

Implicit indefinite objects: grammar, not pragmatics

Luisa Marti
Queen Mary, University of London
luisa.marti@qmul.ac.uk

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Abstract. In this paper I argue that implicit indefinite objects, i.e., the notional objects of intransitive uses of verbs like *eat*, *bake*, *smoke*, *drink*, *read*, *write*, etc., are represented grammatically as null, bare, number-unmarked nouns. The relationship between the null noun and the verb it is the notional object of is just like the relationship between the noun and the verb in what I call Noun-Verb verbs, produced as a result of processes such as noun incorporation, noun stripping or denominal verb formation. The argument is based on the semantic similarities between implicit indefinite objects and the nouns in these other constructions. The results of this research are important not only from a linguistic perspective, but from a philosophy of language perspective as well, as implicit indefinite objects have been taken to constitute evidence for the existence of pragmatic enrichment, a claim that is argued against here.

Keywords: implicit indefinite objects, bare nouns, noun incorporation, noun stripping, denominal verbs, pragmatic enrichment

1 Introduction

English and other languages have verbs that are optionally transitive, i.e., verbs that may appear with or without a direct object. A sub-class of these verbs is illustrated in (1)-(5) (optional direct objects appear in brackets):

- (1) John has already eaten (breakfast)
- (2) Peter is drinking (a glass of wine) in the balcony
- (3) Mary has recently quit smoking (cigars)
- (4) I am so glad that you found time to bake (such a wonderful cake) today
- (5) John has been hunting (deer) a lot lately

Optionally transitive verbs of this type in languages like English, German or Spanish are *eat*, *smoke*, *read*, *cook*, *sing*, *carve*, *knit*, *weed*, *file*, and *write*. This paper is concerned with the interpretation and proper analysis of the intransitive uses of these verbs, mainly with reference to English.

It is uncontroversial that, in their intransitive use, these verbs have a *notional*, albeit null, object. Consider the interpretation of the following examples:

- (6) John has already eaten
- (7) Peter is drinking in the balcony
- (8) Mary has recently quit smoking
- (9) I am so glad that you found time to bake today
- (10) John has been hunting a lot lately

A notional object is understood in all of (6)-(10); e.g., in (6), there is something that John ate (perhaps even a meal; more on this interpretation later); in (8), there is something that Mary quit smoking. It is uncontroversial that the sentences in (6)-(10) are represented as something like (11)-(15) in what some call the language of thought (material in angle brackets is unpronounced):

- (11) John has already eaten <a meal/food>
- (12) Peter is drinking <drinkable liquid/alcohol> in the balcony
- (13) Mary has recently quit smoking <cigarettes>
- (14) I am so glad that you found time to bake <bakeable goods> today
- (15) John has been hunting <animals> a lot lately

Arriving at the proper analysis of these uses involves answering the question of whether the notional objects in (11)-(15) are actually represented grammatically, despite their lack of phonological realization. Carston (2004), Groefsema (1995), Hall (2009), Iten et al. (2004), Recanati (2002) and Wilson and Sperber (2000) have suggested that, in their intransitive uses, these verbs do not have a direct object that is grammatically represented; instead, that object is only provided for pragmatically. These authors appeal to a process of pragmatic enrichment whereby, given appropriate pragmatic pressures, language users “enrich” grammatical interpretations (in this case, representations that lack a grammatical object) in such a way as to provide the missing material (in this case, an object). Importantly, the intransitive uses of these verbs are taken in this literature to illustrate the ways in which pragmatic processes work.

In this paper I argue that this view is mistaken: an object is in fact part of the *linguistic* representation of sentences such as (6)-(10). This object, however, is special in that it is not a normal syntactic object, but a noun whose properties are those of nouns in noun incorporation/stripping and denominal verb constructions in languages such as West Greenlandic, Hopi, Zuni, and many others. The argument rests on the logic of Occam’s Razor: if these notional objects behave, as I show in detail later, like grammatical category X, then the null hypothesis is that the notional objects are themselves instantiations of X. The only difference between the objects of interest here and those that appear in noun incorporation/stripping and denominal verbs is that the former, but not the latter, are phonologically null. I refer to the notional objects in question as implicit indefinite objects throughout the paper, given their lack of phonological representation and their indefinite semantics, more on which below.^{1, 2, 3}

From a purely linguistic perspective, the paper contributes novel arguments to the effect that implicit indefinite objects are number-neutral null nouns that undergo a process similar to noun incorporation/stripping or denominal verb formation, as opposed to other kinds of grammatical object—for example, an empty pronominal such as *pro*, or other types of indefinites, such as bare plurals. From a philosophical

¹ In other languages, the verbs discussed above, or subsets thereof, may or may not behave the way they do in English. For example, the counterparts of (6)-(10) in Hindi all require an overt (cognate) object (Utpal Lahiri, p.c.).

² Implicit indefinite objects in English have been investigated in the linguistics literature at least since Bresnan (1978), Dowty (1981), Fillmore (1969, 1986), Fodor and Fodor (1980), Mittwoch (1980), Shopen (1973) and Thomas (1979).

³ Implicit indefinite objects are not to be confused with other types of implicit objects. For example, this paper is not about so-called definite null objects, such as those of verbs like *choose* or *notice* (see, e.g., Fillmore 1986). More on this in section 5.

perspective, the contribution is that implicit indefinite objects are not useful in revealing the properties of the process of pragmatic free enrichment. In fact, the argument in this paper is a powerful reason for raising the question of whether pragmatic free enrichment exists at all—though I will not be answering this question here.

In addition to comparing implicit indefinite objects with incorporated/stripped, etc. nouns in languages that are well-known for having such processes, we will look in great detail at Frisian. Frisian, as argued in Dyk (1997), has both overt-noun incorporation and implicit indefinite objects. Frisian offers an excellent testing ground for the hypothesis put forth in this paper, because it allows us to see whether the prediction that the two phenomena go hand in hand is actually borne out. We will be able to see more, in fact: in Frisian, implicit indefinite nouns actually *cannot* be anything other than incorporated nouns, in particular, they cannot be *unincorporated* bare (singular, mass or plural) nouns. Frisian is a very suitable language to compare English to because the two languages are very closely related, thus allowing for maximally controlled comparison.

The structure of the paper is as follows. In section 2, I introduce three processes that form verbs out of Noun-Verb combinations: noun incorporation, noun stripping, and denominal verbs, and discuss both their formal and their semantic properties in some detail. In section 3, I look in detail at the semantic properties of implicit indefinite objects in English and show that the semantic properties displayed by implicit indefinite objects are the prototypical semantic properties of nouns that participate in Noun-Verb verb formation. In section 4, we look at the properties of the phenomenon in Frisian and strengthen the argument from section 3. Section 5 argues against other grammatical treatments of implicit indefinite objects. In section 6, we consider the problems pragmatic approaches face given the data presented here. Section 7 is the conclusion.

2 Noun-Verb verbs

2.1 Formal characteristics

There are at least three Noun-Verb verbal formation processes that are of interest to us here: noun incorporation (see, among many others, Baker 1986, Bittner 1994, Gerdts 2001, Haugen 2008a, Kroeber 1909, 1911, Mithun 1984, 1986, Rosen 1989, Sadock 1980, 1986, Sapir 1911), noun stripping (or “composition by juxtaposition” in Mithun’s 1984 classification, more on which in section 4; see Gerdts 2001 and Miner 1986), and denominal verb formation (see Gerdts and Marlett 2008 and accompanying articles in the volume they edited on denominal verb formation). The three processes are illustrated, in the same order, in (16)-(18). The nouns involved in these constructions are bold-faced throughout:

(16) *Yaqui* (Jelinek 1998:213)

- a. Aapo maaso -ta peu -ta -k
 3SG deer -ACC butcher -TRANS-PERF
 ‘He butchered a deer’
- b. Aapo **maaso** -peu -te -n
 3SG deer -butcher -INTRAN -PAST
 ‘He was deer butchering’ (lit. He deer-butchered)

- (17) *Zuni* (Miner 1986:251)

a. télikina	[?] á	-leya	- [?] u
prayer-stick	PL	give	CAUS
‘give prayer-sticks to a plurality’			
b. ’óna	[?] élate	-na	
road	pass.upon	ST	
‘on (her) road passing’			
c. čá	tékalaš	-na	
child	neglect	ST	
‘neglecting (your) children’			

- (18) *West Greenlandic* (van Geenhoven 1998)

Arnajaraq	eqalut	-tur	-p	-u	-q
A.ABS	salmon	-eat	-IND	-INTRAN	-3SG
‘Arnajaraq ate salmon’ (lit. Arnajaraq salmon-ate)					

These processes yield noun-verb combinations that are themselves verbs, very much like the English cases in **Error! Reference source not found.**, though in English Noun-Verb verb formation is much less productive than in the languages above, and in many cases the resulting compound is a noun, not a verb:

- (19) apartment hunting, potty-training, babysitting, tornado watch...

Some of these cases, such as that of West Greenlandic, have been studied under the rubric of ‘noun incorporation’ (see van Geenhoven 1998 for an example) and indeed an issue that has been prominent in the specialized literature for a long time is whether cases like West Greenlandic represent a related but different case from noun incorporation as in (16) (see Kroeber 1909, 1911, Mithun 1984, 1986, Rosen 1989, Sadock 1980, 1986, Sapir 1911, among many many others; and, for a recent overview of the issues, Haugen 2008a), or from noun stripping as in (17). One important difference between noun incorporation/stripping and denominal verb formation seems to be that, while in noun incorporation/stripping, the verb that is incorporated into can function as an unincorporated-into verb as well, as illustrated for Yaqui in (16)a vs. (16)b (i.e., *peu* ‘butcher’ appear in both incorporated and unincorporated form), the verbs involved in denominal verb constructions, as illustrated in (18) for West Greenlandic, are affixes and cannot be used on their own (see Gerdts and Marlett 2008 for recent discussion of this difference). An unincorporated version of (18) is (20), which uses a different root for *eat*:

- (20) *West Greenlandic* (van Geenhoven 1998)

Angunguu-p	aalisagaq	neri	-v	-a	-a
A-ERG	fish.ABS	eat	-IND	-TRANS-3SG	3SG
‘Angunguaq ate the/a particular fish’					

What will be crucial for us throughout the discussion below is that, while there are good reasons for treating the three constructions separately, it is undeniable that they share many properties.

An important issue in the formation of Noun-Verb verbs is the status of the object noun. In all three constructions, the object is not a regular syntactic object. The most important consequence of this is the fact that the nouns in these constructions

must always appear bare. In the case of languages that mark Case overtly, for example, the nouns appear unmarked (see (18) vs. (20) and (16)a vs. (16)b). In Zuni, as described by Miner (1986: 246), nouns are always inflected for number except when they are stripped. A difference between noun stripping and the other two phenomena is that, in noun stripping, the noun seems to retain some of its independence, as evidence by the fact that, at least, in Zuni, it still retains its stress.

Let us go over the remaining properties of these constructions by going back to the examples in (16)-(18). West Greenlandic has constructions, such as (20), that look very similar to normal transitive constructions in English, except for the following relevant properties. First, in (20), the direct object precedes the verb. Second, West Greenlandic is an ergative language, which means that objects of transitive verbs and subjects of intransitive (unergative) verbs are marked with the same Case, as in (24) (called ABSOLUTE; not overt in (20) or (21)):

- (21) *West Greenlandic* (van Geenhoven 1998)
- | | | | | |
|-----------|--------|------|---------|------|
| Angunguaq | tikip | -p | -u | -p |
| A.ABS | arrive | -IND | -INTRAN | -3SG |
- ‘Angunguaq arrived’

Subjects of transitive verbs are marked with a different Case (called ERGATIVE). Third, West Greenlandic has subject ((20) and (21)) and object ((20)) agreement inflection on the verb. And fourth, West Greenlandic has special morphemes for intransitivity (-*u*-) and transitivity (-*a*-). Looking back at (18), we notice that, with a denominalized verb, the object noun is not marked for Case, the transitive morpheme -*a*- is replaced by the intransitive morpheme -*u*-, the same we saw in (21), and there is no longer any object agreement inflection on the verb. Even though, notionally, the object of *eat* here is *salmon*, formally, the language treats the construction the same way it treats intransitive constructions, which leads us to the conclusion that noun-verb verbs in this language are intransitive verbs. Many new verbs can be formed in this way, e.g., what in English would be ‘salmon-eat’, ‘fruit-eat’, ‘cod-eat’, ‘bread-eat’, etc. It is possible for denominalized verbs to be intransitive, as is in the case here, but it is also possible for them to function as transitive verbs, as in the case of *Seri*, discussed in Marlett (2008):

- (22) *Seri* (Marlett 2008: 478)
- | | | | |
|------------|-----|-------|---------|
| a. Ihp | -y | -i | -cáamiz |
| 1SG.INTRAN | -DT | -have | -shirt |
- ‘I was wearing a shirt’/‘I put on a shirt’.
- | | | | |
|-----------|-----|-------|---------|
| b. Ih | -y | -i | -cáamiz |
| 1SG.TRANS | -DT | -have | -shirt |
- ‘I was wearing it (shirt)’/‘I put it (shirt) on’.

Seri allows its denominal verbs to be either intransitive, as in (22)a, or transitive, as in (22)b. We can tell because first person singular agreement is marked in this language by a prefix, which we see in (22), but this prefix has an allomorph for intransitive forms (*hp*-) and another one for transitive forms (*h*-).⁴ This is a property that denominal verb formation shares with noun incorporation, as incorporated-into

⁴ The *i*- that appears before both in the examples is an epenthetic vowel that is there for reasons of syllabification. See Marlett (2008: 477).

verbs can be either transitive or intransitive. In the Yaqui example in (16)a, we see a normal transitive sentence in Yaqui, with the object realized separately from the verb and marked for ACCUSATIVE Case, the normal Case of direct objects in this language. The verb in this sentence is marked with a special suffix indicating transitivity. (16)b is the corresponding noun incorporation structure. The morphology of Yaqui shows that (16)b contains an intransitive verb because *-te* is an intransitive marker. But there are other languages, such as Southern Tiwa, where the resulting incorporated-into verb can be/is marked for transitivity (Allen, Gardiner and Frantz 1984; see Gerds 2001 and Rosen 1989 for further discussion of noun incorporation and (in)transitivity). Gerds (2001) and Mithun (1984) argue that noun stripping always gives rise to intransitive verbs, so this is a property that sets noun stripping apart from the other two processes.

Two further formal properties are of interest here. Some of the languages that allow Noun-Verb verbs allow the noun to be modified externally by adjectives, relative clauses and/or other modifiers. In West Greenlandic, for example, nouns in Noun-Verb verbs can be externally modified by adjectives, numerals, relative clauses and others (data from van Geenhoven 1998):

(23) *West Greenlandic*

Esta	nutaa-mik	aalisagar	-si	-v	-u	-q
E.ABS	fresh-INSTR.SG	fish	-get	-IND	-INTRAN	-3SG
'Esta got fresh fish'						

(24) *West Greenlandic*

Marlun-nik	ammassat	-tur	-p	-u	-nga
Two-INSTR.PL	sardine	-eat	-IND	-INTRAN	-1SG
'I ate two sardines'					

(25) *West Greenlandic*

Arne	qatanngute	-qar	-p	-u	-q
A.ABS	sister	-have	-IND	-INTRAN	-3SG
[_{RC} Canada-mi najuga	-lim			-mik]	
C-LOC	home	-have.REL.INTRAN	-INSTR.SG		
'Arne has a sister who lives in Canada'					

These modifiers are not themselves part of the verbal compound (e.g., Case marking is possible in (23) and (24)), so the modification must happen at a distance, externally. (26) illustrates that in Kusaiean, when noun stripping has occurred, it is not possible for determiners, adjectives or other modifiers (such as numerals; example not provided) to relate to that noun:⁵

⁵ Lee (1975) does not provide, as noted, examples with numerals as external modifiers, but notes in the text (p. 271) that numerals cannot modify incorporated nouns. Also, with examples such as that in d, he doesn't provide the minimal pair that shows that adjectives by themselves cannot modify incorporated nouns, but we gather that this is the case from what he says in the text (p. 271).

(26) *Kusaiean* (Lee 1975)

- a. El twem-lah mitmit
He sharpen.TRANS-PAST knife
'He has sharpened the dull knife'
- b. El twetwe **mitmit**-lac
He sharpen.INTRAN knife-PAST
'He has knife-sharpened'
- c. *Nga twetwe **mitmit** sac
I sharpen knife the
'I knife-sharpen the'
- d. *Nga twetwe **mitmit** sahfiht sac
I sharpen knife dull the
'I knife-sharpen the dull'

Stripped nouns just can't be modified (Gerds 2001).

External modification is also not possible in the case of Yaqui noun incorporation; for example, neither adjectives nor possessive modifiers are possible (from Haugen 2008a):

(27) *Yaqui*

- *Aapo bwe'uu -k **maso** -peu -ta -n
3SG big -ACC deer -butcher -INTRAN -PAST
'He was butchering a big deer'

(28) *Yaqui*

- a. Peo Huan-ta maso peu -te
Peo Huan-POSS deer butcher-TRANS
- b. *Peo Huan-ta **maso** -peu -ta
Peo Huan-POSS deer -butcher -INTRAN
'Peo is butchering Huan's deer'

However, other noun incorporating languages allow external modification, such as Mohawk, discussed in Mithun (1984), among others.

Finally, some languages allow doubling of the noun in the Noun-Verb verb, with either a true double, or a cognate or hyponymous object. In West Greenlandic, the object of a verb formed by denominal verb formation can appear in the sentence marked with special Case (e.g., Instrumental). The possibility of object-like elements appearing with incorporated-into verbs is a well-documented property of noun incorporation. Example (29) illustrates with Chamorro (see Gerds 1998 and Gerds and Marlett 2008, among others, for more examples):⁶

(29) *Chamorro* (Chung and Ladusaw 2004: 109)

- Si Carmen gäi -ga' i ga'lagu
UNM Carmen AGR.have -pet the dog
'Carmen has the dog as pet' (lit. 'Carmen pet-has the dog')

Stripped nouns also cannot be doubled. One crucial difference between noun stripping and noun incorporation that does not allow doubling or external modification is that in

⁶ It seems that noun stripping does not allow this possibility.

noun stripping, the noun retains its status as an independent word and thus, for example, typically retains stress, whereas the Noun + Verb combination created by noun incorporation counts as a single word (Gerdtts 2001).

For each of the three processes outlined above, it is a possibility that the word formation process is morphological or syntactic. Indeed, this issue has been, and still is, hotly debated in the literature on incorporation and related processes. It will not be of concern to us, however, since it is irrelevant to the argument made here: independently of the relevant process occurs in the morphology or the syntax, there is a object noun that is represented at *some* level of linguistic representation. To refer to the semantic process that results in the particular set of semantic features that cluster together as above, it is common to speak of semantic incorporation (see van Geenhoven 1998, Farkas and de Swart 2003, Chung and Ladusaw 2004, among others; in this literature, it is common not to make the formal distinctions I have made above, but the mechanisms proposed that result in the cluster of properties discussed above might well apply to all of noun incorporation, noun stripping and denominal verb formation). I will not be committing myself here to any particular analysis of the morpho-syntax and semantics of Noun-Verb verbs, since, again, which particular analysis is picked is tangential to my argument: all analyses assume that the object noun is represented grammatically.

So far we have seen illustrations of what we could call “classical” Noun-Verb verbs. But other constructions in other languages have come to be analyzed as involving one of these processes, either formally, semantically, or both. For example, Mohanan (1995) and Dayal (1999, 2007) argue that bare nouns in Hindi are incorporated, and so do Farkas and de Swart (2003) for Hungarian. Grønn (2006) has proposed this analysis for the case of Norwegian bare singulars, Asudeh and Mikkelsen (2000) for Danish, Kallulli (1999) for Albanian, Chung and Ladusaw (2004) for Maori *he* indefinites, etc. Bare plurals have also sometimes been subsumed under an incorporation analysis, as in van Geenhoven (1998), who proposes this analysis for bare plurals in German. See Carlson (2006) for an overview. Also, there are languages in which incorporated objects can be NPs, as opposed to bare nouns: Niuean (Massam 2001), Hindi (Dayal 2007) and Chamorro (Chung and Ladusaw 2004) are cases in point.⁷

This finishes this short survey of the formal properties of Noun-Verb verbs. Despite the certain amount of variation that we have found above, it is important to note that the three processes under discussion here form a natural class with respect to the semantic properties discussed in the next section.

2.2 Semantic characteristics

Let us start by noticing that, whereas in (20), the grammatical and notional object is interpreted specifically, in (18) the notional object is interpreted indefinitely. Nouns that have undergone noun incorporation, such as that in (16)b, also receive a non-specific indefinite interpretation, whereas the corresponding non-incorporated ones, as in (16)a, can be interpreted specifically and definitely. Nouns that have undergone noun stripping are also typically interpreted indefinitely and non-specifically. The indefinite, non-specific semantics of the nouns that participate in these verb formation processes is indeed a widely noted fact in the literature (see Carlson 2006, Gerdtts and

⁷ Without further research, it is not possible to tell whether some of these alledged cases of noun incorporation are better treated as noun stripping or denominal verb formation.

Marlett 2008; Mardirussian 1975: 386, Mithun 1984, Sullivan 1984, de Reuse 1994, Spencer 1995; not all of these authors make the formal distinctions we have made above). Carlson (2006) speaks of non-specific indefiniteness as one of the cross-linguistically stable semantic properties of these nouns.⁸ Van Geenhoven (1998) shows that the nouns that undergo denominal verb formation are interpreted indefinitely and non-specifically; i.e., they do not depend anaphorically on a previously introduced or salient entity—they are not pronouns:⁹

⁸ Actually, he speaks of the cross-linguistically stable semantic properties of noun incorporation, but he conflates into one the three processes we have discussed in the previous section.

⁹ There seem to be exceptions to this our first semantic generalization. Mithun (1984: 862) discusses the following example of noun incorporation from Koryak:

(i) *Koryak*

wūtčū	iññin	yūñr	qulaivun.	Mal	-yūñr.
this.time.only	such	whale	it.comes	good	-whale

ga -**yuñy** -upényilenau
they -whale -attacked

‘This is the first time that such a whale has come near us. It is a good whale. They attacked it (the whale)’

Koryak belongs, in Mithun’s classification of noun incorporation, to her Type III, where, it seems, incorporated nouns are familiar, old information (i.e., not, it would seem, non-specific indefinites). It is quite likely that the generalization in the text pertains only to certain types of Noun-Verb verb formation processes, with Type III noun incorporation being the exception; notice that Mithun adheres to the generalization above in the same paper in which the Koryak data is discussed.

Be that as it may, one has to be careful in how one identifies potential exceptions to this generalization. For example, Gerdtz and Marlett (2008: 419-20) and Gerdtz and Hukari (2008: 501-2) seem to suggest that a noun in a denominal verb construction is itself referential, definite and specific if it can serve as the antecedent to a pronoun, as seems possible in languages like Halkomelem and Seri. Whether something can serve as the antecedent to a pronoun, however, is a separate question from whether that something is itself a pronoun. The latter question is the one that is being addressed in the text above; the former question is addressed later. In other words, being capable of anteceding a pronoun does not make the antecedent ‘inherit’ the properties of the pronoun.

Another type of fact that wouldn’t count, in my view, as a necessary exception to the generalization is the following: in some languages that allow denominal verbs, such as Seri (Gerdtz and Marlett 2008, Marlett 2008), the noun that is part of the verb can be modified externally by a demonstrative, as shown in (ii):

(ii) *Seri*

Hipquih ih-s-i-**cáamiz** a-ha
this 1SG.TRANS-IR-have-shirt AUX-DECL
‘I will wear this one’

However, it is not immediately obvious why an example like (ii) indicates that the noun *cáamiz* that forms part of the verb is necessarily definite and referential—the interpretation of such a noun can still be maintained to be indefinite/to lack definiteness, the same way that one wouldn’t say that the the noun *baby* in the following English example is interpreted as a definite just because it is in some sort of relationship with the syntactic direct object, which is definite: *I am baby-sitting your 5-month-old tonight.*

- (30) *West Greenlandic*
 [Several months ago, I sent Juuna a parcel_i and some letters.]
 Ullumi aatsaat **puurtugar** -si -v -u -q, ...
 today first parcel -get -IND -INTRAN -3SG
 ‘Only today he got a parcel.../#Only today he got the parcel_i...

A second cross-linguistically stable semantic property of the nouns that undergo these verb formation processes is that they typically take narrow scope with respect to other operators in the sentence (see Bittner 1994, van Geenhoven 1998, Carlson 2006, among many others; again, not all authors draw the formal distinctions we are drawing here). Consider the following examples from West Greenlandic:

- (31) *West Greenlandic*
 Arnajaraq **aalisaga** -si -nngi -l -a -q
 A.ABS fish -buy -NEG -IND -INTRAN -3SG
 ‘It is not the case that Arnajaraq bought fish’

- (32) *West Greenlandic*
 Vittu **cykili** -ssar -siur -p -u -q
 V.ABS bike -future -seek -IND -INTRAN -3SG
 ‘Vittus is looking for an arbitrary bike’

(31) can only be interpreted as indicated in the translation, i.e., with the noun *aalisaga* ‘fish’ taking scope below negation. A wide scope interpretation for the noun (i.e., ‘There is/are (a) fish that Arnajaraq didn’t buy’) is not available; in other words, (31) cannot describe a state of affairs in which Arnajaraq bought some fish and not others, a situation that is compatible with the wide scope reading of the noun. Similarly, (32) only has the interpretation indicated in the translation and cannot be used to describe a state of affairs in which Vittus is looking for a specific bike, a situation that would be compatible with the wide scope reading of the noun over the intensional verb.¹⁰

Also, typically, the nouns that participate in these verbs formation processes are both semantically number-neutral and number-unmarked morphologically (or, if we consider singular nouns to be morphologically unmarked for number, then these nouns are, formally, singular nouns). We can see this by looking back at the examples we saw in section 2.1 from West Greenlandic, Yaqui or Kusaiean: none of the incorporated nouns there were morphologically marked for number (in fact, for anything), and the semantics was always number-neutral. Recall also that Miner (1986) explicitly states that stripped nouns in Zuni are devoid of the obligatory number inflection of nouns that are not stripped.

There are exceptions to this generalization that actually allow us to look at the question of semantic number in more detail. In languages like Hindi and Hungarian, both singular and plural nouns can participate in verb formation processes, with different effects on semantic number. The generalization is that, in these constructions, singular/morphologically number-unmarked nouns are semantically number-neutral, whereas plural nouns, in the subset of languages that allow them, are semantically plural. Consider the following data from Hungarian:

¹⁰ In (32), -ssar- is a nominal suffix meaning ‘future’ (as in ‘future wife’). Thanks to Maria Bittner for clarifying this to me.

- (33) *Hungarian* (Farkas and de Swart 2003:12)
- a. Mari olvas egy verset
 Mari read a poem.ACC
 ‘Mari is reading a poem’
- b. Mari verset olvas
 Mari poem.ACC read
 ‘Mari is reading a poem/poems’
- c. Mari verseket olvas
 Mari poem.PL.ACC read
 ‘Mari is reading poems’

Example (33)a shows a normal transitive sentence in Hungarian. The language has a dedicated, special position to the left of the verb, where only a small set of items can appear, including nouns in Noun-Verb verbs. When nouns appear in that position they are Case marked (which can be used as grounds for the claim that something bigger than bare N is involved here), and they can either be singular ((33)b) or plural ((33)c) morphologically, with very clear semantic consequences: while (33)b is semantically number-neutral, (33)c is semantically plural (this is indicated in the translations).

Verbs that are formed by using one of the processes we have discussed here typically designate name-worthy, typical activities. Axelrod (1990: 193) says that “...incorporation provides the lexicalized expression of a typical activity”; Mithun (1984: 848) says that “some entity, quality or activity is recognized sufficiently often to be considered name-worthy in its own right”. The following quote about an example of noun incorporation from Chukchi, from Dunn (1999: 223), illustrates this point well:

“Examples with the stem *qora-nm-at-* (‘slaughter reindeer’) can be misleading, as this stems refers to something which, in Chukchi culture, is a unitary activity and is exceptionally name-worthy as a focus of ritual activity and the high point of the day. [...] it only refers to reindeer-killing in its traditional Chukchi cultural context, i.e., killing of a domestic meat reindeer with a knife in the prescribed manner with all attendant ritual”

Such a property has also been noted for bare singulars in other languages. One can see this even in English, despite its highly restricted use of bare singulars. Carlson (2006: 45) notes that being *in bed* is not simply a locative statement, but also “requires that the person be using the bed as its design is intended, i.e., for sleeping or resting but not as a trampoline. Or being *in prison* is not accorded visitors who are at that location, but only those incarcerated (i.e., experiencing what a prison is for)”.

The last property I would like to discuss is whether the nouns in these constructions can antecede pronouns or not. In the debate about whether the proper of analysis of, e.g., noun incorporation, is morphological or syntactic, this property is relevant because being able to antecede pronouns seems to be something that only syntactically active items can do, parts of words are taken not to be able to establish these kinds of relations. So this is a property that has received quite a bit of attention in the literature. Of course, given that there seem to be formally distinct processes here, it would not be surprising if the noun of one type of process were syntactically active while the noun of another type of process weren’t. In any case, as far as I can tell, the situation with respect to this property is mixed (and is thus not that useful for our purposes). Some of the denominal verb languages, like West Greenlandic (van

Geenhoven 1998), and some of the noun incorporation languages, like Hopi (Hill 2003: 241; Haugen 2008a, b), seem to allow nouns to antecede pronouns (pronouns in West Greenlandic realized as part of the verbal inflection):

(34) *West Greenlandic* (van Geenhoven 1998)

Aani	qimmi	-qar	-p	-u	-q	
A.ABS	dog	-have	-IND	-INTRAN	-3SG	
Miki-mik	ati		-qar	-p	-u	-q
M.-INSTR	name	-have	-IND	-INTRAN	-3SG	

‘Aani has a dog_i. It_i is called Miki’

(35) *Hopi* (Haugen 2008a)

Nu’	pakiw	-maqto	-ni;		
I	fish	-go.hunting-FUT;			
noqwitam	pu	-t	enang	nöönösa	-ni
so	we	that	-ACC	in.addition.to	eat(PL) -FUT

‘I’m going fishing, so we can eat it (fish) along with the other food.’

However, Haugen (2008a) observes that this is a “typologically rare” property of noun incorporation. Farkas and de Swart (2003) and Dayal (1999) show that Hungarian and Hindi the singular nouns that participate in the Noun-Verb verb formation processes of these languages cannot act as antecedents for pronouns, at least not in all circumstances, but that their plural counterparts can. Frisian incorporated nouns, as we will see below, also seem to be able to do it only sometimes. It seems that one can say that the nouns that participate in these processes may have their ability to antecede pronouns compromised, but nothing stronger than that. My impression is also that, at least in part, the reason why the empirical picture is not clear is that how anaphorical relations work, what licenses them, etc., is just not well understood in general.¹¹

3 Implicit indefinite objects in English

In this section I show that the semantic properties of implicit indefinite objects in languages like English are in fact the same as the cross-linguistically stable properties of the nouns in Noun-Verb verb formation processes (see Carlson 2006).

3.1 Indefiniteness and non-specificity

Implicit indefinite objects are interpreted as non-specific indefinites, with plain existential import. With an example like (36) the speaker does not convey the idea that something in particular has been eaten today, the same way that that idea would not have been conveyed had s/he said “John has already eaten food/a meal today”:

(36) John has already eaten today

¹¹ And, as Øystein Nilsen reminds me, to make matters more complicated, there is always the possibility that a particular language just doesn’t *have* the right type of anaphor in its inventory of lexical items.

It's important to emphasize this point because there are claims in the literature to the effect that these implicit objects are pronouns, not indefinites (see Recanati 2002 and others). This view, however, does not seem to be tenable. Let us start by considering the following contrast (Condoravdi and Gawron 1996):

- (37) There was a piece of bread on the table but John didn't eat
(cf. *There was a piece of bread on the table but John didn't eat it*)
- (38) There was a good job available here but Fred didn't apply
(cf. *There was a good job available here but Fred didn't apply for it*)

Eat and *apply for* behave differently in English in that, when they are used with silent objects, the object of *eat* cannot pick up a previously established entity in the discourse, the way the pronoun *it* can. The silent object of *apply for* can do just that. A better paraphrase for *John didn't eat* in (37) is 'John didn't eat anything' (silent indefinite objects always take narrow scope, as we will see shortly).¹² Consider also the following contrasts (data from work together with Tom Roeper, but this type of contrast is well-known):

- (39)
- a. A: John is eating a cookie!
B: *Oh, I'd love to eat <the cookie> too!
 - b. A: John is drinking a smoothie!
B: *Oh, I'd love to drink <the smoothie> too!
 - c. A: John taught a great class this morning
B: *Oh, Peter taught <a great class> too!

In these examples, the implicit object of the verbs cannot be interpreted as though it picked its referent from the preceding context, the way a definite would. For example, in (39)c, B can be interpreted as saying that Peter taught a class this morning too, but that is different from saying that he taught a great class too. According to B, Peter engaged in some teaching this morning, but it is left unspecified whether the class Peter taught was great or not—it could be either way. It is easy to see that the implicit objects are not interpreted definitely, because, again, they contrast with versions in

¹² (37) can be true in a situation in which John doesn't eat the bread on the table. That is, in fact, predicted by the approach in the text: that there was a piece of bread on the table but John didn't eat anything is also true in that scenario. (37) and the version with anything are both falsified if John eats anything at all, the bread on the table or whatever. The version with it is falsified only if John eats the bread on the table. Deirdre Wilson (p.c.) brings up other cases, such as (i):

- (i) John bought pizza and then he ate

According to (i), did John eat the pizza? Well, yes, that is compatible with what (i) says, as is any situation in which John eats anything at all. Is that a problem for the idea that the silent object of *eat* is an indefinite, not a pronoun? No, since John bought pizza and then he ate something has the same range of interpretations as (i). In other words, since pizza counts as something, and since pizza is highly salient and relevant in (i), there might be cases in which it looks as though the silent object of these verbs is establishing an anaphoric relation with a previously introduced entity, but that is misleading.

which a pronoun *it* replaces the implicit object: *I'd love to eat it too*, or *I'd love to drink it too*.

This is very different from the way the implicit objects of other verbs are interpreted. For example:¹³

(40)

- a. The car is stuck. Let's push <the car>!
- b. A: John is smoking heroine!
B: Oh, I'd love to smoke <heroine> too!
- c. A: John is driving a motorcycle!
B: Oh, I'd love to drive <the motorcycle> too!

The versions with a pronoun *it* replacing the implicit object are indeed synonymous with the sentences in (40): *Let's push it*, *I'd love to smoke it too*, *I'd love to drive it too*.¹⁴

Importantly, and contra Recanati (2002), Martí (2006) argues that the implicit objects of interest here cannot be bound by higher quantificational elements, the way pronouns can. Compare (41) and (42):

(41) Whenever John cooks mushrooms, Sally never eats them

(42) Whenever John cooks mushrooms, Sally never eats

(41) has a salient interpretation in which what Sally eats varies with the cooking events, that is, those occasions in which John cooks mushrooms are occasions in which Sally never eats the mushrooms that John cooks on that occasion (she can still eat something else in each one of those occasions). (42) can never have such an interpretation: on those occasions in which John cooks mushrooms, Sally never eats anything at all. That this is so can be seen in (43), where a continuation that makes it explicit that Sally eats something on those occasions, just not the mushrooms, is impossible for (42), though, as (44) shows, such a continuation is compatible with (41):¹⁵

(43) Whenever John cooks mushrooms, Sally never eats. #Instead, she eats pasta with tomato sauce

(44) Whenever John cooks mushrooms, Sally never eats them. Instead she eats pasta with tomato sauce

¹³ The existence of null definite objects has been noted before; cf. Massam and Roberge (1989) and Massam (1992) on “recipe context” null objects in English, Suñer and Yépez (1988) for the Quiteño variety of Spanish (spoken in Quito, Ecuador).

¹⁴ The study of implicit arguments has, of course, a long tradition in linguistics. For a recent overview of implicit arguments and for relevant literature, see Bhatt and Pancheva (2006). See also section 5 of this paper.

¹⁵ Implicit indefinite objects are not reflexive pronouns either. Verbs such as *shave* and *bathe*, when they take an implicit object, are understood reflexively, so that, no matter how much the pragmatic pressure, it is impossible to interpret it otherwise (Tom Roeper, p.c.):

- (i) [Mary is a very good sister and shaves/bathes her brother, who just broke his right hand, every morning]

*I am so happy that somebody shaves/bathes <him> every morning!

3.2 Narrow scope

Implicit indefinite objects take obligatory narrow scope with respect to other operators in the sentence, such as negation or intensional verbs (Fillmore 1986, Fodor and Fodor 1980, Mittwoch 1982, Wilson and Sperber 2000). Consider the following English examples:

- (45) I didn't eat yesterday
'I didn't eat any food/meals yesterday'
- (46) John wants to eat
'John wants to eat food/a meal'
- (47) I didn't bake yesterday
'I didn't bake anything bakeable yesterday'
- (48) I want to bake
'I want to bake something bakeable'

Neither (45) nor (47) are compatible with a state of affairs in which, yesterday, I ate/baked some things but left others untouched, but exactly in this kind of scenario the wide scope reading of the silent indefinite objects would be true. Likewise, (46) and (48) can only be interpreted unspecifically, i.e., with low scope of the silent indefinite objects with respect to the intensional verb *want*. E.g., (48) can't mean that there is something specific I want to bake, just that I have baking inclinations. That this is so can be seen in the following contrast:

- (49) A: John is baking a birthday cake
B: Oh, I want to bake too!
B': Oh, I want to bake one too!

Clearly, (49)B and (49)B' are not synonymous. With B, the speaker expresses his/her wish to engage in the activity of baking something; with B', his/her wish to bake a birthday cake.

3.3 Number neutrality

Implicit indefinite objects are semantically number-neutral. To my knowledge, this fact has not been noted before. Thus, if (50) is true, then it is immaterial whether John is smoking half, one or many cigarettes:

- (50) John is smoking outside

Example (51) can be true in a situation in which all I've eaten today is half an apple, as well as in a situation in which I've eaten many more things, including lunch and dinner. The same remarks hold for (52), (53), and similar examples:

- (51) I've eaten today
- (52) It's great that you will bake tomorrow
- (53) Jane is in her room writing

That's exactly what we expect if implicit indefinite objects are number-unmarked nouns, as I contend.

Given that Hindi and Hungarian plural nouns have plural semantics when they participate in Noun-Verb verb formation (see section 2.2), implicit indefinite objects are not morphologically-plural nouns.

3.4 Conventional, name-worthy activities

When verbs such as *eat*, *drink*, *write*, etc. take on implicit indefinite objects, they typically give rise to what we may call “conventionalized” meanings. Thus, if John is eating, then he can only be eating edible things, things that are conventionally eaten. Whereas it is perfectly possible to say that John is eating his bed, strange as that may be, when one says that John is eating, one means that he is eating things that are normally eaten. If instead one were to say that John is reading, then what one means is that John is reading things that are typically read, like a novel or the newspaper, but not a dictionary. One *can* say that John is reading the dictionary, if that is what John is doing, but one doesn't use the intransitive version of *read* for this purpose. It is thus not surprising that implicit indefinite objects can take on even more conventionalized meanings. In English, in addition to meaning “food stuff”, the implicit indefinite object of *eat* can also mean “a meal”. And in Spanish, in addition to meaning “food stuff”, as in English, *comer* in intransitive uses is reserved for lunch. And, of course, the implicit indefinite object of *drink* in English can mean “alcohol”.¹⁶

3.5 Ability to antecede pronouns

The state of affairs in case of implicit indefinite nouns with respect to the possibility of serving as antecedents for pronouns is mixed, perhaps unsurprisingly, given what was discussed in relation to Noun-Verb verbs at the end of section 2.2. (54) and (55) seem fine:¹⁷

(54) I have just eaten. It tasted really good

(55) I have just finished baking. [?] It's going to taste fantastic!

But (56) is not:

(56) John is smoking outside. #He finally managed to find it/them!/#They/It were/was laying next to him

As before, I do not draw conclusions about these nouns on the basis of this property.

¹⁶ Another argument against the idea that implicit indefinite objects are marked for plurality is that morphologically plural-marked nouns, like bare plurals, fail to acquire conventional meanings of the type described here.

¹⁷ Notice that in the English examples, the verb in the second sentence is *taste* in order to prevent an alternative analysis in which the pronoun that is its subject picks up the events of eating, baking, etc. as antecedent, in which case the data wouldn't tell us anything about the antecedent possibilities of silent indefinite objects (cf. **Eating strawberries tasted good*, or **Baking muffins tasted good*). Thanks to Joy Philip for pointing out this possibility to me.

3.6 Section summary: the first part of the argument

In this section I have shown that the semantic properties of implicit indefinite objects in a language like English are just like the semantic properties that are cross-linguistically stable for nouns that participate in Noun-Verb verb formation processes. This constitutes the first part of the argument I make in this paper. Recall that the logic of the argument is as follows: if two phenomena share the same properties, then the null hypothesis, given Occam's Razor, is that the two are in fact the same phenomenon.

The similarities that have been emphasized above are semantic. On the formal side, it is of course licit to ask which of the three types of Noun-Verb verb formation processes is the one that takes place in English in the case of implicit indefinite objects and their associated verbs. From the evidence that we have, at least to the extent that one accepts that an intrinsic characteristic of denominal verb formation is that the verbs involved cannot function as independent words, it seems that implicit indefinite objects do not participate in denominal verb formation—that is, it doesn't seem likely that intransitive uses of *eat*, *write*, *hunt*, etc. arise as a result of denominal verb formation. That's because these roots do seem to be able to function in isolation (e.g., in their transitive uses). So that leaves us with noun stripping and noun incorporation. We can't use the ability to retain stress of nouns that participate in noun stripping as a criterion, for null nouns don't bear stress by definition (if we take this ability to be a defining characteristic of noun stripping). So noun stripping remains a possibility.

So does noun incorporation. It's true that, some allow incorporated nouns to be externally modified, implicit indefinite objects do not seem to allow this:^{18, 19}

- (57) *John ate hot (cf. *John ate hot food/a hot meal*)
- (58) *John ate two (cf. *John ate two meals*)
- (59) *John eats that tastes good (cf. *John eats food/meals that taste(s) good*)
- (60) *John baked wonderful (cf. *John baked a wonderful cake*)
- (61) *John smoked that were bought ages ago (cf. *John smoked cigarettes that were bought ages ago*)

However, we have seen that not all noun incorporation languages allow external modification of the incorporated noun (recall the case of Yaqui), so the facts in (57)-(61) cannot be taken as evidence against an incorporation analysis.

I will not choose between noun stripping and noun incorporation as the analysis for implicit indefinite objects. Notice that the remarks above, while necessary from a descriptive and explanatory perspective, are not necessary from the perspective of the argument being made here, however. For that argument to hold, it is sufficient to show that implicit indefinite objects form a natural class with the nouns that participate in these processes. That's because all that this argument is

¹⁸ François Recanati (p.c.) brings to my attention the fact that French allows examples such as (57). I suspect that an alternative analysis in terms of object *pro* might be possible here. For more on alternative analyses, see section 5 (though I don't discuss French there).

¹⁹ Strings such as *John ate/baked/smoked/hunted two* are possible in English, though these look like they are the result of N-ellipsis, as in (i):

- (i) A: I ate three sardines
B: John ate two ~~sardines~~

concerned with is with the grammatical realization of implicit indefinite objects—and all three Noun-Verb verb formation processes posit a grammatical representation for the nouns involved.

Having said that, in the next section we will look at evidence that suggests that, at least in Frisian, there are good reasons to suppose that implicit indefinite objects are incorporated nouns. Whether we take this to suggest that all implicit indefinite objects, including those in English, are incorporated nouns is a question that cannot be addressed without further research, though.

I would like to finish this section with a very suggestive observation about Yaqui, the Uto-Aztecan language we discussed in section 2. In discussing transitivity and intransitivity in this language, Jelinek and Escalante (2000: 171) note that “in a very small number of Yaqui verbs, intransitive forms are derived via the prefix *hi-*. This prefix is not productive, and it has been conjectured that it is a reduced form of the indefinite pronoun *hita* ‘something’, representing an earlier noun incorporation structure”. They offer the following examples:

(62) *Yaqui*

- | | | | | | | |
|----|---------------------|---------|-------------|------|-----------|------|
| a. | Huan | hi' | -bwa | -k | | |
| | Huan | PRFX | -eat.INTRAN | PERF | | |
| | 'John ate' | | | | | |
| b. | Huan | uka | vachi | -ta | bwa'a | -ka |
| | Huan | DET.ACC | corn | ACC | eat.TRANS | PERF |
| | 'John ate the corn' | | | | | |

Notice that the prefix *hi-* is not, crucially, used when the verb is used transitively, as in (62)b. Obviously, without a more in-depth look at the grammar of Yaqui we cannot draw definitive conclusions, but the observation suggests that there might actually be languages in which the indefinite objects that are implicit in English are actually realized overtly (and as indefinites). This is exactly what the account I'm advocating here predicts.

4 Implicit indefinite objects in Frisian

In the previous section I presented evidence to substantiate the claim that implicit indefinite objects in languages like English behave just like bare, number-unmarked nouns in languages where overt nouns participate in Noun-Verb verb formation. Given Occam's Razor, the null hypothesis regarding the analysis of implicit indefinite objects is that they are null number-unmarked nouns that participate in such processes.

An interesting prediction now arises: in those languages that allow *both* overt-noun Noun-Verb verb formation processes and implicit indefinite objects, the two phenomena should pattern together, down to the small details. I know of no discussion of implicit indefinite objects in the “classical” Noun-Verb verb formation languages. However, luckily, we don't need to look very far to find confirmation for our prediction. Frisian, a very close relative of English, has both noun incorporation and implicit indefinite objects, and Dyk (1997) has argued that, indeed, the two phenomena behave strikingly alike. The fact that Frisian is such a close relative of English only strengthens the argument, since it allows for a very controlled comparison between the two languages.

In this section, I review Dyk's arguments and complete his paradigm with a number of new observations about the semantic properties of incorporated nouns and implicit indefinite objects in this language. We will see that, in fact, Frisian is very useful in allowing us to see that the formal properties of implicit indefinite nouns are in fact those of incorporated nouns, and not those of *unincorporated* nouns.

4.1 Noun incorporation in Frisian

Dyk (1997) is the first, to my knowledge, to make a serious connection between noun incorporation and implicit indefinite objects.²⁰ The language of investigation is Western Frisian, referred to below as "Frisian". Dyk (1997) presents an extended argument that Frisian does indeed have noun incorporation. In providing this argument, Dyk notes the striking similarities between noun incorporation and "detransitivization" (in Dowty's 1989 terminology), which corresponds to what I have called here implicit indefinite objects. In this section, I use either the term "detransitivization", like Dyk, or the term "implicit indefinite objects".

First, let's briefly review Dyk's evidence that Frisian is an incorporating language. Consider the following examples (Dyk 1997: 3):

- (63) *Frisian*
 Wy wolle de messen slypje
 We want the knives sharpen
 'We want to sharpen the knives'

- (64) *Frisian*
 Wy wolle **messeslypje**
 We want knife.sharpen
 'We want to sharpen knives'

(63) is a non-incorporation structure, in (64) there is incorporation of the noun *mês* 'knife' into the verb, resulting in an intransitive verb. Observe that there is no longer an article accompanying the noun in (64) and, more importantly, that the form of the noun, *messe* [məsə], is neither the singular form, *mês* [mɛ:s], nor the plural form, *messen* [məsən]/[məsɐn]. The form *messe* only occurs in compounds in Frisian. That it cannot occur on its own can be seen from the fact that it is never stranded when the verb undergoes V2 movement. Frisian is an SOV language but it is also V2, which means that, in root clauses, the verb must move to the left (Dyk 1997: 4):

- (65) *Frisian*
 Wy slypje_i de messen t_i
 We sharpen the knives
 'We sharpen the knives'

- (66) *Frisian*
 *Wy de messen slypje

²⁰ Though others have suggested the connection in passing. See, for example, Spencer (1991: 471, ft. 11).

When the object incorporates, however, the order we obtain is SOV, suggesting that the verb and its object move as a unit to the V2-position (Dyk 1997: 4):

- (67) *Frisian*
 Wy **messeslypje**_i t_i
 ‘We sharpen knives’

- (68) *Frisian*
 *Wy slypje_i **messe** t_i

Other indications of incorporation are that, whereas normal NPs in Frisian can topicalize, relativize and scramble, incorporated nouns cannot do any of these things. Also, Frisian has both sentential (*net*) and nominal (*gjin*) negation, but only sentential negation is possible in the case of noun incorporation. And there is further phonological evidence that I do not discuss here and for which I refer the interested reader to Dyk’s work.

Dyk argues that Frisian noun incorporation is a case of compound noun incorporation in Rosen’s (1989) classification, or of Type I (“lexical compounding”) in Mithun’s (1984) classification. A characteristic of compound noun incorporation in Rosen’s classification is the impossibility of incorporated nouns to be externally modified by determiners, adjectives or relative clauses, or doubled. This applies to noun incorporation in Frisian (Dyk 1997: 39) (recall discussion of this property in section 2.1):

- (69) *Frisian*
- | | | | | | | |
|----|--------------|-----------|---------------------|--------|---------------------|---------------------|
| a. | *Doede woe | dy | grouwe | hazze | graach | wylds jitte |
| | Doede wanted | that | big | hare | gladly | quarry.shoot |
| b. | *De | perfester | auto himmele | alle | sneonen | har Volvo |
| | The | professor | car.washed | all | Saturdays | her Volvo |
| c. | *Doede woe | dy | grouwe | --- | graach | hazzes jitte |
| | Doede wanted | that | big | | gladly | hare.shoot |
| d. | *Doede woe | dy | --- | graach | hazzes jitte | |
| | Doede wanted | that | | gladly | hare.shoot | |

Frisian noun incorporation is of Type I in Mithun’s classification because this process reduces the valence of the verb (i.e., the verb becomes intransitive); doubling is not allowed, as shown in (69)a and (69)b, which rules out type IV; incorporated nouns do not express familiar information, which rules out type III (see below); and, finally, the notional direct object of the verb cannot be realized with special morphology, such as oblique Case.²¹

We see from the translations that there is a change in meaning induced by incorporation: incorporated objects are interpreted as non-specific indefinites. Further data confirms that the semantics of noun incorporation in Frisian resembles that of incorporation (and Noun-Verb verbs in general) in other languages. Incorporated objects are indeed indefinites, and not pronouns. For example, according to the following sentence, it is not necessary for Loltsje to eat the mushrooms that Gurbe cooks (Siebren Dyk, p.c.):

²¹ Though there are potentially some instances of Type II noun incorporation in Frisian. See Dyk (1997: 41-3).

- (70) *Frisian*
 Altyd as Gurbe poddestuollen siedt, sil Loltsje
 Always when Gurbe mushrooms cooks, will Loltsje
poddestoelite
 mushroom.eat
 ‘Always, when Gurbe cooks mushrooms, Loltsje eats mushrooms’

Also, incorporated nouns take low scope with respect to other operators in the sentence (Siebren Dyk, p.c.):

- (71) *Frisian*
 Hja sille net te **snoekfangen**
 they will not to pike.catch
 ‘They are not going to catch any pikes’

- (72) *Frisian*
 Ik wol te **skilderijbesjen**
 I want to painting.look
 ‘I want to look at paintings’

For example, (71) is unambiguous and means that they are not going to catch any pikes whatsoever.

Incorporated nouns are number neutral in Frisian. Consider (73) (Dyk 1997: 102):

- (73) *Frisian*
 Mem sit te **krantlêzen**
 Mothersits to paper.read
 ‘Mother sits to read papers’

The sentence is compatible both with a situation in which the family only buys one newspaper and with a situation in which the mother goes to the local library and has many newspapers at her disposal.

The resulting verb tends to be reserved for institutionalized, conventional, or habitual activities. Compare (74) (with incorporation) with (75) (without it):

- (74) *Frisian*
 Wy kofjedrinke on tsien oere
 We coffee.drink at ten hour
 ‘We drink coffee at ten o’clock’

- (75) *Frisian*
 Wy drinke om tsien oere kofje
 We drink at ten hour coffee
 ‘We drink coffee at ten o’clock’

The difference is subtle but it exists. Dyk (1997: 51-2) says that (74) “evokes much more a picture of the whole ceremony of drinking coffee, so including the pouring of the liquid into the cups, the additional eating of cookies, the collegial chat, to mention

a few highlights. Sentence [(75)], on the other hand, is at first hand more restricted to the drinking proper.”

Also, it seems that it is not straightforwardly easy for an incorporated noun to antecede pronouns further down the discourse in this language, as is perhaps not surprising given the discussion in section 2.2, though it is possible in some examples. In (77) it seems easier than in (76) (Dyk 1997: 66):

(76) *Frisian*

? It keamerfamke fan it hotel is oan it **bêd**opmeitsjen. Wat sil ik der jûn lekker op sliepe!

‘The chambermaid of the hotel is bed-making. How fine shall I sleep on it tonight!’

(77) *Frisian*

It wiif is oan it **bêd**opmeitsjen. Wat sil ik der jûn lekker op sliepe!

‘My wife is bed-making. How fine shall I sleep on it tonight!’

Though not discussed as a semantically stable property of noun incorporation in Carlson (2006), verbs that have undergone noun incorporation are usually atelic in aspect (see Mithun 1984: 856; she speaks of these verbs as expressing an “ongoing activity”). Frisian noun-incorporated verbs are no exception, as shown by Dyk (1997: 46-7). Consider the behavior of the incorporated-into verb in the following examples with respect to *for*- and *in*-adverbials:

(78) *Frisian*

a. Buorman fervet de doar yn in oere
Neighbor paints the door in an hour

‘Our neighbor paints the door in an hour’

b. ? Buorman fervet de doar oerenlang
neighbor paints the door for.hours

‘Our neighbor paints the door for hours’

(79) *Frisian*

a. *Buorman doarfervet yn in oere
Neighbor door-paints in an hour

‘Our neighbor door-paints in an hour’

b. Buorman doarfervet oerenlang
neighbor door-paints for.hours

‘Our neighbor door-paints for hours’

Of importance here is the contrast between (78)a and (79)a: whereas the telic *paint the door* can take an *in*-adverbial, the atelic, incorporated-into version cannot.

4.2 Implicit indefinite objects in Frisian

In this section, we look in detail not only at the properties of implicit indefinite objects in Frisian, but at the properties of bare, overt nouns in this language as well. As mentioned earlier, comparing the behavior of bare, overt nouns to that of implicit indefinite objects in Frisian shows that implicit indefinite objects are not *unincorporated* nouns, which strengthens both Dyk’s and my argument. Frisian seems

to allow bare plurals in a way that is similar to English. Bare singulars are less common. Mass nouns, of course, can be bare, as shown in (80) (Siebren Dyk, p.c.):

- (80) *Frisian*
 Wy ite jûn fisk
 we eat tonight fish
 ‘We will eat fish tonight’

We will see that the distribution of bare nouns in Frisian is freer than that of implicit indefinite objects.

The properties of implicit indefinite objects in Frisian resemble very closely those of incorporated nouns in this language. First, and quite importantly for our purposes, only incorporated, unergative and detransitivized verbs can appear in the *te*-infinitival construction, as illustrated in (81) to (83); nothing else can appear in this construction (Dyk 1997: 105-6):

- (81) *Frisian*
 Buorman sil te **geit**melken
 neighbor shall to goat.milk
 ‘Our neighbor shall go off to milk goats’

- (82) *Frisian*
 Buorman sil te kuierjen
 neighbor shall to walk
 ‘Our neighbor shall go out walking’

- (83) *Frisian*
 Buorman sil te melken
 neighbor shall to milk
 ‘Our neighbor will go out milking’

Bare nouns are out in this construction (Siebren Dyk, p.c.):

- (84) *Frisian*
 *Buorman sil te messen slypjen
 neighbor shall to knives sharpen

If implicit indefinite objects undergo incorporation in Frisian, then we understand why they are part of the same pattern with noun incorporation. Note that the properties of the *te*-construction help us to tease apart bare nouns from incorporated nouns in this language, and that implicit indefinite objects behave like the latter, not like the former. *Te*-infinitival constructions are thus very important from the perspective of the argument being developed here.

There a number of restrictions on the type of verb that can be incorporated into in Frisian and these same restrictions are very strikingly observed for detransitivized verbs. For example, only verbs that select for a Patient object allow incorporation. The verbs corresponding to English *notice*, *hate* and *know* don’t take Patients as objects and do not allow noun incorporation or detransitivized uses. Let’s illustrate with the first two of these verbs (Dyk 1997: 95, 108):

(85) *Frisian*
 Richt fernimt boumatsjes yn ‘e tún
 notices wagtails in the garden
 ‘Richt notices wagtails in the garden’

(86) *Frisian*
 *Richt **boumantsje** fernimt yn ‘e tún
 wagtail.notices in the garden

(87) *Frisian*
 *Richt fernimt yn ‘e tún
 notices in the garden

(88) *Frisian*
 De kealkop hatet negers
 The skinhead hates negroes
 ‘The skinhead hates negroes’

(89) *Frisian*
 *De kealhop **neger**hatet
 the skinhead negro.hates

(90) *Frisian*
 *De kealkop hatet
 The skinhead hates

The verbs *smite* ‘throw’, *slaan* ‘hit’ and *leegje* ‘empty’ do take Patients as objects and allow both incorporation and detransitivization. No such restriction is observed for bare nouns, as (85), (88) and (91) show (Siebren Dyk, p.c.):

(91) *Frisian*
 Ik haatsje fisk
 I hate fish
 ‘I hate fish’

The subject of incorporated-into verbs must be animate and volitional, and the subject of detransitivized verbs shows the same restriction. For example, with the verb *kleurje* ‘color’, noun incorporation and detransitivization are possible only when the subject is animate and volitional (Dyk 1997: 97-8, 109):

(92) *Frisian*
 It bern kleuret it plaatsje
 The child colors the picture
 ‘The child colors the picture’

(93) *Frisian*
 It bern **plaatsje**kleuret
 the child picture.colors
 ‘The child colors pictures’

- (94) *Frisian*
 It bern kleuret
 The child colors
 ‘The child colors’
- (95) *Frisian*
 De ûndergeande sinne kleuret it hûs
 the setting sun colors the house
 ‘The setting sun colors the house’
- (96) *Frisian*
 *De ûndergeande sinne **hûs**kleuret
 the setting sun house.colors
- (97) *Frisian*
 *De ûndergeande sinne kleuret
 the setting sun colors
 ‘The setting sun colors’

Bare nouns don’t show this kind of restriction (Siebren Dyk, p.c.):

- (98) *Frisian*
 It bern kleuret wetter
 The child colors water
 ‘The child colors water’
- (99) *Frisian*
 De ûndergeande sinne kleuret wetter
 the setting sun colors water
 ‘The setting sun colors water’

And, a verb like *know* never has a volitional subject, and, accordingly, in Frisian this verb never allows incorporation or detransitivization.

Finally, while *ite* ‘eat’ can be incorporated into and can be detransitivized, particle verbs formed on the basis of this verb, such as *opite* ‘eat up’ (lit. ‘up.eat’), *útite* (lit. ‘out.eat’) or *leechite* (lit. ‘empty.eat’) can do neither of these things (Dyk 1997: 111):

- (100) *Frisian*
 Do moatst de brij opite
 you should the porridge up.eat
 ‘You should eat the porridge up’
- (101) *Frisian*
 *Do moatst **brij**opite
 you should porridge.up.eat
- (102) *Frisian*
 *Do moatst opite
 you should up.eat

(103) *Frisian*
 Do moatst de panne útite
 you should the pan out.eat
 ‘You should eat the pan empty’

(104) *Frisian*
 *Do moatst panneútite
 you should pan.out.eat

(105) *Frisian*
 *Do moatst útite
 you should out.eat

Bare nouns pattern differently, again (Siebren Dyk, p.c.):

(106) *Frisian*
 ?Do moast apels opite
 You should apples up.eat
 ‘You should eat up apples’

(107) *Frisian*
 ?Do moast pannen útite
 You should pans out.eat
 ‘You should eat pans empty’

The examples are slightly odd due to the fact that the particle verbs require telic aspect, and the bare nouns seem to be more compatible with atelic aspect. Even then, there is a clear contrast with (101)/(102) and (104)/(105). It is possible to interpret an example like (106) as instructing the hearer to eat apples and eat them completely. So we see that the distribution of implicit indefinite objects in Frisian is more restricted than that of bare nouns and is, in fact, the same as the distribution of incorporated objects.

Further tests, not repeated here, bring out the similarities between incorporated into and detransitivized verbs with unergative verbs, thus indicating that detransitivized verbs are intransitive verbs (see Dyk 1997: 114-6).

The semantic properties of detransitivized verbs in Frisian turn out to be parallel to those of noun incorporation, and of Noun-Verb verbs in general. In addition to being non-specific indefinites (see, e.g., glosses on relevant examples above), implicit indefinite objects in Frisian always take narrow scope with respect to other operators in the sentence (Siebren Dyk, p.c.):

(108) *Frisian*
 Hja ha net iten
 They have not eaten
 ‘They haven’t eaten’

(109) *Frisian*
 Ik wol ite/bakke/smoke
 I want eat/bake/smoke
 ‘I want to eat/bake/smoke’

(108) means that they haven't eaten anything at all, not that there are things they haven't eaten (which, recall, is compatible with them having eaten certain other things). And (109) means that I am hungry/I want to bake something bakeable/I want to smoke some tobacco, not that I want to eat/bake/smoke something in particular.

Also, implicit indefinite objects in Frisian are number-neutral in that, in the examples above, implicit indefinite objects are compatible with both atomicity and non-atomicity.

Just like in the case of noun incorporation, detransitives are typically reserved for conventional, habitual, institutionalized activities. This is the same behavior we observed for English detransitives. In Frisian, the detransitive use of *ite* 'eat' is reserved for instances of eating food or meals, and cannot be used to say that somebody ate, say, his shoe, no matter how salient in the context this might be. Detransitive uses of *drinke* 'drink' can also be used to indicate that the subject drinks alcohol. Alternatively, they can be used to indicate that the subject drinks some normal, drinkable liquid, not, say, gasoline. And so on.

Finally, detransitives in Frisian are atelic, just like incorporated-into verbs. Consider the following examples (Dyk 1997: 133):²²

(110) *Frisian*

- a. Gurbe lêst oerelang
 Gurbe reads for hours
 'Gurbe reads for hours'
- b. *Gurbe lêst yn in oere
 Gurbe reads in an hour
 'Gurbe reads in an hour'

The fact that the distribution of Frisian detransitivized verbs is so similar to that of incorporated into verbs, as pointed out by Dyk (1997), coupled with the fact that it does not pattern together with the distribution of Frisian bare nouns, constitutes

²² In English, verbs that appear with implicit indefinite objects also seem generally atelic, as illustrated in (i):

- (i) John wrote/read/hunted/drank/smoked for hours/*in an hour

The one exception to this seems to be *eat*:

- (ii) John ate for hours/in an hour

Note, however, that this is expected if aspect is determined compositionally and what I've argued for in the text is correct. I have argued that in certain cases, as with *eat*, implicit indefinite objects acquire conventionalized meanings: *John ate* can mean either that he ate food, or that he ate a meal (e.g., lunch). Notice that *eat food* is atelic, while *eat a meal* is not:

- (iii) a. John ate food for hours/*in an hour
 b. John ate a meal *for hours/in an hour

(If (iii)b is at all acceptable with *for hours*, it gets the unfinished event reading so typical of accomplishments in this type of context). If bare *eat* is ambiguous between an implicit indefinite reading that corresponds to *eat food*, and an implicit indefinite reading that corresponds to *eat a meal*, and if the aspectual properties of *eat food* and *eat a meal* differ, then we expect bare *eat* to show the behavior in (ii).

a strong argument in favor of the idea that implicit indefinite objects are incorporated nouns in this language. Claiming the contrary would make us miss the compelling generalizations we have observed in this section.

4.3 Section summary: the second part of the argument

Going back to English, the facts about Frisian reviewed here are important because of the following. The properties of English implicit indefinite objects are the same as those of nouns that participate in Noun-Verb verb formation processes in the languages that have these processes. This forms part of the basis of the claim that implicit indefinite objects in English are in fact nouns that participate in this type of processes, even if overt nouns can't do it. Because English does not incorporate overt nouns, however, we can't make a direct comparison between the two phenomena. But in Frisian we can. Looking at Frisian allows us to test the prediction that, if a language has both overt-noun incorporation (or another Noun-Verb verb formation process) and implicit indefinite objects, then the two should pattern together. The prediction is confirmed quite compellingly. Since Frisian is such a close relative of English, this is the closest we can come to a controlled experiment about English. Thus, we have an additional strong reason to suspect that, indeed, English indefinite objects are represented grammatically as null nouns that undergo a Noun-Verb verb formation process.

5 The third part of the argument: other null objects

There are other possibilities for the representation of implicit indefinite objects that we haven't considered thus far. In this section, I briefly rule out a number of alternative analyses of the data we have considered up to now.

Before going into that, let me summarize the alternatives we *have* considered. We considered that implicit indefinite objects could be *unincorporated* bare nouns. Implicit indefinite objects cannot be unincorporated bare plurals because bare plurals typically don't give rise to the conventionalized interpretations we've observed before. They can't be bare plurals that undergo one of the Noun-Verb verb formation processes because, in languages in which these are allowed, such as Hungarian or Hindi, they are semantically plural. Implicit indefinite objects, however, are semantically number-neutral. Finally, in Frisian, where, as discussed in section 4, we can test the behavior of overt incorporated nouns, implicit indefinite objects and formally unincorporated bare nouns, implicit indefinite objects clearly pattern with overt incorporated nouns.

An alternative analysis we haven't considered is that implicit indefinite objects are represented by the grammar as object *pro*, a null element that has been proposed for languages like Italian (see Rizzi 1986, a.o.) and Japanese (see Saito and Hoji 1983, Tomioka 2003, a.o.), as shown in (111)-(112):

(111) *Italian*

Questo conduce	alla	seguinte	conclusione
this leads	to.the	following	conclusion
'This leads [people] to the following conclusion'			

- (112) *Japanese*
 Ken-wa Erika-o saso-tta Dan-mo saso-tta
 Ken-TOP Erika-ACC invite-PERF Dan-also invite-PERF
 'Ken invited Erika. Dan invited [her] too'

Another possibility is that they are syntactic variables, a proposal that has been made for Brazilian Portuguese by Raposo (1986). Null objects in Brazilian Portuguese are illustrated in (113):

- (113) *Brazilian Portuguese*
 A Joana viu na TV ontem
 the saw on TV yesterday
 'Joana saw [him/her/them] on TV yesterday'

The argument against these analyses is that the properties of these other null objects are not the same as the properties of implicit indefinite objects.

The Japanese type of object *pro*, found also in other so-called radical pro-drop languages like Korean or Thai,²³ can be interpreted referentially, as a bound pronoun, and even as an E-type pronoun. The following examples, from Tomioka (2003: 322-3) illustrate the latter two uses; (112) already illustrates the referential use:

- (114) *Japanese*
 Dono gakusei-mo Dan-ga buzyokushi-ta to it-ta
 which student-even Dan-NOM insult-PERF COMP say-PERF
 'Every student_i said that Dan insulted him_i'

- (115) *Japanese*
 Haha-ga atarai tokei-o katte-kureta-ga boku-wa
 mother-NOM new watch-ACC buy-gave-but I-TOP
 suguni nakusite-simatta
 soon lose-PERF
 'My mother bought me a new watch, but I lost (the watch she bought) soon after'

Object *pro* in Japanese can also be interpreted indefinitely, as (116) illustrates (Tomioka 2003: 323):

- (116) *Japanese*
 Ken-wa kuruma-o kat-ta Erika-mo kat-tta
 Ken-TOP car-ACC buy-PERF Erika-also buy-PERF
 'Ken bought a car. Erika bought (a car), too'

While this indefinite semantics is shared with implicit indefinite objects, there is an important difference, and that is that object *pro* has both pronominal and indefinite

²³ Certain South American dialects of Spanish also seem to have this kind of object *pro*, see Schwenter (2006). Chinese is another radical pro-drop language, but it seems that the status of its null objects is somewhat less clear; see Huang (1984, 1989), among others, and Zushi (2003: 571-580) for a recent overview of the issue. I'm not taking issue with Chinese null objects here.

uses, whereas implicit indefinite objects, as argued in section 3.1, are always interpreted indefinitely, never as a pronoun.

The type of object *pro* we find in Italian is interpreted generically. Rizzi (1986: 503-4) notes that changing a sentence like (111) into one that is interpreted episodically results in ungrammaticality. Compare (117) with (118):

(117) *Italian*

Un	generale	può	costringere	a	obbedire	ai suoi
A	general	can	force	to	obey	to his
ordini						
orders						

'A general can force [people/his soldiers] to obey his orders'

(118) *Italian*

*Alle	cinque	il	generale	ha	costretto	a	obbedire
at.the	five	the	general	has	forced	to	obey

'At five the general forced [people/his soldiers] to obey'

Implicit indefinite objects are not generic *pro*, since they are perfectly acceptable in episodic sentences in all the languages I know that have them:

(119) At six John ate and then left for the game

Raposo (1986: 375-6) notes that Brazilian Portuguese has implicit indefinite objects similar to the English ones that have occupied us here, but he explicitly argues that these cases should not be confused with cases such as (113). One of the differences he points out between the two constructions is, essentially, that, while object *pro* has pronominal uses, implicit indefinite objects do not. Another difference is that the distribution of object *pro* in Brazilian Portuguese is constrained in ways that suggest that syntactic movement is involved in the derivation of the construction; for example, null objects in this language may not appear embedded in sentential subjects (cf. Ross' 1967 Sentential Subject Constraint). Suppose a new personal computer from IBM is under discussion:

(120) *Brazilian Portuguese*

*Que	a	IBM	venda	a	particulares	surpreende-me
that	the		sells	to	private.individuals	surprises-me

'That IBM sells [it] to private individuals surprises me'

This is not the case with implicit indefinite objects in any language I know of, (121) and its counterparts in languages like Spanish and German are perfectly grammatical:

(121) That John is eating surprises me

To sum up. Implicit indefinite objects do not give rise to referential interpretations, are not syntactic variables, and are not interpreted generically. Thus,

they should not receive an analysis in terms of object *pro* or in terms of a syntactic variable.^{24, 25}

6 The fourth part of the argument: problems for a pragmatic approach to implicit indefinite objects

That not all silent objects are interpreted alike is an indication that pragmatic approaches, like those in Carston (2004), Groefsema (1995), Hall (2009), Iten et al. (2004), Recanati (2002) or Wilson and Sperber (2000), at least if they aim at providing for *all* null objects, cannot be right. Equally difficult to explain from such a pragmatic perspective is the well-known fact that not all transitive verbs allow null objects, not even those that constitute near minimal pairs with the verbs in 0-(15), e.g., *ingest* or *devour* (**I ingested/devoured yesterday*), *overcook* (**I overcooked yesterday*).²⁶

The details of the different approaches within this category need not concern us, for they all suffer from the same problems. Any pragmatic approach is in trouble even if only implicit indefinite objects are taken into account. The main problem is that these approaches must consider the cluster of properties we discussed in sections 3 and 4 as accidental. Nothing in this type of approach predicts that implicit indefinite objects always take narrow scope, are number-neutral, or are interpreted indefinitely and non-specifically; as far as a pragmatic approach is concerned, things could have been otherwise, as long as there are good enough pragmatic reasons. Importantly, implicit indefinite objects are interpreted indefinitely, even if there is pragmatic pressure to interpret them otherwise. Importantly again, the fact that implicit indefinite objects behave like an independently attested grammatical category is a generalization that is completely missed in this type of account. Finally, in Frisian, these approaches have to add one new category to the list of those that can appear with *te*-infinitivals, clearly an unwelcome move.

Alternatively, insisting that implicit indefinite objects be given a pragmatic account would entail proposing a pragmatic operation whose effects are just those of Noun-Verb verb formation processes. This move would be rather suspicious, since there would seem to be no empirical reason to justify it: an alternative, grammatical process already exists and can do the work that is needed.

²⁴ An interesting issue arises in connection with Rizzi's (1986) proposal that English does not have object *pro*. The argument is based on the fact that, in Italian, object *pro* is syntactically active, as can be seen from (117), where it controls the PRO in the infinitival clause. The notional object of the English version of (111) is not represented syntactically and cannot control PRO, and thus the English version of (117) is ungrammatical. Given the proposal made in this paper, the question arises as to whether the notional object of the English version of (111) is represented as an implicit indefinite object—albeit one that cannot control PRO and cannot be involved in other types of syntactic licensing either (thus, Rizzi's generalization would not be in terms of structural realization but in terms of *type* of structural realization). Unfortunately, I must leave this very interesting question for another time.

²⁵ Analyses in terms of syntactic ellipsis also don't seem feasible: there is no need for a linguistic or pragmatic antecedent for implicit indefinite objects. Also, implicit indefinite objects do not pattern together with the dropped, topicalized null objects of colloquial German (see Huang 1984, Cardinaletti 1990, a.o.).

²⁶ For similar arguments, see Fillmore (1986). For further discussion, see Groefsema (1995) and Iten et al. (2004), among others.

7 Conclusion

In this paper I have provided an extended argument that implicit indefinite objects in languages like English are null nouns that are represented grammatically and that undergo a Noun-Verb verb formation process. The first part of the argument is that implicit indefinite objects behave semantically like the nouns that undergo Noun-Verb verb formation processes in the languages that have them, like West Greenlandic, Yaqui, Zuni, Seri, etc. The comparison could not be direct because English does not apply these processes to overt nouns. So, in a second step, we looked at one of English's closest relatives, Frisian, which allows us to compare the two phenomena directly. The predictions of the proposal made here are met compellingly in Frisian. The third part of the argument consisted of a number of smaller arguments to the effect that implicit indefinite objects are not unincorporated (singular or plural) nouns, *pro*, or syntactic variables. The fourth part of the argument is that pragmatic approaches to implicit indefinite objects miss all the generalizations discussed in the paper and are thus theoretically very costly. My proposal, then, is that the grammars of languages that have implicit indefinite objects make available null nouns in their lexicons. These null nouns are then subjected to the formal and semantic treatment proper of those processes, whatever the right treatments in this respect turn out to be.

Abbreviations used in glosses

1/2/3 = 1st/2nd/3rd person; ABS = ABSOLUTIVE Case; ACC = ACCUSATIVE Case; AGR = agreement; CAUS = Causative; DET = determiner; DT = distal realis; ERG = ERGATIVE Case; FUT = Future Tense; IND = Indicative Mood; INSTR = INSTRUMENTAL Case; INTRAN = Intransitive; LOC = LOCATIVE Case; NEG = Negation; NOM = NOMINATIVE Case; PAST = Past Tense; PERF = perfective; PL = Plural; PRES = Present tense; PRFX = prefix; REL = Relativizer; SG = Singular; ST = static; TRANS = Transitive; UNM = unmarked morphological Case; WK = Weak

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