

## Nominal Aspect

---

J. RIJKHOFF

*University of Amsterdam*

### Abstract

In this article I argue that besides verbal aspect, which concerns the way a property or relation is represented in the temporal dimension, there is also nominal aspect, which relates to the way a property is represented in the spatial dimension. I will contend that certain elements, which are often believed to be number markers, are in fact nominal aspect markers. Evidence to support this will be taken from several genetically unrelated languages. Additionally it is suggested that nominal aspect plays a role in connection with incorporated and predicate nouns.

### INTRODUCTION<sup>1</sup>

In a general way the notion 'aspect' can be defined as the way in which a property or relation is represented in some dimension. Two kinds of aspect can be distinguished: verbal and nominal aspect. The study of verbal aspect has a long tradition, but nominal aspect has only been introduced recently, at least in the sense in which it is used here (Rijkhoff 1989b, 1990a, 1990b).<sup>2</sup> After a brief look at the more familiar verbal aspects, each of the nominal aspects is discussed in some detail. Then the relevance of nominal aspect will be considered in connection with (i) certain 'number markers' (which will be analysed as nominal aspect markers below), (ii) noun-incorporation, and (iii) predicate nouns.

### 1 ASPECT

#### 1.1 *Verbal aspect*

Properties and relations in the temporal dimension, which are designated by verbs (*sit, walk, read, etc.*), can be characterized in terms of the typically temporal features BEGINNING and ENDING. This gives us four ways of representing such properties and relations, i.e. four verbal aspects (Figure 1). Although at least within some of these aspects finer subdivisions can be made (such as  $\pm$ progressive in the imperfective and  $\pm$ momentaneous in the perfective; see Comrie 1976), and despite the fact that some verbs are inherently

	<i>beginning</i> unmarked	<i>beginning</i> marked
TIME		
<i>ending</i> unmarked	IMPERFECTIVE	INGRESSIVE
<i>ending</i> marked	EGRESSIVE	PERFECTIVE

**Figure 1** Verbal aspects

coded for the aspectual features ENDING (telic verbs such as 'recover') or BEGINNING + ENDING (momentaneous verbs such as 'hit'; cf. de Groot 1985), we may say that generally any property or relation designated by a verb can be represented in any of these four ways. Notice that these aspectual distinctions may not only be expressed grammatically, i.e. by means of inflectional morphology, but also by lexical elements or in a periphrastic construction. For a more extensive discussion of verbal aspect I refer to Verkuyl (1972), Comrie (1976), Lyons (1977: ch. 15.6), Hopper (ed.) (1982), Tedeschi & Zaenen (eds) (1981), de Groot & Tommola (eds) (1984), Chung & Timberlake (1985).

### 1.2 *Nominal aspect*

Nominal aspect is defined as the way in which a property, as designated by a noun, is represented in the spatial dimension with respect to the features SHAPE and STRUCTURE. Nominal aspect is usually coded covertly, i.e. it is a lexical feature of the noun as it occurs in the lexicon. For example, there is nothing that explicitly marks the English noun *car* as a count noun or *water* as a mass noun. The fact that generally nouns (but not verbs) are inherently coded for some aspectual meaning may be related to the idea that spatial orientation is primary in human cognition (Anderson 1973; Traugott 1978; Lakoff & Johnson 1980: ch. 12; Lyons 1977: 718f.). This is also reflected in the fact that in some languages the spatial origin of verbal aspect and tense markers is fairly obvious (Comrie 1976: 98f., 129-30; 1985: 15). In its turn temporal elements may provide the material from which modal elements may develop (Fleischman 1989).

At this point it may be useful to emphasize that referents of noun phrases (NPs) are not entities in the external physical world; hence we speak of 'intended referent' rather than 'actual referent' (McCawley 1968: 138; Dik

1989a: 111f.). This may be demonstrated by the fact that we can discuss referents that cannot be perceived in the immediate extra-linguistic context (Lake Titicaca, the Armada) or never existed (unicorns). Referents of NPs are mental entities, which are construed on the basis of linguistic material. Hence properties of referents of linguistic expressions are due to properties of the elements on the basis of which they are construed (quantifiers, nouns, adjectives, etc.). In other words, there may be discrepancies between referents of NPs and their real-world equivalents (if they exist).<sup>3</sup>

In this view a referent may be regarded as a collection of facts about participants and props as they (i.e. the facts) are mentioned in ongoing discourse and which are stored in the minds of the speaker and hearer. Using a computer database system as a metaphor, a referent can be compared with an indexed record in a special referent file. This temporary file keeps records on all participants and props that figure in a particular discourse. Every time a new participant or prop is introduced a new record is created (that is, another referent is a construed), which may be updated and which helps the speech participants to keep track of the referent (cf. Heim 1982; Rijkhoff 1989a). The records in the temporary referent file must have access to various types of long-term knowledge. For instance, to the knowledge about the situations, events, etc. that some referent was involved in earlier (non-linguistic episodic knowledge; Dik 1989b: 11–12).

Properties in the spatial dimension can be characterized in terms of the spatial features SHAPE and STRUCTURE. If a property as designated by a noun is marked as having STRUCTURE, this means that the referent that was construed on the basis of such a noun is characterized as being divisible. That is, if the space for which such a property obtains were to be divided, that particular property would still obtain.

If a property as designated by a noun is marked as having SHAPE, this means that the referent that was construed on the basis of this noun is characterized as having a definite outline. Thus, in the spatial dimension, too, there are in principle four ways to represent a property. In other words, there are also four nominal aspects (Figure 2). Thus, basically the same property may be represented in different ways. One finds, for example, that one language employs concept nouns where another language uses individual nouns in connection with the same object in the real world. Mandarin Chinese *shū* 'book/books', for example, can be regarded as a concept noun (see below). This means, among other things, that it cannot be pluralized and that the referent of the NP headed by this noun may involve one or more individuals (Li & Thompson 1981: 11; see section 1.2.1 below). The English noun *book*, on the other hand, denotes a singular, spatially bounded entity (i.e. an individual). This implies that it must be pluralized when the speaker wants to indicate that he is referring to more than one book (see section 1.2.2).

	<i>structure</i> unmarked	<i>structure</i> marked
SPACE		
<i>shape</i> unmarked	CONCEPTUAL	MASS
<i>shape</i> marked	INDIVIDUAL	COLLECTIVE

**Figure 2** Nominal aspects

It has already been mentioned that these aspectual distinctions are usually coded covertly, constituting part of the intrinsic, lexical information of the noun. In certain languages, however, one or two nominal aspects (viz. individual and collective aspect) are explicitly expressed; some such languages are discussed in the section 3 below.

### 1.2.1 Conceptual and mass aspect

What unites nouns with conceptual and mass aspect is that the properties they designate are unmarked for the aspectual feature SHAPE. This means that referents construed on the basis of such nouns represent spatial entities which are not characterized as being spatially bounded, which makes them unsuitable for direct quantification: both concept and mass nouns require special constructions in the case of cardinality. This common characteristic of concept and mass nouns is the reason that they have sometimes erroneously been regarded as a single type. This has been opposed by Hundius & Kölver (1983: 168–71), among others, who have convincingly argued that there are both semantic and syntactic differences between constructions involving a measure phrase (which is used with mass nouns) and those involving a numeral classifier phrase (which is used with concept nouns; see the Burmese example below).

#### 1.2.1.1 Conceptual aspect

A noun with conceptual aspect, a concept noun, designates a property in the spatial dimension, but this property is unmarked with respect to the features SHAPE and STRUCTURE. Consequently, the referent of the NP headed by a concept noun is not characterized as being divisible or as having a definite outline. Therefore the real-world equivalent of the referent of the NP headed by a concept noun (if it exists) could in theory be anything essentially characterized by the property designated by a concept noun.

Concept nouns are rather common in South East Asian languages. According to Hundius & Kölver (1983: 166), for instance, most Thai nouns 'purely denote concepts and, for this reason, are incompatible with direct quantification'. Indeed, one of the diagnostics to identify concept nouns is probably that they cannot be pluralized or occur in a direct construction with a cardinal numeral. Since the designated property is unmarked for a spatial boundary (see also mass aspect below), the space for which the property in question holds cannot be counted, at least not directly; only discrete space can be counted. For this reason a separate construction is used: the numeral classifier phrase. In such a phrase the cardinal numeral is in a direct construction with a numeral classifier, which often seems to function rather like an anaphoric element (Jones 1970: 7; Derbyshire & Payne 1990: 243).

In Burmese, for example, one might speak of a river (*myi?*) in at least eight contexts, as is indicated by the choice of the numeral classifier following the numeral *tə* 'one' (Becker 1975: 113):

<i>myi? tə ya?</i>	'river one place' (e.g. destination for a picnic)
<i>myi? tə tan</i>	'river one line' (e.g. on a map)
<i>myi? tə hmwa</i>	'river one section' (e.g. a fishing area)
<i>myi? tə 'sin</i>	'river one distant arc' (e.g. a path to the sea)
<i>myi? tə θwe</i>	'river one connection' (e.g. tying two villages)
<i>myi? tə 'pa</i>	'river one sacred object' (e.g. in mythology)
<i>myi? tə khu'</i>	'river one conceptual unit' (e.g. in a discussion of rivers in general)
<i>myi? tə myi?</i>	'river one river' (the unmarked case)

Because the property designated by *myi?* is unmarked in terms of the spatial features SHAPE and STRUCTURE, the referent of the NP headed by this concept noun can be all sorts of things essentially characterized by the spatial property of 'riveness' (= pseudo-English equivalent of the concept noun *myi?*).

#### 1.2.1.2 Mass aspect

A noun with mass aspect, a mass noun, designates a spatial property which is characterized as having STRUCTURE, but is unmarked as regards the feature SHAPE (cf. Drossard 1982). Consequently, the referent of the NP headed by a mass noun is not characterized as having a definite outline, just like the referent of a NP headed by a concept noun, but it is divisible. In effect this means that the property also holds for any part of the entity (*water, a glass of water, half a glass of water; gold, a bar of gold, half a bar of gold*). Consequently masses can be measured as regards size, weight, or volume.

### 1.2.2 Individual and collective aspect

Nouns with individual and collective aspect designate a property that is characterized as having SHAPE; in other words, these nouns help to construe a referent that represents one or more entities with a definite outline. This implies that such nouns can occur in a direct construction with a cardinal numeral.

#### 1.2.2.1 Individual aspect

A noun with individual aspect, an individual noun, designates a property that is characterized as having SHAPE, but is unmarked as regards the feature STRUCTURE. Hence the referent of the NP headed by an individual noun has a definite outline, but it is indivisible. Many European languages (Dutch, English, German, French, etc.) typically have a large number of individual nouns in their lexicons. For instance, the English noun *car* is an individual noun. If we would divide the space for which the property 'car' holds in half, we would not have two cars; half a car is not a car.

#### 1.2.2.2 Collective aspect

Finally, a noun with collective aspect, a collective noun, designates a property that is characterized as having SHAPE and STRUCTURE. Hence the spatial entity that is construed on the basis of a collective noun is divisible and has a definite outline. In other words, the property designated by a collective noun (e.g. *bunch*) defines a number of distinct individuals, which all share the same property (*grapes*, *flowers*, etc.). If the bunch, the collection of individual grapes or flowers, were to be divided, we could still speak of grapes or flowers.

## 2 SET ASPECT AND THE EXPRESSION OF INDIVIDUAL AND COLLECTIVE ASPECT<sup>4</sup>

Certain languages have grammatical elements that may be regarded as the direct expression of a nominal aspect.<sup>5</sup> It seems, however, that only the two nominal aspects involving the spatial parameter SHAPE, i.e. individual and collective aspect, are explicitly expressed by means of inflectional morphology. This would link up nicely with Friedrich (1970: 380), who stated: 'The category of shape appears to be a typological universal in grammar ... and of not inconsiderable significance for a theory of semantics in grammar.' Furthermore, my data suggest that COLLECTIVE aspect is explicitly expressed more often than INDIVIDUAL aspect.<sup>6</sup>

The nouns that can occur with an individual or collective aspect marker are

inherently coded for a particular aspectual value, which makes it possible for these nouns to help construe referents that are ambiguous with respect to individual and collective aspect. For instance, Asmat *cem* 'house/houses' can refer to one OR more houses (Voorhoeve 1965: 128, 130; see also section 4). I will call these nouns SET NOUNS, since the referent of an NP headed by such a noun may be viewed as representing a set which may contain any number of individuals (one-two-three . . . ; c.f. Brown 1985). If we were to give set nouns a place in the diagram of nominal aspects, we would arrive at the picture in Figure 3. This makes clear that properties designated by set nouns are characterized as having SHAPE, but that they are ambiguous as far as the feature STRUCTURE is concerned. Because the property designated by the set noun is characterized as having a definite outline, the set noun can still be in a direct construction with a cardinal numeral. But there is a difference with individual or collective nouns here.

		<i>structure</i> unmarked	<i>structure</i> marked
SPACE			
<i>shape</i> unmarked		CONCEPTUAL	MASS
<i>shape</i> marked		S E T	

Figure 3 Set aspect

When individual or collective nouns are in construction with a numeral, the latter quantifies the designated (bounded) space, which results in more individuals or collectives, which is reflected in some form of plural marking (*two carS*, *three bunchES*); in other words, the numeral functions as a multiplier.

However, when a numeral is in a direct construction with a set noun, it will function rather as a divisor of the (bounded) designated space, in that it indicates the number of individuals WITHIN the set that has already been defined by the set noun (in pseudo-English e.g. 'two car' or rather 'a two-car set'; for a true example of a set noun in combination with a cardinal numeral see e.g. the Fijian example below). It is not the number of sets that is indicated here (we do not get more sets), but rather the number of individuals that make up that set.

Given the existence of set nouns, how can we determine whether or not nouns are inherently coded for set aspect? There are three criteria. The first and (probably) the third criterion must hold in all instances; the second is language-specific, i.e. it may or may not hold.

Firstly, a noun is coded for set aspect if the referent of an NP that is headed by such a noun (and which does not contain elements indicating number or cardinality) may represent one OR more individuals. Furthermore the language should not employ numeral classifiers (so as to exclude concept nouns, which may also head NPs whose referents may involve one or more individuals; cf. Mandarin *shū* 'book/books' above).

Secondly, a set noun may be aspectually disambiguated by means of an individual or a collective aspect marker, which indicates whether the set consists of one or more individuals (hence individual and collective aspect markers tend to be mistaken for singular and plural number markers, respectively). Below I will give examples from several genetically unrelated languages that employ such nominal aspect markers.<sup>7</sup>

Thirdly, nominal aspect markers do not occur when the noun is in a direct construction with a cardinal numeral. This is because the noun as such designates a single set and the numeral merely indicates the number of individuals contained in that set (see also above). Adding an individual or a collective aspect marker is basically redundant.

### 3 SOME EXAMPLES OF ASPECT MARKING

In the following subsections I will adduce evidence from various sources to support the claim that certain elements are in fact individual or collective aspect markers of set nouns. Much of the evidence will be presented in the form of quotations so as to permit the reader personally to assess the original words of the various authors in the light of my claims.

#### 3.1 *Fijian (Austic, Austro-Tai, Austronesian): vei-* as a collective aspect marker<sup>8</sup>

Fijian common nouns, as they occur in the lexicon, can be used to construe referents that represent one or more individuals. Or, as Churchward (1941: 14–15) put it:

There is nothing in Fijian corresponding to the English plural termination. For example, *na ibe* may mean either the mat or the mats, as indicated by the context.<sup>9</sup>

There are several ways to make clear just how many individuals are involved, one of which is to use cardinal numerals. For instance, *e dua na ibe* 'one mat, a mat'; *e rua na ibe* 'two mats'. Note that except for the different cardinal numeral (*dua* 'one', *rua* 'two') the expressions are formally identical; i.e. there is no 'plural' marker.<sup>10</sup>



In relation to the problem of number marking in Fijian, Churchward (1941), Milner (1956: 16 f.) and Dixon (1988: 73 f.) devote considerable space to discuss the function of the prefix *vei-*, and in their grammars it is explicitly mentioned that this prefix is not an ordinary plural marker, witness e.g. (Churchward 1941: 15–16):

Some nouns—not a great many—have a special plural formed by the prefixing *vei-*. Common examples are . . . *koro* village, *vale* house; *were* garden; *vatu* rock; *kau* tree . . .

Note, however, that in some cases at least, this prefix makes the noun collective rather than strictly plural. The word *veikau*, for instance, means ‘forest’ rather than ‘trees’. Moreover, when the plurality of the noun is shown by the use of a cardinal numeral . . . the *vei-* is not used. Thus, ‘two years’ is not *e rua ne veiyabaki*, but *e rua na yabaki*. True, one may say *e rua na veikau*, but this would mean ‘two forests’; ‘two trees’ is simply *e rua na kau*. [note omitted]

A little further in his grammar of Fijian, Churchward is even more explicit on the (original) function of *vei-* (ibid.: 73):

It would appear, indeed, that the original or fundamental meaning of *vei-*, with verbs as with nouns . . . is just that of plurality, or rather collectivity (a number of things forming a collection or a group).

Consider also the following statement by Dixon (1988: 175):

*Vei-* can be prefixed to some nouns and time words, most kin terms (together with a suffix *-ni*), and to many verbs (sometimes with and sometimes without the passive suffix); in each instance it has a collective sense.

From these quotations it appears that *vei-* also occurs with verbs (compare also Galela (Indo-Pacific) and Hixkaryana (Amerind) below). According to Dixon (1988: 177):

When *vei-* is added to a verb it derives an intransitive form, and the subject may be the sum of A and O [—transitive subject and object function, resp.—JR], i.e. the complete collection of core participants. The important point to note is that these core participants are grouped together as a single set, with no indication of who is A and who is O.<sup>11</sup>

In sum, given the assumption that Fijian common nouns are, as a rule, inherently coded for set aspect as they occur in the lexicon, *vei-* can be regarded as the expression of a collective aspect marker.

### 3.2 Galela (Indo-Pacific, West Papuan, Northern Halmahera): bi as a collective aspect marker

Galela is another language in which the noun as such can be used to head an NP that refers to one or more individuals (van Baarda 1891: 12–13; see also van Baarda 1908: 32–3):

If one uses the noun without further specification as regards number, then one may imply both the singular and the plural of the designated entity [my translation—JR].

Optionally the noun may be preceded by the particle *bi*, as when the speaker wants to emphasize that more than one individual is involved. However, this particle may never occur with a cardinal numeral (*ibid.*):

Should one wish to speak explicitly in the plural, then the particle *bi* is placed immediately before the noun, e.g. *o bi ngoppa*: children; *o bi gotta*: trees; *o bi doemoelè*: weeds (of all kinds); *ani bi doeba*: your sheep; *ma bi soppo*: its fruit; *ai bi deroe*: my boats, etc. . . . If a definite or indefinite numeral follows [the noun], the plural is omitted, e.g. *o ngoppa ja temidungi* – seven children; *o tahoe motohha* five houses; *o wange moroewo naga* some days; *ani doeba sinotto* two of your sheep [my translation—JR].

Van Baarda (1891: 14–15; 1908: 33–5) calls the element *o* an article (ART), but it seems to function rather like a noun phrase marker (see also note 9). Notice that with the human nouns, such as *ngoppa* ‘child(ren)’, the numeral can only be expressed in a predicative construction (van Baarda 1891: 19; 1908: 43; see also note 10 on Fijian numerals); hence the presence of *ja*, which is a pronominal element that is part of the verbal (or better: predicate) complex. The phrase *o ngoppa ja temidungi* may be glossed as ‘ART child(ren) they [are] seven’.

As in the case of Fijian *vei-*, Galela *bi* also occurs with verbs. Fijian and Galela appear to differ, however, in that in the former language the element in question indicates the cardinality of ‘the complete collection of core participants’ (Dixon 1988: 177), whereas in Galela it relates to the number of individual subject OR object entities that are involved in a particular situation, action, etc. (van Baarda 1891: 58–9; 1908: 128–9).

### 3.3 *Hixkaryana (Amerind, Ge-Pano-Carib, Macro-Carib): the particle komo ‘collective’*

*Hixkaryana* is reported not to have a regular singular–plural opposition.

It does, however, have a way of marking ‘collective’ when the focus is on a group. . . . Collective is marked primarily only with ‘human’ class nouns; this class includes, in addition to human beings, animals and items regarded as an integral part of the culture and environment of the people. . . .<sup>12</sup>

With nonhuman nouns the number-marking system is obligatorily absent. With human nouns it is optional in the sense that the speaker can decide whether he wishes to focus on the group or not. In both cases there is often not any clearly disambiguating factor present. (Derbyshire 1979: 126)<sup>13</sup>

It is not clear whether *komo* ‘collective’ is also obligatorily absent if the head noun is in construction with a numeral. According to Derbyshire (1979: 154) there are only three basic numerals (*towenyxa* ‘one’, *asako* ‘two’, and *osorwawo* ‘three’), which function rather as adverbs. Also, Portuguese numerals have come to be employed recently, which are regarded as nouns. In order to function as adverbials these numerals are followed by *me*, which Derbyshire calls a ‘denominalizer’.

What is striking is the fact that, just as in Fijian and Galela, the purported collective aspect marker in Hixkaryana can also be part of the verbal complex. Subject to certain constraints '[t]he collective forms relate to the person of the subject and/or object . . .' (ibid.: 145).

Finally it may be interesting to note that Hixkaryana has two sets of pronouns for referents involving animate entities. One has what the author calls the 'individual' or 'noncollective forms', the other the 'collective forms' (ibid.: p. 127).

### 3.4 Oromo (*Afro-Asiatic, Cushitic, Cushitic Proper*): individual and collective aspect markers

Stoomer (1987: 74) states that the majority of nouns in the three Oromo dialects Boraana, Orma and Wata (=BOW) are unspecified for number. Before him Andrzejewski (1960: 71) had written that these nouns are in a 'general form':

The vast majority of General Forms are associated with NEITHER PLURALITY-NOR-SINGULARITY, i.e. the forms themselves give us no information as to whether what is denoted by them is one or more than one. When such forms are used, only the context can provide us with information about the number of what is denoted.

However a BOW noun can be provided with a so-called 'plural' or 'singulative' suffix, which I regard as instances of a collective and an individual aspect marker, respectively. As regards the so-called plural suffix, Stroomer (1987: 76) observes:

In general, nouns with plural suffixes refer to a counted or countable group of items, whereas the possible plural meaning of nouns unspecified for plural is more general and vague. If a noun is counted by means of a numeral, then there is no plural suffix.

As to the so-called singulative suffix Stroomer states:

BOW nouns denoting animate beings, in particular ethnonyms, can take the singulative suffixes *-(t)ica* (masculine), and *-(t)itii* (feminine). In BOW ethnonyms these suffixes are productive. (ibid.: 83)

In BOW these suffixes basically have the meaning of indicating an individual out of a group . . . (ibid.: 87)

It may be appropriate to mention at this point that in his chapter on non-class noun systems in African languages, Welmers (1973: ch. 9) argues that forms which traditionally have been regarded as mere plurals require a far more subtle interpretation. He notes that in certain languages of the Mande family the stem form of a non-human noun

. . . has a generic reference, not specifically singular or plural, but . . . it is possible to express individuated pluralization. (Welmers 1973: 219)

In sum, a distinct group of nouns in four genetically unrelated languages (Fijian (Austric), Galela (Indo-Pacific), Hixkaryana (Amerind), and Oromo (Afro-Asiatic)) appear to share a number of particular traits. This can be understood if we accept that these nouns are inherently coded for set aspect (meaning that the property they designate is characterized as being spatially bounded and may or may not be divisible), and that certain elements are actually explicit expressions of collective or individual aspect.

#### 4 SIZE AND NOMINAL ASPECT MARKING

In a number of languages employing set nouns, there is a formal relation between the perceived size of the referent and nominal aspect marking, for which I have no immediate explanation.<sup>14</sup> Some such languages will be briefly discussed below in a similar fashion as the languages treated in the previous section.

In Asmat (Indo-Pacific, Trans-New Guinea, Main Section) '[t]here is no way of determining the plural of substantives' (Drabbe 1959: 55), which probably means that these substantives have set aspect. For instance, *cem* 'house/houses', *pok* 'thing/things', *nani* 'heap/heaps' (Voorhoeve 1965: 128, 130). However, the language has two suffixes *-nakáp* and *-nakás*, which seem to function both as diminutive and individual/collective aspect marker. The first, *-nakáp*, is reported to indicate both smallness and singular number; the second, *-nakás*, smallness and plural number. Thus, *cémnakap* 'small house', *póknakas* 'little things', *naniínakas* 'little heaps' (ibid.).

In Koasti (Amerind, Northern, Penutian) '[a]s a general rule, plurality is not marked on the noun itself' (Kimball 1985: 380). Only human nouns may optionally be provided with what is called a plural suffix (*-ha*). This could indicate that nouns are coded for set aspect and that *-ha* is actually a collective aspect marker. It appears that diminutives, which are formed with the suffix *-si/-osi*, are always singular (ibid.: 394; see also pp. 380-92). This suggests that the diminutive suffix marks individual aspect as well.

Ngiyambaa (Australian, Pama-Nyungan, Wiradhuric) nominal roots 'are intrinsically neutral as to number' (Donaldson 1980: 99). One of the ways to specify what Donaldson calls number is by means of a suffix, which is said to indicate both size and number (ibid.):

If a noun is to be marked as singular with such a suffix, it must also be marked for size, large or small, and vice versa. If small, the suffix employed will show whether this is because of immaturity or not.

Note also that definite NPs contain a third person pronoun marked for number.

Finally, it is reported in Stroomer (1987: 87) that the 'singulative affix' *-ittii*, which I consider an individual aspect marker in BOW (see above), also has a diminutive meaning in Wellegga Oromo (Gragg 1976).

In a recent article Dryer (1989) discusses the category of 'plural words', which probably also includes instances of what I would regard as nominal aspect markers. For instance, in some languages the so-called 'plural word' cannot co-occur with a numeral. Interestingly, Dryer found that in a number of cases his category of plural words also includes words meaning 'small' or 'big'.

## 5 SOME SPECULATION ON THE ORIGIN OF NOMINAL ASPECT MARKERS

Although it may be dangerous to hypothesize about the origin of linguistic elements, there is some evidence to suggest that nominal aspect markers may have developed from at least three different sources. One has already been mentioned in the previous section: words meaning 'small' and 'big' (cf. Kimball 1985: 394).

As to individual aspect markers, Greenberg (1981: 109) has suggested that in certain Nilo-Saharan languages an erstwhile non-classifying stage III article (or: noun marker; see also Greenberg 1978) 'has received an apparently secondary interpretation as singular, or perhaps better singulative in relation to a collective. This was already noted by Lukas [1928] in regard to Kanuri *kam* "person"; *am* "people" . . .'.<sup>15</sup>

Plural pronouns may be the source from which collective aspect markers have originated. Note that in some of the languages mentioned in Dryer (1989) (Yoruba, Chamorro, and Ngarinjin), the category of 'plural words' also arose from pronouns (Dryer 1989: 875-6; see also DeBose 1974 on Papiamentu).

## 6 INCORPORATED AND PREDICATE NOUNS

It has often been observed that when nouns are incorporated to become part of a derived verb, this involves some sort of semantic change in that the incorporated noun is said, for instance, to be non-individuated or to have lost its individual salience both semantically and syntactically (e.g. Dik 1980: 38 f.; Mithun 1984). This (admittedly vague) semantic difference between incorporated and non-incorporated nouns may be understood better if we accept that verbs cannot designate properties or relations that pertain to both the temporal and the spatial dimension. If this premise is accepted, then it must follow that any incorporated noun cannot be coded for a nominal aspect.

Obviously, if an incorporated noun does not designate a property in the spatial dimension, it is impossible to indicate how such a property is represented in that dimension. Thus, the semantic difference between an incorporated and a non-incorporated noun is due to the fact that incorporated nouns lack nominal aspect, which in turn is a consequence of the fact that incorporated nouns do not designate properties in the spatial dimension.

The same probably holds for predicate nouns, which, at least in Dutch, are said 'not to individuate' (Geerts *et al.* 1984: 145). Compare:

- (1) Jan is soldaat (Jan is soldier)
- (2) Jan is een soldaat (Jan is a soldier)

In the second sentence *soldaat* 'soldier' heads an NP, as is indicated by the indefinite article *een*. In the first sentence *soldaat* seems to have been deprived of its nominal (i.e. individual) aspect.

## 7 CONCLUSION

In this article I have tried to demonstrate the relevance of nominal aspect. First, of all, the recognition of nominal aspect as a grammatical category may help us to get a better understanding of the differences between the various kinds of nouns. Secondly, it may shed some light on the properties of certain apparent number markers, which are often probably better categorized as nominal aspect markers. Nominal aspect, or rather the lack of aspectual meaning, could also explain the special character of incorporated and predicate nouns. Last but not least, the establishment of nominal aspect as a distinct grammatical category also allows us to analyse NPs and sentences in a similar fashion, as I have already demonstrated elsewhere (Rijkhoff 1989b, 1990b).

JAN N. M. RIJKHOFF  
 Dept. of General Linguistics  
 University of Amsterdam  
 Spuistraat 210  
 1012 VT Amsterdam  
 The Netherlands

## NOTES

- 1 Thanks are due to two anonymous referees for helpful comments.
- 2 I am aware of at least one author who also used the phrase 'nominal aspect', though

in a different sense, viz. Heath in his chapter on Nunggubuyu noun morphology (Heath 1984: 172). Compare in this context also Leech (1969), Greenberg

- (1972: 30), Seuren (1974: 4), Mourelatos (1981: 202 ff.) and Langacker (1987).
- 3 The same holds for referents of sentences, i.e. situations, which are crucially defined by verbs. The fact that in the temporal dimension the same relation or property can be represented in different ways makes it possible for an English sentence such as *I stood there for an hour* to be translated into Russian either with the verb in the imperfective form (*ja stojal tam cas*) or in the perfective form (*ja postojal tam cas*; from Comrie 1976: 4, 16-17). That is, the same real-world situation may or may not be represented as temporally bounded. According to Comrie the second sentence—with *postojal*—suggests a (subjectively) short period, while the first sentence—with *stojal*—is quite neutral. So what this example illustrates is that we do not refer to situations in the external, physical world, but rather to mental constructs that may bear only little (structural) resemblance to their real-world counterparts, if they exist; the fact that we refer to mental constructs also enables us to refer to entities that do (did/will) not exist in the real world, such as desired or feared situations.
  - 4 See Kuhn (1982) for an extensive discussion of the way the notion 'collective' (and, to a lesser extent, the notion 'singulative') is expressed, both grammatically and lexically. In this article I am only concerned with grammatical expressions of the notion 'collective' (see also e.g. Anderson 1985).
  - 5 It must be emphasized that I am only interested in nominal aspect markers that are expressed by means of inflectional morphology. Thus, I am ignoring derived forms such as *knightHOOD* or *friendSHIP*.  
It seems that nouns that designate non-spatial properties, such as abstract nouns (like *love*) and derived nouns (like *destruction*), are modeled after existing aspectual types as they occur in the lexicon of a particular language. Thus *sleep* is a mass noun (*much sleep*), *arrival* a count noun (*two arrivals*). Possibly this is another manifestation of the Principle of Formal and Semantic Adjustment (PFA and PSA, resp.), according to which complex constructions tend to adjust their formal expression and semantic properties to those of the prototypes (Dik 1985; Lehmann 1990).
  - 6 Interestingly, COLLECTIVE aspect is also semantically the most marked nominal aspect (SHAPE and STRUCTURE). If indeed collective aspect is the aspect that is explicitly expressed most often, this is another case of iconicity: formal complexity would correspond to conceptual complexity (see Haiman 1985: 2, 147-51; also Haiman (ed.) 1980). It would be interesting to investigate if the same correlation obtains in relation to perfective aspect, the *verbal* aspect that is marked for either aspectual feature (BEGINNING and ENDING; for some positive evidence see e.g. Bybee & Dahl 1989: 95).
  - 7 It seems that set nouns are also attested in pidgin and creole languages; I am grateful to Peter Bakker (personal communication) for drawing my attention to this (see also Holm 1990).
  - 8 Genetic classifications are according to Ruhlen (1987); in each case only the first three nodes of the genetic tree are given.
  - 9 Dixon (1988: 114f.) calls *na* an article, although it functions differently as compared to articles in e.g. Dutch or English. Compare also Crowley (1985) on noun phrase markers.
  - 10 Numerals (*dua* 'one', *rua* 'two', etc.) behave like verbs, so that the expression of cardinality involves a kind of relative construction. The element *e* preceding the numeral in the examples above is the unmarked form of a subject pronoun (Dixon 1988: ch. 13).
  - 11 Hence the 'reciprocal' notion that is often attached to *vei-* in this context (Churchward 1941: 73-4; but cf. Dixon 1988: 178).
  - 12 Besides the particle *komo* 'collective',

which is the usual collective marker with nouns, there is also the suffix *-yamo* 'collective', which is used mainly with a subclass of derived nouns (Derbyshire 1979: 126).

- 13 As to American Indian languages in general, Boas (1911: 37-8) wrote: 'It would seem that, on the whole, American languages are rather indifferent in regard to the clear expression of plurality, but

that they tend to express much more rigidly the ideas of collectivity or distribution.'

- 14 Cf. also Dryer (1989: 879).  
15 See also Newman (1990: 18). Another possible source for the individual aspect marker may be 'one'; cf. Lorimer (1935: 47f.) on the so-called singular suffix in Burushaski, a language isolate (Ruhlen 1987: 377).

## REFERENCES

- Anderson, J. M. (1973), *An Essay Concerning Aspect*, Mouton, The Hague.
- Anderson, S. R. (1985), 'Inflectional morphology', in T. Shopen (ed.), *Language Typology and Syntactic Description III: Grammatical Categories and the Lexicon*, Cambridge University Press, Cambridge, pp. 150-201.
- Andrzejewski, B. W. (1960), 'The categories of number in noun forms in the Borana dialect of Galla', *Africa*, 30: 62-75.
- Baarda, M. J. van (1891), *Beknopte spraakkunst van de Galillaresche taal*, Kemink & Zoon, Utrecht.
- Baarda, M. J. van (1908), *Leidraad bij het bestuderen van 't Galela'sch dialect, op het eiland Halmheira*, Nijhoff, The Hague.
- Becker, A. L. (1975), 'A linguistic image of nature: the Burmese numerative classifier system', *Linguistics*, 165: 109-21.
- Boas, F. (1911, photomechanic reprint 1969), 'Introduction' in F. Boas (ed.), *Handbook of American Indian languages: Part 1*, Bulletin 40 of the Smithsonian Institution, Bureau of American Ethnology, Anthropological Publications, Oosterhout (The Netherlands), pp. 5-83.
- Brown, D. R. (1985), 'Term operators', in A. M. Bolkestein, C. de Groot & J. L. Mackenzie (eds), *Predicates and Terms in Functional Grammar*, Functional Grammar Series 2, Foris, Dordrecht, pp. 127-45.
- Bybee, J. L. & Ö. Dahl (1989), 'The creation of tense and aspect systems in the languages of the world', *Studies in Language*, 13: 1.53-103.
- Chung, S. & A. Timberlake (1985), 'Tense, aspect, and mood', in T. Shopen (ed.), *Language Typology and Syntactic Description III: Grammatical Categories and the Lexicon*, Cambridge University Press, Cambridge, pp. 202-58.
- Churchward, C. M. (1941; 1973 reprint), *A New Fijian Grammar*, Government Press, Suva (Fiji).
- Comrie, B. (1976), *Aspect*, Cambridge University Press, Cambridge.
- Comrie, B. (1985), *Tense*, Cambridge University Press, Cambridge.
- Crowley, T. (1985), 'Common noun phrase marking in Proto-Oceanic', *Oceanic Linguistics*, 24: 1/2.135-93.
- DeBose, Ch.E. (1974), 'Papiamentu plurals', *Studies in African Linguistics*, Supplement 5: 67-73.
- Derbyshire, D. C. (1979), *Hixkaryana*, *Lingua Descriptive Studies*, Volume 1, North-Holland, Amsterdam.
- Derbyshire, D. C. & D. L. Payne (1990), 'Noun classification systems of Amazonian languages', in D. L. Payne (ed.), *Amazonian Linguistics: Studies in Lowland South American Languages*, University of Texas Press, Austin, pp. 243-71.
- Dik, S. C. (1980), 'On predicate formation', in S. C. Dik, *Studies in Functional Grammar*, Academic Press, New York, pp. 25-52.



- Dik, S. C. (1985), 'Formal and semantic adjustment of derived constructions', in A. M. Bolkestein, C. de Groot & J. L. Mackenzie (eds), *Predicates and Terms in Functional Grammar*, Functional Grammar Series 2, Foris, Dordrecht and Providence, RI, pp. 1-28.
- Dik, S. C. (1989a), *The Theory of Functional Grammar, Part I: The Structure of the Clause*, Functional Grammar Series 9, Foris, Dordrecht and Providence, RI.
- Dik, S. C. (1989b), 'FG\*C\*M\*NLU: Functional Grammar Computational Model of the Natural Language User', in J. H. Connolly & S. C. Dik (eds), *Functional Grammar and the Computer*, Functional Grammar Series 10, Foris, Dordrecht and Providence, RI, pp. 1-28.
- Dixon, R. M. W. (1988), *A Grammar of Boumaa Fijian*, University of Chicago Press, Chicago.
- Donaldson, T. (1980), *Ngiyambaa: The Language of the Wangaybuwan of New South Wales*, Cambridge University Press, Cambridge.
- Drabbe, P. (1959), *Grammar of the Asmat Language* (tr. Joseph Fichtner), Our Lady of the Lake Press, Syracuse.
- Drossard, W. (1982), 'Die Technik Masse/Messen auf der Dimension der Apprehension', in H. Seiler & Chr. Lehmann (eds), *Apprehension: das Sprachliche Erfassen von Gegenständen, Teil I: Bereich und Ordnung per Phänomene*, Gunter Narr Verlag, Tübingen, pp. 98-111.
- Dryer, M. (1989), 'Plural words', *Linguistics*, 27: 865-95.
- Fleischman, S. (1989), 'Temporal distance: a basic linguistic metaphor', *Studies in Language*, 13, 1.1-50.
- Friedrich, P. (1970), 'Shape in grammar', *Language*, 46: 2.379-407.
- Geerts, G., W. Haeseryn, J. de Rooij & M. C. van den Toorn (1984), *Algemene Nederlandse Spraakkunst*, Wolters-Noordhoff, Groningen.
- Gragg, G. (1976), 'Oromo of Wellezza', in M. L. Bender (ed.), *The Non-Semitic Languages of Ethiopia*, Monograph no. 5, Occasional Papers Series, Committee on Ethiopian Studies, East Lansing-Carbondale, African Studies Center, Michigan State University, pp. 166-95.
- Greenberg, J. H. (1972), 'Numeral classifiers and substantival number: problems in the genesis of a linguistic type', *Working Papers on Language Universals*, 9: 1-39.
- Greenberg, J. H. (1978), 'How does a language acquire gender markers?', in J. H. Greenberg (ed.), *Universals of Human Language, Volume 3: Word Structure*, Stanford University Press, Stanford, pp. 47-82.
- Greenberg, J. H. (1981), 'Nilo-Saharan movable-*k* as a Stage III article (with a Penutian typological parallel)', *Journal of African Languages and Linguistics*, 3, 105-12.
- Groot, C. de (1985), 'Predicates and features', in A. M. Bolkestein, C. de Groot & J. L. Mackenzie (eds), *Predicates and Terms in Functional Grammar*, Functional Grammar Series 2, Foris, Dordrecht and Providence, RI, pp. 71-8.
- Groot, C. de & H. Tommola (eds) (1984), *Aspect Bound: A Voyage into the Realm of Germanic, Slavonic and Finno-Ugrian Aspectology*, Foris, Dordrecht and Providence, RI.
- Haiman, J. (1980), 'The iconicity of grammar: isomorphism and motivation', *Language*, 56, 3.515-40.
- Haiman, J. (ed.) (1985), *Iconicity in Syntax: Proceedings of a Symposium on Iconicity in Syntax, Stanford, June 24-6, 1983*, Typological Studies in Language 6, Benjamins, Amsterdam and Philadelphia.
- Heath, J. (1984), *Functional Grammar of Nunggubuyu*, Australian Institute of Aboriginal Studies, Canberra.
- Heim, I. (1982), 'The semantics of definite and indefinite noun phrases', doctoral dissertation, University of Massachusetts at Amherst.
- Holm, John (1990), 'Features in the noun phrase common to the Atlantic creoles', *Linguistics*, 28, 867-81.
- Hopper, P. (ed.) (1982), *Tense-Aspect: Between Semantics and Pragmatics*, Typological Studies in Language 1, Benjamins, Amsterdam and Philadelphia.

- Hundius, H. & U. Kölver (1983), 'Syntax and semantics of numeral classifiers in Thai', *Studies in Language*, 7: 2164-214.
- Jones, R. B. (1970), 'Classifier constructions in southeast Asia', *Journal of the American Oriental Society*, 90: 1.1-12.
- Kimball, G. D. (1985), 'A descriptive grammar of Koasati', doctoral dissertation, Tulane University.
- Kuhn, W. (1982), 'Formale Verfahren der Technik Kollektion', in H. Seiler & F. J. Stachowiak (eds), *Apprehension: das Sprachliche Erfassen von Gegenständen, Teil II: Die Techniken und ihr Zusammenhang in Einzelsprachen*, Gunter Narr Verlag, Tübingen, pp. 55-83.
- Lakoff, G. & M. Johnson (1980), *Metaphors We Live By*, University of Chicago Press, Chicago.
- Langacker, R. W. (1987), 'Nouns and verbs', *Language*, 63: 1.53-94.
- Leech, G. N. (1969), *Towards a Semantic Description of English*, Longman, London.
- Lehmann, Chr. (1990), 'Towards lexical typology', in W. Croft, K. Denning & S. Kemmer (eds), *Studies in Typology and Diachrony: Papers Presented to Joseph H. Greenberg on his 75th Birthday*, Typological Studies in Language 20, Benjamins, Amsterdam and Philadelphia, pp. 161-85.
- Li, Ch. N. & S. A. Thompson (1981; paperback edn 1989), *Mandarin Chinese: A Functional Reference Grammar*, University of California Press, Berkeley.
- Lorimer, D. L. R. (1935-38), *The Burushaski Language*, Vols 1, 2, 3, Harvard University Press, Cambridge, Mass.
- Lukas, J. (1928), 'Transition und Intransition in Kanuri', *Wiener Zeitschrift für die Kunde des Morgenlandes*, 35: 213-14.
- Lyons, J. (1977), *Semantics*, Vols 1, 2, Cambridge University Press, Cambridge.
- McCawley, J. D. (1968), 'The role of semantics in a grammar', in E. Bach & R. T. Harms (eds), *Universals in Linguistic Theory*, Holt, Rinehart & Winston, New York, pp. 124-69.
- Mourelatos, A. P. D. (1981), 'Events, processes, and states', in Ph. J. Tedeschi & A. Zaenen (eds), *Syntax and semantics, Volume 14: Tense and aspect*, Academic Press, New York, pp. 191-212.
- Milner, G. B. (1956; 1972 edn), *Fijian Grammar*, Government Press, Suva (Fiji).
- Mithun, M. (1984), 'The evolution of noun incorporation', *Language*, 60: 4.847-94.
- Newman, P. (1990), *Nominal and Verbal Plurality in Chadic*, Publications in African Languages and Linguistics 12, Foris, Dordrecht and Providence, RI.
- Rijkhoff, J. (1989a), 'The identification of referents', in J. H. Connolly & S. C. Dik (eds), *Functional Grammar and the Computer*, Functional Grammar Series 10, Foris, Dordrecht and Providence, RI, pp. 229-46.
- Rijkhoff, J. (1989b), 'Parallels in the structure of terms and predications', paper presented at Colloquium on NP structure, University of Manchester, 18-19 September 1989.
- Rijkhoff, J. (1990a), 'Explaining word order in the noun phrase', *Linguistics*, 28, 5-42.
- Rijkhoff, J. (1990b), 'Toward a unified analysis of terms and predications', in J. Nuyts, A. M. Bolkestein & C. Ver (eds), *Layers and Levels of representation: A Functional View*, Benjamins, Amsterdam and Philadelphia, pp. 165-91.
- Ruhlen, M. (1987), *A Guide to the Languages of the World, Volume 1: Classification*, Edward Arnold, London.
- Seuren, P. A. M. (1974), 'Introduction', in P. A. M. Seuren (ed.), *Semantic Syntax*, Oxford University Press, Oxford, pp. 1-27.
- Stroomer, H. J. (1987), 'A comparative study of three southern Oromo dialects in Kenya (phonology, morphology and vocabulary)', doctoral dissertation, University of Leiden.
- Tedeschi, Ph. J. & A. Zaenen (eds) (1981), *Syntax and Semantics, Vol. 14: Tense and Aspect*, Academic Press, New York.
- Traugott, E. Closs (1978), 'On the expression of spatio-temporal relations in language', in J. H. Greenberg (ed.), *Universals of Human Language, Volume 3: Word Structure*, Stanford University Press, Stanford, pp. 369-400.

Verkuyl, H. J. (1972), *On the Compositional Nature of the Aspects*, Reidel, Dordrecht.

Voorhoeve, C. L. (1965), *The Flamingo Bay Dialect of the Asmat Language*, Verhandelingen van het Koninklijk Instituut voor

Taal-, Land- en Volkenkunde, deel 46, Nijhoff, The Hague.

Welmers, W. E. (1973), *African Language Structures*, University of California Press, Berkeley and Los Angeles.