"Adjectives": one descriptive linguist's struggle with a "typological generalization"

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I. Introduction

This paper presents the view of a linguist who has described a particular language (I will here discuss Zande, a Niger-Congo language from the Ubangian subbranch) and is then presented with a specific typological generalization (I refer to Dixon's 2004 study of "adjectives"). As that linguist, I ask first, Where and how does Zande fit into the typological classification presented there, and does Zande satisfy the generalization that all languages have an "adjective" word class?

Simultaneously, I must consider whether I "trust" the typologist and accept that his results and conclusions are both notionally pertinent to my description and practically helpful to me in conducting it.

Dixon (2004:43) defines the relationship between typology and description as one of mutual dependence:

"Each of [typological] theory and description feeds the other. New results from language study go towards refining and amplifying the typological framework; and the framework should determine the way in which the description of an individual language is cast."

As I read it, this affirmation implies that typology cannot be inaccurate, only imperfect and incomplete; and that descriptions of individual languages can be errant if they ignore typology. Indeed, on the basis of a selection of known languages, typology reaches certain conclusions (in this case, regarding the existence of "word classes" with "(a) a prototypical conceptual basis; and (b) prototypical grammatical function(s)" (Dixon 2004:2)). It then becomes incumbent upon the descriptive linguist to discover how the language he studies can be seen to conform to, or conceivably nuance these conclusions.

Thus, the fact that, in Nootka utterances (purportedly as described by Swadesh 1938), there is, as it were, an "argument slot" and a "predicate slot", and that individual lexical roots can fill either slot, cannot be seen as either innovative or deviant with respect to a typological classification; rather, it constitutes only a *peculiar variation* on the word-class theme. Grounds for a noun/verb classification of the lexicon can be found there, but "this can be a rather subtle matter" (Dixon 2004:8). Such "subtle matters" are not evidence for movement away from a given typological alignment; they are rather the occasion for enlarging the scope and reaffirming the validity of the existing one.

It could be held that this view of typology is sustainable on the level of word classes, though hardly in many other domains of typological classification. Indeed, the word classes evoked: noun, verb, and adjective, are naturally reflected in the fact that human beings seem to recognize "things" such as kettles, yams, and cockles and to attribute both "properties" and "behaviors" to these things, e.g., know when a kettle, a yam, or a cockle is big and when (or how) a kettle, a yam, or a cockle is sitting or falling apart (according to a cultural classification). This is clearly a cognitive generalization which founds the affirmation that, since most human

discourse seems to involve saying something about something, there must be a class of words, namely nouns, to express that about which something is said, and there must be another class of words, namely verbs, whose primary role is to allow things to be said about the things nouns designate: what they do and how they relate to other things. When we add the class of adjectives, we simply allow that things may be apprehended through classification as kinds of (the same) thing (perhaps as what they *are*) before anything is said about what they do. This kind of reflection of the cognitive organization of the world in the structure of language is not available to found most other typological classifications[1].

Some support for the cognitive generalization might be obtained on a lexical level from verifying whether any given language has a word for 'thing' or, if things are classified, words for 'thing' of each given class; and examining any peculiar features of the use of such terms. In Zande, the Ubangian (Niger-Congo) language examined below, there are words for 'material thing', or at least 'objective thing', and 'thing for (sometimes conflictual) discussion, subject matter, affair'. Both show signs of grammaticalization[2].

Concomitantly, it might be asked whether there is a word for 'do' and whether this verb has peculiar properties, for example, having both transitive and intransitive uses as a kind of default verb. This is indeed the case in Zande.

And lastly, one could determine whether there is indeed an expression for 'kind, type (of thing)'. There are such terms in Zande (see below), which can be used synonymously.

These questions do not seem to have been investigated or even envisaged, perhaps because they are not amenable to typological classification on a large scale.

II. "Adjectives" in Zande

1. "Adjective" + Noun

According to Dixon (2004:22), "the prototypical NP has a noun as head and one (or, sometimes, several) adjectives as modifiers. When this scheme is closely adhered to, there is no difficulty in distinguishing between nouns and adjectives". At first sight, an "adjective" class can thus be easily established for Zande. Adjectives precede referring nominals, for example, gbíá 'chief':

(1)   bàkērē gbíá 'big chief', kùrú gbíá 'old chief', gbēgbèrè gbíá 'bad chief'

These two-term Zande noun phrases contain one term which refers to something, preceded by another which designates some attribute of the thing referred to: these are the modified "noun" and its modifying "adjective".

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[1]Consequently, my remarks here may address only a particular domain of, or particular approach to typology.

[2]The term for 'person' belongs to the same category and shows signs of grammicalization. In fact, one of the Zande pronouns may be traced etymologically to a Niger-Congo word for 'person'. Grammaticalization is cyclical.

2. The composition of the "Adjective" class

Zande has a large number of non-derived terms which can occupy the modifying adjectival position. In my own data, there are more than 200 such terms, and there are doubtless many more. The class is furthermore open; in the Central African variety of Zande, borrowed items have been added from the national language Sango and from Lingala, spoken in the neighboring DRC.

In addition, there are regular derivational processes which allow an adjective-like participial form (meaning 'having the property of being/having been... ') to be constructed from the *accompli* form of any verb[3]. The adjective 'bad' in (1) is derived, unlike either 'big' or 'old'.

3. "Noun-like" adjectives

Zande adjectives are clearly "noun-like" (Dixon's type A, 2004:15). To support this affirmation, it will suffice for the time being to remark that adjectives may optionally bear a redundant plural marker, à-, copied from the modified noun:

(2)   (à-) wéné à- gbíá {P- good P- chief} 'good chiefs'.

4. Attributive propositions

The examples in (1) are noun phrases. There is no way in which an adjective can be used alone in the predicate of an attributive proposition ('the chief is big', etc.) or in a comparative construction[4]. A change in tone pattern will, however, transform many (but not all) adjectives, both original and derived, into predicate modifiers ("adverbs") in verbal propositions:

(3)   ti gbēgbèréè 'fall badly, take a bad fall'.

Zande therefore belongs (like two other Niger-Congo languages cited by Dixon, Yoruba from the Kwa branch and Dagbani from the Gur branch) to set 1 of "languages with restricted functional possibilites for adjectives" (Dixon 2004:28). Zande, like Yoruba, can construct equative (identificational) propositions which, as a class, include (but are not limited to) those of the semantic type 'x is (an) Adj Y', where x is a member of the class Y[5].

More interestingly, Zande can construct attributive propositions using a locative/manner copula verb:

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[3]Since 1) there are (in my own data) about three times as many underived verbs as underived adjectives, 2) every verb also has a pluriactional form, 3) many verbs have one or more other derivates, and 4) each verb, derived or underived, has a participle, the regularity that the proportion of derived adjectives in the adjective stock is greater than the proportion of derived verbs in the verb stock (Dixon 2004:10) will indeed be respected. It is, however, unclear what implications this fact may have.

[4]Dixon notes (2004:11) that the latter use is an extension of the former.

[5]Dixon's examples (2004:28) are 'Olu is a good girl' and 'Ibadan is a large city'. Examples (8) and (29) below are examples of equative utterances.

(4)   gù gbíá ré à- dú nī gbēgbèrè kōò
       {D chief D PAST- C as/with bad 3SM}
       'that chief was bad'

(5)   rį́ à- dú nī wéné rį̀
       {3SF PAST- C as/with good 3SF}
       'she was nice/lovely'

(6)   gù bą̀mbú ré à- dú nī bàkērē hé
       {D house D PAST- C as/with big 3SI}
       'that house was big'

and so forth. In each case, the adjective must be followed by the possessive pronominal form agreeing with the nominal subject. Furthermore, the verb du in these examples is a past *accompli* conjugational form prefixing à-. In general, verbs also have a simple "absolute" form with no prefix, but du is defective in this form. If used in the utterances above, it would be represented by ø; that is, these utterances would be non-verbal[6].

III. Further details

    With the possible exception of attributive propositions (we shall return to the question below), the situation thus far seems straightforward. Now let us look at a certain number of complications.

1. Noun$_{Modified}$ + Noun$_{Modifier}$

    First of all, we must notice that Zande "nouns" can be modified by other "nouns". The modifying noun appears after the modified one. Thus,

(7)   kúmbá bį́ná {man farm} 'farming man, man who knows how to farm and is good at it'

2. Relational N + Noun$_{Modifier}$

    Zande has "relational nouns", nominals which cannot (in general) be used without a following modifier, for example, bā 'father (of)' and nā 'mother (of)'. These can be found in a general sense as bā gùdē {father child} and nā gùdē {mother child}. In other words, relational nouns are formally "nouns" modified by "nouns" with the peculiar property that (unlike kúmbá 'man' in 7) they cannot NOT be so modified[7].

3. Adjective/Noun$_{Modified}$ + Noun$_{Modifier}$

    Zande "adjectives" can be used as in the following example (used by a judge during a

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[6]A detailed presentation of the (fairly complex) situation in Zande can be found in Boyd (1998)

[7]Pronominal substitutes, i.e. possessives, can of course replace the modifying noun.

trial):

(8)   bàkéré ré ngáà gbíá
        {big 1S E chief}
        'my authority derives from the chief' (literally, my importance is the chief)

Since the modifying term is obligatory, this and other comparable examples lead us to the conclusion that "adjectives" can be found behaving exactly like relational nouns.

3'. A "subtle difference"

        Zande has two possessive forms, one for so-called "inalienable" and the other for "alienable" possession. Inalienable possessions are marked by a postposed pronominal in the Noun$_{Modifier}$ slot; alienable possessions are marked by a preposed pronominal in the "adjective" slot, preceded by the marker gā. Thus,

(9)   ndū kò {leg 3SM} 'his (own) leg' vs. gā kò ndū kàmīò {A 3SM leg vehicle} 'his wheel'.

        Some "relational nouns", particularly those denoting human body parts, are used in certain contexts without a following modifier, always with the general sense '*someone's* x', such that, if a postposed modifier were present, it would necessarily be the nominal bòrò 'person' or its indefinite substitute possessive pronominal -sè. This is hardly ever seen with "adjectives" (even those expressing "human propensities"), and when it occurs, as with pàràngá 'young, youth', the result is a "noun" meaning 'young man', i.e., a reference to the possessor of an attribute, not to the attribute itself ('youth', always requiring the postposed pronominal)[8].

4. N$_{Modifier}$ + N$_{Modified}$

        "Nouns" (lexemes designating "prototypical" things) can be found as precessive modifiers of nouns. These are sometimes relational nouns:

(10)   bā- vṵrū búndù 'canon' {male- belly gun} 'cannon' (i.e., gun with a big belly)
        zèkpè-zèkpè ngbā ángó {fleshy mouth dog} 'dog with a fleshy muzzle'

but non-relational nouns also appear:

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        [8]Let it be said in passing that Dixon seems not to appreciate this difference. He envisages only the case of "an NP whose head noun has been omitted" (2004:23), as represented by his English example "I like a good full-bodied red (sc. wine)" (2004:27). A contrasting example is provided by an utterance such as "black becomes Electra", where "black" is not any given black thing, even as general as "apparel", but may extend to her handbag, her nail polish, and even other features of her setting not in immediate contact with her. Of course, to get a third possibility of "the attribute of being black" rather than "the color black", English will want a nominal derivate such as "blackness" ("being in the black" seems to be a metaphorical use of the "full-bodied red" type).

(11)   wé ī̜mè {fire water} 'hot water'
        Zāndē kùà ré {Zande other 1S} 'my Zande neighbor' (vs. pá Zāndē {speech Zande}
        'Zande language', gbéré Zāndē 'Zande dance', etc.)

5. Possessive + Adjective vs. Adjective + Possessive

        The "alienable" possessive pronominal normally stands in initial position in the noun
phrase (preceded only by the demonstrative). Nevertheless, the possessive is sometimes found
after an "adjective":

(12)   bàkērē gā-kò sāpē {big of-3SM knife} 'his big knife'
        wī̜rí gìí mbē kpōrō {small of+1S owner village} 'my little local guy'

where we might easily expect to understand 'large size of his knife' and 'child of my local guy'.

6. Noun substitutes

        Given any noun phrase composed of a modified term and a modifier, both of which are
lexical, Zande can pronominalize one of the terms to form parellel substitutive constructions
corresponding to those found in English:

(13)   the tall man and the short *one*
        the big man and *his* neighbor

        The rules followed in Zande are these:

- If the first term is substituted and the second changed, the first term becomes ø and the second
term takes alienable possessive form. Thus,

(14)   fṵ̀à bòrò´ wà fṵ̀à ángó té
        {track person like track dog N}
        'a person's track is not like a dog's track'
        fṵ̀à bòrò´ wà gà ángó té
        {track person like of dog N}
        'a person's track is not like a dog's (that of a dog)'

(15)   gbīnzà kúmbá wà gbīnzà dē´ té
        {old man like old woman N}
        'an old man is not like an old woman'
        gbīnzà kúmbá wà gā dē´ té
        {old man like old woman N}
        'old men and women are not the same' (English, unlike Zande, has no simple substitution
        procedure in this case)

- If, on the other hand, the second term is to be substituted and the first changed, the second term
becomes the corresponding inalienable possessive pronominal, and the first term is replaced by
the new lexeme:

(16)   bą̄ngīrī gīnè´ nāà (pà) ngbā gīnè
        {eye road with (side) mouth road}
        'the middle of the road and the edge of the road'
        bą̄ngīrī gīnè´ nāà (pà) ngbā há
        {eye road with (side) mouth 3I}
        'the middle of the road and its edge'

(17)   gbāngā ngūà´ nāà gūrū ngūà
        {long tree with short tree}
        'the long stick and the short stick'
        gbāngā ngūà´ nāà gūrū hé
        {long tree with short 3I}
        'the long stick and the short one'

IV. Union of the general view and the details

1. Abolition of the lexical category "adjective"

        I have a simple explanation for these phenomena 1-6 which I now proceed to set forth. In order to understand people speaking Zande, one must first determine what they are talking about. It is not an easy matter in any language to enter a conversation without such knowledge, even when one brings to bear one's prior experience, which has shown that people often talk about certain things and rarely about others. Understanding usually comes after one has listened for some time and/or asked a few questions to clarify the subject. Suppose for example that one hears the noun phrase zų̀-zų́ ngūà. One should know that zų is a verb meaning 'bear fruit' and has, like any other verb, a participial derivate (zų̀-zų́) which is generally used as a modifier. One then concludes, in the absence of context, that the phrase means 'a tree which has borne fruit'. Likewise, if one hears the utterance

(18)   mį̀ bī̄ zų̀-zų́ ngūà {1S see fruit-bearing tree}

one will conclude that it means 'I saw a tree with fruit on it' (perhaps implying that the speaker could pick one and eat it). If, however, one hears the utterance

(19)   mį̀ rī zų̀-zų́ ngūà {1S eat fruit-bearing tree},

since general knowledge teaches one that people do not eat trees (or pieces of wood), whether they have borne fruit or not, one will conclude that one must understand 'I ate a fruit (picked) from a tree'. The same interpretation will hold for the longer utterance

(20)   mį̀ bī̄ ngūà, mį̀ kī- rì zų̀-zų́ hé
        {1S see tree, 1S CONSECUTIVE- eat fruit 3I}
        'I saw a tree and (then) ate its fruit'

        I therefore propose that in Zande there is no "adjective" lexical category; there is, however, an *adjectival syntactic position*. Given an otherwise unoriented noun phrase composed of two terms, simply knowing what people are talking about (i.e., what I would call "pragmatics")

makes it possible to determine which of the two is the head of the phrase. If this head is the second of the two, the first must be semantically an attribute and syntactically a modifier. If, however, the first term designates what is being talked about, the second is semantically relational and now syntactically a relational ("genitival") modifier[9].

Obviously, certain terms in the nominal lexicon are "predestined" for use primarily as modifiers in the adjectival position, and this shows up in frequency: I have innumerable spontaneous examples of bàkērē meaning 'big, important' modifying a following nominal, but only one in which it means 'large size, importance' and is itself followed by a modifier. By the same token, the nominal lexicon contains terms which are predestined to refer and hence be modified when circumstances require: wé 'fire' is a common referring nominal; its use in the adjectival position to modify a following nominal (as in 11) is extremely rare; its relational use as a modifier after another referring nominal, less so.

2. Indeterminacy in selecting the head of a noun phrase

When one knows what people are talking about, syntactic order is to some extent less important and ordering rules can be transgressed under the influence of other factors. Thus, in the case of zèkpè-zèkpè ngbā ángó (see 10): zèkpè-zèkpè 'fleshy' is predestined for the adjectival slot, and modifies a relational noun which normally has another postposed modifier. The speaker therefore naturally constructs a phrase to satisfy the expectations created by experience, even though the relational noun ngbā 'mouth', being itself a modifier of ángó 'dog', should *follow* the latter. But after all, the listener knows what the speaker means[10].

The fact that the head of a noun phrase is determined by pragmatic factors rather than by grammatical class has a further consequence, namely, the impossibility, or perhaps better, the uselessness of any choice of a head under certain conditions. This seems to be the case with the attributive propositions described above (4-6). Indeed, there are uses of the particle nī which must be understood in the sense 'in the form or manner of, like':

(21)   sí ngbá ré nī gúmbá há té
        {3I mouth+L 1S as say 3I N}
        'that is not something I would talk about'

and there are others where nī takes an essentially instrumental sense 'with':

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[9]In Zande, there is a fundamental structural contrast between between adjectival and relational noun modifiers. This is particularly evident in the use of the two syntactic positions to contrast the "alienable" (adjectival) and "inalienable" (relational) possessive pronominals. Nothing seems yet to have been said about any peculiar structural articulation of relational terms and "verb-like adjectives" (Dixon 2004:14) in languages which have the latter.

[10]Clearly, intentional shifting in order to obtain "metaphorical" or, let us say, "poetic" and "literary" effects can also come into play.

(22)   ká rį̀ nàá- rí -ngà hē´ ārèmè nī ngbā rį̀ té
        {if 3SF IRREALIS- eat -N thing today with mouth 3SF N}
        '[otherwise] she would not be eating anything with her own mouth[11] (= she would be alive) today'

Which of these possible interpretations should be placed on attributive predicates, as in (4): 'that chief was such (that he was) "an evil he"[12]' (with gbēgbèrè as modifier)? Or 'that chief was with his own evil (with gbēgbèrè as modified referring noun)[13]? Actually, there seems to be no good reason to choose one syntactic interpretation over the other. If the "associative" noun phrase is a simple association, and "headship" depends on pragmatic factors, there is no reason why "headship" should not be undecidable when the choice entails no semantic consequences.

The same view might be taken of a word such as rį́ká meaning 'kind, type'[14]. Is it truly a relational noun? So it might seem from

(23)   rį́ká ngbáyá bíátá
        {kind maize three}
        'the kinds of maize are three' (or 'kindwise maize is threefold'?)

Or is it adjectival? Doubt arises from the phrase:

(24)   gù rį́ká bàkērē gbátá
        {D kind big town}
        'a truly large town'

In fact, this is a term which, simply on account of its sense, requires no orientation of the phrases containing it.

3. Typological consequence

Zande is therefore a language unlike those in Dixon (2004) insofar as "adjectives are assigned exclusively to the noun class" (Hajek 2004:351). Indeed, the properties which distinguish "adjectives" from "relational nouns" (in particular, the possibility of appearing without a following nominal) are semantic and pragmatic in nature.

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[11]With body parts, the use of nī often connotes ipseity: 'with one's own'.

[12]There is nothing unusual about this interpretation: gbīnzà nį̄ì {old 3SDf} is 'the old one (among them)', gì-mí rį̀ {A-1S 3SF} is 'mine (my girl)'. In each case, the pronominal is the referring head.

[13]Note again that, in any case, the "predicate" in Dixon's sense is not a direct but a manner complement, hence circumstantial and "adverbial" (see Boyd 1998 for further discussion).

[14]I might equally well have chosen one of the words meaning 'true, real, identical', 'ordinary, insignificant', or 'small portion, small quantity of'.

V. Intermediate conclusions

Two negative attitudes to my interpretation are possible:
1) the interpretation I have provided is confusionism. Adjectives are adjectives and sporadic apparent uses of adjectives as "heads" of noun phrases (e.g., "fruit-bearing tree" for "fruit of tree") or nouns as adjectival modifiers (as "fire water" for "hot water") are just metaphors; the generalization stands.
2) The decisive examples are rare and insufficient to justify the interpretation provided:

"It can sometimes be a tricky matter finding criteria to distinguish 'verb-like' adjectives from verbs, or 'noun-like' adjectives from nouns...Criteria are not always of the definitive 'yes-or-no' variety ... [A] collection of statistical tendencies can combine to provide a satisfactory grammatical characterization of the adjective class ...
"As in every other aspect of linguistic criteria, the parameters and classifications are not watertight...[A]lthough for most lexemes in a language, their grammatical class membership can be unambiguously assigned, there are always likely to be a few fuzzy areas between classes... (Dixon 2004:45)"

Point-by-point examination should thus show Zande to be some kind of offshoot of a canonical case, associated with peculiar attributive proposition structure and the presence of an alienable/inalienable contrast[15]; the generalization stands.
A more positive attitude will at best allow that the generalization must somehow be inflected to account for my interpretation.
Which of these attitudes is adopted may well depend on the "trust" the typologist has of me. He will know that he is dealing with the "world expert on Zande", as he is dealing with the world expert on various other languages, to some of which (e.g., Tiba in the Adamawa subbranch of Niger-Congo, cf. Boyd 1999) I have devoted no more than a week's labor. But how exactly is he to evaluate my level of expertise, and guarantee that some future "expert" will not reinterpret my data or adduce new and contradictory data? When one considers that the typological classification of even very well known languages may be debatable (cf. the discussion of the notion of basic word order by Lightfoot 1993), the typologist is entitled to be skeptical.

VI. "Verbal adjectives"?

1. "Verbal adjectives", "participles", and "nominal adjectives"

The matter of "adjectives" in Zande does not end here, for in addition to the nominal lexemes discussed above, Zande, like many other languages in its family, has "verbal adjectives", i.e., some of the meanings classically associated with adjectives are expressed by verbs[16].

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[15]In fact, this latter supposition is manifestly false. An equally good case for adjectivial and relational syntactic positions can be made for the Adamawa language Chamba Daka which does not have the alienable/inalienable contrast and whose attributive propositions are much less clearly manner constructions.

[16]These verbs may generally be considered to be intransitive; nevertheless, a detailed consideration of the question would require that we take into account certain verbs which have

In quite a few cases, there is both a "nominal" and a "verbal adjective" expressing the same notion. Furthermore, since (as we have already seen) each verb has a participial form, derived by one of two types of reduplication[17] (which type corresponds to a given verb is unpredictable), there will be three ways of expressing the notion, two of them nominal (the "nominal adjective" and the participial form) and one of them verbal[18]. In some cases, the nominal adjective and the participle are synonymous and interchangeable (there is no essential difference between gbāngā 'long, tall' and gị̄gị̀zà < gị̄za 'be long, tall); in others, one of the two is dominant and the other hardly ever used (wéné 'good, beautiful' is far more common than ngbà-ngbá < ngba 'be good, beautiful'); and in others still, there is some tendency to specialization of meaning (kị̄kị̀ < kị̄- 'be big' tends to express fatness, kị̄kị̀ndìgì < kị̄ndig- < kị̄-, importance, weightiness, with respect to bàkērē 'large, important').

In some instances, "verbal adjectives" are polysemic while the corresponding nominal adjectives are not. Thus the verb hị̄ expresses both 'be full' and 'be swollen'. There are corresponding "nominal adjectives" expressing only fullness (or degrees of fullness), and others expressing only swelling or distension.

2. Notions expressed by both "nominal" and "verbal adjectives"

"Nominal" and "verbal adjectives" are found for at least the following notions:

DIMENSION/QUANTIFICATION
      large size, fatness, or importance
      large number or multiplicity[19]
      length
      small size, small amount, or thinness (but not insignificance[20])
      shortness
      depth (but not shallowness)
      narrowness (but not width)
AGE
      oldness (but not youth)

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what has been called an "internal complement", i.e., a single noun (or a very small number of nouns) which is not a semantic patient and bestows a particular meaning on the verb. Thus, one can use the verb aw- 'roast' transitively with a patient object as āwà pásị́á 'roast meat', but one will say that pásị́á āwụ̄ wé {meat roast fire} 'the meat (is) roasted'.

[17]Some "nominal adjectives" also have reduplicated form. Their tone pattern is invariably different from that of derived participial forms and they have no etymological relationship to attested verbs.

[18]Let us remark in passing that the *inaccompli* form of each verb gives the infinitive-like verbal noun, e.g., gị́zá 'the fact of being long, tall', and that some verbs have other irregular nominal derivates, e.g., bá-gị́zá 'length, height'.

[19]It is not evident why large size and numerical abundance should belong to different semantic categories.

[20]In all cases, the notions excluded are expressed by "nominal adjectives" alone.

VALUE/QUANTIFICATION
     goodness by quality or appearance
     dangerousness
     insipidity
     sufficiency, appropriateness, capability[21]
     insufficiency, inappropriateness, incapability
     strong odor
COLOR
     whiteness
     maturity (related to redness)
     immaturity (related to greenness)
PHYSICAL PROPERTIES
     curvedness
     flatness
     softness or suppleness (but not tightness or rigidity[22])
     transparency
     turbidity
     smoothness (but not roughness)
     fullness or swollenness (but not emptiness)
     threat[23]
     SPEED (fastness and slowness) may also be included in this category, although the use of terms expressing speed in noun phrases is rarer than their use as predicate modifiers ("adverbs")[24].

     SIMILARITY is also included if 'otherness' is indeed to be grouped with resemblance and difference: the latter are expressed by verbs, but 'other' is nominal (there is also a predicate modifier or "adverb" meaning 'differently').

     QUANTIFICATION is also concerned, if 'remain' and 'last, remaining' are given to this category.

2. "Verbal adjectives", participles, and "nominal adjectives" with the same etymological source

     In some cases, the "verbal adjectives" have, in addition to their participial form, a corresponding "nominal adjective" which is more or less clearly of the same etymological origin. These are from some of the same semantic categories as above:

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[21]Zande does not feel the need to distinguish among sufficiency (QUANTIFICATION), appropriateness (VALUE), and capacity (HUMAN PROPENSITY?).

[22]For whatever reason, there are transitive verbs for tightening but no intransitive verbs for being tight.

[23]The distinction between "physical properties" and "human propensities" is not always as clear as the typologist might wish.

[24]Some words expressing speed are used only in this function. They may be categorized as "ideophones". As in most African languages, verbs, whether adjectival or not, can be associated with one or more ideophones which express either intensity or nuance.

VALUE
      goodness of taste or sensation
      badness of quality or appearance
      mediocrity
COLOR
      blackness
      redness
PHYSICAL PROPERTIES
      coolness[25]
      dryness
      wetness
      hardness from age
      inanimateness

3. "Nominal adjectives" without "verbal adjectives" and vice versa

In the categories of PHYSICAL PROPERTIES and HUMAN PROPENSITIES, many notions are expressed only verbally (fa- 'be hot', tị 'be sharp (as a blade)', end- 'be proud, vain') or only nominally (sàkà-sàkà 'sharp (pointed)', ngbā-ngbā 'headstrong') for no evident reason. Perhaps some kind of semantic justification could be developed in other cases, as for example to explain why kinds of taste (sourness, bitterness vs. notions of savoriness and insipidity) or notions of ending ('end', 'die', 'be lost', 'disappear'; even 'tire' and 'have enough to eat') are only verbal.

DIFFICULTY is verbal; easiness is not distinguished from the physical property 'lightness', which is also verbal, as is heaviness.

With regard to POSITION, closeness and distance are verbal, but leftness and rightness are nominal.

CARDINAL NUMBERS (and terms expressing totality, 'all', and intensity, 'much') are circumstantial modifiers which follow the noun phrase but (as contrastive tonal behavior shows) are not in the relational position. The cardinal numbers may, however, be transposed to the attributive position before a referring nominal, in which case they take on ordinal sense.

4. How "nominal adjectives" differ from "verbal adjectives"

I have already mentioned the facts that
1) "verbal adjectives" tend to be more polysemic than "nominal adjectives" and
2) "verbal adjectives", unlike "nominal" ones, can be nuanced by the use of ideophones. There are two further important differences, namely,
3) verbs undergo derivational processes different from those allowed for nouns. There is, for example a causative derivation by which the verb 'be red' can take on the sense 'make red'. As a general rule, there will be no nominal adjective corresponding to such derivates; only the participial form will therefore be available to expresse 'reddened thing' (thing which has been made red).

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[25]The comment in a preceding note concerning the distinction between "physical properties" and "human propensities" is equally valid in this case.

4) Most importantly, "verbal adjectives" invariably have both perfective and stative senses, i.e., 'become bad, be bad'[26]. This is an important factor for comprehending why certain notions (particularly in antonymic pairs) have only nominal forms. Indeed, things that are old usually have grown old, but things that are young have not grown young. There is therefore no verb 'become, be young', and even the causative 'rejuvenate' would have to be expressed by the notion 'repair, mend'. In the same way, it seems obvious that ìwá 'raw, partially cooked' is naturally nominal, while wį̀ 'become, be cooked; heal, be healed' is easily verbal (though there is no particular reason why, as seems to be the case, there should not be a corresponding "nominal adjective"[27]).

It is not clear from Dixon (2004) exactly how this situation should be treated, and whether it would not be better simply to admit that "verbal adjectives" in Zande are only apparently adjectival insofar as there is no evident means of distinguishing them from other intransitive verbs. In particular, we may note that comparative constructions are of little help in establishing any classificational distinctions. Indeed, verbal comparatives are obtained by focalization and use of the polysemic particle tí whose meanings include 'on, in respect to, on account of, reflexive'. We can thus obtain

(27) dį́n bòrò´ ngbáà tí dį́n hēè
{steal person be_good+Fc over steal thing}
'"stealing a person" (committing adultery) is preferable to, better than stealing a thing' (punishment for the latter may be less than for the former)

But this construction is not restricted to "verbal adjectives"; cf.:

(28) à- dē´ rîî má'ngú tí à- kúmbá
(P- woman eat+Fc mango over P- man}
'women eat more mangoes than men, are more likely to eat mangoes than men'

The same is true of the bipropositional construction using the verb 'surpass' (widely represented in African languages), as in the utterance from which (24) is drawn:

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[26]It must be stressed that these are not flexionally induced senses, but arise from discursive context alone.
(25) rāgō´ gbērē tí kò gbè {place be_bad on 3SM}
usually means 'he grew unhappy, discontented', but could take on a stative sense 'he was always, naturally discontented' with further specification. Likewise,
(26) gù rāgō´ ré gbērē gbè {D place D be_bad much}
'that is/was a very bad (unpleasant, dangerous) place'
generally has a stative connotation, but in context could easily mean 'that place (has) deteriorated a lot'. Both of these utterances have the same simple *accompli* verb form.

[27]It can reasonably be assumed that there are "empty slots" in the Zande lexicon which could be filled by borrowing or other forms of lexical creation. Thus, there are verbs for 'be mad, insane', but the only nominal with this sense is fúù, borrowed from French (thus fúù bòrò 'mad person, lunatic').

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(29) kὺmbà Gbàrìa ngáà rí̧ká bàkērē gbátá, sí níkà- sūsà Bàngí
      {inheritance Gbaria E kind big town 3I FUTURE- surpass Bangi}
      'the town governed by the late Chief Gbaria is going to grow bigger than (the Central
      African capital) Bangui'

Compare:

(30) Bāmbūtī níkà- kḭ̧à à- kḭ̧à kī- sìsì Bàngí
      {Bambuti FUTURE- be_big EMPHATIC- be_big CONSECUTIVE- surpass Bangi}
      'Bambuti is going to grow bigger than Bangi'

(31) mò ná- gúndé tí à- nā-gbḭ̧à rò sìsì à- gūmè rò
      {2S PRES- fear on P- female-in-law 2S surpass P- relative 2S}
      'you would respect your mother-in-law even more than your own relatives'

VII. Final conclusions

I have suggested ways in which the import of my interpretation of the Zande data might
be mitigated or neutralized. If, however, they were to be *validated*, the question would arise
whether it is conceivable that further data from other languages (of Africa or elsewhere) could
roll Dixon's hypothesis back to the affirmation "humans can make a 'substance-attribute'
distinction and necessarily express it in their language". This affirmation would perhaps be non-
trivial cognitively, but trivial linguistically, as it cannot define the *mode* of expression.

On a wider scale, it is inevitable that the descriptive linguist, in the light of language
specificity (all the more patent when he begins to examine corresponding data from languages
in the same historical, geographical, and cultural setting), will wonder whether typology as Dixon
has represented it (I might call it "top-down") is truly helpful to him in his activities.

He might be more amenable to the approach expressed in the recent call for papers for
the concurrent workshop on "Current Issues in Areal Typology)":

"Over the past decade it has become increasingly clear that hardly any typological
variable is evenly distributed over the world; most reveal systematic areal skewings...
Such typological findings have renewed a strong interest in areal linguistics, but because
they often involve larger geographical areas than traditional *Sprachbünde*, they demand
new methods for testing and explaining areal skewings... With regard to explanation,
large-scale areas, and their exceptions, can often only be understood against what is
known from population history through genetic, archeological and social anthropology.
And proper understanding requires a detailed model of language contact and its effects
over (deep) time."

There must nevertheless remain a certain level of skepticism with regard to the "large-
scale" aspirations expressed there, particularly insofar as they are founded on a "detailed model
of language contact". Aside from the fact that such "detailed models" remain abstract with
respect to descriptive practice (see for example Nicolaï 2000), one would have expected a large-
scale *typology* to be founded rather on detailed *(micro)typologies*. I have already referred to the
difficulties involved in my being the sole student of the languages for which I propose a
particular explanation. Given that, barring unforeseen bestowal of a gift for tongues, my

descriptive possibilities are restricted to a small number of languages, a further difficulty lies in the absence of any regional or historical comparative study which might tend to show, through a study of microvariations, whether the situations I describe are widespread or limited in extent, and whether they are the upshots of another situation from which they can be derived or themselves give rise to other innovative behaviors. In sum, it is hard to understand why models should precede the (comparative) study of languages.

Creissels (2005:9-10) makes what I consider to be similar observations concerning word order:

> "the use of a constituent pattern other than *S-V-O-X* is commonly restricted to clause types characterized by the presence of overt predicative markers immediately after the subject. But the details of the conditioning greatly differ from one language to another, and no generalization is possible concerning the TAM and polarity values that trigger a constituent order other than *S-V-O-X*. There are also important differences in the range of nominal terms involved in the alternation, with the result that treating them indistinctly as in[s]tances of a variation between the canonical *S-V-O* pattern and the Mande pattern implies some dose of oversimplification. The three cases examined below [Atlantic Kisi, Kwa Attie, Kru Neyo] ... illustrate the heterogeneity of the constituent order patterns found among West African languages, and ... emphasize the necessity to gather more detailed and more precise information on this matter before any serious attempt to establish a detailed typology of the constituent order patterns found in West Africa."

This approach assumes that microtypologies (I might call them "bottom-up") could be formulated and that unions of diverse microtypologies could provide a clearer understanding of human language and phenomena of language change. Unfortunately, the resources for such ventures are not to hand. In the case of Africa, it is enough to watch the steady decline of recruitment into the domain of language study and the low level of interest in language-theoretical questions on the part of most African populations to convince us that there is no immediate prospect of advance on this front. But in the absence of the necessary foundations, large-scale typology must appear as conjectural, at times to an unacceptable degree.

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Abbreviations used:

1, 2, 3	first, second third person
A	alienable possessive marker
C	copula verb
D	demonstrative
Df	definite
E	equative
F	feminine
Fc	(tonal) focalizing marker
I	inanimate
L	(tonal) locative marker
M	masculine
N	negative
P	plural
S	singular

Annual Meeting DGfS, February 2006