Abstract. This paper is about the difficulties involved in establishing criteria for definiteness. A number of possibilities are considered – traditional ones such as strength, uniqueness, and familiarity, as well as several which have been suggested in the wake of Montague’s analysis of NPs as generalized quantifiers. My tentative conclusion is that Russell’s uniqueness characteristic (suitably modified) holds up well against the others.

Keywords: definiteness, existentials, partitives, uniqueness, semantic scope

1. Introduction

This paper is about definiteness, and more specifically about the difficulties involved in getting clear on which NPs should be classified as definite, or more properly, which NPs have uses which can be so classified. (I use “NP” here the way many linguists now use “DP”. I also use “CNP”, following Montague 1973, to mean ‘phrase of the category of common nouns’ – i.e. for the head N plus any restrictive modifiers.) Intuitively, as a rough first approximation, an NP should be considered definite only if it can be used to talk about some particular entity, where an entity may be either concrete or abstract, and may be a group of entities, or a mass of stuff. Many people agree that there are at least four categories which have such uses: proper names, definite descriptions, demonstrative descriptions, and (personal and demonstrative) pronouns. However, the question arises whether these are the only kinds of NPs that deserve the label “definite”, and if so why. As we will see, universally quantified NPs, partitives, possessive NPs, and specific indefinites all raise issues concerning definiteness.

In the following sections we will look at a number of different attempts to characterize the property of definiteness. We start in §2 with three “traditional” proposals: the notion of strength, which arose in connection with the so-called “definiteness effect” in existential sentences; uniqueness/exhaustiveness, a legacy of Bertrand Russell’s 1905 analysis of definite descriptions; and familiarity, which has been a major competitor to uniqueness following Irene Heim’s 1982 dissertation. In §3 we turn to three proposals which can be seen as descendants of Richard Montague’s classic 1973 work analyzing NPs as generalized quantifiers: those of Jon Barwise & Robin Cooper (1981), Barbara Partee (1986), and Sebastian Löbner (2000). The final section contains a few brief concluding remarks. Throughout the paper I will be ignoring NP uses described as “generic” or “bound variable” unless otherwise mentioned. Even so, space prevents anything like a thorough examination of the topic at hand; the presentation will be necessarily condensed and we will be forced to skip over many important issues.

2. Classical Proposals

2.1 Strength

The possible role of definiteness within early Chomskyan approaches to English grammar arose in connection with NONCONTEXTUALIZED (cf. Abbott 1993) existential (there-be) sen-
tences. Such existentials, which may occur discourse initially, do not allow all NP types, as illustrated in (1) and (2).

(1) a. There was a/some (student’s) dog in the yard.
   b. There were some/several/many/too few/no dogs in the yard.

(2) a. * There was Bill/it in the yard.
   b. * There was the/that/every/each/neither/Mary’s dog in the yard.
   c. * There were all/most/both (of the) dogs in the yard.

As indicated, the NPs following be in (1a) are welcome in this type of existential while those in (1b) are not.

Initially the distinction was thought to be one of definiteness and the term “definiteness effect” is often used to describe these differences in felicity. Gary Milsark’s classic work on this topic (1974, 1977) revealed many of the complications surrounding this criterion of definiteness, and it is to his credit that he created the new terms “weak” and “strong” for those NPs which can, and cannot, occur felicitously in an existential. Based on examples like those above in (1) and (2), we may sort NPs (and determiners) into two categories as shown in (3).

(3) Weak: a/some (student’s) dog, some/several/many/too few/no dogs
Strong: Bill, it, the/that/every/each/neither/Mary’s dog, all/most/both dogs

As can be seen, our basic four kinds of definites (proper names, definite and demonstrative descriptions, and pronouns) – do not occur felicitously in noncontextualized existentials and are correspondingly classified as strong. In the case of possessive NPs (a/some student’s dog, Mary’s dog), it appears that the weakness or strength of the genitive NP determiner is transferred to the NP as a whole. (This has been noted by McNally 1998, Barker 2000, and Peters & Westerståhl 2006, among others. Cf. also the property of “transparency” noted by Löbner 2003.) Compare too the related example in (4) (from Woisetschlaeger 1983: 142).

(4) There was the wedding photo of a young black couple among his papers.

The underlined focus NP in this example is intuitively in the same class with the possessives, but with a postposed “possessor” phrase (a young black couple).

There are at least a couple of potential difficulties here. One concerns the universally quantified NPs – those with all, every, or each (hereinafter “the universals”). They are intuitively definite in many of their uses, so their exclusion from existentials seems natural. However they are often considered not to be definite, especially if definiteness is associated with referentiality, which is traditionally opposed to quantification. But then, part of my purpose is to question these traditional oppositions.

On the other hand NPs with most as determiner are more problematic. They do seem intuitively to be indefinite; a sentence like the following:

(5) When the power went off, most students headed for the dorm.

does not specify which actual students are involved – the speaker clearly does not intend to be talking about any particular students. It is true that morphologically, most is a superlative – thus requiring the definite article in it adjectival use. However the definiteness in this case seems to be associated with the quantity involved rather than the denotation of the NP as a whole. (That is, assuming most students amounts to more than half of them, the complement of this group does not allow another subset as big.) So the exclusion of NPs with most presents a genuine problem for viewing nonoccurrence in a noncontextualized existential as an
adequate criterion for definiteness. (For more discussion of this issue vis-à-vis this construction, see Abbott 2010: Ch. 9.)

2.2 Uniqueness

We’ll begin this subsection by reviewing Russell’s classic analysis of definite descriptions, as well as some additions and modifications that have been proposed for it. Following that we turn to more recent variations on the uniqueness theme, and see how well it applies to other sorts of NPs which are usually considered to be definite.

2.2.1 Russell’s Analysis of Definite Descriptions

As is well known, Russell (1905) analyzed denoting expressions quantificationally. (6) and (7) below show the difference between indefinite and definite descriptions, in his view.

(6)  
a. A representative arrived.
b. ∃x[representative(x) & arrived(x)]

(7)  
a. The representative arrived.
b. ∃x[representative(x) & ∀y[representative(y) → y=x] & arrived(x)]

On this analysis, definite descriptions share with indefinites an implication of existence of an entity meeting the descriptive content of the CNP. (Following Frege (1892) and Strawson (1950), this element of content may be viewed as presupposed in the case of definite descriptions. We return briefly to this issue below.) For Russell, the crucially differentiating element was the implication that this descriptive content apply uniquely – spelled out in the underlined portion of (7b). The formal analysis shown above in (7b) can be extended to definite descriptions with mass or plural heads, as shown by Sharvy (1980; see also Hawkins 1978). In such cases it is the totality of stuff or entities that is in question.

Definite descriptions like the representative in (7a) are called “incomplete” or “indefinite”, since there are an abundance of representatives in the world. In order to maintain Russell’s analysis we must assume that the uniqueness element in (7b) is relativized to context in some way. The issue of incomplete definite descriptions is a complex one which we will skip over for the most part here; see Abbott 2010, Horn & Abbott 2010 for discussion, as well as Löbner’s (1985) “pragmatic” definites, which we will come to very shortly.

It is important to note that the uniqueness aspect of Russell’s analysis is separable from the quantificational aspect. That is, definite descriptions could be seen as simple referring expressions (as in the views of both Frege and Strawson) which nevertheless require unique applicability of their descriptive content. This is true of the approach of Löbner (1985, 2000), according to which the definite article is a marker of “functionality”, in the sense that the CNP with which it is combined is taken to denote a function from contexts to individuals. Some CNPs – e.g. king of France, first person to swim the English Channel, claim that pigs can fly – do this automatically; Löbner (1985) termed these “semantic definites”. The others – e.g. representative, red car, person who called last night – he called “pragmatic definites”. (Rothschild (2007), apparently unfamiliar with Löbner’s work, introduced the terms “role type” and “particularized” for the two subcategories, respectively.) Incomplete definite descriptions, noted above, fall into Löbner’s category of pragmatic definites. Löbner (2000) argued specifically against any interpretation of definite descriptions as quantificational. We return to that issue in §3 below.
2.2.2 Semantic vs. referential uniqueness

It will be useful to distinguish two distinct but closely related ways in which an NP could be described as “uniquely referring”. If Russell’s theory of definite descriptions, as amended by a suitable approach to incomplete descriptions, correctly captures their contribution to the truth conditions of utterances in which they appear, then the essence of definite descriptions is that there is at most one thing (which may be an atomic entity or a group or mass individual) in the relevant context or situation which matches that descriptive content. Let us call this SEMANTIC UNIQUENESS. (Cf. also Roberts 2003 for a slightly different concept.)

There is another way of viewing uniqueness, which takes into account the goals a speaker has with respect to their addressee. On this view, the essence of definiteness in a definite description is that the speaker intends to use it to refer to some particular entity, and (crucially) expects the addressee to be able to identify that very intended referent. (Compare the concepts of “unique identifiability” and “individuation” discussed by Birner & Ward 1998:121f.) This is a pragmatic property which I have called (Abbott 2010) REFERENTIAL UNIQUENESS. (Compare Löbner’s (1985) functional analysis, and also the remarks of Bach 2004: 203.)

2.2.3 Extending Uniqueness to Other NPs

We must now check to see how well the idea of uniqueness fits the other categories of NP which are commonly considered to be definite. We’ll start with proper names and then move on to pronouns. For the purposes of this discussion, it will help to separate demonstrative pronouns from the personal pronouns, and group them instead with demonstrative descriptions.

2.2.3.1 Proper Names

It seems clear that proper names are similar to definite descriptions in possessing both semantic and referential uniqueness. First, proper names present themselves as being associated with a single referent; the term “proper” indicates this property, which is also reflected in the fact that proper names, used as such, constitute a complete NP and do not accept determiners or restrictive modifiers. On the pragmatic side, as with definite descriptions, speakers can expect their addressees to be able to determine, from the use of a proper name, who or what is being spoken about as long as those addressees are already familiar with the name and its referent (see Prince 1992: 301).

2.2.3.2 Pronouns

When we consider personal pronouns it quickly becomes clear that most of them are not semantically unique. Third person pronouns in English incorporate only minimal descriptive content. Although this minimal content may occasionally apply uniquely in a constrained or shrunken universe of discourse, it need not, as shown most clearly by examples like the following (from Winograd 1972: 33)).

(8) The city councilmen refused the demonstrators a permit...
   a. ...because they feared violence.
   b. ...because they advocated revolution.

The city councilmen and the demonstrators are both plural objects suitable for the pronoun they. However, importantly, in the pair of sentences in (8), the content of the predication makes it clear who is being referred to. Use of a pronoun in a context in which a typical addressee would not be able to determine a referent uniquely results in infelicity, as in (9).

(9) # I told Sue and Betty about the problem, and she said she would work on it.
So it seems that use of a personal pronoun shares with uses of definite descriptions and proper names an assumption that the addressee is expected to be able to determine a referent uniquely.

2.2.3.3 Demonstratives

Demonstratives are different from the kinds of definite NP we have been considering in requiring (in their demonstrative uses) some kind of “demonstration” (pointing, nod, etc.) from the speaker. Such indicators may of course be used with other definites, but the other kinds of definite NP do not incorporate this requirement as a part of their semantics. As a result, as pointed out by King (2001: 27), a single demonstrative may be used repeatedly in an utterance for different intended referents, unlike definite descriptions or personal pronouns:

(10)  
   a. I want that cookie, and that cookie, and that cookie.  
   b. #I want the cookie, and the cookie, and the cookie.

(11)  
   a. I want that, and that, and that.  
   b. #I want it, and it, and it.

The requirement of a demonstration helps demonstratives achieve referential uniqueness without semantic uniqueness.

2.2.4 Subsection Conclusion – the Universals

As we have seen, definite descriptions, proper names, pronouns, and demonstratives all seem to share referential uniqueness – an intention on the part of the speaker using them to speak about a particular entity which they assume that the addressee should be able to identify. Thus this property has a strong claim to be the essence of definiteness. Furthermore, if that claim holds up then it would seem that the universals (those NPs with all, every, or each as determiner) should also be included in the category of definite NPs, since in at least some of their non-generic uses their denotation should similarly be identifiable to an addressee.

2.3 Familiarity

We turn now to a competitor to Russell’s uniqueness theory. On Heim’s (1982, 1983) approach to semantics, definite and indefinite descriptions both introduce a variable with information concerning some entity (the information contained in the CNP). The difference, in Heim’s view at that time (following Christophersen 1939), was that indefinite descriptions were required to introduce novel entities while definite descriptions were required to denote familiar ones. When we introduced Russell’s uniqueness theory, we noted in passing that both Frege and Strawson had proposed that definite descriptions presuppose the existence of a referent, rather than asserting it as Russell’s theory seems to imply. Furthermore, on the common ground view of presuppositions, they are propositions which the speaker assumes are shared beliefs between speaker and addressee (see, e.g., Stalnaker 1974, 2002; but also Abbott 2008b). Thus familiarity theory of definiteness comes close to being just a special case of this view of presuppositions.

The main problem with this approach to definiteness (and in general with the common ground theory of presuppositions) is that there are many counterexamples. As noted above Löbner (1985) (and Rothschild (2007)) have distinguished semantic or role-type definite descriptions, where the CNP content itself determines a unique referent, from pragmatic or particularized definite descriptions, where the uniqueness in context is signaled by the definite
article itself. As Löbner pointed out, the familiarity theory of definiteness neglects the first kind, which can naturally be used to introduce new entities into the discourse (1985: 320). However pragmatic, particularized definite descriptions may also be used to introduce new entities into the discourse, as shown by (12) below.

(12) The case of a Nazi sympathizer who entered a famed Swedish medical school in 2007, seven years after being convicted of a hate murder, throws a rarely discussed question into sharp focus.... [The New York Times on line, 1/28/08; underlining added.]

In this example, the entity in question was being mentioned for the first time. Newspapers yield many such examples. In fact empirical research by Fraurud (1990) and Poesio & Vieira (1998) has shown that more than 50% of definite descriptions in naturally occurring discourse may introduce new entities. Supporters of the familiarity theory typically respond to such examples by citing accommodation in the sense of David Lewis (1979). However, as has been observed by, e.g. Gazdar (1979: 107), Soames (1982: 461, n. 5), Abbott (2000: 1419), among others, appeals to accommodation in this case make the familiarity theory virtually vacuous – definites denote familiar entities unless they don’t. More importantly, such appeals do not explain the fact that it is possible to explicitly or implicitly deny any assumption that the referent of a definite description is familiar to the addressee, as shown in (13).

(13) a. The new curling center at MSU, which you probably haven’t heard of, is the first of its kind. [= Abbott 2008a, ex. 6]

b. I’d like to introduce you to the idea that Scientology is a gigantic money-laundering scheme.

If it were correct that familiarity were conventionally encoded in definite descriptions, then examples like those in (13) should be anomalous, but they are not.

By contrast, uniqueness apparently is conventionally encoded in definite descriptions. For one thing, when the and a/an are explicitly contrasted it is always uniqueness that is at issue, not familiarity. (See Horn & Abbott 2010 for many examples.) For another, denying uniqueness for a the content of a definite description results in anomaly, as shown in (14).

(14) # Russell was the author of Principia Mathematica: in fact, there were two. [= Abbott 2008a, ex. 11]

The natural conclusion is that uniqueness is part of the meaning of the definite article while familiarity is not. Instead, familiarity may be derived as a conversational implicature – something which may be cancelled or otherwise neutralized in context. (See Abbott & Horn 2011 for further discussion of this interesting issue.)

2.4 Section Conclusion

Of the criteria considered here – strength, uniqueness, and familiarity – it is clear that uniqueness, especially viewed as referential uniqueness, comes closest to characterizing definite NPs. We turn now to some other proposals.

3. Principal Filters

In this section, we consider three proposals which arose in the wake of Montague’s (1973) treatment of NPs as expressing generalized quantifiers, or sets of sets (ignoring intensionality, which we will continue to do for the duration of this paper). They have in common focusing
on those generalized quantifiers with non-empty generator sets. There are some differences among the proposals, with possibly different conclusions about which NPs would be considered to be definite. We will also look at some syntactic evidence.

3.1 The Proposals

3.1.1 Barwise & Cooper 1981

We consider first the definition of definiteness in Barwise & Cooper (1981:183f; italics in original).

(15) DEFINITION. A determiner $D$ is definite if for every model $M = \langle E, || || \rangle$ and for every $A$ for which $||D||(A)$ is defined, there is a non-empty set $B$, so that $||D||(A)$ is the sieve $\{ X \subseteq E | B \subseteq X \}$. (Hence, $||D||(A)$ is what is usually called the principal filter generated by $B$.)

In more or less ordinary language, this definition requires definite determiners, when combined with a set term, to yield a set of sets with a nonempty intersection – the generator set for the filter. NPs with a definite determiner are then definite.

This definition raises a couple of issues. The first is that it does not include NPs without determiners, such as pronouns and proper names. However it should be relatively easy to revise this kind of definition of definiteness to include them, since the generalized quantifiers interpreting them would also be principal filters. The second issue is more complicated. Barwise & Cooper intended to include definite descriptions (of course) while excluding the universals. One reason for this is that they assumed (following Jackendoff 1977) that a crucial property of definite NPs is the ability to serve as the embedded NP in a partitive, and that the universals cannot appear there. However excluding the universals while including definite descriptions required a couple of stipulations. One was that definite descriptions for which the CNP set is empty (like the present king of France) are undefined. Thus Barwise & Cooper follow Frege (1892) and Strawson (1950) in their view that definite descriptions semantically presuppose the existence of a referent. The other stipulation is that the universals do not share this presupposition of existence. (This latter stipulation does not follow Strawson; cf. Strawson 1950: 344.) We will return to the issue of partitives below in §3.3.

3.1.2 Partee 1986

Our second characterization was not actually proposed as a definition of definiteness, but is nevertheless highly congruent with the Barwise & Cooper idea. Broadly within the Montagovian framework, there are three possible (extensional) types for NPs: $e$ (the type of NPs which denote entities), $<e,t>$ (the type of NPs which denote sets of entities), and $<<e,t>,t>$ (the type denoting generalized quantifiers – sets of sets). Partee (1986) noted that many NPs can appear in more than one type, depending on the context, and she proposed a number of “type shifting principles”, to provide appropriate interpretations. The principle of interest here is one called “lower”, which applies to NPs of type $<<e,t>,t>$ and yields NPs of type $e$. Lower only applies to generalized quantifiers which are generated by single entities, where plural sums and masses are also considered to be entities, and maps them on to those entities. Overtly quantificational NPs like most chickens and no good ideas are not subject to this principle (although it is not clear that the universals are excluded, given that totalities can be considered to be plural sums). Partee pointed out that the traditional division between referential and quan-
tificational expressions seems to correlate well with the division between NPs which may be of type e and those which may not be. (Cf. Partee 1986: 132.)

Partee’s type e NPs are the same as Barwise & Cooper’s definites with one exception – indefinite descriptions. Partee’s criterion for being of type e was the ability to serve as the antecedent of a singular discourse pronoun. As shown in (16) (from Partee 1986, exx. 7, 8), this criterion groups indefinite descriptions with definite NPs.

(16)  
   a. John/the man/a man walked in. He looked tired.  
   b. Every man/no man/more than one man walked in. *He looked tired.

As noted above, Heim (1982) treated indefinite descriptions similarly to definites. Chastain 1975, Kamp 1981, and Fodor & Sag 1982 have also argued that indefinite descriptions can be referential. In order to achieve a type e interpretation for indefinite descriptions, Partee (following Zeevat 1989) suggested that they might receive a generalized quantifier interpretation based on a particular variable – roughly, the set of sets containing x, where x would be assigned a value in context. This would allow lower to apply, yielding x. If this proposal is right, then we would have to conclude at this point either that indefinite descriptions can be definite (this would be when they introduce a discourse referent), or, more plausibly, that being of type e does not correspond to being definite.

3.1.3 Löbner 2000

Löbner (2000) explored the interaction between negation and NP interpretation. He argued that definite descriptions are associated with a (semantic) presupposition of indivisibility, so that predicates apply to them as a whole. This is most easily illustrated with a plural definite description, as shown in (17):

(17)  
   a. The cows are in the field.  
   b. The cows are not in the field.

Löbner argued that (17a) is true only if all of the cows are in the field, and (17b) is true only if all of the cows are not in the field. If some of the cows are in the field and some are not, then neither (17a) nor (17b) is defined. This property then plays an essential role in Löbner’s characterization of definiteness, and also serves to distinguish plural definite descriptions from the universals (as well as other quantified NPs). Note that the negation of (18a) is not (18b), but rather (18c).

(18)  
   a. All the cows are in the field.  
   b. All the cows are not in the field.  
   c. Not all the cows are in the field.

It is this difference in behavior which separates definite NPs from quantificational NPs definitively, in Löbner’s view.

It is worth noting that this characterization of definiteness, like Partee’s criterion for type e NPs, could be held to include specific indefinite descriptions. As the examples below in (19) suggest, the specific indefinite descriptions, like definites, take scope outside of negation. (This in the examples below should be read as the specific indefinite this (cf. Prince 1981), and not the demonstrative this.)

(19)  
   a. This/A certain strange cow is in the field.
The indefiniteness of definiteness

b. This/A certain strange cow is not in the field.
c. No (#certain) strange cow is in the field.

The natural negation of (19a) is (19b), not (19c).

Löbner supported this classification of NPs with some syntactic characteristics. One concerned general scope taking ability. He asserted that “definite NPs do not have scope at all”, while quantificational NPs, of course, do take different scopes. Another property concerned behavior in partitives; like Barwise & Cooper, Löbner assumed that only definite NPs may appear embedded in a partitive. In the next two subsections we take up these assumptions.

3.2 Scope Taking

In this subsection we will take a look at the scope taking abilities of NPs. It will help to break these down into two possibilities – the ability to take narrow scope, and the ability to take wide scope – since these might differ. Of particular interest will be similarities and differences between definite descriptions and quantified NPs.

3.2.1 Narrow Scope

Proper names, and pronouns and demonstrative NPs when they are used demonstratively, generally speaking do not take narrow scope with respect to other operators. This is true whether the operator in question is a quantifier, a propositional attitude predicate, or a modal. This behavior is unlike that of quantificational NPs. Each of the examples in (20) is ambiguous, and has an interpretation in which the underlined NP is interpreted with narrow scope relative to the boldface operator.

(20)  
\[\begin{align*}
  a. & \quad \text{Everybody loves somebody.} \\
  b. & \quad \text{Rush Limbaugh hopes that many liberals will fail.} \\
  c. & \quad \text{Several philosophers might have gone into plumbing.}
\end{align*}\]

In contrast to the ambiguity of the examples in (20), the univocality of those in (21) illustrates the fact that proper names, pronouns, and demonstratives do not take narrow scope.

(21)  
\[\begin{align*}
  a. & \quad \text{Everybody loves Madonna/her/that singer over there.} \\
  b. & \quad \text{Rush Limbaugh hopes that Obama/he/this person sitting here will fail.} \\
  c. & \quad \text{Aristotle/he/those philosophers might have gone into plumbing.}
\end{align*}\]

Exceptions to these generalizations have been argued for, but by and large the pattern holds.

In these contexts, definite descriptions can pattern with the quantificational NPs rather than the referential ones, as shown in (22).

(22)  
\[\begin{align*}
  a. & \quad \text{Each of those people loves the color they look best in.} \\
  b. & \quad \text{Rush Limbaugh hopes that the current president will fail.} \\
  c. & \quad \text{The number of US states might have been odd.}
\end{align*}\]

So as far as classifying an NP type as definite or indefinite, the ability to take narrow scope does not seem to give us good results.

The kind of narrow scope Löbner was particularly concerned with was narrow scope with respect to negation. And it is true that (17b) above, repeated here as (23), seems strongly to suggest that the cows as a group fail to be in the field.

(23)  
\[\begin{align*}
  \text{The number of cows is odd.}
\end{align*}\]
The cows are not in the field. However each also refuses to take narrow scope with respect to negation; (24) is likewise unambiguous.

Each of the cows is not in the field. But Löbner does not seem to allow that quantification involving each involves definite reference.

3.2.2 Wide Scope

As sentence operators, quantifiers can take wide scope with respect to other sentence operators – propositional attitude predicates, modals, or other quantifiers. Thus the examples in (20) above also have readings where the underlined NP has wide scope. Wide scope would seem also to be unexceptionable for definite NPs, if we take the examples above in (21) to be ones in which the underlined NPs have wide scope. An alternative, however, is to conclude that those NPs are simply scopeless. On the other hand it has been argued that we need to recognize actual scope taking on the part of proper names (and other definites) in order to account for cases of sloppy identity. Consider, e.g., (25)

Mary likes her boss but Jane doesn’t.

The relevant reading here is the sloppy one where Jane doesn’t like her own boss. On the standard analysis, the pronoun (her) in the first VP is construed as a variable bound by Mary. (This allows for the second, pronominal, VP to be interpreted as identical with the first.) In order to bind this pronoun, it is typically assumed that the NPs Mary and Jane must have sentential scope taking capabilities. (Cf. Heim & Kratzer 1998, following Keenan 1971, Partee 1972.)

Peters and Westerståhl (2006) gave example (26) as evidence that definite descriptions are not quantifiers.

The novices chose a mentor.

They remarked, concerning this example, that it “unambiguously entails that all novices have the same mentor” (17, n. 12). However that is not so clear. Example (27)

In their sophomore year the students chose a major.

does not seem to me necessarily to imply that each of the students chose the same major. And likewise (28) seems to have a nonanomalous reading.

For lunch, the children ate an apple.

On the other hand it is not so clear that these facts require a quantificational analysis of the definite descriptions in question. Why isn’t it simply an issue of distributive vs. collective predication? In which case why did Peters and Westerståhl take this kind of fact to be significant concerning the quantificational status of definite descriptions? I must confess to being at a loss as to how to interpret these kinds of scopal facts.

3.2.3 Conclusion Concerning Scope

It seems to me we must conclude from this exploration that scope facts are quite complex and require further investigation. The statement that definite NPs do not have scope at all seems definitely too strong. If we want to include definite descriptions in the super category of defi-
nite NPs, then we cannot take inability to take scope as a characteristic of the category. On the other hand Löbner’s claims about negation have held up well, with the exception that each does not behave like the other quantificational determiners in this regard.

We turn now to partitive NPs, which have been taken by Löbner as well as many others to provide a criterial context for definites.

### 3.3 Partitives

Superficially, partitive NPs seem to have the form *Det of NP*. Some examples are given in (29) below.

\[ \text{(29) some of the apples, few of those options, all of Mary’s dogs} \]

If that is indeed their structure, they present a problem: ordinarily determiners combine with CNPs, which denote sets of entities. But with the exception of predicate nominals, NPs denote either generalized quantifiers (sets of sets), or entities, and so they do not provide a suitable interpretation for another determiner to combine with.

Jackendoff (1977) argued that the NP embedded in a partitive had to be definite; he termed this “the Partitive Constraint”. As was mentioned above in §3.1.1, Barwise & Cooper (1981) assumed that Jackendoff was correct, and proposed an analysis of “definite NP” which was tailored to that assumption. As we saw, this definition requires a definite NP to always have a non-empty intersection (the generator set) – thus including definite descriptions (on the assumption that they semantically presuppose existence), but excluding the universals (on the assumption that they do not semantically presuppose existence) as well as all other overtly quantified NPs. The beauty of the Barwise & Cooper analysis was that it suggested an explanation for the Partitive Constraint: only a generalized quantifier with a nonempty intersection would yield a set for the initial determiner to combine with. Barwise & Cooper suggested that *of*, in this construction, acts as an instruction to take the generator set of the NP with which it combines (1981: 206f).

Given that the universals have a nonempty intersection (unless the CNP fails to denote, as in, e.g. the case of *every unicorn*), Barwise & Cooper’s reasoning would lead us to expect them to be able to occur embedded in a partitive. Consider an example like (30).

\[ \text{(30) Most of every apple was in the bowl.} \]

It is true that (30) cannot mean most of the apples are in the bowl. However that is because *every* is a necessarily distributive quantifier – hence its denotation cannot be taken as a group. Below we will see that the universal quantifier *all* does allow a group interpretation, and does appear embedded in partitives.

We should note (30) does have an interpretation as a mass partitive, where the initial determiner (*most* in this case) applies to the individual apples rather than the apples as a group. On this interpretation the individual apples have been cut up or mashed, and a majority portion of each put in the bowl. The necessary distributivity of *every* forces the initial determiner to apply to the individuals in the denotation of its NP. The failure of NPs with *each, most, or both* to occur embedded in a group partitive is a result of the same property. They may readily occur in mass partitives however, as shown in (31).

\[ \text{(31) a. The Smithsonian donated most of both rare book exhibits.} \]
\[ \text{b. One third of each book Chomsky writes is footnotes.} \]
\[ \text{c. At least some of most fruits consists of rind and seeds.} \]

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1 Much of the material in this section was first presented in Abbott 1996. That paper also presents an analysis of partitives, which is not attempted here.
In mass partitives like these the initial quantifier is applying to individuals within the denotation of the embedded NP, and not that NP as a whole.

Returning to the main theme, a number of researchers (most of whom concentrate on group partitives) have concluded that partitives do not, in fact, have the structure Det of NP. Keenan & Stavi (1986: 287) and Peters & Westerståhl (2006: 269) argue that partitives have the structure [[Det of Det] CNP]; while Barker (1998), Löbner (2000), and Ionin et al. (2006) (among others), support a two NP structure. If one of these different structures is correct, the rationale for the Barwise & Cooper analysis disappears. Despite this fact, there is still widespread confidence in Jackendoff’s partitive constraint. Keenan & Stavi assumed that the second Det in their Det of Det partitive structure must be definite (1986: 297). Peters & Westerståhl conclude that it must be either definite or possessive (cf. Peters & Westerståhl 2006: 278). Similarly, as we have seen, Löbner holds that only definite NPs, and not quantificational NPs, occur embedded in a partitive (2000: 253).

Leaving aside the case of the necessarily distributive NPs, there remain many counterexamples to the Partitive Constraint, viewed as a requirement of definiteness. Thus consider the examples below in (32) - (36). (The original sources are given following the examples; (32)-(34) also appeared in Abbott 1996.)

(32) He ate three of some apples he found on the ground.

(Stockwell, Schachter, and Partee 1973: 144)

(33) This is one of a number of counterexamples to the PC.

(Ladusaw 1982: 240)

(34) They called the police because seven of some professor’s manuscripts were missing.

(Keenan & Stavi 1986: 297)

(35) I would hate for my boy-friend and me to be two of seventeen housemates – we would never be able to kiss in private.

(Ionin, et al. 2006: 364)

(36) a. Ants had gotten into most of some jars of jam Bill had stored in the basement.

b. Three quarters of half the population will be mothers at some point in their lives.

c. Any of several options are open to us at this point.

d. Each student only answered a few of many questions that they could have.

e. Half of all dentists who chew gum prefer Trident.

(Abbott 1996: passim)

With the exception of the last example ((36e)), each of the underlined NPs above is intuitively indefinite, and would not be classified as definite by any of the analyses of that concept which we have looked at so far. The last example has an embedded universal (all dentists who chew gum) with a group interpretation.

Data like those above (and more examples can be easily found) suggest that any NP that can have a group interpretation can appear embedded in a group partitive. The only exception is bare plural and mass NPs, which are not welcome there, as illustrated by (37).

(37) a. * Most of books by Chomsky are on politics.
b. * Some of green slime is created by bacteria.

As is also indicated by these two examples, it does not matter whether the bare NP is interpreted as indefinite (as in (37a)) or generically (as in (37b)). Neither is possible embedded in a partitive. (Interestingly, in this characteristic bare plural and mass NPs are different from proper names; viz., e.g., Most of Australia is desert.)

The upshot of this investigation into partitive NPs is that they do not provide a good diagnostic for definiteness.

3.4 Section Conclusions

In this section we have looked at three further attempts to characterize a distinction in NPs. In two cases the authors were explicitly attempting to get at the essence of definiteness (Barwise & Cooper and Löbner), while Partee suggested that being of type e might turn out to coincide with the closely related concept of referentiality. However, as we have seen, there are substantial problems with each of these attempts – viewed as definitions of definiteness. In one (and possibly two) cases the universals seem to be excluded only arbitrarily. Furthermore in the case of the Barwise & Cooper analysis their exclusion was motivated by an assumption which we have seen ample reason to question. On the other hand specific indefinite descriptions would be regarded as definite according to two of the characterizations, which raises further questions about their adequacy – again, as definitions of definiteness. I would certainly not want to claim that the semantic properties brought to light in the three works considered here are not interesting, or that they do not correspond to significant linguistic properties of NPs. My only claim is that none of them appear to give a satisfactory definition of definiteness, or one that is superior to referential uniqueness.

4. Concluding Remarks

This paper has explored the concept of definiteness, and in particular whether existing characterizations of this notion seem to capture its essence. In the course of this exploration we have seen a number of issues and problem areas which make the selection of a single characterization as the correct one difficult. My own feeling is that referential uniqueness is the strongest contender. However, I want to reiterate a comment from the beginning of the paper – that space prevents anything like a full examination of the issues under investigation here. Interested readers are urged to consult both the references listed below and the works they cite.

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6. References


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