Linguistic categories and linguists' categorizations [*]

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Abstract:
The article deals with the notion of category and the linguists' operations for delimiting linguistic categories. A threefold organisation is suggested that subdivides categories into features and features into values. Every word of a natural language can be categorically described via a matrix of values which represent the implementation of features, that, on their turn, are categorial properties. Since there exist many non-clear-cut cases, i.e. items which may paradigmatically belong to more than one category, it is necessary to use both a functional and formal approach in order to get a categorial definition of the items. The traditional 'parts-of-speech' seem still to be the best categorization, in spite of the fact that typology has become acquainted with languages that show very different morphosyntactic structures..

0. In linguistic literature it is more than usual to find the term *category* used for different conceptual objects such as 'verb', 'adjective', 'tense', 'evidentiality', 'dual', 'locative', etc. On the other hand cognitivists speak of abstract categories such as the colour categories 'red', 'yellow', 'blue' or 'green' etc., which receive different linguistic implementations in different languages. The term is assumed without much ado for very different meanings. It may be interesting to observe that the item *category* is lacking even in the index of the excellent manual on *Language Typology and Syntactic Description* edited by Timothy Shopen, though the third volume of that manual has the title 'Grammatical categories and the lexicon' (Shopen 1985).

The aim of this paper is to propose a more accurate definition of 'linguistic category'. As we shall see in more detail in section **6.**, it is necessary to distinguish between formal (i.e. morphological and/or syntactic) and semantic aspects of categories. The more so as there are categorial terms such as *predicate* which are used both in grammatical descriptions and related disciplines like logic and artificial intelligence. It is clear that for the latter the

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semantic aspect is more important, whereas the former has traditionally privileged a formal approach. A functional definition of linguistic categories has to consider both sides. No one-sided definition can be satisfactory.

Let us now come back for a while to the vagueness of many linguistic definitions from an epistemological point of view: In his plenary session lecture at the 17th. International Congress of Linguists in Paris (July 1997) Gilbert Lazard quoted Granger's inaugural lecture at the Collège de France, 1997. The well-known epistemologist labels linguistics as a 'proto-science', meaning by this that linguistics has not yet reached a categorial definition of its objects of inquiry. Lazard exemplifies this definitional uncertainty by the discussion of the so-called 'middle voice'. The middle voice shows different formation strategies in different languages and reflexivity or reciprocity are often blended with middle diathesis.

In spite of the vagueness of concepts such as 'middle', 'aspect' or 'mood' it is a fact that every language description, even of far exotic languages, necessarily makes use of categorial terms. Indeed, it would be difficult to think of a systemic description of a natural language without having recourse to some basic conceptual generalizations such as 'phoneme', 'morpheme', 'phrase' or, for that matter, also 'aspect', 'mood' (or 'modality'), 'voice' (or 'diathesis') and the like.

The point we have to discuss is whether these conceptual generalizations do really deserve to be dubbed categories.

A category is a set of objects which are considered as having common features. Some of these features can be shared by other objects, but not all of them at the same time (otherwise all the objects would belong to the same category).

In the very important collection of papers edited by W.P. Lehmann and Y. Malkiel in 1968, E. Benveniste contributed an insightful article on innovating and conservative mutations in linguistic categories (Benveniste 1968; for an insightful comment on Benveniste see Lazzeroni 1987:21-23). Benveniste's examples of innovating mutations

were, among others, the rise of the definite article in IndoEuropean languages (Germanic, Romance) and the creation of new adverb classes such as Engl. *-ly*, French *-ment* -both deriving from compounds- as well as the loss of the dual in most IE languages. As for conservative mutations he quoted the new Romance future forms with Infin. + *habere*, or the analytic comparison substituting older synthetic forms (Germ. *bewußter* --> *mehr bewußt* "more conscious").

The problem I want to discuss is whether the term *category* does really apply to the cases adduced by Benveniste. Since the problem is a principled one, I shall restrict myself to discuss morphological categories, the most familiar and best known category type in linguistics . In a principled way, there is no reason why the same arguments shouldn't apply to phonology, syntax or pragmatics as well -and in many cases we shall see that we have to consider a 'phonomorphosyntactic' perspective. However, definitions of 'topic', 'focus', 'illocutionary force' etc. -and even 'subject', 'object' and the like- have proved to be much more problematic than those relating to morphology, where categories are usually marked via explicit markers. Therefore, it will be useful to attempt the first steps in the domain of morphology.

1. General orientation works such as encyclopaedias do not usually consider linguistic categories specifically. One of the few general encylopaedias dealing specifically with linguistic categories, namely the *Encyclopaedia Universalis* (vol.18, *Thesaurus*, s.v. 'catégorie') writes as follows:

"on peut assigner aux catégories un rôle essentiellement métalinguistique: en effet, alors que la classe est l'ensemble des éléments de la langue présentant telle ou telle propriété, ce qui les rend mutuellement substituables, catégorie renvoie à des abstractions conceptuelles s'appliquant aux classes. Par exemple, la classe des noms supporte la catégorie du genre et celle du nombre; la classe des verbes, celle du temps, de la personne, du nombre, etc."

No matter which terms are used in this definition, the main point is that at least two different levels are to be kept apart: nouns and verbs represent classes, whereas, in this terminology, gender, number, tense etc. represent, class categories: VERB ==> tense, aspect, mood, diathesis, person, etc. I will return to this very important issue below.

We have to consider the rise of determiners (DET) in a linguistic tradition where determiners (articles) were originally not present as a real categorial innovation. This does not hold, however, for the above mentioned loss of the dual since the feature number still exists in the opposition of the values sing./ plur. (see **table 1**). Nor does it hold for the *hab*$e$re future forms (Lat. *cantare habet* → Fr. *chantera*) which do not introduce a new morphological class, but simply substitute a form in an already existing morphological paradigm. The categorial class underlying both the ancient and new future forms is VERB . In the case in point the category VERB is specified by the feature tense(/mood)[i] which on its turn is implemented by the value future (/ingressive, inchoative).[ii]

According to the definition proposed by Geoffrey Pullum (1994: 478) "a category [...] is a class or division in a general scheme of classification". To have a scheme of classification entails that we attribute to the class an internal structure of its own, which cannot consist merely of a list of tokens belonging to the class. The categorization procedure must also include a set of principles (or conditions) which are implemented at least in the prototypical instances (cp. Jackendoff 1983:82).

We have the following figure (from now on I will use " " to indicate features and < > for values):

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CATEGORY          "features"        <values>        (cf. Pullum 1994: 480, adapted)
-----------------------------------------------------------------------
VERB  ==>         ± tense
                  ± mood   ⇒   ⎡ ± indic. ⎤
                  ±aspect      |  ± subj. |
                  ±number      |  ± opt.  |
                     .         |     .    |
                     .         ⎣     .    ⎦
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The values <indicative, subjunctive, optative> etc. are the implementations of the feature "mood". Each feature will have its matrix of values, as well as each category will have its matrix of features. Note that the relation obtaining between CATEGORIES and "features" is not the same as that between "features" and <values>. The indicative _is_ a mood, whereas a mood _is not_ a verb. On the other hand, we can say that a verb _has_ mood, but we cannot say that mood _has_ the indicative.

Furthermore we may say that Lat. _scribit_ is a verbal form in the indicative, implying by this that this verbal form has mood determination, but we are not able to predict which mood (if any) has to have the category VERB. In other words the analysis process, which starts from real lexical items could be represented as follows:

CATEGORY <== "features" <== <values>.[iii]

The features and values given in the scheme by no means exhaust the possible characteristics. A verb may be characterized in different morphological systems by features other than "tense, "mood" , or "aspect" (e.g. "polarity")[iv] and a "mood" may have values other than <indicative>, <subjunctive>, or <optative> (e.g. <evidential>, <admirative>,etc.).[v]

Of course, this does not mean that the semantic contents expressed by morphological means in language A cannot be expressed by other means in language B.[vi] In other words modality may be expressed by other means than verb moods.

As Roman Jakobson once put it, languages differ not regarding what they can express but regarding what they must express, i.e. regarding the morphosyntactic features and values that are to be expressed in their systems (Jakobson 1963:84). Turkish has to make a choice between -_ml4_ and -_dlr_-forms and therefore the Turkish translation of, say, the English sentence "there has been an accident" has to be more committed and more precise about the grade of evidentiality than the English original: _kaza yapm34_ if I have been told that there was an accident and I was not present, but _kaza yapt3_ if I refer to an accident

I have personally witnessed.

«English, French and Kwakiutl speakers can entertain the same thoughts, but they will embroider or strip those thoughts as required by the language, when they come to speak them», Levinson 1997: 23.[vii]

Large-range cross-linguistic comparisons have recently brought to light many features and values previously unknown to the Western linguistic tradition. Typological comparison is about to uncover that some cognitive behaviours are cross-linguistically widespread in the sense that they are linguistically expressed by morphosyntactic means in many languages. 'Mirativity', as the grammatical expression of new or surprising, unexpected information, has been recently studied by DeLancey for Turkish, Hare (an Athabaskan language), Korean, Sunwar and Tibetan (Tibeto-Burman family): see DeLancey 1997. Dixon (1980: 380f.) has shown that some Australian languages have a "mood" (called <apprehensive>) used to refer to an undesirable event the speaker would like to avoid. Negative forms with tense distinction of personal pronouns are attested for Yoruba; Tagalog knows focus-markers (*ang* and *si*) expressing pragmatic strategies which are grammaticalized in the verb form in a kind of reference-tracking mechanism (cp. Foley & van Valin 1984, Chap.7), etc.

Large-range cross-linguistic comparisons will show that some features and values are more common than others and that, on the contrary, some other features and values are quite rare. However, also the manyfold values pertaining to the verbal feature "mood" -such as <optative>, <apprehensive> - may largely be reduced to the basic opposition 'realis ~ irrealis'. Consequently we will say that <indicative>, meant as the "mood" which predicates a real state of affairs or action, is a prototypical value of "mood" (on the prototypical definition of categories and values see below). What does all this mean regarding linguistic categories? Given the fact that different languages have adopted different values and also different features in their grammatical systems,[viii] is it legitimate to consider categories as

universally valid? Just as well as evidentiality or aspectuality may not be expressed by grammatical means in a language, one can logically expect that a category is lacking in a given grammatical system.

2.   This seems really to apply in some cases.

Note that I am not concerned here with the general, ontologic problem of what may be considered the universally valid notions of a Universal Grammar: 'Verbalkategorien' that represent the ways in which reality is linguistically mapped (usually assumed to be verbs, substantives, adjectives, and adverbs: see Laca 1986: 363 referring, among others, to Lyons 1966). My concern is here with concrete lexemes to be attributed to a specific part-of-speech ('Wortart'). If a language like Hausa says

(1) *mutum mai   alheri*
     person having kindness
     "a kind person";
(2) *yana da   alheri*
     he.is with kindness
     "he is kind" (Schachter 1985: 15)

and uses a noun instead of an adjective, this is not related to the general statement that a predication/attribution assignes a property *y* to an object *x* (in English an adjective to a substantive: *this person is kind / a kind person*) but to the very fact that Hausa has a closed and restricted class of adjectives. In other words we have to distinguish between universal semantic functions and their language-specific implementations, i.e. between the cognitive dimension of concepts and its linguistic realisation. It may happen that a language does not possess the category ADJ, but certainly it will possess a strategy to express the attribution of a quality/property *y* to an object *x* or to predicate that *x* has the quality/property *y*. This is entailed in the generally acceptable and universally valid definition of 'language' as a means of saying something about something or someone (a language 'essential universal': see Ramat 1987: 43f.).

In a well-known article of 1977 R. Dixon investigated sixteen languages (Hausa was one of them) where ADJ is scarcely represented, or hardly so (like Samoan or Yurok) and examined "where have all the adjectives gone", i.e. which categories most replace ADJ for expressing the adjectival function in adjective-deficient languages. Languages with no ADJ at all can be considered to have a kind of syntactic/morphological neutralisation between ADJ and the category or categories (VERB, NOUN) which so to speak have taken over the function of expressing 'property concepts', that is, those concepts referring to properties, qualities or characteristics of referents that are prototypically expressed by adjectives (cp. Thompson 1988: 167). However, in Dixon's article the universal validity of ADJ is nowhere questioned; Dixon, on the contrary, considers ADJ one of the major word classes along with NOUN and VERB

On the other hand, H.-J. Sasse has discussed in a valuable paper whether the notion of 'noun' has to be considered a universal category and maintained that Cayuga, an Iroquoian language of Canada, does not possess this lexical category as traditionally conceived on the basis of the European languages (Sasse 1993). The lexicon of Cayuga has 'roots' which must always appear endowed with affixes expressing pronouns, and aspect (also tense, mood, negation, etc.). Thus, a root never appears in isolation: e.g. the root *-nhoh-* "door" is realized as a predication: *kanhóha* "it is a door". "Table" is expressed with a complex 'word sentence': "she (impersonal pronoun: "people") makes her food thereupon". At the level of the word sentence there is no difference between predicable and non-predicable units, and there is no absolute distinction as far as aspectual and temporal marking are concerned (for further discussion of Sasse's analysis see below, note 13).[ix] Sasse's conclusion (1993: 219): "Nicht jede Sprache hat eine lexikalische Nomen-Verb-Distinktion". He assumes that categories have to be considered as language-specific clusters of features or properties, having formal as well as conceptual aspects. There exist no cross-linguistic abstract categories (p.195).[x]

It seems to me that both in Cayuga and Cahuilla descriptivity is the dominant strategy of naming objects of nature, or thinking and culture. A verbal structure has been lexicalized as a noun: a horse is called in Cayuga "it hauls logs", an arrow is named (described) in Cahuilla as "it is straightened". But is this enough for negating the existence of NOUN as a general category? Note first that similar metaphorical designations have become (and always may become) pure labelling nouns also in the languages where the category NOUN does exist beyond any doubt: cp. *corn* "grain, seed", originally "(what has been) worn-down", *parent* originally "(the person who) is bringing forth"; Lat. *penna* "feather" < **pet-s-nā* lit. "(she) serves to fly", *lūna* "moon" < **louk-s-nā* "(she) serves to give light", etc.: the descriptive strategy which makes use of derivational/inflectional forms is rather widespread.

Secondly, even if we are inclined to admit the absence of nouns in the above discussed languages, this is not detrimental to the claim that categories, as defined at the beginning of this paper, have a universal validity. The distinction between predication and nomination (i.e. between verbal and substantive function) is an 'essential universal' that derives from the definition of language accepted above. In this sense we may maintain that verbal function and substantive function are universal (cp. Coseriu 1974: 51).

Jelinek and Demers (1994) have provided an analysis of the syntax of Straits Salish (Northwest coast of North America) according to which these languages lack a NOUN/VERB contrast at the word class level; however, at the syntactic level it is always possible to make a functional distinction between predication and nomination, i.e. to make a distinction between a predicate phrase and an argument, or referent phrase. This distinction in languages lacking the categorial NOUN/VERB contrast may serve some of the functions served by the NOUN/VERB opposition in the languages that have it.

Above we have distinguished between universal semantic functions and their language-specific implementations. Likewise we have now to distinguish between definition and implementation of categories. If a phenomenon α is present in a language L_1, then there

are no logical arguments capable of excluding the possibility that α may appear also in L_2, $L_3, ...L_n$ (see Coseriu's 'universaux possibles': Coseriu 1974: 49f.). A categorial definition cannot be language-bound.[xi]

Kees Hengeveld (1992: section 4.5.1.) distinguishes between 'specialized' and 'non-specialized' languages: the former are those in which every (basic) category specializes in a particular function. English, with its formal distinction between VERB, NOUN, ADJ, and ADV, belongs to the specialized, i.e. differentiating, type.The more specialized a lexical class is, the less it is necessary to mark this class by means of syntax (or morphology). English -*ly*-adverbs can occur in (almost) every syntactic position since they are unmistakably marked as adverbs.[xii] Adverbs not marked via the -*ly* suffix are more bound to the sentence structure: *She* [*doesn't like*NEG.VERB] *to watch TV* [*like*ADV *he does*]COMPAR and not **like she doesn't to watch TV he does like* or other combinations. We can hypothesize that highly specialized languages will allow larger variation in the word order than non-flexible (i.e. differentiated and rigid: see below) languages.

Non-specialized languages divide into two major subgroups: 'flexible' and 'rigid' languages. Flexible languages are those in which a single part-of-speech may be used in different functions; rigid languages are those in which for certain functions a single part-of-speech may be lacking and which combine different functions in one and the same lexeme form.

```
(3a) Mandarin Chin. neige nühaizi liaojie      and      liaojie    de    nühaizi
                    DET  girl    understand             understand REL  girl
                    "that girl understands"             "a girl who understands"
(3b)                neige nühaizi piaoliang    and      piaoliang de    nühaizi
                    DET  girl    beautiful               beautiful REL  girl
                    "that girl is beautiful"            "a beautiful girl"
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Hengeveld (1992: 64) rightly points out that there is no reason to categorially distinguish between *piaoliang* "beautiful" and *liaojie* "understand" since they appear in the same morphosyntactic environments.

Samoan and Quechua are good examples of flexible languages: the former has no formal distinction between VERB, NOUN, ADJ, and ADV; the latter has just a twofold distinction between VERB on the one hand and NOUN/ADJ/ADV on the other. On the contrary, if Sasse is right, Cayuga would be a typical rigid language, since it would have no NOUN category but just verbal predicates, functionally acting as nouns.[xiii]

For the parts-of-speech problem we are now discussing, the relevant point is that languages may be disposed along a scale as shown in Table 1:[xiv]

Table 1. Scale of languages

	type	P a r t s	o f	S p e e c h		Languages
Fle	1	VERB/ NOUN/ADJ/MannADV				Samoan
xi	2	VERB	NOUN/ ADJ/MannADV			Quechua
ble	3	VERB	NOUN	ADJ/MannADV		Dutch/Ngiti
Differentiated	4	VERB	NOUN	ADJ	MannADV	Hung./Engl.
Ri	5	VERB	NOUN	ADJ	-	Wambon
gi	6	VERB	NOUN	-	-	Chin./Hausa
d	7	VERB	-	-	-	Cayuga (?)

The Hausa examples (1) and (2) show that this language lacks the ADJ class (with a few exceptions). Since *alheri* cannot be used as head of an NP but only in PPs with attributive function, nor as an attribute within an NP, Hausa is a rigid language -whereas Quechua is flexible inasmuch a lexeme can be used both as head of an NP, i.e. as a NOUN, and as attribute within an NP, i.e. as an ADJ (Hengeveld 1992: 64-66). But, still, we analyse Quechua, Cayuga or any other language according to the categorial parameters of 'nouniness', 'adjectiveness' and 'adverbiality': in this sense categories are not only objective, to be found in the scrutinized language, but also a linguist's operation (namely his/her categorizing).

Moreover, the case of Quechua points to the fact that identity of form does not entail identity of categorization, as we shall see in more details below (cp. ex.s (4) and (5a,b)).

Distributional, i.e. syntactic, differences may uncover the existence of hidden categories (see again ex.s (4) and (5a,b)).

3. For the moment neglecting the implicational statements that the above scalar scheme may suggest, we can now try to define the nature of the linguistic categories at different levels, namely at the functional *and* the structural one, minding that a one-sided definition will never be capable to account for the very nature of the facts. For reasons of space we shall examine just some major categories (which are also the most interesting ones).

As for VERBs, _a_) they specify what we say concerning a referent and describe states of affairs or events (they are 'event-denoting', or 'event-specific', in Anderson's terms: see Anderson 1997:14f.). As opposed to NOUNs, VERBs do not introduce autonomous referents . _b_) They usually have more than 0 valencies (excepting the so-called meteorological verbs). _c_) They are prototypically characterized by "tense, mood, aspect, diathesis, polarity" (see note 4), "number", and "person" (though they may have other features, too, like "gender": see below, under **4.**). _d_) They are heads of VPs.

The function of NOUNs is that of _a_) denoting an entity, i.e. to classify a referent by assigning it to a class of (mental) objects. As opposed to VERBs, NOUNs are not time-dependent (cf. Croft 1991:100, referring to Wierzbicka 1986; Anderson 1997: 14f.).; _b_) They introduce a discourse topic (Hopper and Thompson, 1984); _c_) Prototypically they have 0 valencies,[xv] and _d_) they may be endowed with the features "case, number, gender/class" (Schachter 1985: 8). Finally, _e_) they represent the head of a NP.[xvi]

NOUN properties _a_) and _c_) belong to the metalinguistic, logical level of analysis; _b_) refers to the discourse level (pragmatics), while _d_) and _e_) refer to the domain of morphology and syntax. It is thus clear that different levels are involved in an exhaustive description of a category.

ADJECTIVEs *a*) ascribe a quality/property to a referent. _b_) Prototypically, they have 0 valencies.[xvii] _c_) They modify a head noun, both in attributive or predicative function and consequently they may have agreement with the head. _d_) They may have "degrees" (<comparative, superlative, equative>), and *e*) they are heads of Adjectival phrases.

ADVERBs are modifiers of all the other categories -even of adverbs (e.g. *very well*), contrary to ADJs, do not show agreement, and, of course, they represent the head of an Adverb phrase.

DETERMINERs (articles, classifiers, demonstratives in adnominal position: see note 16) express ±definiteness. Syntactically their function is often that of marking the (initial/final) boundary of the NP.[xviii] Articles and classifiers cannot appear in isolation (**the*). As the adjectives, determiners may agree with their head nouns.

ADPositions, SUBordinators and COMPlementisers are lumped by Anderson (1997:20) under the label 'functors'.

By no means do the features reported here exhaust the phenomena connected to the above-mentioned categories. Conversely, there may exist strategies to express semantic values other than those considered thus far. Thus in Bambara definiteness is expressed by a low final tone on the noun and in Southern Lappish the important distinction +def vs. -def direct object is expressed via the opposition accusative vs. nominative (cp. Schachter 1985: 40f.) But the aim of this paper is not to describe the manyfold specific strategies used by different languages to solve problems of expressing semantic contents. What I am discussing here is the existence of general cross-linguistic categories and, accordingly, the well-founded possibility of categorizing.

4. The sharp opposition between the two theses (namely, "categories are language-specific" vs. "categories may only be universal") can in practice be made less severe if we take account of the following point. In language and linguistics sharp

boundaries are exceptions rather than the rule. "[...] fuzziness must not be treated as a defect in language; nor is a theory of language defective that countenances it" (Jackendoff 1983: 117). Categorization judgements admit of three answers: yes, no, not-sure (ibid.: 111). Allowing just yes/no as alternatives has caused much trouble in assigning this or that lexeme to category A or B and, more generally, in discussing the status of categories.

Considering categories not as monolithic unity but as (structured) bundles of features, and features as bundles of values frees us from being restricted to a yes/no solution.

Different categories may share the same features. VERBs usually have a number distinction just as NOUNs do. We have seen that Cayuga 'nouns' may have aspect suffixes.[xix] Bhat (1994) observes that, due to their high dependence on their head nouns, ADJs prototypically should not take 'nouny' inflectional endings marking case, number, gender or definiteness, since these specifications are usually already marked on the head nouns. English adjectives without agreement would therefore be more prototypical than Latin or Sanskrit adjectives. According to Bhat Sanskrit would indeed represent a typical instance of a language where the NOUN/ADJ opposition is fading away. But it's a matter of fact that due to their semantic function, ADJs often show the same features as their head nouns: "gender, number, case"; and there are adjectival lexemes that in specific contexts may be used as nouns:

(4) Ital. [*il/la giovane*]NP *sorrise*
     "the boy/the girl smiled".

The article-marked NP has *giovane* as its head noun. In (5a,b) the adjectival lexeme (*forte*, *veloce* "rapid") has an adverbial function:

(5a) *Le auto correvano   forte*ADV (/ **forti*ADJ) *sull'autostrada*
    The cars were running   fast   on.the highway
(5b) *I   treni correvano   veloce*ADV *nella notte*
     the trains were running fast   in.the night

Note that *forte* in (5a) cannot behave as an ADJ (**forti*), whereas in (5c) the plural *veloci* can

be just an ADJ, though the translation is the same as for (5b):

(5c) *I treni*PLUR *correvano veloci*PLUR *nella notte*

    In a language with rich agreement like Italian the morphosyntactic behaviour of a lexeme disambiguates its categorial status.[xx] Therefore the categorial definition of a lexeme has to take account of both functional (semantic) and formal (morphosyntactic) criteria.[xxi] Prototypically an ADV will not show any kind of agreement with the other parts of the sentence; hence (5a,b) contain an ADV and not an ADJ.

    Conversely, NOUNs can be used as ADJ, as in *the coffee is stone cold* :

(6) Ital. *Fa   un freddo   cane* / *Ha   una sfortuna   cane*
        It.makes a cold   dog /(S)he.has a misfortune dog
        "it is terribly cold"   /"(S)he has a terrible bad luck"

allowing also of a typical adjectival feature such as "comparison" (cf. Anc.Greek:

κύντερος, κύντατος "worse", "worst", lit. "more dog", "most dog", from *κύων* "dog").

    Ex. (7) shows <u>number</u> agreement between the head noun (*api*) and its adjectival noun:

(7) Ital. *Le api   regine*
      The bees queens
      "The queen bees".

Note that in other N+N constructs the second noun does not have "number" agreement with the first one (the head): *le buste*PLUR *paga*SING "the pay envelops", and not **le buste paghe*PLUR*.

    Consider also the following: "gender" is a feature prototypically connected with NOUN (and ADJ, inasmuch as ADJs show agreement with NOUNs). But there are many examples of VERBs endowed with gender distinction as, e.g., the 3rd Past Sg of Russian: *on čital* "he read", *ona čitala* "she read", *ono čitalo* "it read"; Czech *on čekal* "he expected", *ona čekala* "she expected", *to čekalo* "it expected", and also Arab. *kataba* "he wrote", *katabat* "she wrote", etc.

Features are not rigidly bound to categories; on the contrary they may extend over different categories in quite unexpected ways (N.B.: unexpected for a Eurocentric linguistics!). We already quoted the case of Yoruba pronouns having tense opposition.

This discussion shows that categories are not to be considered as waterproof boxes. Shiftings from one box to another (which, by the way, have recently deeply concerned discussions on grammaticalization processes) are always possible.

What is the word *like.* To decide whether it is a VERB, an ADJ or an ADV we need an appropriate morphosyntactic context. Categorial assignment has often been a one-sided operation based either on semantic, or morphological, or syntactic criteria only. Charles Fries provided a strict distributional criterion. For instance all the lexemes which may fill the blank in the string *The.... was good* and give a grammatical output will be nouns (*book, dog, cake, intention*, etc., but not *very, brought* etc.). Examples (4)-(6) show the shortcomings of such a one-sided approach. In order to get a viable definition of a linguistic category we have to consider all the aspects of linguistic structures, i.e. phonology, morphology, syntax and even pragmatics (see the case of Tagalog previously alluded to).

5. If what has been said so far makes sense it is now possible to propose matrixes for every lexical entry. A category is a set of feature specifications. And each feature admits of different realizations. Take for instance a Latin word such as *tabularum* "of the desks": its matrix will be as follows (adapted from Pullum 1994:480):

Tab. 2

```
CATEGORY   "features"        <values>
---------------------------------------------------------
+N   ==>    ⌈+"gender" ⌉ ==>  <fem>
            │+"number" │ ==>  <plur>
            ⌊+"case"   ⌋ ==>  <gen>
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As a second example consider Lat. *amabantur* "they were loved":[xxii]

Tab. 3

```
CATEGORY "features"          <values>
--------------------------------------------------------
+VB  ==>   ⎡+"mood"  ⎤ ==> <indic>
           │+"tense"  │ ==> <impf>
           │±"aspect" │ ==> <imperfective>
           │+"diathes"│ ==> <passiv>
           │+"person" │ ==> <third>
           │+"number" │ ==> <plur>
           │    .     │
           ⎣    .     ⎦
```

Clearly, for a form such as the above mentioned Russian *čital* , *čitala* , *čitalo* we

ought to add to this matrix the feature "gender". "Person", "number" and "gender" may have

the syntactic property of agreement (with the subject, the object or even other sentence

elements). But, clearly, this does not represent a new category -rather, as just stated

above, a property like many others features can have.

Let's now consider the following Turkish examples:

(8) *Türkiye büyük-tür.*   *Türkiye bir cumhuriyet-tir*
      Turkey big-3Sg./ASSERT.CLIT Turkey a republic-3Sg/ASSERT.CLI
      "T. is big. T. is a republic"
(9) *Istanbul-da hava   güzel-dir.   Ben Istanbulda-yım*
       Ist.-LOC   weather   nice-3Sg   I Ist.-LOC-1Sg
      "In Istanbul the weather is (usually) nice.[xxiii] I'm in Istanbul"
(10) *Türkiye küçük bir memleket değil-dir*
       Turkey small a country   NEG-3Sg/ASSERT.CLIT
       "Turkey is not a small country"
(11) *Siz kim-siniz? Siz öğ retmen mi-siniz?   Evet, ben-im*
       you who-2Pl? you teacher INTERR-2Pl? yes I-1Sg
       "Who are you? Are you (the) teacher? Yes, I am"

We see that the so-called *be*-verb suffix (in our examples *-tür/-tir/-dir, -yım/-im,* and

-siniz) may be added to ADJs and NOUNs (Ex. 8), suffixed forms as in (9), negation ADVs

as in (10) and even to interrogative adverbs, interrogative or personal PROs (Ex. 11). We

may consider the *-im/-yım*-suffix and the corresponding suffixes for the other persons

(*-tür/-tir/-dir* in (8)-(10), *-siniz* in (11)) as verbalizers in nominal sentences. Accordingly,

ADVs and ADJs may receive the features "person" and "number" (and "tense") which

prototypically belong to the VERB category. An entry like *değil-dir* (Ex. 10) will have the following matrix:

Tab.4

```
CATEGORY   "features"       <values>
-------------------------------------------------------
ADV  ==>       ⌈+"tense"   ⌉==> <pres>
               | +"aspect"  | ==> <imperfective>
               ⌊+"number"⌋ ==> <sing>
```

A similar case has been produced for Makah Nootka by Jacobsen (1979). In this language it is possible to provide with predicative (verbal) suffixes nouns, adjectives and also adverbs.

We conclude that, as already said before, different categories may share some features. Tab. 2 and 3 share the feature +"number". Moreover, differently from the phonological matrixes of Jakobsonian style which operated with only binary oppositions , these categorial matrixes admits also of ± solutions (see above).

6. Finally we have to mention a dynamic phenomenon which has already been alluded to, although implicitly: recategorization (or transcategorization).

In sections **4.** and **5.** it has been maintained that different categories may share the same features and that categories cannot be considered as waterproof boxes. This opens the way to possible shiftings from category A to B. It is quite easy to find examples of this evolution, and the literature on this topic has considerably increased in recent years.

First of all remember the very general (universal?) tendency to use nouns for body parts as locative Adpositional phrases, or even simple ADPositions (the 'body part model' of Heine, Claudi and Hünnemeier 1991: 125-137):

(12) *on/at the back of*

(13) *Please, call back* (ADV !) *this evening*

(14) Maasai *tá-me* "on, above" (<*"head-in"); Heine, Claudi and Hünnemeier 1991: 129.

We may also find many verbal forms used as ADVs or ADPs : e.g. imperatives such as *bar*, It. *tranne* "bar, except". Many languages have developed local or temporal ADPs from verbal forms which lost the link with their verbal paradigm. This is the case of French *pendant*, Germ. *während*, It. *durante* "during", the last one in itself an italianization of the OFrench *durant*. Lat. *trans* "through" is etymologically a present participle of a verb *trāre* which is found only in compounds such as *intrre.* In Hungarian converbs may become ADPs:

(15) *Mindenki   jön   János-t   kivéve*
     everybody come.3Sg John-ACC excepting
and
(16) *Mindenki   jön kivéve János*

both meaning "everybody is coming except John".

In (15) the converb *kivéve* still behaves like a verb assigning the accusative case to *János*, whilst in (16) it does not assign case and behaves like an ADP (more specifically like a preposition): cf. de Groot 1995: 289. It should be noticed that I am not speaking of derived (or even inflected) forms which may indeed change the original category of the so-called 'citation form', such as the adverbial suffixes *-ly, -lich, -ment* in English,German and French, respectively (*beautiful*ADJ*-ly*, *angeb*VERB*-lich*, *vache*NOUN*-ment*). My concern is here only with lexemes that have not changed their form.

(15) and (16) testify to a very important fact, namely that recategorization does not happen abruptly. On the contrary there are gradual steps along a continuum, which in some cases may be diachronically attested. Fr. *hormis* "except, bar" is attested in OFrench texts, still showing agreement:

(17) *hors mise*FEM *la   terre*FEM *Saint-Magloire* (cp. Kortmann & König 1992: 681).
     excepted   the country   S.-M.

The same holds for the already mentioned It. *durante*:

(18) *duranti*MASC.PLUR *adunque i nuovi fuochi* MASC.PLUR *della santa dea nel petto mio....*
    "while the new fires of the holy goddess where still burning in my heart..."
    (Boccaccio, 14th. cent.)

We may conclude that

«la graduale perdita della possibilità di concordare col soggetto in numero e genere è [...] un segnale di isolamento del participio dal paradigma verbale e di aumento della grammaticalizzazione», Giacalone Ramat 1994: 890.

Parallel to (15) and (16) we have in Italian (19) and (20):

(19) *Il comandante la compagnia*
(20) *Il comandante   della compagnia*
    The commander of.the company

In (19), which is nowadays totally obsolete, the participle still behaves like a verb and assigns to *la compagnia* the object role, whereas in (20) it is the head of an NP specified by a genitive.

Grammaticalization of forms which originally did not belong to the realm of grammar,[xxiv] or belonged to a different grammatical category,[xxv] is evidently a case of recategorization. And this holds true also for the reverse case, i.e. grammatical forms (morphemes,[xxvi] isolated verbal forms,[xxvii] even PROs[xxviii]) which assume lexical value.

But this is another story that would require another article. The conclusion of the present story is that basically the old 'partes orationis' of the classical rhetorical grammatical tradition are still the most useful approach to linguistic categories. As a matter of fact linguists go on speaking of 'verbality', 'adverbiality', 'nouniness', etc. (see above, section 2): I do not think that this is simply due to a Eurocentric perspective -rather, I would say- these categories do really refer to basic cognitive functions and behaviours which necessarily find their realizations in the linguistic predicative procedure. There are mixed flexible types and changes of syntactic category (e.g. VERB $\rightarrow$ N, N $\rightarrow$ VERB) but the typological comparison

confirms the validity of the parts-of-speech analysis we know from tradition. This conclusion is certainly not new; but the fact that a typological approach to the old problem 'what is a linguistic category?' does not provide revolutionary answers is certainly not irrelevant.

The difference between the traditional approach and the typological one resides in the fact that the former made no distinction between morphological behaviour and semantic function in syntax. Plato and Aristotle used *onoma* both as 'noun' and 'subject', *rhema* both as 'verb' and 'predicate' (cf. Sasse 1993:190). The typological approach takes account of both dimensions and keeps them distinct, so that a universal definition of the linguistic categories must consider the grammatical structure and the semanto-syntactic function (for the multi-layered definition of VERB and NOUN see section **3.** Above; cp. also Croft 1991:37).

The famous sentence of *Logical Structures in Language*

(21) *Flying planes can be dangerous* (Chomsky 1957)

receives different meanings according to internal criteria including distribution in sentence structure, ability to inflect for the various inflectional categories, and its syntactic functions.

7. At the beginning of section **3.** I have hinted at possible implicational statements suggested by scheme 1. There are indeed studies which, on the basis of more or less representative language samples, have argued that some category shiftings, such as those previously alluded to (VERB $\rightarrow$ N, N $\rightarrow$ VERB), are common, whereas no examples have been found of other theoretically possible shiftings, e.g. MannADV $\rightarrow$ VERB, MannADV $\rightarrow$ ADJ (de Groot 1997). The cross-linguistic data base is still too scanty for generalizations. However, considering the fact that VERB is the most widespread grammatical category, whereas MannADV is not present in rigid languages, it seems obvious to argue that more basic categories are likely to feed less basic ones, and not viceversa.

Similarly we may also conclude that the major categories will be present in the vaste

majority of languages, while their features and even more their values have a greater chance of being idiosyncratic: to come back to the first example of this paper, "diathesis" is a typical feature of the category VERB which is found in many (but not in all!) languages, while <reciprocity> ("each other") is a diathesis value which is morphologically expressed in just few languages. Distinguishing among three different categorial levels prevents us from being caught in the trap of the sharp opposition 'language-specificness vs. universality' already alluded to (see sect. **4.**)

Addendum

Only after completion of this paper did I read A.M. Vonen's highly interesting dissertation (1997). Chapter 2 contains a clear account of the history and a state-of-the-art discussion about the parts of speech. I am pleased to see that many of the ideas in the present article are shared by Vonen, such as the 'substantivization' of ADJs in Russian (*russkij* "Russian language" < *russkij jazyk*) or the 'verbalization' of NOUNs in Tokelau (*hēvae* 'shoes' > to wear shoes).

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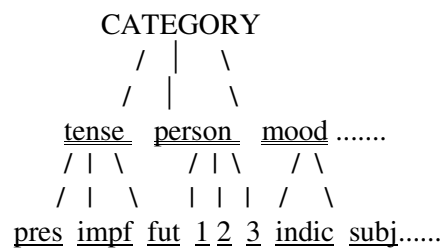in Language 10, 353-389.

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Notes

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[i] As is well known, future forms may in fact express intention, wishing, etc. rather than future time reference

[ii] As is well known, aspectual values can in fact be expressed by future tenses.

[iii] In a way, we could also represent the relation in a tree diagram(where dots mean that the analysis is not exhaustive) considering the category a superordinated *taxon*:

```
                    CATEGORY
                    /  |   \
                   /   |    \
                tense  person  mood .......
                / | \     / | \    / \
               /  |  \    | | |   /   \
              pres impf fut 1 2 3 indic subj......
```

Different terms have been proposed to account for the threefold distinction suggested here and in the text, such as 'word-class', 'super-category' and 'sub-category' (Haspelmath 1995: note 5, with further references). Evidently, it is not a matter of terminology: the point is that we should distinguish three different levels. Therefore distinguishing just between 'Kategoriengefüge' (our 'features') and 'Kategorien' (our 'values'), as Wurzel does (see, e.g., Wurzel 1987), is not sufficient, since the category level is yet not considered.

[iv] Polarity has <positive> or <negative>value: cp. Schachter, 1985:10.

[v] The label '(inherent) categorization' for "tense", "mood" and "aspect" as used by Thieroff (1994:3) does not seem very felicitous since it refers more to the categorizing process than to a state of affairs to be described. The main point, however, is that we have to distinguish between notions such as 'plural', 'indicative', '1st person' on the one hand and notions such as 'number', 'mood', 'person' on the other. The first are implementations of the latter. For other terms used to mark the same basic distinction see Thieroff 1994:3, note 1.

[vi] Cf., e.g., the use of adverbs such as *allegedly, reportedly* to express the non commitment of the speaker vis-à-vis the truth value of the utterance as opposed to the Turk. – *mI4*-conjugation (the so-called referred past):

i. *Hasan yine hastaym34* "allegedly H. is ill again" (vs. *Hasan yine hastad3r* "H. is ill again").

vii There is another aspect of the relation language ~ thought which is rightly pointed out by Levison in the following of the previous quote:«But it is also possible that as a result of those acquired habits of language production [the speakers] do indeed just entertain systematically different thoughts.» Though fundamental, this issue cannot retain us in the present frame. We are here concerned with assigning concrete lexemes to word classes.

viii "Aspect", for instance, is much less grammaticalized in Romance languages than in Slavic.

ix A similar situation has been described by Seiler (1974; 1975) in relation to the problem of language universals for Cahuilla, an Uto-Aztecan language spoken in Southern California:

i. *ne-né?a*
RELAT.PREF-basket-my (a woman is speaking)
  "(it is) my basket"
ii.   *né-at*
  0-Subj. root-ABSOL.SUFF
"the basket" (lit. "'basket' applies to (it)").

i. is a 'relational noun' whilst ii. is an 'absolute noun';

iii. *ne-néneh-qal*
  PERS.MARKER-redupl.verb stem-DURAT.SUFF
   "I am weaving a basket" (a woman is speaking)
iv. *ne-né?a*
  "my interweaving/interwoven" (abstract verbal noun).

x This is much on the relativist line already advocated by Sapir, Jespersen and many other linguists (especially those who studied North- and Meso-American languages: Salish, Nootka, Kwakiutl, etc.) : «no logical scheme of the parts of speech -their number, nature, and necessary confines- is of the slightest interest to the linguist. Each language has its own scheme. Everything depends on the formal demarcations which it recognizes» Sapir, 1921: 119 (quoted in Anward, Moravcsik and Stassen 1997: 168); «The principle here advocated is that we should recognise in the syntax of any language only such categories as have found in that language formal expression», Jespersen 1924: 50 (quoted in Bickel 1997:62).

xi "En effet, par rapport à une langue donnée, l'on peut uniquement se demander si une catégorie existe ou non dans cette langue et, si elle existe, quelle est sa manifestation matérielle", Coseriu 1974: 50.

xii See i. *Martin probably has lost the key of his house*

ii. *Probably, Martin has lost the key of his house*

iii. *Martin has lost the key, probably of his house*

Of course the meanings of these sentences differ according to the sentence parts focussed by the adverb.

[xiii] However, Marianne Mithun (in press) maintains that nouns and verbs are clearly distinguished lexical categories in Iroquoian languages; *ka-* of *kanhóha'* is a noun prefix and *-a'* is a suffix forming nouns -and not an aspect marker suffixed to a noun. See also Broschart 1997: 126.

[xiv] Adapted from Hengeveld / Rijkhoff /Siewierska 1997.(MannADV = Manner Adverb)

[xv] Exceptions are relational nouns such as *president*, kinship terms (one is *president* of something, *father* of someone) and a few other cases (perhaps partitives and measure nouns such as *dozen*, *handful, pound*, etc.)

[xvi] Also PERSonalPROnouns, as well as DEMonstrative (in pronominal function, ie. in non-adnominal position: e.g. *Those are yours*) belong hereto, inasmuch they represent contextually determined, i.e. shifting , referents: Anderson 1997:19. An interesting discussion which can only be alluded to here is where to place QUANTifiers. QUANT.s do not exhibit any distinctive formal morphosyntactic features of their own, so that they do not appear as forming a separate category. Cross-linguistically they exhibit very different morphosyntactic behaviours (see Gil, to appear, § 3.3). Consequently, I would be inclined to ascribe them to the DET category.

[xvii] Relational adjectives such as *full (of)*, comparatives or superlatives such as *better*, *best, latter, first* represent exceptions.

[xviii] E.g. i. Engl. *those young girls*
　　　　ii. Dan. *Han mistede* [*herredǿmm-et*]NP [*over* [*bil-en*]NP]PP
　　　　　　　　　he lost　　　control-the　　　　of　car-the
　　　　iii. Akan *Obea　ketewa　bi* / *Obea　ketewa　yi*
　　　　　　　　　woman small　　a / woman small　this (Schachter 1985: 40).

[xix] Again, the same holds for Cahuilla too:

i. *hen-?ámuwet ?acay-?a*
　me-hunter　　good-PAST
　'I was a good hunter –but I'm it no longer

　 (see Seiler 1995:40).

[xx] Though this is not always the case. In the following sentence

i. *Il　treno　correva　　　veloce　nella notte*
　the trainSG was.runningSG　rapidSG　in.the night

the (possible) agreement in singular of *veloce* does not permit to decide whether it has to be considered as ADJ or ADV. (There are other means that might disambiguate its status, such as position in the sentence and

suprasegmental features:

ii. [*Il treno veloce*ADJ] *correva nella notte*

iii. *Il treno correva, veloce*ATTR.ADJ *nella notte.*)

xxi Basically, it is the position held also by John Anderson: «classes are to be distinguished on a morphosyntactic ('form' and 'function') basis, but their cross-linguistic identification is based on 'meaning', the notional character of central members», Anderson 1997:3. I prefer to consider also syntax as characterized by formal criteria (e.g. in case assignment, mood determination etc.) and lump both under the heading 'form', reserving 'function' to semantics, though it is clear that also morphosyntax is by no means deprived of functional meaning. The main point is, however, that any class definition has to take account of both the formal and semantic aspect.

xxii It remains to be discussed whether the features are hierarchically ordered or not, i.e whether, for instance "person" is prior to "number" or viceversa, or whether "tense" should be considered before "aspect" or the other way round.

xxiii As opposed to *Bugün hava çok güzel* "Today the weather is very (*çok*) nice" - a sentence that has no general validity and is bound to a particular situation.

xxiv This is the case of the auxiliation process where verbal lexemes become used as auxiliaries (Engl. *shall* and *will*).

xxv This is the case of the present participles *pendant*, *während*, *durante*, *trans* etc. becoming ADPs.

xxvi E.g. (American) Engl. *ade* (from *lemonade*, *orangeade*) with the general meaning of "fruit juice"; *itis* (from *bronchitis* and the like) "sickness": see Ramat 1992: 550.

xxvii See, e.g., It. and Span. *comandante, cantante* "singer", *calmante* "painkiller", or Hung. *költö* "poet", *elárusító* "clerk, employee" (actually *-o* pres.participles of the verbs *költ* "to compose" and *elárusít* "to sell"), and even non-nominal forms of the verbal paradigm such as *deficit, affidavit,* It. *vaglia* (<Lat. *valeat*) "postal check". See Moreno Cabrera 1998.

xxviii See Germ. *duzen / siezen* "to address somebody as '*du*' / as '*Sie*' "