REVIEW ARTICLE

ON NOUN CATEGORIZATION

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Gender and other nominal classification systems have recently been the subject of several comprehensive studies. The papers in the volume edited by Unterbeck and Rissanen (2000) deal primarily with structural aspects of gender, i.e. gender assignment and agreement, with occasional comparisons with other nominal classification systems, i.e. noun classes and classifiers. In turn, the two volumes which have so far appeared in the three-volume series edited by Hellinger and Bußmann (2001-2003) concentrate on the socio-cultural aspects of gender, e.g., generics and gender-related stereotypes. The books under review offer a different perspective: gender is here treated as one of the several types of nominal classification, together with noun classes and classifiers. While such common treatments have been attempted before,[1] the two books build upon recent data from typologically diverse languages. This allows the authors to construct typologies of nominal classification systems and provide interdisciplinary insights, particularly into psycholinguistics and cultural anthropology. *Classifiers: A typology of noun categorization devices* by Alexandra Y. Aikhenvald will be reviewed first as it is more comprehensive and can thus serve as the starting point for issues dealt with in the individual papers collected in the volume *Systems of nominal classification* edited by Gunter Senft.

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[1] Witness the classic work by Van Royen (1929), together with the more recent papers in Craig (1986), and studies published in the UNITYP project – especially Seiler and Lehmann (1982), Seiler and Stachowiak (1982), Seiler (1986) and Serzisko (1982).

Classifiers: A typology of noun categorization devices begins with a Preface (pp. vii-viii), in which a few terminological clarifications are made.[2] The ongoing nature of the research in the field is reflected in the Acknowledgements and the Plea (pp. ix-xi), where Aikhenvald welcomes comments on the book. The chapters can be arranged as follows: following the Preliminaries, a detailed introduction is given in Chapters 2-9 into the individual classification systems. Chapter 10 deals with the interactions between noun classification and other grammatical categories, while Chapters 11 and 12 consider the semantics and functions of noun classification systems. Finally, diachronic issues, together with the acquisition and dissolution of the systems are dealt with in Chapters 13 and 14. The volume is complemented with three appendixes (pp. 436-451), together with two lists (of languages, and of language families, linguistic areas and proto-languages) and two indexes (of languages, linguistic areas and language families, and of authors) (pp. 489-535).

In Preliminaries (pp. 1-18), Aikhenvald presents the motivation for a typology of noun classification systems in the face of new data and a terminological confusion. A brief overview is given of classification types and the last two decades of research, including examples of terminological confusion and relatively recent statements that have been revised through new data made available. Aikhenvald draws on an extensive sample of convenience from about 500 languages, frequently based on her own field data. The inductive, empirically-based approach underlines the whole study, which is made manifest by a quotation from Bloomfield (1933) on the value of inductive generalizations (p. 4). In line with the typology proposed by Colette Grinevald (Craig (1992) and "A morphosyntactic typology of classifiers" (pp. 50-92) in the other volume), the typology is based on morphosyntactic criteria, and treats the classification types as prototypes located along a continuum. Several dimensions, or parameters, are distinguished within this continuum; they fall into definitional parameters (morphosyntactic locus of coding, scope of categorization, assignment, surface realization, agreement, markedness relations and degree of grammaticalization) and contingent parameters, e.g., semantic organization and diachronic patterns.

Chapter 2 "Noun class and gender systems" (pp. 19-80) opens the analysis of noun classification types. These systems constitute the most grammaticalized type of classification and are characterized by agreement.[3] Aikhenvald first presents the properties of assignment to genders/noun classes (semantic, formal, mixed).[4] This is followed by a discussion of several issues dealing with agreement: the loci of agreement, differences between semantic and syntactic agreement, determining the number of genders/noun classes in a language, and finally markedness relations, crucial in gender/noun class resolution. Lastly, Aikhenvald considers the realization of noun classes and gives examples of languages with more than one gender/noun class system.[5] This Chapter, as well as Chapters 3-6, is complemented with a summary and a map showing the distribution of a given noun classification type.

Chapters 3 "Noun classifiers" (pp. 81-97) and 4 "Numeral classifiers" (pp. 98-124) take us to the less grammaticalized systems. Of the two types numeral classifiers are by far the most common one; in contrast, noun classifiers are restricted to South-East Asia, Australia and central and south America. However, they have distinct semantics, involving inherent properties such as animacy or physical properties. In addition, they may occur together with other types in a single language. These characteristics warrant a separate treatment (cf. Grinevald's typology in the other volume). Aikhenvald discusses the semantic and syntactic properties of noun classifiers, and provides contrasts with numeral classifiers and noun classes, including a brief comparison with lexical means found in non-classifying languages, e.g., E -*berry*. In contrast, numeral classifiers occur in the context of quantification, i.e. with a numeral or quantifier. They are usually associated with isolating languages, but examples are also given of languages of other profiles, including polysynthetic and fusional (Indic). Numeral classifiers can be realized as independent lexemes; they can also be attached to the numeral or much less frequently to the noun. The chapter on numeral classifiers is concluded with a discussion of the contrasts between sortal classifiers, which categorize in terms of inherent properties, and mensural classifiers, which categorize in terms of quantity, and an illustration of the differences between the latter and quantifiers in non-classifying languages. Here Aikhenvald provides examples of incipient numeral classifiers from nouns in gender languages: Russian and varieties of Arabic.

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[2] The term "noun/nominal classification" is thus used beside "noun/nominal categorization"; likewise, both terms will be used in the present paper. The term "classifier (system)", as it appears in the title of the book, is used in a more general sense, equivalent to a noun classification system. Since "classifier" is used in the narrow sense (i.e. for a type of classifiers, e.g., numeral) in the second volume under review, only the narrow meaning will be adopted here. In addition, "linguistic categorization of a noun" is taken as "linguistic categorization of the referent of a noun" (p. vii). This approach will have important implications throughout the two volumes (cf. especially John A. Lucy's "Systems of nominal classification: a concluding discussion" (pp. 326-341 of the other volume)).

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[3] While English is initially treated separately, it is eventually included within a wider definition of agreement that allows for anaphoric agreement.

[4] The description of the phonological system in Qafar (p. 25), quoted from Corbett (1991: 51-52), is not consistent with the source (the original version can also be found in the paper by Corbett and Fraser in the other volume (pp. 293-325)).

[5] In these languages different modifiers occur in the same or different contexts. That this is possible is an example of a claim that has been revised due to new data made available (cf. Dixon's (1982: 220) statement as to the lack of such systems).

In Chapters 5-7 Aikhenvald deals with the less common types of classifiers: "Classifiers in possessive constructions" (pp. 125-148), "Verbal classifiers" (pp. 149-171), and "Locative and deictic classifiers" (pp. 172-183). Three subtypes are distinguished among classifiers that occur in possessive constructions. "Possessed" classifiers categorize the possessed noun; their use may or may not depend on the distinction alienable : inalienable. "Relational" classifiers constitute a distinct type as they categorize a relation between nouns – between the possessor and the possessee – and are restricted to alienable possession. And finally, the possessor is classified by the least common "possessor" classifiers. As above, examples are given to illustrate the functionally similar classification of the possessor in non-classifying languages. Verbal classifiers, discussed in Chapter 6, appear on the verb and classify a noun in Subject or Object function. Aikhenvald distinguishes three types, realized as affixes, classificatory noun incorporation, where a noun is incorporated into a verb, and suppletive classificatory verbs. This last type, found in North American Indian languages, classifies the argument in terms of its inherent properties (and its orientation in space). It is treated by Aikhenvald as a grammatical means, unlike lexical items as in, e.g., E *drink* vs. *chew*, as their choice is paradigmatic. These systems may interact diachronically in the form of a continuum from incorporated nouns through affixes to classificatory verbs. Another type of interaction may involve the presence of complex systems, with separate types of affixes or affixes and classificatory verb stems. And finally, Chapter 7 is devoted to locative and deictic classifiers, which have received little attention as they have only been attested in a few American Indian languages. Locative classifiers appear in locative NPs and involve shape, dimensionality, boundedness and animacy, while deictic classifiers occur with articles and demonstratives and classify the referent of the noun for shape, extendedness, position and animacy, as well as visibility in Eskimo.

In Chapters 8 "Different classifier types in one language" (pp. 184-203) and 9 "Multiple classifier languages" (pp. 204-241) Aikhenvald considers two types of complex systems. While in the former type different sets of morphemes appear in different morphosyntactic environments, in "multiple classifier" systems the same set of morphemes is used in different environments. Different sets appear most frequently in pairs, e.g., as noun classes and numeral classifiers in the Indo-Iranian branch of Indo-European. The richest system has been found in Palikur (Arawak, Amazonia), with five types.[6] In contrast, in "multiple classifier" systems the same set of morphemes is used in several distinct morphosyntactic environments; the most

complex configurations occur in Amazonia and Papua New Guinea.[7] Depending on the context, the morphemes may differ with respect to morphological realization, obligatoriness and derivational function. In addition to the discussion of the properties of these systems, Aikhenvald considers contrasts between multiple classifier languages and noun class agreement on multiple targets. While the choice of a classifier is always semantically based, she acknowledges the presence of fuzzy types, or systems "in transition from a system with classifiers in multiple environments to a system with noun classes distinct from other noun categorization devices" (p. 235), as in Baniwa and Tariana (Arawak).

Chapter 10 "Classifiers and other grammatical categories" (pp. 242-270) is devoted to the interactions with other grammatical and lexical categories. Generally, these are more likely in fusional languages and with nominal categories than verbal ones. The interdependency of genders/noun classes and number has recently attracted much attention; it strongly appears to be mutual, with the exception of languages with different noun class systems in different numbers.[8] Interestingly, Aikhenvald provides exceptions to Greenberg's Universals 37 and 45, which specify the implicational nature of noun class distinctions in the singular and plural. Closely related are the interactions with person, which also appear in noun classifiers used pronominally, with declensional class, and with grammatical function, also found in verbal classifiers. Further dependencies analysed involve types of possession, politeness and verbal and deictic categories, and finally the lexicon, either by way of derivation in genders/noun classes, or through the expression of further semantic distinctions by classifiers.

In the following two chapters, Aikhenvald focuses on semantic and functional aspects of nominal classification: "Semantics of noun categorization devices" (pp. 271-306) and "Semantic organization and functions of noun categorization" (pp. 307-351). Animacy, physical properties and function as the basic semantic parameters, together with countability, individuation and abstractness as additional parameters, all tend to correlate with individual classification types. Aikhenvald analyses in turn the prototypical semantics of each categorization type. To mention the most common preferences, animacy/humanness/sex are central in noun classes, but they also – contrary to earlier predictions – appear in numeral and possessed classifiers. While physical properties are less frequent in noun classes, they are present in all the other types except for noun and relational classifiers.

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[6] They include genders and four types of classifiers: numeral, verbal (in two types), locative and possessive. In such a system distinct types may appear in the same environment, e.g., noun classes and numeral classifiers.

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[7] It is unclear what is the maximum number of morphosyntactic environments – five (cf. pp. 206, 207, 224) or six (cf. pp. 204, 305, 433). While Aikhenvald acknowledges the possibility of different interpretations (cf. p. 240), this should have been reflected in the references throughout the volume.

On Tariana see also Aikhenvald's "Unusual classifiers in Tariana" (pp. 93-113) in the other volume.

[8] See below for a discussion of "Gender assignment: a typology and a model" (pp. 293-325) by Corbett and Fraser in the other volume.

Chapter 12, in which we turn to the semantic organization and functions of nominal classification, provides the most significant implications. Nominal classification systems are extremely valuable from a cognitive and cultural point of view; as Aikhenvald acknowledges, "[s]emantic features encoded in noun categorization reflect principles of human cognition and world perception" (p. 307). In addition, the chapter contains several arguments against redundancy of nominal classification systems. Aikhenvald begins with the semantic organization of classification systems, which can be best accounted for in terms of prototypes and extension. The semantic roles and discourse-pragmatic functions discussed then provide rich evidence against redundancy. Two main semantic roles are identified: individuation and classification; the use of classifiers with nouns such as 'river' in Burmese demonstrates that classifiers add information to the noun. Several discourse-pragmatic functions can be identified, particularly in systems where the use of classifiers is optional. Anaphora, reference tracking, and correlations with definiteness and specificity occur in all the systems. A related issue involves applicability – or the range of nouns assigned – and the types of default found in classification systems.

The semantics of nominal classification systems provide a reflection not only of universal patterns but also of the physical world, and cultural, environmental and social parameters. While perceptual mechanisms reveal a dependence on visual features, cognitive mechanisms involve categorization in terms of basic level as cognitively most salient. The correlations with extralinguistic phenomena may well be interpreted in terms of the Sapir-Whorf hypothesis.[9] Further, we are dealing here with "probably the only grammatical category which directly reflects (...) social phenomena and shifts" (p. 347), including hierarchies in social and kinship status, as well as changes, e.g., in Khmer during and after the Khmer Rouge revolution, as well as the less dramatic abandonment of the generic *he* in English.

In Chapter 13 "Origin and development of noun categorization devices" (pp. 352-412), Aikhenvald considers the growing amount of diachronic evidence.[10] To begin with, she discusses patterns of the origin of classification devices from open and closed classes. Lexical sources typically involve nouns, where, e.g., words referring to body parts give rise to numeral, verbal and locative classifiers; in addition, in languages with "repeaters" any noun can function as a classifier. Classifiers can also develop from verbs, including nominalized verbs; in mixed types these may coexist with classification devices derived from nouns. The other source involves closed classes, typically demonstrative or 3rd person pronouns. The age of a system, includ-

ing those with several classification types, can be established on the basis of parameters of grammaticalization, i.e. degree of semantic transparency and phonological reduction. In addition to the typical paths of grammaticalization, the origin of classification systems may involve polygrammaticalization, where a single set of lexical items develops into distinct classification types.[11] Internal evolution may also involve another category: either in a development through reanalysis of case (as in the Slavic subgenders) or derivation (as in Indo-European gender), or in a reduction and loss, e.g., through mergers in paradigms (again as in Indo-European). In her discussion of external reasons for the development and decay of classification systems, Aikhenvald gives examples of development by way of either areal influence or borrowing, and decay during creolization and obsolescence. Two final issues dealt with in the chapter involve the development and loss of agreement, again due to internal and external reasons, and the semantic changes that occur in the development of classification systems. These are in line with typical grammaticalization changes, i.e. bleaching, abstraction and metaphorical extensions; an illustration is here provided of historically attested changes in Chinese classifiers.

In the brief final Chapter 14 "Noun categorization devices in language acquisition and dissolution" (pp. 413-424), Aikhenvald discusses the primary role of formal features in the acquisition of gender and noun class languages,[12] and the prominence of lexical information in the acquisition of classifiers. Certain parallels can be found with the dissolution of noun classes and classifiers in aphasia, i.e. prominence of humanness in noun classes and stability of classifiers based on inherent properties.

The volume ends with the Conclusions (pp. 425-435) and three appendixes. The properties of nominal classification systems are summarized, with three summary tables showing classifier types arranged with respect to selected parameters. Prospects for future studies include especially endangered languages, multiple classifier systems, and acquisition and dissolution of classifiers. According to Aikhenvald, "[t]he most important task (...) is first to pursue descriptive studies, in order to collect additional materials which may then assist us in rethinking the whole framework" (p. 435). The appendixes deal with nominal classification in non-classifying languages ("Noun categorization by means other than classifiers" (pp. 436-441)), examples of semantic changes in the development of classifiers ("From nouns to classifiers: further examples of semantic change" (pp. 442-446)), and lastly a "Fieldworker's guide to classifier languages" (pp. 447-451), the aim of which is facilitate the analysis of a previously undescribed nominal classification system.

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[9] However, Aikhenvald points to the limited predictive power of such inductive correlations: thus while the contrast visible : non-visible in Eskimo can be attributed to life in open treeless environment, the contrast also appears, e.g., in Dyirbal (Australian) spoken in closed forest environment.

[10] Characteristically, a discussion of gender traditionally focused on the origin of gender in Indo-European – in contrast, only a short paragraph is here devoted to the issue (p. 378).

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[11] It is unclear why Aikhenvald insists on unidirectionality in grammaticalization (p. 372, 374); some of her own data given elsewhere can be used as counterexamples (e.g., resemanticization of gender as in Spanish – cf. p. 27 and 409).

[12] However, contradictory evidence has been provided by Müller (2000) and Wegener (2000).

On the formal side, while summaries are clearly presented in tables, e.g., the different configurations of systems in a language (p. 202), those in which the individual systems are arranged to form a continuum should also allow for lexical means, as in Grinevald's typology in the other volume under review (p. 61). Such a diagram would be useful in the several cases where Aikhenvald compares classifiers with lexical terms, e.g., mensural classifiers and quantifiers. As far as the maps in Chapters 2-6 are concerned, it was certainly a good idea to include them. Nevertheless, more attention should have been paid to their accuracy as well as the distribution of the languages discussed. While I admire the accurate contour of Ellesmere Island up in northern Canada, a search for other locations may prove a hazardous exercise, especially for the missing Black Sea, Caspian Sea or the Gulf of Finland. Often languages discussed at length are missing on the map (e.g., Hungarian or the isolate Ket), or more seriously, erroneous information is provided (e.g., in the location of noun classes where the whole of Europe is covered, including Finland and Hungary).

Aikhenvald's *Classifiers: A typology of noun categorization devices* provides an excellent introduction to nominal classification systems. Together with the more detailed account of genders and noun classes in Corbett (1991), it is the best source available in the field. As the two volumes under review deal with the same subject matter, I will comment on selected issues raised in both volumes in the final part of the paper.

We now turn to the ten contributions collected in *Systems of nominal classification* edited by Gunter Senft. The volume begins with Acknowledgements (p. ix) and an Introduction (pp. 1-10). This is followed by the papers broadly dealing with three topics: a) general issues involving all nominal classification systems; b) the analysis of classifier systems; and c) the analysis of gender and noun classes. The volume ends with a combined Index of names, places and languages (pp. 343-350). In the Introduction (pp. 1-10), Gunter Senft presents a summary of the contents of the volume and clarifies the aim behind it, i.e. the construction of a theory and a typology of nominal classification systems within an "anthropological linguistic perspective" (p. 1).

Senft's "What do we really know about nominal classification systems?" (pp. 11-49) is concerned with a number of fundamental issues regarding the topic, with an illustration drawn from the author's own research on classifiers in Kilivila (Austronesian). The author begins with an overview of formal devices used in classification systems, including classificatory noun incorporation, suppletive classificatory verbs, numeral classifiers, noun classes and gender.[13] Senft also considers the legitimacy of a common treatment and the nature of semantic distinctions and their discourse functions. Here he points to, e.g., terminological confusion, the presence of

several types within a language (cf. Aikhenvald's Chapter 8), and the movement from one type to another. In the second part of the paper which deals with classifiers in Kilivila Senft insists on the presence of formal distinctions between classifier types.[14] In addition, he discusses selected semantic properties of classifiers, including the interplay between universal and culture-specific motivation, and their dynamic nature, captured by way of a network model. A few comments are due on the introductory overview given by Senft. While such an overview is clearly necessary, it suffers from a number of flaws which render it confusing, not only for uninitiated readers. In addition to being too sketchy, its arrangement is counter-intuitive: it begins with the least familiar classificatory noun incorporation and ends with the most well-known type, i.e. gender. Further, the second type mentioned by Senft involves "classification by verb" (p. 14), i.e. suppletive classificatory verbs in Aikhenvald's typology. The use of such an example in an introductory overview is problematic as this means of classification has also been treated as lexical (cf. the following paper by Grinevald). And finally, the overview ignores noun classifiers; in fact, that these classifiers have been "generally ignored" is given by Grinevald as the original motivation for her typology (p. 65).

Like Aikhenvald's book, Colette Grinevald's "A morphosyntactic typology of classifiers" (pp. 50-92) aims at establishing a typology of classifiers, whose "diversity is not clearly perceived by non-descriptivists" (p. 51). Grinevald starts with an overview of previous research and selected issues that need to be considered in such a typology.[15] Similarly to Aikhenvald, she adopts a functional-typological perspective "(...) which recognizes systems as more or less prototypical, and at various stages of development and disintegration" (p. 54). This introduction is followed by a survey of nominal classification systems – from lexical (class/measure terms) through intermediate (classifiers) to grammatical (noun classes and gender). As mentioned above, such a more explicit integration of the lexical end would have proven useful in Aikhenvald's book. In addition, this comprehensible overview could well take the role of an introduction to the present volume, rather than the one given in the previous paper by Senft.

Grinevald's typology of classifiers, like Aikhenvald's, is grounded in a morphosyntactic approach. The typology is a slightly expanded version of that given by the author in Craig (1994), and accounts for the following types: numeral (sortal and mensural), noun, genitive and verbal (affixes and noun incorporation). In addition to being much less comprehensive that Aikhenvald's typology (it amounts to 7 pages),

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[13] The first two types fall into verbal classifiers in Aikhenvald's typology discussed above.

[14] Cf. Aikhenvald's and Grinevald's (this volume) morphosyntactic approach; on types of numeral classifiers see also Lucy (this volume).

[15] Like Aikhenvald and Senft, Grinevald points to "a currently confused and confusing terminology" (p. 54), where, e.g., Dyirbal is described as having classifiers (Lakoff 1986, 1987), noun classes (by Grinevald herself) and gender (Corbett 1991).

it mostly excludes the less common types. For example, Grinevald's "genitive" classifiers correspond to Aikhenvald's "possessed" classifiers, i.e. one of the three types of possessive classifiers; excluded are Aikhenvald's possessor and relational classifiers. Likewise, suppletive classificatory verbs are here treated as lexical and so excluded from verbal classifiers. Deictic classifiers are described as a "probable" (p. 68) type, while locative classifiers are not accounted for.[16] Two arguments are given in support of the typology: the presence of several classifier types in one language and the correlation between classifier type and semantic categories (cf. Aikhenvald's Chapter 11). Grinevald also discusses similarities with respect to function (individuation and referent tracking) and location as operators within the NP, following Rijkhoff (1990). Examples are then given of prototypical systems; here she emphasizes the need for research in Australia and especially Lowland South America. In addition, she points to the fuzzy edges in the typology, where classifiers blend among themselves and with other nominal classification systems. Finally, Grinevald briefly considers diachronic patterns in the origin and loss of classifiers, as well as the different degrees of their dynamism. By way of a conclusion, she stresses again the value of classifiers; like Appendix 3 in Aikhenvald's volume, the chapter is meant as a guide for fieldworkers.

The following five papers focus on classifier systems. Aikhenvald's "Unusual classifiers in Tariana" (pp. 93-113) and Roberto Zavala's "Multiple classifier systems in Akatek (Mayan)" (pp. 114-146) deal with the two types of complex systems discussed above (cf. Aikhenvald's Chapters 8 and 9). Thus in Tariana (Arawak) the same morphemes are used in distinct morphosyntactic contexts whereas in Akatek different morphemes are used in distinct contexts.[17]

Aikhenvald begins by enumerating five main types of nominal classification,[18] and two problematic issues: the presence of "marginal classifier types" (i.e. locative and deictic) (p. 93) and complex systems (of the two above types). Classification morphemes in Tariana take on several functions – of genders/noun classes, and five types of classifiers (verbal, possessive, noun, numeral, and deictic).[19] As was mentioned above (cf. the discussion of Aikhenvald's Chapter 9 above), this system may be differently interpreted – either as a multiple classifier system, a fuzzy system between a multiple classifier system and a noun class system (p. 235 of the other volume), or finally a "complex agreement system" in Grinevald's interpretation (p. 69). Aikhenvald concludes the paper with a plea for the treatment of classifiers which occur with demonstratives and articles (i.e. "deictic") as a separate type.

In "Multiple classifier systems in Akatek (Mayan)" (pp. 114-146), Zavala gives a detailed analysis of the four paradigms of classification devices found in Akatek, referred to as classificatory suffixes, sortal numeral classifiers, plurals and noun classifiers. Classificatory suffixes appear with numerals and quantifiers, which makes them like numeral classifiers. However, they have several characteristics of the more grammatical systems like gender: all nouns are classified within three classes (humans, animals and inanimates) without paradigmatic variability. The development of two suffixes is shown to have followed the typical paths of grammaticalization from members of the second type, i.e. sortal numeral classifiers. Here Zavala argues for a semantic and morphosyntactic distinction between numeral classifiers and mensuratives.[20] The last two types are constituted by animacy-based plural markers and noun classifiers, as more recent, less grammaticalized and so semantically transparent.[21]

In his "Ants, ancestors and medicine: a semantic and pragmatic account of classifier constructions in Arrernte (Central Australia)" (pp. 147-216), David P. Wilkins advances an unusual case – that "a language can have classifier constructions without having classifiers" (p. 147). Wilkins focuses on the "confusing borderland" (p. 150) between generic nouns and noun classifiers, and reanalyses a sequence of noun classifier + noun as a sequence of generic noun + specific noun. According to him, the "classifier" meaning of the generic noun "is a function of the construction, not a property of the lexeme" (p. 162). The slot for the generic noun can be filled by "any lexicalized superordinate term which has identifiable lexicalized hyponyms" (p. 155); such generics fall into the following types: inherent-nature, function/use and social-status.

A more detailed analysis of generic-specific constructions is preceded with a comparison with two other languages, Yidiny (North-East Australian) and Jakaltek (Mayan). In contrast with Yidiny and Arrernte, noun classifiers in Jakaltek appear to be more grammaticalized and to have an individuating function. A further comparison involving discourse patterns with another North-East Australian language, Yir-Yoront,

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[16] In the conclusions Grinevald admits the introductory nature of the typology, and the fact that it does not address these rare systems (p. 87).

[17] Somewhat misleadingly, the term "multiple classifier system" is used to refer to the presence of both the same set of morphemes (by Aikhenvald) and distinct sets of morphemes (both by Aikhenvald and Zavala).

[18] The terms used here by Aikhenvald do not correspond to those used in the other volume: thus "possessive" corresponds to "possessed" and "genitive" to "relational". In addition, it is unclear whether the terms "genitive" and "possessive" are here used interchangeably. The matter is further confused in a footnote, where we learn that "[p]ossessive constructions in fact allow for two subtypes of classification devices" (p. 111), i.e. "relational" and "possessed" classifiers. In turn, these two terms correspond to those used in her book.

The problems discussed in this and the preceding footnote amply illustrate the terminological confusion acknowledged throughout the two volumes.

[19] On the properties of such systems see the review of Chapter 9 of her book above.

[20] See however Lucy's comments on the distinction in his concluding paper (p. 332).

[21] In addition, Akatek has a fifth nominal classification system based on manual gestures. As Zavala suggests, the interdependence between the two types of classification systems should be analysed.

shows that in Arrernte specific nouns refer to agents, while generics and constructions refer to patients as game animals; in contrast, in North-East Australian languages a specific noun has the same range of case roles and occurs with the same predicates as a generic-specific construction. Thus generic nouns in Arrernte, e.g., *kere* 'game animal/meat', are treated by Wilkins as monosemous lexemes for both the object and the source (i.e. the animal and meat), following the interpretation in O'Grady (1960) and Dixon (1980). The model proposed for the analysis of generic-specific constructions draws on Fillmore's Frame Semantics (e.g., Fillmore 1985) and Wierzbicka's Natural Semantic Metalanguage (e.g., Wierzbicka 1985). The meaning of a specific noun is decomposed into "knowledge structures", which are delimited by the generic noun in the classifier construction, as relevant to the discourse context. Wilkins' paper concludes with entertaining examples of humorous effect caused by mismatches between the generic and specific noun in the construction. In conclusion, the author emphasizes the importance of culturally motivated analysis.

A similar point is made by Kyoko Inoue in "Visualising ability and nominal classification: evidence of cultural operation in the agreement rules of Japanese numeral classifiers" (pp. 217-238). Inoue emphasises the role of cultural background in classifier use, and presents three case studies in the acquisition of classifiers. The choice of a classifier is attributed to the speaker's "visualising ability", which allows them to "mentally view and manipulate a noun" (pp. 235-236). The different patterns of acquisition are shown to depend on the children's exposure to Japanese culture. Two other points are made: Inoue offers a brief critique of formal approaches to classifiers, and points out the lack of referential accounts in the literature on Japanese classifiers. According to Inoue also taxonomic approaches are inadequate as there is little evidence to substantiate them.[22]

In the last paper concerned with classifiers, "Isolation of units and unification of isolates: the gestalt-functions of classifiers" (pp. 239-269), Jürgen Broschart proposes an analysis of classifiers in Oceanic languages within the framework of Gestalt Theory. He distinguishes between "unitizing" classifiers (e.g., numeral classifiers), as opposed to "non-unitizing" classifiers (e.g., noun classifiers), the two types representing the two principles of classification: isolation and unification. The former help establish a "contour", e.g., by way of shape, while the function of the latter is "classification proper", i.e. relating a perceived phenomenon to past experience. While they differ with respect to the principles of isolation and unification, their common function is said to lie in that "they always indicate or facilitate identifiability and manipulability of 'objects of the discourse'" (p. 263). Broschart concludes the paper by relating the two principles of isolation and unification to the more grammaticalized systems: in this case it is gender/noun class, rather than con-

tour or a classifier, that helps to identify or manipulate a unit (i.e. a noun (form)), within the domain of lexicon/grammar.

Finally, we move to noun classes and gender in "Bantu noun class systems: loanword and acquisition evidence of semantic productivity" (pp. 270-292) by Katherine Demuth, and "Gender assignment: a typology and a model" (pp. 293-325) by Greville G. Corbett and Norman M. Fraser. Demuth begins with a comparison of the semantics and realization of the noun class system of Proto-Bantu and those in the modern varieties. Despite the morphological reduction and loss of semanticity, Demuth argues for the presence of semantic motivation, claiming that "noun class systems are *grammatically* productive in most Bantu languages, and *semantically* productive to some degree" (p. 270). Three types of evidence are provided: derivational processes, the assignment of loanwords, and the acquisition of noun classes. A limited semantic productivity is shown by the human class 1/2 and the attribute class 7/8. In the case of acquisition, phonological rules appear to be acquired first, with the semantics of humanness and animacy only accessible at age 4 or 5.[23] Another cause for the retention of these semantic features is the frequency in everyday speech – here the class for humans and relatives is one of the three most frequent classes. On a more general note, Demuth considers the reasons for the very presence of nominal classification and suggests that "the classification of nouns can be thought of as a semantic (and grammatical) necessity, just as verbs must be semantically (and grammatically) classified with respect to tense/aspect" (p. 289).

Corbett's and Fraser's "Gender assignment: a typology and a model" is concerned with the types of and interdependencies between assignment rules found in genders and noun classes. The authors start by outlining the established typology of gender assignment systems which distinguishes between semantic and formal systems; the latter in turn divide into morphological and phonological. This is followed by an outline of the analytical tools applied: the Network Morphology framework and the knowledge representation language DATR. A clear advantage of the model is that it allows us to capture the hierarchical ordering of assignment rules. The analysis is applied to the morphological system in Russian, where gender is predicted from declension, and the gender system of Arapesh (Papuan), where gender can be predicted from morphology, which in turn can be predicted from phonology. Naturally, in both languages these formal rules are overridden by semantic assignment.[24]

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[22] A similar claim is made by Aikhenvald (cf. p. 316 of the other volume).

[23] Aikhenvald reaches a similar conclusion with respect to both noun classes and gender (cf. pp. 413-417 of the other volume).

[24] In this context it should be noted that the following statement in the Introduction should be rephrased to allow for the presence of a semantic basis in all noun classification systems: "With only two exceptions [i.e. this and the preceding one] the contributions in this volume discuss systems of nominal classification that have a conceptual-semantic basis rather than a formal basis" (p. 1).

Two problematic issues concern the predictability of assignment and the role of declension. Corbett and Fraser claim four times that gender is predictable "for the vast majority of nouns".[25] It is unclear however how the model is capable of accounting for such predictability. Such claims need to be substantiated with concrete statistical data which is however lacking. The other issue concerns the relation between gender and declension: like in other studies (Corbett 1991, Corbett and Fraser 2000), gender is predicted from declensional type. However, as it has frequently been suggested (e.g. by Zubin and Köpcke 1981), this motivation is not clear-cut and may function differently for different areas of the lexicon.

The last contribution, John A. Lucy's "Systems of nominal classification: a concluding discussion" (pp. 326-341), nicely sums up some of the essential issues raised in the volume. Lucy points to three methodological confusions: as regards the use of the terms "classification" and "systems of nominal classification", Lucy distinguishes between classification of experience (i.e. of referents) and linguistic form (i.e. of nouns), with intermediate cases.[26] Likewise, the use of the term "systems of nominal classification" in the sense "classifications of some sort operating within or over *noun phrases*" (p. 328) is described as ambiguous: is it the case that nouns classify experience or other linguistic forms, or, *vice versa*, that other classifier forms classify nouns? Lucy emphasizes the referential value of classification forms, or "the contribution to adequate noun phrase reference" (p. 329), in both classifiers and gender. Desemanticized formal patterns would be the only case of a classification of nouns rather than referents.

Two examples are given by Lucy of "Whorfian projections" (p. 331), as a result of which classifiers are interpreted as classifying nouns. In both cases a translated English meaning is projected upon the classifier forms. In the Yucatec (Maya) phrase in (1), *kib'* 'wax' appears with a numeral classifier for one-dimensional entities.

(1) 'un-tz 'iit   kib'
     one-CL:long-thin   wax
     'one long-thin candle'

According to Lucy the Yucatec noun would normally be translated as 'candle', and so a "unitary meaning" would be imposed. This would render the classifier redundant because the property "long and thin" is expressed twice. If it were referentially redundant, then it could only be interpreted as a formal classification of the noun. In the other example Lucy attributes the distinction between sortal and mensural classi-

fiers to the translation of English contrast count : mass, and argues that morphosyntactic evidence should be given to substantiate it. Further, the term "numeral unitizer" (p. 334), rather than numeral classifier, would emphasize the contribution to reference rather than agreement. A more general problem that he identifies concerns the locus of meaning – either in the noun, other elements or the composite construction (cf. Wilkins, this volume).

In his proposal for a typology, Lucy points to the problem with a formal definition of "class" and "classifier", and emphasizes the need for balance in research: "neither a descriptivist goal which operates in terms of formal patterns nor a theoretical goal that emphasizes notional criteria is likely to succeed on its own" (p. 336). The typology accounts for the following characteristics: function, the location within the NP and the characteristics of the referent or the speech event (cf. Silverstein 1986). It distinguishes between systems which in turn address a) the permanent, intrinsic characteristics of the referent (gender/noun classes, noun classifiers, generic nouns); b) the extrinsic characteristics of the referent (numeral classifiers); and c) the pragmatic characteristics of the speech event (classifiers with articles, determiners, locatives). For example, in the first type, the referent is classified for its permanent characteristics in the centre of the NP. This approach translates to the tripartite division of semantic domains for classifiers (substance vs. form vs. social function) as well as Rijkhoff's (1990) parallel layers of NP morphology (cf. Grinevald, this volume). In a concluding statement Lucy again insists on a "joint reading of referential value and constructional placement, semantic content, and pragmatic functionality" in a typology of nominal classification systems (p. 340).

By way of a summary, I would like to focus on a number of fundamental issues dealt with in the volume edited by Senft, with references to Aikhenvald's book. The main aim of the volumes was to establish a typology that would encompass all the nominal classification types. Such typologies have been proposed by Aikhenvald and Grinevald; in both cases they are based on the morphosyntactic locus of classification and view the classification types in terms of a continuum, defined with respect to prototypical cases. Perhaps the best evidence that has been given in their support consists in the presence of complex systems (cf. the contributions by Aikhenvald, Grinevald, Zavala). A few inconsistencies between Grinevald's classification and the two versions of Aikhenvald's classification demonstrate the ongoing nature of the enterprise. It remains to be seen whether and how the more extensive typology proposed by Aikhenvald will be refined as more data becomes available. In addition, I would like to point to the value of alternative approaches, e.g., in terms of function and location within the NP (cf. Grinevald and Lucy), or within the framework of Gestalt Theory (cf. Broschart).

Two general problems can be identified: a terminological confusion and the status of semantic and formal aspects of classification. An inconsistent and often confusing use of terms has been pointed out by several contributors (cf. Aikhenvald, Grinevald, Senft). Whereas it may be permitted in the case of poorly researched

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[25] Cf. the following: "The account so far is, perhaps surprisingly, sufficient to account for the gender of the vast majority of Russian nouns" (p. 308).

[26] A difficult case involves co-occurrence patterns, as in E *drink* which does not classify the associated nouns but "classifies" experience – typically animates – and thus co-occurs with animate nouns.

classifiers (cf. Aikhenvald, Grinevald) and complex systems (cf. the accounts of Tariana in Aikhenvald and Grinevald), it is hardly permissible in the case of better researched types or languages (cf. fn. 15 above on Dyirbal). As regards the other problem, several contributions emphasize the need for balanced approaches to account for both semantic and formal characteristics (cf. Lucy, Senft). A referential and semantic core can be proposed, with ample justification, in all the systems (cf. Aikhenvald, Lucy), including also the more grammaticalized ones (cf. Demuth, Corbett and Fraser). This core is complemented with pragmatic functions, demonstrated by several authors for all nominal classification systems.[27] On the other hand, it would obviously be impossible to establish a classification of the systems irrespective of their morphosyntax (cf. Aikhenvald, Grinevald, and the argumentation in Wilkins). The presence of morphosyntactic contrasts has in fact been considered necessary evidence for a distinction, as between mensural and sortal classifiers (cf. Lucy, Senft).

With regard to the formal side of both volumes, it is perhaps surprising that a large body of recent research in the field has not been documented in the bibliographies. A case in point is the volume edited by Unterbeck and Rissanen (2000),[28] out of which only two papers are listed in Aikhenvald's bibliography. This is particularly unexpected in the case of Aikhenvald's book, as it is meant to be an authoritative up-to-date reference source.

In conclusion, Aikhenvald's *Classifiers: A typology of noun categorization devices* and *Systems of nominal classification* edited by Gunter Senft provide a large amount of evidence and cutting-edge interpretations. The two volumes will doubtless be complemented with further results of field research on nominal classification systems in poorly described areas (e.g., South America and New Guinea) and particularly in endangered languages. In addition, we can anticipate further interdisciplinary research, especially at the interfaces of typology and psychology and anthropology. The interaction between universal patterns of perception and cognition on the one hand, and cultural, environmental and social variables on the other hand, has frequently been revealed in nominal classification systems, and, as pointed out by, e.g., Aikhenvald and Grinevald, makes nominal classification extremely valuable with regard to the universalist vs. relativist debate.

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[27] Notice here the lack of referential or functional accounts in contemporary literature, as pointed out by, e.g., Inoue and Lucy.

[28] Although published in 2000, the volume contains conference papers presented in 1994 and 1996.

REFERENCES

Aikhenvald, A.Y. 2000. *Classifiers: A typology of noun categorization devices.* Oxford: Oxford University Press.

Asher, R.E. and J.M.Y. Simpson (eds.). *The encyclopedia of language and linguistics.* Vol. 3. Oxford: Pergamon Press.

Bloomfield, L. 1933. *Language.* New York: Holt, Rinehart & Winston.

Corbett, G.G. 1991. *Gender.* Cambridge: CUP.

Corbett, G.G. and N.M. Fraser. 2000. "Default genders". In Unterbeck, B. and M. Rissanen (eds.). 55-97.

Craig, C. 1992. "Classifiers in a functional perspective". In Fortescue, M., P. Harder and L. Kristofferson (eds.). 277-301.

Craig, C. 1994. "Classifier languages". In Asher, R.E. and J.M.Y. Simpson (eds.). Vol. 2. 565-569.

Craig, C. (ed.). 1986. *Noun classes and categorization.* Amsterdam: John Benjamins.

Dirven, R. and G. Radden (eds.). 1982. *Issues in the theory of universal grammar.* Tübingen: Gunter Narr.

Dixon, R.M.W. 1980. *The languages of Australia.* Cambridge: CUP.

Dixon, R.M.W. 1982. *Where have all the adjectives gone? and other essays in semantics and syntax.* Berlin: Mouton.

Fillmore, C. 1985. "Frames and the semantics of understanding". *Quaderni di Semantica* 7. 49-58.

Fortescue, M., P. Harder and L. Kristofferson (eds.). 1992. *Layered structure and reference in a functional perspective. Papers from the Functional Grammar Conference, Copenhagen, 1990.* Amsterdam: John Benjamins.

Hellinger, M. and H. Bußmann (eds.). 2001-2003. *Gender across languages: The linguistic representation of women and men.* 3 vols. Amsterdam and Philadelphia: John Benjamins.

Lakoff, G. 1986. "Classifiers as a reflection of mind". In Craig, C. (ed.). 13-51.

Lakoff, G. 1987. *Women, fire and dangerous things: What categories reveal about the mind.* Chicago: University of Chicago Press.

Müller, N. 2000. "Gender and number in acquisition". In Unterbeck, B. and M. Rissanen (eds.). 351-399.

Nuyts, J., A.M. Bolkestein and C. Vet (eds.). 1990. *Layers and levels of representation in language theory.* Amsterdam: John Benjamins.

O'Grady, G.N. 1960. "Comments on 'More on lexicostatistics'". *Current Anthropology* 1. 338-339.

Rijkhoff, J. 1990. "Terms and predications". In Nuyts, J., A.M. Bolkestein and C. Vet (eds.). 165-191.

Seiler, H. (ed.). 1986. *Apprehension: Language, object and order.* Vol. 3. Tübingen: Gunter Narr.

Seiler, H. and C. Lehmann (eds.). 1982. *Apprehension: Das sprachliche Erfassen von Gegenständen.* Vol. 1. Tübingen: Gunter Narr.

Seiler, H. and F.J. Stachowiak (eds.). 1982. *Apprehension: Das sprachliche Erfassen von Gegenständen.* Vol. 2. Tübingen: Gunter Narr.

Senft, G. (ed.). 2000. *Systems of nominal classification.* Cambridge: Cambridge University Press.

Serzisko, F. 1982. "Gender, noun class and numeral classification: A scale of classificatory techniques". In Dirven, R. and G. Radden (eds.). 95-123.

Silverstein, M. 1986. "Classifiers, verb classifiers, and verbal categories". *Berkeley Linguistic Society* 12. 497-514.

Unterbeck, B. and M. Rissanen (eds.). 2000. *Gender in grammar and cognition. Part 1. Approaches to gender. Part 2. Manifestations of gender.* Berlin: Mouton de Gruyter.

Van Royen, G. 1929. *Die nominalen Klassifikationssysteme in den Sprachen der Erde. Historisch-kritische Studie, mit besonderer Berücksichtigung des Indogermanischen.* (Linguistische Bibliothek 4.). Mödling bei Wien: Anthropos.

Wegener, H. 2000. "German gender in children's second language acquisition". In Unterbeck, B. and M. Rissanen (eds.). 511-544.

Wierzbicka, A. 1985. *Lexicography and conceptual analysis.* Ann Arbor: Karoma.

Zubin, D.A. and K.-M. Köpcke. 1981. "Gender: A less than arbitrary grammatical category". *Papers from the Seventeenth Regional Meeting, Chicago Linguistic Society.* 439-449.