Applicatives and Preposition Incorporation

Andrew Garrett

Introduction

Incorporation theory as elaborated by Mark Baker (1988a, 1988b) offers an elegant and ambitious account of a wide range of apparently relational linguistic processes within a non-relational grammatical model. Its strategy in each of several cases is to derive these processes via incorporation, or head-to-head adjunction, and to explain their syntax with independent components of the model. In this paper I will apply a partly descriptive, partly diachronic approach in criticizing one particular component of incorporation theory.

Applicative verbs are a typologically widespread class characterized by valence-increasing morphology which licenses thematically oblique arguments. Two Chichewa examples are1:

1 a. mbidzi zi-na-perek-er-a akhandwe msampha
   zebras SUBJ-PAST-hand-APPL-IND fox trap
   "the zebras handed the trap to the fox" (Baker 1988a:229)

   b. kalulu a-na-gul-ir-a mbidzi nsapato
      hare SUBJ-PAST-buy-APPL-IND zebras shoes
      "the hare bought shoes for the zebras" (ibid. 48)

In addition to their basic objects "trap" and "shoes", the verbs in 1 have applied suffixes which license applied objects "fox" and "zebras". These applied objects are thematically a recipient and a beneficiary, for which I will use the cover term "dative". Applied objects are not restricted to dative thematic roles, but can also be interpreted at least as substitutives, instruments, possessors, and causes (several of which are commonly associated with the dative cases cross-linguistically).

The formal apparatus of incorporation theory in part reflects two descriptive generalizations. The first of these concerns the syntactic status of basic and applied objects. In Chichewa, word order, object agreement, and passivization confirm that the basic object of a non-applicative verb is syntactically its direct object. The same tests establish that in a sentence with an applicative verb, the applied object has syntactic...

1I follow source orthographies except that I specify Chichewa vowel length (by orthographic guimuation) only to mark contour tones, since it is predictable (see Brennan & Kanerva 1989: 5-9), and I modernize Chichewa transcriptions from Watkins (1937).
direct-object status and the basic object is syntactically inert. The applied object in 1b, for instance, can be the subject of the corresponding passive, but the basic object cannot:

2 a mbidzi zi-na-gul-ir-idw-a nasapato ndi kalulu
   zebras SUBJ-PAST-buy-APPL-PASS-IND shoes by hare
   "the zebras were bought shoes by the hare" (Baker 1988a:46)

   b *nasapato zi-na-gul-ir-idw-a mbidzi ndi kalulu
   shoes SUBJ-PAST-buy-APPL-PASS-IND zebras by hare
   "shoes were bought the zebras by the hare" (ibid.)

The second descriptive generalization is that there are syntactic differences in Chichewa between dative and instrumental applied objects. Instrumental applicatives can be built to intransitive verbs, for instance, but datives reportedly cannot, as shown by 3a and by the impossibility of the benefactive interpretation of 3b:

3 a mbalame zi-na-uluk-ir-a mapiko
   birds SUBJ-HAB-fly-APPL-IND wings
   "birds fly with wings" (Baker 1988a:69)

   b mkango u-ku-yend-er-a anyani
   lion SUBJ-PROG-walk-APPL-IND baboons
   "the lion is walking for the baboons" (Baker 1988a:255; 1988b:378)
   "the lion is walking in place of the baboons" (Baker 1988a:470 n. 26; 1988b:378 n. 21)

   c Mavuto a-na-fik-ir-a njula
   Mavuto SUBJ-PAST-arrive-APPL-IND hunger
   "Mavuto came out of hunger" (Baker 1988a:471 n. 31)

In fact it seems necessary to assume that the relevant contrast is not just between dative and instrumental applicatives, as Baker suggests, but between dative and all other applicative interpretations. This is because applied objects with intransitive verbs can be interpreted substitutively, as in 3b, or causally, as in 3c.

Baker refers these two Chichewa generalizations to a pair of proposed typological universals. The first, supported by reference to Chamorro, Chinswini, Huichol, Swahili, Tuscarrora, and Tzotzil, is that "it is normal for applied objects to supplant basic objects with respect to all these 'object properties' " (Baker 1980a:267; one class of exceptions, languages like Kinyarwanda where applied and basic objects both show direct-object properties, will play no role in my discussion). The second, supported by reference to Bahasa Indonesian and Tzotzil, is that "across a wide range of languages, the possibility of an applicative construction is directly dependent on the ability of the root verb involved to assign Case" (ibid. 258). More precisely, it is clear from Baker (1988b) and the data in 3 that this second restriction on applicative formation is assumed to exist only for dative applicatives.

### Applicatives as Preposition Incorporation

Incorporation theory treats applicative syntax as follows. Dative applicatives are synchronically derived by preposition incorporation, which is the adunction of a preposition to the head of its VP, as in 4:

4       VP
       V   PP       V   PP
       P   NP       P   i_i   NP

The Chichewa applied suffix is thus a base-generated preposition obligatorily joined to its verb. 1b has an s-structure like 5: the applied morpheme incorporates at s-structure, and the complex verb-plus-preposition surfaces as an applicative verb.

5       S
       VP
       NP   V   PP   NP
       kalulu anagulira mbidzi nasapato
       hare bought-APPL zebras shoes

The direct-object properties of applied objects arise as a consequence of a special principle governing Case assignment in incorporation structures. Case in this framework comes in at least three varieties: inherent Case, assigned at d-structure; oblique Case, assigned at s-structure, which includes the Case assigned in most languages by prepositions to their complements; and structural Case, also assigned at s-structure, which includes both the accusative Case assigned by a verb to its direct object and in some languages the Case assigned by prepositions to their complements.

The principle in question is the Case Frame Preservation Principle: "A complex X0 of category A in a given language can have at most the maximal Case assigning properties allowed to a morphologically simple item of category A in that language" (Baker 1988a:122). In the case of preposition incorporation, I understand this to mean that a complex verb created by preposition incorporation inherits structural Case-assigning properties from both daughters, and no oblique Case-assigning properties, but that the maximum number of NPs to which such a verb can assign structural Case is limited by a language-specific parameter setting.
While not fully elaborated, this principle seems to operate as follows in languages where complex verbs are parametrically limited to structural Case assignment to one NP. (In this theory, languages like Kinyarwanda reflect a different parameter setting.) Incorporating an oblique-Case-assigning preposition into an intransitive verb creates a complex verb which assigns no Case. Other incorporations create complex verbs which assign structural Case to one NP: incorporating an oblique-Case-assigning preposition into a transitive verb, and incorporating a structural-Case-assigning preposition into either an intransitive or a transitive verb.

Chichewa is taken as typologically unremarkable in that verbs are parametrically limited to one structural Case and prepositions like the applicative suffix assign only oblique Case. A dative applicative built to a transitive verb therefore assigns exactly one structural Case. This is assigned to the applied object and is responsible for its direct-object properties. Basic objects, on the other hand, which lack direct-object status in Chichewa, are assigned inherent accusative Case by the verb at d-structure, as in 6, with incorporation between d- and s-structure and structural Case-assignment at s-structure.

No other pattern is possible in this configuration. The applied object cannot be assigned inherent Case, which is only assigned at d-structure, where verbs are structurally unable to assign Case to prepositional complements. The applied object also cannot be assigned the oblique Case ordinarily assigned by Chichewa prepositions, which is only assigned at s-structure, where incorporation has occurred and verbs are unable by the Case Frame Preservation Principle to assign oblique Case.

However, in an intransitive configuration like 7, which is the structure of the unacceptable reading of 3b, the applied object cannot be assigned inherent Case because it is a prepositional complement at d-structure, it cannot be assigned oblique Case because incorporation blocks oblique Case-assignment, and it cannot be assigned structural Case because intransitive verbs and Chichewa prepositions do not assign structural Case. This rules out dative applicatives with intransitive verbs.

To explain the acceptability of instrumental applicatives with intransitive verbs, Baker (1988b) proposes that unlike dative applied objects, instrumental applied objects and all instrumental phrases are NP sisters of their verb and not prepositional phrases at all; this must be also assumed for Chichewa substitutives and causals. On this view, morphemes like the Chichewa instrumental applied suffix simply realize inherent Case assigned at d-structure and occur in structures like 8, where the applied suffix trace is thematically superfluous and absent at s-structure.

Since the verb in this configuration is intransitive, the applied object cannot be assigned structural accusative Case, but since it is not a prepositional complement it can be assigned inherent accusative Case at d-structure. This correctly predicts that an instrumental applied object with a transitive verb may be assigned either inherent or structural accusative Case, with the other Case assigned to the basic object, and as a result that applied and basic objects of instrumental applicatives both display some direct-object properties in Chichewa.
Applicatives and Typology

Apparent counter-evidence to the view that applicatives are derived by preposition incorporation may reflect either parametric variation in verbal Case-assignment capacity or lexical Case-assigning differences among affixes or prepositions. Nevertheless we may examine some purported universals the account explains. The first is that dative applicatives are rarely built to intransitives. This is supported by the well-known work of Aissen on Tzotzil and Chung on Bahasa Indonesian: applicative verbs in these languages, with essentially dative interpretations, cannot be built to intransitives. Still, its empirical range is unclear.

Baker (1988a, 1988b) asserts that applied objects of lexically intransitive verb roots are not productively interpreted as benefactives in one Chichewa idiolect, although they are interpretable as substitutives, and that 9a therefore cannot be interpreted benefactively. However, an apparently benefactive applied object appears with the same intransitive verb in 9b and its passive 9c, and in any case other speakers accept some such sentences, as indicated in 9d-e.

9a mtolankhani a-ku-thamang-ir-a chiphadzuwa

journalist SUBJ-PAST-APPL-IND beautiful woman

"the journalist is running for the beautiful woman" (Baker 1988a:255)

"the journalist is pursuing the beautiful woman" (ibid. 70)

9b w-a-thamang-ir-á mfuúmu mu-mpipisano

2SGSUBJ-PERF-run-APPL-IND chief LOC-race

"you have run for the chief in the race" (Bresnan & Kazerva 1989:10)

9c mfuúmu y-a-thamang-ir-idw-á mú-mpipisano

chief SUBJ-PERF-run-APPL-IND LOC-race

"the chief has been run for in the race" (ibid. 19)

9d kw-a-n-di-ér-a pano pa thengo

SUBJ-PERF-1SG-OBJ-darken-APPL-IND here LOC forest

"it got dark on me here in the forest" (Watkins 1937:76)

9e u-dá-dá kwá-ér-a

2SGSUBJ-PAST-REFL-marry-APPL-IND

"you have married for yourself" (ibid. 81)

Moreover, as recently argued by Alsina & Mchombo (1989 §4.2.2), Baker's attempt to distinguish substitutive from (other) benefactive interpretations does not account for differences between the syntax of substitutives and other more clearly non-benefactive interpretations. For instance, the substitutive applicative in 10a triggers object agreement and can, as in 10b, be passivized, whereas the causal applicative in 10c can do neither, as indicated by 10d-e:

10a Yëçu a-ná-wá-f-er-a anhu

Jesus SUBJ-PAST-OBJ-die-APPL-IND people
"Jesus died for the people" (Alsina & Mchombo 1989 ex. 36a)

b anhu a-ná-f-ér-chédw-a (ndi Yëçu)

people SUBJ-PAST-die-APPL-PASS-IND (by Jesus)
"the people were died for (by Jesus)" (ibid. ex. 38b)

c chitsífrú chi-ku-lír-ír-a mánthá

fool SUBJ-PRES-cry-APPL IND fear
"the fool is crying for fear" (ibid. ex. 37a)

d *chitsífrú chi-ku-wá-lír-ír-a mánthá

fool SUBJ-PRES-OBJ-cry-APPL-IND fear (ibid. ex. 37b)

e *mánthá a-ku-íl-ír-ídhw-a (ndi chitsífrú)

fear SUBJ-PRES-cry-APPL-PASS-IND by fool (ibid. ex. 37c)

Comparative evidence indicates that applied objects of lexical intransitives can be interpreted benefactively elsewhere in Bantu, as in 11a-b. The verb root of 11b is cognate to that of 10a-b, and Port (1981:79) states specifically that 11b could "also be interpreted in the appropriate context as 'his father did for him', where the son is now a beneficiary.

11a umugere a-rá-kor-er-a umugabo (Kinyarwanda)

woman SUBJ-PRES-work-APPL-IND man

"the woman is working for the man" (Kimenyi 1980:32)

b a-me-f-i-w-a na babake (Swahili)

SUBJ-TNS-die-APPL-PASS-IND by his father
"he has been died on by his father" (Port 1981:79)

Lexically transitive verbs with null indefinite or generic objects are an additional surface intransitive verb type in Bantu, and it is further asserted that benefactive applicatives are possible "based on the transitive uses of these verbs but not on the intransitive ones" (Baker 1988b:378 and Alsina & Mchombo 1989 §4.2.1, followed by Bresnan & Moshi 1990:152). The contrast is illustrated in 12a, where chimangirizó "essay" cannot be omitted. This empirical claim too seems to be contradicted, for Chichewa by 12b-c and for Chimwini by 12d. (The theory of Bresnan & Moshi 1990 suggests that Chimwini should disallow benefactive applicatives with null-object transitives.)

12a mlenje a-ku-lémb-ér-a mfuúmu *(chimangirizó)

hunter SUBJ-PRES-write-APPL-IND chief essay
"the hunter is writing *(an essay) for the chief" (Alsina & Mchombo 1989 ex. 34a)
b mu-nîdi-pêlek-êlê
2PLSUBJ-1SGOBJ-send-APPL-IND
"that you may send (a thing) on my behalf" (Nkomba 1953:108)

c a-kâ-ndî-tekkul-i-ra
SUBJ-go-1SGOBJ-open-APPL-IND
"I will go into the brush over there and knock. They will open up for me"
(Brosnan & Kanerva 1989:43)

d ha-wa-â-m-xadâ-êlê-a (Chinwiini)
NEG-SUBJ-TNS-OBJ-cheat-APPL-IND
"they will not cheat (someone) for/on him" (Aboshekh 1976:3)

It is possible that the acceptability alternations illustrated in 9-12 are conditioned not by transitivity per se but by features of predicate interpretation such as aspect. In any case, dative applicatives in many languages are productively built into intransitive verbs. Three Iroquoian examples with intransitive morphologically underlying roots are 13a-c.

According to the discussion of Tepehua by Watters (1989), "with the exception of Mayan, most other Meso-American languages which have applicatives apparently allow applied affixes to occur on intransitive stems", and the same is true of several cases discussed by Craig and Hale (1988). Three final random examples are 13d-f, where 13f is specifically glossed "for her pleasure or in her place".

13a sako-likuny-êni (Mohawk)
3SGMASC-3SGFEMOBJ-teach-APPL
"he taught her" (Bonvillain 1973:204)

b he:wa:pî:ch (Seneca)
1SGSUBJ-3SGMASCOBJ-cover.with.a.blanket-APPL-ASP
"I've covered him with a blanket" (Chafe 1967:25)

c wa²-nâ².êhêp-ê (Tuscarora)
AO-R.3SGMASCSUBJ-3SGFEMOBJ-whisper-APPL
"one whispered to another" (Rudes & Crouse 1967:2.467)

d ni-mo-weeki-liya (Huasteca Nahuatl)
1SG-REFL-smile-APPL
"I laughed at myself" (R. & P. Beller 1979:205)

e ñanu-bak-wan²-du-gi (Ngandi)
1SGSUBJ-3SGMASCOBJ-APPL-look.around-AGM-PCON
"I was looking around for him" (Heath 1978:81)

f bu kanta-yi si Maria (Chamorro)
1SGSUBJ sing-APPL-FOC Maria
"I sang for Maria" (Topping 1973:251)

Now on the assumption that benefactive applied objects are d-structure prepositional complements and so cannot be assigned verbal inherent Case, at least the benefactive applied affixes above must assign structural rather than oblique Case, since only structural Case can be inherited under incorporation. This is confirmed by the usual independent tests: these applied objects are passive subjects in 9c, 10b, and 11b, and trigger direct-object agreement in 9d-e, 10a, 12b-d, and 13a-e.

A second typological prediction is that while applied objects with intransitive verbs should be freely interpretable as non-datives, in particular instrumentals, they should not be assigned structural accusative Case. The reason is that this thematic class of applied objects has no possible source of such a Case with intransitive verbs: the verbs themselves assign no Case, and applied affixes which license instrumentals just realize inherent Case and are not in fact prepositions or Case-assigners themselves. This prediction is confirmed neither cross-linguistically nor, as also observed by Alsin & Mchombo (1989 §4.22), in Chichewa itself. A specifically instrumental applied object with object agreement appears in the Chichewa sentence in 14a, and an instrumental passive subject appears in 14b. Similar facts in Tepehua are discussed by Watters (1989), and Mark Hale has called my attention to instrumental applied objects assigned structural accusative Case in several Nuclear Micronesian languages, as in 14c.

The object agreement in 14a and the passive suffixes in 14b-e entail the presence of structural accusative Case-assigners, which, since the verb roots are intransitive, can only be the instrumental applied suffixes -er- (14a-b) and -kān- (14c).

14a anyââni a-na-i-yênd-êr-a ndodo (Chichewa)
baboos SUBJ-PAST-OBJ-walk-APPL-IND stick
"the baboons are walking with the stick" (Alsin & Mchombo 1989 ex. 39b)

b ndodo i-ku-yênd-êr-edwâ pa-mserâ (Chichewa)
stick SUBJ-PROG-walk-APPL-PASS-IND loc-road
"a stick is being walked with in the road" (Brosnan & Kanerva 1989:19)

c sroanu ah owto-kînh-yuhk-lac (Korsaean)
coconut.leaves DET weave-APPL-PASS-DIR
"the coconut leaves were used up in weaving" (Lee 1975:192)

Even a large set of isolated data does not disconfirm a theoretical analysis, of course, and the accomplishments of incorporation theory should not be disparaged. Still, the theory seems to have some disadvantages as it relates to applicative verbs. First, it posits significant structural differences within single languages among various morphologically identical applicative constructions, in particular among interpretations traditionally and
cross-linguistically associated with datives. Second, it posits a somewhat obscure Case-
assigning difference among prepositional affixes in languages where all clear prepositions
assign a single type of Case. Third, it predicts an apparently spurious universal contrast
between dative and instrumental applicatives. Where the contrast appears, the theory
treats applied and basic objects as NP sisters of the applicative verb, and in many
instances must allow structural Case-marking of either. This may prove equivalent to
the position that applicatives are derived (morpho-)lexically.

Typology is a notoriously dangerous argument for specific formal proposals, since
typological generalizations very often have diachronic explanations which should not be
included in a formal synchronic grammar. Typological evidence, while always relevant,
can therefore be depended on only when diachronic explanations have been excluded. In
this case, since applied morphemes often originate diachronically as serial verbs, and
benefactive morphemes in particular as verbs meaning "give", any slight tendency toward
restricting benefactives to transitives could reflect the fact that verbs meaning "give"
would originally have co-occurred with transitive predicates. A formal account of such
systems must obviously explain how a transitivity restriction is learnable, but would not
be responsible for explaining the typological facts as well.

**Diachrony I: Applicatives via Clause Union**

In my view these conceptual and empirical inadequacies are related to an inherent
peculiarity of the proposal that applicatives are synchronically derived by preposition
incorporation. This peculiarity is revealed by a superficial comparison with two other
incorporation-theory claims, namely that noun incorporation is synchronically derived by
syntactic noun incorporation, and that causatives are synchronically derived by syntactic
verb incorporation. Noun-incorporation structures usually contain a recognizable noun,
and causatives in a host of languages contain recognizable verbs meaning "make" or the
like. Applicative verb formations, though, do not often contain recognizable prepositions.

There is a simple reason for the difference. As far as I know, synchronic noun
incorporation processes are always the result of diachronic noun incorporation, and
synchronic causatives are the result of diachronic verb incorporation, as in 15 and 16.

15 Noun Incorporation

![Diagram of NP incorporation](image)

16 Causatives

![Diagram of causatives](image)

By contrast, it is not the general case that applicative verbs arise via diachronic
preposition incorporation, though some certainly do. Applicative morphology evolves
most commonly from the two sources in 17: preposition incorporation and verb
serialization. The ultimate reanalysis of these originally free lexical items as obligatorily
bound, applicative morphemes recalls similar historical processes like the capture of
unstressed pronouns and their ultimate transformation into agreement marking, a parallel
which might a priori recommend a lexical or morpholexical account of applicative
morphology (such as that of Alsina & Mclicemo 1989 and Bresnan & Moshi 1990).

17 serial verb

![Diagram of serial verb incorporation](image)

In any case, while synchronic description emphatically need not recapitulate
diachronic development, the incorporation account implicitly makes two specific
diachronic predictions, which as historical claims can be tested in favorable cases. The
first prediction follows from the assumption that dative applicatives are in general derived
synchronically by preposition incorporation. This would entail that language learners are
forced by the interpretation of these applicatives to analyze them as verbs with
incorporated prepositions. For the particular case of applicative morphology which
diachronically continues verb serialization, this in turn entails that reanalysis of a serial
verb as an incorporated lexical item is actually contingent on a categorial reanalysis of
that verb as a preposition. In other words, if applicatives must be preposition
incorporation, then 17 is wrong, the necessary intermediate stage between serial verb and
applied morpheme is preposition incorporation not verb incorporation, and the diachronic
reanalysis of string-adjacent verbs as incorporation structures sketched in 18 requires
that X be a preposition.

18 DIACHRONIC STAGE ONE: Main-V [Serial-V Thematically-Dative-NP]

DIACHRONIC STAGE TWO: [Main-V X] [i Thematically-Dative-NP]

In fact 17 is correct and the prediction of incorporation theory false, since the
development in question is just a special case of what has been called "tight serialization".
An example of this is 19, in which Goddard (1988) states that "there is no possibility of separating [the two verbs] with a pause or any intervening material". Together with the case-marking, word order, and tense scope, this suggests an analysis on which the two verbs form one s-structure complex verb derived by verb incorporation. Similar facts occur in many languages.

19  paluŋ niyiniŋ yanku-la uru-gu (Yankunytjatjara)
     DEF.ERG zebra.finch.ACC go-3SER get-PAST
     "she went and got zebra finch (droppings)" (Goddard 1988:181)

A special case of this development is 20, and an example is provided by the development of Proto-Oceanic *pa(n)ːi "give", discussed at length by Lichtenberk (1985). This was originally a verb, but its Gedered descendent pan occurs productively in two contexts: it is a free verb in 20a, but functions like an applied morpheme in 20b-c.

20a  tamol ta tabiz pan-ag-oi
     man some bowl give-1SGOBJ-IRREAL
     "a man will give me a bowl" (Lichtenberk 1985:47)

20b  ab sas-e pan-ag-oi
     house build-3SGOBJ give-1SGOBJ-IRREAL
     "build a house for me" (ibid. 48)

20c  ya-na-g uza u nau-e pan-ag
     1SG-POSS-1SGPOSS work 2SGSUBJ-do-MED give-1SGOBJ
     "you have worked for me" (ibid. 49)

The development from free verb to bound status did not depend on reanalysis as a preposition. In all contexts, as Lichtenberk shows, this word must be analyzed synchronically as a verb: it displays exclusively verbal morphophonemic alternations, and the optional modality markers illustrated in 20a-b can follow only it and not the head verb. Moreover, this verb cannot be analyzed as serialized in 20b-c, because non-thirdperson subject agreement is obligatory on all non-imperative serial verbs in Gedered, as in 21, but never appears on pan, as in 20c.

21  pain di-matal di-du
     woman 3PLSUBJ-take-seat 3PLSUBJ-go-down
     "the women sit down" (Lichtenberk 1985:50)

This suggests that 20b-c each contain syntactically complex verbs consisting of two phonologically discrete entities, a head verb and an adjoined verb "give" with dative function. The diachronic development of an incorporation structure with dative applicative interpretation is therefore not contingent on any reanalysis of a verb as a preposition, and it is inappropriate to assume in general that applicatives are synchronically derived by preposition incorporation. Some may be, but the argument needs to made explicitly for each case and contrasted with arguments for other analyses like verb incorporation and (morpho-)lexical derivation.

Diachrony II: Applicatives via Preposition Incorporation

In attributing a range of syntactic effects to a particular linguistic process, it is desirable to determine whether clear cases of that process have the same effects, and the second prediction made by incorporation theory is therefore that clear cases of diachronic preposition incorporation will manifest the syntax associated with applicative morphology. As it turns out, there are fundamental differences in the syntax of applicatives and preposition incorporation. The best-known and longest-studied systems of preposition incorporation occur in Indo-European, and I take my data from Homeric Greek. (The analysis was presented in more detail as Garrett 1988, but there are other similar treatments of these facts, e.g. Higginson 1978 and Horrocks 1981.)

Prepositions in Homeric Greek have several straightforward functions: they can head prepositional phrases with overt or null complements, and they can be interpreted as directional or aspect markers. In all these functions they may appear separated from their verbs, as in 22, or phonologically incorporated into them, as in 23:

22  a  bò t... mákhkeston [pp pídakos amph olíges]
     PRODUALNom and fight.PRES3DUAL [pp spring.GEN around small.GEN]
     "and the two fight for a small spring" (Il. 16.824-5)

     b  thecos... éthei éméros [pp ambrosí̂n dìa nūktai]
     divine.NOM come.AOR3SG dream.NOM [pp ambrosial.ACC through night.ACC]
     "a divine dream came through the ambrosial night" (Il. 25.56-57)

23  a  [pp t, nénkos] de dè amphi, mákhkontai
     [pp t, body.GEN] PTC-PCL around-PFV3PL
     "and they fight for his body" (Il. 18.20)

     b  di-e ekhómenos [pp t, méga ástiu]
     through-PFV3C NOM-3SG-MASC [pp t, great.ACC city.ACC]
     "as he was coming through the great city" (Il. 6.392)

As heads of PPs with overt complements, these prepositions are base-generated in their PPs, case-mark their complements, and can be extracted only by topicalization or incorporation. Preposition incorporation is possible in this language regardless of host transitivity, as shown by 23-24.
Preposition incorporation here is unlike applicative formation in having no effect on grammatical relations. The logical objects of prepositions retain their oblique morphological case and the logical objects of verbs retain their accusative case-marking, as illustrated in 25a-b. In addition, nominative case and subject agreement are associated with logical verbal objects but not prepositional objects in passive and middle constructions, as in 25c-d.

References


April 1, 1990