20) is not about mathematicians; its theme is a concrete individualized object - a book by M.Atja.

Generic NPs constituting the subject of a generic proposition are more readily submitted to semantic analysis, for in this context referential import of genericity can be

represented, at least in some contexts, as a kind of quantification. Indeed, if a generic NP is a subject of a proposition, then the quantifier which bounds this NP has maximum scope: its scope is the whole sentence. And if so then the referential import of this quantifier, and hence of the generic NP, can be revealed by means of truth conditions of the sentence as a whole. Otherwise, i.e. in cases where the generic NP does not constitute the subject of the proposition, it is altogether unclear, what proposition constitutes the scope of the supposed "generic quantifier". Thus, for sentences in (21) logical representation is a puzzle:

- (21) a. Ivan can kill a bear.
 b. John doesn't like policemen.
 c. Ego zasadili v kameru smert'niko v
 'He was put into the cell for men sentenced to death'.

But even for generic propositions there is no unique formulation of truth conditions valid for all the contexts. To formulate truth conditions for generic propositions exhaustively it is necessary to reveal all relevant oppositions of contexts, linguistic and extralinguistic, in which the generic subject of a generic proposition might occur (note that the subject of the proposition need not coincide with its grammatical subject, especially in Russian).

5. Generic NPs as names of classes

In some contexts generic terms can be successfully treated as names (or descriptions) of the corresponding class. For example, generic terms used as subjects of predicates which are meaningless unless when predicated to classes (as to be a mammal; to become extinct in examples (3) and (18)), are best represented as names of classes (in English such generic terms can only be marked by a definite article; in Russian they have no special distinctive features), cf.

- (22) *Nekogda j a g u a r* byl rasprostranen po vsemu zemnomu šaru
 'Some time ago the jaguar was spread all over the world'.

In Burton-Roberts 1976 it is claimed that

generic terms which are actually names of classes, even when they occupy the thematic position in the utterance, do not form any generic proposition: NP denoting a class and referring to a class, can be treated as a term with concrete reference and with no corresponding quantifier in the logical representation of the proposition in question.

It is obvious that for generic terms that are names of classes their position in the thematic or non-thematic part of the sentence is referentially irrelevant.

Names of classes in many respects resemble mass terms (such as water, poetry, information etc.): like mass terms, names of classes a) have scattered reference and b) easily tolerate partitive use. Thus, sentence

(23) *Na Dal'nem Vostoke vodjatsja t i g - r y*

'There are t i g e r s in the Far East'

does not purport to mean that a l l t i g e r s live in the Far East, exactly like the sentence There is water in the vicinity does not mean that all water is in the vicinity.

6. Generics as general terms

As for the "typical" generic expressions exemplified, e.g., by (1), (2), (4), we suggest to treat them as g e n e r a l t e r m s in the sense of Quine 1953 or Carnap 1959. General term is an incomplete noun phrase, lacking referential specification. It has an e x t e n s i o n , which is determined by its linguistic meaning. Usually, the extension of a general term is an infinite set (or at least it is a set looked upon as infinite; in other words, it is an o p e n s e t); cf. extensions of such general terms as norwegian (that includes all norwegians who existed, exist now or will exist in future), atom, man etc. General term has no reference - unless it is used in the context of some a c t u a l i z e r (the term is due to Bally 1955), that converts this general term into a singular term referring to a definite object in some definite speech act.

It is usually accepted that general terms have a twofold usage: they can be used as predicates (cf. John is a n o r w e g i -

a n); and besides, they can be used as substantives, but only in the context of an actualizer - a quantifier adjective or a determiner (perhaps, implicite, i.e. having a zero exponent, as is often the case in article-lacking languages like Russian). We claim that general terms afford also of the third type of syntactic and referential use: a general term can be used as a subject of a generic proposition on the condition that the quantification in this proposition is a d v e r b i a l , i.e. quantification markers of the subject form a part of the predicate, i.e. of the verb phrase of the same sentence. In other words, we propose to treat generic terms as referentially incomplete expressions: their reference is specified outside the noun phrase itself. In this respect generic use of a noun man in the proposition Man is mortal can be identified, e.g., with the use of the same noun in such contexts as every man or this man, where man is definitely a general term lacking reference, and referential characteristics of the NP is specified by some external means. The same principle works in such examples as

(24) *There are r i v e r s t h a t d r y u p i n s u m m e r ,*

where rivers that dry up in summer is a referentially incomplete NP: its referential specification is contained in the verb expressing existential quantification.

Quantification in the VP of a generic sentence may be of different kinds - both with respect to its form and with respect to its meaning. As for its form, quantification can be either i m p l i c i t e , as in example (1) or (4), or e x p l i c i t e , as in (2); cf. also the adverb usually explicitly expressing quantification in (25):

(25) *A symphony u s u a l l y c o n s i s t s o f f o u r p a r t s .*

As for its meaning, quantification may belong to the type 'usually', as in (1); to the type 'always', as in (4); and besides, there are great many other semantic types of adverbial quantification in natural languages, these types of quantification being expressed explicitly by adverbs or adverbials with the meaning 'often', 'sometimes', 'as a rule', 'mostly', 'in a typical case', 'almost always' etc. It must be borne in mind that quantification, when implicite, often remains linguistically undefined and

substantially indefinite - in this case a proposition is understood with the type of quantification that will bring it nearest to truth, cf. such platitudes as Extremes meet - to sound like truth it must be understood as 'Extremes usually meet' or even 'It may be the case that extremes meet'.

Thus, for "typical" generic propositions, such as (1), two properties are substantial: 1) they are quantified implicitly; 2) their quantification belongs to the semantic type 'usually'. Truth conditions for a typical generic proposition can be formulated as follows:

- (26) A generic proposition with the subject s and the predicate P is true if and only if for any $x \in E_s$ (where E_s is the extension of the general term s) it is usually the case that $P(s)$ is true.

The meaning of usually can be described in the same way as the meaning of other words is described in lexical semantics. Thus, s is usually P \approx 'For most $x \in E_s$ it is true that $P(x)$, and this situation is considered to be natural'. This definition gives an explanation to the following example from Carlson 1978: sentence Books are usually paperbacks sounds odd, though it is, perhaps, true that most books are now paperbacks. The fact is, that this situation is not as yet considered to be natural.

7. Adverbial quantification

In a similar way truth conditions for other types of adverbial quantification in generic propositions can be stated. What is important is the fact that there are contexts in which adverbial quantification cannot be reduced to quantification over the extension of the subject term.

Take example

- (27) Young people usually overestimate their resources.

Its meaning cannot be adequately represented by means of quantification over the set of all young people: (27) \neq 'Most young people overestimate their resources'. What is meant in (27) is that for most cases when a young man estimates his (or her) resources he overestimates them. So it is clear that quantification over situations and not over objects is involved

here. In the same way we can represent the meaning of sentences (8) - (13) with generic names of situations from section 2.

8. Grammatical problems revisited

Referential oppositions that were introduced allow us to give explanations to at least some of the grammatical phenomena connected with generics, which were mentioned in section 3.

Thus, (28a) and (28b) are not strictly synonymous:

- (28) a. A m e r i k a n e c (Sg) delovit
'An american is effective'.
b. A m e r i k a n c y (Pl) delovity
'Americans are efficient'.

The difference in meaning may be ascribed to the fact that (28b) is a usual type of generic propositions while (28a) describes our mental image of an American (in the sense of Wierzbicka 1980).

Exceptional behavior of generic terms with respect to Tense, exemplified by (18), can be explained by the fact that sentence (18) does not express a generic proposition: NP dinosaurs is here used as a name of class. Genuine generic propositions are, in fact, omnitemporal.

9. Conclusion

Our investigation can be looked upon as a proof of the thesis that for typical generic noun phrases a logico-semantic interpretation can be given which strictly corresponds to their surface structure (in article-lacking languages): generic terms can be treated as referentially incomplete phrases, with quantification expressed outside the phrase itself or not expressed at all.

References

- Bally, Ch. (1955) *Obščaja lingvistika i vo-prosy francuzskogo jazyka*. Moskva: Izdatel'stvo inostr. lit.
Burton-Roberts, N. (1976) On the generic indefinite article. - *Language*, v. 52, p. 427-448.

- Carnap, R. (1959) Značenijs i neobxodimost'. - Moskva: Izdatel'stvo inostr. lit.
- Carlson, G.N. (1978) Reference to kinds in English. - Indiana university linguistic club.
- Jespersen, O. (1927) A modern English grammar. Heidelberg: Carl Winter's Universität - buchhandlung.
- Lyons, J. (1978) Semantics. - L., etc.: Cambridge univ. press, v. 2.
- Padučeva, E.V. (1985) Vyskazyvanie i ego sootnesennost' s dejstvitel'nostju. - Moskva: Nauka.
- Parsons, T. (1970) 'An analysis of mass terms and amount terms.' - Foundations of language, v. 6, p. 363-388.
- Quine, W.O. (1953) From a logical point of view. - Cambridge, Mass.: Harvard univ. press.
- Wierzbicka, A. (1980) Lingua mentalis. - Sydney etc.: Acad. press.