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Origins of Apparent Violations of the "No Phrase"Constraint in Modern Georgian[1]

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It is widely suggested in the literature that words are based on words, roots, or stems, but not on phrases (the "No Phrase" Constraint). In Modern Georgian, constructions such as megobar-ta-gan-i *'[one, some] of the friends' are common; they appear to violate the "No Phrase" Constraint because* gan *'from' is traditionally considered a postposition. In this example,* -i*, the marker of the nominative case, serves as both inflectional and derivational morphology, deriving a substantive, apparently from the postpositional phrase. The paper demonstrates that the construction at issue originated in double case marking. Old Georgia had case marking of this sort, in which case markers occurred not only on head nouns, but also at the right edges of phrases. The same phenomenon was found with postpositional phrases inside an NP, and it is proposed here that although Modern Georgian does not have double case marking, it is the origin of the modern construction discussed here.*

1. Introduction

This paper concerns the Modern Georgian construction illustrated in (1); throughout, it will be contrasted with that in (2).

(1) ert-i megobar-ta-gan-i
one-NOM friend-PL.GEN-from-NOM[2]
'one of the friends'

(2) ert-i megobr-eb-isa gan
one-NOM friend-PL-GEN from
'one from the friends'

The structures differ in that in (1) the last word ends with the suffix *-i*, which functions both as a derivational morpheme forming a noun and as the marker of the nominative case (see Šaniʒe 1973:68, 1976:49-50). A second formal difference is that (1) contains the syncretic plural marker *-ta*, which in Old Georgian served as the plural of cases other than the nominative and vocative; (2), on the other hand, bears the modern plural marker, *-eb*, and the genitive case marker, *-isa*. In addition, the meanings are different; (1) expresses the partitive, while (2) expresses primarily the source or origin. (3) and (4) provide textual examples of the construction

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[2] Abbreviations used in glossing examples include DAT dative, EMPH emphatic, GEN genitive, INST instrumental, NAR narrative, NEG negative, NOM nominative, OBL oblique, PART partitive, PL plural, and SG singular.

in (1), in order to establish that it is a naturally occurring construction.

(3) ert-i am saxel-ta-gan-i, saxeldobr *op'iza*, c'minda
one-NOM this noun-PL.GEN-from-NOM namely --- pure

č'anur-megruli porma-a
Laz-Mingrelian form-it.is
'One of these nouns, namely *op'iza*, is a pure Laz-Mingrelian form.....'
[Šaniʒe 1957:32]

(4) zog-i am pakt'or-ta-gan-i dasaxelebuli-a
some-NOM this factor-PL.GEN-from-NOM named-it.is
'Some of these factors are named.' (i.e. '...have names.') [Topuria 1979:263]

The structure in (1) occurs in a full range of case forms, and (5) provides the paradigm of these.

(5)

Nominative	ert-i	megobar-ta-gan-i	'one of the friends'
Narrative	ert-ma	megobar-ta-gan-ma	
Dative	ert	megobar-ta-gan-s	
Genitive	ert-i	megobar-ta-gan-is	
Instrumental	ert-i	megobar-ta-gan-it	

I have omitted some of the cases here for the sake of brevity; some are illustrated in (6-7).

(6) k'ac-i tav-is-i megobar-ta-gan-it ʒlier-i-a[3]
man-NOM self-GEN-NOM friend-PL.GEN-from-INST strong-NOM-he.is
'A man$_i$ with [some of] his$_i$ friends is strong.'

(7) ert-i čem-i megobar-ta-gan-isa-tvis es gavak'ete
one-GEN my-GEN friend-PL.GEN-from-GEN-for this.NOM I.do.it
'I did this for one of my friends.'

In this paper it is argued that *megobar-ta-gan-i* 'of friends' in (1) (like the other case forms in (5)) is a word, while *megobr-eb-isa gan* in (2) is a related postpositional phrase. If *megobar-ta-gan-i* 'of friends' is indeed a word, it would appear to be a violation of the "No Phrase" constraint, the constraint that states that words are built on a base of words and bound morphemes, not on phrases (see, for example, Bresnan and Mchombo 1995, Di Sciullo and Williams 1987). Although there are other words apparently derived from postpositional phrases in Georgian that also seem to violate the "No Phrase" constraint, their constructions differ somewhat from this one, and only the *-gan* 'from' construction is discussed in this paper. The goal of the paper is to establish the Old Georgian roots of this apparent violation. In the remainder of this section I briefly describe the relevant literature on defining the word. In §2 I discuss evidence that *megobar-ta-gan-i* 'of the friends' is a word, not a phrase. In §3 I consider

[3] This is based on a proverb, *k'aci k'acit ʒlieria* 'a man with (another) man is strong'.

and reject the hypothesis that *gan* is a case suffix, rather than a postposition. In §§4-5 I discuss two constructions in Old Georgian that led to the pattern at issue here and show that it originated as an instance of multiple case marking. In §6 I return to the synchronic status of our example and consider the possibility that case markers in Georgian are clitics. In §7 I consider the process of reanalysis in detail, including the hypothesis that *gan* was reanalyzed as derivational morphology. There is no positive evidence to support this view, and the wordhood of *megobar-ta-gan-i* 'of the friends' is considered again in this context.

There is a long history of defining or identifying the notion "word" within linguistics (e.g. in the twentieth century, Martinet 1960:105, Robins 1967, and more recently Dixon and Aikhenvald, to appear). It has been shown that the phonological word does not necessarily coincide with the morphological (or grammatical) word (Booij 1985, Nespor and Vogel 1986). A number of linguists, including Sadock (1980), Di Sciullo and Williams (1987), Bresnan and Mchombo (1995), and others, have identified a number of specific criteria that seem to characterize words cross-linguistically. Others, including Haag (1997), Ackerman and Webelhuth (1998), Dahlstrom (2000), LeSourd (to appear), and Henderson (to appear) have noted interesting problems in the notion "word". In recent work based on data from languages of the Caucasus, I have also questioned the universality of certain of these criteria, including lexical integrity (the impossibility of a clitic occurring inside a word, Harris 2000a), anaphoric islandhood and the "No Phrase" constraint (Harris, to appear). I therefore find myself in the position noted also by Shibatani and Kageyama (1988) — by questioning the criteria for identifying the word, I leave myself with few clear-cut, well accepted criteria to establish wordhood. I assume here that the criteria proposed in the works cited above are generally (i.e. usually) correct, though they may not be universal.

2. *Megobar-ta-gan-i* is a Word, not a Phrase

In (1), the elements *megobar-, ta-, gan* occur in the same order as the corresponding elements in the phrase in (2). The postposition *gan* 'from' in (2) governs the genitive case in (2) and it appears that *-gan* in (1) governs the same case (realized in its older, fusional form *-ta*) in (1). For both reasons it seems sensible to examine the possibility that (1), like (2), contains a phrase.

Megobar- 'friend', the root, cannot stand alone without a case marker, but *megobar-ta* 'friends.OBL' can stand alone as a word. The ending *-i* 'NOM' cannot stand as an independent word. It therefore makes sense to consider as part of this hypothesis that *megobar-ta-gan-i* 'of the friends' is a phrase consisting of the "words" *megobar-ta* 'friends' and *gan-i*, which might be a postposition or a partitive particle. Therefore, in examining the possibility that (1) contains a phrase, I concentrate on structures in which the words in the phrase are *megobar-ta* and *gan-i*.

The unit *gan-i* is a word, but its meanings are not compatible with the meanings of the expressions we are examining. Čikobava et al. (1950-64) lists the following meanings for *gan-i* : (i) the name of the third letter of the Georgian alphabet; (2) breadth; (3) skirt, the lower part of a dress or coat; (4) (you) go out, a call used to break a circle in dancing. The last of these is probably derived historically from the preverb *gan-* 'out, away', which has the same source as the postposition *gan* 'from'. Nevertheless, none of these seem likely candidates to form a phrase in the meaning here. This is made the more certain by the existence of the adpositional phrases in (8).

(8a) †megobar-ta gan
friend-PL.GEN from
'from (the) friends' (archaic)

(8b) megobr-eb-isa gan
friend-PL-GEN from
'from (the) friends'

(I write postpositions here as separate words, even when this is contrary to the prescriptive orthographic norms of Georgian; I believe this will facilitate understanding. The symbol † is used here to mark expressions that are archaic or formal but not ungrammatical.) If our *gan-i* were indeed a word, it is more likely that it would be a partitive, reanalyzed from the postposition *gan* 'from', as in (8). Therefore one possibility is that *gan* in (1), but not (2), functions as a particle marking the partitive sense we find in this construction.

Hypothesis 1: *megobar-ta-gan-i* is a phrase, not a word.
Hypothesis 1a: *megobar-ta-gan-i* is a postpositional phrase, with the postposition *gan*.
Hypothesis 1b: *megobar-ta-gan-i* is a noun phrase, with the partitive particle *gan*.

In this section I present arguments that both versions of Hypothesis 1 are wrong, and that *megobartagani*, *saxeltagani, pakt'ortagani* (the latter from (3) and (4), respectively), and similar units are grammatical words, not phrases.

These hypotheses are represented by the structures in (9a) and (9b), respectively, and I argue below that these structures are wrong. I argue instead for the structure in (9c).[4]

(9a) [[megobar-ta]$_{NP}$ gan-i]$_{PP}$ Putative PP phrasal structure
friends-PL.GEN from-NOM

(9b) [[megobar-ta]$_{N}$ gan-i]$_{NP}$ Putative NP phrasal structure
friends-PL.GEN PART-NOM

(9c) [[megobar-ta -gan]$_{PP}$ -i]$_{N}$ Proposed word structure
friends-PL.GEN -from -NOM

(9c) is modified in section 7 below. In subsections 2.1-2.4, I present four arguments against the structures in (9a,b).

2.1. An Argument Based on Form

In Old Georgian, the suffix *-ta* formed the syncretic plural of all cases other than the nominative and vocative. In Modern Georgian it is archaic in most contexts but is required in a few. In particular, it is required in certain fixed expressions, such as (10) and (11).

(10) mk'a-ta-tve
mowing-PL.GEN-month
'the month of mowing', i.e. 'July'

[4] A DP analysis is entirely possible here; I have decided not to use that approach, however, because determiners are much less frequent in Georgian than in English.

(11) dɣe-ta mačvenebel-i
day-PL.GEN indicator-NOM
'a week in the Orthodox calendar' (Čikobava et al. (1950-64), 8:1391)

While the examples above are carried over from Old Georgian, new expressions, especially proper names and titles, also use this form.

(12) sabč'o-ta k'avšir-i
soviet-PL.GEN union-NOM
'union of soviets', i.e. 'Soviet Union'

(13) mecniereba-ta ak'ademia
science-PL.GEN academy.NOM
'Academy of Sciences'

(14) kal-ta saertašoriso dɣe
woman-PL.GEN international day.NOM
'International Women's Day'

In contrast, it would be very odd to say (15a); one would use (15b) instead.

(15a) †megobar-ta saxl-i
friend-PL.GEN house-NOM
'[my] friends' house'

(15b) megobr-eb-is saxl-i
friend-PL-GEN house-GEN
'[my] friends' house'

While (15a) is archaic, (12-14) are formal, but not archaic; (10-11), but not (15a), are fixed expressions.

The postposition *gan* 'from' can have as its complement an NP in the singular or in the plural, using the short form of the genitive (*-is*) or the long form (*-isa*).[5] It can occur with the *-ta* plural, but in this context the latter is archaic.

(16)

megobr-is	gan	'from a/the friend'	Singular with short genitive.
megobr-isa	gan	'from a/the friend'	Singular with long genitive.
megobr-eb-is	gan	'from (the) friends'	Plural with short genitive.
megobr-eb-isa	gan	'from (the) friends'	Plural with long genitive.
†megobar-ta	gan	'from (the) friends'	*-ta* genitive plural; archaic.

In contrast to this, the word formed with *-gan-i* occurs only with the *-ta* plural.

[5] On the occurrence of these two, see Pätsch (1964).

(17) *megobr-is-gan-i
*megobr-isa-gan-i
*megobr-eb-is-gan-i
*megobr-eb-isa-gan-i
megobar-ta-gan-i 'of (the) friends' Not archaic or formal.

These facts are not consistent with the structures in (9a,b), where expressions in *gan-i* are analyzed as phrases. I know of no word in Georgian that requires that its complement be in the *-ta* plural. Words that often occur in formal titles, such as *k'avširi* 'union' or *ak'ademia* 'academy', often occur with the *-ta* plural, as exemplified above; but they do not **require** this special form. For example, the Academy Dictionary quotes the uses in (18).

(18a) sit'q'v-eb-is sint'aksuri k'avširi c'inadadeba-ši
word-PL-GEN syntactic union sentence-in

'the syntactic joining of words in a sentence' (Čikobava et al. (1950-64), 4:1014)

(18b) ...činet-is k'avširi
China-GEN union

'the Chinese union' (Čikobava et al. (1950-64), 4:1015)

The examples in (18) show that *k'avširi* 'union' does not require the *-ta* form. In contrast, were *gan-i* a word, in view of (17), we would have to say that it **requires** the *-ta* plural. While there seem to be no examples of words requiring that their complement within a phrase bear the *-ta* plural, there are numerous compound or complex words that obligatorily occur with this plural in them, such as *sul-ta-mxutav-i* 'angel of death' (literally 'soul/breath-PL.GEN-confining-NOM') or (10) above. Thus, the *-ta* form is sometimes idiosyncratically required inside a word, but in phrasal structure it is optional, preferred in formal contexts. These facts suggest that *megobar-ta-gan-i* 'of (the) friends' is a word, not a phrase.

2.2.The Clitic =*ve* EMPHATIC

The clitic =*ve* is difficult to translate into English; in some contexts it is 'very' in the sense 'that very one', in others 'same', 'just', or 'right' (as in 'right there'). I will gloss it EMPH and translate it in various ways.[6]

The clitic may precede or follow the postposition *gan* 'from', as illustrated in (19) (parallel to (2), not (1)).

(19a) am megobr-isa=ve gan
this.OBL friend-GEN=EMPH from
'from this very friend'
(19b) am megobr-isa gan=ve
(19c) ama=ve megobr-isa gan

[6] The emphatic enclitic =*ve* should not be confused with a suffix of the same form. The latter is a derivational suffix that occurs only with numerals and means 'all', e.g. *sam-i-ve* 'all three'.

these.OBL=EMPH friend-GEN from
'from this very friend'

Generally, if a clitic can intervene in a sequence, that is held to be good evidence that the sequence in question is a phrase.[7] (19b) is judged to be preferable to (19a), but both are grammatical for most speakers. What is most important is the contrast between the grammaticality of (19a) and of (20a). This contrast suggests that the sequences in (19) are phrases, while those in (20) are words.[8]

(20a) *(ert-i) megobar-ta=ve-gan-i
one-NOM friend-PL.GEN=EMPH-from-NOM
'one of (the) friends indeed'

(20b) (ert-i) megobar-ta-gan-i=ve
one-NOM friend-PL.GEN-from-NOM=EMPH
'one of the friends indeed'

It is the contrast between the grammaticality of (19a) and (20a) that argues strongly that while *megobar-ta-gan-i* 'of (the) friends' is a word which cannot be interrupted by the clitic *=ve*, *megobr-isa gan* 'from (the) friend' is a phrase.

I know of no other clitic that might be expected in these contexts and might thus provide an additional test.

2.3. Idiosyncracies

As I have already noted, the expression *megobar-ta-gan-i* 'of the friends' is semantically a partitive. Unlike partitives in other languages, this expression in Georgian can only be used with common count nouns, such as *pakt'or-* 'factor', *saxel-* 'noun, name', or *megobar-* 'friend'. It is especially noteworthy that the expression cannot be used with mass nouns; for example, one cannot use this expression to say in Georgian '(I ate some) of the bread (and drank some) of the wine'; the words could be used, but would be interpreted instead as count nouns: 'of the loaves' and 'of the wines'. This sort of idiosyncracy is more characteristic of derived words than of phrases.

Other postpositions do not permit the construction illustrated in (1), (3), and (4).[9] If this

[7] I have argued that a clitic occurs inside a word in Udi (Harris 2000a); but while this is true in Udi, it is generally held to be rare (but see Henderson, to appear). I know of no clitics inside words in Modern Georgian.

[8] Speakers are not in agreement about the results in (19). My most normative consultant found (19a) ungrammatical; other speakers considered (19a) grammatical, but preferred one of the other variants. What is very clear, however, is the contrast between (19a) and (20a). Speakers who found (19a) grammatical found (20a) entirely ungrammatical, and all speakers consulted described a difference between the grammaticality of (19a) and that of (20a).

[9] There are at least three constructions that bear some similarity to this one. There are words formed with *tan(a)*, which at least resembles the postposition *tan* 'with'; but there is reason to believe that this construction does not derive from the postposition (Šanizе 1973). There are forms such as *čven-tan-it* 'from among those with us,' which appear to be superficially similar, but which are restricted to certain mountain dialects (Gabunia 1989). There are word constructions such as *bag-is-mier-i* [lip-GEN-by-NOM] 'labial (sound),' which are similar, but which can occur only with a few roots in the position of *bag-* and in this sense are much more limited than the construction we are examining here.

were a phrasal structure, we would expect it to be available for all postpositions. Restrictions of this sort are more typical of word structure than of phrase structure.

2.4. The Structure of the NP in Georgian

The structures in (9a) and (9b) are incompatible with the facts of Modern Georgian grammar. First, there are no postpositions in Georgian that decline or otherwise bear case markers, as *gan* 'from' does in (9a). If *-i* is not an inflection of *gan*, then (9a) does not characterize its structure.

While it is possible in principle that a language could have a separate particle that expresses the partitive, as in (9b), there are no comparable elements in the Georgian NP. In the Modern Georgian NP there are (i) no particles that express inflectional meaning, which the partitive is in this structure, (ii) no grammatical elements that decline, (iii) no units except the postpositional phrase (see §5 below) that ordinarily follow the main noun (logical head), yet the analysis in (9b) imputes all of these characteristics to the putative word *gan-i*.

2.5. Conclusion

I have argued here that the use of the *-ta* plural is compatible only with an analysis of *megobar-ta-gan-i* 'of (the) friends' as a word. The expressions at issue have the sort of idiosyncrasy that is typical of words, but not of phrases. The alternative structure considered here is incompatible in several respects with the general structure of NPs in Modern Georgian. In addition, the fact that the clitic *=ve* EMPH can occur inside postpositonal clauses with *gan* 'from', but not in the expression at issue, shows that the latter is a word. Lastly, native speakers consider *megobar-ta-gan-i* 'of (the) friends' and similar expressions to be words and always write them as words, not as phrases.

3. *-gan* is not a Case Suffix

One way of dealing with the problem presented by *megobar-ta-gan-i* 'of the friends' would be to analyze *-gan* 'from' as a case suffix. If *gan* is not a postposition, then there is no postpositional phrase and no violation of the "No phrase" constraint in (1).

Hypothesis 2: *-gan* is a case suffix, not a postposition.

In this section I argue that Hypothesis 2 is false.[10]

In Georgian, conjoined nouns must all bear the case required for the function they serve in a sentence, as shown by the examples below. In (21), the conjoined nouns must both be in the narrative case; in (22) they must be in the nominative. The same is true, though not illustrated,

[10] Šanidze (1973) argued that several postpositions of Old Georgian, including *-gan,* have become cases, on the grounds that the case markers which each one formerly governed have disappeared. For example, Old Georgian (from the fifth century) has *c'q'al-sa šina* [water-DAT in] 'in the water'; loss of *a* from *-sa* juxtaposed *s* with *š*, and the former was lost in this phonological environment, giving modern *c'q'al ši* 'in the water', with *šina* also simplified to *ši*. Šanidze's argument is not one that most American linguists would accept, and Čikobava (1961) and Uturgaidze (1979) have both argued against Šanidze's analysis.

for all other cases.

(21a) *da da ʒma-m gaak'etes
sister.NOM and brother-NAR they.do.it
'The sister and brother did it.'

(21b) *da-m da ʒma gaak'etes
sister-NAR and brother-NOM they.do.it
'The sister and brother did it.'

(21c) da-m da ʒma-m gaak'etes
sister-NAR and brother-NAR they.do.it
'The sister and brother did it.'

(22a) *dišvil da ʒmišvil-i movlen
sister's.child and brother's.child-NOM they.come
'The sister's child and the brother's child will come.'

(22b) *dišvil-i da ʒmišvil movlen
sister's.child-NOM and brother's.child they.come
'The sister's child and the brother's child will come.'

(22c) dišvil-i da ʒmišvil-i movlen
sister's.child-NOM and brother's.child-NOM they.come
'The sister's child and the brother's child will come.'

In (21), the stems of the conjoined nouns both end in *a*; in all vowel-final stems the uninflected form serves as the nominative case, and no suffix is used. Only (21c), in which both nouns are explicitly marked with the narrative case, is grammatical. (In (22) the first noun is a compound meaning 'the child of a sister (i.e. niece or nephew)', and the second is a compound meaning 'the child of a brother (i.e. niece or nephew)'.) The point of the example is that in consonant-final stems, too, each of two or more conjoined nouns must be explicitly declined.

In a postpositional phrase with conjoined nominals, the adposition occurs only once, as in other languages. Conjoined postpositional phrases are, of course, also possible; since they are not relevant, they are not illustrated here.

(23) gamq'reliʒ-isa da mač'avarian-is mier[11]
Gamq'reliʒe-GEN and Mač'avariani-GEN by
'by Gamq'reliʒe and Mač'avariani'

A phrase with *gan* 'from' behaves like other adpositional phrases in that with conjoined nominals only one *gan* is needed, as shown in (24), while cases must occur with each conjoined NP, as shown in (21-22).

(24) d-isa da ʒm-isa gan miviɣe
sister-GEN and brother-GEN from I.receive.it
'I received it from [my] sister and brother.'

Thus, *gan* 'from' is an adposition in Modern Georgian, and it combines with NPs to form postpositional phrases. It is not a case marker.

I turn now to the origin of the construction, as this sheds light on its structure. I return below to the structure and status of *megobar-ta-gan-i* 'of the friends', considering it in greater breadth and depth.

4. Origins: *Suffixaufnahme*

Old Georgian, which is attested continuously since the fifth century CE, had multiple case-number marking, also known as *Suffixaufnahme*. In this construction, the head noun bears the case appropriate to the NP as a whole, often called the external case. Attributives within the same NP bear the case required by their functions within the NP, also called the internal case; attributives may also bear the marker of the external case. Boeder (1995) has given a very complete description of this phenomenon in Old Georgian, and I draw here on that work.[12] Examples of multiple case-number marking in Old Georgian are given in (25) and (26). In Old Georgian, numbers and demonstratives precede heads, and other modifiers ordinarily follow them.

(25) saxl-sa iak'ob-is-sa
house-DAT Jacob-GEN-DAT
'(to) the house of Jacob' [cited by Šaniʒe 1976:50]

[11] When NPs in the genitive, dative, or instrumental are conjoined, as in this example, it is required that the penultimate conjunct occur in the long form of the case. Short and long forms are illustrated in (i).

(i)	**Case**	**Short form**	**Long form**	
	Genitive	d-is	d-isa	'sister'
	Dative	da-s	da-sa	
	Instrumental	d-it	d-ita	

[12] This does not, however, mean that I agree with the NP structure he proposes for Old Georgian.

(26) opl-ita p'ir-isa šen-isa-yta
sweat-INST face-GEN you.SG-GEN-INST
'by the sweat of your brow' [Boln. 61, 1, kv., cited by K'alaʒe 1961:112]

In the context of the sentence in which (25) is found, the whole NP illustrated here is in the dative; this is marked with the suffix *-sa* both on the head noun, *saxl-* 'house', and on the attributive, *iak'ob-is-* 'Jacob's'. The genitive internal case on *iak'ob-* 'Jacob' marks its possession of the head noun. In (26), the notion 'by' is expressed by the instrumental case, located on the head noun *opl-* 'sweat' and on the last word of the modifying phrase *p'ir-isa šen-isa-* 'of your brow'. The head of the latter phrase, *p'ir-* 'face, brow' is in the genitive, as required by its context, and this case is repeated as the external case on the possessive pronoun *šen-* 'your.SG'. (Possession of *p'ir-* 'face, brow' by the pronoun *šen-* is not indicated by a case suffix, but is intrinsic in the base.[13]) The examples in (27-29) show that postpositional phrases within the NP, like other attributives, bear the external case (see also Boeder 1995:161-163). Postpositions are underlined.

(27) morc'mune-ta mat misa mimart-ta
believer-PL.NAR the.OBL him.GEN toward-PL.NAR[14]
'the believers in (*lit*. toward) him' [John 7:39]

(28) makus me nič'-i krist'e-is mier-i
I.have.it I.DAT talent-NOM Christ-GEN through-NOM
'I have talent through Christ' [Habo, cited by Šaniʒe 1976:51]

(29) q'ur-i ɣviʒl-isa codv-isa ʒlit-isa-y
caul-NOM$_i$ liver-GEN$_j$ sin-GEN for-GEN$_j$-NOM$_i$
'the caul of the liver of the sin offering' [Leviticus 9:10 G, Abulaʒe 1973:526b]

In (27) the external case marker is *-ta*, which occurs both on the head noun, *morc'mune-* 'believer', and on the postpositional phrase, *misa mimart* 'in (lit. toward) him'. In (28), too, the postpositional phrase, *krist'e-is mier-* 'through Christ', shares the case marker of the entire NP, *-i* NOM. In (29), the adpositional phrase, *codv-isa ʒlit* 'for sin', agrees both with the head of that possessor, *ɣviʒl-* 'liver', and with its head, *q'ur-* 'caul'. I have indexed these to make interpretation easier.

Thus, *Suffixaufnahme* leads to two or more case markers occurring on a single word (see articles in Plank 1995 on the same phenomenon in other languages). In Old Georgian, *Suffixaufnahme* could apply to any attributive in an NP, including a postpositional phrase.

[13] This can be seen clearly in possessed forms where the head bears a case other than genitive; the following examples are from Imnaišvili (1957:517): *sarc'munoeba-man šen-man* 'faith-NAR your-NAR' (Matthew 9:22), *agarak'-sa šen-sa* 'field-DAT your-DAT' (Matthew 13:27 Ad), *tual-it šen-it* 'eye-INST your-INST' (Matthew 7:4 Ad), etc.

[14] See Imnaišvili (1957:341) on the issue of *mimart* 'toward' governing the genitive case.

Suffixaufnahme existed in Old Georgian but is not found in Modern Georgian; the examples of (25-29) are impossible in the modern language.

5. Origins: Double Case through Ellipsis

In this section I describe a structure which appears to be related both to *Suffixaufnahme* and to example (1). Boeder (1995:186-192) describes instances of double case marking (two case markers on a single word) that are due to ellipsis, rather than to *Suffixaufnahme*; these occur in Old Georgian and in Modern Georgian (see also Moravscik 1995, Šaniʒe 1973). Boeder notes that in the modern language this construction is freely used both in the literary language and in conversation.

(30) illustrates double case marking through ellipsis in Old Georgian, and (31) in Modern Georgian.

(30) mašin huriast'an-isa-ni ivlt'oded mta-d
then Judaea-GEN-PL.NOM they.flee mountain-ADV
'Then let [those] in (lit. of) Judea flee into the mountains.'
[Matthew 24: 16C, Boeder 1995:186]

(31) visi šal-it moxvedi? — bebia-s-it
whose shawl-INST you.come grandmother-GEN-INST
'With whose shawl have you come? — With Grandmother's.'
[K'axaʒe 1969:19, Boeder 1995:188]

The double case on *huriast'an-isa-ni* '[those] of Judea' is logically related to the hypothetical structures in (32), and that on *bebia-s-it* 'with Grandmother's' to those in (33).

(32a) igini huris'tan-isa-ni
those.PL.NOM Judea-GEN-PL.NOM
'those of Judea'

(32b) X-ni huriast'an-isa-ni

(33a) bebia-s šal-it
grandmother-GEN shawl-INST
'with Grandmother's shawl'

(33b) bebia-s X-it
grandmother-GEN X-INST
'with Grandmother's X'

In Georgian, in structures of the kind in (32b) and (33b), the case marker of the elided head attaches to the modifier that remains.

We do not have direct knowledge of the location of the logical head in (32b) and (33b), but the hypothetical structures provided are consistent with the unmarked word order of each

language. In particular, in Old Georgian, numbers and demonstratives ordinarily preceded the head, and all other modifiers — adjectives, articles, adpositional phrases — ordinarily followed the head. In Modern Georgian, on the other hand, all modifiers within the NP ordinarily precede the head, except the postpositional phrase, which usually follows it (Harris 2000b).

I hypothesize that double case with ellipsis developed out of true *Suffixaufnahme* in examples similar to (30). In structures such as (32), the case marker was copied onto the final constituent of the NP in the usual way of *Suffixaufnahme* examples such as (25-29).[15]

Postpositional phrases in *gan* 'from' and *tan* 'with' often occur in Old Georgian with an elided head and bearing multiple case-number marking.

(34) ert-man Iesu-ys tana-man
one-NAR Jesus-GEN with-NAR
'one [person who was] with Jesus' [Matthew 26:51 E, cited by Boeder 1995:161]

(35) ert-i morec'e-ta šen-ta gan-i
one-NOM$_i$ hired.servant-PL.GEN$_j$ you.SG-PL.GEN$_i$ from-NOM$_i$
'one of thy hired servants' [Luke 15:19 C, Abulaʒe 1973:483a]

(36) ara xart cxovar-ta čem-ta gan-ni
NEG you.PL.are sheep-PL.GEN my-PL.GEN from-PL.NOM
'Ye are not of my sheep.' [John 10:26 C, cited by Abulaʒe 1973:512a]

In (36) the NP (*cxovar-ta čem-ta gan-ni* 'of my sheep') lacks an overt head; *cxovar-ni* 'sheep-PL.NOM' is understood as the head of the phrase, and the case-number marker of this head — and indeed of the NP as a whole— occurs on the adpositional phrase. Boeder (1995:162) makes the point that (34) also lacks a head; *ert-man* 'one-ERG' is not its true head, but rather an understood *k'ac-man* 'man-ERG'. The same is true of (35), where the understood head is *morec'e-y* 'servant-NOM'. The lack of a head is not very common with other postpositions, as illustrated by (27-29), which have true, overt heads. However, lack of a head is very common indeed with *gan* and *tan*; examples that contain an overt head, as (37) does, are rare.[16]

[15] This is not intended as a claim that copying was actually the mechanism used for this assignment of case marking.

[16] An anonymous reviewer asked for statistics to back up this statement; to the best of my knowledge such statistics do not exist, and I believe that Boeder (1995, *loc cit*) was the first to observe that the head is absent here. However, the request misses the point that my own observation (that there is a difference in this respect between *gan* 'from' and *tan* 'with' on the one hand and other postpositions on the other) is in no sense crucial to the hypothesis that the construction in (1) originated in multiple case-marking. Janda (1996) has shown that in some instances very restricted forms are reanalyzed and generalized diachronically; the frequency with which *gan* lacks a head is not a precondition to the reanalysis of this construction.

(37) toma, ert-i igi atormet'-ta gan-i,
Thomas, one-NOM that.NOM twelve-PL.GEN from-NOM

ara iq'o mat tana
NEG he.is them.OBL with
'Thomas, one of the twelve, was not with them.'

[John 20:24 Ad, cited by Šaniʒe 1976:51]

I assume that (35) had a structure like that in (38a), while (37) was structured as indicated in (38b).

(38a) [ert-i X [morec'e-ta šen-ta gan]$_{PP}$ -i]$_{NP}$
one hired.servant your from

(38b) [ert-i igi [atormet'-ta gan]$_{PP}$ -i]$_{NP}$
one that.NOM twelve from

In (38a), X represents a variable; in this example it is satisfied by *morec'ey* 'hired servant -NOM', but in other instances it may be satisfied by a neutral noun, such as *k'ac-* 'man', as discussed above.

I suggest that the word illustrated in (1) and other words in *-gan-i* (or bearing some other final case form) originated in the multiple case-number marking of Old Georgian, illustrated in (25-37). According to this hypothesis, the phrase with *gan* 'from' was a postpositional phrase inside an NP, as shown in the structures in (38); and, like other postpositional phrases inside NPs, and indeed like other adnominal modifiers in Old Georgian, it received multiple case-marking in the usual way (see Boeder 1995). In addition, phrases with the postpositions *gan* 'from' and *tan* 'with' usually had elliptical heads, represented structurally in (38a) and illustrated in (34), (35), and (36). The postpositional phrase with *gan* 'from', together with a final case marker, was reanalyzed as an independent word.[17] This does not mean that **phrases** in *gan* (such as that illustrated in (2)) ceased to occur, but rather that now there are words that parallel the phrasal structure.

It is possible that this reanalysis occurred in or before Old Georgian. In particular, examples such as (39) suggest that constructions of this sort in Old Georgian had already been reanalyzed as words.

(39) er-isa-gan-ta mat mtavr-isa-ta c'ariq'vanes iesu
people-GEN-from-PL.NAR the.OBL governor-GEN-PL.NAR they.take.him Jesus.NOM
'Some of the soldiers of the governor took Jesus.' [Matthew 27:27AB]

In (39), *er-* means 'people', not 'soldier'; but there is an expression, *er-is k'ac-i* , literally 'people's man', that means 'soldier'. It is used, for example, in one case form or another, as two words or as a compound, in Matthew 8:9 AdAB, Luke 7:8 AdAB, and John 19:23 Ad; an elliptical expression like that in (39), in one case or another, is used, for example, three times in

[17] It is possible that this process also applied to postpositional phrases in *tana* 'with'; see Šaniʒe (1973).

John 19:23 AB and in Acts 10:7. The word *er-isa-gan-* 'soldier' is possible only by ellipsis of *k'ac-ta* 'man-PL.GEN' from the complete expression. The evidence that *er-isa-[kac-ta-]gan-ta* 'soldiers' is a word in (39) is the fact that it is the overt head of the NP; it bears the case-number marker *-ta*, which is found also on the adnominal modifier *mtavr-isa-**ta*** 'of the governor'. Thus the phrase *er-isa-gan-ta mat mtavr-isa-ta* 'the soldiers of the governor' has the structure illustrated by (25). The alternative analysis is that *er-isa-gan-ta* 'soldiers' is a postpositional phrase here, but I know of no instances in which a postpositional phrase is the head of an NP. A second piece of evidence that *er-isa-gan-ta* 'soldiers' is a word, not a phrase, is that it has a definite article, *mat* 'the', which also agrees with it in case and number. In spite of the evidence from this example, we cannot be certain that the reanalysis of the postpositional phrase had taken place by Old Georgian times.

Thus, I have hypothesized that Modern Georgian words in *-gan-i* originated in the multiple case-marking constructions of Old Georgian. I have suggested that these may have been reanalyzed as words already in Old Georgian. In §7 I discuss their reanalysis in greater detail.

6. Modern Georgian Case Markers are Not Clitics

Structures of the sort in (33b) above suggest the possibility that case markers in Georgian might be clitics, rather than affixes. This approach might provide a way of saving the "No phrase" constraint.

Hypothesis 3: Case markers in Georgian are clitics.

In this section I argue that Hypothesis 3 is false, at least for Modern Georgian.

6.1. Old Georgian

The facts of *Suffixaufnahme*, described in §4, may suggest that case markers are indeed clitics in Old Georgian. Most noteworthy in this regard is the fact that Old Georgian case markers attach not only to the substantive categories to which cases attach in other languages — nouns, adjectives, pronouns, articles — but also to adpositional phrases, as shown in §4. With regard to the modern language, however, it is important that *Suffixaufnahme* no longer exists. In particular, case markers attach only to adjectives, pronouns, and nouns in Modern Georgian. They do not attach to postpositional phrases inside the NP, as shown below. (40-41) illustrate the fact that postpositional phrases inside an NP generally follow the head noun, and in the modern language postpositional phrases never agree with heads. Postpositions are underlined in the examples.

(40) masal-eb-i lazur-i zep'irsit'q'viereb-isa tvis
material-PL-NOM laz-GEN oral.literature-GEN for
'Materials on (lit. for) Laz traditional oral literature' [title, K'art'ozia 1968]

(41a) is saxl-i am šenob-is uk'an mxat'vr-eb-is at'elie-a
that house-NOM this building-GEN behind painter-PL-GEN studio.NOM-it.is
'That house behind this building is a painters' studio.'

(41b)	*is	saxl-i	am	šenob-is	uk'an-i	mxat'vr-eb-is	at'elie-a
	that	house-NOM	this	building-GEN	behind-NOM	painter-PL-GEN	studio.NOM-it.is

The structures of (40) and (41) are shown in (42) and (43), respectively.

(42) [masalebi [lazuri zep'irsit'q'vierebisa tvis]$_{PP}$]$_{NP}$
(43) [is saxli [am šenobis uk'an]$_{PP}$]$_{NP}$

These examples show that adpositional phrases do not agree with their heads in Modern Georgian, and they illustrate the fact that most postpositional phrases normally follow their heads in the modern language, as in Old Georgian. (44) shows, however, that a postpositional phrase can precede a head noun under certain circumstances.

(44)	nazmnar-i	saxel-is	mier	saxel-is	martva	brunva	ši
	deverbal	noun-GEN	by	noun-GEN	government.NOM	case	in

udur	ena	ši
Udi.DAT	language.DAT	in

'Government of a noun in a case by a deverbal noun in the Udi language'
[title, Pančvižе 1960]

In both positions postpositional phrases inside NPs lack the case marking that characterizes *Suffixaufnahme* of Old Georgian, as illustrated in (27-29). This means that there is little obvious reason to suppose that case markers are clitics in the modern language.

6.2. Conjoining

When nouns bearing two cases through ellipsis, as described in §5, are conjoined, grammatical norms permit the first noun to bear only the first case.

(45)	mam-is	surat-s	xat'avs?
	father-GEN	picture-DAT	he.paint.it

'Is he painting father's picture?'

(45a)	ara,	d-is	da	ʒm-isa-s
	no	sister-GEN	and	brother-GEN-DAT

'No (the) sister's and brother's.' [Tschenkéli 1958:57]

(45b)	ara,	d-isa-s	da	ʒm-isa-s
	no	sister-GEN-DAT	and	brother-GEN-DAT

'No (the) sister's and brother's.'

Example (45), with answer (45a) is from Tschenkéli (1958) and reflects normative grammar. A linguist consulted as an informant considered (45b) grammatical also, but other consultants

found (45a) ungrammatical and accepted only (45b). These facts suggest that while normative grammar may give the impression that in some instances a second case may be omitted in the first of two conjoined constituents, for many speakers this is not true.[18] These facts show that for at least some speakers case markers are obligatory, even when they are stacked. Inability to omit markers in such circumstances is characteristic of affixes, not clitics. One might compare, for example, the English genitive -'*s*, widely considered a clitic. We find, by contrast, the following patterns.

(46a) John and Mary's garden
(46b) ?John's and Mary's garden (cf. John's and Mary's gardens)

This clitic case marker of English need not occur on both conjuncts, as shown by (46a). This suggests that case markers in Modern Georgian are not clitics, at least for many speakers. We may reasonably assume that my normative consultant is reflecting the situation of the older language, where the properties of case markers were somewhat different.

6.3. General Tests for Clitics

Characteristics of affixes and clitics discussed by Zwicky and Pullum (1983) are widely accepted as diagnostics, and these form the basis for the discussion in this subsection:

> A. Clitics can exhibit a low degree of selection with respect to their hosts, while affixes exhibit a high degree of selection with respect to their stems.
> B. Arbitrary gaps in the set of combinations are more characteristic of affixed words than of clitic groups.
> C. Morphophonological idiosyncrasies are more characteristic of affixed words than of clitic groups.
> D. Semantic idiosyncrasies are more characteristic of affixed words than of clitic groups.
> E. Syntactic rules can affect affixed words, but cannot affect clitic groups.
> F. Clitics can attach to material already containing clitics, but affixes cannot.
> (Zwicky and Pullum 1983:503-504)

Criterion A is discussed above in §6.1; it is noteworthy that case markers of Modern Georgian occur just with nouns, adjectives, and pronouns — the same categories with which they occur in many other languages, where the case markers are considered affixes.

Morphophonological idiosyncrasies (Criterion C) are found in the combination of case markers with pronominal bases. For example, the Modern Georgian forms of the case markers are compared with the forms of selected pronouns in Table 1.

[18] The same speakers do permit *gan* 'from' to be omitted from the first of two conjoined constituents in (24).

	Case markers	Proximate 3rd singular, 'he, she, it'	Distal 3rd singular, 'he, she, it'	Remote 3rd singular, 'he, she, it'	Question word, 'who?'
Nominative	-i/ø	es	eg	is, igi	vin
Narrative	-m(a)	aman	magan	man, iman	vin
Dative	-s	amas	magas	imas	vis
Genitive	-is	amis	magis	imis	vis
Instrumental	-it	amit	magit	imit	---

Table 1. Comparison of the form of case markers (as they appear on nouns) with the forms of selected pronouns in Modern Georgian (omitting the long forms of cases).

The nominative is *-i* after consonants and zero after vowels; the narrative is *-ma* after consonants and *-m* after vowels. Long forms of the dative, genitive, and instrumental are omitted here. It is common for pronouns in other languages also to show irregularities such as these in their case forms, and that is exactly the point; in languages where case markers are affixes, there are irregularities. If the Georgian case markers were clitics, we might expect uniformity of the base, such as **es-i* or **am-i* for the nominative of the proximate pronoun, **am-ma* for its narrative case, and **am-s* for its dative. Thus, this criterion suggests that case markers are affixes in Modern Georgian.

Note that the lack of an instrumental form of the question word *vin* 'who' is an example of an arbitrary gap in the set of expected combinations.[19] According to Criterion B, this is more characteristic of affixes than of clitics.

According to Criterion E, clitic groups are not likely to be affected by syntactic rules. In Georgian, questioned constituents are moved to immediately preverbal position, as illustrated by (47) (see also Harris 1981:16).

(47a) bavšv-ma c'ign-i c'aik'itxa
child-NAR book-NOM he.read.it
'The child read a book.'

(47b) c'ign-i romel-ma bavšv-ma c'aik'itxa?
book-NOM which-NAR child-NAR he.read.it
'Which child read a book?'

[19] See Šanidze (1973:103) regarding the absence of this form, and pages 100-104 for additional examples. One might assume that the lack of this form is explained by the relative infrequency of animates with the instrumental case in general, but this would leave unexplained the existence of forms such as *čem-it* 'me-INST', *šen-it* 'you-INST', *čven-it* 'we-INST', *tkven-it* 'you.PL-INST'. If the instrumental of *vin* 'who' existed, there would be several uses for it, including the following: **vit urt* [who.INST with] 'with whom?', ** vit tav-it* [who.INST self-INST] 'by whose self?', **vit aris k'maq'opili* 'with whom is he satisfied?'. These do not occur because the form does not occur, unlike the instrumental form of other animate pronouns and of animate common and proper names (cf. Tschenkéli 1958:143, 8, 44-47, respectively).

As shown by (47b), the syntactic rule affects the base together with its case marker, making it unlikely that the latter is a clitic.

According to Criterion F, clitics may occur "outside" affixes, but affixes may not occur outside clitics. In §2.2, I showed that the clitic *=ve* 'very' and the postposition *gan* 'from' (also a clitic), may occur in either order: *am megobr-isa=ve gan* or *am megobr-isa gan=ve* 'from this very friend' (see (19)). But it is entirely impossible for the case marker, here *-isa* GEN, to occur outside either clitic, as shown in (48-50).

(48a) *am megob(a)r=ve=isa gan
this.OBL friend=EMPH-GEN from
'from this very friend'
(48b) *am megob(a)r=gan=isa=ve
(48c) *am megob(a)r=gan=ve=isa
(48d) *am megob(a)r=ve=gan=isa

(49a) am megobr-isa gan
this.OBL friend-GEN from
'from this friend'
(49b) *am megob(a)r=gan=isa

(50a) am megobr-isa=ve
this.OBL friend-GEN=EMPH
'of this very friend'
(50b) *am megob(a)r=ve=isa

The examples in (48), which contrast with those in (19), show that the case marker cannot occur outside either or both clitics when both are present. The examples in (49) and (50) are similar, but these each involve only one of the clitics; here too the (b) examples show that the case markers cannot occur outside a clitic. Like the evidence considered above, this suggests that the case markers are affixes, not clitics.

I have omitted Criterion D up to now. I know of no semantic idiosyncracies in the combinations of bases and case markers; their meanings/functions seem to be predictable from the meanings/functions of their parts (compositionality). According to Criterion D, this suggests that the case markers are clitics, rather than affixes. But as far as I am aware, simple case forms in other languages, where the case markers are considered affixes, are also characterized by compositionality. I therefore doubt the relevance of this criterion when applied to case markers.

The results of these tests are summarized in Table 2.

Criterion	**Results regarding status of case markers**
A (degree of selection)	affixes
B (gaps in the set of combinations)	affixes
C (morphophonological idiosyncrasies)	affixes
D (semantic idiosyncrasies)	not relevant
E (effect of syntactic rules)	affixes
F (order of clitics and affixes)	affixes

Table 2. Summary of the Results of the Application of Criteria A-F to Modern Georgian Case Markers.

I conclude that case markers in Modern Georgian are affixes and that the final case markers in forms such as *megobar-ta-gan-i* 'of the friends' (and other case forms in (5)) are likewise affixes.

7. Reanalysis

If structures such as (1) derive from the multiple case marking of Old Georgian, as proposed here, it may be that the structure of (38a) has been reanalyzed. At issue are the questions of (i) whether these are fossilized lexical items inherited from Old Georgian or a productive pattern, (ii) the presence and location of the variable, X, and (iii) the synchronic function of *gan* 'from' and the associated label of the constituent *megobar-ta-gan-*. In §7.1 I discuss the productivity of the word formation. In §7.2 I describe the structure of the phrase containing the word *megobar-ta-gan-i* 'of the friends', including the position of the variable X (as identified in the source constructions, see (32) and (38)), and the function of the morpheme *gan*.

7.1 *Megobar-ta-gan-i* is Productive Word Formation

Although the pattern on which words such as *megobar-ta-gan-i* 'of the friends' is based is certainly ancient, as argued above, the individual words are not fossils formed at an earlier stage and inherited by the modern language. This is shown by the fact that words that did not exist at earlier stages can serve as the base for words of this type. It is most likely that the base of example (4) is a recent borrowing, not present at an earlier stage, since it bears the later meaning 'factor, a circumstance or condition bearing on a result', not the earlier meaning 'doer'. Perhaps clearer examples, however, are *k'omp'iut'er-ta-gan-i* 'of (the) computers' and *i-mail-ta-gan-i* 'of (the) e-mails'. Because the bases of these words are recent borrowings, the examples show that words in *-ta-gan-i* are not ancient frozen forms. In Modern Georgian the construction in *-ta-gan-i* is entirely productive, in the sense of Bauer (2001).

7.2. The Reanalyzed Structure

(51) shows the most likely locations of the variable (with the assumption that *gan* 'from' was not reanalyzed).

(51a)	[	ert-i	X	[[	megobar-ta	-gan]$_{PP}$	-i]$_{N}$	]$_{NP}$
		one-NOM	X		friend-PL.GEN	-from	-NOM	
(51b)	[	ert-i	[X	[	megobar-ta	-gan]$_{PP}$	-i]$_{N}$	]$_{NP}$
		one-NOM	X		friend-PL.GEN	-from	-NOM	
(51c)	[	ert-i		[[	megobar-ta	-gan]$_{PP}$	X-i]$_{N}$	]$_{NP}$
		one-NOM			friend-PL.GEN	-from	X-NOM	

(51a) reflects the likely position of the variable in Old Georgian, where most constituents, including postpositional phrases, follow the head (cf. 38a,b). With the change in word order in Modern Georgian (see Harris 2000b), (51b) represents a likely structure, given that postpositional phrases still generally follow the head (cf. §6.1 above). (51c) represents a likely location in the modern language, when viewed from the point of view of the elliptical element in (33a,b). I know of no evidence that sheds light directly on the differences among the structures

in (51) and would enable us to choose between them.

(52) shows the most likely structural labels relating to the function of *gan*. (52) represents no commitment to a particular position of the variable and uses the unreanalyzed position simply as an example.

(52a)	[ert-i	X	[[megobar-ta	-gan]$_{PP}$	-i]$_{N}$	]$_{NP}$	= (50a)
	one-NOM	X	friend-PL.GEN	-from	-NOM		
(52b)	[ert-i	X	[megobar-ta	-gan	-i]$_{N}$	]$_{NP}$	
	one-NOM	X	friend-PL.GEN	-DERIV	-NOM		

I have argued in previous sections that *megobar-ta-gan-i* 'of the friends' is not a phrase, that *-i* and other case markers are not clitics, and that *-gan* is not a case marker. If any one of these were true, it would preserve the "No Phrase" constraint. The hypothesis embodied by (52b) (or any variant of it, with the variable in a different location) may be seen as a final attempt to save this constraint.

Hypothesis 4: *gan* has been reanalyzed as a derivational morpheme in Modern Georgian.

There is no specific evidence in the language to support Hypothesis 4. For example, if *gan* 'from' had been reanalyzed (in this pattern only) as derivational morphology, we might expect some change in the form of the morpheme, but there has been none.

Booij (1998) provides an up-to-date discussion of distinctions between derivational and inflectional morphology. In this instance, however, our problem is not to determine whether *gan* is inflectional or derivational, but whether it remains a postposition or has been reanalyzed as derivational morphology. For this reason, most of his criteria are inapplicable, and I mention here only those that are relevant.[20] (i) *Gan* does not change word class, as many derivational morphemes do. While changing category is not a characteristic required of derivational morphology, this criterion does fail to provide positive evidence that *gan* is derivational in Modern Georgian. (ii) As noted in §6.1, *gan*, unlike most derivational morphology, is completely productive, though it is restricted to count nouns (see §2.3).

(iii) A third relevant criterion is that inflectional morphology is typically outside derivational morphology, rather than inside it. In our example, *gan* is followed by inflectional morphology, a case marker such as *-i* of the nominative, and is preceded by inflectional morphology, *-ta*. The morpheme *-ta*, while it is archaic or formal in most environments in the modern language, is sufficiently regular and frequent for a child to acquire it as inflectional morphology. For example, any speaker is capable of understanding and forming expressions such as those in (12-14).

Thus, there is some evidence against Hypothesis 4, namely (i-iii). The only actual argument in favor of Hypothesis 4 is the fact that it would constitute a counterexample to the "No Phrase" constraint if *gan* were a postposition in (52). But this is a dangerous approach, since it implies that it is impossible, in principle, to find a counterexample to the "No phrase" constraint. If we simply assume that any morpheme that would otherwise provide evidence

[20] I have omitted the characteristics of obligatoriness, occurrence in paradigms, and syntactic relevance, because these relate to inflectional morphology, not to either derivational morphology or postpositions. I have omitted psycholinguistic differences, because I have no data on this. I have omitted recursivity because recursivity of derivational morphology is so rare that its lack does not constitute an argument that *gan* is **not** derivational.

against the "No Phrase" constraint must instead be derivational morphology, in spite of evidence to the contrary, then the "No Phrase" constraint is true only by definition, not because it expresses a genuine universal.

8. Conclusion

My goal was to show the origins of this apparent violation of the "No phrase" constraint, and I have shown that *megobar-ta-gan-i* 'of (the) friends' and similar expressions are words derived from phrases synchronically. They originate in the multiple case-number marking constructions of Old Georgian, where postpositional phrases inside NPs, together with other adnominal modifiers, bore the case of the head of the NP of which they were constituents. The specific predecessor of the *megobar-ta-gan-i* construction included a variable as its unexpressed head. This construction may have been reanalyzed, such that *gan* — in this construction alone — has become derivational morphology, but there is little evidence bearing directly on this aspect of its structure.

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