Generic Demonstratives
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Previous analyses of generics have focussed on three types of generic NPs: bare plural NPs, and singular NPs headed by either the indefinite or definite article (e.g., Burton-Roberts 1976; Carlson 1977a,b; Declerck 1991; Langacker 1991). However, existing analyses do not account for an additional type of generic reference, which we term GENERIC DEMONSTRATIVES, as illustrated in (1).

(1) A: My roommate just bought a Labrador.
B: Those Labradors make great pets.

Here, B is using a demonstrative NP generically to refer to the kind 'Labradors'. In this paper, we provide a cognitive account of such demonstratives. We will argue that generic demonstratives mark the kind being referred to as a relatively subordinate or homogeneous kind located among the speaker's and hearer's private shared knowledge. We also present the results of a preliminary experiment in support of our analysis.

Generic NPs

As is well known, bare plurals in English can receive either an 'existential' or 'generic' interpretation, as illustrated in (2):

(2) a. Spotted owls are flying overhead.
b. Spotted owls have excellent vision.
c. Spotted owls are rare.

In (2a), the bare plural *spotted owls* is interpreted existentially; that is, (2a) is true just in case there exist two (or more) spotted owls flying overhead. As Carlson notes (1977a), the existential interpretation of a bare plural is synonymous with the corresponding existentially quantified NP; thus, *spotted owls* is equivalent to *some spotted owls* in (2a). In contrast, both the object-level predicate *has excellent vision* in (2b) and the kind-level predicate *rare* in (2c) permit generic interpretations of the bare plural. The two types differ in that object-level predicates involve attributes that are characteristic of individual members of the kind in question, whereas kind-level predicates involve attributes that apply to the class as a whole.[1]

In addition to bare plural NPs, other forms may receive a generic interpretation as well. For example, it is well known that singular NPs with the definite article may be used generically, as in (3):

(3) a. The spotted owl has excellent vision.
b. The spotted owl is rare.

Again, both the object-level predicate in (3a) and the kind-level predicate in (3b) permit generic interpretations.

Similarly, singular NPs with the indefinite article may be used generically; however, their use is more restricted. As has been noted (Carlson 1977a), kind-level predicates are incompatible with the indefinite article, as seen in (4):

(4) a. A spotted owl has excellent vision.
b. #A spotted owl is extinct.

Thus, while bare plural NPs and singular NPs with the definite article may be used to refer to the class as a whole, indefinite NPs may be used generically to refer only to a 'representative instance' of a class (e.g., Talmy 1988, Langacker 1991).

Generic Demonstrative NPs

In addition to bare plurals and singulars with the definite or indefinite article, generic NPs may also be realized with a demonstrative determiner. Examples of such generic demonstratives are provided in (1) above, and in (5) below:

(5) a. A: My roommate owns an IBM ThinkPad.
B: Those IBM ThinkPads are quite popular.
b. A: My roommate owns an IBM ThinkPad.
B: That IBM ThinkPad is quite popular.

Here, both the single and plural demonstrative are being used generically, as a statement about the kind 'IBM ThinkPad'. Note that demonstrative NPs share with bare plural NPs and singular NPs with the definite article the property of permitting both object-level and kind-level predicates, as seen in (1) and (5), respectively.

While the examples in (5) employ the distal form of the demonstratives, the proximal form is possible as well, as seen in (6):

(6) a. [in front of a computer] These IBM ThinkPads are amazing!
b. [in front of a computer] This IBM ThinkPad is amazing!

The choice between the distal and proximal forms depends primarily on the spatial location of the demonstratum: in (5) the demonstratum is distant from the speaker while in (6) it is proximate.

The felicitous use of generic demonstratives is subject to a number of constraints. First, we have found that the predicate of a generic demonstrative is typically evaluative, as seen in (7):

(7) A: My cousin just returned from Canada with an adorable Labrador retriever puppy.

B_1: Those Labradors are extremely loyal, you know.

B_2: #Those Labradors were first bred in Newfoundland, you know.

B_3: Labradors were first bred in Newfoundland, you know.

Here, the generic demonstrative is felicitous with the evaluative predicate of B_1's utterance, but not with the more factual predicate found in B_2's. Note that this constraint does not apply to generics in general, as evidenced by the felicity of the corresponding bare plural generic in B_3's utterance. This evaluative quality of generic demonstratives reflects the speaker's emotional involvement with or reaction to the kind in question, and relates to a range of demonstrative uses that has been characterized as EMOTIONAL or EMPATHETIC DEIXIS (e.g., R. Lakoff 1974, Lyons 1977, Ariel 1990, Chen 1990).[2]

Generic demonstrative NPs are further constrained in that they must represent a kind assumed to be already familiar to the hearer. That is, the kind itself must constitute private shared knowledge (Joshi 1982). Consider (8):

(8) a. A: My brother just bought a small car.

B_1: Those small cars are dangerous!

B_2: Small cars are dangerous!

b. A: My brother just bought a red car.

B_1: #Those red cars are so garish!

B_2: Red cars are so garish!

The difference in felicity between the use of *those small cars* and *those red cars* as generics can be attributed to the ease with which the former, but not the latter, can be construed as a 'hearer-old' (Prince 1992) category. In (8a), B is licensed to assume that 'small cars' is familiar to A as a category. Thus, the kind 'small cars' would be processed as a coherent concept, with members of the category possessing many properties in common. In (8b), however, the generic demonstrative is infelicitous because B cannot plausibly assume that 'red cars' constitutes a pre-existing category for A. Although the kind 'red cars' could easily be constructed, it is less coherent and relatively ad hoc. Note that the corresponding bare plural is felicitous for both kinds of cars (B_2's response).

Plural Demonstrative NPs

In addition to the general constraints outlined above, the felicity of plural generic demonstratives is sensitive to a further restriction not shared by other generic NPs. Consider the data in (9):

(9) a. A: My roommate just bought a dog.

B_1: Dogs make great pets.

B_2: #Those dogs make great pets.

b. A: I'm thinking about buying a new car.
B_1: Cars can be expensive.
B_2: #Those cars can be expensive.

In both (9a) and (9b), generic reference with a plural demonstrative NP is infelicitous. This difference in acceptability cannot be accounted for in terms of the generic context alone, since the predicates *make great pets* and *can be expensive* are both object-level and evaluative. What seems to distinguish generic demonstratives from other types of generic NPs is the specificity of the kind being referred to, as illustrated in (10):

(10) a. A: My roommate just bought a Labrador.
B_1: Labradors make great pets.
B_2: Those Labradors make great pets.

b. A: I'm thinking about buying a new sportscar.
B_1: Sportscars can be expensive.
B_2: Those sportscars can be expensive.

Note that the kinds being referenced here ('Labradors' and 'sportscars') are more specific instantiations of the kinds in (9) ('dogs' and 'cars'). Unlike other types of generic NPs, the felicity of plural generic demonstratives varies across analogous contexts depending on the specificity of the evoked kind.[3]

This notion of kind specificity is captured by folk taxonomies, which partition conceptual domains in terms of vertical levels of abstraction or category inclusiveness (e.g., Kay 1971, Berlin et al. 1973, Rosch et al. 1976). Rosch et al. (1976) distinguished between three levels of categorization: the superordinate, basic, and subordinate levels. Superordinate level categories are the most general, and are comprised of relatively heterogeneous sets of items. For example, the superordinate category 'animal' includes members as diverse as dogs, birds, and fish. Basic level categories exhibit an intermediate degree of inclusiveness. The basic level has been claimed to represent the most efficient level of categorization, as it maximizes within-category similarity and minimizes between-category similarity. For example, members of the basic level category 'dog' tend to be relatively similar to each other, but quite different from members of other kinds of animals, such as birds or fish. Finally, subordinate level categories are the most specific, and are comprised of relatively homogeneous sets of items. For example, members of the subordinate category 'Labrador' are far more similar to each other than members of the basic level category 'dog'.

A central feature of taxonomies is that, as one moves from superordinate to subordinate levels, there is a steady reduction in the number of salient internal contrast sets. That is, category variability is lowest for subordinates. We claim that it is this property of categories that accounts for the distribution pattern of plural generic demonstratives exemplified in (9) and (10). Unlike bare plurals, the use

of plural generic demonstratives seems to implicate that members of the kind in question are "all alike". In other words, the generic use of a plural demonstrative conveys that the predicate holds equally for all category members, rather than being merely typical or characteristic. Because plural demonstratives indicate a high degree of homogeneity, the kind being specified should possess few salient internal contrasts. Thus, plural demonstratives are most acceptable with relatively subordinate generic sets (e.g., 'Labrador' or 'sportscar').

The plausibility of such a relationship between the felicity of plural generic demonstratives and category variability naturally depends on the assumption that individuals are in fact sensitive to variability information. This assumption has been supported by a number of psychological studies. For example, judgments of the degree of variability among category members are positively correlated with the actual level of variability (e.g., Lathrop 1967, Nisbett & Kunda 1985, Park & Hastie 1987). Similarly, the perceived variability of a group has been shown to increase with the number of subordinates comprising the group (e.g., Park & Judd 1990). Category variability information has been found to influence a number of cognitive processes, including property induction (e.g., Nisbett et al. 1983, Park & Hastie 1987, Rips 1975) and categorization (e.g., Fried & Holyoak 1984, Rips 1989).

To investigate our hypothesis, we conducted a preliminary study in which subjects were asked to evaluate a series of generic statements. In this study, 24 undergraduate students were each presented with 12 brief conversations between two participants, A and B. In each conversation, A's utterance concerned a single specific member of a particular category, and B's utterance was a subsequent generic statement about that category. Two separate factors were manipulated in constructing these conversations. First, we varied the *taxonomic level* of the category in question. One version of each conversation involved a basic level category, as in (11). The other involved a subordinate level category, as in (12):

(11) A: My parents want to give me their cat for the summer.
B: Cats can be pretty destructive.

(12) A: My parents want to give me their Siamese cat for the summer.
B: Siamese cats can be pretty destructive.

For each conversation, half of the subjects were given the basic level version, and half were given the subordinate level version. Each subject was presented with an equal number of basic and subordinate level conversations.

Second, we varied the *type of generic* NP uttered by B. For half of the subjects, B's utterance always contained a bare plural (e.g., *cats* or *Siamese cats*). For the remaining subjects, B's utterance always contained a plural demonstrative (e.g., *those cats* or *those Siamese cats*).

The conversations were presented in booklets, with three conversations appearing on each page. Subjects were asked to read each conversation and rate the felicity

of B's response on a five-point scale, where 1 indicated that the utterance was 'very odd', and 5 indicated that the utterance was 'very natural'.

In accordance with our hypothesis, we predicted an interaction between taxonomic level and type of generic NP. For conversations containing bare plurals, the naturalness of the generic statements should be relatively insensitive to the taxonomic level of the evoked kind. In contrast, for conversations with generic demonstratives, statements about subordinate kinds should be rated as significantly more natural than those about basic kinds, due to the decrease in homogeneity associated with the latter.

The acceptability ratings were submitted to a 2 (taxonomic level) x 2 (type of generic NP) analysis of variance. As predicted, there was a significant interaction between the two factors ($F(1,22)=25.31$, $p<.001$). Whereas generic statements containing bare plurals were equally natural whether the evoked kind was subordinate ($\underline{m}=4.06$) or basic ($\underline{m}=3.99$), generic statements containing plural demonstratives were significantly more natural for subordinates ($\underline{m}=4.01$) than for basics ($\underline{m}=2.83$). There were also significant main effects of taxonomic level ($F(1,22)=32.02$, $p<.001$) and type of generic NP ($F(1,22)=7.80$, $p<.025$), due mainly to the relatively low acceptability of basic kinds with demonstratives. Thus, statements containing demonstratives were judged infelicitous only when the evoked kind was at the basic level. The data constitute strong evidence for the sensitivity of plural generic demonstratives to category variability information. Note that these results cannot be explained by positing a different relationship between the evoked kind and the predicate across taxonomic levels. If this were the case, the effect of taxonomic level found for demonstrative NPs should have obtained for bare plurals as well.

Although we chose to manipulate category variability in terms of taxonomic levels, where subordinates exhibit the greatest relative degree of homogeneity, it should be noted that the felicity of plural generic demonstratives is not strictly dependent on level of abstraction. What is crucial is that the number of salient internal contrasts be minimized. For example, 'porcupine' is a basic level category. However, unlike many basic categories, 'porcupine' is not further divisible into subordinate kinds for most American English speakers. Thus, the perceived variability of this basic level category is comparable to that of typical subordinates, as indicated by the felicity of the plural demonstrative generic in (13):

(13) A: My dog was attacked by a porcupine yesterday.
B: Those porcupines are very territorial.

It is the degree of homogeneity – the extent to which members of the kind are "all alike" – that is central to determining the felicity of plural generic demonstrative NPs, rather than the actual taxonomic level of the kind per se.

Singular Demonstrative NPs

Singular generic demonstratives are similar to plural generic demonstratives in their sensitivity to category variability. In the case of singular demonstratives with mass nouns, this analogy is especially transparent. Consider (14):

(14) A: I'll be serving ice cream at the party.
B_1: Ice cream is a real crowd pleaser.
B_2: #That ice cream is a real crowd pleaser.

Here, generic reference with a singular demonstrative NP is quite odd. However, when a subordinate substance kind is evoked, as in (15), the singular demonstrative NP is felicitous:

(15) A: I'll be serving Ben & Jerry's ice cream at the party.
B_1: Ben & Jerry's ice cream is a real crowd pleaser.
B_2: That Ben & Jerry's ice cream is a real crowd pleaser.

It is the additional specificity provided by a brand name in this example that renders the singular generic demonstrative acceptable.

In the case of count nouns, the range of distribution exhibited by singular generic demonstratives is even more restricted than that exhibited by plural generic demonstratives. Consider (16):

(16) A: My roommate owns a laptop computer.
B_1: Those laptop computers are pretty versatile.
B_2: #That laptop computer is pretty versatile.

Here, the subordinate kind 'laptop computer' is sufficiently homogeneous to allow the felicitous generic use of a plural – but not singular – demonstrative.[4] However, this contrast between singular and plural demonstratives disappears as the variability of the evoked kind approaches zero, as in (17):

(17) A: My roommate owns an IBM ThinkPad.
B_1: Those IBM ThinkPads are pretty versatile.
B_2: That IBM ThinkPad is pretty versatile.

In contrast to plural demonstrative generics, whose felicitous use requires that the kind in question be relatively homogeneous, singular demonstrative generics involving count nouns further require that the individual exemplars of the evoked kind are conceptually identical or functionally indistinguishable. This requirement explains why singular generic demonstratives are generally odd when the evoked kind is a natural kind, even when the category is sufficiently subordinate to not allow further subdivision. Consider (18):

(18) A: My parents want to give me their Siamese cat for the summer.
B: #That Siamese cat is pretty destructive.

Here, even though it is difficult for most individuals to differentiate the kind 'Siamese cat' into further subordinates, the singular demonstrative is infelicitous. This difficulty can be attributed to our knowledge of natural kinds: in general, no two members of any given species will be exactly alike. In contrast, the exemplars of the lowest level categories in artifact taxonomies (e.g., 'IBM ThinkPad', 'Honda Civic') tend to be functionally indistinguishable by design. For such categories, the singular generic demonstrative will be felicitous.

Discussion

The observed pattern for generic demonstrative NPs may be summarized as follows. In all cases, the felicitous use of generic demonstratives requires that the evoked kind be relatively homogeneous. That is, these forms require a minimum of salient internal contrasts. Singular generic demonstratives involving count nouns further require that the individual exemplars of the evoked kind are conceptually identical. Thus, the interpretation of generic demonstratives is related to the variability of the category in question.[5]

Of course, the variability associated with a given category is not a static property. First, increasing familiarity or expertise with a kind generally leads to an increase in perceived variability (e.g., Linville et al. 1989). For example, a cat expert who has learned to distinguish among various types of Siamese cats would presumably find generic statements containing *those Siamese cats* to be quite odd. On the other hand, an individual possessing unusually limited experience with or knowledge of cats might find a generic statement containing *those cats* to be perfectly natural.

Second, if the initial impressions of a category are based on idealized summary descriptions (such as stereotypes or prototypes), the perceived variability will tend to be lower than if no such information is available (e.g., Park & Hastie 1987, Smith & Zarate 1990). Indeed, a central component of most stereotypes is the belief that the group in question is a relatively homogeneous entity (Kashima & Kashima 1993). For this reason, generic demonstratives are frequently applied to racial or ethnic groups for which widely-held stereotypes exist (e.g., *Those Japanese...*, *Those Mexicans...*).

Finally, our data on generic demonstratives call into question two existing claims about the use of definite determiners in English generic NPs. First, it has been argued that definite plural generics are unacceptable in English: whereas *the dog* may receive a generic interpretation, *the dogs* may only be interpreted existentially (Declerck 1991, Langacker 1991). Second, it has been argued that definite mass nouns in English (e.g., *the water*) are infelicitous as generic NPs (Langacker 1991). However, the results of our investigation indicate that the generic interpretation of plural and mass demonstrative NPs is indeed possible, subject to the conditions outlined above.

Extensions

Thus far, all of our examples of generic demonstratives have involved evaluative predicates that have been explicitly mentioned. However, a generic interpretation of demonstratives is possible even when the predicate is implicit, as in (19):

(19) a. Labradors!

b. Those Labradors!

Both of the utterances in (19) could be used in the presence of a single Labrador behaving in a prototypical manner. Such utterances can be analyzed as a case of conversational R-implicature (Horn 1984), instructing the hearer to supply the relevant object-level predicate. Like demonstrative NPs in generic contexts, this construction is sensitive to category variability, as illustrated in (20):

(20) a. Dogs!

b. #Those dogs!

Whereas (20a) can be used generically in the presence of a single dog, (20b) can only be interpreted existentially.

Our analysis of generic demonstrative determiners extends straightforwardly to demonstrative pronouns. Consider (21) and (22):

(21) A: My sister owns a Honda Civic.
B_1: Those are great cars.
B_2: That's a great car.

(22) A: My sister is a philosopher.
B: Oh, she's one of those...

In each case, the demonstrative pronoun may receive a generic interpretation.[6] Given that the felicity of such uses is constrained by the variability of the evoked kind, this has important implications for the interpretation of pronouns in ambiguous TOKEN-FOR-TYPE METONYMIES (cf. Gibbs 1994). For example, if a speaker points at a single isolated car and says *I want one of those* or *That's what I want*, the speaker will most likely be understood as referring to a specific type of car (e.g., 'Honda Civic'), rather than to a higher level category (e.g., 'cars' or 'vehicles').

Finally, our claims concerning the sensitivity of demonstratives to category variability extend to proper name demonstratives in habitual statements, as illustrated in (23):

(23) That Dr. Williams is always falling asleep in surgery.

Demonstratives with proper names are acceptable just in case the predicate is time-stable or denotes an essential trait of the referent. Even in the absence of such grammatical markers of habituality as the present progressive in (23), felicitous use of a proper name demonstrative nonetheless requires a context in which the relevant predicate is time-stable. Consider (24):

(24) That Dr. Williams fell asleep in surgery today.

Here, if Dr. Williams has never before fallen asleep in surgery and is believed to be an otherwise competent physician, the use of a demonstrative would be odd. In this way, proper name demonstratives are analogous to generic demonstratives, with the former being sensitive to the variability of an individual across time, and the latter being sensitive to variability across category exemplars.

Conclusion

In this paper, we have investigated the use of demonstratives in generic contexts. We have shown that demonstrative NPs may be used generically, and are closely aligned with other definite generics in that they refer to kinds rather than representative instances. Such uses are subject to a number of general constraints, including that a) the predicate be evaluative; and b) the kind in question constitute private shared knowledge. More importantly, we have shown that generic demonstratives are sensitive to the variability of the evoked kind. Specifically, their felicitous use requires that the category be relatively homogeneous. We take the pattern of generic demonstratives that we have identified to be a grammatical reflex of this aspect of underlying category knowledge.

These findings have implications for the analysis of a variety of phenomena, including the interpretation of ambiguous token-for-type metonymies and the use of proper name demonstratives in habitual statements. More generally, these findings are consistent with a growing body of research claiming that many principles of cognitive representation (e.g., frames, prototypes, reference points) are projected onto linguistic structure. To our knowledge, however, the present results constitute the first real evidence that a particular grammatical device is sensitive to category variability information.

Notes

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[1] Carlson (1977a:56 ff.) provides a useful, yet imperfect, diagnostic for distinguishing generic uses of bare plurals from existential ones: in extensional non-negative contexts, a superordinate bare plural can be substituted for a hyponym under an existential interpretation, but not a generic one. Thus, for example, if it is true that spotted owls are flying overhead, then it is true that birds are flying overhead. However, if it is true that spotted owls have excellent vision, it does not follow that birds have excellent vision. Thus, only the existential interpretation permits the substitution of hyponymous expressions with no change in truth-value.

[2] Interestingly, the same constraint applies to the use of the demonstrative with proper names, as illustrated in (i):

(i) a. That Jonathan is a pain.
b. #That Jonathan is an engineer.

Here, we see that the demonstrative with a proper name is felicitous only with a relatively evaluative predicate. See below.

[3] We're not considering cases involving contrastive accent, e.g. *THOSE dogs make great pets*, or *Those LABRADORS make great pets*. While a full examination of the role of accent must await further study, we nonetheless note that accented demonstratives induce a contrast among subordinates of the evoked kind, while accented kind terms induce a contrast among categories at the same taxonomic level as the evoked kind.

[4] Note that the infelicity of B_2's response in (16) cannot be attributed to the singular number of the NP alone. By replacing the demonstrative with the definite article, the generic interpretation of the singular NP becomes felicitous, as seen in (i):

(i) The laptop computer is pretty versatile.

[5] We have remained relatively silent on the question of whether the homogeneity of the kind in question is defined locally, in terms of the predicate, or globally, in terms of the set of salient attributes associated with the kind irrespective of the particular predicate. That is, do generic demonstratives specify kinds for which the predicate applies invariantly to all members, or more generally to kinds whose members do not differ from one another along multiple dimensions? We leave this issue for future research.

[6] Interestingly, the constraint that the predicate of a generic demonstrative be evaluative appears to be relaxed in the case of demonstrative pronouns, as demonstrated by the felicity of B's response in (i):

(i) A: My sister owns a Toyota Camry .
B: Those are made in Kentucky.

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