

Selection, Idioms, and the Structure of Nominal Phrases with and without Classifiers*

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Abstract

It is common to hypothesize that in classifier and non-classifier languages alike the various functional heads (determiner/demonstrative, numeral, classifier) each head their own projection, so that the maximal projection of the nominal phrase is not NP but something like DP. We evaluate the predictions this makes regarding selection and verb-object idioms in English, a non-classifier language, and in Korean and Vietnamese, two classifier languages. These predictions are not upheld. Selection and idioms show that the maximal projection of the nominal must be a projection of the lexical N itself, not a functional element. We develop such an analysis of nominals, and show how it accounts for data that was taken to motivate the DP Hypothesis.

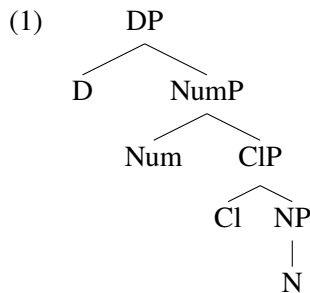
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1 Introduction

The DP Hypothesis, which claims that the head of the nominal projection is not N, but a functional projection D, appears to have gained such widespread acceptance in the field that articles and textbooks now regularly use the label “DP” to refer to nominal phrases, rather than “NP.” The basic claim of this theory—that lexical Ns are dominated by a sequence of functional projections—has also been adopted in studies of classifier languages. One of the most common approaches to the structure of the nominal phrase in classifier languages is to hypothesize that the various functional elements—demonstrative (D), numeral (Num), and classifier (Cl)—all head their own projections. Each of these heads projects, so that the maximal projection of a noun is not NP but DP (determiner or demonstrative phrase¹). The following structure is quite common (see Simpson 2005, Wu and Bodomo 2009, Cheng and Sybesma 2012, among others):

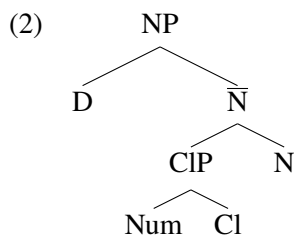
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¹We abstract away from the question of whether demonstratives are the same category as determiners, and whether that category is the D of the DP Hypothesis proposed for languages with determiners. See the works cited for some discussion.



Other publications add even more projections (e.g., Bartlett and González-Vilbazo 2013).

In this paper, we compare the DP Hypothesis as applied to English and to classifier languages against a different hypothesis, where the head of the nominal is the lexical head N (the NP Hypothesis). We adopt the structure proposed for English by Payne and Huddleston (2002) and adapt it to classifier languages as follows:



In this structure, the maximal projection of the nominal is a projection of the lexical head N, not any of the functional heads. There are three levels: the head N, the maximal projection NP, and intermediate projections which we label “ \bar{N} ,” of which there may be more than one (see Payne and Huddleston 2002, Payne *et al.* 2013).² We assume that the numeral and classifier together form a sub-constituent, but this is not crucial to the arguments (see, e.g., Li and Thompson 1981, Tang 1990, Nguyen 2008, Zhang 2011, Bale and Coon 2014).

We compare the DP Hypothesis and the NP Hypothesis on a variety of phenomena, spending the most time on selection and verb-object idioms. We argue that all of this evidence supports the NP Hypothesis over the DP Hypothesis. Selection, in particular, is simply incompatible with the DP Hypothesis. In the DP Hypothesis, verbs must not select Ns, they must select Ds. D selects NumP, Num selects for CIP, and so on (Bartlett and González-Vilbazo 2013). This must be the case given the usual assumption that selection is strictly local, such that heads can only select their complements and their specifiers. In a structure like that in (1), it is impossible for there to be any selectional relation between a verb and the N head within its nominal complement. We show that this is incorrect, and that the head of the sister of a verb must be N, not

²Payne and Huddleston 2002 do not use the label “ \bar{N} ” for this intermediate projection, because the \bar{X} label means something particular in classical X-Bar Theory, namely a constituent that includes the head and its selected arguments only. The intermediate projection in nominals does not appear to distinguish between arguments and adjuncts. We nevertheless label it \bar{N} , though with the caveat that this does not correspond perfectly to many versions of X-Bar Theory.

D or any other functional head. We also present data from a survey of verb-object idioms in English and classifier languages that argues for the same conclusion: the functional elements in idioms are generally not part of the idiom, and can be freely interchangeable. This requires that the head of the complement of the verb be N, not D, Num, or Cl.

We begin in section 2 by examining the issue of selection in detail, and compare nominals to clauses. There we show that the facts of selection are only compatible with the NP hypothesis. In contrast, the head of the clause is a functional projection. Section 3 then presents a detailed study of verb-object idioms in English, Korean, and Vietnamese, and argues that the patterns of idioms that we find are best accounted for by the NP hypothesis. In particular, in verb-object idioms, the functional elements are almost never part of the idiom, and they can often freely vary, just like optional modifiers like adjectives. We argue that this is incompatible with central tenets of the DP Hypothesis. Section 4 addresses possible responses to the idiom data within the DP Hypothesis, and shows that all of them are lacking. It also addresses some other issues from the recent literature on idioms.

Section 5 then shows how the NP Hypothesis can account for various facts that have typically been analyzed in DP terms, and in particular facts that have been used to argue for the DP Hypothesis. All of the facts are compatible with the NP structure. The overall conclusion is that the NP Hypothesis fares as well as the DP Hypothesis on most facts, and is the only one of the two that is compatible with the facts of selection and idioms. Recent findings on head movement also support the NP Hypothesis. The overall conclusion is that the DP Hypothesis is not well motivated; the NP Hypothesis is clearly superior.

Throughout this paper, we treat both non-classifier languages like English, and classifier languages, concentrating on Korean and Vietnamese (these three languages are spoken natively by the three authors). The arguments hold for languages of both types, and indicate that the head of the nominal in every language is N, not D.

2 Selection

We begin with the issue of selection, and the problem it raises for the DP Hypothesis. First, some background on the DP Hypothesis.

The DP Hypothesis is the conjecture that the head of the nominal phrase is not N; instead, the NP projection is dominated by one (or more) functional heads that actually head the phrase, one of which is D (Determiner). Early suggestions of this hypothesis include Jackendoff (1972), Hogg (1977), Brame (1981, 1982), Szabolcsi (1983); among early proponents of this theory are Hudson (1984), Fukui (1986), Fukui and Speas (1986), Hellan (1986), Abney (1987), Horrocks and Stavrou (1987), Szabolcsi (1987), Löbel (1989), and Olsen (1989).

The primary motivation for the DP Hypothesis has always been a conceptual parallel with the structure of the clause, which was reworked by Chomsky (1986) as CP–IP–VP. The idea was that functional categories like C(omplementizer) and I(nflection) fit the X-bar schema, and head XPs with complements and specifiers; we should expect the same for functional heads like D. In addition, some researchers noted morphological parallels between clauses and nominals in agreement and case, which they took to suggest an NP-internal

Infl, parallel to the clause. For a recent endorsement of the idea of a complete parallel between nominals and clauses, see Ritter and Wiltschko (2014, 1334).

Selection, however, calls this parallel into question. As has been pointed out by Baltin (1989), Payne (1993), Williams (2003), Sportiche (2005), and Bruening (2009), verbs do not select for Ds, as the DP Hypothesis requires, or for any of the functional elements in the nominal. In contrast, in clauses, what is selected is the highest functional element. We show this in detail beginning with English, and then turn to the classifier languages Korean and Vietnamese. Section 2.4 addresses attempts to fix the DP Hypothesis to account for the facts, including the often-appealed-to notion of an extended projection (Grimshaw 2005 [1991], van Riemsdijk 1998). This notion does not describe anything in the clausal domain, and so is nothing but an ad hoc attempt to fix the failings of the DP Hypothesis in the nominal domain.

Before we begin, it is important to clarify what we mean by selection. We are concerned with selection in the broadest sense, encompassing semantic selection (s-selection), categorial selection (c-selection), selection for features (e.g., [finite]), and lexical selection (l-selection, Pesetsky 1992). We see no need to distinguish among these subtypes of selection. All of them are strictly local: particular selectors select particular elements to merge with. This selection may involve the specification of the semantic type of that element, its category, features it bears, or even particular lexical items (as in V selecting for particular prepositions, or as in idioms, below). We find all of these in selection, and our discussion in this section includes all of them, but focusing on category and feature selection. We are not aware of any reason to distinguish between these various subtypes for the purposes of our comparison here. (For discussion, see Pesetsky 1992; Pesetsky's attempt to eliminate c-selection is shown by Alrenga 2005 to be unsuccessful, and Pesetsky himself acknowledges that lexical selection and feature selection are necessary in addition to s-selection.)

2.1 English

Clauses and nominals differ in what is selected when a verb selects them. Verbs that select for clausal complements select only categories that are determined high in the clause, such as questions versus declaratives, finite clauses versus nonfinite clauses, and subjunctive versus indicative clauses:

- (3) *Questions versus declaratives:*
 - a. Sue thinks that/*whether the world is flat.
 - b. Sue wonders whether/*that the world is flat.
- (4) *Finite versus nonfinite:*
 - a. Bertrand wants the world to be flat.
 - b. * Bertrand wants that the world is flat.
- (5) *Subjunctive versus indicative:*
 - a. Sue asked that the answer be/*is two.
 - b. Sue thinks that the answer *be/is two.

Grimshaw (2005) claims that subjunctive selection is an instance of a verb selecting the form of the embedded verb. This is clearly not the case; it is the form of the *highest* verb, so Infl or Tense, that is selected, not the main verb:

- (6) I suggest that you **be/*are** studying when I return.

Furthermore, Baltin (1989) argues that verbs only need to select the complementizer, and nothing else. If a verb selects *for*, the clause is nonfinite, if *that*, it is finite. Payne (1993) (citing A. Zwicky) points out that subjunctives are an apparent problem for this view: both indicatives and subjunctives in English appear under *that*. However, plenty of languages have distinct subjunctive and indicative complementizers (e.g., Romanian); it is therefore not crazy to think that English has a C_{Indic} and a distinct C_{Subj}, both of which are pronounced as *that*; if this is the case, then it is possible to maintain that selection of clauses involves only selection for C, and never for anything in the complement of C. Verbs that select clauses *never* select for the main verb, for modals, for auxiliaries, for negation, or for topic or focus phrases (suggesting that TopicP and FocusP are not actually high functional heads in CP, contra Rizzi 1997). All of these can generally appear in any complement CP whose other functional elements they are compatible with.³

We conclude that the verb is not the head of the CP in any sense, C is. It is what is selected for when verbs select clauses. Note that this is simply incompatible with Grimshaw's (2005 [1991]) idea of the clause as an extended projection of the verb: there is no sense in which CP, or any of the functional projections above VP, is a projection of the verb. We will return to this point in section 2.4.

In contrast to clauses, verbs that select nominal arguments *never* select for particular determiners, or numbers, or possessors, or anything else. Generally, if a verb admits a nominal, any sort of nominal is allowed: quantificational, deictic with demonstrative, definite or indefinite, numeral plus noun, adjective plus noun, and so on. For instance, Baltin (1989) points out that there is no verb that allows NPs without a possessor but not ones with a possessor (or vice versa); there is also no verb that allows indefinite NPs but not definite ones:

- (7) *Nonexistent selectional pattern:*
a. John glorped books. (Baltin 1989, (35))
b. * John glorped his books. (Baltin 1989, (36))

- (8) *Nonexistent selectional pattern:*
a. Samuel is streading a book.

³A reviewer brings up selection of CP apparently changing when the higher clause is negative or a question, for instance where *if* is degraded with positive *know*:

- (i) a. ? I know if this will work.
b. I don't know if this will work.

Such facts are discussed in Adger and Quer (2001) and McCloskey (2006) and given a plausible semantic account. They are therefore not a problem for the view of strict locality of selection that all the data presented here argues for (see especially Adger and Quer 2001 on this point).

- b. * Samuel is streading the book.

One possible case of this is kinship *have*:

- (9) a. I have a child.
b. * I have the/every child.

However, this is possibly some kind of existential construction; see Freeze (1992), among others. *Constructions* sometimes require indefinites (e.g., existential constructions) or definites (e.g., topic constructions), but particular verbs do not (note that *have* in other uses allows definites).

Number is often selected when a verb selects a nominal:

- (10) a. I gathered the students.
b. * I gathered the student.
c. I gathered the French Club.
d. * I gathered the scissors. (where there's only one pair of scissors)
e. I gathered a butcher, a baker, and a candlestick maker.

But note that selection for number is generally semantic, not syntactic, as shown by the semantically plural but syntactically singular (10c) versus the semantically singular but syntactically plural (10d). It is not clear that number should be represented as a functional head separate from N (as in Ritter 1991); if it is, it is not clear what its content is in (10c), where the noun is formally singular, or in (10e), where each of the conjoined nouns is singular. It is more plausible to view semantic number as a property of the noun, given (10c) (but we acknowledge that number is a complicated topic that we cannot possibly do justice to here).

There is yet another asymmetry between nominals and the clausal domain. In the clausal domain, we have seen various instances of categorial selection for CP above (with selection for particular values of C, like [interrogative]). In addition, some verbs also select for clauses that are smaller than CPs. Raising verbs, for instance, are typically analyzed as selecting bare IPs (with a value of [nonfinite]), since raising is incompatible with CP material (complementizers, *wh*-phrases). Some other verbs are thought to select something even smaller, for instance VP. The following are some examples that have been argued to involve selection of bare VPs (Stowell 1983; examples (11a–d) are Stowell's):

- (11) a. Mary had [_{VP} her brother open the door].
b. Nobody heard [_{VP} it rain last night].
c. I want [_{VP} it understood that the order was given].
d. We all feared [_{VP} John killed by the enemy].
e. I made [_{VP} them leave the room].

Numerous verbs also select forms in *-ing* and do not allow infinitival *to* or anything that is known to be higher than VP (see Pesetsky 1992); these might also plausibly be analyzed as selection of (a particular value of) VP:

- (12) a. She enjoyed [hearing the concerto].
 b. * She enjoyed [to hear the concerto].
- (13) a. He succeeded in [convincing her].
 b. * He succeeded [to convince her].

Alternatively, these are gerunds, nominals formed from VPs. If so, there is some nominal-forming head that selects for a VP. Either way, we see selection of VP. (For an analysis of restructuring or clause union as selection of VP, see Wurmbrand 2007.)

In other words, in the clausal domain, where it is hypothesized that there is a series of projections CP-IP-VP, we see selection for each of these projections: some verbs select CP, others select IP, others may select VP. Now, if nominals were truly like clauses and involved a series of projections DP-(NumP)-NP (or others), we should likewise see selection for each of these projections. The fact is that we never do. As stated above, if a verb (or other head) selects for a nominal, these functional elements vary, either freely or based on the choice of head noun (never the selecting verb). Some publications adopting the DP Hypothesis in fact argue that different nominal projections can have or lack the functional projections to different extents, for instance Déchaine and Wiltschko (2002) and Bošković (2014). It is striking, and totally unexpected in these theories, that verbs and other selectors *never* select for particular “sizes” of nominals in this sense, whereas they do seem to select different “sizes” of clauses.⁴ Once again, the expectations of the DP Hypothesis are not met, and clauses and nominals are not parallel at all.

Turning to selection of form, we also find that clauses and nominals behave entirely unlike each other, as was noted by van Riemsdijk (1998). In the clausal domain, each head determines the form of the head of its complement. C determines Infl, and each auxiliary determines the form of the next. This is illustrated for English below (for a recent analysis of the English auxiliary system, see Harwood 2015):

- (14) *C determines Infl (finite vs. nonfinite):*
- a. I would like for the Jamaicans to win.
 b. I expect that the Jamaicans will win.
- (15) *Each auxiliary determines the form of the next:*
- a. I might have been being handed some cocaine (when the police caught me).
 b. (might: bare form; have: -en form; be (Prog): -ing form; be (Pass): -en form)

⁴Pereltsvaig (2006) claims that such selection happens in Russian, with an aspectual prefix selecting a QP rather than a full DP. However, Pereltsvaig’s account of the difference between DPs and QPs is based entirely on semantics and features, and does not depend on a difference between the two in syntactic category. A reinterpretation of the Russian data might view the two types of nominals as syntactically the same but semantically and featurally distinct. As far as we can tell, this type of analysis would be compatible with all of Pereltsvaig’s data.

Additionally, incorporated and “pseudo-incorporated” objects are sometimes posited to lack functional structure. As far as we can tell, however, this is not an issue of selection; one and the same verb can appear with either a full-fledged NP and an NP lacking functional material.

The main verb does not determine the form of the functional elements, they determine its form. The only exception that we are aware of is auxiliary selection with unaccusatives versus unergatives (Romance, Dutch). But in this case, auxiliary selection is not determined by the verb itself. The same verb will have one auxiliary in the active voice, and a different one in the passive voice. In addition, adding a PP can change the choice of auxiliary for the same verb (see, e.g., Hoekstra and Mulder 1990). In other words, auxiliary selection seems to be determined by several heads in the clause, and not by the particular verb.

In clauses, then, functional heads determine the form of other heads, consistent with the typical analysis where a functional head heads the CP projection, with each head taking the next as its complement.

In contrast, in nominals the form of everything else is determined by the head noun:

- (16) a. too many/*much people
b. too much/*many rice
c. these/*this scissors

This is even clearer in languages like Spanish that are richer in inflection than English:

- (17) *Spanish*
a. todos esos lobos blancos
all those wolves white
b. todas esas jirafas blancas
all those giraffes white

In Spanish, every element in the nominal phrase must agree with the head noun in gender and number (*lobos* is masculine plural, *jirafas* is feminine plural).

One might try to claim that it actually works the other way around: choosing a functional element in DP actually determines the form of N. This does not seem to be correct, however. In clauses, where this *is* how selection works, every verb will be able to combine with any of the functional elements that select its form. For instance, there is no hypothetical verb *geat* that only has finite forms, and lacks a nonfinite one:

- (18) *Nonexistent verb:*
a. I think that he geats. (finite)
b. * I want to geat. (*nonfinite)

In contrast, a noun will just be incapable of combining with functional elements that mismatch:

- (19) a. these scissors
b. * this scissors
c. * too many rices

If it were really the case that the functional elements in the nominal determined the form of N, in the same way that the functional elements in the clause determine the form of V, we would not expect this asymmetry.

The conclusion is that each functional element in the clausal domain is a head taking the next one as its complement (which determines its form), but this is *not* the case in nominals. In other words, clauses and nominals are not parallel at all. We can also note at this point that clauses do not behave as though they are headed by the lexical verb, as Grimshaw (2005 [1991]) claims when she analyzes the clause as an *extended projection* of the verb. In fact, the verb determines nothing outside of its own projection. There is no sense in which the higher functional projections are projections of the lexical verb. This is discussed in more detail in section 2.4. For now, we conclude that the facts of selection indicate that the head of the CP is in fact C, but the head of the NP is not D, it is N.

2.2 Selection in Classifier Languages: Korean

Classifier languages show the same clause-nominal asymmetry that English does, as we now show beginning with Korean.

Korean employs different sentence-final particles to mark clauses as declarative, interrogative, imperative, and exhortative (Ahn and Yoon 1989, Whitman 1989, Jung 1998, Bradner 2004, Pak 2004, among others). Verbs that select clauses as complements may select for particular types of these mood markers. For instance, the verbs meaning ‘claim’ and ‘believe’ only permit declarative clauses and do not allow interrogative clauses, while ‘ask’ and ‘question’ select for interrogatives and do not permit declaratives:⁵

- (20) a. Lina-nun [Thomi-ka ku kapang-ul sa-ss-ta/*nya]-ko cwucanghay-ss-ta
 Lina-Top [Tommy-Nom that bag-Acc buy-Pst-Decl/*Q]-KO claim-Pst-Decl
 /mit-ess-ta.
 /believe-Pst-Decl
 ‘Lina claimed/believed that Tommy bought that bag.’
- b. Lina-nun wuli-eykey [Thomi-ka ku kapang-ul sa-ss-nya/*ta]-ko mwul-ess-ta
 Lina-Top we-Dat [Tommy-Nom that bag-Acc buy-Pst-Q/*Decl]-KO ask-Pst-Decl
 /cilmwunhay-ss-ta.
 /question-Pst-Decl
 ‘Lina asked/queried us whether Tommy bought that bag.’

As further examples, ‘suggest’ and ‘persuade’ select for an exhortative, while ‘order’ and ‘direct’ require an imperative:

⁵Abbreviations: Acc: Accusative, Adn: Adnominal, Asp: Aspect, Cl: Classifier, Comp: Complementizer, Cop: Copula, Dat: Dative, Decl: Declarative, Def: Deferential, End: Ender, Evi: Evidential, Exhort: Exhortative, Fut: Future, Gen: Genitive, Hon: Honorific marker, Imp: Imperative, Int: Intimate marker, Neg: Negative, Nml: Nominalizer, Nom: Nominative, Part: Particle, Pl: Plural, Pol: Polite marker, Pres: Present, Pst: Past, Q: Question, Top: Topic

- (21) a. Lina-nun wuli-eykey [ku kapang-ul sa-ca/*ta/*nya]-ko ceyanhay-ss-ta
 Lina-Top we-Dat [that bag-Acc buy-Exhort/*Decl/*Q]-KO suggest-Pst-Decl
 /seltukhay-ss-ta.
 /persuade-Pst-Decl
 ‘Lina suggested to us/ persuaded us to buy that bag.’
- b. Lina-nun wuli-eykey [ku kapang-ul sa-la/*ca/*ta/*nya]-ko myenglyenghay-ss-ta
 Lina-Top we-Dat [that bag-Acc buy-Imp/*Exhort/*Decl/*Q]-KO order-Pst-Decl
 /cisihay-ss-ta.
 /direct-Pst-Decl
 ‘Lina ordered/directed us to buy that bag.’

As in English, then, verbs that select clauses select something high in the clause, namely whatever head it is that determines declarative, interrogative, imperative, or exhortative mood (see Jung 1998 for a summary of views in the Korean literature on what this head is). Note that in Korean, embedded clauses are typically marked with a morpheme *-ko* (*-nun* if they are complements to nouns), which comes outside the mood marker. The morpheme *-ko* is generally assumed to be a complementizer (Choe 1988; Ahn and Yoon 1989; Whitman 1989; Yoon 1990; Sells 1995; Kim 1996; Jung 1998). However, it occurs with all mood markers, which is what is actually selected by embedding verbs. Since the morpheme *-ko* is invisible to this selection, it could not be a head occurring between the mood head and the higher verb; instead, it appears to be simply a morphological marker of subordination.

As for heads lower in the clause, they are selected by higher heads in the same clause, as in English. As an example, consider negation. In an imperative, negation is marked by *mal* rather than the more general *an*:

- (22) (Han and Lee 2002, (2))
- a. Hakkyo-ey ka-ci **mal**-ala.
 school-to go-CI Neg-Imp
 ‘Don’t go to school!’
- b. * Hakkyo-ey **an** ka-la.
 school-to Neg go-Imp
 ‘Don’t go to school!’

The same is true in embedded clauses: an embedded imperative uses *mal*, selected by the imperative head:

- (23) a. Lina-ka wuli-eykey [cip-ey ka-ci **mal**-la]-ko myenglyenghay-ss-ta.
 Lina-Nom we-Dat [home-to go-CI Neg-Imp]-KO order-Pst-Decl
 ‘Lina ordered us not to go home.’
- b. * Lina-ka wuli-eykey [cip-ey **an** ka-la]-ko myenglyenghay-ss-ta.
 Lina-Nom we-Dat [home-to Neg go-Imp]-KO order-Pst-Decl
 ‘Lina ordered us not to go home.’

Just as in English, a higher verb selects the highest element in the clause (mood, in the case of Korean); mood selects the form of a lower head (negation); and so on. There is no embedding verb that selects for a negative clause or a non-negative clause; no embedding verb that selects for a particular tense or aspect; etc. In the clausal domain, each head selects the next head down. A verb that selects a clause only selects a particular value for the *highest* functional head in the clause. Once again, selection is strictly local: a higher verb cannot determine anything within the clause itself, other than the head of the clause.

In contrast, verbs that select nominals never select for particular functional elements. There is no verb that selects for a demonstrative, a numeral, or a classifier. If a verb selects a nominal phrase, any combination of these elements is allowed. This is demonstrated for mass and count nouns below:

- (24) a. Mina-ka (ku /sey pyeng-uy) wain-ul ma-syess-ta.
 Mina-Nom (that /three Cl-Gen) wine-Acc drink-Pst-Decl
 ‘Mina drank (those/three bottles of) wine.’
- b. Tim-i (i /twu thong-uy) pyenci-lul sse-ss-ta.
 Tim-Nom (this /two Cl-Gen) letter-Acc write-Pst-Decl
 ‘Tim wrote (these/two) letters.’

As in English, the functional elements in the nominal domain are *never* selected by verbs. A verb either selects a nominal or it does not. If it selects a nominal, any combination of the functional elements demonstrative, numeral, classifier is allowed. This is in stark contrast with clauses, where verbs *only* select the highest functional element, and each functional element selects the next.

2.3 Selection in Classifier Languages: Vietnamese

Vietnamese behaves in exactly the same way. Verbs that select clauses only select for values that are determined by the head of the clause: declarative versus interrogative versus imperative, for example. Unlike Korean, Vietnamese does not have a system of inflectional suffixes marking different types of clauses. Instead, clause types are marked by particles, although many of these particles are limited to root clauses and some are optional. Nevertheless, embedded clauses can be distinguished by semantics and by other grammatical means, for instance the choice of clause-initial complementizer. For example, the verb ‘say’ only permits declaratives and does not allow interrogatives (the complementizer *liệu* can only appear in interrogatives), while ‘want to know’ only allows interrogatives (which may be marked by a clause-final particle and *liệu*):

- (25) a. Họ nói [là/rằng/*liệu Ly chẳng biết nấu cơm].
 3P say Comp/Comp/*Interr.Comp Ly Neg know cook rice
 ‘They said that Ly does not know how to cook.’
- b. * Tân nói [Thơ có gặp Lan hay không].
 Tân say [Tho CO meet Lan or Q]
 ‘Tan said whether Tho met Lan.’ (Bruening and Tran 2006, (8a))

- (26) a. Hùng muốn biết [là/rằng/liệu Tuấn đến nơi chưa].
 Hung want know [Comp/Comp/Interr.Comp Tuan arrive place Q]
 ‘Hung wants to know if Tuan has arrived yet.’
- b. * Tân muốn biết [Thơ đã gặp Tiên].
 Tan want know [Tho Asp meet Tien]
 ‘Tan wants to know that Tan met Tien.’ (Bruening and Tran 2006, (9b))

Verbs selecting clauses only select for features carried by the head C: declarative, interrogative, or imperative. They never select for tense, aspect, or polarity, for instance. These are selected by functional elements within the clause itself. For instance, as in Korean, imperative clauses select a particular form of negation. Rather than the usual *không*, *đừng* or *chớ* must be used instead:

- (27) **Đừng/chớ/*không** mua con heo này!
 Neg.Imp/Neg.Imp/*Neg buy Cl pig this
 ‘Don’t buy this pig!’

When a higher verb selects an imperative clause as its complement, that imperative will in turn select the form of negation appropriate to an imperative. This is shown with the following pair, where it is not grammatical to use the form of negation selected by a declarative *chẳng*, which can be used in a sentence like (25a) where the higher verb selects a declarative complement.

- (28) Họ đã yêu-cầu chúng-tôi **đừng/chớ/*chẳng** mua con heo này.
 3P Pst request 1P Neg.Imp/Neg.Imp/*Neg buy Cl pig this
 ‘They requested us not to buy this pig.’

In other words, just as in English and Korean, in Vietnamese a verb that selects for a clause can only select for features carried by the head of the clause (declarative, interrogative, imperative). There is no case where a verb selects elements lower within its clausal complement. Within the clause, each head selects the next, so that imperatives select one form of negation and declaratives select another.

In contrast, verbs that select nominals never specify anything about the functional elements that occur in nominals. They never select for demonstratives, numerals, or classifiers. If a verb takes a nominal phrase as its complement, it permits any combination of these functional elements and even their complete absence. The following is typical, where the functional elements are simply optional:

- (29) a. Tôi có-thể ăn hết (cả) (một) (quả) sầu-riêng (kia) mà!
 1S can eat done (all) (one) (Cl) durian (that) Part
 ‘I can eat (that one whole) durian.’
- b. Họ định mua (hai) (chiếc) nhẫn (này).
 3P plan buy (two) (Cl) ring (this)
 ‘They plan to buy (these two) rings.’

- c. Chi vừa đốt (mười) (cái) áo (kia).
 Chi just burn (ten) (Cl) shirt (that)
 ‘Chi just burned (those ten) shirts.’

Once again, the conclusion is that clauses are headed by functional elements, something like C. The highest functional element selects the next functional element, until the lexical verb is selected. Nominals, in contrast, are *not* headed by functional elements. What is selected by a selecting verb is the lexical N itself, and the functional elements are irrelevant. This is true cross-linguistically, in classifier and non-classifier languages alike. Clauses and nominals are not comparable at all when it comes to selection, and the DP Hypothesis simply gets the facts wrong.

2.4 Attempts to Fix the DP Hypothesis

The issue of selection has been addressed in the DP Hypothesis. The first attempt at accounting for the selection of N that we are aware of involves percolation (Abney 1987). The features of N percolate up through the functional layers (in Abney, AP as well as DP). The problem with this account is that it does not explain why Ds and other things are *not* selected in nominals; they are there, and local, and should be available for selection. This theory would also have to explain why the features of V (or other things) do not percolate up to CP. In other words, it does not capture the asymmetry between clauses and nominals.

The second attempt at a fix that we are aware of is the double-headedness of Radford (1993). In this account, nominals have two heads, N and D. Again, this theory does not explain why Ds and other things are not selected in nominals, since they are entirely comparable to N. It also fails to explain why clauses behave differently from nominals.

The third attempt to salvage the DP Hypothesis in the face of the selection facts is the notion of an extended projection (Grimshaw 2005 [1991], van Riemsdijk 1998). The DP is said to be an extended projection of the N, and so a higher verb can indirectly select the N by selecting for the whole extended projection. The problem with this hypothesis is that it boils down to an ad hoc attempt to fix the failings of the DP Hypothesis. As we have seen, it is simply not correct to view the clause as an extended projection of the verb. There is no sense in which the functional elements of the clause are really a projection of the verb. As we saw, it is the functional elements that are selected when clauses are selected, and each functional head determines the form of the one it selects. The verb does not determine anything outside of its own projection. This means that the notion of an extended projection is simply incorrect for clauses, and fails to capture anything about their behavior. In the nominal domain, it does seem that the entire nominal is a projection of the noun. This means that the DP Hypothesis *could* be correct, *if* we adopt the notion of an extended projection. However, since this notion describes nothing in the clausal domain, its use in the nominal domain is completely ad hoc: it becomes a device whose only purpose is to fix the failings of the DP Hypothesis. In addition, the idea of an extended projection suffers from the same problem as the percolation idea discussed above: there is no reason in the extended projection theory why D, Num, and Cl could not be selected. The notion of an extended projection is therefore unhelpful and ad hoc, and should be abandoned.

A fourth attempt to account for selection in the DP Hypothesis was proposed by Sportiche (2005).

Noticing that verbs never select for Ds, Sportiche proposed that in their base positions, nominals are simply Ns. They then move to locations higher in the tree where the Ds are generated, combining with them to become a DP. The problem with this account is that there is no place where the Ds could be generated, by Sportiche's own reasoning. Just as Vs never select Ds, neither do Voice, *v*, Aspect, Tense, C, or any other functional projections. There is no selectional relation between D and any projection higher in the tree. If D cannot be an argument of V because V never selects D, then there is no head anywhere in the tree whose argument D could be. The only head D enters into any relation with is N.

Finally, a reviewer suggests that perhaps selection is not strictly local. To our knowledge, this has never been proposed in the literature, and with good reason. As we saw in the clausal domain, selection *is* strictly local, with each head selecting the next. Similarly, if selection were not strictly local, we would expect all kinds of configurations to be licit that are not. For instance, prepositions like *despite* strictly select NPs and do not allow CPs:

- (30) a. *Despite [_{CP} that he never finished his PhD], ...
 b. Despite [_{NP} the fact that he never finished his PhD], ...

If selection could be non-local in the way the DP Hypothesis requires, an NP in the specifier of CP or a nominal main predicate should be able to satisfy the selectional requirement of *despite*, but they cannot:

- (31) a. *Despite [_{CP} [_{NP} which degree] he never finished],...
 b. *Despite [_{CP} that he is [_{N_{pa}} genius]],...

To give up the locality of selection is to give up most of the results of syntactic theory. We conclude that this is not an option.⁶

2.5 Summary

The facts of selection are incompatible with the DP Hypothesis. What verbs select is the lexical head N, not any functional projection in the nominal phrase. This is in sharp contrast with clauses, where verbs *only* select the highest functional projection. Nominals and clauses are not parallel at all, as the DP Hypothesis claims. We conclude from this that the head of the nominal projection must be N, not D or any other functional category.

We turn next to a detailed investigation of verb-object idioms. As we will show, they follow the same pattern as selection generally: there is a relation between V and N, and no relation between V and any of the functional projections within its nominal complement. Again, we take this to argue in favor of the NP Hypothesis and against the DP Hypothesis.

⁶The same reviewer asks about negation, which is commonly posited to head a NegP that is only present in negative clauses (e.g., Pollock 1989). According to the reviewer, this ought to disrupt the selectional relation between whichever two heads flank NegP. However, note that functional categories in the clause can often optionally select a range of categories. In English, Mod(al) can select any of Perf(ect), Prog(ressive), Pass(ive), or the main verb; Perf can select Prog, Pass, or the main verb. A head can include Neg among the categories it selects, and then Neg would be able to select the remainder as its own complement. (Alternatively, Neg is just one value of a head that is present in all clauses, as in the Σ P analysis of Laka Mugarza 1990.)

3 Idioms

We begin with some preliminaries. First, we consider phrasal idioms to be two or more words that, just when combined with each other, do not have the meaning that is expected from the combination of their constituent parts, but some other meaning. It is crucial that this meaning only arises when the parts co-occur. For example, *get X's goat* is a phrasal idiom because the verb *get* does not have its literal meaning of acquisition in this idiom, nor does *X's goat* refer to an animal. Just when combined, they produce the meaning 'drive X to anger/annoyance'. The verb *get* does not have this meaning in any other context, nor does *X's goat*. This particular idiomatic meaning only arises when the V and the NP combine together; it is not there with different choices of NP or different choices of V. So, *get X's goat* does not have the same meaning as *get X's sheep/cow/hen* or *have/take/bring/steal X's goat*. A good illustration of the role of combination in determining meaning is the three idioms *hit the sack* (go to bed), *get/give the sack* (be fired or fire someone), *leave holding the sack* (abandon to take all the responsibility). Here, the NP *the sack* has three different meanings triggered by the other words that it combines with.

In contrast, the expression *a little bird told X Y* is not a phrasal idiom, because the verb, *told*, has its literal meaning in this expression. In addition, the NP *little bird* can mean an anonymous source of information with different verbs. It is attested in *a little bird said/mailed/broadcast/leaked/etc.* The NP even occurs without any verb of communication, as in *Had Varys's little birds failed him for once?* (George R.R. Martin, *A Clash of Kings*).

In our study, we limit ourselves to verb-object idioms. The deciding criterion for counting something as an idiom is that the non-literal meaning only arises when the V and the NP combine together, and is not present with different choices of V or different choices of NP, as just illustrated. See more on this in section 4.

3.1 The Selection Theory of Idioms

Idioms become relevant to deciding between the DP Hypothesis and the NP Hypothesis once we consider theoretical approaches to the syntax of idioms. We are aware of four existing theoretical approaches to idioms and the structures they can be composed of. The first says that phrases that are interpreted idiomatically must be deep structure constituents, excluding all non-idiomatic material. This approach has been shown to be incorrect. For instance, Ernst (1981), Nunberg, Sag, and Wasow (1994), Nicolas (1995), O'Grady (1998), and others have pointed out that quantifiers, adjectives, and possessors that are not part of an idiom can come in between a verb and object that are interpreted idiomatically:

- (32) a. pull some discreet strings
b. pull a few strings
c. pull yet more strings (Nunberg, Sag, and Wasow 1994, (5c))
- (33) (O'Grady 1998, (5a,c,d))
a. kick the filthy habit

- b. leave no legal stone unturned
 - c. jump on the latest bandwagon
- (34) (O’Grady 1998, (4c–e))
- a. lose X’s cool
 - b. get X’s goat
 - c. fill X’s shoes

Adjectives, quantifiers, and possessors form constituents with nouns; there is no constituent in these examples consisting of all and only the idiomatic material. Therefore, the underlying constituent view must be rejected.

The second approach, which we adopt, says that idiomatic interpretation is dependent on selection (Bruening 2010):⁷

- (35) The Principle of Idiomatic Interpretation:
 X and Y may be interpreted idiomatically only if X selects Y. (Bruening 2010, 532, (24))

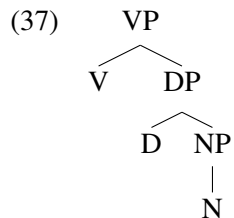
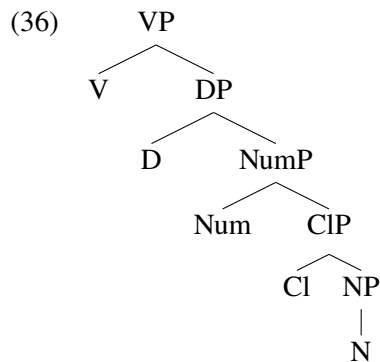
In the above examples, *pull* selects *strings*, and so the two can be interpreted idiomatically; *kick* selects *habit*; and so on. Non-selected elements, like adjectives and possessors, can appear in between pieces of idioms, because they do not disrupt this selection. Adjectives and adverbs *may* be part of an idiom, as in *beat a dead horse* or *bite the big one*, because they select for the projections they adjoin to. So, in *beat a dead horse*, *beat* selects an NP headed by the N *horse*, and *dead* selects a nominal projection (\bar{N} in our structure), here one headed again by *horse*. Note that in the case of idioms, selection is for particular lexical items (the “l-selection” of Pesetsky 1992, see above). Note also that some idioms permit more than one word; for example, *clutch at straws* is also attested as *grasp at straws*. L-selection can specify a list of lexical items in addition to single lexical item, or even a semantic class of lexical items, as in “families of idioms” like *beat the crap out of*. Here the verb can be one of several verbs like *beat* and *kick*, and the noun can also vary within a limited range, as *crap*, *shit*, *tar*, etc. A particular verb or class of verbs can select a list of particular lexical items, or a class of lexical items, with the result that the particular words chosen can even be somewhat productive. For more details of the selection theory, see Bruening 2010 and section 4 below.

There is also a third approach to idioms, the dependency theory of O’Grady (1998). In O’Grady’s formulation, this is mostly equivalent to the selection theory. However, it has been altered slightly in the notion of the *catena* in Osborne, Putnam, and Gross (2012). We do not adopt this theory, because it introduces a syntactic notion, the *catena*, that we believe syntactic theory can do without. Similarly, the fourth approach posits phrasal *constructions* as primitives in grammar and views phrasal idioms as examples of

⁷Various versions of this have been proposed. For instance, Baltin (1989) says that idioms involve only the head of a phrase and the head of one of its complements. This is not quite right, because specifiers can also be selected; see Bruening (2010). van Gestel (1995) says that idioms consist of the selection of a lexical head by another lexical head. Again, this is not quite right, because idioms can include functional material, see Bruening (2010). According to Koopman and Sportiche (1991, 224) a necessary condition on idioms is that, if X is the minimal constituent containing all the idiomatic material, the head of X is part of the idiom. This is correct, but it is too weak and is subsumed by the Principle of Idiomatic Interpretation in the text.

these constructions (e.g., Riehemann 2001). We also believe that syntactic theory can and should do without the formal notion of a construction. In contrast, every theory needs selection in some form or other. We therefore adopt the selection theory, and turn to what idioms have to tell us about the structure of nominal phrases.

The simplest place to start will be with verb-object idioms, where everyone assumes that verbs select their objects. Consider the structure of the nominal phrase posited for classifier languages above, as well as the simpler DP Hypothesis for English, both combining with a verb as its object:



These structures, combined with the selection theory of idioms, predict that there will be no verb-object idioms where V and N are fixed, but the functional elements D, Num, or CI can be freely varied and are not part of the idiom. This is so because, in the structures above, V does not select N; V selects D. These structures instead predict that verb-object idioms will always include the functional elements D, Num, and CI, if they include N. The only way to construct an idiom involving V and N is to build a chain of selection: V selects D, D selects Num, Num selects CI, CI selects N. The same is true for the simpler DP structure for a language like English: V selects D, and D selects N. Verb-object idioms are therefore predicted to always involve D.

Note that it is not entirely clear what analyses like the above have to say about cases where the functional elements are absent. For instance, it is common in some classifier languages for objects to be bare Ns. There are two options: (1) the functional elements are present but null; (2) they are simply missing, and the maximal projection of the object is NP. On either option, if an idiom consists simply of V and N, analyses like the above predict that functional elements will not be able to appear. Either the null version is selected and should be obligatory, in the version where the functional heads are present but null; or the V can select a bare NP, in which case adding any functional elements will disrupt this selectional relation.

In contrast with the DP Hypothesis, the NP Hypothesis predicts that verb-object idioms do not need to involve the functional elements D, Num, Cl. The verb selects N directly, and V-N idioms should be common. The functional elements may be included, the same way idioms may include optional elements (e.g., adjectives in *beat a dead horse*), but they may also freely vary, the way quantifiers, adjectives, and possessors were shown to above.

We now turn to testing these predictions, beginning with the simpler case of English, and then turning to two classifier languages, Korean and Vietnamese. As we will see, the predictions of the NP Hypothesis are upheld, while those of the DP Hypothesis are not.

3.2 English Verb-Object Idioms

Previous work on idioms in English has already noted that determiners can often vary. Nicolas's (1995) corpus study of adjectival modification noted many instances of non-canonical determiners being used, for instance *having the biggest field day of all* for *have a field day*. Lebeaux (2000) claimed that idioms divide into two groups depending on whether the determiner is fixed or not (but we will see below that nearly every determiner can vary). Svenonius (2005) suggested that determiners are never part of verb-object idioms, as did Bruening (2010, note 11). One indication of this is that, as noted by Moon (1998, 114), verb-object idioms with a determiner can often be rephrased as compounds without one:

- (38) a. break the ice — ice-breaker (Moon 1998, 114)
 b. bury the hatchet — hatchet-burying (Bruening 2010, note 11)

The most extensive study to date is that of Riehemann (2001). Riehemann investigated a corpus of English for attested uses of idioms, and one of the questions she asked was whether determiners can vary. For our purposes, we divide the idioms she investigated as follows:

(39) *Determiners found to vary:*

- | | | |
|-----------------------|----------------------------|--------------------------|
| a. bite the bullet | j. keep tabs on | s. rear its head |
| b. break the ice | k. lead the field | t. run the show |
| c. break the mold | l. level the playing field | u. saw logs |
| d. bury the hatchet | m. lose face | v. sound the death knell |
| e. call the shots | n. lose ground | w. spill the beans |
| f. cat out of the bag | o. make waves | x. strike a chord |
| g. clear the air | p. pay dividends | y. take a back seat to |
| h. close ranks | q. pay the piper | |
| i. deliver the goods | r. raise hell | |

(40) *Determiners not found to vary:*

- | | |
|-------------------------|---------------------|
| a. hit the ceiling/roof | e. make tracks |
| b. hit home | f. shoot the breeze |
| c. kick the bucket | g. speak volumes |
| d. look the other way | h. take a powder |

As can be seen, the majority of idioms (25 out of 33) permit the determiner to vary.

Here we add to Riehemann's corpus study by investigating additional idioms and by taking a second look at the group that she found not to vary in her corpus. We use the internet as a corpus, again focusing on verb-object idioms, although we also include some V-P-NP and V-NP-P idioms. We do not include the ones that Riehemann already found to vary, because we already know that they do. We divide up the idioms we look at according to the determiner that appears in their canonical form, as follows. For reasons of space, we include our findings immediately in the form of some attested examples. We begin with idioms that have a definite determiner in their canonical form:⁸

(41) *Definite*

- a. bark up the wrong tree: "Have you ever barked up a wrong tree?"; "you're barking up another wrong tree"
- b. beat the bushes for: "I beat some bushes for your contact details"
- c. beat around the bush: "Let's beat around this bush no more"; "You people beat around more bushes than an army of gardeners"
- d. bite the big one: no other determiner found
- e. bite the dust: no other determiner found
- f. bring home the bacon: "I still need to bring home some bacon occasionally."
- g. buy the farm: "many of us thought that perhaps Osama might, indeed, have bought that proverbial "farm" in the caves a few months ago"
- h. call off the dogs: "we might possibly call off some dogs and remain adequately safe AND informed"
- i. fly the coop: "Jones flew that coop and headed out of town to friendlier climes"
- j. foot the bill: "Who should foot that bill?"; "taxpayers must foot another bill"
- k. give someone the cold shoulder: "At least 1 industry is about to give Google a big cold shoulder"
- l. hit the ceiling/roof: no other determiner found
- m. jump the gun: "I figured, why not just jump that gun"; "Before you all jump another gun,"
- n. kick the bucket: no other determiner found
- o. look the other way: "The law enforcement agencies looked some other way because, after all, these were hijabi sisters just uttering some harmless little religious prayer in Arabic"

⁸It should be noted that in many of our examples where determiners and numerals are changed, the change has an effect on the interpretation of the verbal event. This effect can be specification to the particular case at hand ("let's beat around this bush no more"); indicating less than total involvement ("We might possibly call off some dogs"); repetition ("taxpayers must foot another bill"); and even anaphora ("the producer did the same number on B.J."). The literature on adjectival modification in idioms argues that many or even all instances of such modification are actually modification of the whole VP or event (see Ernst 1981 and Nicolas 1995). It might be that determiner variation does something similar. Regardless, the determiners, numerals, etc. can be altered, while the verb and the noun cannot.

- p. pull the plug on: “It would take tremendous strength and belief in yourself to pull yet another plug on a relationship,”
- q. pull the wool over X’s eyes: “Tol’ ye to go home to the ole man, an’ pull some more wool over his eyes!”
- r. rock the boat: “This’ll rock some boats”
- s. sell down the river: “you just sold yourself down another river”
- t. shoot the breeze/the bull: “let’s shoot some breeze”
- u. toe the line: “Pravda began to toe a line approved by Stalin and Kamenev”

As can be seen from these examples, determiners are not generally fixed in idioms. Of the idioms with the determiner *the*, we were able to find instances of different determiners with all but *bite the big one*, *bite the dust*, *hit the ceiling/roof*, and *kick the bucket*. We also found instances of different determiners with *look the other way* and *shoot the breeze*, which Riehemann (2001) did not find varying in her corpus.

Idioms with indefinite determiners showed a similar malleability, other than *come a cropper* and *have a ball*:

(42) *Indefinite*

- a. beat a dead horse: “it’s moronic for a public figure to beat that dead horse of a joke”
- b. carry a torch for: also occurs frequently as “carry the torch for”
- c. cast a pall on: “first let me cast the usual pall on proceedings”
- d. come a cropper: no other determiner found
- e. cut X some slack: “let’s not cut him too much slack”
- f. do a number on: “the producer did the same number on B.J.”
- g. drop X a line: also occurs as “drop X the line”
- h. have a ball: no other determiner found
- i. have a bone to pick with: “I have no bone to pick with you”
- j. have an axe to grind with: “I myself have no axe to grind on this matter,”
- k. NEG hold a candle to: “The 1996 version with Leonardo DiCaprio and Claire Danes was okay, but it doesn’t hold even ONE candle to this version.”
- l. sing a different tune: “Betcha if your family was threatened by their actions you’d be singing some different tune.”
- m. smell a rat: “Do we all smell many rats connected with this legislation?”
- n. turn over a new leaf: “The Bulletin herewith announces its intention to turn over many new leaves.”

There are also a number of idioms that have a bare singular noun in their canonical form. Of these, Riehemann (2001) found *lose face*, *lose ground*, and *raise hell* occurring with other determiners. We find the same with other such idioms, except for *hit home*:

(43) *Bare singular*

- a. close up shop: “international banks have not totally closed up the credit shop”
- b. eat crow: “Critics of ‘new’ hunting season may have to eat some crow”
- c. eat humble pie: “Obama might eat some humble pie,”
- d. hit home: no other determiner found
- e. make head or tail of: “He spoke so rapidly that I could make no head or tail of his speech”
- f. mean business: “This guy means some serious business.”
- g. pass muster: “creativity has to pass some muster as practical”
- h. talk turkey: “Let’s talk some serious turkey!”
- i. turn tail: “the defenders would just turn their tail and run the other way”; “That’s a very good moment to turn the tail and run like crazy”

Finally, idioms that take bare plurals in their canonical forms can also appear with other determiners, as Riehemann (2001) found for *close ranks*, *keep tabs on*, *make waves*, *pay dividends*, and *saw logs*. We also find other determiners with *make tracks* and *speak volumes*, which Riehemann did not find in her corpus:

(44) *Bare plural*

- a. build castles in the air: “Mother Meade had built many castles in the air.”
- b. cut corners: “This is What Happens When Companies Cut Too Many Corners and Don’t Give a Damn”
- c. make tracks: “so me and Walker made some quick tracks to the truck while Ben held rear guard for us”
- d. speak volumes: “Which speaks some volumes about Pocock”; “my silence speaks no volumes”

To summarize, we looked at 48 idioms in addition to the 25 that Riehemann found occurring with other determiners. Only seven were not found with determiners other than those that appear in their canonical form: *bite the big one*, *bite the dust*, *hit the ceiling/roof*, *kick the bucket*, *come a cropper*, *have a ball*, and *hit home*. This means that in 66 out of 73 verb-object idioms, or 90%, the determiner is not fixed.

Moreover, even the idioms that seem to be completely fixed and to only occur with a designated determiner, like *kick the bucket*, turn out not to crucially involve the determiner. From this idiom has been derived an NP *bucket list*, from which has been derived a verb *to bucket-list* (‘to do things that are on your list of things to do before you kick the bucket, because you expect to kick the bucket soon’). The determiner has simply vanished when the NP part of the idiom has been extended to new idioms. Obviously, it was not a crucial part of the idiom. Similarly, determiners are dropped from idioms in headlines and in telegraphic speech (“Fred Phelps Kicks Bucket,” “Joan Rivers Bites Big One,” “Officials Look Other Way on Immigration”). In the case of *bite the big one* and *look the other way*, the determiner can be dropped without affecting the meaning of the idiom, but the adjective cannot.

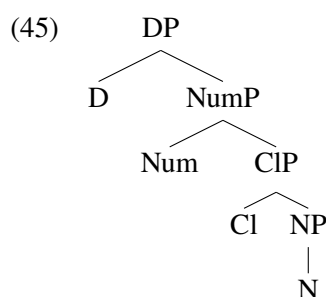
This pattern indicates that verbs relate directly to Ns, not to Ds. This means that the head of the sister of V must be N, not D. The same holds for P: its sister must be a projection of N, not D. Determiners in idioms behave like optional modifiers (adjectives, possessors, relative clauses), which can be left out, added, or replaced with another; the typical rules for determiner use will determine what is appropriate.⁹

3.3 Classifier Languages: Korean and Vietnamese

We also carried out a study of verb-object idioms in two classifier languages, Korean and Vietnamese. The full data are included in the appendix. Here we present the findings and selected examples illustrating those findings. We begin with a brief overview of nominal phrases in the two classifier languages, and then turn to idioms. In both Korean and Vietnamese, we find two classes of verb-object idioms: (1) idioms that consist only of V and N; and (2) idioms that consist of V and N, plus one or more of the functional elements D, Num, Cl. To reiterate, the DP analysis of nominal phrases, combined with the selection view of idioms, predicts that the functional elements D, Num, Cl will not be able to vary in any verb-object idiom. They will either have to be null, if they are not part of the idiom, or they will be unchangeable, if they are. This is not what we find, though: both Korean and Vietnamese idioms that consist only of V and N can have different functional elements added, and idioms that appear to include one or more of D, Num, or Cl may generally occur with or without those elements.

3.3.1 Description of Nominal Phrases in Korean and Vietnamese

Korean is an agglutinating SOV language whose nominal phrase includes demonstratives, numerals, and classifiers which may occur in that order. To remind the reader, a frequently proposed structure for such nominal phrases is the following:



This structure could be applied straightforwardly to Korean, given nominal phrases like the following:

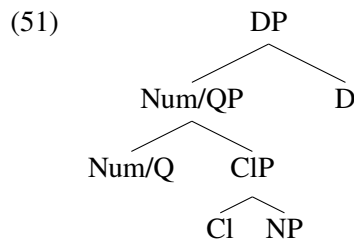
⁹Even the structure can be changed: for instance, open possessor slots, as in *cook X's goose*, can be rephrased as postnominal PPs under the right conditions: “Aviation officials may *cook the goose of* opponents of policy of culling birds to make airways safer” (headline). Note that here a determiner has sprung up, where the usual formulation of the idiom has a prenominal possessor and no determiner. This follows the pattern of determiner use in the language generally. Again, this makes sense in the selection theory, but only if verbs select NPs, not DPs.

There has been disagreement in the literature on the structure of the nominal phrase in Korean (and Japanese, a syntactically similar language). Some works argue that there is no DP structure in Korean and Japanese (e.g., Fukui 1986, Lyons 1999, Fukui and Takano 2000); however, Park (2008) and Jung (1998) analyze Korean nominals as DPs. Our data indicate that the DP Hypothesis is incorrect for Korean, and indeed in general.

Turning to Vietnamese, it is an isolating SVO language that does not have case marking or verbal agreement. Like Korean, its nominal phrase includes a classifier, but it is slightly different from Korean in that it takes post-nominal modifiers. According to previous studies, a noun phrase in Vietnamese has three main parts: (i) pre-nominal modifiers (Totality, Quantifier/Numeral), (ii) the Head (Classifier/Measure Noun, Noun), and (iii) post-nominal modifiers: Adjective, Relative Clause, Demonstrative (Nguyen 2004, Nguyen 2008; Diep 2005). Some examples of complex Vietnamese noun phrases containing all of these elements are given below:¹¹

- (50) a. tất.cả những con mèo đen tôi đã nuôi ấy
 all many CI cat black I Pst raise that
 ‘all of those many black cats (that) I took care of’
- b. toàn.bộ mười cân thịt ngon.lành mà anh muốn mua này
 all ten CI meat delicious that you want buy this
 ‘all of these ten kilos of delicious meat that you want to buy’

This would lead to the following structure for Vietnamese within the DP Hypothesis, ignoring modifiers like adjectives, relative clauses, and possessors (all of which come after the head noun and could be analyzed as adjoined to NP on the right):



Alternatively, D is on the left, but its entire complement moves to Spec-DP (see, e.g., Simpson 2005). Either way, what would be selected by V is not N, but D.

3.3.2 Verb Plus Object Idioms in Korean and Vietnamese

Our main sources for Korean idioms are (i) the online dictionary of the National Institute of the Korean Language (http://stdweb2.korean.go.kr/section/idiom_list.jsp); (ii) the electronic version of the Korean dic-

¹¹According to Tran 2011, except for the class of special nouns, all Vietnamese nouns have to have a classifier in order to occur with a numeral. This means that the examples below all have classifiers if they have numerals, since all of the idioms listed here only contain nouns in the regular class.

tionary (<http://www.sejong.or.kr/>); (iii) a print idiom dictionary of the Korean language (Lee, Koo, and Lee 2008); and (iv) naturally occurring data found on the internet using Google and Naver searches. For Vietnamese, we used an online dictionary of idioms (<http://tudienthanhngu.com/>), a print dictionary of Vietnamese idioms and proverbs (Hoang 1997), and natural data found on the internet using Google, from different contexts including forum conversations, blogposts, and online newspapers. Examples found on the internet were checked with a number of native speakers.

Our survey of idioms reveals that a large number of idioms in both Korean and Vietnamese involve a verb and its object, and the object may also include various functional and non-functional elements. We divide object-verb idioms in Korean and verb-object idioms in Vietnamese into two classes according to the occurrence of functional elements. Class 1 includes object-verb or verb-object idioms with bare nouns and no functional elements, while Class 2 includes object-verb or verb-object idioms with one or more functional elements in the object (out of Dem, Num, Cl). Note that Vietnamese also has a large number of idioms on the pattern V N V N (something like a serial verb construction), but, to keep matters simple, we only look at V N idioms here, with a single verb and nominal. However, because there are so few idioms of Class 2, with a functional element included as part of the idiom, we do bring in a few V N V N idioms in the discussion of that group.

In what follows, we give a few examples of each class below with the idiom's use in a sentential context. The idiomatic parts are italicized; in each case, only those parts are fixed, while everything else can be altered.

First, Class 1 involves object-verb idioms for Korean and verb-object idioms for Vietnamese where the idiom includes only N and V. This class of idioms is well attested in both Korean and Vietnamese. Appendix A lists sixty-five Korean idioms in Class 1 and Appendix B lists sixty-nine idioms in Vietnamese, and we do not pretend that these lists are exhaustive. Here we illustrate with a small handful of examples from Appendix A and Appendix B, beginning with Korean:

(52) Class 1: N-V

- a. choysen-ul taha-n ne-eykey *tol-ul tenci-l* salam-un amwuto eps-ul
best-Acc do-Adn you-Dat stone-Acc throw-Adn.Fut person-Top anyone not.exist-Acc
kes-i-ta.
Nml-Cop-Decl
'There would not be anybody that criticizes you who did your best.' (throw a stone = criticize)
- b. il.il.kwu kwukup.cha-ka *cho-lul tatwu-e* talli-ko iss-ta.
one.one.nine emergency.car-Nom second-Acc dispute-e run-ko exist-Decl
'The 119 ambulance is running in a very urgent situation.' (dispute a second = be very urgent)
- c. moin salam-tul-i motwu *hye-lul naytwul-ess-ta*.
gathered person-Pl-Nom all tongue-Acc wave-Pst-Decl
'All gathered people were very astonished.' (wave a tongue = get astonished)
- d. ku cong-un *temtheke-lul ssu-ko* cwukim-ul tangha-yess-ta.
that servant-Top worry-Acc wear-and killing-Acc suffer-Pst-Decl

- ‘That servant got all the blame, and was killed.’ (wear worry = get blamed)
- e. na-nun *chel.phan-ul kkal-ko* ku namca-eykey kopaykha-yess-ta.
 I-Top iron.pad-Acc spread.out-and that guy-Dat propose-Pst-Decl
 ‘I was brash, and proposed to the guy.’ (spread out iron pad = be brash)

Turning to Vietnamese, we present here five examples from Class 1, which includes idioms consisting only of N and V. A few idioms include other material besides V and N, for instance a PP in (53e).

(53) Class 1: V N, no functional elements:

- a. Khi đứng trước Ly, Nam chỉ biết *ngâm hạt thị*.
 when stand before Ly Nam only know hold seed fig
 ‘When standing in front of Ly, Nam stays so very quiet.’ (hold seed fig = be awfully quiet)
- b. Nam và Ly đã *chia tay* hai năm trước.
 Nam and Ly Pst divide hand two year ago
 ‘Nam and Ly broke up two years ago.’ (divide hand = break up)
- c. *Chém gió* với bạn bè là một thú vui phổ biến trong giới trẻ.
 slash wind with friend is a hobby popular in world young
 ‘Bragging with friends is a popular hobby among the young people.’ (slash wind = brag, boast, chitchat in a slightly exaggerated manner)
- d. Khi lên sân khấu, cô ấy *ăn ảnh* lắm.
 when go.up stage she eat photo much
 ‘She is very photogenic when she is on stage.’ (eat photo = be photogenic)
- e. Bọn họ không dám về làng vì đã *trót ăn cơm trước keng*.
 they Neg dare come village because Pst mistake eat rice before bell
 ‘They didn’t dare to come back to the village because they lived together without getting married.’ (eat rice before bell = live together without getting married)

The idioms of Class 2 include N, V, and one or more of the functional elements of the nominal phrase (D, Num, Cl). We have found a relatively small number of idioms of Class 2, namely fourteen in Korean and seven in Vietnamese. Fourteen of these Korean idioms include a numeral as part of the idiom, and the other consists of Num-Cl-N-V. We have not found any idioms which seem to include a demonstrative. Some examples follow. Examples (54a–54b) are examples of idioms consisting of Num-N-V; the rest are listed in Appendix A. Example (55) is the sole Num-Cl-N-V idiom, in which a verb, the head N of its object, and a numeral accompanied by a classifier are interpreted idiomatically.

(54) Class 2: Num-N-V

- a. *han wumwul*-man kkwucwuni *pha-sey-yo*.
 one well-only steadily dig-Hon-Pol
 ‘Focus on one matter!’ (dig one well = focus on one matter)

- b. ne-nun sinsa-losse ettehkey *twu mal-ul ha-ni?*
 you-Top gentleman-as how two word-Acc do-Q
 ‘How can you as a gentleman change your mind so easily?’ (do two words = change one’s mind easily)

(55) Class 2: Num-Cl-N-V

- Hana-nun mikwuk-eyse *twu mali thokki-lul motwu cap-ass-ta.*
 Hana-Top America-in two Cl rabbit-Acc all catch-Pst-Decl
 ‘Hana accomplished what she has planned in America.’ (catch two rabbits = accomplish)

Note that adverbs and quantifiers can be added in between the idiomatic object and verb (54a, 55). Additionally, inflectional endings like those on the verb, and case markings on the object, vary according to the context; for instance in (54a), the accusative case marker is replaced with the morpheme meaning ‘only’.

Turning to Vietnamese, a few examples of Class 2 taken from Appendix B2 follow. As noted above, because there are so few idioms of this type, we also include some V N V N idioms in this class.

(56) Class 2: V N or V N V N, functional element included:

- a. Dầu em có *uốn ba tấc lưỡi* tôi vẫn sẽ không đổi ý!
 Despite you have fold three unit(2.3cm) tongue I still will Neg change idea
 ‘Even when you try to talk to persuade me, I will not change my mind.’ (fold three units tongue = use speaking skill to persuade someone)
- b. Tùng toàn *ăn quả vả rồi trả quả sung* một cách thản.nhiên .
 Tùng always eat Cl lychee then return Cl fig one way calm
 ‘Tùng is always ungrateful like nothing matters.’ (eat lychee return fig = be ungrateful)
- c. Em làm.ơn đừng suốt ngày *vơ đũa cả nắm* như vậy!
 you please no through day gather chopstick all hand like this
 ‘Please don’t always stereotype like this.’ (gather chopsticks all hand = stereotype things or people)
- d. Ai có.thể ngờ Nam đã *ăn ở hai lòng* với Ly?
 who could expect Nam Pst eat live two stomach with Ly
 ‘Who would have expected that he was unfaithful with Ly.’ (eat and live two stomachs = be unfaithful)

As noted above, the DP analysis of nominal phrases makes the prediction that in idioms functional elements should be fixed. Under this hypothesis, there is no selectional relation between V and N; V selects D, D selects Num, Num selects Cl, and Cl selects N. This predicts that functional elements within the nominal complement should not vary. In the following subsections, however, we shall show that this is not the case in Korean or Vietnamese. Numerous N-V idioms (Class 1) can add various functional elements (D, Num, Cl) without changing the idiomatic meaning. Similarly, Class 2 idioms, though they appear to include one or more of D, Num, and Cl, can actually have these elements changed.

3.3.3 Results for Class 1: Bare N-V/V-N Idioms

We begin with Class 1, the object-verb idioms in Korean and the verb-object idioms in Vietnamese where only the bare noun is idiomatic, and show that a number of idioms in this class may occur with various functional elements (demonstratives, numerals, and classifiers) and non-functional elements (possessors and adjectives). Among the sixty-five idioms of Korean provided in Appendix A, we find that twelve can occur with functional elements; twenty-six can occur with non-functional elements; and seven can take both functional and non-functional elements in the NP. Adding these additional elements does not alter the idiomatic interpretation under consideration; rather it often adds an implication that a part of an idiomatic meaning is emphasized to some extent (as noted in note 8).

The same is attested in Vietnamese. Of the group of 69 V-N idioms in Appendix B1, we find that (i) 28 idioms are immutable and fixed; (ii) 12 idioms can add non-functional elements like possessors and adjectives; (iii) 4 idioms can have functional elements (D, Num, Cl) added to them, but not non-functional modifiers; and (iv) 25 idioms can include both functional and non-functional elements in the NP.

First, some N-V idioms can occur with demonstratives. The Korean idiom *hanulul cciluta*, ‘to poke a sky’, allows the demonstrative *ku* to precede the noun, retaining the idiomatic interpretation:

- (57) i mal-ul tha-nun swunkan, yelepwun-uy messulewum-un ce hanul-ul cci-lul
this horse-Acc ride-Adn moment you.Pl-Gen niceness-Top that sky-Acc poke-Acc
kes-ip-nita.
Nml-Cop-Decl.Def
‘At the moment you ride on this horse, you will look much nicer.’ (poke a sky = have a great force.)

Next, some N-V idioms can add numerals in the NP. For example, in Korean the bare noun *khongpap*, ‘rice with beans’, can be preceded by the numeral *yeltays* ‘fifteen’.

- (58) ku nom-un yel.tays kulus-uy khong.pap cengto mek-eya cengsin chali-l
that guy-Top ten.five bowl-Gen rice.bean thereabouts eat-should mind wake.up-Adn.Fut
nom-i-ta.
guy-Cop-Decl
‘That guy will be a normal person if he goes to a prison around fifteen times’ (eat a rice with beans = go to a prison)

Similarly, in Vietnamese, the idiomatic reading is still available when a totality expression *cả*, ‘all’, and a numeral *hai*, ‘two’, are added to the noun *tay*, ‘hand’.

- (59) Thông-thường cơ-quan điều-tra đã bó tay thì Viện cũng bó **cả hai tay** luôn!
normally administrative investigate Pst fold hand then court also fold all two hand Part
‘Normally if the Investigate Administrative gives up, the Court will also give up.’ (fold hand = give up)
(<http://sinhvienluat.vn/threads/toi-gi-day.21321/page-3>)

Additionally, some N-V idioms in Korean permit a wh-Num *myech*, ‘how many’, followed by the classifier *kay*, a general classifier used to count inanimate objects; the result is a rhetorical wh-question.

- (60) a. tangsin halapeci-kkeyse-nun totaychey wuli nala yeksa-ey **myech kay**-uy
 your grandfather-Hon-Top ever our country history-in how.many Cl-Gen
hoyk-ul ku-u-si-n kes-ip-nikka?
 stroke-Acc draw-u-Hon-Adn Nml-Cop-Q.Def
 Literal: ‘How many strokes did your grandfather draw to our country history ever?’; id-
 iomatic: ‘Your grandfather made a number of great contributions.’
- b. kulekeyo. cengmal **swusip kay**-uy *hoyk-ul ku-u-sy-ess-ta malha-yto*
 Yes really tens Cl-Gen stroke-Acc draw-u-Hon-Pst-Decl tell-even.if
kwaen-i ani-kess-sup-nita.
 exaggeration-Nom Neg-Fut-Hon-Decl.Def
 Literal: ‘Yes, even if we say that he drew tens of strokes, that is not an exaggeration at all’;
 idiomatic: ‘He made numerous contributions.’

Such a question can also be answered by adding a numeral and classifier, as in (60b) (see below on the rhetorical effect of this).¹²

Similarly, some V-N idioms in Vietnamese allow a wh-word to be inserted in pre-nominal position:

- (61) Nếu có-thể mong bạn bớt chút thời-gian chia-sẻ... cùng cộng-đồng còn hơn là đi
 if can hope 2S lower little time share together community still more Cop go
 buôn **mấy sọt dưa lê.**
 sell how.many basket melon pear
 ‘If possible, I hope you can take a bit of time to share with the community rather than just
 chitchat.’ (sell melon and pear = chitchat)
 (<http://agriviet.com/threads/giong-du-du-nao-co-gia-cao-nhat-viet-nam.208971/page-13>)

More examples of Korean N-V idioms with demonstratives, numerals, and classifiers added are given below. We assume, based on Sohn (2001, 353), that a quantifier like *motun*, ‘every’, is category Num.

- (62) a. Lee sacang-i **motun santhong**-ul *kkay noh-ass-ta.*
 Lee boss-Nom every container-Acc break put-Pst-Decl
 ‘The boss Lee ruined everything.’ (break a container for branches = ruin)

¹²Note that it is also possible for the object part of the idiom to be a null anaphor in examples like (60b). See Nunberg, Sag, and Wasow (1994) on anaphora with idiom chunks. This possibility fits into the selection theory: in (60b), the verb *ku*, ‘draw’, selects the object, *hoyk*, ‘stroke’, and triggers an idiomatic interpretation; it can do this when ‘stroke’ is accessed indirectly through a null or overt pronoun that activates the same lexical content as *stroke*, too. The same holds for anaphora with VPs in English, as when A says, “The shit will hit the fan tonight,” and B replies, “Yes, it certainly will.” In B’s reply, the null VP still invokes the same lexical items and the same selectional relations, giving rise to the same idiomatic interpretation.

- b. emma-ka atul-hantey **yang** son-ul ta tul-ess-ta.
 mother-Nom son-Dat both hand-Acc all hold.up-Pst-Decl
 ‘The mother gave up her son.’ (hold up hand = give away/up)
- c. kwucheycekulo malha-myen kimyohan senswu-nim-kkeyse keyim-kye-ey **han** hoyk-ul
 specifically tell-if kimyohan player-Hon-Nom.Hon game-field-in one stroke-Acc
 ku-u-sye-ya ha-pnita.
 draw-u-Hon-should do-Decl.Def
 ‘Specifically speaking, the player Kim, Yohan should make a crucial contribution to the game field.’ (draw a stroke = make a crucial contribution)
- d. kyengki-uy sung.phay-nun **ku** twukkeng-ul yel-e-pwaya al-ke-ya.
 game-Gen victory.defeat-Top that lid-Acc open-e-try know-Fut-Int
 ‘We will know the result of the victory or defeat of the game once the game is done.’ (open lid = find out a result)

If the N in an N-V idiom is countable, a numeral and classifier can be added:

- (63) han salam-i **yele** **kay**-(uy) kamthwu(-lul) ssu-nun kes-un po-ki coh-ci
 one person-Nom numerous Cl-Gen hat-Acc wear-Adn Nml-Top see-Nml good-ci
 anh-ta.
 Neg-Decl
 ‘It does not look good that one person has a lot of authorities.’ (wear a traditional hat = have an authority)

Examples illustrating these points for Vietnamese appear below.

For comparison, many idioms in Korean and Vietnamese also permit adjectives and possessors, elements that are traditionally not conceived of as selected. An example from Korean is the following:

- (64) a. ne-nun **emma(-uy)** sok-ul elmana kulk-eya elun-i toy-kess-ni?
 you-Top mother(-Gen) stomach-Acc how.much scratch-indeed adult-Nom become-Fut-Q
 ‘How much do you have to worry your mother to become an adult?’ (scratch stomach = make someone worry)
- b. kutul-un sikminci thongchi-ey **saylowun/cainhan** makak-ul tulenay-ess-ta.
 they-Top colony reign-in new/mean horse.leg-Acc bring.out-Pst-Decl
 ‘They disclosed the hidden details of their colonization.’ (bring out a horse leg = disclose hidden details)

An example illustrating Vietnamese is the following:

- (65) Tôi sẽ không nuốt lời của mình.
 1S Fut Neg swallow word belong self

‘I will not break my promise.’ (swallow word = break a promise)
 (<https://lesen237blog.wordpress.com/author/lesen2372014/page/7/>)

In (65), the idiom *nuốt lời*, ‘to swallow word’, allows the reflexive possessor to follow the noun and still retain the idiomatic interpretation. More idioms like this can be found in the first part of Appendix B1.

Notice that the addition of functional elements (e.g., totality expressions, numerals, and wh-wordw) makes the idiomatic interpretation become more emphatic and prominent in both Korean and Vietnamese. Different functional elements can be added to make the emphasis stronger or weaker. An example was the answer to the rhetorical question in (60b), where the addressee answers the question by specifying the number of the strokes. The effect of this is to intensify the idiomatic interpretation. The same is attested in Vietnamese. In (66a), the numeral *mười*, ‘ten’, can be used to make it clear that the speaker is really giving up. In the same manner, in example (66b), a numeral *trăm*, ‘hundred’, can be inserted after the wh-word *mấy*, ‘how many’, to show the attitude of the speaker. (These examples are constructed but were checked with a number of native speakers. Similar examples can be found on the internet.)

- (66) a. Tôi nói thật là tôi **bó cả mười** tay rồi!
 I say honest that I fold all ten hand already
 ‘To be honest, I already so so gave up.’ (fold hand = give up)
- b. Hai cô *buôn* được **mấy trăm thúng** dưa lê rồi?
 two you sell able how.many hundred basket melon pear already
 ‘You guys must have been chatting for so long, yeah?’ (sell melon and pear = chitchat)

In addition to the above case in which functional elements are added to idioms with bare Ns, it is also common to find that some idioms can add both lexical non-selected elements (adjectives and possessors) and functional elements (demonstratives or numerals). The following examples illustrate such idioms in Korean:

- (67) a. **i cakun** *kan-ul elmana coli-ess-nun-ci.*
 this small liver-Acc how.much boil.down-Pst-nun-End
 ‘I have been very nervous.’ (boil down liver = be very nervous)
- b. Kim *sacang-i motun telewun temtheke-lul ssu-ko saimha-yess-ta.*
 Kim boss-Nom every dirty worry-Acc wear-and resign-Pst-Decl
 ‘The boss Kim had all the blame shifted on to himself and resigned.’ (wear worry = get blamed)
- c. *na Kim.sicang-i pwuceng kongcicka-uy motun ssi-lul malli-kess-ta.*
 I Kim.mayor-Nom corruption official-Gen every seed-Acc dry-Fut-Decl
 ‘I, the mayor Kim, will get rid of all the officials’ corruptions.’ (dry seeds = get rid of)

This kind of addition is also widely attested in Vietnamese; as mentioned earlier, out of the 69 idioms that consist only of V and a bare N, we found a total of 25 that permit both lexical elements (adjectives and

possessors) and functional elements (demonstratives or numerals) to be added in the NP. For instance, the idiom below consists of a V and an N *ngứa mắt*, ‘itch eye’, idiomatic ‘be irritated’. As the following examples show, the bare N ‘eye’ can have numerous functional elements added and still retain the idiomatic meaning. Examples (68a) and (68b) have more or less the same meaning, where (68b) simply adds a classifier. By adding the emphatic *cái* and a classifier, example (68c) has a stronger meaning than the first two. The possessor and demonstrative in (68d) give the strongest interpretation of the idiom.¹³

- (68) a. Thú.thật với anh là tôi *ngứa mắt* lắm rồi!
 honest with you that I itch eye much yet
 ‘To be frank with you, I am very irritated.’ (itch eye = be irritated)
- b. Thú.thật với anh là tôi *ngứa con mắt* lắm rồi!
 honest with you that I itch Cl eye much yet
 ‘To be frank with you, I am very irritated.’ (itch eye = be irritated)
- c. Thú.thật với anh là tôi *ngứa cái con mắt* lắm rồi!
 honest with you that I itch Emph Cl eye much yet
 ‘To be frank with you, I am so very irritated.’ (itch eye = be irritated)
- d. Thú.thật với anh là tôi *ngứa cái con mắt này của tôi* lắm rồi!
 honest with you that I itch Emph Cl eye this belong I much yet
 ‘To be frank with you, I am so very much irritated.’ (itch eye = be irritated)

Another example is given below. The idiomatic reading remains even when functional and non-functional elements are added. The more are added, the more specific and emphatic the idiom becomes.¹⁴

- (69) a. Bà Ly đã *dắt mũi của hai thằng*.chả suốt bao năm qua!
 madam Ly Pst lead nose belong two he through how year last
 ‘Madame Ly controlled the two guys for so many years! (lead nose = control, make someone obey)

¹³Examples similar to those in (68) can be found at:

- <http://www.phuot.vn/threads/4078-Ai-v%E1%BB%81-M%E1%BB%99c-Ch%C3%A2u-%C4%83n-T%E1%BA%BFt-%C4%90%E1%BB%99c-l%E1%BA%ADp-c%C3%B9ngem/page4>
- https://www.facebook.com/UTCConfessions/posts/502092393161097?stream_ref=5
- <https://www.facebook.com/UlawConfessions/posts/572246509489019>
- <http://truongton.net/forum/archive/index.php/t-758270.html>

¹⁴Again, similar examples can be found on the internet, for example:

- <http://ver2.hoangsa.org/forum/archive/index.php/t-26554.html>
- http://doctruyen.org/hoang-kim-dong/giai-thich-5_164744.html

- b. Bà Ly đã *dắt hai cái mũi của hai thằng*.*chả* suốt bao năm qua!
 madam Ly Pst lead two Cl nose belong two he through how year last
 ‘Madame Ly controlled the two guys for so many years! (lead nose = control, make someone obey)’
- c. Bà Ly đã *dắt hai cái mũi bự của hai thằng*.*chả* suốt bao năm qua!
 madam Ly Pst lead two Cl nose big belong two he through how year last
 ‘Madame Ly controlled the two guys for so many years! (lead nose = control, make someone obey)’

These are just a few examples. As mentioned, out of 69 Vietnamese idioms, 25 allow both functional and non-functional elements to be added to them, and another 4 permit just functional elements. This is 29 that permit D, Num, Cl to be added without disrupting the selectional relationship between V and N that is necessary for the idiomatic meaning. The predictions of the DP Hypothesis do not appear to be correct. Rather, functional elements pattern with non-functional elements like adjectives and possessors in not being fixed in verb-object idioms.

The conclusion that we draw is that numerous idioms with a bare N in both Korean and Vietnamese do permit functional elements to appear with the N, without affecting the availability of the idiomatic reading. The prediction of the DP Hypothesis (that D, Num, Cl would not be able to occur) is not correct. The functional heads D, Num, Cl rather seem to pattern like non-selected adjectives and possessors, which are also typically not part of object-verb idioms but can be added to them.

3.3.4 Results for Class 2: Functional Elements Included

We now turn to Class 2, the object-verb idioms in Korean and the verb-object idioms in Vietnamese that include one or more of D, Num, Cl as part of the idiom. As noted above, in Korean we have found fourteen idioms in Class 2, listed in Appendix A2. In Vietnamese, we have found only seven idioms of this type, listed in Appendix B2.

First, in Korean all fourteen idioms in Class 2 include a numeral; one also adds a classifier. All fourteen, it turns out, permit the numeral to be replaced with another numeral or to be left out if the conditions are right. Once again, manipulating the idiom in this way typically intensifies the idiom. In the following examples, the numeral ‘two’ can be replaced with ‘three’, and ‘one’ with ‘two’:¹⁵

- (70) a. Hana-nun mikwuk-eyse *twu mali thokki-lul* motwu *cap-ass-ta*.
 Hana-Top America-in two Cl rabbit-Acc all catch-Pst-Decl
 ‘Hana accomplished what she had planned in America.’ (catch two rabbits = accomplish)
- b. phalli-uy sashiptay wekHING-mam *sey mali thokki-lul cap-ta*.
 Paris-Gen forties working-mother three Cl rabbit-Acc catch-Decl
 ‘Working mothers in their forties in Paris accomplish many things.’
 (http://www.ohmynews.com/nws_web/view/at_pg.aspx?CNTN_CD=A0001334135)

¹⁵ An anonymous reviewer disputed some of the data in this section, so we provide some links to naturally occurring examples.

- (71) a. *han wumwul*-man kkwucwuni *pha-sey-yo*.
 one well-only steadily dig-Hon-Pol
 ‘Focus on one matter!’ (dig one well = focus on one matter)
- b. **twu wumwul** *pha-nun* cwung.ki-tul
 two well dig-Adn middle.business-Pl
 ‘Small and medium-sized business are focusing on more than one thing.’
 (<http://www.fnnews.com/news/201303181734385875>)

We provide two more examples below to show that idioms that include a numeral permit that numeral to be replaced with another:

- (72) a. *ne-nun* *sinsa-losse ettehkey twu mal-ul ha-ni?*
 you-Top gentleman-as how two word-Acc do-Q
 ‘How can you as a gentleman change your mind so easily?’ (say two words = change one’s mind easily)
- b. *sinsa-losse ettehkey twu mal sey mal yele mal-ul ha-ni?*
 gentle.man-as how two word three word many word-Acc do-Q
 ‘How can you as a gentleman change your mind so easily?’ (literal: ‘say two words, many words’)
 (similar example at <http://news.kukmin.tv/news/articleView.html?idxno=828>)
- (73) a. *Chelswu-nun yang tali-lul kelchi-n-ta*.
 Chelswu-Top both leg-Acc span-Pres-Decl
 ‘Chelswu is a two-timer.’ (span two legs = date more than one person at a time)
- b. *seysang pwulkongphyeng.ha-ci. nwukwu-n sey tali ney tali-to kelchi-ko*
 world unfair.do-End someone-Top three leg four leg-even span-and
pwulep-ta.
 jealous-Decl
 ‘The world is unfair. Some people date with even three or four partners at one time, and I am jealous of it.’ (literal: ‘span three legs, four legs’)
 (similar example at <http://news.zum.com/zum/view?id=029201307087742103&t=0&cm=newsbox&v=2>)

Numerals can also be left out, and a possessor like the reflexive *casinmanuy* inserted instead:

- (74) a. *han wumwul*-man kkwucwuni *pha-sey-yo*.
 one well-only steadily dig-Hon-Pol
 ‘Focus on one matter!’ (dig one well = focus on one matter)
- b. **casin.man-uy wumwul-ul** *pha-sip-si-o*.
 self.only-Gen well-Acc dig-Hon-Hon-Imp

‘Focus on only one thing!’ (example modified from https://books.google.es/books?id=_eGqBAAAQBAJ&pg=PT114&lpg=PT114&dq=자신만의+우물파기&source=bl&ots=P6UTOs0u8h&sig=qmL-ZGWaq8PO2oLqyhCQmvUWcpQ&hl=en&sa=X&ei=3aS3VK2wGMWd7gb724CgBA&ved=0CCMQ6AEwAA#v=onepage&q=자신만의%20우물파기&f=false)

In Vietnamese, numerals can also be left out, as shown in the example below. This idiom is unusual in that it does not have the usual NP-internal order of Vietnamese: the usual order is Num-CI-N, but this idiom appears as N-Num-CI. If the order is changed to the usual one, *chỉ năm ngón tay*, V-Num-CI-N, the idiomatic meaning is not available anymore. As (75b) shows, the idiom permits the numeral *năm*, ‘five’, and the classifier *ngón* to be omitted. The numeral can also be changed to emphasize the idiomatic reading in (75c).¹⁶

- (75) a. Ly vào bếp rồi đứng đấy *chỉ tay năm ngón*.
 Ly come kitchen then stand there point hand/finger five CI
 ‘Ly came into the kitchen and stood there bossing people around.’ (point five fingers = boss people around)
- b. Ly vào bếp rồi đứng đấy *chỉ tay*.
 Ly come kitchen then stand there point hand/finger
 ‘Ly came into the kitchen and stood there bossing people around.’ (point five fingers = boss people around)
- c. Ly vào bếp rồi đứng đấy *chỉ tay mười ngón*.
 Ly come kitchen then stand there point hand/finger ten CI
 ‘Ly came into the kitchen and stood there really bossing people around.’ (point five fingers = boss people around)

As mentioned above, since there are so few V N idioms in Class 2 in Vietnamese, we also looked at V N V N idioms that include functional elements. They behave the same way, in allowing the functional elements to be dropped or replaced with another. The following idiom usually occurs with the classifier *con*, but it can be dropped or replaced with others, and other functional and lexical elements may be added in addition.¹⁷

¹⁶ Attested examples can be found at:

- http://ngotruong.blogspot.com/2010_04_01_archive.html
- <http://xebushanoi.com/forum/archive/index.php/t-7187.html>
- <http://ttvnol.com/threads/english-for-friends-friendsa-t-club-the-6th-floor.478177/page-44>

¹⁷ Attested examples illustrating these points can be found at:

- <http://dechvn.net/da-den-luc-tha-con-tep-bat-con-tom-v-9425/>

- (76) a. Hãy biết cách thả con tép bắt con tôm để thành công mau lẹ.
 let know way release CI small.shrimp catch CI big.shrimp to succeed soon fast
 ‘Let’s achieve something big by letting go of the small thing.’ (release small shrimp catch big shrimp = achieve something big by letting go of something small)
- b. Hãy biết cách thả tép bắt tôm để thành công mau lẹ.
 let know way release small.shrimp catch big.shrimp to succeed soon fast
 ‘Let’s achieve something big by letting go of the small thing.’ (release small shrimp catch big shrimp = achieve something big by letting go of something small)
- c. Hãy biết cách thả hai ba con tép nhỏ và bắt một con tôm to
 let know way release two three CI small.shrimp small catch one CI big.shrimp big to
 để thành công mau lẹ.
 succeed soon fast
 ‘Let’s achieve something big by letting go of the small thing.’ (release small shrimp catch big shrimp = achieve something big by letting go of something small)

These examples from both Korean and Vietnamese show that functional elements that typically occur in certain idioms can be omitted, and they can also have other functional elements intervene between them and the selecting verb. As stated above, this is inconsistent with the predictions of the DP Hypothesis for classifier languages, which predicts that functional elements will not be able to vary in verb-object idioms.

Classifiers can also be left out, just like numerals, as shown in the example below involving the idiom ‘grow CI banyan.tree,’ which typically occurs with the classifier *cây* used with stick-like objects. As (77b) shows, omission of the classifier does not affect the grammaticality or idiomaticity of the sentence. In (77c), we can see that the sentence has the idiomatic reading when it includes a numeral, a classifier, an adjective, and a demonstrative in the noun phrase.¹⁸

- (77) a. Nam trông cây si với Linh lâu rồi.
 Nam grow CI banyan with Linh long already
 ‘Nam has been pursuing Linh for a long time.’ (grow CI banyan tree = pursue a girl’s love)
- b. Nam trông si với Linh lâu rồi.
 Nam grow banyan with Linh long already

• <http://2s.zing.vn/tin-tuc/chi-tiet.thong-bao.choi-gunny-nhan-qua-2s-bat-dau-dot-thu-2.3569.html>

• <https://www.facebook.com/HuyMeProductions/photos/pb.290309384403049.-2207520000.1410316798./548318765268775/?type=1>

¹⁸Some attested examples involving this idiom can be found at:

• <http://ask.fm/TylerNhi/answer/115045700957>

• <http://tuongtri.com/2013/09/18/cay-si/>

• <http://text.123doc.org/document/2048372-vai-dieu-thu-vi-ve-cay-si-potx.htm>

‘Nam has been pursuing Linh for a long time.’ (Cl omitted)

- c. Tôi quá dại.dốt nên đã trông **mỗi một** cây si già đó với Ly suốt mười năm qua.
I too naive so Pst grow only one Cl banyan old that with Ly through ten year past
‘I tried to pursue a single old flame with Ly for ten years.’ (literal: ‘I grew that one old banyan tree with Ly for ten years.’)

This is not expected on the DP Hypothesis, where DP and NumP should interfere in the selectional relation between V and Cl. Alternatively, V selects D, which selects Num, which selects Cl, but then D and Num should have to remain null, as they typically do not appear in an overt form in this idiom.

In Korean, the one idiom that includes a classifier does not permit that classifier to be replaced with another:

- (78) *twu mali/*calwu thokki-lul cap-ta*
two Cl/Cl rabbit-Acc catch-Decl
‘to accomplish’ (literal: ‘catch two rabbits’)

However, this is a fact about classifiers, not idioms. A literal sentence with the noun ‘rabbit’ also only permits one classifier:

- (79) *Mina-ka twu mali/*calwu thokki-lul cap-ass-ta.*
Mina-Nom two Cl/Cl rabbit-Acc catch-Pst-Decl
‘Mina caught two rabbits.’

It is therefore not surprising that the classifier cannot be changed in the idiom, either. (One thing we will note in the summary to this section is that nouns that are part of idioms always have the classifier that is appropriate to them in their literal use.)

3.3.5 Summary: Idioms in Classifier Languages

Our survey of idioms in both Korean and Vietnamese reveals the same patterns that we saw in English: verb-object idioms and object-verb idioms consist for the most part only of V and N, and functional elements can be added or changed in between, contrary to the predictions of the DP Hypothesis. We also find that idioms that appear to include one of D, Num, or Cl can actually have those elements replaced with another or left out. Additional functional elements that are not part of the idiom can also be added. In general, it appears that it is not important to verb-object and object-verb idioms whether the object contains D, Num, or Cl. This follows the patterns of selection generally, as discussed above: no verb in classifier languages specifies that its object has to have a D, Num, or Cl. This fact cannot be captured by the DP Hypothesis for classifier languages, where the only selectional relationship that exists between a verb and its object is between the verb and the functional projections.

Accordingly, we conclude, as we did for English, that the DP Hypothesis is not able to capture the patterns of verb object and object-verb idioms in Vietnamese and Korean. Verbs select directly for Ns, not

Ds or any other functional elements. Given strict locality of selection, the maximal projection of an object has to be NP, not DP.

3.4 Summary: Idioms

The examination of verb-object idioms in English and two classifier languages undertaken here has revealed several striking patterns, some of which have not yet been remarked upon. First, the vast majority of verb-object idioms in the two classifier languages involve only a V and an N, and nothing else. There is a much smaller number of idioms that include V, N, and one or more of Num and Cl. Demonstratives are never part of verb-object idioms, at least in our sample, while Num and/or Cl occasionally are (but when they are, they can usually be varied). One other finding, perhaps expected, is that, when a Cl does occur in a verb-object idiom, it is always the appropriate classifier for the N in its literal use.

The sheer discrepancy in numbers between bare V-N idioms and V-N idioms with functional elements can be taken as itself an argument against the DP Hypothesis. If nominals were really dominated by multiple functional projections, such that verbs selected those projections, we would expect that more idioms would include them. The fact that the vast majority do not indicates that what V selects is actually N, not any functional projection.

Turning to the specific predictions of the DP Hypothesis, we found that, while some verb-object idioms do not permit additional elements to be added, many do.¹⁹ Most of those that seem to include a Num and/or Cl actually permit those elements to be left out or changed, meaning that only V and N are crucial parts of the idiom. In general, when only V and N are part of an idiom, demonstratives, numerals, and classifiers can be added or changed. These findings are not consistent with the DP Hypothesis for classifier languages. According to this hypothesis, verbs could never directly select for N; they could only indirectly select for N, by selecting for D, Num, and Cl. This would lead us to expect that verb-object idioms would often require particular Ds, Nums, and Cls, but this is a pattern that we never find (see also Japanese, footnote 19). It would also lead us to expect that when Ds, Nums, and Cls can appear in idioms, they would have to be a fixed part of the idiom. Again, this is not what we find. Only V and N are ever fixed elements of verb-object idioms. Similarly, if objects that consist only of a bare N lack the functional projections altogether, we would expect that it would be impossible to add those functional projections to a verb-object idiom, because they would disrupt the necessary selection between the verb and the N. Again, this is not what we find.

We conclude from this that the DP Hypothesis for classifier languages is incorrect, as is the DP Hypothesis for English (and any language, we would venture to say). The head of the sister of the verb must be N, and could not be D, Num, Cl, or anything else. More generally, N is the head of the extended nominal projection, in any position (object of P, subject, etc.).

¹⁹According to Kishimoto (2008, note 5), Japanese object-verb idioms do not allow demonstratives, numerals, classifiers, or adjectives at all. Only a bare N is ever allowed. Even this is inconsistent with the DP Hypothesis; see the text.

4 Possible Responses, and More on Idioms

In this section we discuss possible responses that a proponent of the DP Hypothesis might offer, as well as further issues involving idioms that have been raised in the literature.

4.1 Functional Elements Excluded?

One alternative that a proponent of the DP Hypothesis might offer for our data is that functional elements are free to be excluded from idioms, and in general are. This idea could be wedded either to the selection theory, or perhaps to a theory where idioms are underlying constituents (where possessors and modifiers might be introduced by functional elements, and hence can be excluded from the idiom). In the selection theory, a chain of selection would hold from V through D, Num, Cl, to N, such that V and N can be interpreted idiomatically, but D, Num, and Cl do not have to be a fixed part of the idiom because they are functional heads. (Svenonius 2005 offers a theory similar to this.)

The problem with this alternative is that it overgenerates massively. For instance, analogizing nominal phrases to clausal phrases, as proponents of the DP Hypothesis frequently do, there ought to be idioms consisting of a matrix verb plus the lexical content of its complement clause, minus all of the functional elements in the embedded clause in between. Such an idiom would look like *say (that) the wolves left*, perhaps with a meaning like ‘deceitfully pretend the danger is past’. To the best of our knowledge, no such idiom exists. In contrast, V-N idioms are common in classifier and non-classifier languages alike (like *cry wolf*, similar to the meaning of the non-existent idiom just discussed). There also ought to be idioms that consist of a verb and the nominal object of its complement preposition, excluding the preposition. That is, the verb and NP would be fixed, but the preposition in between could vary. Along with ‘beat around the bush’, one should be able to ‘beat in the bush’ or ‘beat through the bush’, but such examples do not occur.²⁰ In contrast, V-(NP)-P idioms, with an open slot for the complement of the P, are common (*light a fire under X, shed light on X, turn a blind eye to X, throw the book at X*; O’Grady 1998, 300–301). This is the exact opposite of what would be expected on this alternative view.

Idioms, then, constitute yet another case where clauses and nominals are not parallel at all. As just noted, V-N idioms, minus the functional material of the nominal phrase, are common. V-V idioms, minus the functional material in the clausal complement of the first verb, are conspicuously absent. Moreover, if the possessor in the nominal were really structurally analogous to the clausal subject, we ought to expect numerous V X_{subject} V idioms, with an open slot for a subject, the same way there are numerous V $X_{\text{possessor}}$ N idioms, with an open slot for a possessor (*get X’s goat, fill X’s shoes*). There are no V X_{subject} V idioms.²¹

²⁰O’Grady (1998, 280–281) cites the example of ‘skating on thin ice’ occurring as ‘skating over/close/to/over (sic) thin ice’, but here the idiom seems to be just ‘thin ice’. It occurs frequently as ‘on thin ice’ or just ‘thin ice’ in numerous book and song titles; in fact, in the first 50 hits for “on thin ice” using google and the first 50 hits for “thin ice” (no preposition; searches performed 12/21/2013), the verb ‘skate’ does not occur even once. In contrast, the verbs ‘walk’ and ‘tread’ occur with the PP ‘on thin ice’ a few times. When there is a P, it is usually ‘on’, but one occurrence of ‘across’ did occur in these 100 hits (with no verb).

²¹One possibility is *X cross that bridge when X come to it*. Here, the adjunct clause seems to have an open subject position. However, this subject position is not actually open, it is obligatorily coindexed with the matrix subject. The idiom seems to include a pronoun in embedded subject position, the same way it includes a pronoun in embedded object position that is obligatorily

This discrepancy is totally unexpected in the DP Hypothesis.

4.2 A Locality Constraint on Idiomatic Interpretation?

A proponent of the DP Hypothesis might attempt to account for the difference between nominals and clauses in idioms by claiming that there is a locality constraint on idiomatic interpretation. In fact, it has been claimed by Marantz (2001) that idiomatic interpretations are limited by certain heads. This is built upon by Svenonius (2005), who proposes that idioms cannot cross phase boundaries (in the phase theory of Chomsky 2000). The two important phase boundaries are CP and vP. If an idiomatic V were to select a CP as its complement, down to the main verb of the CP, this would cross too many phases boundaries, hence it would be ruled out.

Svenonius (2005) attempts to provide some evidence for this claimed locality constraint on idioms, but in fact his data seem to point in the opposite direction. He notes the existence of idiomatic expressions that consist of a modal and a main verb, which would have to cross the vP phase boundary:

- (80) a. the **will-call** window
- b. a **can-do** attitude
- c. a **must-have** item
- d. a **Devil-may-care** attitude

To these we can add idiomatic interpretations that include tense and aspect together with a main verb:

- (81) a. an **also-ran**
- b. a **has-been**

There are numerous other idioms that would have to cross phase boundaries, as well. Many include a full finite CP:

- (82) a. strike [while the iron is hot]
- b. close the stable door [after the horse has bolted]
- c. count X's chickens [before they hatch]
- d. cross that bridge [when X comes to it]
- e. be that [as it may]
- f. [when hell freezes over]
- g. [until the cows come home]

Others include a non-finite CP:

- (83) a. NEG have a leg [to stand on]

coindexed with the matrix object.

- b. NEG have a pot [to piss in]
- c. a tough row [to hoe]
- d. play hard [to get]

Other idioms include both a main verb in the vP phase and high functional material outside of that phase, because they obligatorily include that material:

- (84) a. Break a leg! (obligatorily imperative)
- b. No can do. (Neg Modal V)

Note also the numerous examples of idioms that obligatorily include negation along with a lexical verb, for instance (83a–b).

Harwood (2015) argues that certain idioms include progressive aspect. He gives the following examples (his example 83):

- (85) a. Something is eating X.
- b. X is pushing up daisies
- c. X is cruisin' for a bruisin'
- d. X is chomping at the bit

We find numerous examples on the web of *push up daisies* and *chomp at the bit* in the simple past or in other forms besides the progressive. The other two do seem to only occur in the progressive (but *cruisin' for a bruisin'* might just to maintain the rhyme). Harwood argues that the progressive is included in the vP phase, and so these are not problematic for the claim that idiomatic interpretation is limited to a single phase. However, he also cites an idiom that seems to include perfect aspect, in (86a). We add the Elvis example, which also only occurs in the perfect (meaning, 'the event is over'):

- (86) a. X has been around the block a few times
- b. Elvis has left the building.

Both of these obligatorily include the perfect aspect, which would have to be outside the vP phase on Harwood's assumptions. There does not seem to be a difference between progressive (1–2 idioms) and perfect (three idioms, including *a has-been* from above) in this regard.

We believe that idioms tend not to include functional material, but this is only a tendency, not a grammatical principle (prepositions, in particular, are common). We also believe that idioms tend to be structurally small, but again this is only a tendency. We find numerous counterexamples to the claim that there is a locality condition on idioms. In particular, we find many instances of adjunct CPs in idioms. This makes the discrepancy between nominals and CPs as complements even more striking, since CPs *can* be part of an idiom (as adjuncts).

Note that the nominal-CP contrast in object position does not follow in the selection theory, either: Vs can select Cs and build a chain of selection through a complement clause. This is exactly what happens with

adjunct CPs in idioms in the examples above (except that the adjunct selects the V, not the other way around). For this reason, the grammar must allow it in principle, as the selection theory does. The difference between adjunct and complement CPs is probably one of propositional structure: we conjecture that idioms prefer to be a single proposition. Complement CPs embed one proposition within another. The adjunct CPs that we find in idioms generally do not, for the most part they are temporal modifiers. Again, though, we do not posit this restriction as a grammatical principle, but only a tendency; *be that as it may* may well involve two propositions. Importantly, positing this hypothesized tendency will not help to salvage the DP Hypothesis: although it now has an explanation for the difference between nominal and CP complements, it still has no explanation for how a verb could directly select an N, ignoring all the functional projections in between.

4.3 Collocations and Other Fixed Expressions

One might object to some of the examples in the previous subsection on the basis that some parts of the expression have their literal interpretation. For instance, in *a can-do attitude*, *can* and *do* are interpreted purely literally. In *cross that bridge when X comes to it*, the entire adjunct clause is interpreted literally (except that the bridge is not a literal bridge). In our study of verb-object idioms above, we limited ourselves to idioms where none of the words involved had its literal interpretation.

However, it is not clear that it is necessary or desirable to distinguish literal from non-literal words in fixed expressions. Riehemann (2001) distinguishes *idiomatic words* from *non-idiomatic words* within idioms, but makes no distinction between idioms that contain the two categories. For instance, in *get X's goat*, neither *get* nor *goat* have their literal interpretation, as discussed above. They are both idiomatic words. However, in *miss the boat*, *miss* is a non-idiomatic word, because it has its literal meaning. Nevertheless, this idiom only occurs with these particular words; *the boat* does not occur with the same meaning with other words (e.g., *caught the boat* does not mean that the opportunity was seized). Nicolas (1995) makes the same distinction, but with a different name, but then also views them as essentially identical.

Most of the literature on idioms does not draw a sharp distinction between idioms and other fixed expressions, including collocations and proverbs or sayings (in fact Schenk 1995 argues explicitly that they all obey the same syntactic constraints). We believe that they all work in the same way, via selection. In fact this is how purely literal, non-fixed language works, so this is no surprise. Other than their fixedness, the one way idioms are different is that they obey the Constraint on Idiomatic Interpretation proposed by Bruening (2010, 532, (25–26)):

(87) Constraint on Idiomatic Interpretation:

If X selects a lexical category Y and X and Y are interpreted idiomatically, all of the selected arguments of Y must be interpreted as part of the idiom that includes X and Y.

(88) Lexical categories are V, N, A, Adv.

This constraint captures the asymmetry between verb-object idioms, with an open slot for the subject, and logically possible but non-existent subject-verb idioms with an open slot for the object (Marantz 1984). Following Kratzer (1996), external arguments are arguments not of the verb, but of a higher functional head

Voice. If an idiom were to include an external argument and a verb, that idiom would also have to include Voice. Voice would select the external argument and the V, but by the Constraint on Idiomatic Interpretation, all of V's arguments would then have to be included in the idiom as well. Hence there can be no idiom that includes a subject and verb and has an open slot for an object.

Putative counterexamples to this restriction are not actual counterexamples, as the discussion of *a little bird told X* showed for that example above. See O'Grady (1998, 295–297) and <http://lingcomm.blogspot.com/2011/01/idioms-and-by-phrases.html> on other putative counterexamples. The only potentially valid counterexample that we are aware of is the example cited above as including the progressive aspect:

- (89) a. Something is eating X
 b. What's eating X?

However, notice that this idiom commonly occurs in two forms, with two different subjects. Also note that the verb *eat* in this idiom is a psych verb, meaning something like 'bother'. Psych verbs are known to behave unusually, and have been analyzed as having no subject underlyingly. That is, they have two objects, one of which becomes the surface subject (Belletti and Rizzi 1988). In current terms, both arguments are arguments of the V, and neither is an argument of Voice. We tentatively adopt this analysis for this particular idiom, so that the idiom is simply the V and one of its selected arguments (which it simply selects in the form of an existential quantifier, which can then be realized as *something* or as *what*).

In this same vein, consider proverbs, many of which are complete sentences. Moon (1998, 115) notes that proverbs that are full sentences often lose their subject to become VP idioms (note that determiners can also change, from *a straw* to *straws*):

- (90) a. a drowning man will clutch/grasp at a straw → to clutch/grasp at straws
 b. don't look a gift horse in the mouth → to look a gift horse in the mouth
 c. don't put the cart before the horse → to put the cart before the horse
 d. You can't have your cake and eat it, too → to have one's cake and eat it, too
 e. the pot can't call the kettle black → to call the kettle black

It never happens that the object becomes the open slot, while the subject is retained. In the judgment of the first author, turning *the pot can't call the kettle black* into *call the kettle black* is perfectly natural, but turning it into *the pot can't call X black* is entirely unnatural. Hence the Constraint on Idiomatic Interpretation captures something important about native speaker competence.

As Bruening (2010) shows, the Constraint on Idiomatic Interpretation also accounts for asymmetries in idioms built with ditransitives. Briefly, V X NP idioms are common (*give X the boot*), but there is no V NP X idiom (**throw the wolves X*). This follows from the analysis of ditransitives put forward in Bruening (2010), in conjunction with the Constraint on Idiomatic Interpretation.

Turning to other types of fixed expressions, we are not aware of any proverbs or sayings, or any kind of collocation, that includes a subject and verb but an open slot for an object. If the subject is included, the object always is as well. Often, there is no object, and none can be added. So, in the examples above,

like *a can-do attitude* and *a devil-may-care attitude*, no object is possible (**a can-do-macramé attitude*). Similarly, there is no fixed expression consisting of a verb and first object with an open slot for a second object, but V X NP collocations are common (e.g., *give X a round of applause*).

This means that expressions like *a can-do attitude* are relevant for our discussion here, as they obey all of the constraints on idioms. Fixed expressions in general obey these constraints. For our purposes we will limit consideration to cases where the particular words used are fixed and cannot be varied. In the examples above, this is true; alongside *a can-do attitude*, one cannot have a *may/should-do attitude* or a *can-complete/finish/make/succeed attitude*.

All of this indicates, then, that there is no locality constraint on idiomatic interpretation. Idioms frequently cross phase boundaries. The asymmetry between clauses and nominals as complements cannot be explained by a locality constraint.

4.4 Summary

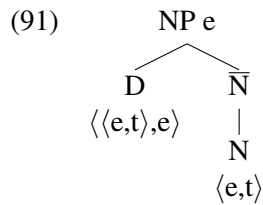
We conclude that there is no good alternative open to the DP Hypothesis to explain our idiom data. In contrast, the NP Hypothesis gets the facts exactly right.

5 Capturing Facts in the NP Hypothesis

We have seen that the DP Hypothesis is simply incompatible with the facts of selection and idioms. On the other hand, most of the literature of the last few decades on syntactic phenomena within the noun phrase has been couched within the DP Hypothesis. One might naturally think that any successes that have been achieved would require that hypothesis, and could not be captured in the NP Hypothesis, leaving us in a bind. In this section we demonstrate that this is not the case. In fact, most results are neutral between the two hypotheses and analyses that have been offered within the DP Hypothesis can be transferred without change to the NP Hypothesis. We demonstrate this here, concentrating on influential proposals and data that have been argued to require the DP Hypothesis. We also show that recent investigations of head movement also favor the NP Hypothesis.

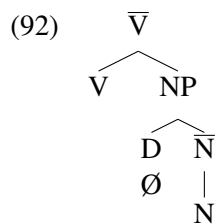
5.1 Semantics and Licensing Empty Ds

We begin with the influential proposal that NPs are basically predicates that become arguments only in combination with Ds (Szabolcsi 1987, Longobardi 1994; cf. Chierchia 1998). It is a straightforward matter to transfer this hypothesis to the NP structure. There is no reason D has to be the head of the whole nominal in order to perform this function:



Compare generalized quantifier theory (Barwise and Cooper 1981), where an object quantifier is semantically a function that takes the V as its argument. In no theory of syntax does that make the object the head of the VP.

Longobardi (1994) also proposes that certain languages have null Ds that perform the function of turning a predicate into an argument. According to Longobardi, these null Ds require licensing through lexical government, typically by a verb. If one wished to maintain this theory, again it would not require the DP Hypothesis. In most theories of head government, a head may govern the specifier of its complement:

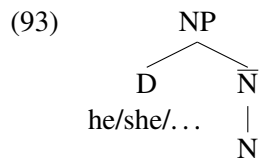


Since there is no barrier to head government between the V and the specifier of its complement, the V can license the null D here.

In other words, every aspect of Longobardi's theory is entirely neutral between the DP Hypothesis and the NP Hypothesis. The only exception is head movement, which we discuss below.

5.2 Pronouns as Ds

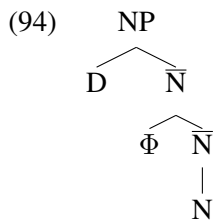
Other influential recent work has investigated the structure of pronouns cross-linguistically, building on Postal's (1966) arguments that pronouns have the distribution of Ds, not Ns (e.g., Elbourne 2001, Déchaine and Wiltschko 2002, Kratzer 2009). Again, most of the results of this work can be captured straightforwardly in the NP Hypothesis. For instance, analyzing pronouns as Ds does not require the DP Hypothesis, as the following illustrates:



For Elbourne (2001), e-type pronouns are the result of NP ellipsis, stranding D. This is possible in the structure above: what would be stranded is the D, exactly as the specifier of CP is stranded in sluicing (Ross

1969). For Kratzer (2009), some features of pronouns start out in N, while others (specifically, [def]) start out in D. This can be stated in the structure above, too; the only difference is that the head movement from N to D that Kratzer suggests (p.222) could not take place in the NP structure. See more on head movement below.

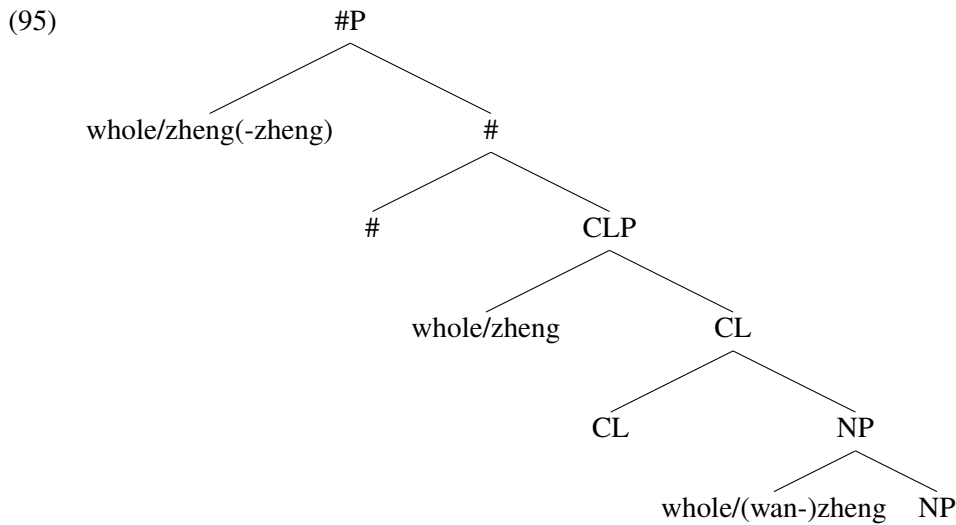
Déchaine and Wiltschko (2002) was mentioned briefly above; they hypothesize a very articulated structure with multiple functional projections (DP, Φ P, and NP). Some pronouns have the full range of projections, others only some of them. As discussed above, this is incompatible with the facts of selection, and so we reject it. This does not mean, however, that pronouns could not have varying levels of functional structure; that structure would just have to be located within a projection of N, as follows:



Again, DP analyses can generally be reformulated as NP analyses, if that is viewed as desirable.

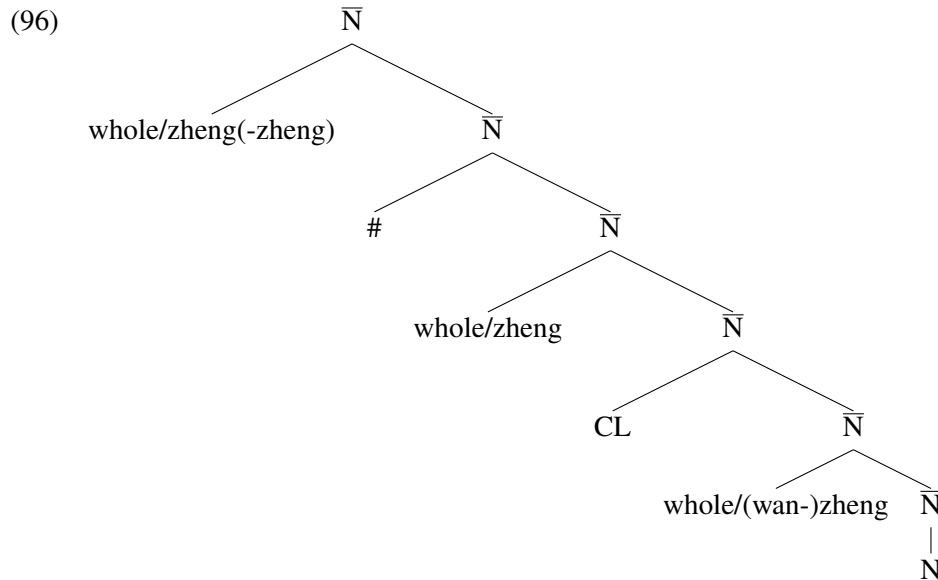
5.3 A Classifier Example

We now make the same point with a recent analysis involving a classifier language. Liao (2015) analyzes English as having the same classifier structure as Chinese at an abstract level, and different locations within this structure explain different readings of the modifier *whole* and its counterpart in Chinese. The structure Liao proposes is the following:



If *whole* or its counterpart in Chinese modifies CL, then a part-related reading obtains, but if it modifies either # or NP, then the reading is a whole-related one. Liao provides an account of this in both languages given the above structure.

These results remain wholly unaffected if the structure above is simply transformed into the NP structure:



In other words, analyses that have been expressed in terms of the DP Hypothesis are generally neutral between the DP Hypothesis and the NP Hypothesis (see also footnote 4 on the analysis of “small nominals” in Pereltsvaig 2006).

5.4 Head Movement

As far as we can see, the one aspect of DP analyses of nominal structure that is incompatible with the NP Hypothesis is head movement from N to D. Head movement is thought to only move a head to the next immediately c-commanding head; N-to-D movement therefore requires that D take NP as its complement. N could not move to D in the NP structure, because a head cannot move to its own specifier (or any specifier).

N-to-D movement has been posited in numerous languages. It has been argued to take place in the Romance languages (e.g., Bernstein 1993, Cinque 1994, Longobardi 1994, Dobrovie-Sorin 1987 as cited by Bernstein 2001), in Scandinavian languages (Delsing 1988, 1993; Taraldsen 1990, among others), and in Semitic languages (e.g., Ritter 1988, 1991).

However, more recent work has argued that N-to-D movement is *not* the right analysis, for any language. For instance, Cinque (2005) argues that there is no head movement inside nominals; if there were, word order typology could not be accounted for (see also Cinque 2010). For Scandinavian, Hankamer and Mikkelsen (2005) argue that N-to-D movement is not the right account of the word order possibilities (see also Embick

and Marantz 2008). The Romanian facts have also been argued to require a different account (Dimitrova-Vulchanova 2003), as have the Hebrew and Arabic data (Shlonsky 2004). Lipták and Saab (2014) argue from ellipsis that there is no head movement in nominals in Spanish and other Romance languages. Alexiadou (2001) and Georgi and Müller (2010) also argue against N-to-D movement.

We conclude from this recent research that there is no argument for the DP Hypothesis and against the NP Hypothesis from head movement. Not only that, this recent literature actually argues that the DP Hypothesis is on the wrong track. The DP Hypothesis expects N-to-D movement to exist, comparable to verb movement in clauses; if it truly does not, as all this recent work indicates, then the expectations of the DP Hypothesis are not upheld. In contrast, the NP Hypothesis predicts that N-to-D movement is impossible, and this prediction seems to be correct.

5.5 DP Languages Versus NP Languages

There is a current debate in the literature on the syntax of nominals concerning whether the structure of nominals is universal or not. This debate takes the form of one side arguing that nominals in all languages are or may be DPs (e.g., Longobardi 1994; Cinque 2005; Pereltsvaig 2007, 2013; Cyrino and Espinal 2015), while the other side argues that nominals in some languages are bare NPs, lacking DP structure, but nominals in other languages are DPs (Bošković 2008, 2012, 2014).

Our findings do not bear directly on this debate, although we have found that in one respect, a language with articles and no classifiers like English acts exactly the same as two languages without articles and full classifier systems. Rather, our findings indicate that if there is a difference between classes of languages, it could not be in the presence or absence of functional structure like DP. All of the data we have presented indicates that there is no such structure, in any language. We therefore suggest that the debate is not framed correctly. On the one side, Bošković's claim that languages with articles have DP while languages without articles do not simply could not be correct. On the other side, if there is a universal structure for nominals, it is NP, not DP. The functional elements must be dependents of NP (but it is possible that they do differ from language to language).

Throughout this section, we have seen that there are no impediments to the view that nominals in all languages are NPs. Analyses that have been stated in DP terms can be restated in NP terms. This is true of the references cited above for the universalist position, as well, much of which adopts Longobardi's view that D turns predicates into arguments (and codes referentiality). As we saw above, this view can be stated in NP terms with no loss. (See also note 4 on other functional elements within the NP.)

However, as just mentioned, the counter position could not be true: it could not be correct, as Bošković claims, that languages with articles have a DP structure, while languages without have only NP. Bošković does find that numerous syntactic facts seem to correlate with the presence of articles in a language; if these correlations are real, they are very significant and demand an explanation. However, Pereltsvaig (2013) notes numerous problems with both the empirical claims in Bošković's work and the theoretical analyses of the putative facts. To give one example, Bošković (2008, 2012) claims that only languages without articles allow left branch extraction from within the NP. Pereltsvaig (2013) argues that this is mistaken: apparent left branch extraction in languages like Russian is not extraction at all, and in fact left branch extraction is banned

in those languages, too. Conversely, we note that Bošković's account of the lack of left branch extraction in article languages like English does not appear to be adequate. According to Bošković, a left branch in NP cannot escape the DP phase (in the phase theory of Chomsky 2000) in English because moving from the position of adjunct to NP to Spec-DP violates a ban on movement being too short (e.g. Bošković 1997, Abels 2003, Grohmann 2003). However, *wh*-phrase adjuncts in NP demonstrably *do* move to the left edge of the nominal (e.g., Hendrick 1990):

- (97) a. [NP<sub>[AP How expensive] a car] did you buy?
b. [NP a [AP very expensive] car]</sub>

A *wh*-phrase as AP appears to the left of the indefinite article, while a non-*wh*-phrase AP appears to the right. Since the *wh*-phrase can get to the left edge of the nominal, it should be able to extract from it, in Bošković's system.²²

We conclude, first, that the empirical generalizations that motivate a difference between languages with and without articles are probably faulty, given the problems noted in Pereltsvaig (2013); and second, that the account of them in terms of some languages having DP and others just NP is problematic. We therefore see no impediment to a view of nominals where they are universally headed by the lexical head N.

5.6 Summary

This section has gone through some recent analyses of nominals that have been couched within the DP Hypothesis. We have shown that, quite generally, these accounts can be restated in the NP Hypothesis. The one component of such analyses that is not compatible with the NP Hypothesis is N-to-D movement, but recent research has indicated that this movement does not exist. This result favors the NP Hypothesis over the DP Hypothesis. We conclude that all of the facts unearthed so far are either neutral with respect to the two hypotheses or favor the NP Hypothesis. (For rejection of other arguments that have been given in favor of the DP Hypothesis, see Bruening 2009.)

6 Overall Conclusion

Our findings regarding verb-object idioms and selection generally are incompatible with the DP Hypothesis. Clauses and nominals are not parallel at all: clauses *are* headed by functional elements, but nominals are not. When verbs select nominals, they select only the head N. This is true in both classifier and non-classifier languages alike, and is consistent only with the NP Hypothesis, and not the DP Hypothesis.

We also went through a sample of analyses that have been couched within the DP Hypothesis and showed that, in general, the facts of nominals and the important results that have emerged from analyzing them over

²²We also note that the explanations for different facts that Bošković proposes often contradict each other. For instance, Bošković claims that there is a difference between languages with articles and languages without in possible readings of the quantifier 'most'. In order to explain this difference, he posits covert movement of the superlative morpheme out of the DP in DP languages (see the diagram in Bošković 2012, 207, (83b)). This is exactly the type of movement he rules out in his account of left branch extraction.

the last few decades are neutral between the DP Hypothesis and the NP Hypothesis. Moreover, recent work on head movement upholds the prediction of the NP Hypothesis that N-to-D movement could not exist. Taking stock, the DP Hypothesis has no advantage over the NP Hypothesis, while the NP Hypothesis has a clear advantage with regard to selection, idioms, and head movement.

This does not mean that the NP Hypothesis can account for everything by itself. There are still numerous phenomena that are completely mysterious, like the facts of left branch extraction in English discussed briefly above. However, all such facts are equally mysterious on the DP Hypothesis. Since the DP Hypothesis is incompatible with well-motivated views of how selection operates in syntax, explanations of these mysterious facts should be pursued within the framework of the NP Hypothesis, not the DP Hypothesis. The widespread adoption of the DP Hypothesis was a mistake, and it should now be abandoned.

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