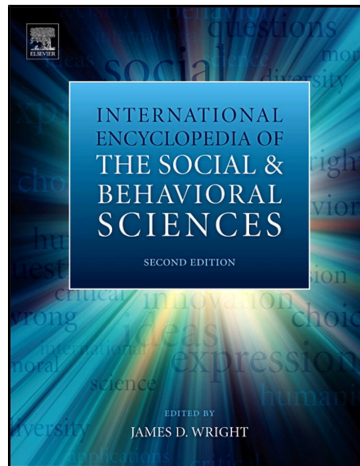


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## Classifiers, Linguistics of

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### Abstract

The study of classifiers was concerned at first by classification systems in the nominal domain (with systems labelled numeral, noun, genitival and verbal classifiers according to their morphosyntactic loci), and only later with classifiers in the verbal domain (with verb classifiers). Beyond the spoken modality, classifiers exist in sign languages and Egyptian hieroglyphs. To account for the great variety of individual systems, a multidimensional approach is adopted. This approach includes an inventory of forms and a semantic profile of the system, the classificatory scope of individual classifiers, and the system's origin and stage of evolution. Pending are issues of lumping versus nonlumping of classifier and other types of systems, and a terminology to handle the great variety of systems.

In the literature concerned with linguistic categorization systems, the term 'classifiers' is actually used in two ways, either for a great variety of systems or for a much narrower range of such systems. The wide-scope approach, called here the lumping position, finds its justification in the multiple ways in which many linguistic categorization systems share some similarities of either forms or semantics. The narrower approach taken here, or nonlumping position, means to isolate a particular set of those systems and to only use the term 'classifiers' for them. This set is characterized by its nonconcordial morphosyntactic nature, its not being involved in lexicogenesis (or creation of new words in the lexicon), its being of clear lexical origin and persistent semantic motivation, and its being subject to specific discourse-pragmatic conditions of use. In this narrower sense of the term 'classifiers,' there are no classifier systems in Indo-European languages and the most widely known exemplars of such systems are most likely the numeral classifier systems (see Gil, 2013), found in Asian languages like Chinese or Japanese (pp. 279–303), but also in America (see early study by Berlin, 1965). They are illustrated in Table 1.

### History of Classifier Studies: From the Classics on ...

Classifiers became of interest to general linguists in the 1970s, following proposals to capture their universal semantic properties. Three articles stand out as classics of the field. Adams and Conklin (1973) were the first to wade through much comparative data and to claim the existence of some universal semantic properties of systems of classification. They used primarily data from Asian numeral classifier systems and

established the primacy of three basic shapes, semantic combinations of one of the major dimensional outlines of objects (1D, 2D, 3D) with a secondary characteristic of consistency and/or size, the primary shapes being 1D rigid, 2D flexible, and 3D full. They showed how these combinations of features were directly inherited from the most common lexical sources for the most basic set of classifiers, designating the primary elements of the physical world being handled for the survival of human communities, as shown in Table 2.

Denny (1976) was the work of a psychologist whose main contribution was the appealing proposal that what classifiers are 'good for' (the title of his paper) is to signal how humans interact with the world, as indicated by the organization of the semantic traits of classifiers into three kinds, those of 'social, physical, and functional interaction.' The 'social interaction' domain is that of animate entities of our world, principally fellow human beings, classified by sex, social rank, or other categorization schemata, as well as other entities such as divinities and other powers specific to a culture. The 'physical interaction' domain is the one of manipulatable and manipulated objects of the world classified along certain parameters linked to their nature, principally of shape. Finally, the 'functional interaction' domain is that of entities of the world being classified by the use to which they are put, such as food, clothing, or transportation, for instance.

Allan (1977) was the first typological study based on a broad database of 50 classifier languages covering different types of nominal classification systems. Although the reliability of the data was variable, there was still a remarkable overlap between the seven 'categories of classification' (material, shape, consistency, size, location, arrangement, and quanta) he proposed and Denny's (1976) three functional domains. Furthermore, two of Allan's original statements were of particular interest

**Table 1** Examples of numeral classifier systems

	Japanese		Tzotzil
a.	enpitsu ni-hon pencil 2-CL(1D) 'Two pencils'	a.	j-ch'ix kantela 1-CL(1D) candle 'One candle'
b.	ringo ni-ko pomme 2-CL(3D) 'Two apples'	b.	j-p'ej alaxa 1-CL(3D) orange 'One orange'

**Table 2** Lexical sources of basic classifiers

Lexical origin	Classifiers
Tree/trunk	1D: long-rigid
Leaf	2D: flat-flexible
Fruit	3D: round

for later discussions on the nature and purpose of such categorization systems. They were the note of a total absence of color classifiers, and of a constraint that the characteristics picked up in the classification system be perceivable by more than one of the senses alone, such as sight and touch, where sight means primarily perception of shape.

Several collective publications later expanded the field of nominal classification studies in general from various disciplines. Seiler and Lehmann (1982), Seiler and Stachowiack (1982) and Seiler (1986) report on the major typological project known as UNITYP, which studied the various techniques that languages have to capture the function of apprehending objects, including numeral classifiers and noun classes. The collection in Craig (1986a) covers various approaches from different fields, and includes articles on the acquisition, historical development, discourse function, semantics, and cognitive value of these systems. The collection in Senft (2000, actually based on a 1993 working conference) is a further elaboration of issues of typology, grammaticalization, and function of nominal classification systems.

### Typology of Classifier Systems

While the first studies of so-called classifiers had a general tendency to overlook the existence of multiple types of classification systems, at some point linguists' attention turned to the typological characterization of classifier systems per se. The specificity of these particular systems was then considered at two levels: at one level the issue is to distinguish them from other types of classification systems, and at the other it is to recognize several subtypes among them.

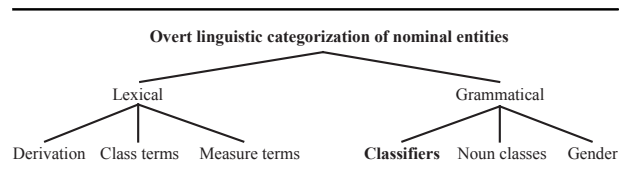
### Classifiers as One Type of Nominal Classification System

As argued early in Craig (1987) and worked out in more detail in Grinevald (2000), classifier systems can be identified as specific types of linguistic systems both on lexical and morphosyntactic grounds, although it is true that in some languages the different systems commonly share lexical sources and seem to be intertwined, as will be considered below.

In the lexical domain, classifiers may be distinguished from *measure terms* and *class terms* with which they are often either confused or consciously lumped.

All languages have lexical sets of measure terms, the expression 'measure terms' being used here as a cover term for what are strictly speaking measures and types of arrangements. Examples of English measure terms include actual measure terms such as a glass of water, a pound of sugar, a slice of bread, a sheet of paper, and arrangements such as a pile of books, a group of children, a line of cars. Class terms are sets of lexical items used in lexicogenesis; they participate in compounding processes of word formation that are functionally equivalent to derivational processes. English has class terms like '-berry' (as in strawberry, blueberry, boysenberry, gooseberry, loganberry), '-man' (as in mailman, policeman, garbageman), or '-tree' (as in apple tree, banana tree, cherry tree), for which the functional equivalent in French can be derivational suffixes, such as '-ier' (as in pommier 'apple tree', bananier 'banana tree', cerisier 'cherry tree').

**Table 3** Different systems of overt linguistic categorization



In the morphosyntactic domain, classifiers can be distinguished from concordial systems such as *gender* best known from Indo-European languages and *noun class systems* of Bantu languages. Classifiers therefore are one among several systems of overt linguistic categorization of nominals as shown in Table 3.

### Various Subtypes of Classifier Systems

Beyond distinguishing classifier systems from other systems of nominal classification, it is further necessary to acknowledge the existence of several subsystems of classifiers.

Craig (1987) and Grinevald (2000) proposed a typology based on the morphosyntactic locus of the classifier, on grounds of better reliability of this criterion over one of semantics. It was clearly conceived as a guide to fieldwork on yet undocumented systems of oral tradition languages. The proposal presented here stands therefore in contrast to studies where all systems are mixed in a lumping position, as was the case in Allan (1977) but also still in Croft (1994), for instance, in which discussions on universal semantics miss the specificities of the distinct systems in their more prototypical forms.

In the study of classifiers, which was first limited to the domain of nominal classification, i.e., the categorization of nouns, the numeral classifiers (numeral + CL) used in quantifying expressions were the best known and those considered as the prototype of classifiers (and are still considered that way by many). But three other subtypes of classifiers were later identified. From languages of Oceania linguists learned of genitival or possessive classifiers (poss + CL) as constituents of possessive constructions, and from languages of Mesoamerica and Australia came the identification of noun classifiers (CL noun), so-called for appearing with a bare noun and not linked to the expression of quantification or possession, although sometimes labeled generic classifiers because of their semantics. Finally, North American languages exhibited yet another type of classifier, labeled verbal classifiers (verb-CL) for being morphemes referring to nominal arguments inside the verb form, often linked to linguistic processes of incorporation.

These four major subtypes of nominal classification systems identified in the languages of the world are schematized in Table 4.

Table 5 gives sentence examples to illustrate these four major subtypes of classifier systems.

To the major noun/numeral/genitival/verbal classifiers shown in this diagram, one should add two much rarer secondary types that have been identified more recently, mostly in Amazonian languages, and have been found on demonstratives and locative adpositions (Aikhenvald, 2000).

**Table 4** Loci of major subsystems of nominal classifiers

NP	[POSS+CL <sub>genitival</sub>	Numeral+CL <sub>numeral</sub>	CL <sub>noun</sub> +Noun	]NP	//	Verb-CL <sub>verbal</sub>
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**Table 5** Examples of major subtypes of nominal classifier systems

1.	<b>Noun classifiers;</b> Jakalteq-Popti' (Craig, 1986, p. 264)	a.	xil naj xuwan no7 lab'a saw CL John CL snake '(man)John saw the (animal)snake'
2.	<b>Numeral classifiers;</b> Ponapean (Rehg, 1981, p. 130)	a.	pwihk riemen pig 2+CL: animate 'two(-animate) pigs'
		b.	tuhke rioapwoat tree 2+CL: long 'two(-long) trees'
3.	<b>Genitive classifiers;</b> Ponapean (Rehg, 1981, p. 184)	a.	kene-i mwenge CL-GEN.1 food 'my(-edible) food'
		b.	were-i pwoht CL-GEN.1 boat 'my(-transport) boat'
4.	<b>Verbal classifiers;</b> Cayuga (Mithun, 1986, pp. 386–388)	a.	ohon'atathe ak-hon'at-a:k it-potato-rotten past.I-CL-eat 'I (potato-)ate a rotten potato'
		b.	skitu ake'-treh-tae' skidoo I-CL: vehicle-have 'I (vehicle-)have a car'

**Arguments for Subtypes**

The existence of different subtypes of classifiers was argued on several grounds (as in Grinevald, 2000). First is the characteristic of different loci for the classifier, as mentioned above in Table 4, with a specific inventory for each locus. Second is the fact that several independent systems can co-occur in the same language with different inventories and different semantics in different morphosyntactic loci. Such is the case of the coexistence of numeral and genitival (or possessive) classifier systems of Micronesian languages like Ponapean, as exemplified above in Table 5. The third argument is semantic, and relies on a strong correlation between the major morphosyntactic subtypes of classifiers presented and their semantic profiles, i.e., the semantic basis of their categorizing principle. It is not a question of all or nothing, since, as discussed below, the dynamics of such systems allow for much variation and overlap, but of strong tendencies. Concentrating on the categorization of nonhuman entities (and borrowing from Denny (1976) the notions of physical and functional properties) the following pattern can be seen: physical properties such as shape seem to be the dominant semantic parameter of numeral classifier systems, functional properties such as food and transportation the major one of genitival classifier systems, while material and essence of objects constitute the major concern of noun classifier systems, as schematized in Table 6.

Two notes of clarification about these correlations between semantic profiles and subtypes of classifiers are needed. One is

that the numeral classifier systems have two kinds of elements within the same inventory and in the same slot, known as mensural (two-truck loads of/lines of trees) and sortal (two-long trees) elements, and that only the sortal ones are considered here. The other is that no particular correlation seems to hold between verbal classifier subtype and semantic profile (as illustrated in the Cayuga examples of Table 5).

While the first studies of the phenomenon of classifiers were restricted to the domain of nominal classification, other systems were identified that classified verbs through verb semantics, first on the basis of languages of Australia (Schultze-Berndt, 2000; McGregor, 2002), but also in parts of

**Table 6** Different semantic profiles of subtypes of nominal classifiers

Subtype	Semantic profile	Examples
Numeral classifiers	Physical categories	One-LONG RIGID canoe; Two-ROUND oranges; Three-FLAT FLEXIBLE blankets
Genitive classifiers	Functional categories	My-VEHICLE canoe; Your-EDIBLE fish; His-DRINKABLE potion
Noun classifiers	Material/essence categories	(a/the) WOOD canoe; ANIMAL (woollen) blanket; PLANT coffee (drink)

**Table 7** Verbal versus verb classifiers

Verbal CL (classifier of patient object)	Verb CL (classifier of verb semantics)
a. I [LONG RIGID]-put a knife on the table	c. You shout-[SAY] to me (Intransitive)
b. I [VEHICLE]-have a canoe	d. Put-[DO] a knife on the table! (Transitive)

Latin America (Dickinson, 2000). The contrast between verbal (locus) and verb (domain and locus) classifiers is outlined in Table 7 where in (a) the classifier attached to the verb refers to the characteristic shape of the knife, while in (b) the classifier categorizes the semantics of the verb itself.

Schultze-Berndt labels these verb classifiers generic verbs. They constitute a closed class that take verbal inflections and are accompanied by so-called 'coverbs' corresponding to the verb class of European languages but including also adverbs. Table 8 shows three such verb classifiers.

The inventory of these verb classifiers (as in Schultze-Berndt, 2000, pp. 402–404) contains 26 elements, constituting the categorization of events given in Table 9.

**Classifiers in Other Modalities**

Furthermore, the discussion of classifiers has been extended to languages of other modalities, such as visual modalities, dynamic for sign languages, and static for hieroglyphs, but both interesting for their iconic nature. Emmorey (2002) is a collection of articles on the phenomenon of classifiers found across the sign languages of the world, shows that their dominant type is of the form of verbal classifiers, discussed in sign language literature under the label of classifier constructions. It has also been argued that some sign languages, such as Swedish sign language, exhibit not only verbal but also noun classifiers (Berman and Wallin, 2003). The latest addition to the discussion of classifier studies comes from the writing system of some ancient languages, such as Ancient Egyptian and Sumerian. Goldwasser (2006) argues that the elements of the Egyptian hieroglyphic writing system known in the literature as 'determinatives' (Champollion, 1836) can be reanalyzed as classifiers. Goldwasser and Grinevald (2012) further specify that, on closer inspection, this particular system of classifiers can be shown to resemble known classifier systems of oral languages although it presents the unique characteristic, not described for other languages as yet, of combining within one system the classification of both nouns and verbs, in their

**Table 9** Inventory of classifier VERBS in Jamingjung

Semantics of categorization	CL of intransitive verbs	CL of transitive verbs
a. Location, existence, possession, and change of locative relation	BE, FALL	HAVE, PUT
b. Translational motion	GO, COME	TAKE, BRING, LEAVE, APPROACH, FOLLOW
c. Contact/force	–	HANDLE, HIT, CHOP, KICK/STEP, POKE, BITE, THROW
d. Burning, cooking	BURN	COOK
e. Polyfunctional	–	SAY/DO
f. Caused change of possession	–	GIVE, TAKE AWAY
g. Other major verbs	–	SEE, EAT, MAKE

Schultze-Berndt, E., 2000. Simple and complex verbs in Jamingjung: a study in event categorization in an Australian language, Ph.D. thesis, University of Nijmegen, pp. 402–404.

respective morphosyntactic loci with their expected semantic profiles (categorization of humans, animals, and inanimates of the Egyptian culture vs categorization of types of events). Table 10 offers a sample of such coexisting noun and verb classifiers.

This system sometimes also applies to other word categories, such as adverbs and adpositions more rarely attested in classifier systems of the world (but found in Australian Jamingjung verb classifier system too). It would seem that what appears as a mixed noun and verb system is most likely a natural phenomenon of classification of a root system. Roots are a central concept of this language in which it may prevail over that of word categories (noun and verbs) of prime importance in Indo-European languages. The analysis of determinatives as classifiers is not yet accepted by all Egyptologists who do not consider it as part of the language, on the ground that the system is restricted to the hieroglyphic writing system and appears not to have been part of the spoken language. This is evidenced by the fact that when hieroglyphs were transcribed into Coptic writing these classifiers were ignored. But the system is so strikingly similar in its categorizing schemata to classifier systems of spoken languages that drawing the parallel argues interestingly for the cognitive power of such systems, with their mix of universal and language specific categorization processes, independent of the modality of expression.


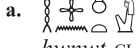
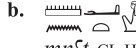










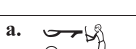


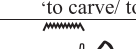

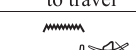
Therefore, in the end, the variety of subsystems of classifiers is much greater than thought before, the classifier systems of

**Table 8** Classification of verbs in Jamingjung (Schultze-Berndt, 2000, p. 404)

a. yeah, yes 'yes, we set fire to the firewood \'	<b>dalb</b> <b>light.fire</b>	guyug fire	yirr- <b>arra</b> -m=ngarndi 1pl.excl:3sg- <b>PUT</b> -PRS=Sfoc2
b. burra- <b>ngayi</b> -rna=yirrag 3pl:3sg- <b>SEE</b> -IMPF=1pl.excl.OBL 'the dogs used to track them for us, the goannas'		wirib-di dog-ERG	<b>jarl</b> , <b>track</b> malajagu goanna
c. ga- <b>jga</b> -ny=ni 3sg- <b>GO</b> -PST=SFOC1 'he went up on a rock'		wagurra-bina rock-ALL	<b>burduj</b> <b>go.up</b>



**Table 10** Classifiers of Egyptian hieroglyphs

	Classifier	Hieroglyph name & code	Examples	
of NOUNS				
1.	 'HUMAN FEMALE' (CL:HF)	seated woman B1	a.  <i>hwnwt</i> -CL:HF 'young girl'	b.  <i>mn<sup>t</sup></i> -CL:HF 'wet-nurse'
2.	 'ANIMAL' (CL:ANIMAL)	hide and tail <sup>1</sup> F27	a.  <i>miw</i> -CL:ANIMAL 'cat'	b.  <i>pnw</i> -CL:ANIMAL 'mouse'
3.	 'WOOD' (CL:WOOD)	branch M3	a.  <i>ztwt</i> -CL:WOOD 'bed'	b.  <i>hbny</i> -CL:WOOD 'ebony'
of VERBS				
4.	 'INGESTION/COGNITION/ PERCEPTION' (CL:ICP)	man with hand to mouth A2	a.  <i>swr</i> -CL:ICP 'to drink'	b.  <i>mri</i> -CL:ICP 'to love'
5.	 'POWER' (CL:PWR)	man striking with stick A24	a.  <i>hti</i> -CL:PWR 'to carve/ to sculpture'	b.  <i>sb3</i> -CL:PWR 'to teach'
6.	 'MOVEMENT' (CL:MVMT)	legs walking D54	 <i>n<sup>i</sup></i> -CL:MVMT 'to travel'	
7.	 'MOVEMENT BY BOAT' (CL:MVMT/BOAT)	boat on water P1	 <i>n<sup>i</sup></i> -CL:MVMT/BOAT 'to travel (by boat)'	

After Goldwasser, O., 2002. *Lovers, Prophets and Giraffes: Wor[ld] Classification in Ancient Egypt*. Göttinger Orient Forschungen, Otto Harrassowitz, Wiesbaden, pp. 57–89.

the major lexical categories of N and V attested in the languages of the world today being as presented in [Table 11](#).

### A Multidimensional Approach to the Study of Linguistic Classification Systems

One of the major challenges of classifier studies is not only that there is a great variety of classification systems, but that there is also great variability within the different types of systems and subsystems. These varieties are taken to reflect the intermediate nature of these systems as secondary linguistic systems of clear lexical origins, some borrowed, some native, and all at different degrees of grammaticalization. The multiple dynamics at work in those systems make the descriptive task onerous, but at the same time very productive when proceeding to comparative and typological work. It is of prime importance, therefore, to consider a number of dynamic variables, from synchronic and diachronic points of view, for any description of a specific system along the line of topics listed below.

#### The Inventory of Forms and Its Semantic Profile

Systems of classifiers vary greatly as to the number and the specificity of the classes that compose a system. The inventory of classificatory items can be small or large, from a handful to hundreds,

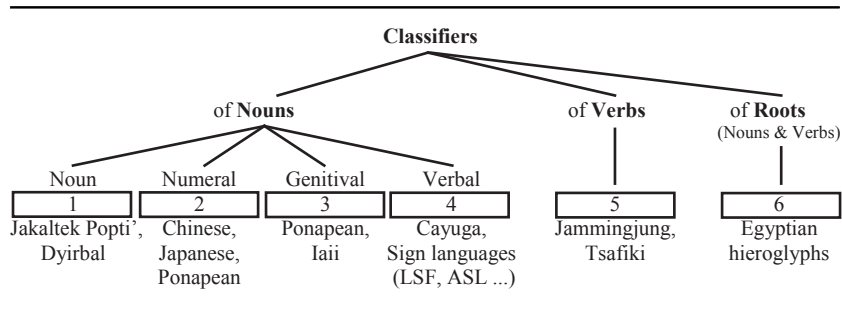
with some systems open. The inventory generally has a dominant semantic profile, corresponding to one of the three functional domains mentioned (social, physical, functional).

#### The Classificatory Scope of Individual Items

The classes defined can vary from very simple homogeneous with transparent semantic motivation to very complex, heterogeneous ones. The latter are organized around a core of prototype elements to which others have been added through various means of extension, such as with the famous class of 'women, fire, and dangerous things' of Dyirbal (interpretation from [Lakoff, 1986, 1987](#); or original analysis from [Dixon, 1982](#)). Another well-known example is the case of the Japanese numeral classifier [hon], used prototypically for long, thin objects but in modern times classifying telephone calls and baseball hits as well ([Matsumoto, 1993](#)).

The items of an inventory are therefore of very different classificatory scope. The most common classifiers categorize at some generic level (e.g., animal/plant or 1D–2D–3D or food/transport), while others, fewer, at a more specific one (e.g., a corn and corn product class next to a generic plant class), with the specificity going to the extreme situation of so-called 'unique' classifiers, meaning classifiers heading a class of just one item (e.g., 'elephant' or 'tiger' or 'crocodile' in a class of its own, next to an animal classe). These specific and unique

**Table 11** Diversity of subtypes of classifiers (and sample languages)



classificatory items are particularly interesting for their cultural significance (as demonstrated for Jakalteq Popti' in Craig, 1986b). At the other extreme, the inventory of some systems also includes a totally desemantized classifier, or default classifier, for any number of items with no semantic links (meaning something like 'a thing'). This default item is often traceable through time to some specific noun turned classifier (as e.g., bamboo in Chinese and papyrus scroll in Egyptian hieroglyphs).

**Origins: Internal Development or Borrowing of an Idea and Areal Spread**

Classification systems follow various paths of evolution. Some emerge language internally, from already existing lexical classification systems like class terms, and recycled lexical items of the language. Any classification system needs to be assessed further in the context of a common phenomenon of areal spread. The spread can operate either through the actual borrowing of a system, morphology included, or through the borrowing of the idea and motivation for the development of such systems with native lexical items. A well-known case of areal spread is that of the expansion of the original Chinese numeral classifier system into its surrounding regions (Bisang, 1999); more recent literature treats the spread of noun class and classifiers in the Amazon region (Seifart and Payne, 2007; Aikhenvald, 2012).

**Age, Life Cycles, and Degree of Grammaticalization**

Systems studied today vary greatly in age. Some are very old, such as the Chinese numeral classifier system or the Egyptian hieroglyphic system, while others can be argued to be only several centuries old, like the Q'anjob'alan-Mayan noun classifiers, or even much less for some of the recent sign language verbal systems.

An early proposal (Dixon, 1982; repeated in Dixon, 1986; echoed in Grinevald, 2000) had suggested a correlation between type of classification system in general and degree of grammaticalization based on comparisons of the better known systems of the time, i.e., Bantu noun class systems and Asian numeral classifier systems. However, new data on other noun class systems and classifier systems per se have led to the proposition of disconnecting the question of the degree of grammaticalization from the type of system. Guarding against some Eurocentric posture and the problem of considering as prototypical the first systems described, Grinevald (2002) argues against this correlation, on the basis of a sample of classifier

systems of different subtypes. They include incipient to well-established systems of noun classifiers from the Australian (Sands, 1995) and American continents, and more or less grammaticalized numeral classifiers of Asian languages as well as very grammaticalized ones of Chibchan languages of Central America. In a similar vein, Grinevald and Seifart (2004) contrast incipient noun class systems of Amazonia to more grammaticalized Bantu noun class systems (which in fact exhibit more variability than acknowledged in the literature and can be very old, sometimes even decaying).

The parameters considered to establish the degree of grammaticalization of a system are as listed in Table 12.

**The Productivity of the System**

Independently of its origin, its type or its age, any system can be shown to be more or less productive, adapting or not to linguistic and cultural development by incorporating new items in its classification schemata. For instance, the Thai

**Table 12** On the grammaticalization of classification systems

	<i>Less grammaticalized systems</i>	<i>More grammaticalized systems</i>
System properties	Do not classify all nouns (nonexhaustive) Few classes if emergent, to very LARGE NUMBER of classes if fully developed	Classify ALL nouns (exhaustive) SMALLER number of classes
Use	OPEN and productive Possibility of assigning N to DIFFERENT CLASSES Determined by speaker's pragmatic CHOICE	CLOSED N assigned to a UNIQUE CLASS NO speaker VARIATION
Morphosyntax	Varies in formal/informal contexts Not affixed to the noun INDEPENDENT constituent without fusion No or limited agreement schema: marked for pragmatic purpose	No variation according to register Possibility of marking on the noun itself FUSED with other grammatical categories (def, nb, case) Part of rigid AGREEMENT schemata (beware of effect of standardization; freer in speech!)

numeral classifier system, which is very old, is also very productive: it is open and adapting to the language of modern life, in contrast to the noun classifier system of Jakalteq-Popti', which is not very old, but seemed frozen and unable to cope with the classification of modern imports and products when studied in the 1970s (Craig, 1986b).

All these parameters of variation make it clear that no two classification systems, even of the same type or subtype, will resemble each other closely, although they remain comparable when caution is taken to factor in those parameters of variation. What is striking in fact, in the midst of the surface variation of all these classification systems in terms of origins and paths of evolution, is precisely their shared basic principles of semantic categorization of the world humans live in. In their classificatory schemata, made at once of cognitive universal patterns and cultural specificities, they are of great interest to various disciplines beyond linguistics itself.

## Discussion

The situation in classifier studies today is that of a pervasive confusion about what is being discussed, due to unsettled issues of terminology (that persist even at the time of this writing).

### Classifiers from a Lumping versus Nonlumping Position

As set out from the start, a primary issue to clarify would be the question of lumping all classification systems together (Aikhenvald, 2000, 2012; Croft, 1994; Seifart and D. Payne, 2007) or not lumping them and identifying a subset of systems called classifiers (the line mainly argued in Grinevald, 2000 *inter alia*). Much depends on an a priori positioning, clearly influenced by the nature of the data that individual linguists handle. The fact is that there can be overlap among systems, of lexical sources, of categorization schemata, when systems sometimes emerge one from another, while discussions of dynamics and levels of categorization can apply equally to both noun class and classifier systems. However, from a strictly linguistic point of view, a nonlumping morphosyntactic approach facilitates a concentration on the specificities of 'classifier systems' per se as one-place grammatical classification systems, and allows for better attention to their own varied subtypes, as shown above.

It is worth noting, in addition, that if all systems of linguistic categorization were to be called 'classifiers,' in a lumping approach, then another term would need to be invented for the particular set of classification systems labeled 'classifiers' in a nonlumping approach.

### Further Terminological Issues

Independent of the lumping issue, some researchers question altogether the appropriateness of the term 'classifier' or the pertinence of talking of classification in general, since the term classifier can be seen as a misnomer indeed, if taken literally as necessarily implying classifying. The problem often raised is that of the phenomena of 'repeater' and 'unique' classifiers, where 'repeater' refers to a classifier that is a copy of a noun and 'unique' to one that heads a class of just one item, neither appearing to classify *sensu stricto*. But classification is

far from the only or even, at times, the main function of classifiers, which lay important and diversified roles in discourse (as discussed in the collections of Craig, 1986a; Senft, 2000, for instance, and further explored in Contini-Morava and Kilarski, 2013).

The term classifier cannot be taken either as applying to a specific linguistic category, since there is so much variation along the parameters outlined above, so that no two systems are indeed the same. The appropriate way to use the term is therefore as a cover term, maybe best written in caps as some type of grammatical gloss, as CLASSIFIER, to signify its status of abstract comparative concept to permit a typological approach through the great language specific diversity of such phenomena locally described in family specific terms.

At a more local level, the terminological problem extends to the naming of the subtypes of classifier at two levels, the lexical domain of classification (of nouns or verbs, that could also be labeled nominal vs verbal classification) versus the morphosyntactic locus of the classifying element (again potentially either set of terms). But the present situation remains one of nonalignment of terms between these two levels which comes from the evolution of the discussions over time, from language particular descriptions to a more global view of all systems for typological purposes. The choice was made not to correct this problem in this article since one of its major goals was to report on the existing literature, but the task remains, particularly now that an even wider range of systems has been described, inviting another round of typological studies.

Another unsettled question of terminology is that of the labeling of the different levels of categorization identified, with alternative naming existing at each level identified. For instance, the most desemanticized classifier is called either 'default' or 'general,' while the most common one is called either 'general' or 'generic' or even 'specific,' although some reserve the term specific for a lower level of categorization. Only the level of unique classifier is uniformly recognized and labeled. The most important point has been made, however, that classifiers define more or less heterogeneous classes, through processes of extension and progressive desemanticization of existing classifiers, with a very language specific selection of specific items of culture for special treatment.

Additionally, there is sometimes a confusion between two types of classifiers, where 'unique' refers to a classificatory function (of class contains of only one item), and repeater to the form of the classifier (whether full or truncated form of its lexical source, with no particular link to the process of classification). The nature of unique and repeater classifiers was illustrated in Table 13.

**Table 13** Repeater versus unique in Jakalteq Popti'

CL		Repeater	Unique	CL	N
<i>atz'am</i>	'Salt'	+	+	<i>atz'am</i>	<i>atz'am</i> '(The) salt'
<i>metx'</i>	'Dog'	-	+	<i>metx'</i>	<i>tx'i'</i> 'The/a dog'
<i>ha</i>	'Water'	+	-	<i>ha</i>	<i>ha'</i> 'The water'
				<i>ha</i>	<i>nhab'</i> 'The rain'
				<i>ha</i>	<i>pam</i> 'The/a lake'
				<i>etc.</i>	



## Conclusion

The domain of linguistic classification systems is very rich and varied, marked by a fluidity across a number of possible systems which share their being secondary systems of lexical origin forming more or less grammaticalized systems. This article has concentrated on the systems known as classifiers in a nonlumping position and proposed a morphosyntactic approach to the typological study of classifiers, with the view of encouraging the linguistic description of as many new systems as possible. The lumping position has been taken more recently by linguists dealing generally with the intricate interweaving and overlapping of classificatory systems typical of many Amazonian systems, more focused on semantic similarities than on the structural specificities of the systems. Such a lumping position is also the approach of a general study of the functions of the different nominal classification systems: semantic, such as expanding the referential power of the lexicon; and discourse/pragmatic, such as establishing and manipulating the status of discourse referents (Contini-Morava and Kilarski, 2013). The challenge of accounting for the nature and specificities of linguistic classification systems persists, but interest in them remains high as they provide a unique window on issues of cognitive and cultural categorization, and, as emphasized here, on the dynamics of grammar-making. Language systems in other modalities, be they contemporary sign languages or ancient hieroglyphic writings have confirmed in recent times how essential linguistic categorization is for any type of human language.

*See also:* Australian Aboriginal Society and Culture: An Overview; Classification, Understandings of in the Social Sciences; Historical Thought and Historiography: Southeast Asia; Sign Language: Psychological and Neural Aspects.

## Bibliography

- Adams, K.L., Conklin, N.F., 1973. Towards a theory of natural classification. Papers from the Regional Meeting of the Chicago Linguistic Society 9, 1–10.
- Aikhenvald, A., 2000. *Classifiers: A Typology of Noun Categorization Devices*. Oxford University Press, Oxford.
- Aikhenvald, A., 2012. *The Languages of the Amazon*. Oxford University Press, Oxford.
- Allan, K., 1977. Classifiers. *Language* 53, 285–310.
- Berlin, B., 1965. *Tzeltal Numeral Classifiers*. Mouton, The Hague.
- Bergman, B., Wallin, L., 2003. Noun and verbal classifiers in Swedish sign languages. In: Emmorey, K. (Ed.), *Perspectives on Classifier Constructions in Sign Languages*. L Erlbaum Associates, Mahwah, NJ, pp. 32–52.
- Bisang, W., 1999. Classifiers in East and Southeast Asian languages: counting and beyond. In: Gvozdanovic, J. (Ed.), *Numeral Types and Changes Worldwide*. Mouton de Gruyter, Berlin, pp. 113–185.
- Champollion, J.-F., 1836. *Principes généraux de l'écriture sacrée égyptienne*. Institut d'Orient/Michel Sidhom, Paris.
- Contini-Morava, E., Kilarski, M., 2013. Functions of nominal classification. *Language Sciences* 40, 263–299.
- Craig, C.G. (Ed.), 1986a. *Noun Classes and Categorization*. John Benjamins, Amsterdam.
- Craig, C., 1986b. Jacalteco noun classifiers: a study in language and culture. In: Craig, C.G. (Ed.), *Noun Classes and Categorization*. John Benjamins, Amsterdam, pp. 263–295.
- Craig, C.G., 1987. *Jacalteco Noun Classifiers: A Study in Grammaticalization*, *Lingua* 70, 241–284.
- Croft, W., 1994. Semantics universals in classifier systems. *Word* 45, 145–171.
- Denny, J.P., 1976. What are noun classifiers good for? Papers from the Regional Meeting of the Chicago Linguistic Society 12, 122–132.
- Dickinson, C., 2000. Complexpredicates in Tsafiki. *Proceedings of the Annual Meetings of the Berkeley Linguistic Society* 26 (2), 27–37.
- Dixon, R.M.W., 1982. Noun classifiers and noun classes. In: Dixon, R.M.W. (Ed.), *Where Have All the Adjectives Gone? and Other Essays on Semantics and Syntax*. Mouton, The Hague, pp. 211–233.
- Dixon, R.M.W., 1986. Noun classes and noun classification in typological perspective. In: Craig, C.G. (Ed.), *Noun Classification and Categorization*. John Benjamins, Amsterdam, pp. 105–112.
- Emmorey, K., 2002. *Perspectives on Classifier Constructions in Sign Languages*. L Erlbaum Associates, Mahwah, NJ.
- Gil, D., 2013. Numeral classifiers. In: Dryer, M.S., Haspelmath, M. (Eds.), *The World Atlas of Language Structures Online*. Max Planck Institute for Evolutionary Anthropology, Leipzig. Available online at: <http://wals.info/chapter/55> (accessed on 05.08.14.).
- Goldwasser, O., 2006. A comparison between classifier language and classifier script: the case of ancient Egyptian. In: Goldenberg (dir), G. (Ed.), *A Festschrift for Hans Jakob Polotsky*. Magnes Press, Jerusalem, pp. 16–39.
- Goldwasser, O., Grinevald, C., 2012. What are determinatives good for?. In: Grossman, E., Polis, S., Winand, J. (Eds.), *Lexical Semantics in Ancient Egyptian*, vol. 9. Widmaier. *Lingua Aegyptia Studia Monographica*, Hamburg, pp. 17–53.
- Grinevald, C., 2000. A morphosyntactic typology of classifiers. In: Senft, J. (Ed.), *Nominal Classification*. Cambridge University Press, Cambridge, UK, pp. 50–92.
- Grinevald, C., 2002. Making sense of nominal classification systems: noun classifiers and the grammaticalization variable. In: Wischer, I., Diewald, G. (Eds.), *New Reflections on Grammaticalization*. John Benjamins, Amsterdam, pp. 259–275. *Typological Studies in Language* 49.
- Grinevald, C., 2004. Classifiers. In: Lehmann, C., Mugdan, J., Skopeteas, S. (Eds.), *Morphology: An International Handbook on Inflection and Word-Formation*, vol. 2. Walter de Gruyter, Berlin/New York, pp. 1016–1031.
- Grinevald, C.G., Seifart, F., 2004. Noun classes in African and Amazonian languages: Towards a comparison. *Linguistic Typology* 8, 243–285.
- Lakoff, G., 1986. Classifiers as a reflection of mind. In: Craig, C. (Ed.), *Noun Classes and Categorization*. John Benjamins, Amsterdam, pp. 13–51. *Typological Studies in Language* 7.
- Lakoff, G., 1987. *Women, Fire and Dangerous Things: What Categories Reveal about the Mind*. The University of Chicago Press, Chicago.
- Matsumoto, Y., 1993. Japanese numeral classifiers: a study of semantic categories and lexical organization. *Linguistics* 31, 667–713.
- McGregor, W., 2002. *Verb Classification in Australian Languages*. Mouton de Gruyter, Berlin.
- Mithun, M., 1986. In: Craig, C.G. (Ed.), *The convergence of noun classification systems*, pp. 379–397.
- Rehg, K., 1981. *Ponapean Reference Grammar*. Pali LanguageTexts: Micronesia. University Press of Hawaii, Honolulu.
- Seifart, F., Payne, D., 2007. Nominal classification in the North West Amazon: issues in areal diffusion and typological characterization. *International Journal of American Linguistics* 73 (4), 381–387.
- Sands, K., 1995. Nominal classification in Australia. *Anthropological Linguistics* 37, 247–346.
- Seiler, H., 1986. *Language, Object, and Order: The Universal Dimension of Apprehension*. Gunter Narr, Tübingen.
- Seiler, H., Lehmann, C. (Eds.), 1982. *Apprehension. Das Sprachliche Erfassen von Gegenständen. Bereich und Ordnung der Phänomene*, vol. 1. Narr, Tübingen.
- Seiler, H., Stachowiack, F.J. (Eds.), 1982. *Apprehension. Das Sprachliche Erfassen von Gegenständen. Die Techniken und ihr Zusammenhang in Einzelsprachen*, vol. 2. Narr, Tübingen.
- Senft, G., 2000. *Systems of Nominal Classification*. Cambridge University Press, Cambridge.
- Schultze-Berndt, E., 2000. *Simple and Complex Verbs in Jamingjung: A Study in Event Categorization in an Australian Language*. Ph.D. thesis. University of Nijmegen.