Grammar vs. pragmatics: carving nature at the joints^{*}

Luisa Martí
Queen Mary University of London

June 2014

Abstract. I argue that the debate on the division of labor between grammar and pragmatics, at least as it pertains to pragmatic free enrichment, needs to be better grounded empirically. Often, only a reduced set of facts from English is used to substantiate claims regarding pragmatic free enrichment. But considering only a reduced set of facts from a single language can only afford limited (and, sometimes, wrong) results, because we can only see whatever this one language chooses to express. Two cases studies are presented: adjectival fragments, and implicit indefinite objects. A grammatical analysis is defended for them.

1. Introduction

How do we know which natural phenomena a particular process, law, rule, etc. is supposed to apply to, or account for? We proceed by dividing up nature into domains and establishing analogies with other phenomena. Those phenomena that pattern together belong together in the same domain and, everything else being equal, are subject to the processes, laws, rules, etc. of that domain. Thus, we ‘carve nature at the joints’, not at places where it is not meant to be carved. The goal of this paper is to highlight the usefulness of this classic methodology when applied to the debate between grammar and pragmatics. We will see that, seen in this light, phenomena that have previously been accounted for by free pragmatic enrichment actually shouldn’t be accounted for by it, since the phenomena in question turn out to pattern together with independently known grammatical phenomena—and hence should be analyzed in grammatical terms.

Consider first data like the following, the subject matter of section 2:

^{*} Many thanks to Robyn Carston, Peter Pagin and Deirdre Wilson for their invitation to the workshop *Semantics, Pragmatics and Systematicity* (University of Stockholm, May 2009), out of which this paper grew, and to Herman Cappelen for inviting me to present this material at Arché (St. Andrews, UK). Thanks to the audiences at these events, especially Herman Cappelen, Stephen Neale, Walter Pedriali and François Recanati, for very stimulating discussion and for pressing me on certain issues, as well as to Klaus Abels, Maria Bittner, Bert Le Bruyn, Natalia Cichosz, Paul Elbourne, Martin Everaert, Eleni Gregoromichelaki, Ruth Kempson, Ivona Kučerová, Jason Merchant, Peter Muriungi, Øystein Nilsen, Isabel Pérez Jiménez, Alex Perović, Joy Philip, Matt Reeves, Marisa Rivero, Tom Roeper, Yael Sharvit, Peter Svenonius, Henriette de Swart, Hiroyuki Uchida, Andrew Weir and several anonymous reviewers for data, questions, comments, references and very helpful discussion. All errors are of course my own.

- (1) [You come in and pointing at your shirt I say:]
Nice!

Everybody agrees that the speaker of e.g., (1), meant that the shirt you are wearing is nice. At some level or other, competent speakers of English have access to a representation associated with, e.g., the fragment *Nice!* of (1) that is slightly bigger than meets the eye, i.e., something like *That shirt is nice!*, or *The shirt you are wearing is nice!*. The question that arises is this: is the material that is left implicit in (1) generated by the language faculty, i.e., the grammar, or is that implicit material absent from any grammatical representation and provided for by some other means instead? At least some proponents of pragmatic free enrichment have favored the idea that it is pragmatic free enrichment that provides the ‘missing’ material here (see Carston 2002, Hall 2009, Stainton 2006, among others). In this approach, the grammar has no role to play other than in the provision of the adjective/adjectival phrase (with its phonology, its compositional semantics, its internal syntax, etc., of course); the language faculty is not involved in the mediation between the fragment *Nice!* and the ‘expanded’ version in the so-called language of thought that, were we to make explicit, would sound something like *That shirt is nice!* Pragmatic free enrichment is a process whereby considerations of relevance, salience, etc. make it such that speakers of a language add material to a grammatical object (e.g., a (complete or incomplete) proposition/sentence, an adjective (denotation), etc.). The added material is only implicitly expressed, and the process is, at least according to some of its defenders, purely pragmatically triggered, never grammatically mandated. See Hall (2009) for more details.

In the grammatical approach to adjectival fragments, the language faculty produces a representation of the ‘expanded’ version, and there is nothing specific to adjectival fragments that is provided for pragmatically. At the level of the language of thought, we do have a representation of the ‘expanded’ version, but that is only because we had a representation for it already as an output of the language faculty, albeit one that involved ellipsis of certain material.

These are empirical claims and as such need to be justified. In section 2, I present an empirical argument that the grammar mediates between the fragment and the ‘expanded’ version based on the cross-linguistic comparison of the expression of adjectival fragments. In section 3, I exemplify the benefits of the cross-linguistic method in the domain of implicit indefinite objects and present an empirical argument that the understood or implicit object argument of certain verbs is also represented grammatically.

Notice that, if I am right and, as I contend, pragmatics doesn’t contribute implicit material in the two areas of investigation I cover, it doesn’t follow that *all the phenomena that currently fall under pragmatic free enrichment* are to be dealt grammatically, or with the same grammatical means. That conclusion can only be reached after we have found empirical arguments for the grammatical approach for all such effects, one case at a time, since we have no *a priori* reason to expect that exactly the same grammatical mechanisms would be involved in all of these cases. So, the proposals in this paper are compatible with the existence of pragmatic free enrichment. It may be that, after doing more work of this kind, we have no reasons to believe that pragmatic free enrichment exists, or it may be that we *do* have such reasons. But in order to reach such conclusions, we first need to do empirical work, I contend.

2. Case Study I: Adjectival Fragments

The argument presented in this section is as follows: whatever choices languages make for adjectives in predicative position, they make the same choices for adjectives in fragments. These choices have to do with gender agreement and with the predicative vs. attributive distinction. We would be missing a generalization if the predicative construction and the fragment did not stand in some relation—the account I defend here says that the full, predicative construction is the grammatical source of the fragment. I make this argument in two different ways: first, by looking at how different languages mark adjectival fragments for grammatical gender and the predicative vs. attributive distinction (section 2.2), then by looking at adjectives which cannot be used predicatively (section 2.3). I begin, in section 2.1, by summarizing the arguments put forth by Jason Merchant with respect to nominal fragments, since my argument here is an extension of his. In section 2.4, I consider an alternative explanation of the facts, compatible with free pragmatic enrichment, and reject it, and in section 2.5, following Merchant (2004, 2007a, b), I discuss in detail what a grammatical analysis of adjectival fragments might look like.

2.1 Nominal Fragments

Merchant (2004, 2007a,b) argues for a grammatical, ellipsis account of nominal fragments on the basis of, among others, Case connectivity effects in a wide variety of languages, as illustrated for German in (2) (Stainton 2006 takes up these facts from Merchant's work and draws different conclusions from them):

- (2) *German*
[A customer at a café, to the waiter:]
Einen/*Ein Kaffee, bitte!
a.ACC.MASC.SG/a.NOM.MASC.SG coffee please
'A coffee, please!

German uses Case endings on determiners (and other words) depending on their syntactic function/position. So, for many objects of transitive verbs, such as *order*, *bring*, *buy*, *drink*, *would like*, etc. (in German: *bestellen*, *bringen*, *kaufen*, *trinken*, *gerne haben*), when those objects come with a determiner, we see a special ending on the determiner, ACCUSATIVE Case:¹

¹ List of the abbreviations used in glosses: ABS = ABSOLUTE Case; ACC = ACCUSATIVE Case; APPL = Applicative morpheme; DAT = DATIVE Case; ERG = ERGATIVE Case; FEM = Feminine; FOC= focus; FV = Final vowel; IND = Indicative Mood; INSTR = INSTRUMENTAL Case; INTRAN = Intransitive; LOC = LOCATIVE Case; LONG = Long form; MASC = Masculine; NEG = Negation; NEUT = Neuter; NOM = NOMINATIVE Case; PAST = Past Tense; PL = Plural; PRES = Present tense; REL = Relativizer; SG = Singular; SHORT = Short form; STR = Strong; SUBJ = Subjunctive Mood; TRAN = Transitive; WK = Weak; 1/2/3 = 1st/2nd/3rd person.

- (3) *German*
 Ich hätte gerne einen/*ein
 I have.PAST.SUBJ gladly a.ACC.MASC.SG/a.NOM.MASC.SG
 Kaffee
 coffee
 ‘I would like a coffee’

This ending is different from the ending we see when the noun phrase appears in subject position (NOMINATIVE Case), as in (4):

- (4) *German*
 Ein/*Einen Kaffee ist bestellt/gebracht/
 a.NOM.MASC.SG/a.NOM.MASC.SG coffee is ordered/brought/
 gekauft/getrunken worden
 bought/drank been
 ‘A coffee has been ordered/brought/bought/drank’

Only ACCUSATIVE Case on the determiner is possible in (2), NOMINATIVE Case is not (no Case marking other than ACCUSATIVE is). On the pragmatic free enrichment analysis, supported prominently by Stainton (2006), among others, we expect this kind of Case connectivity only if we make the rather implausible assumption that Case is something that affects the workings of pragmatic free enrichment. The pragmatic free enrichment approach says that *Ich hätte gerne* ‘I would like’ is present only on the language of thought representation. I take it that language of thought representations are not the place for expressing Case relations. Or, to put it in a different way: the pragmatic approach to fragments like (2) is not complete if it doesn’t provide reasons to believe that language of thought representations are a good place to express Case relations.²

On the grammatical approach, which Merchant defends, Case connectivity is easily explained: the grammar outputs a representation for (2) that is the same kind of representation it would assign to the full German sentence in (3) (also felicitous in the context provided), except that it is followed by ellipsis of *Ich hätte gerne* ‘I would like’ (after movement of *einen Kaffee* to clause-initial position; see §2.5). In the full sentence, only ACCUSATIVE Case is possible for the determiner of the object. Hence, we expect ACCUSATIVE Case to be the only possible Case in the fragment in (2). By analogy, we assume that even in English the full sentence is provided for grammatically, but the morphology of English doesn’t allow us to ‘see’ this the way the morphology of German does.

How do we know, in the grammatical approach, whether what the grammar outputs is (the German equivalent of) *I would like a coffee, please!* (followed by movement and ellipsis), as opposed to, say, (the German equivalent of) *I would like to have a coffee, please!*, or *I would like to order a coffee, please!*? The answer is that we don’t. The grammar is not in the business of determining what a speaker wants to say. Its job is to impose constraints on how one must say whatever it is one wants to

² Pragmatic free enrichment approaches form part of a bigger group of approaches to elliptical phenomena known as ‘direct interpretation approaches’. These include, among others, Barton (1990), Barton and Progovac (2005), Culicover and Jackendoff (2005), Ginzburg and Sag (2000), and, for certain kinds of fragments, Fortin (2007). I discuss Culicover and Jackendoff (2005) in detail in §2.5, and, very briefly, some of the others in note 13. Not all direct interpretation approaches necessarily appeal to pragmatic enrichment as it is understood here.

say. That is as true in the case at hand as it is in other cases, such as when we wonder why a speaker says, explicitly, *I would like to have a coffee, please!* as opposed to saying *I would like to order a coffee, please!* In the case at hand, it imposes quite a strong constraint on the full, expanded version of the fragment: it must have the noun phrase in ACCUSATIVE Case, so many other potential expansions—any which are felicitous in the context in (2) but have the noun phrase marked with a different Case—are banned by the grammar. The issue that we are considering here is not *what* a speaker might want to say, but, given that, how much the journey from his communicative intention to the language of thought representation is mediated by language. These same considerations apply to the argument on adjectival fragments I develop below.³

2.2 Adjectival Fragments

There are two important notions to keep separate regarding grammatical gender. One is the gender a particular noun is assigned by a particular language (e.g., feminine, masculine, neuter), another is the behavior words associated with this noun display such as adjectives and articles/determiners. What will be important below is not so much the gender that nouns are assigned in a particular language, but the syntactic relationship with nouns, i.e., gender agreement, that adjectives morphologically display in that language.

The argument I develop is as follows: whatever gender agreement choices languages make for adjectival fragments, they make the same choices for the corresponding full, predicative construction. I have found instantiations of the two logical possibilities entailed by this generalization. First, there are languages, such as Norwegian and Kitharaka, which mark adjectives in the fragment and in the predicative construction. Second, there are languages, such as German and Dutch, that mark adjectives neither in the fragment nor in the predicative construction, even though these languages mark adjectives with gender agreement in other contexts. The generalization suggests that there are no instantiations of a third type of language, namely, a language in which the choice of gender agreement on the adjective when it is used as fragment differs from the choice of gender agreement on the adjective when it is used in predicative position. The argument rests on the non-existence of such languages. English, not being a grammatical gender agreement language to begin with, falls outside of the generalization.

Consider (5):

- (5) [Your fridge has been taken for repair and the repairman brings it back to you.
As you open the door, he points at the repaired fridge and says:]
a. The fridge is like new!
b. Like new!

In English, either the full predicative construction or a simple fragment are possible.⁴ The same is true in other languages:⁵

³ Thanks to Herman Cappelen and Walter Pedriali for pressing me on this issue.

⁴ Stainton (2006) and others agree that in cases in which a linguistic antecedent is present in the context that would be able to license ellipsis, such as the question-answer pair in (i), the implicit material of the answer is provided for grammatically and then elided:

(i) Q: What is that?
A: A nice shirt

- (6) *Kitharaka*
- a. Furinji ino ita ja-imbia
 9.fridge this like 9-new
 ‘This fridge is like new’
- b. Ita ja-imbia
 like 9-new
 ‘Like new’
- (7) *Norwegian*
- a. Kjøleskapet er som nytt
 Fridge.DEF is as new.NEUT.SG
 ‘The fridge is like new’
- b. Som nytt!
 as new.NEUT.SG
 ‘Like new’
- (8) *German*
- a. Der Kühlschrank ist wie neu
 the.MASC.SG fridge is like new
 ‘The fridge is like new’
- b. Wie neu!
 like new
 ‘Like new’

Kitharaka, being a Bantu language, has a sophisticated noun class system and a corresponding adjectival gender agreement system. Adjectives in Kitharaka bear a mark of gender agreement. *Fridge* happens to belong to class 9, and adjectives that accompany it must bear the mark of that noun class, as indicated by the prefix *ja-* in (6)a. When just the fragment is used, as in (6)b, the same prefix is used on the adjective. No other markings are grammatical in (6)a or in (6)b. In Norwegian, which distinguishes neuter from ‘common’ gender (which collapses masculine and feminine), the noun *kjøleskap* ‘fridge’ is neuter, and in both the full predicative construction in (7)a and in the fragment in (7)b, the adjective must take on neuter agreement; i.e., in (7), *nytt* is possible but *ny* is not.

German (and Dutch, not discussed here) has a sophisticated system of gender agreement on adjectives, but uses the unmarked, bare form for the full predicative construction, as in (8)a. Any gender agreement on the adjective leads to ungrammaticality. The same is true for the fragment in (8)b. It is crucial for the argument that we look at some of the details of the adjectival agreement system of German. If the adjective is used in attributive position when there is no article (e.g., with bare singular and plural nouns, with mass nouns), not only does the adjective agree in gender, the so-called strong inflection of the adjective is used. In that case,

Thus, these cases constitute a separate phenomenon even for some pragmatists. See Merchant (2004) for arguments that the implicit material in Q/A pairs is provided for grammatically. An important feature of the data that I test here is thus that no linguistic antecedent is available.

⁵ Thanks to Peter Muriungi for the Kitharaka data, Klaus Abels for the German data, Øystein Nilsen for the Norwegian data, and Alex Perović for the Serbo-Croatian data discussed later on in the section. The Spanish data also discussed later is my own, corroborated by Isabel Pérez Jiménez, whom I also thank here.

the adjective *neu* takes the form *neuer* (for masculine plural NOMINATIVE)⁶. That is the form used in (9):

- (9) *German*
 Neu-er Wein ist angekommen
 New-NOM.MASC.SG.STR wine is arrived
 ‘New wine arrived’

If the adjective is used in attributive position following the definite determiner, then the adjective is still marked for gender agreement but the so-called weak inflection is used, as in (10):

- (10) *German*
 Der neu-e Wein ist angekommen
 The.NOM.MASC.SG new-NOM.MASC.SG.WK wine is arrived
 ‘The new wine arrived’

If the adjective is used predicatively, then the bare form *neu* must be used; any form of (gender) marking is impossible. Thus, German adjectives, in addition to agreeing with nouns in gender, are differentiated according to whether they appear in predicative position or not.

If use of the adjective as a fragment was unrelated to its use in the full predicative construction, why would the bare form be imposed in (8)b? An approach that postulates that only pragmatic free enrichment mediates between the fragment in (8)b and the thought corresponding to (8)a, and that accepts that grammatical gender agreement and choice of strong vs. weak inflection is a grammatical phenomenon, does not expect German to allow only the bare form in fragments. Why couldn’t it use a gender-agreeing adjective in the strong form, given that the strong form of the adjective is used *when no determiner is present*? On the other hand, on an approach that says that the full predicative construction is generated by the grammar even when seemingly just the fragment is there, this restriction is expected: the adjective in the fragment actually appears in predicative position, and as such it must behave like other adjectives in this position, bearing no morphological markings. One important distinction between strong and unmarked inflection is that the former is used attributively, while the latter is used predicatively. Only making reference to this distinction can we explain the facts. But making reference to predicative position necessarily entails making reference to the full, predicative construction—that is in the definition of predicative position. And if it is the grammar that is in charge of gender agreement and choice of inflection, then there is no other analysis that explains the facts but the one that has the grammar generate the full predicative construction and subsequently allows ellipsis of subject and verb.⁷

⁶ The adjectival inflection system of German is highly syncretic, so in many cases one doesn’t see much. Unless otherwise indicated (both for German and Serbo-Croatian below), the adjective is in NOMINATIVE Case, the Case that is used in predicative constructions.

⁷ Consider (i) and (ii):

(i) <i>German</i>	(ii) <i>German</i>
Dieser Wein ist wie neuer Wein	Dieser Wein ist wie neu
This wine is like new.STR wine	This wine is like new
‘This wine is like new/young’	‘This wine is like new/#young’

Interestingly, in Spanish and Serbo-Croatian, there are two possibilities for marking the adjective that appears as a fragment: either with the marking that agrees with the gender of the noun, or with one that doesn't seem to:

- (11) *Spanish*
 [Same context as in (5)]
 ¡Como nueva/nuevo!
 like new.FEM.SG/MASC.SG
 'Like new!'
- (12) *Serbo-croatian*
 [Same context as in (5)]
 Kao nov/novo!
 like new.SHORT.MASC.SG/SHORT.NEUT.SG
 'Like new!'

In Spanish, *nevera* 'fridge' is feminine, in Serbo-Croatian *frizider* is masculine. The adjective in the fragment in Spanish can bear either feminine or masculine agreement, in Serbo-Croatian it can be either masculine or neuter agreement. Importantly, the account proposed here makes the prediction that languages like this can exist only if they make available full predicative versions of the fragments where each of the possible agreement patterns is used. This is indeed what we find:

- (13) *Spanish*
 La nevera está como nueva/*nuevo
 The.FEM.SG fridge is like new.FEM.SG/MASC.SG
 'The fridge is like new'
- (14) *Spanish*
 [Same context as in (5)]
 ¡Esto está como nuevo/*nueva!
 This.MASC⁸.SG is like new.MASC.SG/FEM.SG
 'This is like new!'
- (15) *Serbo-Croatian*
 Ovaj frizider je kao nov/*novo
 this.MASC.SG fridge is like new.SHORT.MASC.SG/SHORT.NEUT.SG
 'This fridge is like new'

In contexts that license N-ellipsis, such as (i), adjectives are marked with strong inflection. The adjective in this case can be interpreted in many ways: the wine tastes like new because we just opened the bottle, or because it is young, or, rather unlikely, because it was previously adulterated and now we have managed to restore it to its original state. However, in (ii), where the adjective is unmarked, it is no longer possible to interpret *new* as 'young'. As predicted by the grammatical account, the fragmented versions of (i) and (ii) have the same interpretation possibilities as (i) and (ii), respectively.

⁸ *Esto* may actually be neuter instead of masculine. In that case, we must say that *nuevo* can be either masculine or neuter. I don't discuss this issue further here.

- (16) *Serbo-Croatian*
 [Same context as in (5)]
 Ovo je kao novo/*nov!
 This.NEUT.SG is like new.SHORT.NEUT.SG/SHORT.MASC.SG
 ‘This is like new’

The set of cases for which (14) and (16) can be used is a superset of the set of cases in which (13) and (15) can be used, respectively: in the former, it is immaterial what the grammatical gender is of the noun that describes the object picked up by *this*, the masculine (Spanish) or neuter (Serbo-Croatian) form of the demonstrative can be used, and the corresponding adjective agrees with it. It is common to refer to forms such as these as default. To abstract away from defaults, consider similar examples in the plural, which, at least in these languages, has no default:

- (17) *Spanish*
 [Your two fridges have been taken for repair and the repairman brings them back to you. As you open the door, he points at the repaired fridges and says:]
 ¡Como nuevas/*nuevos!
 like new.FEM.PL/MASC.PL
 ‘Like new!’

Only the agreeing version of the adjective is possible in this fragment.⁹ In Norwegian, Kitharaka and German, these kinds of alternative sources are just not available.

Serbo-Croatian has two forms for adjectives (in addition to different forms for gender, case and number): long and short. Both forms can be used attributively¹⁰, but, importantly, the long form is never used in predicative position. The long form of *nov* is *novī* (NOMINATIVE, masculine, singular), and *novī* cannot be used instead of *nov* in (12) or (15). *Novō*, the long form of *ново* (NOMINATIVE, neuter, singular), and which ends in a long vowel, is impossible in (16). This restriction falls out straightforwardly from the grammatical account of adjectival fragments, since this account claims that the full predicative construction underlies the fragment. On the free enrichment account, one would have to say that the distribution of long and short forms of adjectives in Serbo-Croatian is stated at the level of the language of thought. For that account to work, we would need an argument that that is the right treatment for the restriction—but it is completely unclear why the language of thought would care about long and short forms of adjectives.

Thus, on the grammatical account, we expect to find restrictions on the form of the fragmented adjective in languages that impose restrictions on adjectives in predicative position, and the restrictions are expected to be the same. This is indeed what we found. The grammatical account predicts that we should only be able to find languages which mark the adjective the same way in the predicative construction and in the fragment, whatever way that is. There should be no language that makes different choices for the predicative construction and the fragment, since the former is

⁹ As predicted, (i) is not possible in the context in (17):

(i) Estos están como nuevos
 these.MASC are like new.MASC.PL
 ‘These are like new’

¹⁰ Some speakers get a very subtle meaning difference between the long and short forms when they are used attributively; this seems to boil down to a distinction between specific (long) and non-specific (short) (Browne 1993: 327).

the grammatical source of the other. I haven't found any such language. The pragmatic account makes no predictions in this respect: the choice of marking on the adjectival fragment is necessarily independent of the choice of marking on the adjective that appears in predicative position in the full-fledged sentence. True, it views the relationship between the fragment and the full, predicative construction in the opposite way: in this account, the fragment is pragmatically enriched to result in something that is or resembles the full, predicative construction. But there is no room in that account to express the kinds of restrictions we have seen here, because it does not provide an argument that adjectival gender agreement, the choice between strong vs. weak inflection in German, or the choice between long and short forms in Serbo-Croatian, are pragmatic in nature.

2.3 Non-predicative Adjectives in English

Even English can be revealing for our enterprise, despite the fact that its adjectival system is much more impoverished than any of the languages we have considered. That is because English (and, of course, other languages) has a class of adjectives that cannot be used predicatively. And what we find is that, as predicted by the grammatical account, it is exactly these adjectives that cannot be used as fragments. Adjectives such as *nice* can be used both attributively and predicatively, as shown in (18) and (19), respectively:

(18) John was wearing a nice shirt

(19) That (shirt) is nice

Of course, *nice* can also be used as a fragment, as we have seen before:

(20) [You come in and I say, pointing at your shirt:]
Nice!

Adjectives like *multiple*, *single* (in the sense that opposes *multiple*), *former*, *mere*, *future*, *alleged*, *main*, etc., on the other hand, can only be used attributively:

(21) I saw multiple gold medalists at the party

(22) *Those gold medalists are multiple

And, crucially, these adjectives cannot be used as fragments either:

(23) [At a party in which some of the guests are multiple gold medalists, all of them wearing all their medals at their necks]
Wow! #Multiple!

The grammatical account says that the grammatical source of the adjectival fragment is the full, predicative construction. So, if something cannot be used in the predicative construction, it cannot be used as a fragment either, as we have just seen. Unless it is supplemented with an argument that the attributive-predicative distinction is a pragmatic distinction, the pragmatic account makes no prediction with respect to

these data; i.e., there is no reason in this approach why an adjective like *multiple* can't be used as a fragment.^{11, 12}

2.4 Culicover and Jackendoff (2005) and Indirect Licensing

I now consider and reject an alternative explanation of the facts that is compatible with the pragmatic free enrichment approach. That is the proposal made in Culicover and Jackendoff (2005), which they call *indirect licensing*. Indirect licensing is intended to cover a wider range of facts than I have discussed here, for discussion of which I refer the reader to Culicover and Jackendoff (2005). Here, I limit myself to an evaluation of indirect licensing as an account of adjectival fragments.¹³

In indirect licensing, the semantic and syntactic features of a fragment are licensed at a distance by a linguistic or non-linguistic antecedent. Culicover and Jackendoff (2005: 262) consider the following case from Icelandic:

- (24) *Icelandic*
 A: Kisa kom in
 Kitty.NOM.FEM.SG came in
 ‘Kitty came in’
 B: Já, rennblaut
 yes wet.NOM.FEM.SG
 ‘Yes, (she came in) wet’

The adjective *rennblaut* is marked NOMINATIVE, feminine, singular, just like *Kitty* in the previous sentence. No other marking on the adjective is possible. *Kitty* is understood to be the one who is wet. Thus, *Kitty* acts as the linguistic antecedent of the adjective and licenses the particular marking that we see. Other markings have no licenser, and thus lead to ungrammaticality. There is no need to appeal to the idea that there is a grammatical source for (24)B that is bigger than meets the eye, and there is no need for an argument that gender agreement and the predicative vs. attributive distinction is pragmatic. This account is compatible with a free pragmatic enrichment account in which *she came in* is provided for pragmatically.

¹¹ One may argue that the important distinction is actually between intersective and non-intersective adjectives. That this is not the case is shown by the fact that, for example, *fake* and *false* are non-intersective but they can be used predicatively (cf. *that watch is fake*; *the claim he made is false*) and as fragments.

¹² Imagine a situation in which we are dividing up a group of people into two subgroups. One of the subgroups will contain the multiple gold medalists, the other subgroup the single gold medalists. In this scenario, one can use bare *multiple* and bare *single* as one points to each person and determines the subgroup s/he belongs to. This, however, is not a counterexample to the claim that these adjectives cannot be used as fragments. I could have used the words *the* and *a* after agreeing with you that *the* will designate the multiple gold medalists, and *a* the single gold medalists—but it would be unreasonable to conclude from that that *the* and *a* can be used as sentence fragments—they can't. In this scenario we are using these words as labels. I could have used a whistle for one and a clap for the other. I could have used full sentences too—*my left arm is sore* could designate one subgroup, *colorless green ideas sleep furiously* could designate the other, etc. In other words, anything agreed upon previously goes. We shouldn't use this kind of scenario to test hypotheses about what can and cannot be a sentence fragment.

¹³ Other accounts of fragments are Barton and Progovac (2005), Fortin (2007) and Ginzburg and Sag (2000: 295-333). These accounts present their own set of issues, and I do not discuss them here.

An item can also be indirectly licensed by a non-linguistic antecedent. Consider (25):

- (25) *Icelandic*
 [Pointing toward a book]
 Viltu rétta mér hana?
 will.you hand me.DAT it.FEM.ACC
 ‘Would you hand it to me?’

Bókina ‘book’ is feminine in Icelandic, and it is not linguistically expressed in (25). The pronoun *hana* must be in the feminine though. Culicover and Jackendoff (2005: 261) propose that gender agreement on the adjective is indirectly licensed by the existence of a book in the discourse context; i.e., the presence of the book licenses an abstract linguistic object which, in Icelandic, bears feminine gender, and it is this linguistic object, in turn, what licenses the agreement we see on the pronoun.

It is not problematic for indirect licensing to cover grammatical gender agreement on fragmented adjectives in Kitharaka, Norwegian or Spanish. (25) is very reminiscent of (6) (Kitharaka) and (7) (Norwegian). Languages that have a default gender, such as Spanish ((11)) are not difficult to accommodate; there are different claims one could make, for example, that default gender does not require licensing, that any gender agreement can license default gender, etc.

The data on the distribution of attributive and predicative adjectives in German, Serbo-Croatian and English, however, and the way it ties up with gender agreement, is a serious problem for this approach. Nothing in the German example in (8)b, *wie neu!* ‘like new!’ allows us to make a distinction between attributive and predicative position in this account—for all we know, it could be either (notice that *wie ein neuer Kühlschrank!* ‘like a new fridge!’, with the adjective in attributive position, would be felicitous here). Given the Icelandic, Kitharaka and Norwegian examples, non-linguistic material can indirectly license gender features, and other examples dealt with by Culicover and Jackendoff suggest that indirect licensing can license other inflectional features in the same circumstances, such as Case, and even prepositions that are required for certain arguments. So, why isn’t the strong inflection on the adjective licensed here? Why isn’t a gender-agreeing form licensed here? A similar problem is presented by Serbo-Croatian in (12), or, in fact, by English in (23). Why isn’t the long form of the adjective licensed in (12)? Why isn’t a gender-agreeing form licensed here? And why isn’t *multiple* licensed in (23)?

We can spell out the problem with respect to the distribution of predicative vs. attributive adjectives by first asking what it is that licenses the Serbo-Croatian short form in the indirect licensing account. Culicover and Jackendoff (p. 262) discuss the following example:

- (26) *Serbo-Croatian*
 A: Onda je moj pas utrcao u sobu
 then be my dog.MASC.SG ran in room
 ‘Then my dog ran into the room’
 B: Da, mokar
 yes wet.SHORT.MASC.SG
 ‘Yes, (it was) wet’

The presence of the verb *je* ‘be’ must be enough to indirectly license the short form of the adjective in this example (i.e., a preceding instance of the predicative construction). One can accept the idea that the mere presence of a book in an example like (25) licenses (the linguistic object that in turn licenses) the particular gender agreement that we see in the pronoun *there*, and that the gesture of pointing is what licenses (the linguistic object that licenses) the short form of the adjective in (12), in the absence of a previous, overt predicative sentence. But, then, why can’t the same pointing gesture indirectly license the attributive adjective? Notice that, compatible with pointing at a book, are both *That book is nice* (predicative) and *That is a nice book* (attributively). With respect to the English facts in section 2.3, the problem is similar. Adjectives that cannot be used predicatively could be assumed to be marked attributively only. But, why isn’t their attributive feature indirectly licensed in contexts such as (23), given that a full sentence or noun phrase with the adjective in attributive position is felicitous there as well (e.g., *Wow! Multiple gold medalists!*).

With respect to gender agreement: if non-linguistic material can indirectly license gender agreement in Icelandic, Kitharaka and Norwegian, why can’t gender agreement be licensed in Serbo-Croatian or German adjectival fragments?

Indirect licensing is an alternative approach to what I have called here the grammatical approach (it is grammatical too, though in a different sense; in addition, it appeals to pragmatics). This approach needs to be supplemented with a way of making a distinction between attributive and predicative adjectives when these adjectives are used as fragments. The notions ‘attributive’ and ‘predicative’ are relational: they refer to the relationship between the adjective and its immediate surrounding linguistic context (i.e., whether it precedes or follows a noun, whether it is in predicative position). Because the indirect licensing account assumes that there is no such immediate linguistic context, it seems as though it would have no grounds to begin with there. Culicover and Jackendoff’s way out is to appeal to the discourse context as a source for the licenser of fragmented predicative adjectives, but then it is unclear why fragmented attributive adjectives couldn’t be licensed as well: in all cases, a full sentence or noun phrase that contains the adjective in attributive position is possible as a substitute for the fragment. Thus, we have no reasons to suppose that the discourse context (e.g., pointing gestures) couldn’t indirectly license fragmented attributive adjectives too. With respect to gender agreement, a similar problem arises.

2.5 Analysis

Here is one possible analysis for adjectival fragments. My analysis is a PF-deletion account (see, among others, Hankamer and Sag 1976; Johnson 1996, 2001; Lasnik 1999a, 1999b, 2001; Merchant 2001, 2004; Ross 1969; Sag 1980 and Sag and Hankamer 1984), though there are other grammatical approaches to ellipsis in the literature, such as those that postulate a null pro-form in the ellipsis site which gets resolved either via LF-copying (see, among others, Beavers and Sag 2004, Chung, Ladusaw and McCloskey 1995, Fiengo and May 1994 and Fortin 2007), or by appealing to the same mechanisms of interpretation used for overt pronouns (see, among others, Depiante 2000; Hardt 1993, 1999; Lobeck 1995 and Shopen 1973). I do not defend my choice of grammatical account here, since what is important from our perspective is that *a* grammatical account of the facts works.

Consider again (1), repeated here:

- (27) [You come in and pointing at your shirt I say:]
Nice!

The derivation proceeds as follows. In a first step, the grammar of English generates the full predicative construction in (28):

(28) That shirt is nice!

That is, the grammar first generates the syntactic tree in (29), irrelevant details omitted:

(29) [TP [NP that shirt] [VP is [AP nice]]]

(29) provides the representation on which to express gender agreement. In a second step, the adjective phrase containing the adjective is fronted to clause-initial position, leaving a trace in its original position, as shown in (30):

(30) [FP [AP nice]_i] [TP [NP that shirt] [VP is t_i]]

Then, in a third step, a process of pragmatically controlled ellipsis takes place, a process that deletes TP (Tense Phrase), a constituent, and leaves the fragment adjective as the only phonologically realized item of the sentence:

(31) [FP [AP nice]_i] [~~TP [NP that shirt] [VP is t_i]]~~

Several comments about this derivation are in order. First, a great deal is made in the literature, and rightly so, about deletion of non-constituents. The price to pay for it, all things being equal, is overgeneration. That is the reason why Merchant's version of the ellipsis account of nominal fragments relies on syntactic movement. Consider (32), together with Merchant's analysis for it, in (33) (irrelevant details omitted):

(32) Question: Does Abby speak Greek?
Answer: No, Albanian.

(33) [FP Albanian_i] [~~TP she [_iVP speaks t_i]]~~

In Merchant's analysis, after *Albanian* has raised out of its VP-internal position to clause-initial position, deletion targets the whole TP, a constituent. Merchant provides much further evidence for the existence of this kind of movement.

Crucially, adjectival movement is allowed in the languages that we have covered here. Consider Spanish:

(34) *Spanish*
Como nueva, está la nevera
like new.FEM.SG is the fridge
'Like new, the fridge is'

Notice that in cases like Spanish, which require subject-verb inversion in the clause in which the moved item lands (see Torrego 1984), the reverse order between subject (*la nevera*) and verb (*está*) is ungrammatical (i.e., **Como nueva, la nevera está*), as expected if *como nueva* has moved. Notice as well that such sentences require

appropriate intonation and heavy contextualization (including their English counterparts). As has been observed before (e.g., Merchant 2004, 2008), ellipsis induces amelioration effects that explain the contrast between the full sentence in (34) and the corresponding adjectival fragment, which does not have such requirements.

Second, notice also that the movement step in (30) is crucial in order to explain why attributively-marked and attributive adjectives cannot serve as sentence fragments. Nothing else in the grammatical account prevents that. If the movement in (30) is a necessary component of the analysis of adjectival fragments, then it follows that attributively-marked and attributive adjectives will never be able to function as fragments, since they can never move out of a DP, in English or in other languages:

(35) *Nice_i, that is a t_i shirt

Third, as Merchant (2004: 718ff) and others have argued (beginning with Schachter 1977, 1978 and going on to Pullum 2001 and Stanley 2000), ellipsis need not be linguistically controlled. Consider VP-ellipsis:

(36) [John attempts to kiss his wife while driving]
Wife: John, you mustn't [~~VP-kiss me~~]!

It is possible for a silent element to be provided for grammatically and yet to allow pragmatic control. Notice that in (27) and the other cases that have occupied us in this section, the context is rich enough to make a certain entity salient (i.e., a shirt) as well as a certain relation between that salient entity and the adjective. Merchant (2007a: 25) proposes that 'an expletive, deictic, or demonstrative subject (*there/it, he/she/it, this/these/that/those*) and an appropriate form of the verb *be* (appropriate in person, number, aspect, and tense) can be elided if a referent for the deictic or demonstrative is salient enough to resolve it (in other words, in the same circumstances that such elements can be used without linguistic antecedents, period)'.

3. Case Study II: Implicit Indefinite Objects

English and other languages have verbs that may appear, on the surface, with or without a direct object. A sub-class of these verbs is illustrated in (37)-(41):

(37)	John has already eaten	(food/a meal)
(38)	Peter is drinking in the balcony	(alcohol)
(39)	Mary has recently quit smoking	(cigarettes)
(40)	I am so glad that you found time to bake today	(bakeable goods)
(41)	John has been hunting a lot lately	(animals)

Verbs of this type in English (or in languages like German or Spanish) are *eat, smoke, read, cook, sing, carve, knit, weed, file, and write*.

That there is a notional, even if unuttered, object (indicated in parentheses) in the interpretations of the object-less versions of these sentences is uncontroversial. The controversial question is whether there is an object at any point in the grammatical derivation of the object-less sentences, despite its 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 at least some of the uses of these seemingly object-less sentences, there is indeed no object at any level of

linguistic representation. Instead, that object is provided for pragmatically. In these cases, given appropriate pragmatic pressures, language users enrich grammatical interpretations in such a way as to provide the missing material. Here I argue that an object is, on the contrary, part of the linguistic representation of sentences such as (37)-(41) in all of their uses. This object, however, is not a run-of-the-mill syntactic object, but an object whose properties are those of nouns in noun incorporation constructions found in languages such as West Greenlandic, Frisian, and many others. The argument rests on the following logic: if these notional objects behave like linguistic category X (i.e., incorporated nouns), then the null hypothesis is that the notional objects are themselves instantiations of that linguistic category X. The only difference between the objects of interest here and those that appear in noun incorporation is that the former, but not the latter, are phonologically null.¹⁴

3.1 Noun Incorporation

Noun incorporation is a word formation process whereby a verb and a noun (usually, its object) are put together to form a verb. It is illustrated in the following examples (nouns that have undergone incorporation are in bold-face throughout) (see Baker 1986, Bittner 1994, Gerdts 2001, Gerdts and Marlett 2008, Haugen 2008a, b, Kroeber 1909, 1911, Miner 1986, Mithun 1984, 1986, Rosen 1989, Sadock 1980, 1986, Sapir 1911, among many others)^{15, 16}:

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

- a. Angunguu-p aalisagaq neri -v -a -a
 A-ERG fish.ABS eat -IND -TRAN -3SG.3SG
 ‘Angunguuaq ate the/a particular fish’
- b. Arnajaraq **eqalut** -tur -p -u -q
 A.ABS salmon-eat -IND -INTRAN -3SG
 ‘Arnajaraq ate salmon’ (lit. Arnajaraq salmon-ate)

(43) *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)

¹⁴ 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). See Gillon (2012) for more recent discussion.

¹⁵ English has *apartment hunting*, *potty-training*, *babysitting*, or *tornado watch*, but these do not seem to be full-fledged verbs (e.g., consider **John tornado watched/apartment hunted yesterday*), perhaps with the exception of *babysit*.

¹⁶ An important issue in the specialized literature is whether there is a single process of noun incorporation, or illustrated here are instances of different verb formation processes (e.g., noun stripping, denominal verbs, etc.). The differences between these different processes need not concern us, since what will be important for us is that the processes involved in examples (42)b, (43)b or (44)b, even if formally distinguishable, share a number of semantic properties. It is because of this uniformity that I maintain the label ‘noun incorporation’ throughout.

(44) *Frisian* (Dyk 1997: 3)

- a. Wy wolle de messen slypje
 We want the knives sharpen
 ‘We want to sharpen the knives’
 b. Wywolle **messeslypje**
 We want knife.sharpen
 ‘We want to sharpen knives’

When the noun and the verb are put together, a number of associated effects follow. Importantly, the object noun loses its status as a regular syntactic object. This can be seen in the fact that the nouns in these constructions must always appear bare. Whereas in an example like (44)a, it is of course perfectly possible to precede the object noun with a definite article, a (definite) article is impossible, as in (44)b, when that noun has incorporated. In the case of languages that mark Case overtly, the nouns appear unmarked (see, e.g., (43)a vs. (43)b). In West Greenlandic, an ergative language, objects of transitive verbs and subjects of intransitive (unergative) verbs are marked with ABSOLUTE Case, and subjects of transitive verbs are marked with ERGATIVE Case. In (42)b, where the noun has incorporated, the subject is marked with ABSOLUTE, not ERGATIVE, Case.

Word order is also affected, so that incorporated nouns always precede the verb, independently of the canonical position of regular syntactic objects in the language in question. Also, languages like West Greenlandic have subject and object agreement inflection on the verb; we can see that there is no object agreement for incorporated objects ((42)b). Finally, languages like West Greenlandic and Yaqui have special morphemes for intransitivity and transitivity. In (42)b, for example, we notice that, with incorporation, the verbal morpheme *-a-* is replaced by the morpheme *-u-*, an intransitive suffix.¹⁷

Some, though not all, of the languages that allow incorporation allow the noun to be modified externally by adjectives, relative clauses and/or other modifiers. West Greenlandic does (van Geenhoven 1998), Frisian doesn’t (Dyk 1997):

(45) *West Greenlandic*

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

‘Esta got fresh fish’

These modifiers are not themselves part of the verbal compound (e.g., notice the Case marking in (45)), so the modification happens at a distance, externally.

There are a number of semantic characteristics that are associated with noun incorporation. The incorporated noun is interpreted indefinitely and non-specifically: compare the a and b examples in (42)-(44). The indefinite, non-specific semantics of the nouns that participate in noun incorporation is a widely noted fact in the literature (see Carlson 2006, van Geenhoven (1998), Gerdts and Marlett 2008; Mardirussian 1975: 386, Mithun 1984, de Reuse 1994, Spencer 1995, Sullivan 1984, among others). A second cross-linguistically stable semantic property of incorporated nouns is that they typically take narrow scope with respect to other operators in the sentence

¹⁷ There are languages where incorporated-into verbs are transitive (see Allen, Gardiner and Frantz 1984, Gerdts 2001, Marlett 2008, Rosen 1989).

(Bittner 1994, van Geenhoven 1998, Carlson 2006, among many others). Consider the following examples (Siebren Dyk, p.c.):

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

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

Example (46) is unambiguous and means that they are not going to catch any pikes whatsoever. This is a narrow scope reading; (46) cannot describe a situation in which they are going to catch some pikes but not others, which would be compatible with the wide scope reading. Likewise, example (47) is unambiguous and can only receive a narrow scope, *de dicto* reading, whereby what I want to do is look at some paintings or other (e.g., because I am in the mood for looking at paintings), not that there exist some particular paintings I want to look at.

Also, 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 these nouns are, formally, singular nouns). We can see this by looking back at (42)-(44): none of the incorporated nouns in these examples are morphologically marked for number (in fact, for anything), and the semantics is always number-neutral. E.g., (44)b expresses the wish to sharpen knives generally, without a specification as to the number of knives this might be—we would be satisfied if we managed to sharpen twenty knives or only half a knife.¹⁸

Verbs that are incorporated into typically designate name-worthy, typical activities. For example, Axelrod (1990: 193) says that ‘...incorporation provides the lexicalized expression of a typical activity’. And Mithun (1984: 848) says that ‘some entity, quality or activity is recognized sufficiently often to be considered name-worthy in its own right’.

Finally, there is the question of whether the nouns in these constructions can antecede pronouns or not. The situation with respect to this property is quite mixed. Some languages, like West Greenlandic (van Geenhoven 1998) and Hopi (Hill 2003: 241; Haugen 2008a, b), allow incorporated nouns to antecede pronouns:

- (48) *Hopi* (Haugen 2008a)
 Nu’ **pakiw** -maqto -ni;
 I fish -go.hunting-FUT;
 noqwi tam *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.’

Other languages, such as Frisian, only allow this sometimes (Dyk 1997: 66). The strongest statement one seems to be able to say in this regard is that incorporated

¹⁸ See Farkas and de Swart (2003) for refinements of this generalization that need not concern us here.

nouns may have their ability to antecede pronouns compromised.

3.2 Properties of Implicit Indefinite Objects in English and Frisian

In this section we review the properties of implicit indefinite objects in English, as well as in Frisian. This constitutes the basis for the main argument: namely, that implicit indefinite objects and incorporated nouns form a natural class and, as such, we would want the analysis of the latter to extend to the former. As the analysis of noun incorporation seems to require grammatical tools (see all the references cited in the previous subsection), it follows that the same means, and not pragmatic free enrichment, should be used in the analysis of implicit indefinite objects. In section 3.3 I provide an overview of some of these grammatical tools.

It is well known that implicit indefinite objects are interpreted as non-specific indefinites with plain existential import (Bresnan 1978, Dowty 1981, Fillmore 1969, 1986, Fodor and Fodor 1980, Gillon 2012, Mittwoch 1980, Shopen 1973, Thomas 1979). In (49), the speaker does not convey the idea that something in particular has been eaten today, the same way that that would not have been conveyed had s/he said ‘John has already eaten food/a meal today’:

(49) 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 Recanatì 2002 and others). This view, however, does not seem tenable. Consider the following contrasts (Condoravdi and Gawron 1996):

(50) 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*)

(51) 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 (50) is ‘John didn’t eat anything’ (silent indefinite objects always take narrow scope, as we will see shortly).

There are cases where it might seem that a definite, pronominal-like interpretation exists. Consider the following example (Deirdre Wilson, p.c.):

(52) John bought pizza and then he ate

The sentence in (52) is true in a situation in which John ate the pizza. Pizza is mentioned and is thus an available discourse entity for further reference. Using the negation test proposed in Martí (2006), however, discussed in more detail below, shows that this interpretation cannot be so:

(53) #John bought pizza but then he didn’t eat. Instead of the pizza, he ate pasta with tomato sauce

If (52) had the purported definite, pronominal-like interpretation, (53) should be a well-formed series of two sentences, since upon saying that John bought pizza but then he didn't eat it, it is a perfectly coherent thing to say that instead of the pizza, he ate pasta with tomato sauce. However, (53) is not well-formed. (53) contrasts with (54):

- (54) John bought pizza but then he didn't eat it. Instead of the pizza, he ate pasta with tomato sauce

Examples such as these suggest that the implicit object of interest here always introduces existential quantification and is never pronominal or definite in nature. The first sentence in (53) says that John bought pizza but that then he didn't eat anything at all; it is not possible to follow this up with the statement that John ate something else instead of the pizza. John eating the pizza is merely a *situation* that makes (52) true (perhaps it is even the situation which most easily comes to mind upon hearing (52)), but it is not necessarily the/an *interpretation* of the sentence.

Contra Recanati (2002), Martí (2006) argues that the implicit objects of interest here cannot be bound by higher quantificational elements, the way pronouns can. She uses the negation test used in (53). In this case, however, the examples involve binding. Compare (55) and (56):

- (55) Whenever John cooks mushrooms, Sally never eats them

- (56) Whenever John cooks mushrooms, Sally never eats

Example (55) 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). (56) 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 (57), where a continuation that makes it explicit that Sally eats something on those occasions, just not the mushrooms, is impossible for (56), though, as (58) shows, such a continuation is compatible with (55):

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

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

The correct description of examples such as (52) and (56) is crucial to our enterprise, since they are the kind of examples that motivate the pragmatic free enrichment account. The negation test reveals, however, that there are no true definite or pronominal uses of the object-less verbs in question—this is a strong indication that it is wrong to appeal to this pragmatic process to account for the behaviour of these verbs.

Another property that implicit indefinite objects share with incorporated nouns is that they 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):

- (59) I didn't eat yesterday
- (60) John wants to eat
- (61) I didn't bake yesterday
- (62) I want to bake

Neither (59) nor (61) 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, (60) and (62) can only be interpreted unspecifically, i.e., with low scope of the silent indefinite objects with respect to the intensional verb *want*. E.g., (62) can't mean that there is something specific I want to bake, just that I have baking inclinations. The narrow scope interpretation of implicit indefinite objects can also be observed in sentences with other operators, such as (63):

- (63) Half of the students are baking

The narrow scope reading of example (63) is true in a situation in which, out of four students, student A is baking baked item 1, and student B is baking baked item 2. The other two students are not baking anything. The sentence is true in this situation. However, it is false in a situation in which, out of four students, students A and B are baking baked item 1, student C is baking baked item 2, and student D is baking baked item 3. If the sentence had a wide scope reading of the implicit indefinite object, it would be true in this second scenario.

Again like incorporated nouns, implicit indefinite objects are semantically number-neutral. As far as I know, this fact has not been noted before. Thus, if (64) is true, then it is immaterial whether John is smoking half, one or many cigarettes:

- (64) John is smoking outside

Example (65) 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:

- (65) I've eaten today

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

When verbs such as *eat*, *drink*, *write*, etc. take on implicit indefinite objects, they typically give rise to 'conventionalized' meanings, in a similar fashion to incorporated nouns. 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’.

Finally, the state of affairs in case of implicit indefinite nouns with respect to the possibility of serving as antecedents for pronouns is mixed, unsurprisingly, given the discussion in section 3.1. (66) and (67) seem fine:¹⁹

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

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

But (68) is not:

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

Notice that the impossibility for English implicit indefinite objects to be externally modified, exemplified in (69)-(72), does not constitute evidence against an incorporation analysis.²⁰

- (69) *John ate two (cf. *John ate two meals*)
- (70) *John eats that tastes good (cf. *John eats food/meals that taste(s) good*)
- (71) *John baked wonderful (cf. *John baked a wonderful cake*)
- (72) *John smoked that were bought ages ago (cf. *John smoked cigarettes that were bought ages ago*)

That’s because not all noun incorporation languages allow external modification of the incorporated noun (recall section 3.1), so these facts cannot be taken as evidence against an incorporation analysis.

Frisian allows us to test one important prediction, namely, that implicit indefinite objects are incorporated nouns. That’s because this language has both implicit indefinite objects *and* noun incorporation, as we saw in section 3.1. The fact that Frisian is such a close relative of English allows for a controlled comparison between the two languages.

In fact, this is precisely the argument made by Dyk (1997) regarding the nature of what he calls ‘detransitivized’ verbs (in Dowty’s 1989 terminology), which are the verbs that take implicit indefinite objects, such as English *eat*. He concentrates on certain formal properties of the two phenomena, however, and does not consider the full scale of their meaning effects. I briefly review Dyk’s (1997) argument here, and I add some new data to complete the semantic picture.

¹⁹ In these 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.

²⁰ 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~~

Importantly, only incorporated, unergative and detransitivized verbs can appear in the *te*-infinitival construction in Frisian, as illustrated in (73) to (75); absolutely nothing else can appear in this construction (Dyk 1997: 105-6):

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

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

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

This means that unergatives, detransitivized and incorporated-into verbs form a natural class. Then, there a number of restrictions on the type of verb that can be incorporated into in Frisian and these very same restrictions are 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 (Dyk 1997: 95, 108):

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

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

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

Verbs such as *smite* ‘throw’, *slaan* ‘hit’ and *leegje* ‘empty’ do take Patients as objects and allow both incorporation and detransitivization.

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):

- (79) *Frisian*
 It bern kleuret it plaatsje
 The child colors the picture
 ‘The child colors the picture’
- (80) *Frisian*
 It bern **plaatsje**kleuret
 the child picture.colors
 ‘The child colors pictures’
- (81) *Frisian*
 It bern kleuret
 The child colors
 ‘The child colors’
- (82) *Frisian*
 De ûndergeande sinne kleuret it hûs
 the setting sun colors the house
 ‘The setting sun colors the house’
- (83) *Frisian*
 *De ûndergeande sinne **hûs**kleuret
 the setting sun house.colors
- (84) *Frisian*
 *De ûndergeande sinne kleuret
 the setting sun colors
 ‘The setting sun colors’

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

The distribution of implicit indefinite objects in Frisian is, thus, the same as the distribution of incorporated objects, down to small details. Further tests, not repeated here, bring out further similarities between incorporated into and detransitivized verbs, thus indicating that detransitivized verbs and incorporated-into verbs form a natural class (see Dyk 1997: 111-6).

The semantic properties of detransitivized verbs in Frisian (not explored in great detail in Dyk 1997) are indeed parallel to those of noun incorporation. 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.):

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

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

(85) 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 (86) 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. And, 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.

3.3 Analysis

The discussion in the preceding sections constitutes the argument that the analysis of implicit indefinite objects and incorporated nouns should be the same. Nobody as far as I know denies that noun incorporation is a grammatical process—hence, implicit indefinite objects should receive a grammatical treatment too.

The task to provide an analysis here is made difficult by several facts. First, there seem to be different kinds of noun incorporation and/or of noun-incorporation-like processes, so a single analysis is unlikely to do justice to the variation displayed here (see footnote 16). Second, there is a long-standing debate in the literature about the nature of noun incorporation, whether it is a lexical/morphological or a syntactic process (for references to both of these issues, see Baker 1986, Bittner 1994, Gerdts 2001, Gerdts and Marlett 2008, Haugen 2008a, b, Kroeber 1909, 1911, Miner 1986, Mithun 1984, 1986, Rosen 1989, Sadock 1980, 1986, Sapir 1911, among many others). It is outside of the scope of this paper to settle any of these issues. However, I do want to sketch different possibilities for grammatical analysis to demonstrate that the idea defended in this section is implementable.

The analyses suggested below are intended to address *all* uses of seemingly object-less sentences like those in (37)-(41). It is true that some accounts of this data (for example Recanati 2002) appeal to pragmatic free enrichment for some uses, and to something else (such as metaphysical unarticulated constituents, or existential quantification) for other uses. Roughly, this dichotomy corresponds to a distinction between what we might call definite or pronominal uses, where an interpretation that picks out a contextually salient entity obtains (discussed in section 3.2), and indefinite uses (which would be interpreted purely existentially). In the analyses presented below, however, these uses do not correspond to two different categories. The reason is that it cannot be the case that sometimes the implicit object of verbs such as *eat* is interpreted definitely/pronominally and in other circumstances it is interpreted indefinitely, since this would not allow us to distinguish between crucial examples, such as those in (53)-(54) or (57)-(58). I conclude from the discussion in section 3.2 (as well as from Bresnan 1978, Dowty 1981, Fillmore 1969, 1986, Fodor and Fodor

1980, Gillon 2012, Mittwoch 1980, Shopen 1973 and Thomas 1979), that in all cases, a sentence such as ‘John ate’ is interpreted existentially, as ‘There is something edible that John ate’— the issue addressed in this section is how this existential interpretation might come about.

The first analytical possibility is to assume that a lexical rule transforms transitive verbs like *eat* into their intransitive versions. This rule, similar to those discussed by Dowty (1981), Fodor and Fodor (1980), and, more recently, Recanati (2002), would be responsible for introducing existential quantification (see Gillon 2012 for a recent discussion of the first two treatments). The rule would have to do nothing else in order to account for the other semantic properties of implicit indefinite objects (which would become a mere descriptive label in this approach—there would be no actual linguistic manipulation of an object in any sense of the word, though there would be no role for pragmatic free enrichment). First, if existential quantification is introduced at the level of the verb, the existential quantifier will not be able to scope over anything that is above that verb, so narrow scope will be the only option. Second, the rule introduces no number distinctions, so we expect implicit indefinite objects to be compatible with any quantity, including partial quantities. The rule introduces no pronoun whatsoever, so pronominal properties are not expected for the implicit indefinite object. Regarding the conventionalized nature of incorporated-into verbs, one can simply say that, however this is achieved, it has the existential lexical rule as a pre-requisite. Finally, one expects the possibility of implicit indefinite objects to antecede pronouns to be reduced or perhaps non-existent, depending on whether one assumes that the existential quantification rules does or doesn’t introduce a discourse referent (we saw that the empirical picture in this regard is not very clear, so it seems premature to say more in this respect at the moment).²¹ The main problem I see with it is that, at the very least, the analysis is not sufficient, because there are a number of morphological and syntactic properties associated with implicit indefinite objects, with variations in different languages (e.g., in Frisian vs. English), that also need to be accounted for, but which this analysis says little or nothing about. It is not even clear that it can actually be extended to account for noun incorporation. At least, not without assuming that the incorporated noun has to be represented lexically—but, in that case, the rule would have to manipulate something like a null noun in the case of implicit indefinite objects.

There seem to then be three main possibilities left: a morphological approach, a syntactic approach, or a mixed morpho-syntactic approach.²² These types of approaches have been pursued for noun incorporation and related processes in the literature in various ways (see references above), and the task would be to extend them to implicit indefinite objects. I provide an example of what that could look like here, cast in syntactic terms.²³

Suppose that 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 a morphological approach, this would be a null/zero morpheme). Thus,

²¹ Thanks to Henriette de Swart and Bert Le Bruyn for discussion of this analysis.

²² For a fourth possibility, see Gillon (2012). Gillon does not establish a connection with noun incorporation. However, in both Gillon’s and my analysis, there isn’t both a transitive and an intransitive *eat*—such verbs are unambiguous.

²³ I concentrate on what is known in the literature as compound noun incorporation. Frisian has compound noun incorporation—it is the kind that does not allow stranded modifiers or cognate objects. This is sufficient for our purposes. The analysis in the text is inspired by Haugen (2008a), to whom the interested reader is directed for a full account.

whether a language allows implicit indefinite objects would depend, 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. This null noun is then put together with verbs like *eat*, *write*, *smoke*, etc. via a syntactic process (which could be Merge, see Haugen 2008a; or perhaps Conflation, as in Hale and Keyser 1993, 2002). The noun is thus base-generated next to the verb. Because the category of the noun that undergoes Merge is just N(oun), we expect no Case markers or other morphological markers that full noun phrases do carry. Intransitive marking on the incorporated-into verb is explained because the process involved here forms words, and thus other word-formation processes can be sensitive to them, such as that which affixes transitive or intransitive suffixes to roots. We can explain intransitive marking because the null, bare noun has undergone a syntactic process that regular syntactic objects do not normally undergo (e.g., regular syntactic objects are not merged directly with the verb). Because the noun is bare, there is no number-marking and hence no semantic number import. The noun may have its ability to antecede pronouns reduced, just like some incorporated nouns.

A common denominator in various proposals for the analysis of noun incorporation is the semantic function that is assigned to the incorporating noun: that of restricting the internal argument of the verb. I 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. This rule applies in cases where a predicate is being combined with a property. 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 (87).²⁴

$$(87) \quad \text{Restrict } (\lambda y \lambda x \lambda e [\text{feed}'(y)(x)(e)], \text{dog}') = \lambda y \lambda x \lambda e [\text{feed}'(y)(x)(e) \ \& \ \text{dog}'(y)]$$

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 see how this applies to an example. 'N' stands for the bare, null noun:

$$(88) \quad [[\text{N-eat}]] = \lambda x \lambda y \lambda e [\text{eat}'(y)(x)(e) \ \& \ \text{N}'(y)]$$

The expression in (88) gets combined with the subject:

$$(89) \quad [[\text{N-eat}]][[\text{John}]] = \lambda y \lambda e [\text{eat}'(y)(\text{John})(e) \ \& \ \text{N}'(y)]$$

Then, existential closure applies, yielding (90):

$$(90) \quad \exists y \exists e [\text{eat}'(y)(\text{John})(e) \ \& \ \text{N}'(y)]$$

Existential closure is what adds existential quantification to noun incorporation and to implicit indefinite objects, and is hence responsible for the existential import and

²⁴ In λ -expressions, 'x, y' are individual variables, 'e' is an event variable.

indefiniteness of the construction. Existential import thus comes, not from the null incorporated noun itself, but from the fact that variables get existentially closed at the event level. Incorporated objects and implicit indefinite 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 (90). The conventionalized meanings discussed in sections 3.1 and 3.2 have semantic incorporation as a pre-requisite.²⁵

3.4 Summary

In this section I have shown that the semantic properties of implicit indefinite objects in languages like English or Frisian are just like the semantic properties that are cross-linguistically stable for nouns that participate in noun incorporation.

The facts about Frisian are important because of the following. The properties of English implicit indefinite objects are the same as those of nouns that participate in noun incorporation. 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 process, 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 made here that, if a language has both overt-noun incorporation and implicit indefinite objects, then the two should pattern together. This 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.

All the pragmatic approaches that have made proposals regarding implicit indefinite objects (e.g., Carston 2004, Groefsema 1995, Hall 2009, Iten *et al.* 2004, Recanati 2002 or Wilson and Sperber 2000) have one important feature in common: implicit indefinite objects are not present at any level of grammatical representation. The implicit indefinite object ends up being part of the representation of the sentences in question in the language of thought as a result of pragmatic inferencing, which takes place in order to allow the hearer to understand the message that the speaker intended to communicate. The particular process often appealed to is pragmatic free enrichment, which is free in the sense that it is not linguistically mandated, that is, there is nothing in the linguistic representation of the sentences in question that forces the addition of the missing material. Whether or not pragmatic free enrichment takes place depends entirely on the particular features of the context of utterance at a particular time and place. When we understand a sentence such as 'John ate' as communicating that John ate a particular meal, the concept MEAL is added post-linguistically. For cases in which the implicit object of a verb like *eat* is taken to be bound (I've disputed that this actually happens, in section 3.2), Recanati (2002) uses bound variadic functions. For a recent, detailed account of how a system like this could work, see Hall (2009, ch. 3).

²⁵ The question arises as to whether implicit indefinite objects are ever explicit. Suggestively, 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'. This is exactly what is predicted by the position defended here, though a more careful look at the data and the language is necessary to establish a firm conclusion.

Any pragmatic approach must consider the cluster of properties we discussed in the previous sections as accidental. Nothing in this type of approach predicts that implicit indefinite objects always take narrow scope, are number-neutral, are interpreted indefinitely and non-specifically or display the telicity properties that they do. As far as these pragmatic approaches are concerned, things could have been otherwise. Implicit indefinite objects, however, are interpreted indefinitely, even if there is pragmatic pressure to interpret them otherwise, as we have seen (recall the discussion of the purported pronominal nature of implicit indefinite objects in section 3.2). 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. 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.

4. Conclusion

In this paper I have illustrated some of the benefits of a cross-linguistic approach to the grammar-pragmatics interface. I have argued that only after looking at phenomena from this empirical stance can we make an informed decision as to whether processes such as pragmatic free enrichment are involved or not in their analysis. The paper's main contribution is methodological.

I reached the conclusion that in two of the cases that are typically used to argue for pragmatic free enrichment, we have good reasons to suppose that grammatical processes, rather than pragmatic free enrichment, are involved. I argued that the treatment of adjectival fragments that best accounts for the generalizations is one in which the grammar generates a full, predicative construction, parts of which undergo pragmatically-controlled deletion. The kind of relationship that this account establishes between the adjectival fragment and the full, predicative construction seems to be the one that is called for in order to account for the restrictions and possibilities that we found to operate on adjectival fragments cross-linguistically. I also argued that a grammatical, noun-incorporation-type of approach is the best explanation for the behavior of implicit indefinite objects. In the analysis I defended, the implicit object of verbs such as *eat*, *bake* or *drink* is represented grammatically and is not provided for pragmatically.

I anticipate that this approach has much to teach us about the properties of a number of other phenomena that have interested philosophers of language and pragmatists for a long time, and which are sometimes referred to with the labels 'unarticulated constituent' or 'implicit argument': quantifier domain restriction (see Martí 2003, Etxeberria 2005 and Etxeberria and Giannakidou 2007), the standard of comparison of certain adjectives, the interpretation of the implicit location of meteorological verbs (*It's raining*), other types of sentence fragments, the causal and temporal interpretations of *and*-conjunction, and others.

References

- Allen, B., Gardiner, D. and Frantz, D. 1984: Noun incorporation in Southern Tiwa. *International Journal of American Linguistics*, 50, 292–311.
- Axelrod, M. 1990: Incorporation in Koyukon Athapaskan. *International Journal of American Linguistics*, 56, 179-195.
- Baker, M. 1988: *Incorporation. A Theory of Grammatical Function Changing*. Chicago: The University of Chicago Press
- Barton, E. 1990: *Nonsentential Constituents*. Amsterdam: John Benjamins
- Barton, E. and Progovac, L. 2005: Nonsententials in Minimalism. In R. Elugardo and R. Stainton (eds.), *Ellipsis and Non-sentential Speech*. New York: Springer
- Beavers, J. and Sag, I. 2004: Coordinate ellipsis and apparent non-constituent coordination. *Proceedings of the 2004 HPSG Conference*, Stanford, CA: CSLI Publications.
- Bhatt, R. and Pancheva, R. 2006: Implicit arguments. In *The Blackwell Companion to Syntax*, volume II, 554-584
- Bittner, M. 1994: *Case, Scope and Binding*. Dordrecht: Kluwer.
- Bresnan, J. 1978: A realistic transformational grammar. In M. Halle, J. Bresnan, and G. Miller (eds.), *Linguistic Theory and Psychological Reality*. Cambridge, Massachusetts: MIT Press
- Browne, W. 1993: Serbo-Croat. In B. Comrie and G. G. Corbett (eds.) *The Slavonic Languages*, Routledge Language Family Descriptions. Oxon: Routledge.
- Carlson, G. 2006: The meaningful bounds of incorporation. In S. Vogeleer and L. Tasmowski (eds.) *Non-Definiteness and Plurality*. John Benjamins, 35-50
- Carston, R. 2002: *Thoughts and Utterances. The Pragmatics of Explicit Communication*. Blackwell
- Chung, S. and Ladusaw, W. 2004: *Restriction and Saturation*. Cambridge, Mass.: MIT Press.
- Chung, S., Ladusaw, W & McCloskey, J. 1995: Sluicing and Logical Form. *Natural Language Semantics*, 3, 239-282
- Condoravdi, C. and Gawron, J.M. 1996: The context dependency of implicit arguments. In M. Kanazawa *et al.* (eds.) *Quantifiers, Deduction and Context*. Stanford, CA: CSLI Publications.
- Culicover, P. and Jackendoff, R. 2005: *Simpler Syntax*. Oxford University Press
- Depiante, M. 2000: *The Syntax of Deep and Surface Anaphora: A Study of Null Complement Anaphora and Stripping/Bare Argument Ellipsis*, University of Connecticut Ph.D. dissertation.
- Dowty, D. 1981: Quantification and the lexicon: a reply to Fodor and Fodor. In M. Moortgat, H. v.d. Hulst, and M. Hoekstra (eds.) *The Scope of Lexical Rules*. Dordrecht: Foris. 79-106
- Dyk, S. 1997: *Noun incorporation in Frisian*, Rijksuniversiteit Groningen, Ph.D. dissertation.
- Etxeberria, U. 2005: *Quantification and Domain Restriction in Basque*. University of the Basque Country, Spain Ph.D. dissertation
- Etxeberria, U. and Giannakidou, A. 2007: Contextual restrictions and the definite determiner. Paper presented at the conference *Context Dependence, Perspective and Relativity in Language and Thought*, École Normale Supérieure, Paris
- Farkas, D. and de Swart, H. 2003: *The Semantics of Incorporation: from Syntax to Discourse Transparency*. Stanford: CSLI Publications.
- Fiengo, R. & May, R. 1994: *Indices and Identity*, Cambridge: MIT Press.

- Fillmore, C. 1969: Types of lexical information. In F. Kiefer (ed.) *Studies in Syntax and Semantics*. Dordrecht: Reidel. 109-137
- Fillmore, C. 1986: Pragmatically controlled zero anaphora. *Proceedings of the Annual Meeting of the Berkeley Linguistics Society*, 12, 95-107.
- Fodor, J. and Fodor, J. D. 1980: Functional structure, quantifiers, and meaning postulates. *Linguistic Inquiry*, 11, 759-769
- Fortin, C. 2007: Some (not all) nonsententials are only a phase. *Lingua*, 117, 67-94
- van Geenhoven, V. 1998 *Semantic Incorporation and Indefinite Descriptions. Semantic and Syntactic Aspects of Noun Incorporation in West Greenlandic*. Stanford, CA: CSLI Publications.
- Gerdts, D. 2001: Incorporation. In A. Spencer and A. Zwicky (eds.) *The Handbook of Morphology*. London: Blackwell. 84-100.
- Gerdts, D. and Marlett, S. 2008: Introduction: the form and function of denominal verb constructions. *International Journal of American Linguistics*, 74, 409-22
- Gerdts, D. and T. Hukari 2008: Halkomelem denominal verb constructions. *International Journal of American Linguistics*, 74, 489-510
- Gillon, B. 2012: Implicit complements: a dilemma for model theoretic semantics, *Linguistics and Philosophy*, 35, 313-359
- Ginzburg, J. and Sag, I. 2000: *Interrogative Investigations: The Form, Meaning and Use of English Interrogatives*. Stanford, CA: Center for the Study of Language and Information.
- Groefsema, M. 1995: Understood arguments: a semantic/pragmatic approach. *Lingua*, 96, 139-161
- Hale, K. and Keyser, S. J. 1993: On argument structure and the lexical expression of syntactic relations. In K. Hale and S. J. Keyser (eds.) *The View from Building 20: Essays in Linguistics in Honor of Sylvain Bromberger*. Cambridge, MA: MIT Press, 53-109
- Hale, K. and Keyser, S. J. 2002: *Prolegomenon to a Theory of Argument Structure*, Cambridge, MA: MIT Press
- Hall, A. 2009: *Free Pragmatic Processes and Explicit Utterance Content*. University College London Ph.D. dissertation.
- Hardt, D. 1993: *Verb Phrase Ellipsis: Form, Meaning and Processing*. University of Pennsylvania Ph.D. dissertation.
- Hardt, D. 1999: Dynamic interpretation of verb phrase ellipsis. *Linguistics and Philosophy*, 22, 185-219
- Haugen, J. 2008a: *Morphology at the Interfaces. Reduplication and Noun Incorporation in Uto-Aztecan*. Amsterdam: John Benjamins
- Haugen, J. 2008b: Denominal Verbs in Uto-Aztecan, *International Journal of American Linguistics*, 74, 439-70
- Hill, K. C. 2003: Hopi denominal and noun-incorporating verbs. In L. M. Barragan and J. D. Haugen (eds.) *Studies in Uto-Aztecan*. Cambridge, MA: MIT Working Papers on Endangered and Less Familiar Languages, 5, 215-244
- Iten, C., Junker M.-O., Pyke A., Stainton R. and Wearing C. 2004: Null Complements: Licensed by Syntax or by Semantics/Pragmatics?. In M.O. Junker, M. McGinnis & Y. Roberge (eds.) *Proceedings of the 2004 Canadian Linguistics Association*, 1-15
- Jelinek, E. 1998: Voice and transitivity as functional projections in Yaqui. In M. Butt and W. Geuder (eds.) *The Projection of Arguments: Lexical and Compositional Factors*. Stanford, CA: CSLI Publications, 195-224

- Jelinek, E. and Escalante, F. 2000: Unaccusative and unergative verbs in Yaqui. In E. Casad and T. Willett (eds.) *Uto-Aztecan: Structural, Temporal, and Geographical Perspectives*. Salt Lake City: University of Utah Press, 171-182
- Johnson, K. 1996: When verb phrases go missing. *Glott International*, 2, 5, 3-9
- Johnson, K. 2001: What VP-ellipsis can do, and what it can't, but not why. In M. Baltin & C. Collins (eds.) *The handbook of contemporary syntactic theory*. Blackwell. 439-479.
- Kroeber, A. L. 1909: Noun incorporation in American languages. *Verh. XVI. Intern. Amerikanisten-Kongr.*, Wien, 569-576
- Kroeber, A. L. 1911: Incorporation as a linguistic process. *American Anthropologist*, 13, 577-584
- Lasnik, H. 1999a: Pseudogapping puzzles. In S. Lappin & E. Benmamoun (eds.) *Fragments: Studies in Ellipsis and Gapping*. Oxford: Oxford University Press. 141-174
- Lasnik, H. 1999b. On feature strength: three Minimalist approaches to overt movement. *Linguistic Inquiry*, 30, 197-217
- Lasnik, H. 2001: When can you save a structure by destroying it? In M. Kim & U. Strauss (eds.), *Proceedings of the North East Linguistic Society 31*, GLSA, 301-320
- Lobeck, A. 1995: *Ellipsis: Functional Heads, Licensing and Identification*. Oxford: Oxford University Press.
- Mardirussian, G. 1975: Noun incorporation in Universal Grammar. *Proceedings of the Chicago Linguistics Society*, 11, 383-9
- Marlett, S. 2008: Denominal verbs in Seri. *International Journal of American Linguistics*, 74, 471-488
- Martí, L. 2003: *Contextual Variables*, University of Connecticut Ph.D dissertation.
- Martí, L. 2006: Unarticulated constituents revisited. *Linguistics and Philosophy*, 29, 135-166
- Merchant, J. 2001: *The syntax of Silence. Sluicing, Islands and The Theory of Ellipsis*. Oxford: Oxford University Press
- Merchant, J. 2004: Fragments and ellipsis. *Linguistics and Philosophy*, 27, 661-738
- Merchant, J. 2007a Three kinds of ellipsis: syntactic, semantic, pragmatic? Ms., University of Chicago, Chicago
- Merchant, J. 2007b The syntactic representation of implicit arguments. Talk presented at the 'Funny' *Indefinites Workshop*, ZAS Berlin
- Merchant, J. 2008 Variable island repair under ellipsis. In K. Johnson (ed.), *Topics in Ellipsis*. Cambridge: Cambridge University Press, 132-153
- Miner, K. 1986: Stripping and loose incorporation in Zuni. *International Journal of American Linguistics*, 52, 242-254
- Mithun, M. 1984: The evolution of noun incorporation. *Language*, 60, 847-894
- Mittwoch, A. 1980: On the difference between *eating* and *eating something*: activities vs. accomplishments. *Linguistic Inquiry*, 13, 113-122
- Pullum, G. 2001: Hankamer Was! In Chung, S., J. McCloskey, and N. Sanders (eds.), *The Jorge Hankamer WebFest*. University of California, Santa Cruz. <http://ling.ucsc.edu/Jorge/pullum.html>.
- Recanati, F. 2002: Unarticulated constituents. *Linguistics and Philosophy*, 25, 299-345
- de Reuse, W. 1994: Noun incorporation in Lakota (Siouan). *International Journal of American Linguistics*, 60, 199-260

- Rosen, S. 1989: Two types of noun incorporation: a lexical analysis. *Language*, 65, 294-317
- Ross, J. R. 1969: Guess who? In R. Binnick, A. Davidson, G. Green & J. Morgan (eds.). *Papers from the fifth regional meeting of the Chicago Linguistic Society*, 252-286.
- Sadock, J. 1980: Noun incorporation in Greenlandic. A case of syntactic word formation. *Language*, 56, 300-319
- Sag, I. 1980: *Deletion and Logical Form*. Garland Press.
- Sag, I. and Hankamer, J. 1984: Toward a theory of anaphoric processing. *Linguistics and Philosophy*, 7, 325-345
- Sapir, E. 1911: The problem of noun incorporation in American languages. *American Anthropologist*, 13, 250-82
- Schachter, P. 1977: Does she or doesn't she? *Linguistic Inquiry*, 8, 763-767.
- Schachter, P. 1978: English propredicates. *Linguistic Analysis*, 4, 187-224.
- Shopen, T. 1973: Ellipsis as grammatical indeterminacy. *Foundations of Language*, 10, 65-77
- Spencer, A. 1991: *Morphological Theory*. Oxford: Blackwell.
- Stainton, R. 2006: *Words and Thoughts: Subsentences, Ellipsis, and the Philosophy of Language*. Oxford: Oxford University Press.
- Stanley, J. 2000: Context and Logical Form. *Linguistics and Philosophy*, 23, 391-434
- Sullivan, P. 1984: Noun incorporation in Yucatec Maya. *Anthropological Linguistics*, 26, 138-160
- Thomas, A. 1979: Ellipsis: the interplay of sentence structure and context. *Lingua*, 47, 43-68
- Torrego, E. 1984: On inversion in Spanish and some of its effects. *Linguistic Inquiry*, 15, 103-129
- Wilson, D. and Sperber, D. 2000: Truthfulness and relevance. *UCL Working Papers in Linguistics*, 12, 215-254