Implicit indefinite objects: The barest of the bare

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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., display the semantic properties of incorporated, number-unmarked nouns. This behavior is taken as evidence that the grammar of languages like English makes available an implicit number-unmarked noun that incorporates with the verb, both formally and semantically. 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, incorporation, pragmatic enrichment

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Implicit indefinite objects: the barest of the bare

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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., display the semantic properties of incorporated, number-unmarked nouns. This behavior is taken as evidence that the grammar of languages like English makes available an implicit number-unmarked noun that incorporates with the verb, both formally and semantically. 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.

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1 Introduction

Carston (2004), Groefsema (1995), Hall (2009), Iten et al. (2004), Recanati (2002) and Wilson and Sperber (2000) have suggested that the null notional object that certain verbs can take is not represented at any level of grammatical representation but is provided for pragmatically. These null objects are exemplified in (1)-(5) (material in angle brackets is unpronounced). Verbs that are able to take these objects in languages like English, German or Spanish are *eat*, *smoke*, *read*, *cook*, *sing*, *carve*, *knit*, *weed*, *file*, and *write*:[1]

(1) John has already eaten <something edible/a meal>
(2) Peter is drinking <something drinkable/alcohol> in the balcony
(3) Mary has recently quit smoking <cigarettes>
(4) I am so glad that you found time to bake <something bakeable> today
(5) John has been hunting <animals> a lot lately

The authors above appeal to a process of pragmatic enrichment whereby, given appropriate pragmatic pressures, language users "enrich" grammatical interpretations in such a way as to provide these notional objects. These seemingly intransitive uses of otherwise transitive verbs are commonly taken in this literature to illustrate the ways in which pragmatic processes operate. In this paper I argue that this view is mistaken: the seemingly intransitive uses of these verbs do not illustrate the way pragmatic mechanisms work because the notional objects of these verbs are actually represented grammatically as incorporated nouns. The argument rests on the logic of Occam's Razor: if these notional objects behave, as I show in detail below,

[1] In other languages the verbs listed here, or subsets thereof, may or may not behave the way they do in English. For example, the counterparts of (1)-(5) in Hindi all require an overt (cognate) object (Utpal Lahiri, p.c.). Interestingly, there are analyses of cognate objects in the literature (see e.g., Hale and Keyser 2000), which are similar to what I will be arguing for here for implicit indefinite objects. See section 7 for more discussion.

like grammatical category X, then that's best explained by claiming that the notional objects are themselves instantiations of X. The only difference between the indefinite objects of interest here and regular incorporated nouns is that the former, but not the latter, are phonologically null. I usually refer to the notional objects in question as implicit indefinite objects.

From a purely linguistic perspective, the paper contributes novel arguments to the effect that implicit indefinite objects are incorporated number-unmarked nouns, 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.

Implicit indefinite objects in English have been investigated at least since Bresnan (1978), Dowty (1981), Fillmore (1969, 1986), Fodor and Fodor (1980), Mittwoch (1980), Shopen (1973) and Thomas (1979). A number of properties are important in order to delimit the phenomenon of interest. First, these verbs have transitive uses:

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

Second, (1)-(5) have notional, understood objects. Third, the understood object is interpreted indefinitely, simply as 'something' or with additional restrictions that resemble selectional restrictions imposed by verbs. Fourth, implicit indefinite objects always take narrow scope with respect to other operators in the sentence. To this list, we will add that these objects are number-neutral, and that, together with the verb, they constitute an activity that is considered typical, conventional, habitual, or nameworthy. We will see that these are also the properties of incorporated nouns cross-linguistically.

In addition to comparing implicit indefinite objects with incorporated nouns in languages like West Greenlandic, we will look in great detail at Frisian. Frisian, as argued in Dyk (1997), has both overt-noun incorporation and implicit indefinite objects. We will be able to see, then, that, if a language allows both, the two have the same properties, as predicted by the proposal made here.[2] 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 *un*incorporated bare (singular, mass or plural) nouns.

At the end of the paper I will present an analysis of implicit indefinite objects which, on the formal side, involves the operation Merge (whether this is taken to be a morphological or syntactic operation I won't decide). On the semantic side, the operation Restrict is in charge of composing the verb and the noun together.

The structure of the paper is as follows. In section 2, I introduce the basics of noun incorporation. In section 3, I look in detail at the properties of implicit indefinite objects in English. As we go along, I show that the properties displayed by implicit indefinite objects are the prototypical properties of incorporated, number-unmarked nouns. In section 4, we look at the properties of the phenomenon in Frisian. Section 5

[2] The prediction is, in fact, that if a language allows both *compound* overt-noun incorporation and implicit indefinite objects, the two should behave alike, for I will be proposing that implicit indefinite objects are one case of compound noun incorporation. More on this below.

argues against other grammatical treatments of implicit indefinite objects. In section 6, we consider briefly the problems pragmatic approaches face given the data presented here. Section 7 presents a possible grammatical analysis of the data. Section 8 is the conclusion.

2 Noun Incorporation

Noun incorporation is a productive process that yields noun-verb combinations that are themselves verbs (see Baker 1988, 1996, Bittner 1994, Haugen 2008, Kroeber 1909, 1911, Mithun 1984, 1986, Rosen 1989, Sadock 1980, 1986, Sapir 1911, among many others). Many Amerindian and Austronesian languages have different versions of it. English has processes that are reminiscent of noun incorporation, such as noun-verb compounding, as exemplified in (11):

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

However, in English, the majority of these compounds are themselves nouns. Sometimes, they can be used as verbs (e.g., *babysit*); even though this is a possibility, this is not a productive way of creating verbs in English. In noun-incorporation languages, however, it is. We will focus on object noun incorporation in what follows, for obvious reasons.

Rosen (1989) distinguishes *compound noun incorporation* from *classificatory noun incorporation*. In compound noun incorporation, the resulting N-V complex is an intransitive verb and stranding or doubling are impossible. In classificatory noun incorporation, stranding and doubling can occur. In stranding, the incorporated noun is externally modified by adjectives, numerals, relative clauses, etc. In doubling, a phrase that looks like a direct object is present.[3]

To illustrate, consider the following examples from West Greenlandic[4] (Sadock 1980, 1986, van Geenhoven 1998), Kusaiean (Lee 1975, Rosen 1989), and Yaqui (Jelinek 1998, Haugen 2008). Incorporated nouns are in boldface throughout:

(12) *West Greenlandic*

Arnajaraq	**eqalut**	-tur	-p	-u	-q
A.ABS	salmon	-eat	-IND	-INTRAN	-3SG

'Arnajaraq ate salmon' (lit. Arnajaraq salmon-ate)

[3] There are many issues about object noun incorporation that I won't be able to do justice to in this brief introduction. For example, Mithun (1984) establishes further categories within compound and classificatory noun incorporation, which I don't discuss here (note that Mithun reserves the term "classificatory noun incorporation" for a special category within what I and others call classificatory noun incorporation). Gerdts (2001) and Haugen (2008) provide useful recent overviews and further discussion.

[4] A famous debate in the earlier incorporation literature was concerned with whether languages like West Greenlandic actually exhibit noun incorporation (see Mithun 1984, 1986, Sadock 1980, 1986). The debate was centered around the fact that the verbal roots that are incorporated into in this language cannot function as independent words. This, however, does not seem like a good enough reason to abandon the idea that West Greenlandic and other languages have noun incorporation, since the construction has all the other properties of noun incorporation. For recent discussion of this issue, see Haugen (2008).

(13) *Kusaiean*

El	twetwe	**mitmit**-lac
He	sharpen.INTRAN	knife-PAST

'He has knife-sharpened'

(14) *Yaqui*

Aapo	**maaso** -peu	-te	-n	
3SG	deer -butcher	-INTRAN	-PAST	

'He was deer butchering' (lit. He deer-butchered)

Compare these examples with the corresponding, unincorporating ones in (15)-(17):

(15) *West Greenlandic*

Angunguu-p	aalisagaq	neri	-v	-a	-a
A-ERG	fish.ABS	eat	-IND	-TRANS	-3SG.3SG

'Angunguuaq ate the/a particular fish'

(16) *Kusaiean*

El	twem-lah	mitmit	sahfiht	sac
He	sharpen.TRANS-PAST	knife	dull	the

'He has sharpened the dull knife'

(17) *Yaqui*

Aapo	maaso	-ta	peu	-ta	-k
3SG	deer	-ACC	butcher	-TRANS	-PERF

'He butchered a deer'

West Greenlandic has constructions, such as (15), that look very similar to normal transitive constructions in English, except for the following relevant properties. First, in (15), 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 ABSOLUTIVE; not overt in (15) or (18)):

(18) *West Greenlandic*

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 ((15) and (18)) and object ((15)) agreement inflection on the verb. And fourth, West Greenlandic has special morphemes for intransitivity (*-u-*) and transitivity (*-a-*). Looking back at (12), we notice that, when the object is incorporated into the verb, it is not marked for Case, the transitive morpheme *-a-* is replaced by the intransitive morpheme *-u-*, the same we saw in (18), 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.

In Kusaiean, transitive verbs such as *twem* 'to sharpen' can be transformed into intransitive verbs by deleting the last consonant and then reduplicating what remains, giving rise to *twetwe*. (16) shows a normal transitive sentence; we observe the somewhat exotic word order found inside of the noun phrase. (13) contains an incorporated object (called 'included object' in Lee's 1975 grammar). The verb in this sentence is correspondingly marked for intransitivity. In addition, the tense verbal suffix *–lah* is attached to the noun instead of the verb (in the form of *–lac*), suggesting that the whole complex *twetwe mitmit* 'knife-sharpen' is being treated as a verb.

Finally, in example (17) 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. (14) is the corresponding noun incorporation structure. The morphology of Yaqui shows that (14) contains an intransitive verb because *–te* is an intransitive marker.

An important feature of West Greenlandic incorporated nouns is that they can be externally modified by adjectives, numerals, relative clauses and others:

(19) *West Greenlandic*

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

'Esta got fresh fish'

(20) *West Greenlandic*

Marlun-nik	**ammassat**	-tur	-p	-u	-nga
Two-INSTR.PL	sardine	-eat	-IND	-INTRAN	-1SG

'I ate two sardines'

(21) *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 incorporated (e.g., Case marking is possible in (19) and (20)), so the modification must happen at a distance, externally. However, as shown in (22), in Kusaiean, when noun incorporation 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 (22)b, 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).

(22) *Kusaiean*

a. *Nga twetwe **mitmit** sac
I sharpen knife the
'I knife-sharpen the'

b. *Nga twetwe **mitmit** sahfiht sac
I sharpen knife dull the
'I knife-sharpen the dull'

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

(23) *Yaqui*

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

(24) *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'

And, in West Greenlandic, but not, to the best of my knowledge, in Kusaiean or Yaqui, the object of a verb formed by incorporation can appear in the sentence marked with special Case (e.g., Instrumental). This is known as the anti-passive construction:

(25) *West Greenlandic*

Angunguaq **aalisakka**-mik neri -v -u -q
A.ABS fish-INSTR eat -IND -INTRAN -3SG
'Angunguaq ate fish'

Arguably, in this case it is not obvious that the verb has been incorporated into, since there is no overt incorporated noun. But the possibility of object-like elements appearing with incorporated-into verbs is indeed a well-document property of classificatory noun incorporation. Example (26) illustrates with a fourth language, Chamorro (Chung and Ladusaw 2004: 109) (see Gerdts 2001 for more examples):

(26) *Chamorro*

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')

The conclusion is that, whereas West Greenlandic and Chamorro allow classificatory noun incorporation, Kusaiean only allows compound noun incorporation.[6]

[6] Yaqui seems to actually allow classificatory noun incorporation with a separate set of verbs, at least according to some analyses (see Haugen 2008: 152-160).

Notice the difference in meaning between incorporated and non-incorporated objects in these languages. For example, whereas in (15), the grammatical and notional object is interpreted specifically, in (12) the notional object is interpreted indefinitely. The indefinite, non-specific semantics of incorporated nouns is a widely noted fact in the incorporation literature (see Mithun 1984, Sullivan 1984, de Reuse 1994, Spencer 1995, etc.).

To refer to the formal process of noun incorporation, researchers sometimes speak of morphological/syntactic incorporation, depending on the level of grammar they assume the process takes place. Since I will not be making any claims as to whether implicit indefinite objects are incorporated morphologically or syntactically, I will refer to this aspect of incorporation as formal incorporation. To refer to the semantic process that results in the particular set of semantic features that we find associated with formal incorporation, it is common to speak of semantic incorporation (see van Geenhoven 1998, Farkas and de Swart 2003, Chung and Ladusaw 2004, among others).

So far we have seen illustrations of what we could call "classical" noun incorporation. But other constructions in other languages have come to be analyzed as involving incorporation, either formal, semantic, 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; some researchers speak of *pseudo-incorporation* in these cases.

As a summary of this section, let me offer a quote on compound noun incorporation from Mithun's (1984) seminal paper that contains most of the ingredients we will be looking for in the next section (p. 856):

> "...a V stem and a N stem are combined to form an intransitive predicate denoting a unitary concept. The compound is more than a description; it is the name of an institutionalized activity or state. [...] [The noun] no longer refers to a specific entity; instead, it simply narrows the scope of the V. It is thus unaccompanied by markers of definiteness or number, or by demonstratives. Although it may function semantically as a patient, location, or instrument, it has no independent syntactic role in the sentence as a whole, and so is unmarked for case."

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 semantics of incorporation" (in Farkas and de Swart's 2003 and Carslon's 2006 terminology). After presenting the case for semantic incorporation, I show that, formally, implicit indefinite nouns undergo compound noun incorporation, not classificatory noun incorporation.

3.1 Indefiniteness and non-specificity

Implicit indefinite objects are interpreted as non-specific indefinites. With an example like (27) 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":

(27) John has already eaten today

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):

(28) 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*)

(29) 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 (28) is 'John didn't eat anything' (silent indefinite objects always take narrow scope, as we will see shortly).[7] Consider also the following contrasts (data from work together with Tom Roeper, but this type of contrast is well-known):

(30)

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!

[7] (28) 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. (28) 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.

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 (30)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 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:[8]

(31)

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 (31): *Let's push it*, *I'd love to smoke it too*, *I'd love to drive it too*.[9]

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 (32) and (33):

(32) Whenever John cooks mushrooms, Sally never eats them
(33) Whenever John cooks mushrooms, Sally never eats

(32) has a salient interpretation in which what Sally eats varies with the cooking events, that in which 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). (33) 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 (34), where a continuation that makes it explicit that Sally eats something on those occasions, just not the mushrooms, is impossible for (33), though, as (35) shows, such a continuation is compatible with (32):[10]

[8] 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).

[9] 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.

[10] 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.):

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

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

Incorporated nouns, as we saw in section 2, are also typically interpreted indefinitely and non-specifically; i.e., they are not pronouns. Referential interpretations are often out for incorporated nouns, particularly in the case of compounding noun incorporation (see Mardirussian 1975: 386, Mithun 1984: 849, Sullivan 1984, de Reuse 1994, Spencer 1995, among many others, for explicit statements in this vein). van Geenhoven (1998) specifically argues that even incorporated objects in a classificatory noun incorporation language like West Greenlandic are not pronouns, as shown in (36):[11]

(36) *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$_i$...

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:

(37) I didn't eat yesterday
'I didn't eat any food/meals yesterday'

(38) John wants to eat
'John wants to eat food/a meal'

(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!

[11] Exceptions come, for example, from Koryak (Mithun 1984: 862):

(i) *Koryak*
wŭtču iñínñin yúñı qulaívun. Mal -yúñı.
this.time.only such whale it.comes good -whale
ga **-yuñy** -upényıḷenau
they -whale -attacked
'This is the first time that such a whale has come near us. It is a good whale. The attacked it (the whale)'

Mithun (1984) argues that languages that can do this exhibit a type of classificatory noun incorporation in its own right (she calls it Type III). But Type III is a type of classificatory incorporation; referential interpretations are out for compound noun incorporation.

(39) I didn't bake yesterday
'I didn't bake anything bakeable yesterday'

(40) I want to bake
'I want to bake something bakeable'

Neither (37) nor (39) 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, (38) and (40) can only be interpreted unspecifically, i.e., with low scope of the silent indefinite objects with respect to the intensional verb *want*. E.g., (40) 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:

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

Clearly, (41)B and (41)B' are not synonymous. With B, the speaker expresses his/her wish to engage in the activity of baking something; with B', his/her with to bake a birthday cake.

Obligatory narrow scope is a well-known property of incorporation (see Bittner 1994, van Geenhoven 1998, Carlson 2006, among many others). Consider the following examples from West Greenlandic:

(42) *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'

(43) *West Greenlandic*

Vittu	**cykili**	-ssar	-siur	-p	-u	-q
V.ABS	bike	-future	-seek	-IND	-INTRAN	-3SG

'Vittus is looking for an arbitrary bike'

(42) can only be interpreted as indicated in the translation, i.e., with the incorporated noun 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, (42) 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 incorporated noun. Similarly, (43) 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 incorporated noun over the intensional verb.[12]

[12] In (43), *-ssar-* is a nominal suffix meaning 'future' (as in 'future wife'). Thanks to Maria Bittner for clarifying this to me.

3.3 Number neutrality

Implicit indefinite objects are semantically number-neutral. To my knowledge, this fact has not been noted before. Thus, if (44) is true, then it is immaterial whether John is smoking half, one or many cigarettes:

(44) John is smoking outside

Example (45) 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 (46), (47), and similar examples:

(45) I've eaten today
(46) It's great that you will bake tomorrow
(47) Jane is in her room writing

That's exactly what we expect if implicit indefinite objects are number-unmarked incorporated nouns, as I contend. Typically, incorporated nouns are both semantically number-neutral and number-unmarked morphologically (or, if we consider singular nouns to be morphologically unmarked for number, then incorporated nouns are, formally, singular nouns). We can see this by looking back at the examples we saw in section 2 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.

We can actually look at the properties of singular vs. plural incorporated nouns separately, for languages like Hindi and Hungarian can incorporate both singular and plural nouns, with different effects on number. The generalization is that singular/morphologically number-unmarked incorporated nouns are semantically number-neutral, whereas plural incorporated nouns, in the subset of languages that allow them, are semantically plural. Consider the following data from Hungarian (Farkas and de Swart 2003:12):

(48) *Hungarian*
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 (48)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 incorporated nouns. 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, hence pseudo-incorporation), and they can either be singular ((48)b) or plural ((48)c) morphologically, with very clear semantic consequences: while (48)b is semantically number-neutral, (48)c is semantically plural (this is

indicated in the glosses). So, implicit indefinite objects are not incorporated, 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".

Again, this is a property that implicit indefinite nouns share with incorporated objects. 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)". On the other hand, it doesn't seem that this is a property that bare plurals have, a fact that can be used as an argument against the idea that bare plurals are incorporated, or against the idea that implicit indefinite objects are themselves bare plurals.

3.5 Ability to antecede pronouns

It seems that at least sometimes incorporated nouns can antecede pronouns, as in the following examples from West Greenlandic (van Geenhoven 1998) and Hopi (Hill 2003: 241; Haugen 2008) (pronouns in West Greenlandic realized as part of the verbal inflection):

(49) *West Greenlandic*

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'

(50) *Hopi*

Nu'	**pakiw**	-maqto	-ni;			
I	fish	-go.hunting	-FUT;			
noqw	itam	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 (2008) observes that this is a "typologically rare" property of noun incorporation. Farkas and de Swart (2003) and Dayal (1999) show that Hungarian and Hindi incorporated singular nouns 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 incorporated nouns 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.[13]

The state of affairs in case of implicit indefinite nouns is mixed, unsurprisingly. (51) and (52) seem fine:[14]

(51) I have just eaten. It tasted really good
(52) I have just finished baking. ? It's going to taste fantastic!

But (53) is not:

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

3.6 Compound noun incorporation

Implicit indefinite objects in English undergo compound noun incorporation, not classificatory noun incorporation. That's because these objects cannot be externally modified, and because, in these constructions, it is not possible to realize a direct object (with special morphology/special marking), as we saw for Chamorro or West

[13] 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.

[14] 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 anteceding 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.

Greenlandic in section 2. Examples (54)-(58) show that external modification is not possible:[15, 16]

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

What would the anti-passive construction look like in English? Since English does not mark Case overtly on nouns, the closest we can come to realizing an object with special marking is with the use of prepositions, as in the examples in (59), which are all ungrammatical:[17]

(59) *I baked with muffins
*We ate with paella
*I hunted on/with deer

3.7 Summary

In this section I have presented the case for implicit-noun incorporation in English. The case rests on the fact that the semantic properties of implicit indefinite objects in this language (and in other languages, such as Spanish or German, though those were not shown here) are just the cross-linguistically stable semantic properties of incorporation. If implicit indefinite objects in English are implicit nouns that undergo (compound) noun incorporation, then this state of affairs is exactly what we expect.

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[15] François Recanati (p.c.) brings to my attention the fact that French allows examples such as (54). 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).

[16] 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~~

[17] Spanish, however, seems to allow something that at least resembles the anti-passive construction in these cases:

(i) *Spanish*
Ayer comimos con paella
yesterday ate.IND.1PL with paella
'Yesterday we ate paella'

(ii) *Spanish*
Hoy (nos) hemos desayunado con tostadas
today us have.IND.1PL had.breakfast with toast
'Today we had toast for breakfast'

While Spanish is like English in not incorporating overt objects, it may be that it still has something that resembles the anti-passive construction with null incorporated objects. I must leave this issue for another occasion.

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:

(60) *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 (60)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.[18]

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, Spanish and German behave just like bare number-unmarked incorporated nouns in languages that have overt-noun incorporation. The conclusion I draw from that is that implicit indefinite objects are number-unmarked incorporated nouns.

An interesting prediction now arises: in those languages that allow *both* compound noun incorporation 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 incorporating 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 of the compound type 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

[18] In (reference removed), I showed that implicit indefinite objects are incompatible with personal datives, possible in some idiolects/dialects of English, as shown in (i)-(iii):

(i) I ate myself an apple/John baked himself a wonderful cake
(ii) I ate yesterday/I ate myself yesterday
(iii) John baked yesterday/John baked himself yesterday

I argued that this was an instance of the generalization that incorporated nouns have to be adjacent to the verb. Another possibility is that personal datives are incompatible with the aspectual properties induced by implicit indefinite objects/incorporated objects. I put these facts aside here for lack of space. I also leave the aspectual properties of implicit indefinite objects for another occasion; for some remarks, see Mittwoch (1980).

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 *un*incorporated nouns, which supports the idea that implicit indefinite objects are both formally and semantically incorporated. Thus, whereas a semantic incorporation analysis may be called for in the case of bare nouns in this and other languages, Frisian shows that bare nouns need not always be *formally* incorporated.

Dyk (1997) is the first, to my knowledge, to make a serious connection between noun incorporation and implicit indefinite objects.[19] The language of investigation is Western Frisian, referred to elsewhere 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):

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

(62) *Frisian*
Wy wolle **messe**slypje
We want knife.sharpen
'We want to sharpen knives'

(61) is a non-incorporation structure, in (62) 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 (62) and, more importantly, that the form of the noun, *messe* [mɛsə], is neither the singular form, *mês* [mɛ:s], nor the plural form, *messen* [mɛsən]/ [mɛsn̩]. 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):

(63) *Frisian*
Wy slypje$_i$ de messen t_i
We sharpen the knives
'We sharpen the knives'

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

(64) *Frisian*
*Wy de messen slypje

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):

(65) *Frisian*
Wy **messe**slypje$_i$ t$_i$
'We sharpen knives'

(66) *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. Note that incorporated nouns in Frisian cannot be externally modified by determiners, adjectives or relative clauses (Dyk 1997: 71).

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 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.):

(67) *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.):

(68) *Frisian*

Hja	sille	net	te	**snoek**fangen
they	will	not	to	pike.catch

'They are not going to catch any pikes'

(69) *Frisian*

Ik	wol	te	**skilderij**besjen
I	want	to	painting.look

'I want to look at paintings'

For example, (68) is unambiguous and means that they are not going to catch any pikes whatsoever.

Incorporated nouns are number neutral in Frisian. Consider (70) (Dyk 1997: 102):

(70) *Frisian*
Mem sit te **krant**lêzen
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 (71) (with incorporation) with (72) (without it):

(71) *Frisian*
Wy kofjedrinke on tsien oere
We coffee.drink at ten hour
'We drink coffee at ten o'clock'

(72) *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 (71) "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 [(72)], on the other hand, is at first hand more restricted to the drinking proper."

Finally, 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 3.5, though it is possible in some examples. In (74) it seems easier than in (73) (Dyk 1997: 66):

(73) *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!'

(74) *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!''

As mentioned earlier, we will be comparing the behavior of bare nouns to that of implicit indefinite objects because in Frisian it is possible to show that implicit indefinite objects are not *un*incorporated 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 (75) (Siebren Dyk, p.c.):

(75) *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 noun incorporation. First, and quite importantly for our purposes, only incorporated, unergative and detransitivized verbs can appear in the *te*-infinitival construction, as illustrated in (76) to (78); nothing else can appear in this construction (Dyk 1997: 105-6):

(76) *Frisian*
Buorman sil te **geit**melken
neighbor shall to goat.milk
'Our neighbor shall go off to milk goats'

(77) *Frisian*
Buorman sil te kuierjen
neighbor shall to walk
'Our neighbor shall go out walking'

(78) *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.):

(79) *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):

(80) *Frisian*

Richt	fernimt	boumatsjes	yn	‘e	tún
	notices	wagtails	in	the	garden

‘Richt notices wagtails in the garden’

(81) *Frisian*

*Richt	**boumantsje**fernimt	yn	‘e	tún
	wagtail.notices	in	the	garden

(82) *Frisian*

*Richt	fernimt	yn	‘e	tún
	notices	in	the	garden

(83) *Frisian*

De	kealkop	hatet	negers
The	skinhead	hates	negroes

‘The skinhead hates negroes’

(84) *Frisian*

*De	kealhop	**neger**hatet
the	skinhead	negro.hates

(85) *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 (80), (83) and (86) show (Siebren Dyk, p.c.):

(86) *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):

(87) *Frisian*

It	bern	kleuret	it	plaatsje
The	child	colors	the	picture

‘The child colors the picture’

(88) *Frisian*

It	bern	**plaatsje**kleuret
the	child	picture.colors

‘The child colors pictures’

(89) *Frisian*
It bern kleuret
The child colors
'The child colors'

(90) *Frisian*
De ûndergeande sinne kleuret it hûs
the setting sun colors the house
'The setting sun colors the house'

(91) *Frisian*
*De ûndergeande sinne **hûs**kleuret
the setting sun house.colors

(92) *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.):

(93) *Frisian*
It bern kleuret wetter
The child colors water
'The child colors water'

(94) *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):

(95) *Frisian*
Do moatst de brij opite
you should the porridge up.eat
'You should eat the porridge up'

(96) *Frisian*
*Do moatst **brij**opite
you should porridge.up.eat

(97) *Frisian*
*Do moatst opite
you should up.eat

(98) *Frisian*
Do moatst de panne útite
you should the pan out.eat
'You should eat the pan empty'

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

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

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

(101) *Frisian*
? Do moast apels opite
You should apples up.eat
'You should eat up apples'

(102) *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 (96)/(97) and (99)/(100). It is possible to interpret an example like (101) 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. For example, implicit indefinite objects in Frisian always take narrow scope with respect to other operators in the sentence (Siebren Dyk, p.c.):

(103) *Frisian*
Hja ha net iten
They have not eaten
'They haven't eaten'

(104) *Frisian*
Ik wol ite/bakke/smoke
I want eat/bake/smoke
'I want to eat/bake/smoke'

(103) 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 (104) 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.

Finally, 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.

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

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 incorporated nouns in the languages that have noun incorporation. This forms part of the basis of the claim that implicit indefinite objects in English are in fact incorporated null nouns. English does not incorporate overt nouns, so, unfortunately, in English we can't make a direct comparison between the two phenomena. Looking at Frisian allows us to test the prediction that, if a language has both overt-noun incorporation 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 incorporated nouns.

5 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 *un*incorporated bare nouns. Implicit indefinite objects cannot be unincorporated bare plurals because bare plurals typically don't give rise to the conventionalized interpretations we observed in section 3.4. They can't be incorporated bare plurals because, in languages in which these are allowed, such as Hungarian or Hindi, these are semantically plural. Implicit indefinite objects, however, are semantically number-neutral, as argued in section 3.3. 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 (105)-(106):

(105) *Italian*
Questo conduce alla seguente conclusione
this leads to.the following conclusion
'This leads [people] to the following conclusion'

(106) *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 (107):

(107) *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,[20] 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; (106) already illustrates the referential use:

(108) *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$_i$'

(109) *Japanese*
Haha-ga ataraii 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'

[20] 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.

Object *pro* in Japanese can also be interpreted indefinitely, as (110) illustrates (Tomioka 2003: 323):

(110) *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 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 (105) into one that is interpreted episodically results in ungrammaticality. Compare (111) with (112):

(111) *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'

(112) *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:

(113) 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 (107). 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:

(114) *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, (115) and its counterparts in languages like Spanish and German are perfectly grammatical:

(115) 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.[21, 22]

6 Problems for a pragmatic approach to implicit indefinite objects

That not all silent objects are interpreted alike, as discussed in sections 3.1 and 5, 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), that 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 (1)-(5), e.g., *ingest* or *devour* (**I ingested/devoured yesterday*), *overcook* (**I overcooked yesterday*).[23]

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, or are number-neutral; as far as a pragmatic approach is concerned, things could have been otherwise, as long as there are good enough pragmatic reasons. Implicit indefinite objects are interpreted indefinitely, even if there is pragmatic pressure to interpret them otherwise. Importantly, 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.

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[21] 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 (111), where it controls the PRO in the infinitival clause. The notional object of the English version of (105) is not represented syntactically and cannot control PRO, and thus the English version of (111) is ungrammatical. Given the proposal made in this paper, the question arises as to whether the notional object of the English version of (105) 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.

[22] 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.).

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

Alternatively, insisting that implicit indefinite objects be given a pragmatic account would entail proposing a pragmatic operation whose effects are just those of incorporation. 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.

7 Analysis

In this section I offer a possible grammatical analyses of the core data we have seen in the paper. I present (an approximation to) an analysis of noun incorporation here, borrowed from the literature for the most part, because I want to show that the analysis I propose for implicit indefinite objects fits into the larger picture.

7.1 Formal aspects

Languages that have implicit indefinite objects have in their lexicons null indefinite bare nouns which are number-neutral, i.e., something similar to ”thing” in English. Thus, I take it that whether a language allows implicit indefinite objects depends, in part, on whether this null noun is available in its lexicon. This null noun necessarily incorporates. A language may allow null-noun incorporation without allowing overt-noun incorporation.

The next step is to ask where in the grammar the ”putting together” of the verb and the noun occurs. This is a hotly-debated issue. The empirical side of the issue is how to distinguish theoretically between compound noun incorporation and classificatory noun incorporation. There are different possible answers to this question. One is to say that compound noun incorporation is a lexical process, and classificatory noun incorporation is a syntactic process. Another possible answer is to take it that both processes are syntactic, not lexical, but that the empirical differences follow from differences between the processes. Sadock (1980, 1986) can be viewed as falling within this general ballpark, and more recent accounts of N-V word formation, such as those in Hale and Keyser (1993, 2002) and Haugen (2008) also belong here. I will not make a real choice between these answers here. The reason for not wanting to choose is that the data of interest in this paper doesn’t seem to argue strongly in favor of one account or the other.

The least contested issue, it seems, is the nature of classificatory incorporation. Here, it is not unlikely that some sort of syntactic operation is involved. Haugen (2008: chapter 7), building on ideas in Hale and Keyser (1993, 2002) and Halle and Marantz (1993, 1994), proposes the following. The operation involved is Move. Nouns that undergo classificatory incorporation are generated as DP objects, and as such can be accompanied by modifiers (numerals, possessives, adjectives, relative clauses). After movement of N to V,[24] there are different things that can happen to the trace of N. The trace is a bundle of features and a late insertion mechanism will spell out those features by making use of vocabulary items. If the features of the item that gets inserted in the trace position are a subset of those of the head of the movement chain, then we get an incorporated-into verb accompanied by what some call a ”hyponymous” object. Such is the case of the Chamorro example we saw in section 2, repeated here:

[24] Actually, to little *v*, a functional category related to the verb. I put this and other technical details aside.

(116) *Chamorro*

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')

If the features of the item that gets inserted in the trace position are identical to those of the head of the movement chain, then we get an incorporated-into verb accompanied by a cognate object, as in the following example from Hopi (Hill 2003: 239):[25]

(117) *Hopi*

Hak	yòypu-t	aaya-t	**aay**	-an	-numa
who	cracked-ACC	rattle-ACC	rattle	-CAUS	-CIRCG

'Someone's going around shaking a cracked rattle' (lit. 'Someone's going around rattle-shaking a cracked rattle'

If nothing is inserted in the trace position of N, then we get stranded modifiers.

So much for classificatory incorporation. For compound incorporation, Haugen assumes that a different syntactic process, Merge ("conflation" in Hale and Keyser's framework), puts the object, a bare N, and V together. There is no movement involved here; rather, N is base-generated next to V. Thus, there can be no cognate or hyponymous objects. Because the category of the noun that undergoes Merge is just N, we expect no Case markers and no (stranded) modifiers. From my perspective, it doesn't matter if this process is syntactic, as Haugen would have it, or lexical/morphological, as others may prefer.

In both cases, we explain the intransitive marking on the incorporated-into verb because the two processes involved here, Move and Merge, form words, and thus other word-formation processes can be sensitive to them, such as that which affixes transitive or intransitive suffixes to roots.

Implicit indefinite objects, then, are bare Ns that are base-generated next to verbs like *eat*, *write*, *smoke*, etc. and that undergo Merge with V. I suspect that implicit indefinite objects undergo compound noun incorporation in all the languages that have them, but only further research can reveal whether this suspicion is correct.

The noun bears no morphological markings at all—hence, there are no semantics to be derived from morphological marking, and implicit indefinite objects are, thus, number-neutral. The closest we come to an overt version of this null N in English is "thing". The noun may have its ability to antecede pronouns reduced, just like some incorporated nouns. No stranded modifiers or special objects are allowed.

7.2 Semantics

Here there are, again, different theoretical choices we could make, though the issue of how to provide a proper semantics for noun incorporation seems less controversial. A common denominator is the semantic function that is assigned to the incorporating

[25] See Hale and Keyser (2002) for an incorporation approach to cognate objects in English. In footnote 1 I pointed out that some languages don't seem to have implicit indefinite objects and instead have cognate objects, such as Hindi.

noun: that of restricting the internal argument of the verb. Here I will build upon Chung and Ladusaw's (2004) implementation of this idea.

Chung and Ladusaw (2004) propose that there is a mode of composition called Restrict that applies in cases of formal incorporation, among others. This rule applies in cases where a predicate is being combined with a property, of type <e,t>. The property argument is interpreted as a restrictive modifier of the predicate. The operation does not reduce the predicate's degree of unsaturation; i.e., semantically, the predicate is still missing an internal argument. Restrict is illustrated in (118):

(118) Restrict (λyλxλe [feed'(y)(x)(e)], dog') = λxλyλe [feed'(y)(x)(e) & dog' (y)]

Chung and Ladusaw allow Restrict to demote an argument from the top of the λ-expression to a position just above the event argument. This is to free the semantic computation from having to track the order in which the arguments are targeted for composition, and hence from doing double-duty (otherwise, it both tracks the degree of unsaturation of the predicate and the order in which the arguments are targeted for composition). Restrict does not force this demotion, though, so there are in principle always two outputs for the operation, given a predicate and a property.

Because Restrict does not saturate argument slots, a further operation of Existential Closure is available. Existential Closure occurs when the composition reaches the event argument. Existential closure existentially closes whatever variables remain open at that stage.

Let us apply this to the Chamorro example in (119), from Chung and Ladusaw (2004: 107):

(119) *Chamorro*

Gäi	**-kareta**	si	Antonio
AGR.have	-car	UNM	Antonio

'Antonio has a car' (lit. 'Antonio car-has')

The result of combining the verb *gäi* 'have', of type <e,<e,t>>, with *kareta* 'car' via Restrict is the following:

(120) [[gäi-kareta]] = λxλyλe [have'(y)(x)(e) & car'(y)]

(120) is still of type <e,<e,t>>. Now it gets combined with the subject:

(121) [[gäi-kareta]]([[si Antonio]]) = λyλe [have'(y)(A)(e) & car'(y)]

Then, existential closure applies, yielding (122):

(122) ∃y∃e [have'(y)(A)(e) & car'(y)]

Existential closure is what adds existential quantification to incorporation, and is hence responsible for the indefiniteness of the construction. Incorporated objects take obligatory narrow scope with respect to sentential negation and other sentential operators because these operators enter the semantic composition at the sentential

level, after the predicate has achieved semantic completeness, i.e., after the stage represented in (122).[26]

Because Restrict does not saturate the internal argument, it is possible to interpret cognate and hyponymous objects in this system. Consider our familiar example in (123):

(123) *Chamorro*

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')

The incorporated-into verb can combine with *i ga'lagu* 'the dog' via Functional Application, giving rise to (124):

(124) Restrict (λyλxλe [have'(y)(x)(e)], pet') = λyλxλe [have'(y)(x)(e) & pet'(y)]
[λyλxλe [have'(y)(x)(e) & pet'(y)]] (ιz dog'(z)) =
λxλe [have'(ιz dog'(z))(x)(e) & pet'(ιz dog'(z))]
λxλe [have'(ιz dog'(z))(x)(e) & pet'(ιz dog'(z))](Carmen)=
λe [have'(ιz dog'(z))(C)(e) & pet'(ιz dog'(z))]
Existential Closure (λe [have'(ιz dog'(z))(C)(e) & pet'(ιz dog'(z))]) =
∃e [have'(ιz dog'(z))(C)(e) & pet'(ιz dog'(z))]

Chung and Ladusaw do not discuss cognate objects or stranded modifiers. However, the same treatment can be given to these cases. The more interesting case is that of stranded modifiers. According to the analysis presented in section 6.1, there is a DP inside of the verb phrase whose N moves together with the verb, leaving a trace behind that doesn't get spelled out. The question arises as to how the N-trace is interpreted. For simplicity, we can assume either that the N-trace is of type <e,t>, a "vanilla" predicate without much semantic content, or that it is ignored by the semantic component. We then get the following for an example like (125), repeated from section 2:

(125) *West Greenlandic*

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

'Esta got fresh fish'

[26] Chung and Ladusaw don't discuss the scope of incorporated objects with respect to subject quantifiers. Presumably, incorporated objects still take narrow scope in those cases. Implicit indefinite objects do too:

(i) Half of the students ate

Example (i) means that half of of the students ate something or other and is incompatible with a situation in which all of the students actually ate something, and half ate the same thing. This scenario, however, is compatible with a wide scope reading of the implicit indefinite. In order to explain this, Chung and Ladusaw would presumably claim that subject quantifiers QR out of the VP.

(126) [[nutaa-mik t_N]] = λx. fresh'(x)
[[aalisagar-sivuq]] = λyλxλe [get'(y)(x)(e) & fish'(y)]
Restrict (λyλxλe [get'(y)(x)(e) & fish'(y)], λx. fresh'(x)) =
λxλyλe [get'(y)(x)(e) & fish'(y) & fresh'(y)]
[λxλyλe [get'(y)(x)(e) & fish'(y) & fresh'(y)]](Esta) =
λyλe [get'(y)(E)(e) & fish'(y) & fresh'(y)]
Existential Closure (λyλe [get'(y)(E)(e) & fish'(y) & fresh'(y)])=
∃y∃e [get'(y)(E)(e) & fish'(y) & fresh'(y)]

Putting together the formal and the semantic accounts, we say that the processes described in section 6.1, that is, the one associated with classificatory incorporation and the one associated with compound incorporation, necessarily trigger semantic incorporation as described in this section.[27]

Thus, going back to implicit indefinite objects, the existential import associated with them comes, not from the null incorporated noun itself, but from the fact that variables get existentially closed at the event level in this system. Obligatory narrow scope follows from this too, just as it does for incorporated nouns. The conventionalized meanings we discussed in section 3.4 have semantic incorporation as a pre-requisite.

8 Conclusion

In this paper I have provided two positive arguments that implicit indefinite objects in languages like English, Frisian, Spanish or German are incorporated nouns. The first argument is that implicit indefinite objects in these languages behave semantically like incorporated nouns in languages that have noun incorporation, like West Greenlandic, Yaqui, etc. The comparison could not be direct because English does not incorporate overt nouns. However, looking at one of English's closest relatives, Frisian, allows us to compare the two phenomena directly. The second argument is that the predictions of the proposal made here are met compellingly in Frisian.

Then, I provided several arguments about what implicit indefinite objects are not: they are not unincorporated (singular or plural) nouns, they are not *pro*, they are not syntactic variables, and they do not arise as a result of pragmatic enrichment. The core of the argument was always the same: these alternative analyses cannot capture all the properties of the phenomenon at hand. All of these alternatives miss the empirical generalizations we have discussed here.

I suggested that the grammars of languages that have implicit indefinite objects make available null nouns in their lexicons. These null nouns must undergo compound incorporation, that is, they are base-generated next to the verb and Merge with it. On the semantic side, the nouns are composed with the verbs via the operation Restrict, which does not saturate the internal argument of the verb.

[27] Nothing is said here about whether other morphological/syntactic configurations or processes also trigger semantic incorporation. Thus, this account leaves the door open to a situation in which we find semantic incorporation without formal incorporation. This may be useful in dealing with bare nouns for which we have positive evidence of the lack of incorporation, despite the incorporation semantics. And, in Chung and Ladusaw's account, it allows the treatment of Maori *he*-indefinites as semantically incorporated.

Abbreviations used in glosses

ABS = ABSOLUTIVE Case; ACC = ACCUSATIVE Case; AGR = agreement; DET = determiner; 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; TRANS = Transitive; UNM = unmarked morphological Case; WK = Weak; 1/2/3 = 1st/2nd/3rd person

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