

The distribution of case
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1. Introduction

Case markers will be defined as follows:

- (1) A case marker is a formal device associated with a noun phrase that signals the grammatical role of that noun phrase.

Let us clarify the terms used in this definition. "Formal device" includes any form of expression that case markers take across languages: segmental morphemes (affixes, clitics, stem modification, suppletion), suprasegmentals (stress, pitch), and linear order patterns. The term "noun phrase" refers both to constituents overtly labeled as such in constituency grammars and to unlabeled units consisting of noun heads and their dependents in dependency grammars. "Grammatical role" refers to both semantic functions, such as Agent and Theme, and their morphosyntactic reflections, such as subject and direct object. Grammatical roles may be more broadly classed as complement, adjunct, modifier, and determiner.

The aspect of case marking that forms the topic of this article is its distribution. "Distribution" refers to the conditions under which something occurs. We will focus on the syntagmatic distribution of case markers within individual languages. Most of the discussion will pertain to segmental case markers.

The distribution of an element within a linguistic structure consists of two components: conditions for occurrence and conditions for linear ordering. As an initial working assumption, we will hypothesize that the distribution of case markers is simple. If so, certain predictions follow.

SELECTION

- (a) **All** case markers are associated with noun phrases that have grammatical roles.
- (b) Case markers are associated with **all** those noun phrases

that have grammatical roles.

- (c) Every noun phrase carries a **single** case marker for each of its grammatical roles.
- (d) Noun phrases with **different** grammatical roles have **different** case markers; noun phrases of the **same** grammatical role have the **same** case markers.

The statements in (a) and (b) specify an exclusive selectional relationship between noun phrases with grammatical roles and case markers. Each is an empirical hypothesis: it may turn out to be true or false. The statement in (a) may seem logically implied by the definition of case markers given in (1) but this is not so. Given the definition, an element that marks only constituents other than noun phrases with grammatical roles would not qualify as a case marker, but the definition does allow for the possibility that a bona fide case marker's distribution is extended to constituents of other types. The statement in (b) is also open to disconfirmation: the definition in (1) allows for the existence of noun phrases with grammatical roles that are not case-marked.

The statements in (c)-(d) define simple biunique relations between grammatical role and case marker. (c) has to do with quantitative relations: one grammatical role, one case marker. Like those in (a) through (b), this pattern is not dictated by the definition of case markers in (1): noun phrases having more than one marker for a grammatical role would be consistent with the definition. The statement in (d) has to do with qualitative relations: same grammatical role, same case marker, and distinct grammatical roles, distinct case markers. Once again, departures from this stipulation - synonymous and homonymous case markers - are consistent with the definition in (1).

Let us now turn to linear order: what might simple case-marking patterns of order be like?

LINEAR ORDER

- (e) Every case marker has a **single allowable position** relative to the noun phrase that it is associated with.
- (f) Case markers are **adjacent** to the noun phrases or their components that they are associated with.

Although these are plausible patterns, they, too, may turn out to be false. (e) excludes instances where a given case marker has variable positions. Its plausibility stems from the fact that segmental case markers are either affixes or clitics and bound formatives generally show invariant order. (f) predicts iconic ordering widely documented in all aspects of morphology and syntax across languages: that parts of the sentence that go together stand together.

These considerations show that the six hypotheses above may or may not be borne out by evidence. In sections 2 and 3, we will take up each in turn and present some facts to assess their empirical adequacy. As we will see, none of them hold without qualifications.

2. Selection

- (a) **All** case markers are associated with noun phrases that have grammatical roles.

This statement is generally true: case markers occur on such noun phrases as agents, patients, subjects, objects, other complements, adjuncts, modifiers, and determiners of verbs, adjectives, adpositions, and nouns. (2) provides English examples.

- (2) (a) case-marking of the object of a verb
John has met **him**.
- (b) case-marking of the complement of an adjective
John is jealous **of him**.
- (c) case-marking of the complement of a preposition
I heard this from **him**.
- (d) case-marking of the determiner of a noun
John's father is retired.
- (e) case-marking of the modifier of a noun
The man **from Chicago** is retired.

There are nonetheless occurrences of case markers that deviate from this pattern. (3) offers examples of ungoverned case.

- (3) (a) **To** your health!
- (b) Now, **about** your grade.

- (c) German
Den rot-**en**.
 the:**ACC** red-**ACC**
 'The red one.' (in answer to questions like 'Which one would you like?')
- (d) Latin
 Me: miser-**um**!
 I-**ACC** miserable-**ACC**
 'Oh, unhappy me!'
 (Blake 1994: 9)
- (e) Serbo-Croatian
 Gospodin-**e**!
 gentleman-**VOC**
 'Sir!'
- (f) Latin
Ho:c respons-**o:** dat-**o:** discessit.
 this:**ABL** response-**ABL** given-**ABL** he:departed
 'This answer given, he departed.'
- (g) **With** the problem safely out of the way, we can relax.

In the first three examples, the sentences consist of single noun phrases which therefore do not bear grammatical roles relative to another constituent. Here, case-marking is justified at least semantically since there are understood governors: 'let us drink' (in (3a)), 'let us talk' (in (3b)) and 'want' (in 3c)). The accusative in (3d), the vocative in (3e), the ablative absolute construction in (3f) and the absolute *with*-construction in (g) have no similar semantic justification.

In (3), case occurs on constituents that have no grammatical role; but the constituents are full noun phrases. A different departure from (a) is when constituents are case-marked that are not full noun phrases. An example is predicate complements (Blake 1994: 95-97).

- (4) (a) Latin
 Cicero:n-em **co:nsul-em** crea:ve:runt.
 Cicero-**ACC** **consul-ACC** made:3PL
 'They made Cicero consul.'
 (Blake 1994: 95)

- (b) Hungarian
Peter **beteg-nek** látszik.
Peter **sick-DAT** seems
'Peter seems sick.'

In the Latin example, the predicate complement is a noun in the accusative; in the Hungarian example, it is an adjective in the dative. These predicate complements are not full noun phrases: they are not referential and cannot take determiners.

The distribution of case markers may extend even beyond noun phrases and subparts thereof. The same forms that mark adpositional case on noun phrases may also occur on verbs. Verbal particles and affixes of the sort illustrated in (5) have adverbial, aspectual, or idiosyncratic meanings.

- (5) (a) Come **in!** (compare with Come!)
(b) Drink **up!** (compare with Drink!)

- (6) Serbo-Croatian
(a) **pod** vodom 'under water'
(b) **pod**-uzimati 'to undertake'
under-take

In languages such as German and Hungarian, these markers are under some conditions affixed to the verb and under others, they are separated from it as independent adverbs.

- (b) Case markers are associated with **all** those noun phrases that have grammatical roles.

Three qualifications are called for. First, whether a noun phrase is or is not overtly marked for case may depend on the case involved. Certain cases are particularly prone to being zero-marked. In a study of the distribution of adpositional, affixal, and zero case marking, Lehmann (1985) proposed the following:

- (7) Given the scale of Nominative < Accusative < Genitive < other cases, if a language has zero-marking for a case, it also has zero-marking for all cases to the left.

Second, the occurrence of case-marking may also vary with the type of noun phrase: pronouns are more commonly case-marked than noun-headed phrases (cf. Iggesen 2005 and article #15 in this volume) and infinitival and clausal noun phrases are least likely to bear case-marking.

The third qualification has to do with instances where compliance with (b) would lead to a sequence of more than one case marker on a single nominal. In some instances, spelling out both case markers is grammatical, as in (8).

(8) (a) Quechua (Blake 1994: 104)

Hwan-**pa-a** rikaa.

John-**GEN-ACC** I:see

'I see John's (house).'

(b) Basque (Moravcsik 2003: 453)

gizon-**aren-ari**

man-**GEN-DAT**

'to that of the man'

At first blush, the word *Hwan-pa-a* 'John's' in (8a) is paradoxically marked: it has both a genitive and an accusative suffix. The paradox disappears, however, if we realize that the word stands for two noun phrases with distinct roles. One is 'John', the possessor of 'house', which is understood; the other is 'John's house', which is the direct object of 'see'. The marking of the two grammatical roles results in a sequence of two case markers. The same holds for (8b). (9) provides a similar example from English.

(9) I gave the picture to Anne's brother and the book
to Susan's.

In *to Susan's*, the two noun phrases involved are 'the brother' marked for the dative case and 'Susan', the possessor of 'brother', marked for genitive.

This construction, known as hypostasis - a genitive determiner that lacks its head and is marked both for genitive and for the case assigned to the understood head (cf. Moravcsik 2003: 453-454) - makes perfect syntactic sense: it is in compliance with (b), which requires that all noun phrases with grammatical roles should be marked for their roles.

However, multiple case marking is generally not tolerated as (b) would require it. Consider Russian. (10) illustrates the difference between the accusative and the instrumental case (all examples below are adapted from Babby 1988: 289).

(10) (a) bol's-**ie** butylk-**i**
big-**PL.ACC** bottle-**PL.ACC**

'big bottles (ACC)'

- (b) **s** bol's-**imi** butylk-**ami**
with big-**PL.INSTR** bottle-**PL.INSTR**
'with big bottles'

In Russian, numerals govern case; for example, after numerals 5 and above, the plural genitive is required:

- (11) (a) pjat' bol's-**ix** butylok
five:NOM big-**PL.GEN** bottle:**PL.GEN**
'five big bottles (NOM)'

Now, what happens if a numerated noun phrase is an object or an instrument? If (b) were to hold, both the genitive case required by the numeral and the case required by the verb would have to be marked. This is indeed so if the "external" case is the accusative: the numeral is marked for the accusative and the adjective and noun are in the genitive:

- (12) pjat' bol's-**ix** butylok
five:**ACC** big-**PL.GEN** bottle:**PL.GEN**
'five big bottles (ACC)'

On the analogy of (12), if the external case is the instrumental, we would expect the numeral to be so marked and the adjective and noun in the genitive. But this is not what happens; as shown in (13), not only the numeral but the adjective and noun are also in the instrumental case with the genitive suppressed.

- (13) **s** pjat'-**ju** bols-**imi** butylk-**ami**
with five-**INSTR** big-**PL.INSTR** bottle-**PL.INSTR**
'with five big bottles'

The general pattern is that in instances of case conflict, the genitive assigned by the numeral overrides the accusative but the instrumental overrides the genitive (Babby 1988: 291; for discussion, see also universal #54 in the Konstanz Universals Archive).

Provided the adjective and the noun form a noun phrase, (13) violates (b): the grammatical role of the noun-phrase-complement of the numeral is not marked by the genitive case. If the adjective and noun do not form a full noun phrase, there is no violation of (b); but then (a) is

violated in that a constituent other than a noun phrase is marked for case.

We now turn to the two hypotheses about quantitative and qualitative relations between case marker and noun phrase.

(c) Every noun phrase carries a **single** case marker for each of its grammatical roles.

This is indeed a frequent pattern. The single adposition or case affix may mark the noun phrase as a whole as shown by the preposition in (14a), the postposition in (14b), and the noun-phrase-final affix in (15).

(14) (a) English
with the three young boys

(b) Japanese
Sono wakai otokonoko **ga** furui pan **wo** tabeteiru.
the young boy **NOM** old bread **ACC** eat
'The young boy is eating old bread.'

(15) Basque (Saltarelli et al. 1988: 77, 300)

(a) etxe-**tan**
house-**LOC**
'in house'

(b) etxe zaharr-**etan**
house old-**LOC**
'in old house'

Another pattern is the single case marker associated with a particular constituent of the noun phrase, such as the noun or the demonstrative (Blake 1994: 99-106).

Alternatively, there may be more than one marker for a given case within the noun phrase. This departure from the one noun phrase - one case marker relation stipulated by (c) takes two forms: either more than one constituent of the noun phrase is marked by case; or the case marker is itself compounded, consisting of more than one marker.

First, let us consider extended exponence: instances where more than one constituent of a noun phrase is case-marked for the same grammatical role. Four of the possible configurations of concord are exemplified in (16) (for relevant crosslinguistic generalizations and discussion, see universals ##119 and 120 in the Konstanz Universals Archive).

(16) (a) Hungarian: **DEM** ART ADJ **NOUN**

ez-**t** a magas ember-**t**
this-**ACC** the tall man-**ACC**
'this tall man (ACC)'

(b) Duungidjawan: **NOUN ADJ DEM** (Wurm 1976: 108-109)
d^yan-bam-**ma** bu:gubu-**na** man
men-DUAL-**ACC** short-**ACC** this
'these two short men'

(c) German: **DEM ADJ NOUN**
diese-**n** hoche-**n** Mann
this-**ACC** tall-**ACC** man
'this tall man (ACC)'

(c) Latin: **DEM NOUN ADJ**
hunc vir-**um** magn-**um**
this.**ACC** man-**ACC** tall-**ACC**
'this large man (ACC)'

Whether concord does or does not take place depends not only on the particular constituents of the noun phrase but also on their position: the same constituent may or may not agree depending on where it is located. As illustrated in (17), concord is preferred if the constituents are non-adjacent.

(17) Warlpiri (Hale 1973: 314; transcription simplified)

(a) Tjantu wiri-**ngki** tji yalkunu.
dog big-**ERG** me bit
'The big dog bit me.'

(b) Tjantu-**ngku** tju yalkunu wiri-**ngki**.
dog-**ERG** me bit big-**ERG**
'The big dog bit me.'

In addition to the particular noun phrase constituent and its position within the phrase, two other factors play a role in whether concord does or does not take place: the meaning of the case and its form. First, there may be concord for the marking of some cases but not for others. In Estonian, there is concord for the adjective and the noun in the relative case but not in the comitative (Kilby 1981: 115).

Second, affixes and adpositions are not equally prone to concordial case marking. Kilby (1981: 115, 118) observed that, in contrast with affixal case markers, which may show concord, adpositions occur only once per noun phrase. While

this may be the prevailing pattern, there are instances of noun-phrase-internal agreement in adpositions. In Hungarian, the demonstrative optionally repeats the postposition of the entire noun phrase (for more detail, see Moravcsik 2003: 207-209).

(18) (a) ez-**en** a nap-**on** **kívül**
 this-**SUPESS** the day-**SUPESS** **besides**
 'beside this day'

(b) ez-**en** **kívül** a nap-**on** **kívül**
 this-**SUPESS** **besides** the day-**SUPESS** **besides**
 'beside this day'

Concord may result in a special morphological type of construction known as Suffixaufnahme (cf. Plank (ed.) 1995). Suppose there is a noun phrase that consists of a noun head and its possessor noun phrase, such as 'the man's wife'. The noun phrase will have a particular case marker corresponding to its grammatical role in the sentence and 'the man's' will also have a case marker required by its role as a possessor. If there is to be case concord in this noun phrase, 'the man's' will have to have a second case: in addition to the genitive, it will also have the case of the entire noun phrase that it is part of. A pattern of double case results, as in (19).

(19) Kayardild (Evans 1995: 398)
 thabuju-**karra-nguni** mijil-**nguni**
 brother-**GEN-INSTR** net-**INSTR**
 'with brother's net'

This sequence of two case markers on a single constituent is similar to that seen in the Quechua and Basque examples of hypostasis in (8). But there is a difference: in (8), the external case descended on the possessor constituent due to lack of an overt head, while here, it is concord with the overt head's case that causes double case marking.

Suffixaufnahme is syntactically entirely regular and thus one would expect it to be very common across languages. Since it is not common, the question is how languages manage to avoid it. Two obvious resolutions to the case conflict are those already seen in the Russian examples of (12) and (13): either the external case is suspended or the genitive is (cf. Blake 1994: 104-105). The two alternatives are illustrated in (20).

(20) (a) Latin
alb-**am** columb-**am** puell-**ae**
white-**ACC** dove-**ACC** girl-**GEN**
'the girl's white dove'

(b) Armenian (Blake 1994: 105)
bazmnt'eamb zarauk'm Hayoc
mass.**INSTR** troops.**INSTR** Armenian
'with the mass of Armenian troops'

In the Latin example, concord applies to the adjective but bypasses the genitive-marked constituent. In Armenian, it is the genitive that yields: 'troops' is expected to be in the genitive but instead it takes on the external case.

In addition to single-headed, multi-part noun phrases which show concord, another construction type where a noun phrase may be multiply-marked for its grammatical role is coordination. Consider (21).

(21) (a) Students came **from** Germany and Italy.
(b) Students came **from** Germany and **from** Italy.

In coordinate structures, it is the higher noun phrase whose case is governed by the verb or some other governor. Correspondingly, (21a) may be analyzed as the case-marking preposition assigned to this higher noun phrase. In (21b), however, the higher noun phrase's grammatical role is marked on both conjuncts.

As shown in (21), in English, such double case-marking of conjuncts is an option that coexists with single marking. This is often so if the case marker is an adposition. If the case marker is an affix, separate marking of each conjunct is generally required.

(22) Hungarian
(a) két fiú-**t** és két lány-**t**
two boy-**ACC** and two girl-**ACC**
'two boys and two girls(ACC)'

*két fiú és két lány-**t**
two boy and two girl-**ACC**

In the examples discussed so far, the one-to-one relationship between noun phrase and case marker was departed from by **more than one constituent of a noun phrase marked for case**. The Hungarian examples in (18) also illustrate the other departure already mentioned above: **the**

case marker itself consisting of more than one marker. The most common form of this is when an adposition and an affixal case jointly mark a grammatical role with the adposition itself governing an affixal case. The pattern is familiar from German, Russian, Latin; (23) illustrates it from Ancient Greek.

(23) Ancient Greek

(a) **eis** te:-**n** poli-**n**
into the-**ACC** city-**ACC**
'into the city'

(b) **en** te: pol-**ei**
in the-**DAT** city-**DAT**
'in the city'

Alternatively, there may be more than one adposition - as in English **from out of** *two hundred candidates* - or more than one affixe. The affixes may be the same: in Hungarian, the accusative affix may be doubled on some stems, e.g. *ő-t-et* "he/she-**ACC-ACC**" 'him/her'. Or, a case marker may be composed of more than one case marker, as in Avar, where the suffix *q-e* 'to' consists of *q* 'at' and *e* 'toward'. Compound case-markers are frequent in Australian languages (Blake 1994: 154).

(d) Noun phrases with **different** grammatical roles have **different** case markers in and across sentences. Noun phrases of the **same** grammatical role have the **same** case markers in and across sentences.

The first assertion contained in (d), that different grammatical roles are signaled by different case markers, is commonly departed from. Case syncretism violating this pattern is discussed in a article #13 of this volume; cf. also Baerman and Brown 2005.

The second claim of (d): same grammatical role - same case marker - would hold true if the assignment of case markers were dependent only on grammatical role. This, however, is not so for three reason.

First, the form of the case marker frequently depends on the morphosyntactic class membership of the constituent that carries it. Nouns, adjectives, and pronouns may carry different markers for the same case, as in Russian:

(24) Russian

iz bols'-**ovo** gorod-**a**
from large-**GEN** city-**GEN**

'from a/the large city'

Second, case may cumulate with other properties of the noun phrase that is marked for it, such as gender, number, or definiteness. This means that noun phrases with the same grammatical role may carry different case markers if they differ in these other properties. This pattern is well-known from some Germanic, Slavic, and Romance languages, where case cumulates with gender and number. The effect of definiteness on the case marking of direct objects is illustrated in (25): in Turkish, definite or specific objects are overtly marked while others are zero-marked.

(25) Turkish

(a) Kitablar-^o okumadım.
books-**DEF.ACC** I:have:not:read
'I have not read the books.'

(b) Kitablar okumadım.
books:**INDEF.ACC** I:have:not:read
'I had not read books.'

Third, markers of the same case may vary not only with the diverging properties of the case-marked noun phrase but also with the divergent properties of the governing constituent. If the same grammatical role were associated with the same case markers, arguments of finite verbs and arguments of nominalized version of those verbs would be marked the same way. This is not so: at least one of the arguments of a nominalized verb is generally expressed as a genitive.

(26) Lithuanian (Koptjevskaja-Tamm 2003: 733; glossing simplified)

(a) Amerik-**a** buvo atrasta Kolumb-o
America-**NOM** was discovered Columbus-**GEN**
'America was discovered by Columbus,'

(b) Kolumb-o Amerik-**os** atradimas
Columbus-**GEN** America-**GEN** discovery

But even finite verbs may call for different markers on their complements for what seems to be the same case depending on the verb's semantic and syntactic properties. High-level transitivity as defined by Hopper and Thompson favors the accusative marking of objects over oblique marking (Hopper and Thompson (eds) 1982). In some languages

such as Russian and Finnish, the case-marking of objects differs depending on whether the clause is affirmative or negative. Verbs referring to psychological states, verbs of perception, verbs with modal meanings and verbs of possession generally show non-canonical marking of their subjects and objects (Onishi 2001; Aikhenvald, Dixon, and Onishi 2001 (ed.); cf. also universal #123 in the Konstanz Universals Archive). (27) is an illustration contrasting the absolutive complement of the verb 'cut' and the dative complement of the verb 'want' in Samoan.

(27) Samoan

(a) E sogi e le tama **0** le ufi i le to'i.
 PRES cut ERG the boy **ABS** the yam INSTR the knife
 'The boy cuts the yam with the knife.'

(b) E mana'o le tama **i** le teine.
 PRES want the boy **INSTR** the girl
 'The boy wants the girl.'

3. Linear order

(e) Every case marker has a **single allowable position** relative to the noun phrase that it is associated with. Generally, case markers do indeed have unique positions relative to the noun phrase. There are nonetheless three types of departures from this pattern.

First, there may be freely variant order between noun phrase and adposition, such as in English *notwithstanding the weather*, and *the weather notwithstanding*.

Second, there may be free variation in the ordering of affixes as in Zyryan (Comrie 1980: 81-82).

(28) Zyryan

(a) kerka-**nim-lano**
 house-**our-to**
 'to our house'

(b) kerka-**lano-nim**
 house-**to-our**
 'to our house'

Third, the order of case marker and noun phrase may depend on the type of noun phrase. For example, oblique cases follow noun stems in Hungarian but for some pronouns, the cases are stems with pronominal reference affixed (Moravcsik 2003: 225-226).

(29) (a) a kert-**ben**
the garden-**LOC**
'in the garden'

(b) **benn**-em
LOC-1SG
'in me'

(f) Case markers are **adjacent** to the noun phrases or their components that they are associated with.

This statement covers the general pattern of adpositional order: adpositions are generally adjacent to their noun phrases or their components (on inpositions, see Dryer 2005b). English preposition-stranding – as in *Who are you talking **about**?* – departs from this pattern. The construction, which is infrequent across languages, illustrates the less than fully clear-cut difference between case marker and verbal particle.

Furthermore, (f) also predicts the prevalent order of affixal case markers relative to other affixes. As noted by Greenberg (1963, universal #39), there is a crosslinguistic tendency for the number affix to come between the stem and the case affix. Bybee (1985: 33-34) relates this to a general relevance principle according to which affixes whose meaning is more closely relevant to that of the stem are ordered closer to the stem than those whose meaning is less relevant. Putting it differently, linear order reflects semantic scope relations: since case has scope on a noun including its number, it should be ordered more externally. The noun phrase itself has number and it is this numbered constituent that is assigned case.

Nonetheless, (f) is not exceptionless. Of the two alternative orders in Zyryan shown in (29), only (a), where case is outside the possessive marker, conforms to the pattern. Several other such non-iconic affix orders in Uralic languages are discussed in Comrie 1980 and in other languages in Blake 1994: 106.

The adjacency of noun phrase and case marker may be realized with different linear precedence relations, with the case marker immediately preceding or immediately following the noun phrase or its relevant parts. In this regard, there is an asymmetry between adpositions and case affixes. Adpositions are variable in their order: some languages have prepositions, others have postpositions, again others have both. The occurrence of the two orders

correlates with the basic constituent order type of a language (Dryer 2005c).

Affixal case markers, however, show a strong preference for following the constituent they occur on. In his language sample, Dryer has found 431 languages with core-case suffixes as opposed to only 35 with prefixes, such as Takelma (Dryer 2005b).

(30) Takelma
 gwel-danà
 under-rock
 'under the rock'

This fact is a reflection of the general preference for suffixing over prefixing of bound markers in general (Stump 2001, Dryer 2005a).

4. Conclusions

Several of the facts about the distribution of case marking surveyed in this paper have a functional basis. Thus, the overwhelmingly preferred adjacency of case marker and noun phrase, which is a consequence of the more general tendency for semantically coherent constituents to stand next to each other, clearly helps comprehension. The preference for the suffixing of case markers over their prefixing - a reflection of a crosslinguistic preference for suffixes over prefixes regardless of what they express - also aids the decoder. As suggested by Hawkins and Cutler (1984), "speakers and listeners process stems before affixes" (306). If so, receiving stems first facilitates natural processing.

However, how function comes to shape form cannot be understood without reference to the historical processes that provide the mechanisms to mediate between the two. For the explanation of the suffixing preference, Hall proposed that word-initial position resists phonological fusion and thus the prefixation of lexical elements - the ancestors of case markers - to stems, while word-final position favors it (Hall 1984). Additional diachronic factors determining the evolution of case markers and their distribution will be discussed in articles #27-31 of this volume.

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