

INTRODUCTION:
THE FORM AND FUNCTION OF
DENOMINAL VERB CONSTRUCTIONS¹

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This paper is a general and brief introduction to the phenomena explored in this issue—denominal verbs and allied constructions. We outline their morphological, syntactic, and semantic properties and contrast them with other similar phenomena such as noun incorporation and noun stripping. As seen in the papers herein, these properties may differ substantially from language to language, but the various constructions are profitably compared under a common rubric. Thus, these papers give a glimpse of the linguistic variety that is found in languages of North America, while contributing to our typological knowledge of denominal verb constructions, which heretofore have received little attention.

[KEYWORDS: denominal verbs, noun incorporation, noun stripping]

1. Introduction. Denominal verbs are often illustrated in the literature using examples like the following.

(1a) *She jetted to Paris.*

(1b) *He banked his tax refund.*

(1c) *Gray ash blanketed everything in the city.*

(1d) *If you google my name, you will find my website.*

In English, this is a productive (and popular) process of zero-conversion of a noun to a verb that has the meaning of the event inherently related to the noun. Denominal verbs (henceforth DNVs) have a wide variety of meanings, including ‘use x as an instrument’, ‘put something in or on x’, and ‘do something in the manner of x’. Such verbs have been noted in a number of languages, including English (Clark and Clark 1979), German (Mateu Fontanals 2001b

¹ We would like to thank Todd Peterson and Charles Ulrich for editorial assistance and Willem de Reuse, Jason Haugen, Tom Hukari, and John Stonham for their comments and corrections.

Abbreviations used are: 1 (first person), 2 (second person), 3 (third person), 1s (first-person singular subject), 2s (second-person singular subject), ABS (absolutive), ACC (accusative), AUX (auxiliary), CONN (connective), DECL (declarative), DET (determiner), DIM (diminutive), DT (distal), ERG (ergative), IND (indicative), INST (instrumental), INTRANS (intransitive), IR (irrealis), LNK (linker), N (negative), OBL (oblique), PAST (past tense), PERF (perfective), POS (possessive), Q (question particle), RL (realis), SG (singular), SN (subject nominalizer), SUB (subject), TRANS (transitive), VBL (verbalizer).

and Stiebels 1998), Romance languages (Mateu Fontanals 2001*a*), and Modern Hebrew (Arad 2003). Various analyses have been employed to relate the noun and the verb in the lexicon (see especially Hale and Keyser 1993 and Kiparsky 1997).

In some simple sense, the term denominal verb might un-usefully apply to any nominal that is used as a verb, for example, predicate nominals. However, the phenomena addressed under this label here are more precisely delineated. The denominal verbs appear in construction-specific environments. Namely, there is a particular morphology and therefore a particular meaning associated with the construction. What we mean by a DNV can be illustrated by the following examples.

- (2) Seri (Marlett this issue)
thp-y-i-cáamiz.
 1sS(INTRANS)-DT-HAVE-shirt
 ‘I was wearing a shirt’.
- (3) Guarijío (Haugen [this volume], citing Miller 1996)
kari-é=ne.
 house-HAVE-1SG
 ‘I have a house’.

The elements conveying the meaning of a verb and a noun combine into a single word. This is very much like the phenomenon of noun incorporation, which has received considerable attention in the literature (see Baker 1988; 1996 and references therein). Compare the Nahuatl example in (4*b*) to the unincorporated example in (4*a*).

- (4) Nahuatl (Sapir 1911)
- (4*a*) *ní-c-qua in nacatl*
 I-it-eat the flesh
 ‘I eat the flesh’.
- (4*b*) *ní-naca-qua.*
 I-flesh-eat
 ‘I eat flesh’.

As seen in these examples, the same verb is used both as an independent form and as the host of noun incorporation. However, in the case of DNV constructions, the element conveying the verb meaning does not otherwise occur as a freestanding verb capable of taking an NP complement. For example, the verbalizing prefix in the Halkomelem DNV construction in (5*a*) cannot stand as an independent predicate (see 5*b*).

(5) Halkomelem (Gerds, field notes)

(5a) *ni? cən tx^w-səplil.*
AUX 1SUB VBL-bread

‘I bought bread’.

(5b) **ni? cən tx^w-ət k^w səplil.*
AUX 1SUB buy-TR DET bread

‘I bought some bread’.

To express buying bread with a freestanding verb, one would use the transitive verb *?iləq-ət*, which is unrelated to the verbalizing prefix in (5a).

(6) *ni? cən ?iləq-ət k^w səplil.*
AUX 1SUB buy-TR DET bread

‘I bought some bread’.

By the criterion that the verb element is not a freestanding root, DNV constructions are also distinct from noun stripping.² See, for example, the Tongan data in (7b), in which the object noun is stripped of its case and other trappings, the clause is detransitivized, and yet the object remains an independent word.³

(7) Tongan (Churchward 1953)

(7a) *Na’e inu ’a e kavá ’e Sione.*
PAST drink ABS CONN kava ERG John

‘John drank the kava’.

(7b) *Na’e inu kava ’a Sione.*
PAST drink kava ABS John

‘John kava-drank’.

The packaging of verbal and nominal elements as a single word, as one also sees in noun incorporation, makes the DNV construction a particular challenge to theories seeking to represent the interface of syntax and morphology. The fact that these constructions vary considerably both morphologically and syntactically means that much more detailed descriptions are needed in order for theories to address them. The differences and the similarities with noun

² Denominal verbs are also distinct from the phenomenon of lexical suffixation found in Northwest languages. See Gerds (1998) for discussion.

³ See Miner (1986) for discussion of noun stripping in Zuni and a comparison with noun incorporation.

incorporation facts suggest that syntactic theories will need to be fairly sophisticated in order to provide an analysis for the full range of data.

The purpose of this set of papers, however, is mostly descriptive rather than theoretical. Little is known about this type of DNV construction, other than the substantial research on Eskimoan, especially a series of studies on Greenlandic by Sadock (1980; 1985; 1986; 1991).⁴ So the first task is to expand the scope and depth of the data in order to provide an adequate empirical foundation for the discussion. While DNV constructions have begun to attract more attention, both descriptively and theoretically, more information about them is needed from typologically and genetically diverse languages.

The papers in this issue of *IJAL* look at languages from five different groups.⁵ Seri is a linguistic isolate of northwestern Mexico that has traditionally been linked to the controversial Hokan super-family. Uto-Aztecan is a set of language families that extends from the western North America to the heart of Central America. Apachean languages are part of the Athabaskan super-family and are spoken in Oklahoma, New Mexico, Utah, and Arizona. Halkomelem is a Salish language and Nuuchahnulth (Nootka) is a Wakashan language; both of these languages are spoken in southwestern British Columbia.

2. Characterizing the DNV constructions. As will become evident from reading these papers, the DNV constructions that are discussed here fit the definition above, but they also differ significantly from each other. Thus, they give a glimpse of the linguistic variety that is found in languages of North America and also contribute to our typological knowledge of DNV constructions in the languages of the world. We briefly summarize and contrast the data presented in the papers herein, contrasting them to the well-documented Eskimoan DNV constructions. We also situate DNV constructions among other related phenomena such as noun incorporation and noun stripping.

2.1. Morphology. First, we can contrast the languages with respect to the verbalizing element of the DNV construction. The languages represented in these papers present an important array of facts regarding the type and meaning of the morphology that is used to create the denominal verb. In Seri, one prefix is primary and has the basic meaning HAVE, with pragmati-

⁴There has been some terminological confusion in the literature regarding the status of the Eskimoan phenomenon, which is often referred to as noun incorporation. See especially the exchange between Mithun (1986) and Sadock (1986) and the discussion in Gerds (1998).

⁵Language families of North America that reportedly do not have DNV constructions include Mayan, Muskogean, and Iroquoian. In other language families they may exist, but they are not well documented.

cally motivated extensions like PUT ON. In Halkomelem there are four verbalizing prefixes meaning HAVE/GET/MAKE, BUY, INGEST, and GO TO. The Uto-Aztec languages have from two or three (Hopi) to at least nine (O'odham) affixes, all suffixes except for one rare prefix in Tepehuan. The verbalizing affixes have meanings such as BECOME, HAVE, MAKE, ACQUIRE, USE, PUT ON, REMOVE, MARRY, GO FOR THE PURPOSE OF. The number of verbalizers in these languages contrasts with Eskimoan, which is known to have scores of suffixal verbs participating in DNV constructions. For example, Labrador Inuttut has about 65 suffixal verbs (Smith 1978). However, van Geenhoven (1998b:23–25) points out that the most commonly occurring DNVs in Greenlandic are *-qar* 'have', *-liur* 'make', *-tur* 'eat, drink', *-si* 'get, buy', and *-rniar* 'sell'.⁶ Facts like the above, while preliminary, show a clear implicational pattern: if a language has only one denominal affix, it seems to be HAVE/DO/MAKE/GET; next most popular are other transitive meanings such as BUY and INGEST; less frequent are intransitive meanings such as GO TO.

Even within the scope of this small set of studies, the languages vary substantially from the above generalization. As Stonham [this volume] explicates, the Nuuchahnulth situation is somewhat different from these other cases of DNVs. Like Eskimoan, it has scores of bound verbs that appear as suffixes: one-quarter of the verbs of the languages have bound forms. These have a broad range of transitive and intransitive meanings. They include verbs translated as 'obtain', 'get', 'take along', 'make', 'eat', 'buy', 'seek', 'give', 'go to', and other typical DNV meanings. However, Nuuchahnulth also has a wide variety of other bound verbs such as ones meaning 'attack', 'cook', 'die', 'hear', 'sing', 'dream', 'accompany', 'move about', 'leave behind', and 'travel along'. At the other end of the spectrum, the Apachean data also look quite different from the general case discussed above: the Apachean DNV construction is more a product of the frame it appears in than of verbalizing morphology per se.

When compared to the basic word order of these languages, the data in these papers make it clear that the morphological facts do not fall out from the syntax of these languages: there is no direct relationship between the position of the verb in the clause and the position of the "verbalizing" element. Salishan is verb-initial and the verbalizers are prefixes; Uto-Aztec is verb-final and verbalizers are almost always suffixes. But Seri is verb-final and has verbalizing prefixes, and Wakashan is verb-initial but bound verbs follow the noun. Rather, the important relationship is between the position of the verbalizer and the morphological structures of the languages. Productive

⁶ Johns (2005) develops this viewpoint further, showing that most of the suffixal verbs in Inuktitut have a basic meaning component of quantity, negative, or identity and thus reduce semantically and syntactically to light verb constructions.

morphology in Seri is almost exclusively prefixal (contrary to what might be expected for a strongly SOV language); the verbalizer is a prefix. Productive morphology in Wakashan, Uto-Aztecan, and West Greenlandic is suffixal; the verbalizers are suffixes. Halkomelem has productive suffixation on verbs but prefixation on nouns; the denominal verbalizers are prefixes. Disparities between clause-level order and word-internal order suggest that noun stripping is not the historical source of DNV constructions, at least not in all cases.

The papers on Apachean, Salishan, and Uto-Aztecan address historical and/or comparative evidence. The picture one gets is that often the function of DNV constructions is old and reconstructible, though the exact forms and meanings of the affixes may vary slightly from language to language. The obvious source for the verbalizing morphology would be a form that is originally a verb root, as Gerdtz and Hukari [this volume] argue for in Halkomelem based on comparative Salish evidence. In some languages, noun incorporation structures could serve as a source for DNV constructions; the verb could become phonologically reduced over time, becoming a bound form and eventually an affix. Newer verbs, or independent verbs with similar meanings, would serve to introduce noun phrases. The syntactic similarities between DNV and noun incorporation constructions noted below are also suggestive of a connection. Noun incorporation may be an intermediate historical step between standard clause structure and DNV constructions, and some researchers posit an intimate connection between them (see Hill 2003, for example, based on work on Hopi, although NI and DNV are clearly distinct in other Uto-Aztecan languages (Haugen [this volume])).

The facts are also varied when we examine the nominal element of the denominal verb. In one of the Apachean languages, the construction is limited to kinship terms, and in another to body-part terms. In Seri, only nouns that can be inflected for possession may productively form DNVs. In contrast, a large variety of nouns, both basic and derived, can form DNVs in the other languages. In Halkomelem, DNVs can be formed on plural and diminutive nouns. In Nuuchahnulth, all nouns except personal names—even morphologically complex ones—can participate. In this respect, DNV constructions differ from noun incorporation, which is usually limited to noun roots or stems—a large but closed class of forms.

One type of evidence that DNV constructions productively allow an open class of nouns is that, in all of the languages discussed herein, borrowed nouns as well as native words may participate—see table 1. Thus, we know that DNV constructions in the languages studied here are active in the modern language and not the fossilized occurrence of just a few forms. When these two aspects are viewed together, we see that the DNV construction in Apachean is limited by both its sparseness of verbal morphology and its

TABLE 1
EXAMPLES OF LOANWORDS IN DNV CONSTRUCTIONS

Language	Family	Form	Gloss	Source of Loanword
Yaqui	Tarahitian, Uto-Aztecan	<i>wakah-tu-k</i>	'became a cow'	Spanish <i>vaca</i>
Halkomelem	Central Salish, Salishan	<i>tx^w-šuk^wə</i>	'buy sugar'	English
White Mountain Apache	Western Apachean, Apachean, Athabaskan	<i>dá=bé'soh-zhíq</i>	'full of money'	Spanish <i>peso</i>
Seri	Serian, Hokan?	<i>i-tróoqui</i>	'have a vehicle'	regional Spanish <i>troque</i> < English <i>truck</i>
Nuuchahnulth	Wakashan	<i>naama-óa</i>	'buy rum'	English <i>rum</i> via Chinook Jargon [Lem]

tight restriction on the class of participating nouns. Seri, Halkomelem, and Uto-Aztecan languages have a core set of verbalizers but a more robust inventory of participating nouns. Nuuchahnulth DNV constructions exhibit a broad range of both bound verbs and nouns.

2.2. Syntax. The papers in this issue also present a range of interesting facts about the syntax of DNV constructions. In all of the languages represented here for which unambiguous indicators of transitivity are available, denominal verbs may be used intransitively. For example, Halkomelem DNV constructions take absolutive subjects and lack overt transitive suffixes (Gerdts and Hukari [this volume]).

(8) Halkomelem (Gerdts, field notes)

(8a) *ni? c-qʷqʷəm.*

AUX VBL-ax

‘He had an ax’.

(8b) **ni? c-qʷqʷəm-ət-əs.*

AUX VBL-ax-TR-3ERG

‘He had an ax’.

However, Marlett [this volume] shows that Seri also allows DNV constructions that are explicitly transitive.

(9) *ih-y-i-cáamiz.*

1sS(TRANSITIVE)-DT-HAVE-shirt

‘I was wearing it (shirt)’.

Thus, DNV constructions can be syntactically intransitive or transitive. In this respect, they resemble noun incorporation constructions, which are syntactically intransitive in some cases, as evidenced by the lack of object agreement in the Nahuatl example in (4b), or transitive, as evidenced by object agreement with the incorporated noun in the following Southern Tiwa examples:⁷

(10) Southern Tiwa (Allen, Gardiner, and Frantz 1984:293)

(10a) *Ti-shut-pe-ban.*

1s:3sii-shirt-make-PAST

‘I made the shirt’.

⁷ See Gerdts (1998) and Rosen (1989) for a discussion of evidence for transitivity in noun incorporation case.

- (10b) *Te-shut-pe-ban.*
 1s:3pii-shirt-make-PAST
 ‘I made the shirt’.

Some of the languages allow the nominal element in the DNV to be “doubled” with an external NP, as in the following Seri example.

- (11) [*Caamiz hipquih*] *in-s-i-caamiz a-ha.*
 shirt this 2sS-IR-HAVE-shirt AUX-DECL
 ‘You should wear this shirt’.

In some cases (for example, in Seri), the doubled NP functions as the direct object of the DNV. In Halkomelem, however, the free NP is not a direct object but rather an oblique phrase, as evidenced by the presence of the oblique preposition *?ə*.

- (12) *c-sisə́lə* *?ə* *θə* *sisə́lə-s.*
 VBL-grandparent(DIM) OBL DET grandparent(DIM)-3POS
 ‘She had a grandmother’.

When discussing doubling, two types can be distinguished: true doubling versus hyponymic doubling. In the first type, the same noun occurs in the denominal verb and also as the head of the noun phrase, as in (11) above. In other cases, a hyponymous relationship exists between the nominal element of the denominal verb and the external NP: the nominal element in the DNV indicates a generic and the external NP gives an instantiation of a particular kind.

- (13) Seri (Marlett [this volume])
ʔ[Ha-táamt c-ool pac] in-t-i-pazáatoj?
 ABS-sandals SN-black some 2sS-RL-HAVE-shoes
 ‘Are you wearing black sandals?’

- (14) Yaqui (Haugen [this volume])
'uka 'ili chu'u-ta nee vuk-ek
 det.ACC little dog-ACC 1SG pet-PERF
 ‘That little dog is my pet’.

Hyponymy is also seen in classifying noun incorporation (Mithun 1984, Rosen 1989, and Gerdts 1998), as illustrated in the following classic Mohawk example (Mithun 1984:870):

- (15) *Tohka niyohserá:ke tsi nahe' sha'té:ku níku:ti*
 several so.it.year.numbers so it.goes eight of.them
rabahbót wahu-tsy-ahní:nu ki rake'níha.
 bullhead he-fish-bought this my.father

'Several years ago, my father bought eight bullheads'.

Another property of noun incorporation constructions that is shared by DNV constructions is modifier "stranding," where the external noun phrase consists solely of a demonstrative, adjective, or quantifier (or a combination of them, but without a head noun).⁸ The following, often-cited Mohawk example (Mithun 1984:870) illustrates this:

- (16) *Kanekwarúnuy wa'-k-akya'tawi'tsher-ú:ni.*
 it.dotted.DIST PAST-1SG-dress-make

'I made a polka-dotted dress', ('I dress-made a polka-dotted one'.)

Parallel data exist in DNV constructions. For example, in some Uto-Aztecan languages and in Seri, the external noun phrase may be something that looks like an adjective and determiner, as in the following Seri example (Marlett [this volume]).

- (17) [*C-heel zo*] *h-yo-m-i-cáamiz.*
 SN-red a 1sS(TRANS)-DT-N-HAVE-shirt

'I'm not wearing a red shirt'.

West Greenlandic also allows external modification, but the "stranded" phrase is marked with Instrumental case (van Geenhoven 1998a:232).

- (18) *Suulut qisum-mik timmisartu-liur-puq.*
 S.ABS WOOD-INST.SG airplane-make-IND.[-TR].3SG

'Suulut made a wooden airplane'.

In contrast to the above, in the case of modified phrases in Halkomelem and Nuuchahnulth, no stranding is allowed. Rather, the denominal verb affix attaches to the adjective instead of to the head noun.

⁸ There is an important descriptive and theoretical issue that should not be overlooked. When a noun phrase translated as 'this' or 'the red' or 'three' occurs with a denominal verb, one might think that the modifier has been "stranded" by the "movement" of the head noun into the verbal structure (to use a common metaphor). But as Mithun (1986) has aptly shown in the discussion of the noun incorporation facts, one must be very careful. Many languages allow noun phrases consisting solely of a modifier without a head noun. So in fact nothing has been stranded in noun incorporation or denominal verb constructions. A thorough investigation of the relevant structures is obviously required.

- (19) Halkomelem (Gerds and Hukari [this volume])

?i:č ?əw c-pəq ləmətulqən?
 AUX:Q:2SUB LNK VBL-white wool

‘Do you have any white wool?’

- (20) Nuuchahnulth (Stonham [this volume])

?iiδ^w-cuk tĩmaqsti
 big-require mind

‘It requires a big mind’.

The verbalizing element is on the left edge in Halkomelem, since it is prefixal, and so it could be analyzed as a left-edge clitic. However, the Nuuchahnulth bound verb appears after the adjective, between it and the head noun, thus showing that a simple phrasal affix analysis is inadequate.

Overall, we see that DNV constructions provide an interesting array of phenomena relating to the transitivity of the surface syntax. As in the case of noun incorporation cross-linguistically, DNVs can be surface transitives or intransitives. Transitivity implies the possibility of an external phrase—and thus the possibility of doubling and stranding effects. However, intransitivity does not imply the lack of these, since the external phrase can appear as an oblique element in some languages.

2.3. Semantics. One way to study the semantic properties of a DNV construction is to compare it to a periphrastic equivalent. However, this is not always possible. For example, in Halkomelem and Seri, there is no free-standing verb for ‘have’, and this meaning is expressed instead by DNV constructions. existential possession constructions (‘My house is big.’), or by verbs of ownership or handling (‘Do you own a car?’, ‘Are you carrying a knife?’, etc.). When an equivalent paraphrase is available, the DNV construction seems to convey more of a routinized event, and the noun is not definite, specific, nor individuated. The same effect often occurs in noun incorporation and noun stripping, as shown in examples above. What these constructions have in common is that the nominal element is not a determiner phrase and thus lacks the meaning of a specific or definite noun as supplied by the determiner, which would allow the noun to be anchored in space and time.

However, the definiteness, specificity, or individuation of the noun can be established through an external NP, in the languages that allow external NPs. For example, the external NP in Seri can consist of just a demonstrative.

- (21) [*Hipquih*] *ih-s-i-caamiz* *a-ha*.
 this 1sS(TRANS)-IR-HAVE-shirt AUX-DECL

‘I will wear this one’.

Furthermore, the nominal in the DNV may be referential: it can be the referent of an anaphor even when it is not doubled, as shown in data from Halkomelem and Seri. Thus, we see that nouns participating in DNV constructions have a range of semantic properties drawn from the context of their use.

Since the verbal elements in DNVs tend to convey conceptually basic meanings, DNVs are often used to express commonly occurring, everyday events. However, since the participating nouns usually constitute a fairly open class, DNV constructions for the most part do not acquire the status of fixed expressions, nor do they show noncompositional meaning as is often the case of compounds like ‘do lunch’, ‘play house’, and ‘baby-sit’. In fact, the event described may be novel or culturally nonsalient, as shown clearly in Halkomelem examples like *c-penšən* ‘get a pension’ (Gerdts and Hukari [this volume]). DNVs based on borrowed nouns (see table 1) provide evidence for their use in innovative contexts. Thus, we see that DNV constructions in the languages studied here are productive in the modern language and not just fossilized occurrences of a few forms.

3. Conclusion. The topics of the five papers in this issue touch on similar, but not entirely uniform, phenomena from different language families of North America. These phenomena, discussed under the cover term “denominal verb constructions,” are significantly different from what have been called denominal verbs in languages like English, etc., in that they are more active both morphologically and syntactically. Also, several authors show that DNVs are ostensibly different from noun incorporation and noun stripping, though they share many syntactic characteristics with these constructions. Comparatively little theoretical work has been done on DNV constructions; the exception is the plethora of research on Eskimoan languages, especially on Greenlandic, done under the rubric of noun incorporation. All of these constructions sit at the nexus of morphology and syntax, and thus are an important challenge to theories of morphology, syntax, and their interface. Due to space limitations, the authors of the papers published here were unable to do more than touch on the important issues that will need to be addressed in more typological and theoretical accounts.

As these papers illustrate, because they are based on languages that are typologically and genetically diverse, and because they show a diversity of phenomena, it is important for ensuing investigation to increase the range of languages under consideration and also the depth of the descriptions that are provided. The languages studied here are all endangered—some critically so. Opportunities to pursue additional lines of inquiry are limited but essential for a thorough understanding of the creativity of the human language faculty. We are fortunate that the authors of these papers have conducted pri-

mary research on these languages, can draw on personal knowledge of the languages resulting from years of investigation, and thus are able to contribute to our understanding of DNV constructions.

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