NON-SPECIFIC OBJECTS IN THE PSEUDOPASSIVE

The Syntax and Semantics of English Pseudo-Incorporated Pseudopassives

by

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ABSTRACT

This thesis introduces a special form of pseudopassive that differs from previously discussed forms in that it includes a direct object adjacent to the verb. It is shown that the direct object position in this construction is restricted to NPs that lack D(eterminer)-level projections. As a result, the direct object can only receive a non-specific interpretation, resists certain types of modification, extraction, and scope interactions. Due to its lack of D-level, I argue, the direct object also cannot check the EPP feature on T and therefore cannot raise to subject of the passive sentence. T, then, must probe instead into the PP, agreeing with the PP-object and raising it to its specifier.

I posit that the syntactic machinery which allows pseudopassivization is the availability in English of selecting prepositions from the lexicon that are unvalued for tense – as such, these prepositions must depend on the c-commanding verb to value their tense features and in turn assign case to their objects. When the verb itself is unvalued for tense, the PP's nominal object must raise to a higher project to value its tense features (i.e., to be case-licensed); this is the situation in passives, namely in pseudopassives. The solution I argue for draws heavily from the recent research and framework of Pesetsky & Torrego (2004, 2006, 2007).

On the semantic side, the direct objects in these pseudopassives are compared to similarly behaving non-specific nominals in Hindi, Chol, Tongan, Inuktitut, Nez Perce, among others (Dayal 2003, Coon *to appear*, Ball 2005, Wharram 2003, Deal 2007). The researchers who identified such nominals in these languages have referred to them as *pseudo-incorporated*, and claim that pseudo-incorporated NPs are interpreted not as individuals (type *e*) but as properties (type *<et>*). Following their lead, I have coined the term *pseudo-incorporated pseudopassive* (PIPP) for the special form of pseudopassive that includes these reduced, non-specific direct objects. In order to semantically combine the passive predicate with these non-specific property-type arguments, I adopt Wharram (2003) and Deal's (2007) proposal for a morpheme, ANTIP, that adjoins to the verb root and yields a property-taking function in place of an individual-taking one.

Thesis supervisor: Novin Richards
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Boy afraid, prudence never pays,
and everything she wants costs money...
'Girl Afraid' –Morrissey (The Smiths)

Being such an important and delicate matter, acknowledgments I imagine should not be left until 1:43am to be written. Unfortunately it's a habit I can't seem to shake.

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INTRODUCTION

As indicated by its title, this thesis investigates the properties of non-specific objects as they occur in English pseudopassive sentences, which will be shown to, in fact, be the *only* kind of objects allowed in the pseudopassive construction. To illustrate, the pseudopassive sentence in (1) allows the indefinite object *a habanero* to occur between the verb and stranded preposition, while the same object preceded by the definite determiner, *the habanero* in (1b), is judged ungrammatical. Furthermore, *a habanero* cannot refer to a specific habanero (nor take scope outside of other operators in the sentence, as will be shown later in chapter 1).

(1) a. This cutting-board was chopped a habanero on.
b. *This cutting-board was chopped the habanero on.

The theoretical importance of this observation is two-fold. First, it tells us something very interesting about the syntax of interveners (that is, nominals/phrases that block structurally lower phrases from raising over them), or rather the syntax of non-interveners: to block raising-to-subject it is not enough just to be a nominal in an argument position, you also have to have D-level structure. I will argue that those nominals that occur without the required structure and its associated features cannot raise to subject because they are not suitable goals for T's probing – *an avocado* in (1a) just doesn't have what T needs. This frees-up T to look elsewhere to satisfy its phi-feature checking needs, namely into the PP below. In essence, the sentences under study are evidence that nominals exist that in many ways look like other argument DPs – for example they can be conjoined, and modified – but in many other ways behave much differently – they cannot be extracted by A'-movement, cannot take wide scope over other operators, and cannot be modified by relative clauses.

Second, the fact that objects in the pseudopassive are restricted to these reduced, sub-DP, non-specific forms makes this particular construction an optimal research tool for probing the relationship between the syntactic structure and the semantic interpretation of nouns. As we will see shortly, the missing D-level projections of these nominals correspond to missing semantics, most notably specificity/definiteness, and wide-scope readings, but also certain interpretations of otherwise ambiguous modifiers are not possible. This thesis serves, in a sense, as a first-pass probing into these syntax-semantics correlations, and as such will at times raise more questions than I can answer within its limits.

More generally the availability of any object in sentences like (1), for at least some English speakers, is unexpected under previous analyses of the pseudopassive construction (namely that of Hornstein & Weinberg 1981). Since these theories have posited an adjacency requirement on the verb and preposition (in order for them to form a complex predicate by *reanalysis*), allowing an object between the two shouldn't be possible. A new approach to the mechanics of the common pseudopassive is therefore in order, and I propose that the current theoretical framework of Pesetsky & Torrego (2004, 2006, 2007) can be smoothly applied to analyze the pseudopassive as an instance of Tense-sharing between T, the passive predicate, and the stranded preposition.

The topic of non-specific objects has seen a recent flurry of research, mostly from non-English language data where these objects are more easily distinguished from other indefinites by their special syntax, semantics, and morphology (Bittner 1984,1987, van Geenhoven 1998,

Wharram 2003, Massam 2001, Dayal 2003, Coon to appear, Chung & Ladusaw 2004, Deal 2007, and others). We will see below that the curious properties observed for objects in the pseudopassive pattern with many (if not most) of the ones reported in those studies, which cut across languages and language families from Mayan to Austronesian to Eskimo-Aleut and beyond. This thesis also, then, adds to the growing literature and deeper understanding of the typology of these nominal objects.

What I will come to defend herein is that, following many of the authors just cited, pseudopassive objects are interpreted as properties of type <*et*>, and not as individuals. This property-type semantics corresponds to the lacking D-level structure in the syntax, and together these features account for their distinctive properties, namely the ungrammaticality of strong determiners, pronouns, or possessives, their scopelessness, inability to extract or to be modified by relative clauses, and their necessarily non-specific interpretation. In many languages these objects appear intractably adjacent to the predicate similar to lexical noun-incorporations like *to cat-sit*, or *apartment-hunt*, earning them the term *pseudo-incorporated*, and the semantic mechanism by which the two come to be joined in meaning *pseudo-incorporation* (also known as *semantic incorporation*). Anticipating this analysis, I will refer to the construction in (1) as *pseudo-incorporated pseudopassive*, or PIPP for short.

The obvious question that this paper will not answer conclusively is that of what separates speakers who accept (1a) and other PIPPs productively from so many other speakers who are much less permissive with this construction. This appears to be a complicated matter which I will leave for the most part for future research. Chapter 1, however, opens with a discussion on the grammatical status of PIPPs and a number of examples, forms and settings that non-PIPP speakers may find more palatable, from Bolinger (1977). The chapter then proceeds to lay out a number of properties that support the lack of D-level syntax in PIPP direct objects, or that our theory will need to account for otherwise.

In chapter 2, the syntactic structure that I posit for PIPPs will be presented, building up from the essential pieces: the syntax of passives, then of pseudopassives, and finally of pseudo-incorporated pseudopassives. Here I will discuss the issue of interveners, why we might expect the direct object in PIPPs to be one, and how its truncated D-less structure allows it not be. This chapter ends with the syntactic structure that the semantics of the third chapter will be handed to deal with, most notably a sentence with a predicate-type object in place of an individual one.

The third chapter reviews the properties documented for pseudo-incorporated objects cross-linguistically. This serves both as support that we are on the right track in identifying PIPP direct objects as deserving of the title, and to introduce the semantic mechanisms those researchers have proposed to get predicates to take properties as arguments. The proposed mechanisms span from lexical rules/operations (Dayal 2003, van Geenhoven 1998), to new rules of semantic composition (Chung & Ladusaw 2004), to silent morphemes that attach to verb roots (Wharram 2003, Deal 2007). Although empirical data in support of any of these approaches over the others is currently weak, Wharram 2003 argues that the antipassive morpheme in West Greenlandic correlates with the semantically-incorporated behaviour of nominals. He thus attributes this morpheme the semantic function of turning individual-taking verbs into property-taking ones; this morpheme, ANTIP, is simply silent in many other languages. I follow Wharram (and Deal 2007), therefore, in positing a silent morphological head in PIPPs that allows the verb to combine with the D-less, truncated nominals under investigation. Although it is tempting to suggest that the availability of this morpheme is what separates PIPP speakers from non-PIPP speakers, chapter 3 concludes with a discussion of two other cases in English where nominals

have been argued to semantically incorporate with their predicates: in existential-*there* constructions, and as complements to intensional verbs on their opaque readings. Chapter 4 will conclude.

To summarize a last time before getting on our way, this thesis argues the following main points:

i. The direct object in PIPPs is necessarily syntactically reduced, missing D-level structure, at the very least.

ii. Without D-level structure, PIPP direct objects do not act as interveners to movement of lower phrases (allowing the lower PP-object to raise to subject).

iii. Pseudopassivization arises by the selection of PP whose P-head is unvalued for T (tense) features by a verb who is also unvalued for these features (i.e., a passive verb); both heads therefore depend on a higher, T-valued head to value their features, creating a complex predicate.

iv. Nominals missing D-level structure syntactically are interpreted semantically as properties (<*et*>).

v. PIPP predicates combine with a silent head ANTIP yielding a function that takes a property <*et*> argument, as required to combine with its complement.

CHAPTER 1 – PROBING THE PROPERTIES OF PIPPS

1.1 THE GRAMMATICAL STATUS OF PIPPS

Before setting forth on this exploration of the syntactic and semantic properties of PIPPs, some ink must be spilled on the subject of their grammatical status in English. As mentioned above, many of the sentences that have been introduced and will be discussed throughout this study are not accepted out of the blue by most English speakers consulted, or not without difficulty and wincing. There are two points to consider, however, that may help the reader suspend their disbelief that PIPPs could be a part of any English speaker's grammar.

First, PIPPs that are constructed from idioms of the form V+Obj+P seem to be acceptable to all speakers, an observation found in much of the Linguistics literature on (common) pseudopassives also (Jespersen 1928, Mincoff 1958, Hudson 1967, Labov 1972, Bolinger 1977, Hornstein & Weinburg 1981, Baltin & Postal 1996, Tseng 2007). This includes such strings as *make fun of*, *take umbrage at*, *take advantage of*, *make a fighting ground of*, *make allowances for*, *keep tabs on*, etc.; examples are readily observed in modern dialogue from pop-culture television to e-bay advertisements:

(2) "I've been reading up on your poor nurse's condition, and it is nothing *to be made fun of*."

South Park, Season 2 'Conjoined Fetus Lady' Episode

(3) "Sega Genesis system has been used and *taken good care of*."

E-bay advertisement for Sega Genesis system

(4) "Do I look like someone to be made a jerk of?"

American Dad

The structure is therefore not altogether foreign to most English speakers, despite that it does not appear to be as productive for everyone as it is for the speakers of the dialect under study.

Still, there are contexts beyond idioms even that improve the interpretability of PIPPs, as Bolinger (1977) discusses in great detail. Bolinger takes a strong stance on the grammatical productivity of PIPPs and common pseudopassives (referred to as *transitive* and *ditransitive prepositional verbs* in his work), maintaining that, "while a running frequency count might well show that the great majority of prepositional verbs are lexicalized, lexicalization is only contributory. Passive prepositional verbs are a completely open set" (Bolinger 1977: 59). Some forms may seem odd used out of the blue, but put in the proper context they become more natural – this much seems true, although we will see that many of Bolinger's explanations for this are unclear and out of date. Hopefully future work will be able to scrutinize the following examples/contexts and extract the underlying mechanisms at play.

Bolinger argues that two factors regulate the acceptability of passivizing a prepositional verb: the semantic relationship between the prepositional verb and the patient, and the interpretability of the sentence. The first point relates to the well-known requirement that the subject of a passive must be understood as somehow affected by the event described by the predicate. Taking the example (1) from above of cutting-boards and habanero, my chopping a

habanero on the cutting-board likely got spicy oils and seeds from the pepper all over the board (rendering it unsuitable to use when we cut, say, the coffee cake) – thus the board is interpretable (to some) as having been affected by the cutting of a habanero on it and can serve as subject of the formed passive.

> The second criterion relates more or less to sentence processing. As Bolinger explains: we reject a sentence like **I don't like to be blamed mistakes on* in spite of the acceptability of the corresponding active *Don't blame those mistakes on me* and of similar passives like *I don't like to be thrown mud at* because of the high degree of expectation that *blame* will have a personal and not an abstract object: the hearer gets as far as *blamed* and is sure that *I don't like to be blamed* means what it appears to mean – and then *mistakes on* forces him to revise. Even though theoretically the same cumulative ambiguity afflicts *That argument was built a case against* (first, *That argument was built*; second, *That argument was built a case*), the distracting interpretations are less insistent (Bolinger 59).

Again this second component is vague and quite difficult to support without carrying-out proper processing experiments. His point is that the contexts he identifies as facilitating "help the listener to quickly identify the prepositional verb as a unit" (60). I present each of these contexts in turn with some of his examples:

i. Contextual parallelism

(5) a. The defendants – the ones arrested and brought charges against yesterday – are all expected to plead innocent.
b. The books that were separated and stuck markers in are on the middle shelf.
c. This tool has never been used for its main purpose – in fact, it's never been done anything with at all.

In (5), by conjoining or juxtaposing the PIPP with another, more pedestrian passive predicate, the former is understood more quickly as a unit on par with the latter by the listener.[1]

ii. Analogy

(6) a. Mary was written a letter to. (on analogy to *Mary was written a letter*)
b. John was done a favor for. (vs. *John was done a favor*)
c. That's a problem that needs to be found a remedy for. (vs. *...to be found a remedy*)

The idea here seems to be that PIPPs created from double object verbs can be more easily passivized on analogy to their regular double object parallel, the preposition left stranded at the end adding only some minor extra semantic specification of direction.[2]

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[1] Norvin Richards (p.c.) suggests one possible explanation for this particular helping context: by conjoining a regular passive (or even active) VP with the PIPP one the sentence is allowed by the Principle of Minimal Compliance (Richards 1998). Despite that raising the PP-object from the PIPP VP might be ungrammatical, since it is also raising from a grammatical site within the regular passive VP the two VPs taken together comply minimally with proper movement rules.

[2] An interesting though not yet understood detail to note here is that for some PIPP speakers, certain double object predicates that typically do not work as well as dative (NP-PP) constructions improve when passivized. These speakers judge (id) better than (ic), although not on par with (ia) or its passive (ib):

(i) a. Igor gave Amy a headache.

iii. The use of empty verbs

(7) a. If these bridges are put supports under, they will withstand any amount of flooding.
b. That product can't be made a profit from.
c. What's he miffed about? Was he taken a swipe at by somebody?

Bolinger indicates that the use of empty verbs such as *make*, *take*, and *put* in (7) tend to suggest that a noun will naturally follow them. The V-NP-P string typically has another single word predicate synonymous in meaning, so *to put supports under = to support, to make a profit from = to profit, to take a swipe at = to swipe (at)*; that is, these verbs are "in the nature of compounding elements."

iv. Predictability of the verb + noun combination

(8) a. John was held a grudge against.
b. The troops were opened fire on.
c. That whole platoon was simply made mincemeat of.

Here, the more predictable or frequent the verb+noun combination (or the verb+noun+preposition), the more natural the PIPP. Interestingly, as we vary the verb or object to a less common substitute an originally well-constructed PIPP becomes more difficult to accept, shown in the contrasts between (9a) versus (9b), and (9c) versus (9d):

(9) a. I don't like to be brought charges against.
b. ?I don't like to be lodged charges against.
c. The solution has been raised serious doubts about.
d. ?The solution has been raised serious questions about.

Next, Bolinger observes that using a verb-object-preposition string in the active first facilitates interpretation of the same string in the passive later on in the discourse. Examples are in (10):

v. Repetition and presuppostion

(10) a. –He paid too much for his coat.
–Well, lots of things *are paid too much for* these days. You have to expect it.
b. –What's that pipe for?
–To blow bubbles with.
–Well, has it been?
–Been what?
–Blown any bubbles with yet?

Similar to the first factor, contextual parallelism, by hearing the complex predicate string first in a typical setting (the active, without any passive-movement), the hearer is better prepared to hear and interpret that same string as a predicative unit the second time around in the passive.

---

b. Amy was given a headache.
c. *Igor gave a headache to Amy.
d. ?Amy was given a headache to.

Constructions that presuppose a prior context for the complex predicate, without the explicit repetition shown above, also have an optimizing effect:

(11) a. *Were you aimed a gun at?
b. How does it feel to be aimed a gun at?
c. *This bed has been eaten potato chips in.
d. To be eaten potato chips in isn't the best thing for a bed.

As Bolinger explains, (11b) (vs. (11a)) "contains a *petitio principii*: it cannot be asked unless the interlocutor has already had a gun aimed at him" (63). He believes that topicalized infinitives such as (11d) are preferred to (11c) for similar reasons, namely they imply that the matter has been brought up already. Bolinger takes these five situations to support his claim that prepositional verbs exist beyond lexicalized forms, that "the only real restrictions are clarity and intent. The use of a prepositional verb has to be motivated."

We learn from Bolinger's discussion that the grammatical status of PIPPs in standard English is not a simple matter, but more importantly, that evidence of their availability in the right context (and with a varying degree of productivity) is easier to come by than seems from the outset. For the purposes of this paper, however, we limit our investigation to the grammars of those speakers I have found who readily accept PIPPs out of the blue with considerable productivity. That is, if we consider PIPP-acceptability as a continuum across the grammars of different speakers (which seems fairly accurate from my informal surveying of various speakers and dialects), with the speakers who only allow fully lexicalized forms at one extreme, and those who accept a range of forms, provided they occur in the more propitiatory contexts discussed above, fall at various points in the middle, then the speakers under study herein sit at the other extreme of the continuum (I will refer to those at the PIPP-accepting extreme as PIPP-speakers throughout, to facilitate discussion).

From my informal survey of native English speakers (mostly Linguistics students and their friends/family, by e-mail and in person), PIPP-acceptance does not appear to correlate strongly with regional dialect, although most of the PIPP-speakers I found grew up in various locations in Canada (it is worth noting that Dwight Bolinger, however, did not grow up in Canada). Even speakers within the same family are often split with regards to this construction. Judgments throughout are primarily my own, with secondary verification and consultation from other speakers. Curiously, even those who do not fully accept PIPPs out of the blue still share the judgments that definite direct objects are worse than indefinites, and other key PIPP properties/restrictions that I come to shortly.

Lastly, a few words on the status and importance of PIPPs cross-linguistically. In section 2, I present evidence that the direct object in PIPPs is particularly restricted to non-specific indefinite NPs, which have been shown for a wide range of languages to differ syntactically and semantically from other, fuller DPs. PIPPs, therefore, add further support for the existence of this distinction between different kinds of nominal arguments.

Whether other languages might allow a PIPP construction, that is, a similar situation of passive-raising an argument from a PP, over another nominal, and stranding the preposition itself, is an interesting question also. We expect the construction to be very rare indeed, given the unpopularity of one of its necessary parts, preposition-stranding; worse yet, only a subset of languages allowing preposition-stranding by A'-movement also allow the A-movement stranding that yields pseudopassives. Languages known so far to allow pseudopassives include English,

Norwegian, Vata, and Gbadi (Abels 2003 and references therein), and so only in these languages can we hope to find other PIPP-like constructions. Although investigation and comparison of cross-linguistic PIPP constructions and properties is not the focus of the present paper, I note in passing that Norwegian does appear to allow very PIPP-like sentences indeed, as shown in (12):

(12) a. *at brevet*$_i$ *ble klisteret frimerker på* e$_i$.
that letter-the was pasted stamps on
'the letter was pasted stamps on.'
(Taraldsen 1979, Åfarli 1992)

b. *at frimerker*$_i$ *ble klisteret* e$_i$ *på brevet.*
that stamps was pasted on the letter
'the stamps were pasted on the letter'

c. *at det ble klisteret frimerker på brevet.*
that it was pasted stamps on the letter
lit. 'it was pasted stamps on the letter'
(Haider 46)

Just as in the English gloss, the subject of (12a) has been raised out of the PP despite the presence of a direct object, *frimerker* 'stamps.' However unlike English, Norwegian also allows the same sentence with an expletive subject and no argument movement, known as the 'impersonal passive' in (12c). As a preview of some restrictions on PIPP objects we come to below, these same restrictions hold for the direct object in the Norwegian construction, shown in (13): the definite object *frimerkene* in (13a) is banned, as is the possessive *frimerkene mine* in (13b), and the universally quantified *alle frimerker* in (13c).

(13) a. **at brevet*$_i$ *blei klistra frimerkene på* e$_i$.
that letter-the was pasted stamp-the on
'the letter was pasted the stamp on.'
b. **at brevet*$_i$ *blei klisteret frimerkene mine på* e$_i$.
that letter-the was pasted stamps-the my.pl on
'the letter was pasted my stamps on.'
c. **at brevet*$_i$ *ble klisteret alle frimerker på* e$_i$.
that letter-the was pasted all stamps on
'the letter was pasted all stamps on.'
(Sverre Johnsen, personal communication)

Interestingly, the definiteness restriction on the direct object holds for the impersonal forms of these sentences also. Further investigation into the differences and similarities between PIPP constructions in those languages that can create them, although interesting and relevant to the arguments of this paper, must be left for future work.

Having now discussed the status of PIPPs, we move on in the next section to a more detailed look at the properties of this interesting construction.

1.2 PIPP-OBJECT PROPERTIES

1.2.1 In Search of D: No Determiners, No Pronouns, No Possessors...

When we take a closer look at what types of nominal phrases are possible in PIPP direct object position, we observe that items which usually (i.e. are argued to) inhabit D are illicit in the pseudopassive direct object.

First off, pseudopassive direct objects cannot be preceded by strong determiners or quantifiers, seen in (14):

(14) a. *This cutting-board was chopped *the* avocado on.
b. *This cutting-board was chopped *every* avocado on.
c. *This cutting-board was chopped *some* avocados on (...the rest are on the table)
d. *This cutting-board was chopped *an* avocado on (the one that was on the table).

It is important to note that the acceptability of indefinite determiners, as in (14b&c), varies with their interpretation as either strong or weak (i.e., specific vs. non-specific, or put differently, presuppositional vs. non-presuppositional); the sentences in (14c&d) are fine on a weak/existential reading. Crucially, weak interpretations of indefinite determiners have been argued in the literature to derive from their ability to combine with nouns as modifiers, rather than as generalized quantifiers (Partee 1989, Diesing 1992, Alonso-Ovalle & Menendez-Benito 2002). When understood referentially, as indicated in the examples above, the indefinites contain true determiners, i.e. D-heads, and the sentences are ungrammatical.

In (15), we see that pronouns are also not possible:

(15) a. –What about the students? *-The NSF grant was paid them with.
(vs. 'The NSF grant was paid students with')
b. –Where'd this dirt come from? *You were dumped it on, weren't you?
(vs. 'you were dumped dirt on')

Finally, possessors, which are argued for English to be in D or SpecDP (Cardinaletti 1998, Larson & Cho 2003, and others), cause the sentences to be ungrammatical:

(16) a. *Those pants just aren't meant to be tucked *Blanche's* shirts into.
b. *These pants just aren't meant to be tucked *my* shirts into.
c. * This cage was kept *Jurassic Park's* Raptors in, but they've escaped

Given that those items expected to occur in D are not possible in PIPP direct object position, it is logical to suspect that there is no D projection in these nominal phrases. The next section briefly demonstrates that although the DO is smaller than a DP, it is larger than just an N-head.

1.2.2 Bigger than N

In contrast to lexical noun-incorporations (baby-sitting, salamander-hunting, etc.), PIPP direct objects appear to be larger phrases supporting modifiers, weak quantifiers (as noted above), and conjunction. We see in the following examples that modifiers of the direct object are readily accepted (and even publicly attested) in the pseudopassive:

(17) a. Sega Genesis system was used and taken good care of.
(from a merchandise-description on ebay)
b. This cutting board was chopped various different local vegetables on.
c. Wow, this fabric could be made lovely cushions out of.

Conjoined modified NPs are possible also:

(18) a. That cutting-board was only chopped purple onions and fresh okra on.
b. This cage is kept velociraptors and baby tyrannosaurs in.
c. The stolen money was bought a sports car and some liquor with.

Again, definite/strong quantifiers are not possible in conjunctions either:

(19) a. *That cutting-board was only chopped the onions and the tomatoes on.
b. *This cage is kept every velociraptor and (that) baby tyrannosaur in.
c. *The stolen money was bought the sports car and that liquor with.

The possibility of modification and conjunction are both strong support that the DO is not a simple N-head. The position and interpretation of modifiers is however restricted in interesting ways, which I elaborate on presently.

1.2.3 Adjective Interpretations

It is well-known since Bolinger (1967) and much work since (Larson 1998, 2001, Cinque 2005, amongst others) that certain adjectives in English can appear both pre- and post-nominally: in pre-nominal position these adjectives are ambiguous between two different interpretations, whereas in post-nominal position the ambiguity is resolved. The most famous contrasts occur between stage- and individual-level, restrictive versus non-restrictive, and implicit relative versus modal readings, demonstrated in (20):

(20) a. **Stage level vs. Individual level**
visible stars =stars inherently visible (i-level), or stars visible right now (s-level)
stars *visible* =stars visible right now (s-level)

ex. The *visible stars* are Polaris and Alpha Centauri...
...in this hemisphere.
(i-level: these stars are inherently visible given their brightness and proximity to Earth)

...all the others are blocked by the clouds.
(s-level: these stars are the ones we can see right now)

The *stars visible* (tonight) are Polaris and Alpha Centauri. (only s-level)

b. **Restrictive vs. Non-restrictive**

every *unsuitable* word =every word is unsuitable (non-restrictive), or those words that are unsuitable (restrictive)

every word *unsuitable* =every word that is unsuitable (restrictive)

ex. The *unsuitable words* were cleaned off of the building wall...
...now it's clean as new.
(non-restrictive: the words were all unsuitable)

...the suitable words were left in place.
(restrictive: of the words, those that are unsuitable)

The *words unsuitable* (for displaying on building walls) were cleaned off.
(only restrictive)

c. **Implicit relative vs. Modal**

every *possible* candidate =every potential candidate (modal), every candidate possible (implicit relative)

every candidate *possible* =every candidate it was possible for us to interview (implicit relative)

ex. They interviewed every *possible candidate*...
...then asked which ones wanted to contend. (modal)
...then there was no one left to interview and they gave up. (implicit rel.)

They interviewed every *candidate possible*. (only implicit rel.)

Interestingly, when we use these adjectives to modify pseudopassive direct objects, however, only one interpretation is possible, shown in the following examples:

I. Stage-Level vs. Individual-level

(21) a. Here, this table is to be noted *visible* stars in for each hour of your observation, #(and whether you could see them or not).[3]

a'. You should note *visible* stars in this table for each hour of your observation.

b. *Where's an astronomy book that's listed stars *visible* in?

c. Where's an astronomy book that's listed *visible* stars in?

c'. The authors listed *visible* stars in this astronomy book.

[3] The hash-mark outside of the brackets indicates that the utterance would be awkward, and rather inappropriate *without* the bracketed continuation.

d. #This fancy telescope was to be counted *visible* stars with, but the clouds were so thick that there weren't any.
d'. I was going to count *visible* stars with this telescope, but there weren't any.

e. Did you hear about that botched-up burglary back in the 50's? Well there's the prison that was locked-up *responsible* individuals in... #(until they were finally acquitted years later).
e'. They locked up *responsible* individuals in that prison.

In (21a), the pragmatically preferred context would be one in which the stars that are actually visible at each hour of observation (given cloud-cover, light-pollution, etc.) are the ones being noted in the table; the bracketed continuation disambiguates the context to one that instead forces the individual-level interpretation of 'visible stars.' That (21a) is awkward *without* this continuation indicates that the stage-level interpretation is inaccessible – the only reading available is therefore the individual-level one which clashes with the preferred context until the continuation is parsed. Similarly, in (21d) the sentence is interpreted as a contradiction since our world knowledge maintains that the set of inherently visible stars is constant (modulo the occasional super-nova), while the sentence asserts that there weren't any such stars. This contradiction is unexpected if the pre-nominal adjective 'visible' is ambiguous between stage-level and individual-level readings.

The post-nominal position for these adjectives is completely ungrammatical, shown in (21b). The example in (21e) is similar to (21a) – *responsible individuals* in this sentence can only be understood as 'people who are generally responsible individuals,' and not as 'people who were responsible for the crime.' The interesting observation from (21) is that only the individual-level interpretations of the modifiers in question are possible.

II. Restrictive vs. Non-restrictive

(22) a. I'll never hire that baby-sitter again – my children were yelled several *unacceptable* curse-words at while we were out... (#we only yell the acceptable ones at them).
a'. The baby-sitter yelled several *unacceptable* curse-words at our child. (we only yell the acceptable ones at them).
b. *My children were yelled several curses (that were) *unacceptable* at.
c. Igor's editorial was deleted *tenable* accusations from... (#of course, the *untenable* ones were left in).
c'. Igor deleted *tenable* accusations from his editorial... (of course the *untenable* ones were left in).

Again in (22a,c) we observe that only one reading, the non-restrictive one, is possible for the typically ambiguous (as in (22a', c') modifiers *unacceptable* and *untenable*. (Example (22b) shows that these adjectives are not possible in post-nominal position either.)

III. Implicit Relative vs. Modal

(23) a. This computer program will be background-searched *possible* candidates with... (# then we'll sort out which ones have potential).

a'. We will background-search *possible* candidates with this program... then we'll sort out which ones have potential.
b. *This program will be background-searched candidates *possible* with.

Lastly, *possible* in (23a) can only mean 'potential candidates,' its modal reading, and not '(all) candidates that it was possible for us to compile,' which would be the implicit relative reading. The non-PIPP version allows both interpretations.

One way to analyze this data is to follow Larson (1998) in assuming that the ambiguity typically observed for these modifiers falls out from the syntactic level, either NP or DP, that is modified. *Stage-level*, *restrictive*, and *implicit relative* interpretations arise when the adjective modifies the DP-level (α in (24)); *individual-level*, *non-restrictive*, and *modal* interpretations arise when the adjective modifies the NP-level (β in (24)). It's worth noting that only the DP-level modifiers surface both pre- and *post*-nominally, recalling that post-nominal ones are all illicit in PIPPs.

(24) a. $[_{DP}$ D α $[_{NP}$ β N] α] (α = DP modifier; β = NP modifier)
(Larson & Marušič 2004: 280)

If the partitioning into DP-level and NP-level modifiers represented in (24) is correct, then the results of the above examples correlate nicely with those of the previous sections. That is, if PIPP direct objects are necessarily NPs, then it is expected that DP-level modification is not possible. The syntactic and semantic structures underlying these modifier ambiguities are in hot debate, however, and there is little agreement whether Larson's or any other proposed structure is correct (see Alexiadou 2001, Cinque 2005, Larson 1998, *inter alia*).[4] Despite their differences, both Alexiadou's (2001) and Cinque's (2005) analyses for ambiguous modifiers are also compatible with the idea that PIPP-objects lack a D-level (and possibly more levels directly below).

Alexiadou posits a dual source for nominal adjectives: *direct* and *indirect* modification. *Direct* modification yields those adjective meanings that are only available *pre*-nominally in English, and, as the term suggests, combine with the noun directly. *Indirect* modification is made via relative clauses that may or may not have been reduced, and these are the adjective meanings that are available on either side of the noun. Alexiadou assumes Kayne's (1994) analysis of relative clauses, in which a CP is selected by D, and the head-DP of the relative clause raises from within CP to its specifier. This structure is represented in (25):

(25) a. $[_{DP}$ D CP]
b. $[_{DP}$ D $[_{CP}$ DP_j [C° $[_{IP}$ ... t_j ...]]]] *head-raising*
(Alexiadou 2001: 17, from Kayne 1994)

As we see, the D level on this account is again crucial for the *stage-level*, *restrictive*, and *implicit-relative* interpretations, but not for the *individual-level*, *non-restrictive*, and *modal* ones, quite similar to Larson's structure above.

[4] The pre-nominal vs. post-nominal modifier picture gets even more complicated when we examine the facts in other languages, as these authors do. It is far beyond the scope of this paper to solve the underlying structure of modifier positions and ordering (although more could be said).

For Cinque, as for Larson also, adjectives on their *individual-level*, *non-restrictive*, and *modal* interpretations are introduced in the inner-most positions, closer to the noun itself, while they can only receive *stage-level*, *restrictive*, and *implicit-relative* meanings when introduced as relative clauses (or reduced ones) in the outer parts of the nominal phrase. Clearly there must be something, possibly semantic, that forces this syntactic separation into inner and outer layers, although it does not seem to have been identified in the literature as of yet. I suspect given the *non-specific* semantics of pseudo-incorporated nouns cross-linguistically, that if my argument is sound that PIPP-objects belong to this class, then the outer modifier levels and meanings available there must be involved in introducing *specificity* and *reference* to the nominal. This area of nominal-internal structure is ripe for further study, though I cannot pursue it here.

The modification data presented above, although not entirely conclusive, is explained in a simple manner assuming any of three leading analyses of adjective modification – the solution is that PIPP-objects are missing D-levels (and possibly more just below D). The NP status of the PIPP-object argued for here has other supporting repercussions as well, which I explore in the next sections.

1.2.4 Extraction

A curious fact about PIPP direct objects is that they cannot be extracted overtly by topicalization, in (26a,c), or wh-movement, attempted in (26b,d):

(26) a. *It was habanero that this cutting-board was chopped *t* on.
b. *What was this cutting-board chopped *t* on?
c. *It was a student the NSF grant was paid *t* with.
c. *Who was the NSF grant paid *t* with?

The severe ungrammaticality of the attempts in (26) to move these objects in PIPP constructions is in stark contrast to the facility of extracting them from more pedestrian structures, in (27):

(27) a. It was habanero that we chopped *t* on this cutting-board.
b. What do you chop *t* on this cutting board?
c. It was a student that we paid *t* with the NSF grant.
d. Who did you pay *t* with the NSF grant?

Cagri (2007) argues that Turkish bare-NPs cannot raise for case, nor undergo wh-movement or topicalization, whereas full DPs can.[5] Thus, PIPP DOs appear again to pattern in

[5] Cagri's arguments for this are however too complex to fit in the space of this paper. Minimally, we see in (ib) vs. (ii) that the non-specific object *pasta* 'cake' occurs without case-morphology, unlike its specific/definite counterpart *bu pasta-yI* 'this cake-ACC', and cannot be separated from the predicate by intervening adverbs:
(cont. on next page)

(i) a. Hasan dün pasta yedi.
Hasan yesterday cake ate
'Hasan ate (some) cake yesterday.'
b. Hasan pasta *hIzlI /*dün /*kasIkla yedi
Hasan cake quickly/yesterday/with a spoon ate

(ii) Hasan bu pasta-yI hIzlI /dün /kasIkla yedi
Hasan this cake-ACC quickly/yesterday/with a spoon ate

behaviour with bare-NPs cross-linguistically, and not with DPs. I argue below that extraction of PIPP DOs is blocked by the semantic type of the trace they would leave behind – an individual of type *e*, and not a property of type <*et*> which the predicate is anticipating – but we will come to this shortly.

First, however, I wish to explore further the issue of wh-words in PIPPs, for the following reason: wh-words *en situ* in the PIPP DO position *are* possible, shown in (28b,c):

(28) a. *How many onions was this cutting board chopped on?
b. This cutting board was chopped *how many* onions on?
c. Quick, I need to know when this cutting-board was chopped *what* on!
(cf. (26b))

Given (28a) and the ungrammatical attempts at extraction above, the acceptability of sentences like (28b) and (28c) is rather surprising. The pattern starts making some sense, at least in light of work on wh-movement and specificity, when we observe that not all wh-words are licensed in this position. If we replace the wh-words in (28b) and (28c) with ones deemed more specific (as in *which*, *who*, etc. see Kiss 1993, Munaro & Obenauer 2002), as in (29), the question construction is once again ungrammatical:

(29) a. *This cutting board was chopped *which onions* on?
b. *Which cutting board was chopped *which onions* on?
c. *Quick, I need to know when this cutting-board was chopped *who* on?
d. *What was paid *who* with?

A number of researchers have argued that in wh-movement, it is not the wh-word itself that is probed and attracted to C, but a separate head in the nominal left periphery – Q in Cable (2007), and F (or Foc, for *Focus*) in Aboh (2004). Based on morphosyntactic data from Gungbe, Aboh (2004) argues that the nominal F head is a realization of the syntactic D-level, which is split into several phrases in parallel to recent split theories of C at the clausal left-periphery. The D-level also introduces specificity, via a nominal TopicP. Our English data is consistent with Aboh's theory if the PIPP-object wh-words lack D-level projections, since this would demonstrate that wh-words are permitted as NP-objects so long as they are non-specific and do not raise: specificity and question raising would require the D-level structure that is argued here to be inadmissible in PIPP DO position.

1.2.5 Scopelessness

Related to the extraction pattern above, PIPP DOs have necessarily narrow scope, unlike their canonical-sentence counterparts. It is well known that multiply quantified phrases in a sentence (in English) generally result in scope ambiguities. In attempting to find scope ambiguities in PIPPs, however, we get the following (some sentences adapted from Carlson 1977, Chierchia 1998) (contrasted again with the non-PIPP (non-bare plural) versions in (30b',c'd',e'):

'Hasan ate this cake (quickly/yesterday/with a spoon).
(Cagri 2007:141)

(30) a. Every cutting-board was chopped vegetables on. **(some) > every*

b. Each grant was paid three students with. **three > each*
b'. They paid three students with each grant. *three > each, each > three*

c. All vegans have been fed an animal product to...
...by accident at some point in their lives. *all > an*
...*gelatin was snuck into all water supplies! **an > all*
c'. Someone has fed an animal product to all vegans. *all > an, an > all*

d. ?Each lab was tested parts of that machine in. **(some) > each*
d'. They tested parts of this machine in each lab. *parts > each, each > parts*

e. That cutting-board wasn't chopped a habanero on. *Neg > a, *a > Neg*
e'. I didn't chop a habanero on this cutting-board. *Neg > a, ?a > Neg*

Kind-denoting bare plurals such as *vegetables* in (30a) are scopally inert even in regular contexts, so we do not in fact expect scope ambiguities for them in PIPPs either (which is born-out in (30a)). Necessarily narrow scope would not be expected for the singular indefinites in (30c,e), however, if we thought they were no different from regular DP objects. Non-kind bare plural typically pattern with singular indefinites in terms of scope options, and we would expect the same for PIPP-objects of this kind, but the opposite is observed (in (30e)).[6]

Given that scope ambiguity is argued to arise from Quantifier Raising (May 1977, and much work since), the PIPP DO's scopal inertness is either support that the DO is an NP and thus non-quantificational, or that the PIPP DO cannot extract at all for other or related reasons (as seen above), or both. Necessarily narrow scope is a hallmark property of pseudo-incorporated/non-specific objects reported cross-linguistically, again strengthening the argument that PIPP-objects are an instance of such pseudo-incorporation.

To summarize, this first section had two main objectives: the first, to introduce the PIPP construction and to identify a number of interesting restrictions on, and properties of the direct objects that can appear in it. The second was to begin to develop an account of these properties, by highlighting both the similarity of these objects to non-specific pseudo-incorporated objects cross-linguistically, and the syntactic-semantic evidence that these nominals lack D-level structure (which will prove quite important in the next chapters).

[6] Non-kind bare plurals have been observed in the literature to show the same scope ambiguities in English as singular indefinites, as in (i):

(i) a. I didn't see parts of that machine. *some > every, every > some*
(Carlson 1977)

CHAPTER 2 – THE SYNTAX...

2.1 ...OF (PSEUDO-INCORPORATED) (PSEUDO)PASSIVES: ONE T-VALUE TO SHARE AROUND

To tackle the syntax of pseudo-incorporated pseudo-passives, I must first build up compositionally my assumptions and account of its more basic parts: the passive, then the pseudo-passive. The next section briefly reviews the most basic and relevant aspects of regular passives, and what makes pseudopassives curious, given earlier theories of passive morphology. I argue subsequently that Pesetsky & Torrego's (2004, 2006, 2007; henceforth P&T) framework provides us with a natural way to understand passives, and to reanalyze the old theory of *reanalysis* (as developed in Hornstein & Weinberg 1981) for pseudopassives, while still capturing the intuitions that incited it. Lastly, I lay out the syntactic problems of fitting an extra direct-object into a pseudo-passive, and how these are circumvented in PIPPs by the very properties we observed in the above section. So now onward.

2.1.1 Passive 101

Since the passive is an integral part of the pseudopassive, and of PIPPs, it is worth going over the core aspects of passivization, which are accepted by and large without much debate. Taking the active sentence in (31a) as example, it has the related passive sentence in (31b):

(31) a. David chopped the habanero.
b. The habanero was chopped by David.

Most basically we observe that the subject of (31b) is understood in the same role as the object in (31a) – in both sentences *the habanero* ends up chopped, despite that this nominal occupies a different syntactic position in *a* versus *b*. In the generative grammar tradition, I take this observation to reflect movement of *the habanero* from an underlying lower position, where it gets its role-assignment as object, to the subject position in the passive (31b). The original agent of the active sentence, "demoted" from its typical subject position, appears optionally in a *by*-phrase, and the verb itself takes on its past participle form while tense is born by the auxiliary *be*.[7]

Early theories correlated the past participle morpheme *–en* with the necessary raising-to-subject of the object, explaining that *–en* absorbs the verb's accusative case, forcing the object to move to a position where it can receive nominative case licensing (Chomsky 1981, Baker 1988, Baker, Johnson & Roberts 1989). By this analysis, only those verbs that assign accusative case can undergo passivization, to the exclusion of unaccusatives, and unergatives on some accounts. But what about regular pseudopassives? Looking at some examples in (32), we see that they all

[7] There is obviously much more to be discussed and debated regarding the passive, especially with regards to the subject's demotion, how it receives a theta-role, where the by-phrase is positioned syntactically, and the likes. For the purposes of this paper I limit the discussion to the passive properties most relevant to my analysis of PIPPs, but see Baker, Johnson & Roberts (1989), Collins (2005), Hallman (2002), and many others for discussion on the issues I omit.

fall into the unergative classification, that is they are satisfied with only an agent/subject, though they happily occur with PPs also (pseudopassive forms are primed):

(32) a. Marigold talked (to the students).
a'. The students were talked to by Marigold.
b. Ickabod sat (on the big, fluffy couch).
b'. The big, fluffy couch was sat on by Ickabod.
c. Each child slept (in a different bathtub).
c'. A different bathtub was slept in by each child.

Pseudopassives are somewhat weird on two counts then: first, it's not clear that the verbs involved assign accusative case to begin with. And second, it's often assumed that nominals within prepositional phrases receive case from the preposition itself, why then should passivization of the *verb* effect the case-licensing abilities of the preposition embedded below?

We've seen this scenario before, however, namely with long (or super) passives in German, demonstrated in (33):[8]

(33) a. weil (dieser Turm)$_i$ schon vor zehn Jahren t_i zu restaurieren versucht wurde.
since this tower already from ten years t to restore tried was
"...since somebody tried to restore the tower already ten years ago."
(Wurmbrand, 1998: 147)

In (33) when the verb that embeds the infinitive *zu restaurieren* 'to restore' is passivized, as *versucht wurde* 'tried was,' it is the object of the infinitive that raises to subject. That we see a similar phenomenon, passive morphology on one predicate causing a lower predicate to lose its nominal-licensing abilities, with pseudopassives is therefore not so surprising. I propose that such phenomena are in fact easily explained once we adopt the agreement and feature-valuation framework of Pesetsky & Torrego (2004, 2006, 2007) and an extra idea (from Pesetsky p.c.) about passive verbs, which I come to presently.

2.1.2 Pesetsky & Torrego, and Putting the Passive Pieces Together

In Pesetsky & Torrego's (2004, 2006, 2007) framework, Case is an instance of an uninterpretable Tense feature on D, while subject agreement on T reflects the uninterpretable φ-features on T (where φ/phi-features are things like number, gender, etc.). Tense needs to agree with a φ-valued D, and a D with valued-Tense, for the former to value its φ-features, and the latter to value its T-features. What is novel in P&T's framework resides in the details of agreement: when two items agree with regards to a given feature, the outcome is two instances of one feature (as opposed to two unique features that have the same value, as in Chomsky 2001); this effectively creates a link between the two feature instances "that is accessible to subsequent processes" (P&T 2007:4). Now when two items agree for a feature that is unvalued on either, the result is not vacuous, but instead yields something like a shared index between the two items, and when one eventually gets valued, the other automatically gets this same value.

[8] I am grateful to David Pesetsky for initially suggesting this parallel.

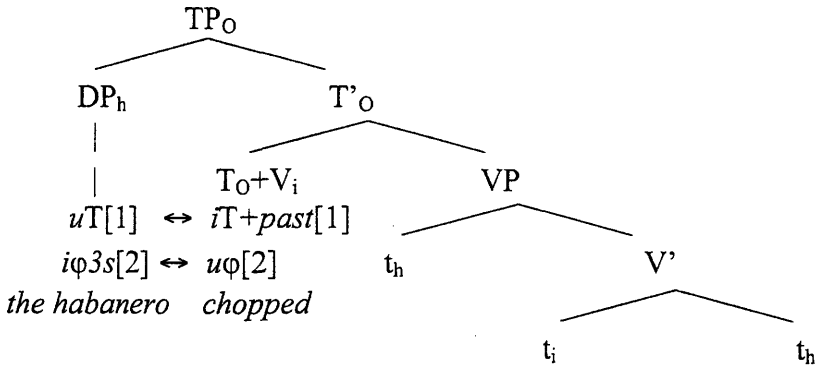
P&T represent a feature's *index* within square brackets [ ] (borrowing this notation from the HPSG literature), preceded by a symbol for the given feature ('T' for tense, 'φ' for phi/D-features), which is preceded by either a *u* for 'uninterpretable' or *i* for 'interpretable.' When one instance of a feature eventually gets valued, its value is indicated just before the bracket (as in *u*T+*past*[1]). Therefore an uninterpretable, valued phi-feature on Tense is shown in a tree as *uφ1ps*[1], whereas an uninterpretable, unvalued (but agreed with) tense feature on D is represented just as *u*T[1] (and whichever head D agreed with for tense would also bear the index [1]). This index sharing mechanism will be important shortly.

A final property of P&T's framework concerns complement selection. The observation is that heads which are needy, *i.e.* are unvalued for a given feature, select complements that have an instance of this same feature. They call this the vehicle requirement on merge (VRM), as in (34):

(34) **Vehicle Requirement on Merge (VRM)**
If α and β merge, some feature F of α must probe F on β.
(Pesetsky & Torrego 2006:1)

In a canonical sentence (that is, an active one), the verb is lexically valued for tense but unvalued for phi-features, while the noun is lexically valued for phi-features but not for tense. By VRM, for V and D to merge unvalued φ on V must probe for valued φ on D, although this probing results in theta-role assignment instead of agreement.[9] Past this point P&T do not elaborate on the whole derivation, but I reconstruct that it would continue as follows. Now TP_O,[10] which is unvalued for either tense or phi-features, probes into V for valued tense, which V has, so they agree, V raises up to its specifier, and this results in a morphological merger of V into T_O (in the sense of Matushansky 2002). Since its phi-features are still unvalued, T_O probes again and finds the DP, who has valued phi-features *and* unvalued tense to boot. DP is raised to T_O's specifier (without morphological merger), agrees with T's features, valuing its own uninterpretable tense features as well (which we would otherwise call ACC case licensing). The derivation for a typical transitive sentence like *David chopped the habanero* looks so far like (35):

(35)

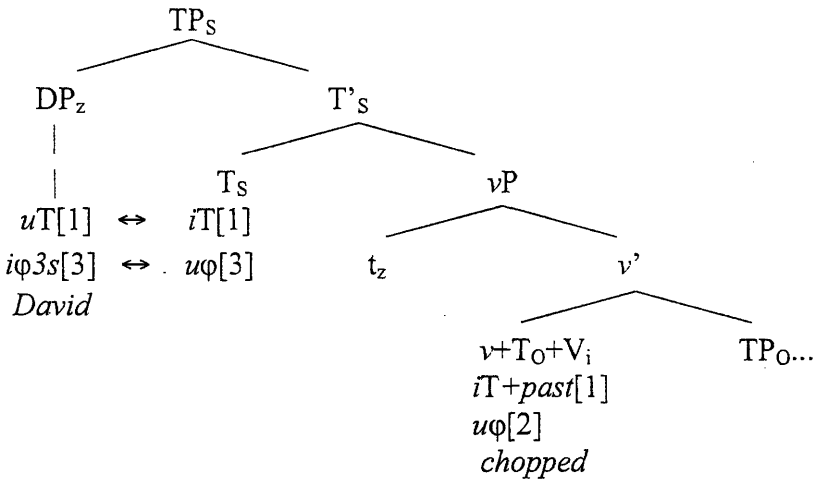


[9] P&T (2006) suggest that certain probe-goal relations don't result in agreement because a head must have first doled out all of its semantic relations (theta-roles) before it can value its features.

[10] This is the TensePhrase projected below *v*P which checks the object's case/T features in a canonical sentence, much like μP in Johnson (1991), and also known as AgrOP elsewhere.

Above this, T_S's interpretable tense features must eventually probe into its complement for valued T-features on $V+T_O$, then for valued phi-features on the subject DP (which will then raise to specifier of T_S and value its uninterpretable tense features = NOM case):[11]

(36)



Returning now to the English passive, I would like to pick up on an idea from Pesetsky (p.c.) that to be a passive verb is to be unable to lexically bear valued T. Given the canonical derivation above, the effect of merging a tense-unvalued verb is this: V merges with DP just as before, and T_O with VP. When T_O agrees with V however, the best they can do is to share an index for tense, since neither has an actual value at this point. When DP is raised, it values the phi-features on $V+T_O$, but again gets only a tense-*index* in return – this DP must, then, raise eventually to specifier of the higher T_S, that is to subject position, where the only *valued* tense feature of the construction sits, thanks to the auxiliary *was*.[12] Here is the trick: DP finally gets a value for tense, but recall that the index that this value replaces is shared by $V+T_O$ left below also, so via DP's valuation they also get valued.[13]

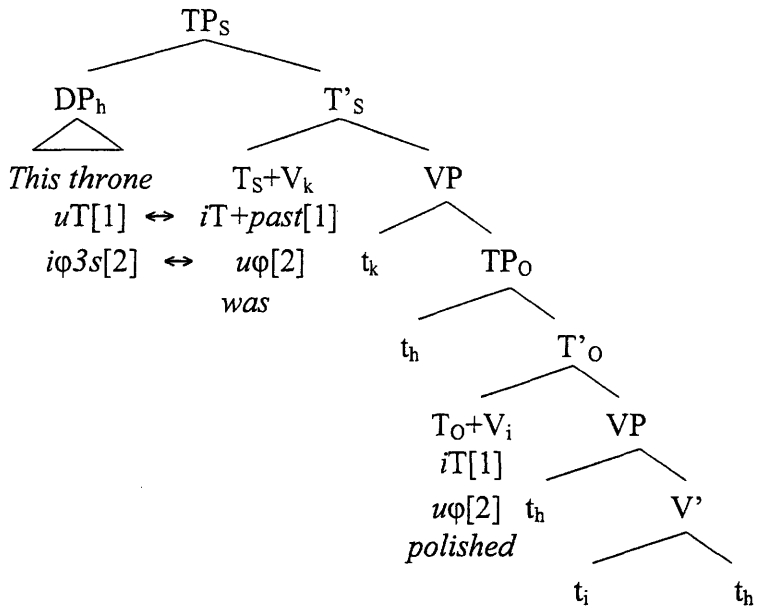
Following this approach to passives, we get a final tree as in (37) (ignoring *v*P):

[11] As mentioned, P&T did not go through a complete derivation such as this in their papers – this is what I think they may have in mind, but it might easily be flawed.

[12] Again P&T aren't explicit about what contributes the higher value for T, whether it's *v* in parallel to V, or whether it's provided by a tensed auxiliary verb such as *was*. They also do not specify their assumptions regarding *v* in passive sentences, that is, if it is defective (they do suggest that T_O is defective in passives, but I should think this stipulation is no longer necessary once we assume passive V is unvalued for tense). Nothing in my account hinges on one or the other possibility.

[13] This is very similar to P&T's (2007) analysis of raising predicates, where the DP that raises to subject values the tense features of the T, *v* and V projections below in the infinitival complement by agreement with T_S of the matrix verb.

(37) *This throne was polished.*



With this all in place, we can now easily give an account of pseudo-passives, to which I come to now.

2.1.3 'Reanalysis' Reanalyzed

The possibility in English of raising a prepositional object to a case position, stranding the preposition itself, has long puzzled syntacticians. How does a nominal that theoretically gets case-licensed by the preposition move to receive another case?

To deal with this dilemma (as well as constructions in which an anaphor is bound by a seemingly non c-commanding noun within a PP), researchers invoked the notion of *reanalysis* by which the preposition in certain circumstances incorporates into the verb, creating a larger predicate (Postal 1971, Chomsky 1981, van Riemsdijk 1978, Hornstein & Weinberg 1981, and others). This rule as stated in Hornstein & Weinberg (1981) is given in (38):

(38) V → V* (where V c-commands all elements in V*)

They explain that the Reanalysis rule in (38) "says that in the domain of VP, a V and any set of contiguous elements to its right can form a complex V" (H&W 1981:60). Other elements can occasionally come between the V and P, so long as the whole complex string forms a possible *semantic word.* They give two tests (or requirements) for what counts as a semantic word, namely:

(39) a. Meanings of strings of words which are semantic words are noncompositional, while the meaning of strings not forming semantic words are.

b. Subparts of (most particularly arguments contained in) semantic words are not referential in meaning.

(H&W 1981:65)

The test/requirement in (39a) is meant to capture the possibility of V-N-P idioms like *take advantage of*, while excluding non-idiomatic strings like *talk to Bill about* (or examples like the PIPPs discussed throughout *chop habaneros on*, *tuck shirts into*, etc.). Chapter 3 of the present thesis aims to give a compositional account of precisely these types of construction. The requirement in (39b) is perhaps tenable, given the non-specific interpretation of the PIPP-objects we have been discussing.

The reanalysis solution proceeds as follows: by reanalysis of the verb and preposition in a pseudopassive, the prepositional object becomes the direct object of the V-P complex instead; since this predicate's accusative case is absorbed by passivization, the object *must* raise to subject in order to be licensed. Although this solution captures our intuition that V and P in the pseudopassive are more tightly related than elsewhere, the reanalysis mechanism seemed ad hoc and came under harsh scrutiny over the years. Not to mention, one of the arguments for the tight connection (i.e. a 'contiguous string' requirement inherited from van Riemsdijk (1978)) between V and P was that a direct object could not appear between the two items, which is contradicted outright by the PIPP constructions under discussion here.

Some of the major objections to the reanalysis story were that on various tests the preposition appears to remain syntactically independent of the verb, and that on others the object patterns more like a prepositional object than a direct object (Baltin & Postal 1996). For example, Baltin & Postal argue that the conjunctions in (40) do not manifest the incorporated P that is an essential step of reanalysis:

(40) a. The bridge was flown over and then, but only then, under.
b. Fascism was fought for by Goebbels and (then) against by De Gaulle.

(Baltin & Postal 1996:130)

I think the idea here is that if the verb and preposition are syntactically unified, then we shouldn't be able to conjoin a variety of prepositions (since they aren't independent phrases, or even heads), especially with a slew of other things in between (such as *...and then, but only then...*).[14]

Much like Baltin & Postal's examples, those in (41) show that the pseudopassive verb can be gapped without the preposition:

(41) a. Blanche's hair was spat in, and Dorothy's hair ___ on.
b. Superdog and her stunt double came up to us: I was sat beside, and Elliot ___ on!
c. During the airshow this bridge was flown over, and that one ___ under.

We would not expect the preposition to be strandable by the gapping in (41) if the two were syntactically joined. I follow Baltin & Postal, then, in rejecting that pseudopassivization requires overt incorporation of P into V.

[14] Baltin & Postal note that a referee pointed out the possibility in English of conjoining word-internal morphemes, such as *pre- and post-WWII automobiles*. B&P reply that if we try to interpret the examples above in this way, it's not obvious just what word the prepositions are internal *to*; "Surely it makes no sense to construe [fought for by Goebbels and then against (by De Gaulle)] as a word, that is, a V."

A more recent idea, however, is that the incorporation of P and V is real, though not syntactic, or at least not pre-spell out. Müller (1995), for example, has argued that this non-syntactic incorporation, which he calls *abstract incorporation*, is a certain case of agreement between two items. He posits this agreement, based on Baker (1988), to block Case assignment by P.[15] Given that P&T claim that P is also a kind of T, capable of valuing *u*T-features on a DP, (and requiring its *u*φ-features to themselves be valued by a DP), T-agreement between P and V is a likely candidate for *abstract incorporation*.[16] Clearly not all instances of agreement have the same effect as we observe between V and P in English pseudopassives – I suggest that we specify Müller's idea to apply to agreement between two like *interpretable* features only, so between *i*T and another *i*T, or possibly between *i*φ and another *i*φ.[17]

More specifically, I propose that, just like passive V, P also can be selected from the lexicon unvalued for T.[18] This option is required, actually, for a PP to be complement to a verbal predicate based on P&T's (2006) complement selection requirements. So P, which has an interpretable tense feature, agrees with the same feature on V, which yields *abstract incorporation* in Müller's sense. When V itself *is* valued for tense, it values that of P, which then values the uninterpretable tense of P's complement DP. This results in oblique case marking on DP. However, when V is itself unvalued for tense, as in passives, P and its complement DP can only share V's index, and DP must raise higher to find a value, which then values the others below. To summarize, my account of the pseudo-passive has the following parts:

(42) a. PP first-arguments to verbal predicates must be headed by *i*T*unval.*
b. P must take a DP complement; this DP raises to SpecPP before merge with V; by agreement with P, shares with it the same 'index' for T-value, although valuation has not occurred.
c. Passive V is lexically unvalued for T, rendering T_O incapable of valuing DP: DP must raise higher to SpecT_S in order to finally value *u*T (and all the other instances of its T index below).

Bringing these puzzle-pieces together into a complete derivation, I illustrate the pseudo-passive structure as in (43) (ignoring again the position and role of *v*P):

---

[15] Another effect of P-to-V incorporation in the literature is that once it takes place, the PP-object, and the direct object are equidistant to higher probes (as V+P raises and incorporates through higher projections up to T, mostly at LF in English; Chomsky 1992, Hoekstra 2000). This would explain why the direct object in PIPPs does not intervene the PP-object's raising to subject, but would not account for the restrictions we've observed on PIPP-structure, which the analysis I will soon sketch does.

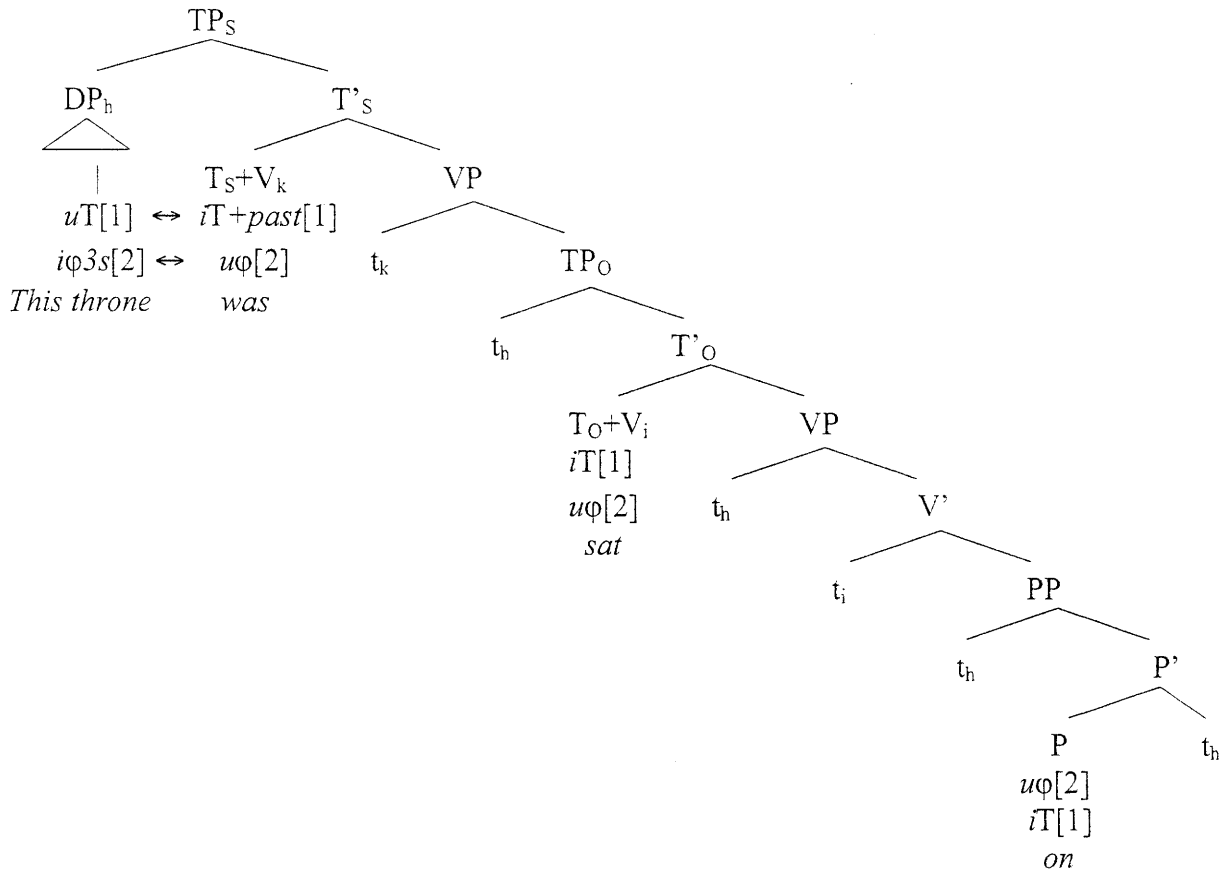
[16] P & T, p15.

[17] I'm not sure what construction might involve this latter agreement, but one candidate is the Semitic construct state whose head-noun characteristically cannot be preceded by a determiner, and appears often in a reduced form from its usual one, as in (i):

(i) beyt ha- mora
house the-teacher
"the teacher's house" (Ritter 1991: 6)

[18] P&T also analyze raising infinitives as verbs unvalued for T.

(43) *This throne was sat on (by Marie Antoinette).*



The structure in (43) is fairly simple, and again reminiscent of other more familiar constructions, such as raising infinitives (Pesetsky & Torrego 2007:12), and perhaps the closer parallel to pseudopassives, the well-known long-passive of Germanic mentioned above.[19] As mentioned above, P&T (2007) analyze raising infinitives as instances of verbs unvalued for tense – such a verb still enters into agreement relationships with the T and *v* heads, giving these heads all essentially the same index in place of a tense value. This index must get replaced by a tense value higher in the structure, exactly like the pseudopassive. This yields an intuitive explanation for complex predicates in general: complex predicates, whether V+V, V+particle, V+P, etc., are termed this based on the intuition that they are in fact one predicate (or one meta-event) with certain features spread across several different lexical items. What binds these event-pieces together as one predicate/event is the dependency on the same Tense valuation. In the next section we will fit the notorious direct object of PIPPs into the picture.

[19] The system of Tense agreement and valuation (as well as other features also) proposed in the recent work of Pesetsky & Torrego, much discussed here, seems likely to extend fruitfully to other structures such as resultatives, small clauses, etc.

2.2 ...OF NON-INTERVENERS

Now that we've set up a plausible structure for passives and regular pseudo-passives, it's now prime time to return to the actual construction at hand, the pseudo-incorporated pseudo-passive, and the conceptual questions PIPPs raise. The first question I will address involves our notion of an intervener, that is, an argument that blocks the raising of a hierarchically lower one. Why isn't the PIPP direct object an intervener to the raising of the PP's complement DP? I come to this now.

2.2.1 Closest and Highest

Assuming that an argument raises to subject position of a passive verb to satisfy the EPP on T (Extended Projection Principle, in the sense of Chomsky 1995), theoretically only the *closest* (i.e., *highest*) phrase/head with the appropriate D-features can raise, by a rule such as *Attract Closest*, in (44) (based on earlier formulations in Chomsky 1973, 1993 and Kitahara 1994):

(44) *Attract Closest*
α can raise to target K only if there is no legitimate operation Move β targeting K, where β is closer to K
(Pesetsky 2000:15)

Assuming that probing heads search down the tree for their goals, the closest goal is necessarily the higher one, where we might define *higher* as in (45):

(45) *Higher*
X is higher in the tree than Y if the set of nodes dominating X is a subset of the set of nodes dominating Y (i.e., if X dominates or c-commands Y)
(Pesetsky, 24.952 class hand-out)

But the DO is structurally *higher* – the common tests in (46-48) demonstrate that the direct object asymmetrically c-commands the PP (assuming that passive constructions are derived from a similar structure as their active counterparts, as in Baker, Johnson&Roberts 1989, Hallman 2000, and Collins 2005 both above):[20]

(46) *Variable binding*
a. June introduced *every astronaut*$_i$ to *her*$_i$ evil twin.
b. June introduced *her*$_{*i/j}$ evil twin to *every astronaut*$_i$.

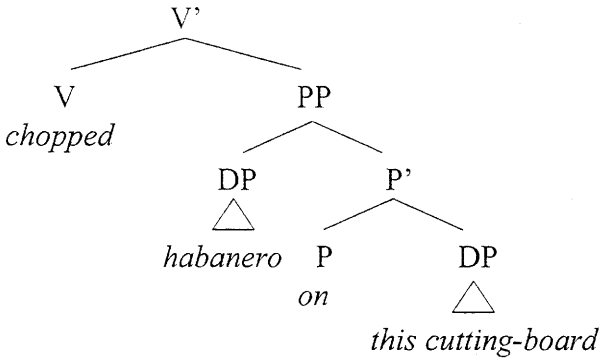
(47) *Condition C*
a. I paid *him*$_{*i/j}$ with *Elliot*$_i$'s paycheck.
b. I paid *Elliot*$_i$ with *his*$_i$ paycheck.

[20] We unfortunately cannot perform these tests on the actual PIPP forms, since the DO is a non-specific indefinite in all the cases discussed, which is incompatible with variable binding and co-indexing. We have already seen in (14) that multiple-question formation is actually possible in PIPPs, and that in these sentences it is the PP-object that is raised to SpecCP, with the wh-DO is in situ. Once the PP-object has raised to SpecTP, however, it is of course now closest to the Wh-probe on C; this cannot, then, determine the base heights of the two phrases.

(48) *Superiority effects*
a. What did that kid spit on who?
b. ?Who did that kid spit what on?

The binding and superiority data above suggest a cascading VP structure as in (49), argued for multiple PP argument/adjunct and dative constructions in Pesetsky (1995):

(49) *...chopped habanero on this cutting-board.*



The DO *habanero* sits in the specifier position of the PP, parallel to other small clause predications (see Beck & Johnson 2004, Pesetsky 1995 for double-object/dative constructions, von Stechow 1995 for resultatives). Indeed, it makes sense to identify the underlying syntax of PIPPs with that argued for double argument, or 'dative alternation' frames since the latter participate in the former easily, demonstrated in (50):

(50) a. The Children's Aid Foundation was donated several bags of toys to.
b. An anonymous do-gooder donated several bags of toys to the foundation.

I return to the semantic composition of the VP in chapter 3 below, but returning for the moment to the question at hand, why doesn't the DO act as an intervener to raising of the PP-object in PIPPs?[21]

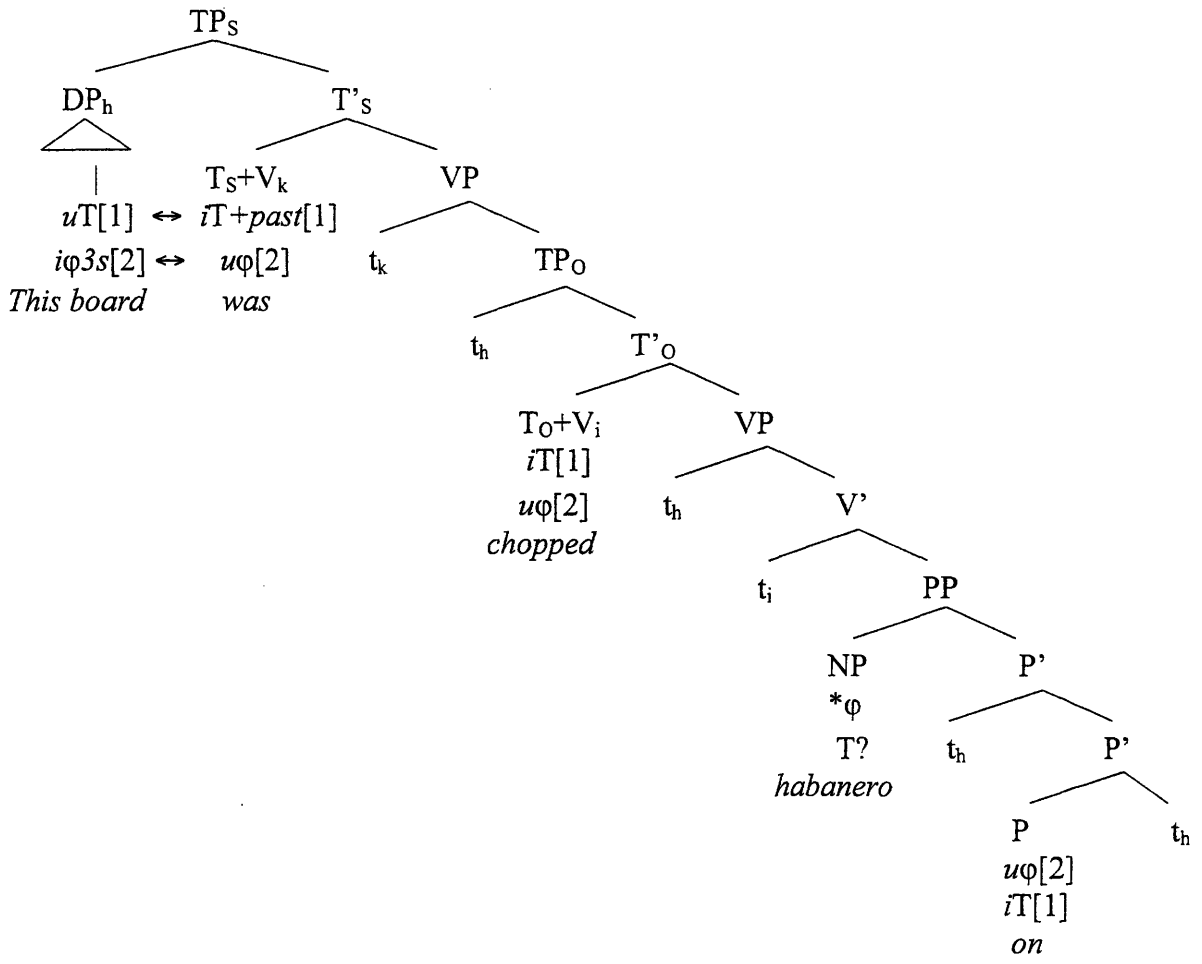
Let's recall the findings of the very first section of this paper – direct objects in PIPP constructions cannot be preceded by strong determiners or possessives, cannot be pronouns, cannot bear certain kinds of modification, all items argued to require a D-head or D-level structure in the nominal. My conclusion from those observations (as well as the scopal inertia, and inability to extract of these objects) was that in fact these nominals are bare-NPs, necessarily missing a DP-level and D-head. I assumed above, following a number of other researchers, that the φ-features necessary for checking the EPP reside on D (Stowell 1981, Longobardi 1984). Bare-NPs do not bear the D-features necessary to check the EPP, are not possible goals for T's probing, and do not therefore intervene between T_S's probing and the PP's object.

The PIPP-English speaker, upon understanding the subject to have moved from PP-object position, must interpret the DO as a bare-NP in order to satisfy *Attract Closest*, saving the

[21] Another question to ask is whether these PIPP DOs require Case. As we will see in chapter 3, cross-linguistic comparison suggests they don't: pseudo-incorporated DOs frequently cannot take case-marking (Tongan, Hindi), or the predicate they appear with has intransitive morphology (Inuktitut, Nez Perce).

derivation. What is perhaps most interesting (or promising) is that the NP restriction we've observed entirely supports our theory of probe-goal relations and superiority. Fitting-in the PIPP-object into the pseudopassive structure, we get (51):[22]

(51) *This cutting-board was chopped habanero on.*



The next question to address is 'how *do* these bare-NPs fit themselves into the sentence semantically? Chapter 3 now explores the semantic side of the PIPP construction.

[22] It's not clear what features PIPP-objects have, apart from being deficient enough in phi-features to evade T's probing. Semantically, these nominals are interpreted much like adjectives, and so if this adjective-like property extends to the syntax, we would expect them at least (given P&T's system) to be self-contained in terms of whatever features they have, i.e., they do not enter into agreement with any other items in the derivation.

CHAPTER 3 – THE SEMANTICS...

3.1 ...OF PSEUDO-INCORPORATION

3.1.1 Cross-linguistic Support

A number of researchers have observed direct objects with similar restrictions across a variety of languages and language families: Greenlandic Inuktitut (Bittner 1984,1987, van Geenhoven 1998, Wharram 2003), Niuean (Massam 2001), Tongan (Ball 2005), Hindi (Dayal 2003), Chol (Coon 2006), Chamorro (Chung & Ladusaw 2004), Nez Perce (Deal 2007).[23] The mechanism that creates these predicate-object constructions is usually referred to as *pseudo-incorporation* (a.k.a. *semantic incorporation*, or *NP-incorporation*). Taking a look at a few cases, and the evident parallel between them and PIPP DOs, we see that a common analysis is ideal.

Examining the Austronesian language Tongan first, we observe that the sentences in (52) include a direct object despite that the subject is absolutive marked (not ergative as would be expected if the sentences were transitive, as in (52c)); the sentence is effectively marked intransitive despite the presence of the object (similar to antipassive constructions in other languages). Ball (2005) explains that determiners and case markers are banned from DO position in this construction. Similar to the English examples, the object is not necessarily bare, despite the absence of case-marking and determiners, but can be modified with adjectives such as 'new' in (52a), or conjoined with another noun, in (52b).

Tongan

(52) a. Na'e ta: ki:ta: fo'ou 'a Sione.
PAST hit guitar new ABS (name)
'Sione played a new guitar.'

b. Na'e to: manioke mo e talo 'a Sione.
PAST plant cassava and taro ABS (name)
'Sione planted cassava and taro too.

c. Na'e to: 'a e manioke 'e Sione.
PAST plant ABS DET cassava ERG (name)
'Sione planted the cassava.

(Ball 2005:21,23)

Also as in English, Ball reports that modifiers are restricted to one side of the noun, post-nominal position, despite that some adjectives can appear on either side of other non-incorporated nouns

[23] There are a number of interesting issues regarding these 'incorporated' objects that differ from language to language but that are beyond the scope of this paper to address. For one, some languages do not allow case morphology on these objects (Tongan, Nez Perce, Turkish), while others allow a range of case morphemes (Hungarian), and still others have a special case morpheme for incorporated objects (West Greenlandic, Inuktitut). Languages also vary with regards to 'discourse opacity,' that is, the ability to support discourse anaphora (Mithun, 1984, Dayal 1999, 2007, Farkas & de Swart 2004). While the restricted object can serve as antecedent to a later anaphor in some languages (West Greenlandic, Chamorro, English, and bare plurals in Hindi and Hungarian (though not bare singulars)), but reportedly cannot in others (bare singulars in Hindi and Hungarian). These topics are well deserving of future cross-linguistic examination.

(with a difference in interpretation), and that these objects cannot scramble. The adjective restriction is demonstrated in (53) – pre-nominal *ki'i* 'small' is possible with the non-incorporated object in (53a), but not in (53b) when the object *manioke* 'cassava' is incorporated (cued by the absolutive case marking on the subject). Post-nominal *iiki* 'small (amount)' is fine with the incorporated object, however, in (53c):

(53) a. Na'e to: 'e Sione 'ene *ki'i* manioke.
PAST plant ERG (name) his small cassava
'Sione planted his small amount of cassava.'
b. *Na'e to: *ki'i* manioke 'a Sione.
PAST plant small cassava ABS (name)
Intended: 'Sione planted a small amount of cassava.'
c. Na'e to: manioke *iiki* 'a Sione.
PAST plant cassava small ABS (name)
'Sione planted a small amount of cassava.'
(Ball 2005:44-45)

We find a comparable situation in Chol (of the Mayan language family) – determiners are illicit with the DO in this VOS order (shown in (43b)), as well as proper names, emphatic pronouns, and possessives, though modifiers are still possible (as in English, and Tongan).

Chol
(54) a. tyi i-kuchu si' winik
PERF 3E-carry wood man
'The man carried wood.'
b. *tyi i-kuchu jini si' winik
PERF 3E-carry DET wood man
'The man carried the wood.'
c. tyi i-tsepe kabäl koya' jini xk'aläl
PERF 3E-cut many tomato DET girl
'The girl cut a lot of tomatoes.'
(Coon 2006:1-2, 7)

Next, although case marking is usually obligatory on animate DPs in Hindi, it is not present on indefinites that show the same scopal inertness as discussed for English in section 1.2.5, demonstrated by the contrast between (55b) and (55c) (note that in (55a) dropping the case marker *ko* from *har bacca* 'every child' is ungrammatical):

Hindi
(55) a. anu *har bacca/ har bacce-ko sambhaalegii
Anu every child every child-ACC will-look-after
'Anu will look after every child' (typical sentence)
b. anu bacca nahii samhaalegii Neg > ∃, *∃ > Neg.
Anu child not will-look-after
'Anu will not look after children'

c. anu ek bacce-ko nahii samhaalegii Neg > ∃, ∃ > Neg.
Anu one child-ACC not will-look-after
'Anu will not look after a particular child'
(Dayal 2007:3)

As a final example, when the DO in Inuktitut appears with special 'modularis' case, this object becomes a scopeless indefinite, even when this object is a proper name. Note that the predicate is marked as intransitive in (56b), when the DO has 'modularis' case.

(South Baffin) Inuktitut
(56) a. Tuglasi taku-lauq-t-a-ra
Douglas see-PAST-PART-TRANS-1SERG.3SABS
'I saw Douglas'
b. Ippaksak Tuglasi-mik taku-lauq-t-u-nga
yesterday Douglas-MOD see-PAST-PART-INTRANS-1SABS
'Yesterday, I saw someone named Douglas ("a Douglas")'
(Wharram 2003)

The Inuktitut pseudo-incorporated DO in (56b) is argued by Wharram to be licensed by a certain morpheme which attaches to the verb, taking it from a predicate taking an individual (type *e*) as its first argument, to one that takes instead a property of type <*et*>. Similar examples from West Greenlandic that include an overt antipassive morpheme (bolded in (57b)) are given in (57):

West Greenlandic
(57) a. illuigaq qimap-pa-a
hunting.hut leave-TRANS.INDIC-3SGERG/3SGABS
He left a hunting hut
b. illuikka-mik qimat-**si**-vu-q
hunting.hut-MOD leave-ANTIP-INTRANS.INDIC-3SGABS
He left a hunting hut
(Bittner 1987, ex. 80)

In both Inuktitut and West Greenlandic the morphology on the antipassive verb is intransitive, agreeing only with the subject, whereas the non-antipassive form is transitive and agrees with both subject and object.

3.1.2 Combining Predicates with Properties

The semantic analyses proposed by these researchers are for the most part in agreement: they argue that the non-specific indefinite DOs in the above constructions are interpreted as properties of type <*et*> (not as arguments of type *e*) – often claimed to be the basic type of bare-NPs.[24] The predicate combines with this property, to yield the same predicate but with a

[24] Chierchia (1998) argues that languages differ with regards to the lexically-coded type of their nouns. English, in his theory, has both nouns of the argument type (mass nouns, and kinds), and those of the property-type (those that aren't mass nouns or kinds). Most of the English nouns we have discussed so far fall into the property-type NP

restricted domain. Where analyses differ is at what level of representation, or by what mechanism individual-taking predicates are shifted to their property-taking counterparts. Dayal (2003), van Geenhoven (1998), and Ball (2005) each propose a lexical rule for pseudo-incorporating verb creation; however, the English construction displays a productivity that is not typical for purely lexical phenomena, rendering this approach suspect.[25]

Two other promising proposals have been made in recent pseudo-incorporation literature, one for a new rule of semantic composition (Chung & Ladusaw 2004), and another for a new morpheme (Wharram 2003, Deal 2007). A major difficulty that arises in trying to find support for either of these approaches is that in most of the pseudo-incorporating languages researched to date, there is no overt 'signal' for when the predicate is to be combined with a property in place of an individual – that is, pseudo-incorporation appears to be a rather silent process. If the mechanism at work is indeed a rule of semantic composition such as *Restrict*,[26] (that proposed by Chung & Ladusaw), then we would want to investigate whether this rule is available in all languages, and what other constructions we might predict it to play a role in interpreting.

As for the new morpheme proposal, one researcher, Wharram (2003), has claimed that the predicate's property-taking 'signal' is not silent, but is in fact overtly realized as antipassive morphology in West Greenlandic; Wharram gives this morpheme the semantics in (58):

(58) ANTIP[27]
$\lambda P_{<e,<s,t>>} \lambda Q_{<e,t>} \lambda e . \exists x. P(x)(e) \& Q(x)$
(Wharram 2003)

ANTIP in (58) takes first a regular intransitive predicate, then a property, and introduces an existentially closed variable for which both the predicate and the property are true. I would like to claim, then, following Wharram (2003) for Inuktitut and West Greenlandic, and Deal (2007) for Nez Perce,[28] that such an ANTIP morpheme is present in English PIPPs as well. Ignoring for the moment the PP, an implementation of ANTIP in one of the PIPP examples from above is derived partially in (59):

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category, and those that don't are easily type-shifted by 'Derived Kind Predication' to allow for the kind of combination soon to come. Chierchia's theory is not problematic for this account.

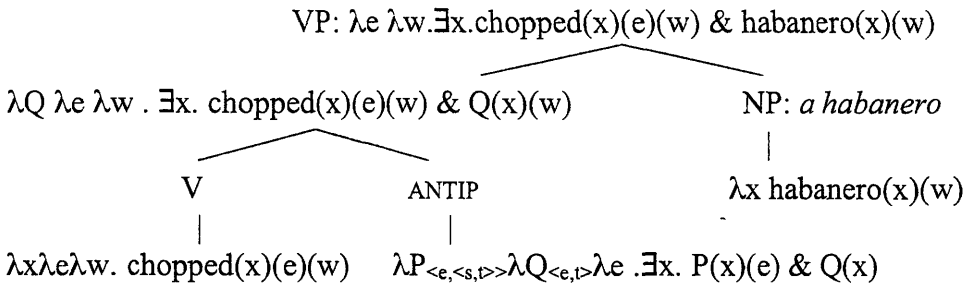
[25] In contrast, Dayal (2003) explains that Hindi pseudo-incorporation can only occur with verb-argument pairs that are "appropriately classificatory" (i.e., have some relative cultural frequency as a typical activity), a restriction which she argues is best defined in the lexical semantics of the predicate.

[26] The *Restrict* operation interprets the NP-property *p* as a restrictive modifier of the predicate, yielding the original function (defined by the predicate) with its domain restricted to the subdomain of elements that have the property *p* (Chung & Ladusaw 2004:5).

[27] See Deal (2007) for reasons why this morpheme needs to be modalized by an accessibility relation to possible worlds. I have not implemented her modifications here only for simplicity of exposition.

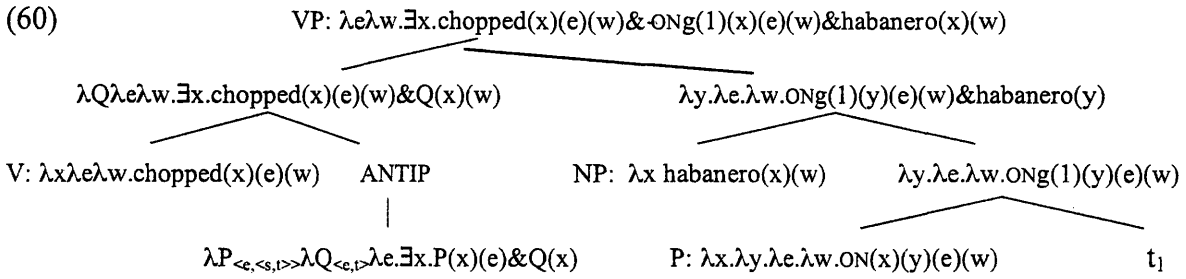
[28] Deal (2007) actually makes the stronger claim that an ANTIP morpheme as in (58) is present in all constructions (cross-linguistically) which involve a predicate taking a property as internal argument. I discuss Deal's analysis in section 3.2.2.

(59) *chopped* ANTIP *a habanero*



Recall now that I argued above for a 'cascade' syntax for the direct object and PP, in the spirit of Pesetsky (1995), so that the verb doesn't directly take the direct object as complement, but a PP small clause of sorts with the direct object in its specifier. Adapting (59) to the syntax we already posited, we get (60):

(60)



In this derivation the direct object and the rest of the PP can combine by predicate modification given that they are both property-type functions. This complex property can then still combine with the V+ANTIP phrase in the same manner as above in (59), existentially closing the object argument. It is worth pointing out that a number of structures matching the configuration in (60) can participate in the PIPP construction, including certain complex NPs and AdjPs as in (61):

(61) a. Noam Chomsky has been written a dozen books about over the years.
(from the complex NP *a dozen books about Noam Chomsky*)
b. Elliot was painted a portrait of.
(from the complex NP *a portrait of Elliot*)
c. No one likes being felt sorry for.
(from the AdjP-small clause *sorry for no one*)

The sentences in (61) satisfy the PIPP semantics by being interpretable as complex properties, while still satisfying the syntax by containing an embedded nominal that has the appropriate φ-features to serve as goal to T above, and raise to check T's EPP. The admissibility of sentences like (61a-c) is a welcome observation, then, and lends support to the analysis being presented.

Finally, we can come back to the curious facts we observed above regarding PIPP DO extraction: once the PIPP predicate has combined with ANTIP, it can no longer combine with an individual argument of type *e*, but must take a property. But the semantic framework in use above, namely along the lines of Heim & Kratzer (1998), holds that traces are interpreted as type

e. If this is correct, then any attempt to extract the NP-property will cause a type mismatch, fatal to the derivation.

3.2 ...OF NON-SPECIFIC OBJECTS IN OTHER CONSTRUCTIONS

We saw just above that property-type objects are reported to exist in a wide variety of languages and language families. Do we have evidence for these objects elsewhere in English apart from these PIPPs? If the mechanism that allows property-type objects to combine with verbs is indeed a morpheme such as ANTIP, or a semantic composition rule like *Restrict*, then we should expect to find this mechanism at work in more constructions than just PIPPs. Sure enough, there are at least two other constructions in English that have been argued to involve property objects: existential sentences, and those involving intensional verbs on their opaque readings of the object. I come to these each in turn.[29]

3.2.1 Existential-*There*

Existential sentences in English characteristically take the form in (62a), alternating with the non-existential construction in (62b):

(62) a. *There* be NOMINAL PREDICATE.
b. NOMINAL be PREDICATE.

That is, the subject position of the existential is occupied by the expletive *there* while a nominal which would otherwise be subject in the non-existential form remains low in the sentence, to the right of *be* (or certain unaccusative predicates); these sentences typically assert the existence of the nominal at a particular time, place, or in general, hence the term *existential*. An example is given in (63a) and its non-existential counterpart in (63b):

(63) a. There are some sharks in my swimming pool.
b. Some sharks are in my swimming pool.

Milsark (1974) made two important observations regarding the nominals (or rather the determiners that head these nominals) that can appear in existential sentences, and the kinds of predicate these nominals can be predicated of. The first of these observations is that there is a definiteness restriction on the object of existentials – *weak* determiners (such as *some*, *several*,

[29] If the researchers who argue for property-type objects in existentials and intensional situations (McNally 1992, Zimmermann 1992, McNally&van Geenhoven 2005, Deal 2007) are correct, then one obvious potential solution to the difference between PIPP-speakers and non-PIPP-speakers is quashed. Namely, we cannot simply stipulate that the grammar of PIPP-speakers includes this morpheme/semantic rule for combining verbs and objects of type <*et*>, and that most other English speakers do not have this mechanism. Something else must underly the divergence between these two grammars. Another possible solution could be to argue that only PIPP-speakers can use this particular morpheme/semantic rule productively with non-intentional/existential verbs. This is also rejected since this would predict that all English speakers would accept PIPPs formed from intensional verbs and their objects, as in (i). This does not fall-out, however, as (i) is judged just as ungrammatical by non-PIPP speakers as the other PIPPs in this paper (while it is fine for PIPP speakers).

(i) a. The sick child was sought a surgeon for.

no, *a*), as Milsark terms them, are valid heads of nominals in this position, while *strong* determiners (such as *every*, *the*, *both*, *most*, and possessive pronouns) cannot appear here. This *strong-weak* determiner contrast is demonstrated in (64) vs. (65):

(64) a. There are *some* sharks in my swimming pool.
b. There is *a shark* in my swimming pool.
c. There are *several* sharks in my swimming pool.
d. There are *at least five* sharks in my swimming pool.

(65) a. *There is *every* shark in my swimming pool.
b. *There are *most* sharks in my swimming pool.
c. *There is *her* shark in my swimming pool.
d. *There are *both* sharks in my swimming pool.

This pattern is suspiciously reminiscent of the determiner restriction discussed at length for PIPP direct objects above, and a number of researchers have argued similarly that the restricted nominals in existential-*there* sentences are properties, not individuals (McNally 1992, 1998; Dobrovie-Sorin 1997). I will briefly point out, however, some additional similarities.

The second of Milsark's observations is that not all predicates can follow the existential nominal; the generalization is that predicates that can are temporally bounded, or *stage-level* predicates, while those that cannot are permanent properties, or *individual-level* ones (in the sense of Carlson 1977). This distinction is given in (66):

(66) a. There are sharks *available.*
b. *There are sharks *cold-blooded.*

Although this fact does not relate immediately to what we have discussed so far for English PIPP direct objects, Farkas & de Swart (2003) make a similar observation for semantically incorporated arguments in Hungarian.

In Hungarian, what Farkas & de Swart call semantically incorporated nominals occur in a particular position linearly to the left of a predicate. They argue that this is the same position that hosts other items such as verbal particles and focus marked constituents, referred to as the PredOp position in Szabolcsi (1997). Crucially, full DPs, which are usually preceded by a determiner, typically occur post-verbally in sentences involving infinitival complements, as in (67a), whereas bare nominals, which necessarily lack determiners, occur before both the predicate and infinitival complement, in the PredOp position, shown in (67b):

(67) a. Mari fog/akar olvasni *egy verset*
Mari will/want read.Inf a poem.Acc
"Mari will/wants (to) read a poem."
b. Mari *verset* fog/akar olvasni
Mari poem.Acc will/want read.Inf
"Mari will/wants (to) read a poem/poems/poetry."
(Farkas & de Swart 2003:92-3)

Farkas & de Swart explain that Hungarian incorporated nominals are not restricted to being direct objects, as is reported for West Greenlandic and other languages. Subjects can also on occasion incorporate, as in the bare singular *gyerek* 'child' in (68a). As with English existential sentences, these incorporated subjects are only possible with stage-level predicates and not with individual-level ones, demonstrated by the ungrammaticality of (68b):

(68) a. Gyerek sírt a kozelben
child cry.Past the vicinity.in
"A child/children was/were crying in the vicinity."
b. *Gyerek okos
child clever
"A child/children is/are clever"
(Farkas & de Swart 2003:10)

Although it's beyond the scope of this paper to explain the distribution of predicates in existential constructions, the analysis of Dobrovie-Sorin (1997) is worth mentioning briefly for its relevance to the current and earlier discussions. On Dobrovie-Sorin's account, only those predicates that can type-shift to take property arguments will allow existential readings for bare plurals, taken to be type *<et>* properties.[30] Again, this is very reminiscent of the proposals discussed above for pseudo-incorporation across languages, and a common mechanism for both English constructions is highly favourable.

A last property of existential NPs that has been observed more recently by Musan (1993, 1996) is their *temporal dependence* on the situation time of the sentence's predicate. In Musan's work, an NP is *temporally dependent* when the time of the situation denoted by the N' has to intersect with the time of the situation denoted by the main predicate of the clause. An NP is *temporally independent* when there is a reading available where the time of the situation denoted by the N' does not intersect with the main predicate of the clause (Musan 1995, 1996). This is exemplified in (69):

(69) a. Many fugitives are now in jail.
b. There are now many fugitives in jail.

The nominal *many fugitives* in (69a) can be interpreted as former fugitives who are now in jail (and no longer present fugitives); the time span at which the individuals were fugitives does not coincide with the time when they are in jail (on the most natural reading), so *many fugitives* is temporally independent. *Many fugitives* in (69b), however, can only mean that current fugitives are in jail, indicating that *many fugitives* in this position is temporally dependent. To make sense of (69b) listeners tend to imagine a scenario in which the individuals in jail are simultaneously fugitives from some other jail, country, etc. The important point is that the reading on which

[30] "Those predicates that can type-shift" in Dobrovie-Sorin's proposal means those that can existentially bind one or more of their argument positions, which she argues is restricted to predicates which have an argument that is space-localized. Some predicates space-localize their arguments on their own, while others' arguments can be space-localized by another, prepositional-phrase argument. Her account is focused primarily on the existential interpretations of bare plurals in subject and existential-*there* constructions. Although the analysis is extended to explain the different behaviours between bare plurals and other indefinites, the extension is not entirely compatible with my proposal herein and I leave it for future research to see if the two approaches can be reconciled.

fugitives and *in jail* are true of the individuals at distinct intervals is available in (69a) but not in (69b), which is an existential construction.

When we try similar examples with PIPP direct objects, in (70), we observe the same pattern (the PIPP sentences are contrasted with non-PIPP variants in the letter-prime examples):

(70) a. That jail is kept many fugitives in now.
a'. They keep many fugitives in that jail now.
b. Elliot was introduced (many) good professors to in the sixties, but none of them remember him now... #that they're faculty.
b'. I introduced many good professors to Elliot in the sixties, but none of them remember him now that they're faculty.
c. ?The ambulance being transported two victims in was T-boned on its way to the hospital.
c'. The paramedics transported two victims in the ambulance.

As in (69), the NPs in the non-prime examples of (70) can only be temporally interpreted as holding at the situation time of the main predicate: *fugitives* in (70a) can only be fugitives from somewhere else; *professors* in (70b) must have been professors in the sixties also (so the continuation in (70b') is contradictory); *victims* in (70c) must have been victims previous to the T-boning (i.e. during the transporting). Temporally independent readings of the direct objects seem to be available for all the prime (non-PIPP) examples in (70).

Summarizing what we have just discussed, the nominals in existential sentences match those in PIPP direct object position and pseudo-incorporated NPs cross-linguistically on a number of characteristics: neither can take strong determiners or have specific interpretations, neither can be predicated of individual level adjectives,[31] and finally neither can have a temporal interpretation independent from that of the main predicate. Given these similarities (both in English and cross-linguistically), it is highly desirable to posit a common analysis for the nominals in both constructions: namely, that semantically these nominals are properties of type <*et*>, and syntactically they are lacking a D-level that houses EPP-checking D-features, strong determiners, and specificity. The next section reviews another case of previously claimed property-type arguments in English, namely oblique objects of intensional verbs.

3.2.2 Intensional Verbs and Opacity

Indefinite objects of intensional 'verbs of absence', such as *want*, *look for*, *search for*, *seek*, etc. are well known to have two readings in English. Take for example *a piñata* in (71):

(71) I want a dinosaur piñata for my birthday party.
a. There is a (particular) dinosaur piñata that I want for my birthday party.
b. I want a dinosaur piñata for my birthday party, any dinosaur piñata will do.

On one interpretation, that in (71a), the subject has a specific piñata in mind and for all the possible worlds compatible with my desires, I get that particular dinosaur piñata. This reading necessarily presupposes the existence of a dinosaur piñata in the actual world (unless the subject

[31] This is a separate issue from what kinds of adjectives can modify these nominals directly, however.

is delusional). The reading in (71b), however, can be true despite that there may be no dinosaur piñatas in the real world – that is, the indefinite scopes below the modality introduced by the intensional predicate *want*.

Another property known to differentiate these two interpretations is whether they permit substitution: on the specific piñata, or *transparent* reading, we can substitute an extensionally equivalent noun for *a dinosaur piñata* and truth is preserved whereas the same is not true when the indefinite is understood as non-specific, or *opaque*. Let's say that there's a store specializing in dinosaur piñatas and that the particular one I want for my party was made by David. Instead of (71) I can utter (72) and the sentence is still true on this transparent meaning of the indefinite.

(72) I want a piñata made by David.

The truth of (72) is not guaranteed by the truth of (71), however, when the indefinite is understood opaquely/non-specifically, even if in the evaluation world all the dinosaur piñatas are also made by David; there will likely be possible worlds where my desires of having a piñata made by David are met but where these piñatas aren't dinosaurs.

Here, again, researchers beginning with Zimmerman (1992) have argued that the type of object that combines with the predicate, individual versus property, is what sets apart indefinites on their transparent and opaque readings (van Geenhoven & McNally 2005, Deal 2007). Property-type complements yield opaque readings since they contribute no existential force of there own, while individual type *e* and quantified type *<<et>t>* complements are understood transparently. This result does not fall out from the property vs. individual distinction alone, however, but from the interaction between complement type and the lexical semantics of intensional (vs. extensional) predicates themselves. Put differently, van Geenhoven & McNally 2005 and Deal 2007 (although not Zimmerman 1992) maintain that non-specific objects, characterized by their narrow-scope, non-referentiallity, and special morpho-syntax in some languages, are always interpreted as properties, in both intensional and extensional conditions – it is the extra modal embedding of intensional verbs that causes non-specific/property objects to lack existential presuppositions or substitutability, providing us a semantic environment to more tangibly pull the two complement types apart.

In support of this theory, Deal observes that those languages that distinguish specific versus non-specific complements "do so the same way in intensional contexts and in extensional contexts" (Deal 2007:10). When the morpho-syntactically marked non-specific object complements an intensional verb, the opaque reading surfaces. The following examples from Nez Perce demonstrate this (non-specific objects are signaled by the absence of both object agreement on the verb and case on subject and object (Deal 2007:4)):

(73) Intensional context: properties vs. individuals

a. 'e-'péew'i-se cíiciyele picpíc-ne
3OBJ-seek-INC purple cat-OBJ
I'm looking for a purple cat
Comment: (surprised) "There's a cat out there that is purple and you're looking for it"

b. 'ipéew'i-se cíiciyele picpic
seek-INC purple cat
I'm looking for a purple cat [non-specific]

(74) Extensional context: same behavior
a. Caan-nim paa-'yaaq-na inii-ne
John-SUBJ 3/3-find-PERF house-OBJ
John found a house
Context: One house in Lewiston is red, and yesterday, John found that house.
b. Caan hi-'yaaq-na iniit
John 3SUBJ-find-PERF house
John found a house
Same context; comment: "It's not referring to the red house or anything, it's just he just found a house that he's been looking for."
(Deal 2007:10)

Another point of support comes from the observation that quantified objects like *each comic book* in (75), which cannot combine as properties of type <*et*>, cannot be interpreted opaquely.

(75) Alain is seeking each comic book.
(van Geenhoven & McNally 2005: 888)

The utterance in (75) would be false if we discovered that there don't exist any comic books.

Lastly, coming back to our PIPP constructions, these can be constructed with intensional predicates also, and as expected the object can only be understood opaquely:

(76) The sick child was sought a doctor for.
a. Someone looked for a doctor (for the sick child), though there may not be one.
b. #There's a particular doctor that was sought (for the sick child).

On van Geenhoven & McNally's account, most predicates have two forms in the lexicon – one that takes an individual as argument, and another that takes a property, the latter which following van Geenhoven 1998, they call semantic incorporation. For example, the intensional predicate *look for* will have the two denotations in (77):[32]

(77) a. look for ⇨ $\lambda w\, \lambda y\, \lambda x$ (***look for*** $_w(x, y)$)
where ***look for*** $_w(x, y) = 1$ iff in the world of evaluation w there is an individual x and an individual y such that x is trying in w to bring it about that, in some world w', x finds y in w'.
b. look for ⇨ $\lambda P\, \lambda w\, \lambda x$ (***look for*** $_w(x, P)$)
where ***look for*** $_w(x, P) = 1$ iff in the world of evaluation w an individual x is trying in w to bring it about that there is an individual y in world w' which x finds in w' and which is P in w'.

[32] Van Geenhoven & McNally do not press that both of these denotations exist in the lexicon as base forms, but allow that the opaque form may be derived from the transparent form by a productive lexical rule, or that a semantic rule such as Chung & Ladusaw's (2004) *Restrict* (discussed above) might apply in at LF to join the transparent form with a property-type complement (p.896). Deal (2007) gives sound reasoning against the viability of *Restrict* or any other semantic/pseudo-incorporation mechanism that ends up existentially quantifying the property-object outside of the modality introduced by intensional predicates, which I discuss below.

(van Geenhoven & McNally 2005:896,898)

By the denotation of the semantically embedding *look for* in (77b), the individual that *x* finds needs only to exist in some modally accessible world *w'* to make an utterance true, and not in the actual world.

Deal (2007), while concurring with van Geenhoven & McNally that opaque complements result from property-type objects combining with intensional predicates, takes a different approach to the syntactico-semantic machinery that permits this combination. Instead of positing two distinct verb forms, or a lexical rule that creates one from the other, Deal follows Wharram (2003) in assigning the job of turning an individual-taking predicate into a property-taking one to a morpheme, ANTIP. Wharram's denotation of ANTIP, seen above and repeated in (78) (with world arguments made explicit), yields wrong results, however, in just these intensional contexts.

(78) ANTIP
$\lambda P_{<e,<s,wt>>} \lambda Q_{<e,wt>} \lambda e . \exists x. P(x)(e)(w) \& Q(x)(w)$
(Deal 2007:11)

Assuming a denotation for *look for* as in (79), Deal explains:

(79) $\lambda x \lambda e \lambda w.$ *search*$(e)(w) \& \forall w'$ where search is successful: *find*$(x)(e)(w')$
A denotation like this for 'look for' or 'seek' would tell us that whenever an individual α is looked for, the worlds where the search is successful have α being found. Since α is an individual, we have gotten the specific reading of 'look for': we turn to ANTIP to build the non-specific reading. But when we put an intensional verb like this one together with ANTIP [(78)], a non-specific reading is not what we get. The $\exists$ quantifier introduced by ANTIP will necessarily fall outside the quantification over worlds introduced by the verb root, and so in spite of ourselves, we end up being committed to the same sought object existing in all search worlds.
(Deal 2007:11)

Deal's solution, then, is to modalize the ANTIP morpheme itself. She modifies Wharram's original morpheme as follows:

(80) Modalized ANTIP
$\lambda P_{<e,<s,wt>>} \lambda Q_{<e,wt>} \lambda e \lambda w. \forall w'$ compatible with intent(e) in w: $\exists x.Q(x)(w') \& P(x)(e)(w')$
(Deal 2007: 13)

The morpheme in (80) combines with a verb root to yield a predicate that takes a property argument, and situates the event described by the verb with respect to a set of possible worlds where the intentions of the event are met. Existential closure of the object variable occurs within this modal embedding, circumventing the problem explained above with Wharram's original formulation. She argues that the modal notion of intent is retrieved from the event itself: "when one intends something of an action, one hopes the world will be a certain way as a result of that action. This way the world will be is modeled as a possible world set, a set of teleological alternatives. Teleological alternatives are referenced in language when we use the verbs *intend* or *plan*, and when we talk about purposes and rationales" (Deal 2007:14). Bittner (1987)

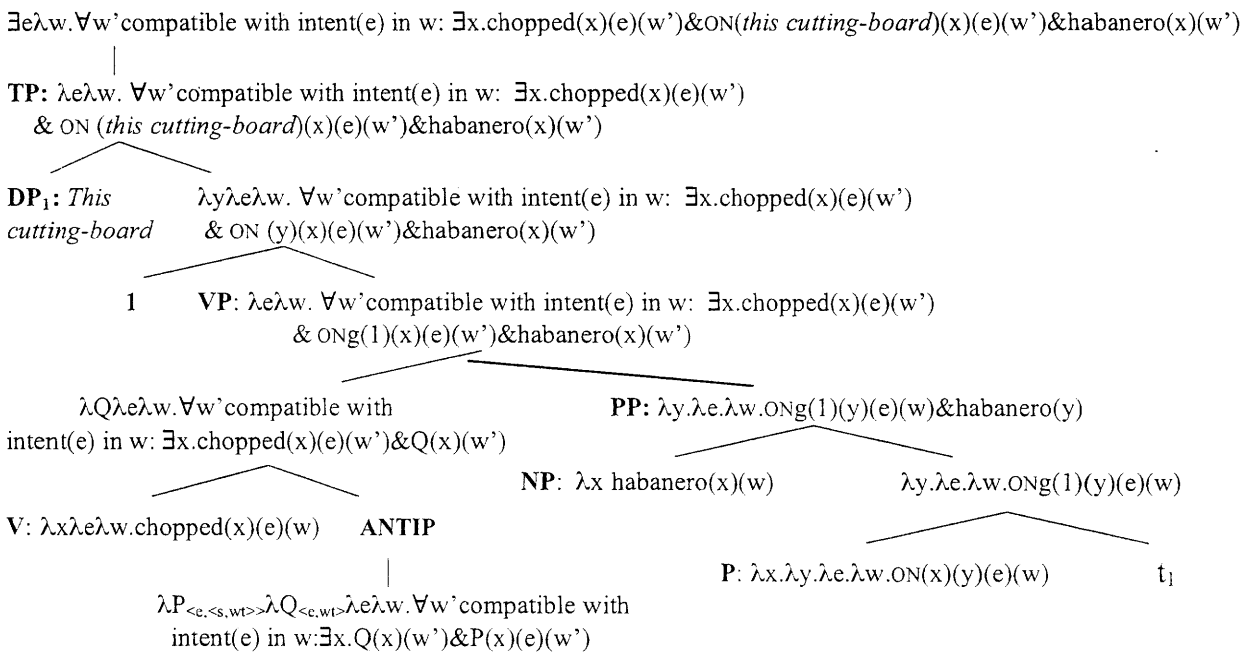
observes an interesting difference in West Greenlandic between objects of verbs with and without ANTIP, Deal notes, that supports a modal aspect to the ANTIP morpheme: while (81a) (without ANTIP) states that the agent left an actual hunting hut, (81b) (with ANTIP) says that he left something he *used* as a hunting hut, though maybe not a hunting hut proper.

(81) a. illuigaq qimap-pa-a
hunting.hut leave-TRANS.INDIC-3SGERG/3SGABS
He left a hunting hut
b. illuikka-mik qimat-si-vu-q
hunting.hut-MOD leave-ANTIP-INTRANS.INDIC-3SGABS
He left a hunting hut
(Bittner 1987, ex. 80)

Bittner takes this difference as evidence that "in [West Greenlandic], all antipassive predicates are world-creating, even if their transitive counterparts denote purely extensional predicates" (Bittner 1987: 225).

Adopting, therefore, Deal's modalized ANTIP together with the syntactic structure we saw above, we get the following proposal for PIPP syntax and semantics (neglecting to include verb movement, or semantically vacuous syntactic projections):

(82) *This cutting-board was chopped habenero on.*



Beginning with the PP, P takes the trace of *this cutting-board* as its first argument, the latter which has raised up to greener case pastures (since syntactically P is unvalued for tense features). The resulting function, a property of type <*e*<*s*<*wt*>>> (once we've added the event and world arguments), combines with the NP *habanero* by predicate modification, yielding a slightly more complex property to combine with the V+ANTIP head. The verb itself combines with the ANTIP

head to become now a function suitable to apply to the property PP. Once V+ANTIP combines with the PP, we have a function (VP) that (once given a world and event argument) says for all worlds compatible with the intent of the event being described, there is individual x that is a habanero in that intent world, and is *on* the referent of 1 in that intent world. As the DP *this cutting-board* comes to re-merge with the structure, the composition of its index with VP is interpreted by predicate abstraction, returning a function that once again takes an individual argument. This function applies to DP, the event argument is existentially closed, and we interpret the sentence finally as true if there is an event such that for all worlds compatible with the intent of that event (in the world of evaluation, typically our world), there is an individual that is a habanero in that world, and that is chopped on this cutting-board in that world. This account unfortunately neglects the semantic nuances of the passive construction, namely that the subject is understood as somehow affected by this chopping, as well as the contributions of tense, aspect, etc.

CHAPTER 4 – CONCLUSIONS

4.1 SUMMARY

In this paper I argued that PIPP direct objects are truncated NPs, missing D-level structure, and as such they must combine somehow with V as properties of type *<et>*. To allow this combination, a silent morpheme ANTIP adjoins to the verb root. As a result however, PIPP DOs cannot be extracted, since their type *e* trace would cause a type mismatch with the newly created V-ANTIP predicate. As NPs, the DO cannot satisfy the EPP, and the PP-object is raised to subject in its place, creating in effect a structure that is both passive (the subject is "suppressed") and antipassive (the theme is also "suppressed" in a certain sense). Along the way it was necessary to give a modernized account of pseudopassives, and possibly of complex predicates more generally: I posited that the intuitive cohesiveness of V and P in pseudopassives (i.e., the sense that they form one predicate) lies in the syntactic sharing of a common T-value. As both V and P are lexically unvalued for T, they both depend on a higher T-valued projection to form a proper predicate.

4.2 REMAINING QUESTIONS

As anticipated, many questions have been raised throughout this thesis without any accompanying solutions. The most obvious puzzle this thesis raises is what separates the grammars of those English speakers who can create PIPPs productively, versus those who only accept idiom-PIPPs if any at all. One suggestion (from Norvin Richards, p.c.) is that although all English speakers have non-specific, *<et>* objects to make use of in existential-*there* and intensional contexts, PIPP-objects are even more radically reduced. That is, if we understand D-level structure in nominals to be split into several different functional projects (as argued by Aboh 2004, Cable 2007, amongst others), PIPP-objects may necessarily lack more of these projections than non-specific objects in other contexts; some speakers' grammars may not allow such reduced NPs in an argument position. A starting point to investigating this option would be to examine more thoroughly the differences between PIPP-objects and non-specific objects in more widely accepted contexts. Right off the bat we would observe that while PIPP-objects do not support relative clause modification, relative clauses are often fine with existential and intensional sentences.

Another possibility involves the prosody-syntax interface: those speakers that allow PIPPs might allow Case-checking (uninterpretable T-feature valuation in the P&T framework we discussed above) of the direct object by prosodic means. Other speakers whose grammars cannot satisfy Case in this manner understand PIPPs as ungrammatical due to the unlicenced object. This prosodic case checking as been proposed by Siloni 2001 to account for Semitic construct state constructions, where she argues that the syntactically and prosodically reduced head-noun checks Case by inhabiting the same prosodic domain as the adjacent full-structure/Case-marked DP. A number of similarities between PIPP-objects and construct-state head-nouns suggest that this path might be worth pursuing: neither can support definite determiners, both are argued to have a deficient set of φ-features, and both occur necessarily

adjacent to a supporting predicate (the Case-marked DP in the construct state, and V in the case of PIPPs).

Another important question is raised by the semantic mechanism adopted to join PIPP objects (the complement PP really) with the predicate: can we find syntactic evidence for a silent ANTIP morpheme in English? I have no leads on a solution to this question unfortunately, but future research on pseudo-incorporation must certainly devote some effort to finding support either for such a morpheme, or for a semantic operation such as *Restrict*, or the lexical ones proposed in Dayal, van Geenhoven, etc.

Finally, as mentioned previously, the fact that PIPP-objects are necessarily reduced, non-specific, D-less structures makes it an uncannily helpful construction for probing a number of questions regarding the correlation of syntactic structure with semantic interpretation. Future work might examine the connection of D-structure to the availability/absence of stage-level, restrictive, and other adjective interpretations. If these readings are dependent on relative clause modification underlyingly, it would be interesting to understand why. Cross-linguistic data on what kinds of modification are possible with pseudo-incorporated objects could also help to understand these structure-meaning correlations more thoroughly. All other questions that have not been adequately answered herein, or even raised, must await future research.

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