

Nouns, Verbs, and Verbal Nouns: Their Structures and their Structural Cases^{*}

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1. Introduction: What is the noun-verb distinction about?

One much-discussed question concerning the noun-verb distinction from a crosslinguistic, typological perspective is whether this distinction is continuous or discrete. Not surprisingly given their general commitments and styles of analysis, functionalist theorists have tended to see it as continuous (Bhat, 1994, Dixon, 1982, Hengeveld, 1992, Stassen, 1997, Wetzler, 1996), whereas formal generative linguists have seen it as discrete (Baker, 2003, Chomsky, 1970). However, it seems like this should be a relatively straightforward empirical question. One might wonder then, trying to put prejudices aside, why there has been so much disagreement about it.

Considering the matter again, it seems clearer to me than ever that this is probably not such a straightforward empirical question after all. Rather, the answer depends on what we mean by the terms “noun” and “verb”, and that is largely a conceptual matter. Indeed, there are at least three distinct linguistic units that the question might reasonably be about, as listed in (1).

- (1) Whether the noun-verb distinction is discrete or continuous could concern:
 - a. morphemes: single lexical units that may or may not get grouped into larger words
 - b. words: potentially inflected units that are “complete”, that can “stand on their own”
 - c. the atoms in a syntactic representation, the “leaves” in a generative tree

These different units are of course closely interrelated in various ways. For example, words are built out of morphemes, and sometimes a word consists of a single morpheme in relatively uninflected languages like English. Moreover, either words or morphemes are the units of syntactic representation for most theories. But this interrelatedness does not imply that the distinctions are unimportant. On the contrary, it means that we have to be particularly careful to be clear what we are talking about, or we run the risk of confusion and talking past one another. The famous controversies surrounding the noun-verb distinction in Southern Wakashan languages, discussed and partially untangled by Braithwaite (this volume), are a good case in point.

My own research on these matters to date (Baker, 2003, Baker, 2008) has focused unabashedly on (1c). I have claimed that syntactic representation makes a discrete distinction between noun and verb—indeed, it makes a ternary distinction of noun, verb, and adjective. My research also suggests that words ((1b)) are not very significant units for theoretical discussion. Whole words are often complexes of different elements (morphemes), each of which has its own well-defined properties, but the properties of the whole need not be well-defined or particularly coherent. They could be a mishmash of the properties of the component parts. Finally, this body of work is largely agnostic about the morphological units (roots) mentioned in (1a). It could well be that root morphemes map onto discrete syntactic atoms in ways compatible with their lexical

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meanings in a manner that is continuous, probabilistic, and functional. The result could be different amounts of “category conversion” between verbs and nouns in different languages.

For example, the root *fish* in English can be used either as a noun or a verb (*I caught a fish, I will fish tomorrow*). When it is used as a noun, it has all the properties of a noun: it can be plural, it can have quantifiers and determiners, it can be the argument of a verb, it cannot be a predicate without a copular particle (see (6c) below), it cannot bear tense marking, and so on. When it is used as a verb, it has all the properties of a verb, which are essentially the opposite list of properties. It is never used in a way where it has half of the properties of one category and half of the properties of the other in the same structure. I take this to indicate that the noun-verb distinction is discrete, as it concerns syntactic nodes. Nevertheless, it is also true that the same root morpheme can be associated with either an N node or a V node in the syntax. And presumably it is not a coincidence that this particular root can do that, since similar roots can also be used either way in other languages (e.g. *challwa* ‘fish’ in Mapudungun; see Smeets (2008:122)). Rather it could be a function of the lexical semantics of this root that it associates relatively easily with both kinds of syntactic nodes, whereas other roots may not. This implicit theory of how roots relate to syntactic nodes by virtue of their meanings could be continuous and probabilistic as far as I know. It is thus not only possible but even likely that the distinction between nouns and verbs could be both discrete and continuous: it is continuous with regard to the properties of roots, but discrete with regard to syntactic items.¹

With that point clarified, in the bulk of this chapter I propose to continue the investigation of the discrete difference between nouns and verbs qua syntactic atoms. In particular, I seek to extend my previous theory of the noun-verb distinction into the realm of case assignment. It is well-known that verbs in many languages appear with bare nominal complements in a structural case (accusative, absolutive), whereas nouns do not. This can be seen in (2) from English (Chomsky, 1981: 49-50, Stowell, 1981).

- (2)
- a. *I imagined Chris/her.*
Rome destroyed Carthage/them.
 - b. **the idea Chris/her*
**Rome’s destruction Carthage*
 - c. *the idea of Chris*
Rome’s destruction of Carthage

Although this fact is very familiar, it is not well-understood how it follows from the fundamental syntactic distinction between verbs and nouns. I for example had nothing to say about this in Baker (2003).

There are also interesting crosslinguistic layers to this issue, in that the alignment of a language’s case system seems to matter. While it is very rare for an accusative language to use accusative case inside nominals, it is not uncommon for an ergative language to use structural

¹ There seems to be some resonance between this perspective and the psycholinguistic results of Błaszczak and Klimek-Jankowska (this volume). They show that several different versions of the noun-verb contrast are psycholinguistically relevant, and these are stored in different parts of the brain. That seems similar to my point that several different noun-verb distinctions can be defined grammatically, and they are interrelated but not coextensive. Of course, mapping out precisely how their distinctions do or do not relate to mine would be a challenging task

ergative case inside nominals, to mark the possessor of the noun. (3) shows a case in point from Shipibo (see also Valenzuela (2003)).²

- (3) a. *Jose-kan ochiti ben-ai.* (Transitive subject)
José-ERG dog seek-IMPF
'José is looking for a/the dog.'
b. *Jose-kan ochiti* (Possessor)
José-ERG dog
'José's dog'

One would like to understand this difference between ergative and accusative languages.

Finally, it is striking that, whereas simple nouns cannot have accusative complements in accusative languages, nouns derived from verbs—gerunds or so-called verbal nouns—often do have accusative complements. This is seen in (4) from English, to be contrasted with (2b,c) (cf. Chomsky, 1970).

- (4) [*Rome's destroying Carthage*] *proved it was an evil empire.*

What I say about (4) will not be especially novel, but it reinforces that there is something nontrivial to explain in (2b,c), and the attempt to derive (2) from first principles must not flounder on (4). I also offer (4) as a further illustration of the point that words are not the best units for linguistic theory to be primarily about. The bimorphemic word *destroying* has a mixture of properties with respect to the noun-verb distinction precisely because it is an amalgam of two elements: *destroy*, which is a well-behaved verb, and *-ing*, which is (I claim) a well-behaved noun. Overall, this work is a new illustration of the discreteness that is relevant to (1c) and of the vanity of pursuing (1b)—while continuing my silence with respect to (1a).

2. A cluster of discrete differences between nouns and verbs as syntactic atoms

What then is really at the root of the noun-verb distinction with respect to the atoms of syntax? From what should we hope to derive the difference in case assignment seen in (2)?

My (2003) answer is outlined briefly in (5).

- (5) a. A noun is a lexical category that introduces a referential index.
b. A verb is a lexical category that has a specifier (as well as a complement).
c. An adjective is a lexical category that has neither an index nor a specifier.
d. Reference Predication Constraint: No syntactic node can both introduce an index and license a specifier.

² Abbreviations used in the glosses of examples include the following: ABS, absolutive; ACC, accusative; AOR, aorist; ASP, aspect; DAT, dative; DEF, definite; ERG, ergative; GEN, genitive; IMPF, imperfective; IND, indicative; INST, instrumental; NOM, nominative; NOML, nominalizer; PASS, passive; PAST, past tense; PL, plural; PRF, perfective; PROSP, prospective; PRT, particle. Agreement affixes are glossed with triples that consist of (up to) a number indicating person (1, 2, 3), a lower case letter representing number (s, p) or gender (m, f, n), and an upper case letter representing the grammatical function (S, O, P(ossessor)) of the agreed-with nominal.

What it is for a category to have a specifier ((5b)) is familiar from X-bar theory and its descendants. In a broadly minimalist theory incorporating bare phrase structure (Chomsky, 1995), it means that a verb has the power to merge with a second syntactic category, beyond the one category that any sort of head can merge with (its complement). This syntactic property is what makes verbs particularly good relators, hence predicates. The notion of referential index in (5a) is a bit more idiosyncratic: it is intended to be a piece of syntactic representation that corresponds to the power to track sameness, and hence the power to refer. This is the distinctive property of nouns and their projections, which allows them to enter into binding relations and more generally to provide fixed points in the syntax. I assume that the referential index also underlies a noun's characteristic ability to have valued phi-features, including person, number and gender; see Klockmann (this volume) for discussion and application of this to puzzles concerning the category of numerals in Polish. (5c) expresses the idea that adjectives have no positive quality of their own: it is enough to say that they do not have the positive qualities of either verbs or nouns to account for their unique syntactic behavior.³ Finally, (5d) is a syntactic axiom inspired by the semantic truism that no category can both predicate and refer (Geach, 1962). It insures that no fourth lexical category is defined by these properties. (Adpositions are functional categories, in my view.)

If this way of thinking is on the right track, it is obvious that the noun-verb distinction qua syntactic atoms must be discrete. It simply makes no sense to say that there is some intermediate category that has half a specifier, or 0.35 referential index. It also seems to me that this theory is very likely to be universally applicable, defining categories that are made available to language users by a Universal Grammar, contrary to the methodological and theoretical recommendations of Haspelmath (this volume). It seems nearly inevitable that the issue of reference and reference-tracking (which are the roots of the notion of referential index) will arise in a discrete way in every language system, and so will the issue of putting one linguistic element in a syntactic relationship that corresponds to predication with another one (the roots of the notion specifier). And indeed Haspelmath (this volume) does acknowledge that “ ‘nouns’ and ‘verbs’ are very similar across languages.”⁴

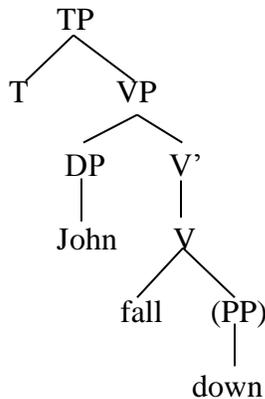
Simple structures that illustrate the three way distinction are given in (6). (6a) versus (6b) and (6c) shows that verbs (here an unaccusative verb) can take a subject directly, inside VP, in accordance with (5b). In contrast, nouns and adjectives can only function as predicates if they are

³ A reasonable alternative is that the distinction between adjectives and nouns centers on the fact that adjectives express gradable predicates but nouns do not; see for example Constantinescu (this volume). In Baker (2003: Ch. 4) I discuss why I think this is a less firm basis for a universal syntactic theory of the noun-adjective distinction than (5) is. There I also derive the important fact that APs but not NPs can be complements of dedicated degree heads from (5b,c).

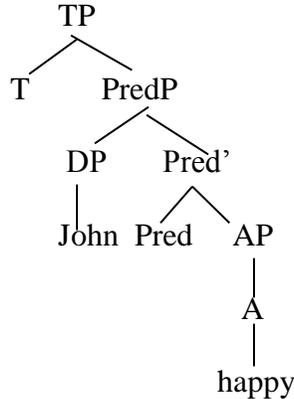
⁴ I should clarify, however, that my theory of the universal noun-verb distinction does not entail that all languages necessarily have lexical items that belong to both categories. It can be imagined that no open-class words have a referential index (i.e., a language has no nouns), but only functional heads like pronoun and determiner do. Similarly, it can be imagined that no open class words combine directly with a subject (there are no verbs) but only functional heads like Pred do (and indeed there are languages which do not have an open class of verbs). The seeming fact that all languages do have at least some nouns and some verbs is thus a contingent discovery, not an a priori assumption, as discussed in Baker (2003). (Indeed, I was rather surprised that the tests turned out that way.) Indeed, as Braithwaite (this volume) mentions, there is no longer any serious disagreement among specialists that Wakashan (and Salish) languages have a noun-verb distinction, even though typological discussions continue to invoke this as an instance of potentially radical crosslinguistic difference.

complements of a functional head Pred, which licenses the specifier that nouns and adjectives on their own cannot license. This will prove to be the most important aspect of the theory of categories for current purposes. (6b) versus (6c) also illustrates the difference between nouns and adjectives: the projection of the noun bears a referential index, whereas the projection of the adjective does not. That is less directly relevant here, but the distribution of indices in a structure does play a role at one point.

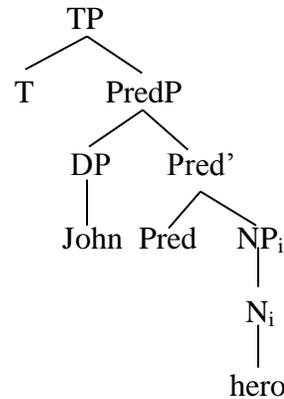
(6) a.



b.



c.



See Braithwaite (this volume) for evidence from root allomorphy that this structural distinction between nominal predicates like (6c) and verbal predicates like (6a) holds even in Nuu-chah-nulth, surface inflectional morphology notwithstanding.

Baker (2003) derived a cluster of properties from the axioms in (5), including these: nouns and adjectives often need copular particles to be predicates, but verbs do not; tense-aspect morphemes often attach directly to verbs but not to nouns and adjectives; theme arguments of intransitive verbs behave like direct objects in some respects (unaccusativity diagnostics), whereas comparable arguments of nouns and adjectives do not; nouns can bind pronouns and anaphors, but verbs and adjectives cannot; noun phrases can receive thematic roles from heads directly, but verb phrases and adjective phrases cannot, and so on. Baker (2008) extended this theory to explain a three-way contrast in agreement: verbs across languages often agree with the subject in person, adjectives agree in number and gender but not person, and nouns resist agreeing at all. The current task, then, is to relate the case differences seen in (2) to these same axioms.

3. Assumptions about case: dependent case assignment

In addition to a theory of categories, we also need some axioms we can use on the case theory side. Concerning this, I adopt the notion of so-called dependent case assignment, as originally proposed by Marantz (1991). The crucial idea be expressed as in (7); this formulation is in more recent terms, following Baker and Vinokorova (2010) and Baker (In progress).

- (7)
- a. If NP1 c-commands NP2 in the same domain (phase), assign NP1 *ergative*.
 - b. If NP1 c-commands NP2 in the same domain (phase), assign NP2 *accusative*.
 - c. Otherwise NP receives unmarked case (called *nominative* or *absolutive*).

One of the attractions of Marantz’s idea is the simplicity and symmetry with which it handles both accusative case systems and ergative case systems. (8) shows a typical accusative pattern in the Turkic language Sakha (Vinokurova, 2005). Here both the subject of the transitive sentence and the subject of the intransitive sentence have no overt case suffix, whereas the object of the transitive clause bears a distinguishing suffix *-(n)I*, called accusative.

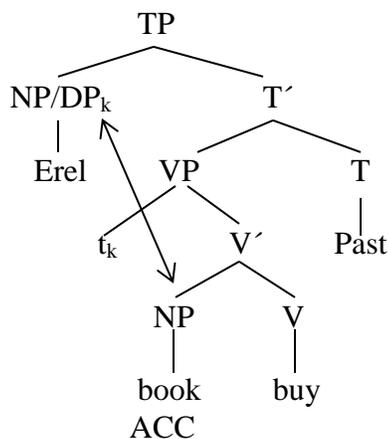
- (8) a. *Min ülel-ii-bin.*
 I.NOM work-AOR-1sS
 ‘I worked.’
 b. *Erel kinige-ni atyylas-ta.*
 Erel book-ACC buy-PAST.3sS
 ‘Erel bought the book.’

(9) shows a typical ergative pattern in the Panoan language Shipibo, spoken in Peru (Valenzuela, 2003). Here the subject of the intransitive verb and the object of the transitive verb have no overt case suffix, and it is the subject of the transitive clause that bears a distinguishing suffix *-(ni)n*, called ergative.

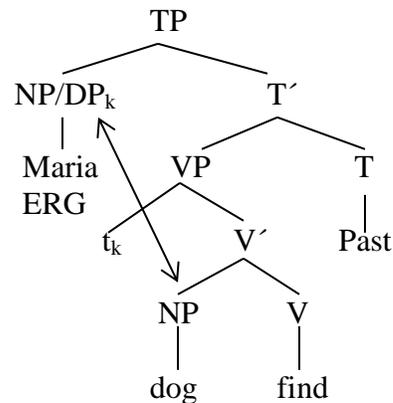
- (9) a. *Maria-nin-ra ochiti noko-ke.*
 Maria-ERG-PRT dog find-PRF
 ‘Maria found the dog.’
 b. *Maria-ra ka-ke.*
 Maria-PRT go-PRF
 ‘Maria went.’

The transitive clause in (8b) has roughly the structure in (10a), and the one in (9a) has the structure in (10b). (Here I suppress the possible decomposition of the verb into a *v* node and a *V* node, which is now standard in minimalist syntax; this is simply for ease of exposition.)

(10) a.



b.



In both languages, the subject c-commands the object in the same clause. Therefore in the accusative language the object is accusative by (7b), and in the ergative language the subject is ergative by (7a). In contrast, in intransitive clauses like (8a) and (9b) there is only one NP present, so neither (7a) or (7b) applies, and the intransitive subject gets unmarked case (often morphologically unmarked, but not always) in both types of language. That is essentially all there is to the difference between morphological accusativity and morphological ergativity on this view. This theory's simplicity and symmetry contrasts markedly with agreement-based theories of case assignment that have been standard in Chomskyan work, but which usually do not work as well for ergative languages without special additional assumptions (see Ura (2000) for some discussion of the issues). Since part of what I want to explain is why ergative case often does generalize from clauses to nominals but accusative case does not, it is important to have a theory that handles both well at the clausal level.

Indeed, we can already begin to see in outline how the theory of categories in (5) might have a positive interaction with the dependent case theory in (7). My category theory says that what is special about verb phrases as opposed to noun phrases and adjective phrases is that verb phrases can have two nominals inside them, a specifier as well as a complement. Dependent case theory says that accusative case is assigned when there are two nominals in the same domain. Therefore, it makes perfect sense in these terms that accusative case might appear inside verb phrases but not inside noun phrases or adjective phrases. Indeed, I claim that this is at the heart of the case distinction seen in (2). But there is significant work to be done in fleshing out this idea and drawing the necessary distinctions in order to make it work.

4. Structural case in nominals: genitive

With these tools in hand, let us start on the topic of structural case assignment in nominals. As we begin to assess this empirical domain, the first obvious fact is that none of the clausal structural cases mentioned in (7) is the most common case to find on a nominal inside a larger nominal. Rather, in languages with overt case marking it is very common for there to be a special case used inside nominals that is distinct from any case used as a primary structural case in clauses—a case conventionally called genitive. (11) gives a simple example from Turkish. The exponent of genitive case here is *-nIn*, quite distinct from nominative *-Ø*, accusative *-I*, and dative *-E* (Öztürk, 2005:28).

(11) *Ali-nin kalem-i*
 Ali-GEN pencil-3sP
 'Ali's pencil'

Furthermore, in some languages, this special genitive case can be used more than once in the same nominal. For example, Japanese allows two or more distinct nominal expressions to appear in the same larger nominal, all of them (including certain PPs; see (12c)) have the same genitive marker *no*, distinct from nominative *ga*, accusative *o*, and dative *ni* in Japanese (Saito et al., 2008).

(12) a. *Haruki no kuruma*
 Haruki GEN car
 'Haruki's car'

- b. *yuubokumiN no toshi no hakai*
 nomad GEN city GEN destruction
 ‘the nomad’s destruction of the city’
- c. *Taroo no Yooroppa-e no ryokoo*
 Taroo GEN Europe-to GEN trip
 ‘Taroo’s trip to Europe’

Tamil is another, unrelated language that allows multiple genitives; as shown in (13) (Nagarajan Selvanathan, personal communication).

- (13) *John- ooṭa Mary- ooṭa padam*
 John-GEN Mary-GEN picture
 ‘John’s picture of Mary’

Not all languages allow multiple genitive constructions, but those that do are instructive because they show that genitive case is not a form of dependent case marking (in those languages). If genitive were only on the highest DP inside the nominal, one might consider some variant on the ergative rule in (7a); if genitive were only on the lowest DP inside the nominal, one might consider a variant of the accusative rule in (7b). But genitive is on both of them. So it is not a form of dependent case. Rather, it must be a variant of unmarked case as in (7c), hence not sensitive to the details of structure. This was Marantz’s original (1991:24) view: he permitted different kinds of unmarked case to be assigned in different kinds of phrases. This can be stated as in (14), with (14a) capturing this first order difference between constituents headed by nouns and those headed by verbs.

- (14) a. If NP is not otherwise case marked and it is contained in NP/DP, mark it *genitive*.
 b. If NP is not otherwise case marked and in TP/CP, mark it *nominative/absolute*.

I hasten to add that it is not necessary for a language to distinguish the unmarked case assigned in NP/DP from the unmarked case assigned in TP/CP in this way. Languages that do not make such a distinction can be described as using nominative case for the possessor of an NP. A much-discussed example of this is Hungarian (see Kiss (2002: 157-175) and references cited there). Nominative case on possessors is also allowed in Tamil, and nominative and genitive have converged in almost every environment in Sakha as well.⁵ But genitive is a commonly-used theoretical possibility.

5. Dependent structural case on possessors: ergative, not accusative

⁵ I thank an anonymous reviewer for reminding me of this possibility, and for mentioning Hungarian as a seeming case in point. The reviewer also asks if ergative languages ever use unmarked absolute case for the possessor in NP/DP. The answer for now is that I do not know. The question is an interesting one in that I do not know of a relevant example offhand, but neither do I know of a reason why this should not be possible.

Another possibility is that genitive case is assigned by a determiner head to some DP in its domain under agreement. That is a plausible analysis of (11) in Turkish, given that there is agreement morphology on the possessed noun that indexes the possessor. See Baker (in press) for discussion of how this possibility fits into the overall picture.

There are, however, interesting second order effects to consider too. It is not uncommon for ergative languages to use the same ergative case that marks the subject of a transitive clause to mark the possessor of a noun. (3) gave one example of this from Shipibo; (15) gives another one (Valenzuela 2003:324). Note that in (15) the subject of the transitive sentence *Cesar* bears the same case suffix as the possessor of the object *Maria* (namely *-nin*).

- (15) *Cesar-nin-ra [Maria-nin wai] rera-ke machito-nin.*
 Cesar-ERG-PRT Maria-GENfield fell.tree-PRF machete-INST
 ‘Cesar cleared Maria’s field with a machete.’

This apparent homophony between ergative and genitive is systematic in Shipibo.⁶

Nor does this homophony seem to be accidental. It is found in quite a few families, and it can be widespread in those families. (16) shows the well-known sameness of ergative and genitive in Kalaallisut (Greenlandic), and (17) shows that they are the same in Burushaski.

- (16) a. *Umiarsu-up Qaaurtuq aqqusaar-paa.*
 ship-ERG Qaqortoq stop.by.at-IND.3sS.3sO
 ‘The ship stopped at Qaqortoq.’
 (Fortescue, 1984: 210)
- b. *piniart-up qaja-a*
 hunter-ERG kayak-3sP
 ‘The hunter’s meat’
 (Fortescue, 1984: 216)
- (17) a. *Hilés-e dasín mu-yeets-imi.*
 boy-ERG girl 3fO-see-3mS
 ‘The boy saw the girl.’
 (Willson, 1996:3)
- b. *hilés-isho-e ó-mish-ants*
 boy-PL-ERG 3p-finger-x.PL/ABS
 ‘the boys’ fingers’ (note: genitive and ergative are different on feminines)
 (Willson 1996:53)

This pattern is well-known to typologists. For example, Lander (2009: 590) writes: “Thus, possessives reflect ergative case in such diverse languages as Eskimo, Austronesian Niue, Indo-European Ladakhi, Northeast Caucasian Lak, Northwest Caucasian Circassian, and an isolate

⁶ There are (only) two exceptions to this identity: genitive is distinct from ergative for the first person singular pronoun (*nokon* ‘my’ vs. *e-n* ‘I’) and for the third person singular pronoun (*jawen* ‘his/her’ vs. *ja-n* ‘he/she’) (Valenzuela 2003:185-186). These exceptions might show that the syntax does distinguish between ergative and genitive in Shipibo, but the two cases are very similar in their feature structures, such that the morphology spells out both with the same morphemes in most instances. For example, one might say that genitive case is really the features [+high, +nominal], ergative is [+high, +clausal], *nokon* is the spell out of [1st singular, +high, +nominal] and elsewhere +high spells out as *-n/-nin*. A similar treatment would handle the difference between feminine genitive and feminine ergative in Burushaski. See Baker (in press) for more on the role of PF in realizing cases assigned in the syntax within my theory.

Burushaski.” Palancar (2009) adds Tibeto-Burman languages and Chiapas Zoque to this list. On the other hand, there are also ergative languages that use a genitive distinct from the ergative: they include Basque, Hindi, and many Australian languages. So this pattern of syncretism is reasonably common in ergative languages, but certainly not inevitable.

In contrast, it is very rare for accusative to carry over from clauses into simple nominals to mark the possessor. This happens in none of the accusative languages that I picked out for special study for Baker (in press). For example, it does not happen in Sakha ((18a)), or Amharic ((18b)), or Tamil ((18c)), or Quechua ((18d)).

- (18) a. *Masha-(Ø) at-a,* not: **Masha-ny at-a* (Sakha)
 Masha-GEN horse-3sP Masha-ACC horse-3sP
 ‘Masha’s horse’ (note: genitive almost the same as nominative)
 (Vinokurova 2005)
- b. *yä-tämari mäś’haf,* not: *tamari-n mäś’haf* (Amharic)
 GEN-student book student-ACC book
 ‘a student’s book’ (dative=*lä-*, nominative is Ø)
 (Leslau, 1995)
- c. *vaṇṇaan-(ooṭa) viiṭu,* not: *vaṇṇaan-e viiṭu* (Tamil)
 washerman-GEN house washerman-ACC house
 ‘the washerman’s house’ (dative= *-ukku*, nominative is Ø)
 (Asher, 1982)
- d. *Xwan-pa wasi-n,* not: *Xwan-ta wasi-n* (Cuzco Quechua)
 Juan-GEN house-3P Juan-ACC house-3P
 ‘Juan’s house’ (“dative”= *-man*, nominative is Ø)
 (Lefebvre and Muysken, 1988)

Nor is accusative used as genitive in canonical Indo-European languages that have overt case marking. If anything genitive is more closely allied with nominative in these languages: in Sakha, the genitive is the same as the nominative unless the possessor is itself possessed, and a bare (=nominative) form is an option for possessors in Tamil.

Typological sources do mention a small number of languages in which accusative is the same as genitive, although they do seem to be fewer than the ergative languages. Lander (2009: 590) in particular cites two cases: Martuthunira and Karachai-Balkar. But these do look like historical accidents. In Martuthunira, dative and genitive are homophonous (a common syncretism) as in other Australian languages, and as Martuthunira changed from an ergative language into an accusative one the historical dative was recruited as the new accusative (Dench, 1995)—a historical development that can also be seen in Spanish, Hindi, Georgian, and other languages. The result is that accusative is etymologically related to genitive, but the connection is an indirect one, crucially mediated by the dative case. Moreover, it is notable that the homophony between accusative and genitive in Martuthunira is only partial: the two cases have the same form on consonant final stems, but different forms after vowel-final stems. I find it striking, then, that even when historical forces tend to cause accusative and genitive to be the same, speakers resist a complete identification of the two. The Karachi situation is quite similar: genitive and accusative are clearly distinct in the Turkic family in general, but the two have converged because of phonological processes in Karachi. Even so, different forms have been maintained in one particular morphophonological environment, after a noun stem that bears a

third person singular possessor suffix (Seegmiller, 1996:13-14). I conclude that these apparent exceptions do not seriously undermine the observation that ergative case readily generalizes from clauses to nominals, whereas accusative does not.⁷

Nez Perce provides another way to see that there is a difference between ergative and accusative case in their propensity to be used in nominals. Nez Perce is a so-called tripartite language, which uses both the ergative rule in (7a) and the accusative rule in (7b). As a result, only the subject of an intransitive verb is in the unmarked case: it differs in form from both the subject and the object of a transitive clause, these two also differing from each other (Deal, 2010: 77).

- (19) a. *Ki-nm picpíc-nim pee-p-ú' cu'yéem-ne.*
 this-ERG cat-ERG 3S/3O-eat-PROSP fish-ACC
 'This cat will eat the fish.'
 b. *Hi-páay-na háama.*
 3S-arrive-ASP man
 'The man arrived.'

Consider now how the possessor inside a nominal is marked in this language. Although both ergative and accusative are present within the language's morphological resources, the possessor is marked with ergative, not with accusative (Deal 2010: 79).⁸

- (20) *háama-nm ciq'ámqal*
 man-ERG dog
 'the man's dog'

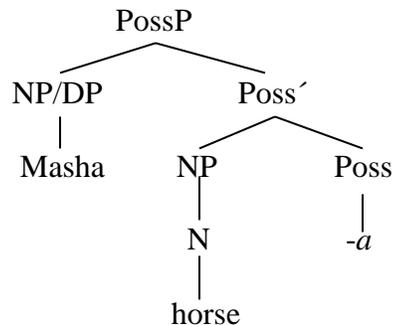
Given this empirical difference between ergative and accusative in languages that do not have a specialized genitive form, I ask whether it can be explained in terms of a dependent theory of case assignment. For the basic fact, the answer is an easy yes. To see this, we have to take a stand on the structure of possessed nominals. I assume that one very common kind of structure crosslinguistically is the one in (21); this is essentially the structure for *Pat's book* in English in Abney (1987) and much related work (Alexiadou et al., 2007). Here there is a functional head—I call it Poss—which takes the possessed noun phrase as its complement, and the possessor as its specifier. This PossP may or may not be further embedded inside the

⁷ Kittilä and Malchukov (2009: 558) mention a potentially more significant case of accusative being syncretic with genitive, namely Uto-Aztec languages like Sonora Yaqui. Here the syncretism is more widespread in (a branch of) the family; it is also found in Hopi, for example (Ken Hale, course notes). But the striking thing about Hopi is that its case system is a very impoverished one: it only distinguishes nominative from oblique, where oblique case is used not only for theme objects and possessors, but also in other syntactic environments, including goal objects of ditransitive verbs and objects of postpositions. What is plausibly happening in these Uto-Aztec languages is that the spell out rules for case are that +NOM is spelled out as \emptyset and everything else is spelled out as $-t$. Given that $-t$ is the default exponent in this morphological sense, we cannot conclude from it how many distinctions the syntax makes: we get the same outcome regardless of whether or not the syntax assigns the same case to direct objects and possessors. We should be very cautious about inferring any positive connection between accusative case and genitive case on the basis of a minimally differentiated morphological system like this one.

⁸ As in Shipibo, this homophony breaks down (only) for a few pronouns, which have genitive forms, but no ergative form. See note 6 for a sketch of an approach that accounts for this sort of fact.

projection of a distinct D (determiner) head in some languages; I leave this open here, but see Alexiadou et al. (2007: Part IV, chapter 2) for discussion and refinements, and Baker (in press) for some case-theoretic implications of distinguishing Poss and D in a structure like (21).⁹

(21)



Now it is clear that, wherever anything like the structure in (21) holds, the possessor ‘Masha’ c-commands ‘horse’, so ‘Masha’ qualifies for ergative if (7a) applies inside PossPs as well as inside finite clauses.

More precisely, we can think of dependent case rules as being families of rules that apply when certain kinds of phrases are spelled out. We have already seen this for unmarked case in (14): unmarked case may be different when PossP/DP is spelled out as opposed to TP, giving genitive as opposed to nominative-absolutive, or it may be the same. Similarly, high dependent case may be different when PossP/DP is spelled out as opposed to TP, giving a genitive-ergative

⁹ The possessive affix *-uk* when it is attached to nouns in Nuu-chah-nuth (Braithwaite, this volume) is a possible overt manifestation of the Poss head in (21).

My structure in (21) is the same as structure (22) of Alexiadou et al. (2007: 563). Based on their synthesis of the generative literature on a fairly large number of (mostly European) languages, these authors go on to suggest that full NP/DP possessors can appear as the specifiers of a range of different functional projections: a very high one (DP), a slightly lower one (which they call IP, FP, or AgrP), or a significantly lower one (which they call PossP or nP). They take the lowest of these positions to be the base/thematic position of the possessor in all languages, saying that it moves to higher specifiers in some languages. However, one of the charms of a dependent case theory built on rules like (7) is that it is not particularly sensitive to the details of the functional architecture of the phrase or the exact position of an NP/DP within that structure. What matters is the relative position of one nominal with respect to another—in this case, the fact that the possessor asymmetrically c-commands the possessed NP. That holds true in all of the more elaborated possessive structures that Alexiadou et al. (2007) consider (including some in which the possessor follows the noun, which they claim to be the result of the noun undergoing head movement to land in a head position to the left of the possessor in Spec, PossP).

I do not rule out the possibility that other structures for possession may exist as well, outside of European *sprachbund*. The important thing for my line of argument is that structures like (21) are common enough throughout the world that they have a nontrivial effect on the typology of case marking, and that the reverse structure, with the possessed NP as the specifier of some head and the possessor DP as its complement, does not exist. This asymmetry might be seen as a kind of thematic hierarchy effect, where possessor is the highest theta-role assigned within the nominal (cf. Barker and Dowty 1993, Alexiadou et al. 2007:585), parallel to the fact that agents are consistently the highest theta-role assigned within clauses (e.g. Baker 1997).

distinction, or it may be the same, giving syncretism. The families of dependent case rules are stated roughly as in (22)

- (22) a. If NP1 c-commands NP2 within PossP/DP, assign NP1 case X.
If NP1 c-commands NP2 within TP, assign NP1 case Y.
If NP1 c-commands NP2 within the same domain (TP or PossP/DP), assign NP1 case Z.
b. If NP1 c-commands NP2 within the same local domain, assign NP2 *accusative*.

Case X in (22a) would typically be called genitive, case Y ergative, and case Z is a case that takes up the role of both, a genitive-ergative homophony (“relative” in the Eskimoan tradition). In contrast, no natural generalization of the accusative rule in (22b) will give the same case to the possessor in (21) as to the object in a transitive clause, simply because no other nominal element c-commands the possessor in this structure (and (21) is the only relevant type of structure; see note 9). The typological asymmetry that I set out to explain thus follows in a straightforward manner.

This proposal about why ergative case is often used on possessors as well as on transitive subjects makes a prediction: genitive case that is really a generalization of ergative case to nominals should not be useable on more than one noun phrase within a larger nominal, the way that the specialized genitive can in Japanese and Tamil (see (12) and (13)). The reason is simply that one of the two nominals would presumably c-command the other, and only the c-commanding nominal would qualify for high dependent case according to (22c). Genitive case that is really an unmarked case, assigned by (14a) can be used multiple times within a nominal, but genitive case that is dependent case should not be. And indeed I do not know of any ergative language in which ergative is used more than once in a nominal—although the issue is not often discussed. Shipibo in particular disallows two ergative-genitive nominals in a larger nominal, as shown in (23) (from my own fieldwork).

- (23) *Jose-kan (*Maria-nin) foto*
José-ERG Maria-ERG picture
'José's picture (*of Maria)'

If this generalization holds up, it distinguishes my theory from one in which ergative and genitive are unrelated in syntax, but are syncretic in morphology. That more superficial theory could allow examples like (23), since having two genitives is sometimes possible (see (12) and (13)) and both genitives would look like ergatives in phonological form according to the alternative proposal.

6. Dependent accusative case on possessed nouns?

It is fairly straightforward, then, to explain why possessors inside complex nominals can receive ergative case but not accusative case. But it takes significantly more work to explain the more general result that accusative case is almost never used anywhere in a structure headed by a simple noun. For example, given (21) and the notion of dependent case, we see why the possessor does not get accusative case, but now we need to ask a new question: why doesn't the possessum 'horse' get accusative case in this structure? After all, it is c-commanded by another

nominal inside PossP, namely the possessor, and being c-commanded within a local domain is the heart of the accusative rule in (22b). It takes a little imagination to see what such a structure would look like, but (24) is a possibility. Here the possessor of the goal NP gets some kind of unmarked case (nominative or genitive) and the possessum gets accusative inside PossP. The PossP as a whole then gets whatever case it should have within the larger sentence, in this example dative.

- (24) *Mary-NOM [_{POSSP} John-NOM/GEN sister-ACC]-DAT book-ACC give
 ‘Mary gave the book to John’s sister.’

An interfering factor in this is that one might well get two case affixes realized on the same noun stem—both accusative and dative in (24). This will be unrealizable by the morphology at phonological form in some languages. Moreover, if it is consistently the inner affix that is suppressed morphologically, we might take that to explain why the possessum is not accusative in particular examples. This analysis could work well in individual languages, but it is not general enough to explain the (presumed) fact that (as far as I know) nothing like (24) is found in any language. After all, the rules of surface case realization are known to vary. Some languages do allow a noun to bear more than one case affix—Australian languages like Kayardild (Evans, 1995), for example, as well as Korean. Indeed, Korean allows the combination dative+accusative in double object constructions (Gerdtts and Youn, 1999):

- (25) *Chelswu-ka Swuni-eykey-lul chayk-ul cwu-ess-ta.*
 Chulsoo-NOM Sooni-DAT-ACC book-ACC give-PAST-IN
 ‘Chulsoo gave Sooni a book.’

It is not clear, then, why no languages allow multiple case marking like the kind indicated in (24). We could also imagine a hypothetical nominal like [John sister-ACC] being used as the subject of a clause in nominative case in an accusative language. Since nominative case is often phonologically null, one might expect that having this sort of possessed nominal in the subject position would not pose as much of a challenge to the morphological system: the morphology could simply ignore the nominative layer and spell out the accusative layer in the normal way for that language. But this also never happens, to my knowledge. If not, then we want a principled reason as to why accusative case is not generalized to nominals in this way either.

To address this, I begin by observing that the issue would not arise if one did not distinguish the Poss head from the noun in (21), but generated the possessor directly in SpecNP, disregarding the Reference-Predication Constraint in (5d). Then the NP referring to the possessum would not be c-commanded by the possessor; rather, it would contain the possessor. It would not, then, be expected to receive accusative case. In the big picture, this different assumption about the structure of possessed nominals would not solve the problem, but only move it around; then the problem would be why the possessor gets ergative case in some ergative languages, even though there is no nominal that it c-commands. Nevertheless, this intuition may be useable in a less direct way. I propose to capitalize on it by saying that the possessor in (21) both is and is not inside the possessed nominal: it is outside the minimal nominal expressing the possessum, namely NP, but it is inside the greater nominal expressing the possessum, namely the PossP or DP as a whole.

This can be made precise in terms of the notion of referential index. Given my theory of categories, according to which a noun is by definition a lexical category that bears a referential index, the case rules in (7) should properly be stated not in terms of NP or DP, but rather in terms of “expression that bears a referential index.” They should then read something like as in (26).

- (26) a. If X has a referential index and X c-commands Y such that Y has a distinct index within the same local domain (phase), assign X *ergative*.
 b. If X has a referential index and X is c-commanded by Y such that Y has a distinct index within the same local domain (phase), assign X *accusative*.

In addition to giving me a kind of conceptual purity, this revision has two advantages. First, it allows us to finesse the NP-DP distinction (which I have been loose with throughout), saying that either can in principle participate in case marking, since both categories bear referential indices. Second, it becomes easy and natural to say that the two nominals that interact case theoretically must not only have indices, but must have distinct indices. This means that the lower nominal in a movement chain will not trigger ergative on the higher nominal in the same chain in a passive or unaccusative structure, for example (compare Marantz’s (1991: 25) statement that the two NPs must be “distinct”).

The big advantage of using of referential indices in the dependent case marking rules for current purposes is that it allows us to put slightly different conditions on the nominal that undergoes case marking and the nominal that triggers case on it (its case competitor, using a term from Bittner and Hale (1996)). In particular, we can say that a nominal X undergoes the dependent case rules only if X is the maximal phrase that bears a particular referential index. Indeed, there is good reason to restrict case in this way in many languages, where case shows up only once in a complex nominal, at the outer edge of that nominal. The nominative case marker *-t* in Choctaw, for example, appears at the right edge of the subject nominal, and if the subject contains an adjective or a determiner after the head noun, then *-t* shows up there, not on the noun itself.

- (27) *Ofi’ hómma’ yamm-at* *not: *Ofi-yat* *hómma’ yamma*
 dog red that-NOM dog-NOM red that
 ‘that red dog’
 (Broadwell, 2006: 50)

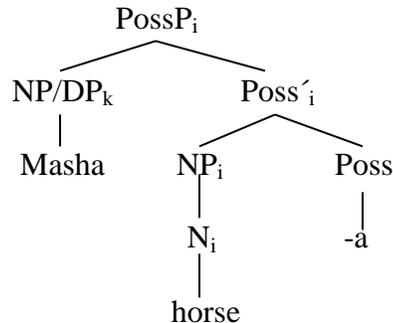
This strongly suggests that it is the DP as a whole that is marked for case, and not the NP within the DP. There are of course also languages in which every element inside the nominal (more or less) is marked for case—noun, adjective, and determiner—as in familiar Indo-European languages with case concord. Such languages would be the result of the case feature distributing from the nominal as a whole to all the words inside the nominal. But if case is only marked once on a complex nominal, the norm is for it to be marked on the maximal nominal (e.g. DP), not on the NP at its core. With this in mind, I revise (26) to (28).

- (28) Suppose that X bears index [i], no other phrase Z properly contains X and also bears [i], and there is an expression Y that bears a distinct index [k] in the same domain as X.
 a. Then if X c-commands Y, assign X *ergative*.
 b. Then if X is c-commanded by Y, assign X *accusative*.

The crucial move here is that the case undergoer X is stipulated as needing to be the maximal bearer of a particular index, in the sense that it is not contained in any larger phrase that bears the same index, whereas the case competitor does not need to satisfy this maximality condition. Rather, the case competitor can be a proper subpart of a larger nominal that designates the same entity.

With this in mind, consider again the basic possessive structure in (21), enriched by the explicit marking of referential indices in (29).

(29)



Here NP/DP_k is the maximal constituent that has the index k (no larger phrase refers to Masha). Therefore it meets the description of a case undergoer in (28). It also c-commands a nominal with a distinct index (although not a maximal one), namely NP_i . Therefore DP_k is qualified to receive ergative. In contrast, NP_i denoting the possessum does not meet the description of a case undergoer in (28), because it is contained in a larger constituent that bears the index i (that refers to the horse), namely $PossP_i$. Only the nominal expression as a whole undergoes case marking. As a result, neither NP_i nor $PossP_i$ is qualified to get accusative by (28): NP_i is not qualified because it is not maximal, and $PossP_i$ is not qualified because it is not c-commanded by a distinct nominal in this substructure. (Of course $PossP_i$ might be c-commanded by another nominal at the level of the clause, so that it gets accusative as the object of that clause, but that is a separate matter.)¹⁰

Therefore, by clarifying exactly what nominal expressions participate in the dependent case assigning rules in this way we can explain why dependent ergative case is used in possessed nominals, but dependent accusative case is not. This was one of the initial goals of my inquiry.

7. Case on the complements of nominals

There is one more structure to consider, however, if we want to explain in full generality why structural accusative case is never used in nominals headed by a simple noun. We need to

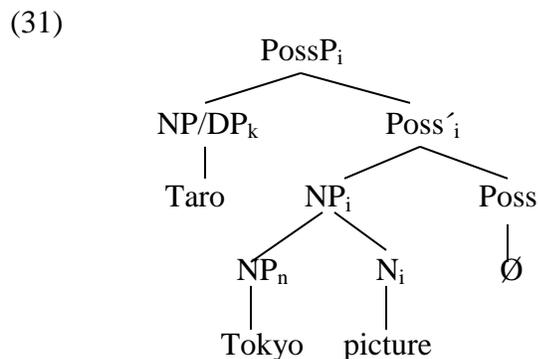
¹⁰ My use of referential indices here causes an anonymous reviewer to ask whether my theory might have something useful to say about the distinctive (and complex) case properties of expressions like ‘an idiot of a doctor’ in, for example, German (e.g. see den Dikken (2006: ch.5)). The thought would be that ‘idiot’ and ‘doctor’ might bear the same index, since one is predicated of the other, and this different representation could affect how case works out, given that (28) refers to indices. The short answer, however, is “not that I know of”—in part because I happen to think that predicate nominals and their subjects actually bear different indices, as discussed in Baker (2003:162-165).

consider the possibility of having two distinct maximal nominals within a larger NP, as in structures like *John's picture of Mary*. Here *John* and *Mary* are distinct maximal nominals, and *John* c-commands *Mary* (cf. *John's picture of himself*, where the anaphoric complement is bound by the possessor). Could then the complement of the noun *Mary* get structural accusative case in some accusative languages?

Starting from English, one might think that the structure in question simply does not arise: perhaps nouns can take PPs as complements but not NPs or DPs, possibly because the thematic role being assigned can only be assigned by means of a preposition. Then *of* would need to be present in the English nominal for semantic reasons, and not (only) as the realization of some kind of oblique, nonstructural case. This issue has been debated for English (Chomsky, 1981, Rappaport, 1983), although the more widespread view has been that *of* can be a mark of nonstructural case. However, Japanese is helpful here, because of its relatively unconstrained rule of genitive case assignment ((14a)). A Japanese nominal can have two NPs with genitive case inside of it. This is true not only for event-denoting nouns like 'destruction' in (30a) (which might have some verbal structure; see section 8) but also for more canonical object-denoting nouns like 'picture' in (30b).

- (30) a. *yuubokumiN no toshi no hakai*
 nomad GEN city GEN destruction
 'the nomad's destruction of the city'
 (Saito et al. 2008)
- b. *Taroo no Tokyo no syasin*
 Taro GEN Tokyo GEN picture
 'Taro's picture of Tokyo'
 (Shigeto Kawahara, personal communication)

I know of no reason to think that 'city' and 'Tokyo' in (30b) are anything other than NPs or DPs that undergo Japanese's general rule of unmarked genitive case assignment. So the structure in (31), with N taking an NP or DP complement, does seem to be allowed by universal grammar.



Moreover, 'Tokyo' seems to meet the structural description of the accusative rule in (28): it is the largest nominal bearing the index n (referring to Tokyo) and it is c-commanded by a distinct nominal 'Taro' nearby. Hence it looks like 'Tokyo' could get accusative in some language—in any language that generalizes its accusative rule from clauses to DPs the way that Shipibo and Greenlandic generalize their ergative rule from clauses to DPs (see (22)).

However, the noun complement is not accusative in any language that I am aware of. For example, it is not in Japanese or Tamil, as shown in (32).

- (32) a. **Taroono Tokyo o syasin* (Japanese)
 Taro GEN TokyoACC picture
 ‘Taro’s picture of Tokyo’
 b. **John-ooṭa Mary-e padam* (Tamil, compare (13))
 John-GEN Mary-ACC picture
 ‘John’s picture of Mary’

Rather, the complement of the noun has genitive case, as in Japanese and Tamil, or it is expressed as a PP, as in English, or a structure with two nominals as immediate constituents of a larger nominal is simply ineffable, as seems to be the case in Shipibo and many other languages.

Why should this be? We know that the c-command condition on dependent case assignment is met in (31), and so is the condition that there be two distinct maximal nominals. The only other condition that could fail according to our current formulation is the domain condition: it could be that the two nominals are not in the same local domain in (31). We get the desired result if we say that Poss (and perhaps D-like heads more generally) are universally phase heads in the sense of Chomsky (2000, 2001), similar to *v* and *C*.¹¹ The necessary assumptions are listed in (33).

- (33) a. Poss is a phase head.
 b. Its NP complement is a spell out domain.
 c. Dependent and unmarked case assignment take place at Spell Out.

(33c) reflects how case assignment happens more generally, according to Baker (in press).¹² (33a,b) then imply that in a structure like (31) the NP [Tokyo picture] is spelled out first, and case-marking applies to that domain taken by itself, before the DP *Taro* comes into consideration. This spelled-out NP properly contains only one maximal DP ‘Tokyo’, not two, so dependent case assignment does not apply and unmarked case assignment does apply. Therefore, ‘Tokyo’ comes out as genitive in languages like Japanese and Tamil (or with a nonstructural case in English), not with accusative case.¹³

¹¹ This might cohere with the fact that A-bar movement out of NP/DP is highly restricted or impossible in many languages.

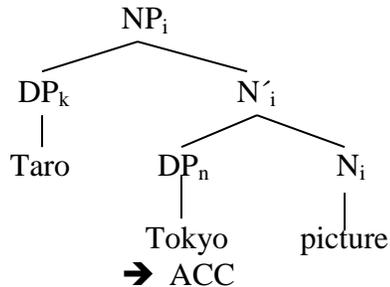
¹² See Baker (in press) for some refinements concerning different types of phase heads. These are required to get the fact that some languages have differential object marking at the level of the clause, but there is no direct analog of this variation at the level of nominal structure (that we know of).

¹³ There are two other details to mention here. First, we need to say that the complement of a noun cannot undergo the equivalent of object shift to the edge of or out of NP_i to enter the same spell out domain as the possessor. For discussion of this point, see Baker 2010. Simplifying somewhat, I assumed there that object shift targets a specifier position, that the functional heads in the extended projection of an NP are themselves nominal (see Grimshaw 1991), and that part of being nominal is not allowing a specifier position (see (5b)). It follows from these assumptions that the equivalent of object shift cannot apply to the complement of a noun, because there is no legitimate landing site for it.

Second, we might wonder how ‘Taro’ gets genitive case in (30b)/(31) if it is not spelled out with NP_i. One solution that would work would be to say that there is a DP headed by a null *D* that dominates

It should be noticed that (5b), one of my defining differences between nouns and verbs, plays an important role here. (5b) says that verbs can take a specifier but nouns cannot. Suppose that that were not true, that nouns could take specifiers as well. Then a representation like (34) would also be possible, as an alternative to (31).

(34)



Here the higher nominal ‘Taro’ and the lower nominal ‘Tokyo’ are contained in all the same maximal projections. Therefore there is no possibility of there being a spell out domain that contains the one but not the other (assuming that only maximal projections can be spell out domains, as is standard). So if (34) is possible, then dependent accusative case in simple noun phrases should also be possible in some languages. But we know that (34) is not possible: it is ruled out by the axioms of my category theory, in particular the Reference-Predication Constraint in (5d). This is the sense in which the impossibility of structural accusative case in nominals headed by a simple noun follows from combining my (2003) theory of categories with the dependent theory of case assignment (together with auxiliary assumptions, like those in (33)).

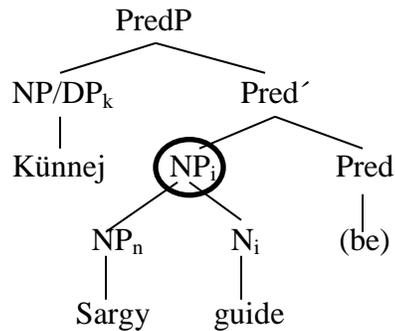
This explanation can be generalized to explain why the complement of a predicate nominal also cannot be accusative. For example, the complement of *picture* in (35a) in English must have *of*, the complement of ‘guide’ in (35b) from Sakha must have inherent dative case not structural accusative case, and so on.

- (35) a. *That is a picture *(of) her.*
 b. *Künnej Sargy-ga/*Sargy-ny sirdjit.* (Vinokurova 2005:257)
 Künnej Sargy-DAT/*ACC guide
 ‘Künnej is a guide to Sargy.’

Again, (5b) and (5d) imply that the subject of predication must not be in SpecNP (as work in the tradition of Stowell (1983) assumed, for example). Rather, it must be first merged in SpecPredP as in (36), where Pred is a distinct functional head that relates (directly or indirectly) to the presence of overt copular elements in many languages (see also (6)). Given this, dependent case assignment gives the right result if we assume that Pred, like Poss, is a phase head. Then its complement NP (or DP) is a spell out domain which contains only the complement of the noun, not the subject of predication. Since there is only one maximal nominal inside this NP, dependent accusative case does not apply, but rather default genitive case (or some kind of oblique case assignment).

PossP in (31). This D is also a phase head, triggering the spell out of PossP, and the unmarked case that is assigned within PossP (as within NP) is genitive in Japanese. Other ways of regulating when unmarked case is nominative and when it is genitive could probably also work.

(36)



This analysis also predicts that the subject of a nominal predication will never be ergative as a consequence of it c-commanding the complement of the predicate nominal. I believe that to be true as well; rather, the subjects of predicate nominals are invariably absolutive in the ergative languages of my acquaintance, such as Shipibo and Burushaski.¹⁴

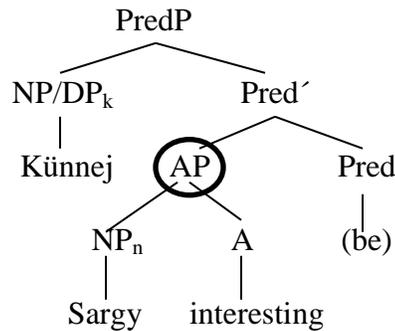
This analysis extends immediately to cover the fact that predicate adjectives are like predicate nominals in not having structural accusative complements. (37) shows that the complement of an adjective in English must be marked with *of*, just as the complement of the noun must be in (35a), and that the complement of an adjective in Sakha must be marked with inherent dative, just as the complement of the noun is in (35b).

- (37) a. *John is proud *(of) her.*
b. *Künnej Sargy-ga/*Sargy-ny interiehinej.*
Künnej Sargy-DAT/*ACC interesting
'Künnej is interesting to Sargy.'
(Vinokurova 2005:257)

This follows from the fact that adjectives are intrinsically like nouns and not like verbs in not allowing a specifier (see (5) and (6)). Hence when used predicatively, they too need to be complements of a Pred head. Pred is a phase head, so the complement of A is spelled out with AP before the subject comes into view. Therefore, the two do not interact case theoretically. The structure is in (38), which is parallel to (36) except that the complement of Pred has a referential index in (36) but not in (38)—a difference that has no impact on the case assigning rules.

¹⁴ What does not follow without further assumptions is why the NP complement of Pred as a whole does not trigger ergative on the subject of predication, the way that the NP complement of Poss does in (21). One possibility is that the predicate nominal NP is embedded in some larger (“denominalizing”) functional projection in addition to Pred, and this keeps it from functioning as a case competitor. This additional bit of structure shows up morphologically in some languages, e.g. as the ‘adverbial’ particle *aa* in Tamil, as equative case in Chukchi, and so on. See Baker (in press) for discussion.

(38)



This is, I claim, exactly the sort of result that one wants a good, deep theory of the lexical categories to provide: it should predict specific empirical similarities and differences in the behavior of the categories in terms of the fundamental essence of those categories. In this particular case, adjectives are known to be like nouns with respect to the number of arguments they license inside their projection. Moreover, the number of nominals in the local domain is known to be crucial for dependent case assignment. Putting these facts together, we correctly predict that adjectives should be like nouns rather than like verbs when it comes to case theory—even though in certain other respects (those involving referential indices) they are more like verbs than like nouns.

8. Case on the complements of verbal nouns

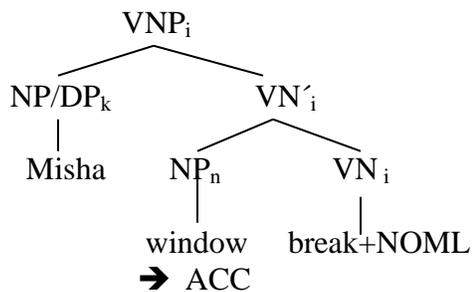
Finally, let us consider briefly the fact that, although simple nouns do not take structural accusative complements in language after language, nouns that are derived from verbs can take structural accusative complements in many of those same languages. (38) shows examples of this from four nominative-accusative languages: English, Sakha, Amharic, and Tamil. The verbal noun is in bold and its accusative complement is underlined.

- (39) a. *John's **criticizing** me was upsetting.* (English)
- b. *Misha tünnüg-ü **aldjat-yy-ta** aqa-tyn kyyhyr(t)-ta.*
Misha window-ACC break-NOML-3sP father-3sP.ACC anger-PAST.3sS
'Misha's breaking the window angered his father.'
(Sakha (Baker 2011))
- c. *Mist-u-n **bä-mä-gdäl** tä-kässäs-ä.*
wife-DEF-ACC on-NOML-murder PASS-accuse-3mS
'He was accused of murdering his wife.'
(Amharic, Leslau 1995: 400)
- d. *John Mary-e **paat-adu** en-akki teriy-um.*
John Mary-ACC saw-NOML me.DAT know-3nS
'I know John seeing Mary.'
(Tamil, Nagarajan Selvanathan, personal communication)

I close then by considering why this is, and what it shows us about a theory of lexical categories.

A phrase built around a verbal noun typically has the same gross syntactic distribution as a normal noun phrase; that is a large part of why it is called a verbal *noun* (whereas the fact that it can take an accusative object is part of why it is called a *verbal* noun). Within my assumptions, this noun-like external distribution clearly implies that the verbal noun phrase has a referential index, since this is the property that underlies the distinctive distribution of nominals (Baker 2003). At the same time, the construction seems to have both a specifier and a complement, with the complement having accusative case. There is some naturalness, then, to saying that verbal nouns have both verbal features and nominal features simultaneously, as Lefebvre and Muysken (1988) and Malouf (2000) do; they could be a kind of intermediate category halfway between the poles of nouniness and verbiness. In particular, the analysis of the subject of (39b) could be as in (40).

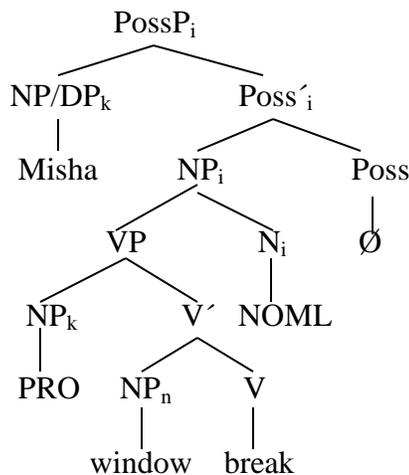
(40)



Of course, this representation violates the Reference Predication Constraint in (5d)—but maybe that is too bad for the Reference Predication Constraint.

There is, however, a crucial fact that the analytic strategy in (40) misses: this is the fact that this hybrid structure is only possible if the putative head is bimorphemic: only words that have a verbal stem and a nominal affix behave like this. This is not, strictly speaking, captured in (40): as far as this structure is concerned, there could be morphologically simple members of the category VN as well as morphologically complex members of that category, just as there are simple members of other categories like noun, verb, and adjective. Therefore, I propose to change the analysis to (41) (see Baker (2011) on Sakha; similar approaches have been adopted by many generative linguists; see for example Borsley and Kornfilt (2000) and Alexiadou et al. (2007)).

(41)



What we have in (41) is essentially a normal VP construction¹⁵ acting as the complement of a noun in a normal noun construction. The NP headed by that noun is in turn the complement of Poss, which is a normal possibility for NPs (see (21)). In addition, I assume that the overt NP in SpecPossP (the possessor of the nominal part of the structure) controls a null subject PRO (the subject of the verbal part of the structure). In this structure, all the syntactic nodes obey the Reference Predication Constraint, as well as other conditions. In particular, VP (and PossP) have specifiers, but NP does not; NP introduces a referential index, but VP does not. (PossP also bears a referential index, but it crucially does not introduce that index; rather, it is inherited from its NP complement.) Because VP has a specifier and a complement, the complement of VP receives accusative case by the dependent case rule in (7b).¹⁶ Now we can see why these complex NP structures can have an accusative NP inside them, whereas simple NP structures do not: they allow this precisely because they embed a VP structure, and verbs unlike nouns can have a specifier as well as a complement within the same minimal domain.

Notice that the parts of the syntactic tree in (41) correspond to morphemes in (39) quite well. Poss is the only potentially null head here (it is actually realized as possessive agreement in Sakha) and that is no different from simple possessed nominals. However, the leaves of this syntactic tree do not correspond to full words as neatly. In particular, the three distinct heads V, N, and Poss correspond to one polymorphemic word, *aldjat-yy-ta* ‘break-NOML-3sP.POSS in Sakha. I assume that this comes about as the result of head-to-head movement in the sense of Baker (1988) and related work, where V moves to N and then to Poss (or, equivalently for these purposes, there is merger of adjacent heads at PF, as in Bobaljik (2002)). This captures the important generalization that the smaller unit is verbal and the larger unit is nominal in both the syntax and the morphological structure. In the syntax, the smaller unit is verbal and the larger unit is nominal in the sense that the direct object (lower in the tree) is accusative and the subject (higher in the tree) is genitive—not to mention that the construction as a whole is nominal in how it functions in the larger syntactic context. In the morphology too, the smaller unit is verbal and the larger one is nominal, in that the root of the word is verbal but the inflected word as a whole is nominal, including its inflectional suffix. The analysis in (41) is superior to the analysis in (40) in that it renders this parallel between the morphological structure and the syntactic structure nonaccidental. Overall, this illustrates rather clearly, I hope, the force of my claim in section 1 that the interesting principles concerning nouns and verbs apply to morphemes and to the atoms of the syntactic representation (which are nearly the same thing here) but not to full words. If we consider the Sakha word *aldjat-yy-ta* to be the proper unit of analysis, then it is a counterexample to the principles in (5) and to the otherwise robust case theoretic consequences that follow from them. If, however, we consider the morphemes to be closer to the proper unit of

¹⁵ Here again I suppress the decomposition of the verb into V and v heads, for simplicity.

¹⁶ I do, however, need to say a little more about the spell out domains here. In languages where accusative is only assigned when TP is spelled out, we need to make sure that there is a TP-like domain in (41). Perhaps the NOML head really takes a vP complement rather than VP (see note 15), and NOML is a phase head, it causes its vP complement to spell out. Then we might say that vP is similar enough to TP to count as a domain that uses the same repertoire of structural cases. (More elaborate structures with additional null functional heads are of course also possible.)

analysis (really syntactic atoms), then the principles in (5) apply as usual to explain the details of the construction, and we capture the parallels in morphological and syntactic structure as well.¹⁷

9. Conclusions

In conclusion, I have sought to explain why the structural accusative case that is used in clauses is not also used in nominals by combining a dependent theory of case with my (2003) theory of the lexical categories. In particular, accusative case is not used on the possessor, because it is higher than the possessum, not lower, given standard structures for possessed nominals. Therefore, possessors might be ergative in an ergative language, but they will not be accusative in accusative languages. Nor is accusative used on the possessum of a possessed nominal, because the possessum is not a maximal nominal; its referential index is inherited by the larger DP as a whole. Finally, accusative case is not used on the complement of a possessed or predicated noun: in these structures there is a higher c-commanding nominal, but it is not close enough to the complement to make it accusative (it is not in the same spell out domain, the way that it is in verbal constructions). Therefore, the case theoretic differences between nominals and clauses can be explained given my theory of the noun-verb distinction, as can the fact that those differences vary somewhat with the alignment type of the language.

In addition, I have accounted for why verbal nouns are different from simple nouns in their case properties. They can have accusative objects (depending on the language) because they decompose into two distinct units in the syntax: an ordinary verb, and an ordinary noun. This substantiates my claim that the noun-verb distinction properly applies not to whole words but to the elements of a syntactic representation, which can be smaller than words, corresponding more closely to the morphemes that make up those words. Words then may not have well-defined categorial properties, particularly when they are the result of the late union of elements that have different categories. This has contributed to the impression that category distinctions are not discrete.

Overall, I offer this study in case theory as a new example of the discrete and coherent difference between verbs and nouns qua elements in a syntactic representation, showing that an explanation of their case differences can be built on the same foundation as the explanations of other differences between structures containing verbs and structures containing nouns discussed in Baker (2003) and Baker (2008). In particular, they derive from the fact that verbs permit specifiers whereas nouns (and adjectives) do not, taken together with the dependent theory of accusative case assignment.

¹⁷ Cetnarowska's (this volume) analysis of denominal relational adjectives like *Italian*, in which a nominal element is merged with an adjectival head in the syntax, with the nominal features projecting, could be used to make much the same point. Relational adjectives seem to have a mix of nominal and adjectival properties, making it tempting to treat them as an intermediate category on some kind of continuum. But in fact they are crucially complex morphosyntactically, with one part unambiguously nominal and another part unambiguously adjectival. Here too morphemes and syntactic atoms have discrete and well-defined categories, but morphologically complex words may not.

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