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DYNAMICS OF ATTENTION FOCUS IN NARRATIVE DISCOURSE: THE PULAAR CASE by Andreij A. Kibrik (Moscow)

Attention focusing is one of the central cognitive mechanisms that govern discourse processing. The present paper has a twofold purpose. The theoretical purpose is to formulate deductively the major stages of attention focusing in narrative discourse. These stages, in the first place, include: introduction of a referent into attention focus (AF), maintenance of a referent in AF and wiping it off from AF. The descriptive purpose is to apply the proposed approach to the data of a particular language, namely Pulaar (Atlantic family). Each stage of AF dynamics in discourse is served by the corresponding formal means. Attention dynamics processes in Pulaar are affected by the grammatical features of the language, especially the multi-noun-class system reflected in anaphoric pronouns. If there are several focal referents their coding varies depending on whether they belong to the same noun class or different ones.

FUNCTIONS OF EVENKI VERBAL SUFFIXES WITH VARIABLE MORPHEME ORDERING (with special reference to Evenki and comparative data from other languages) by I.V. Nedjalkov (St. Petersburg)

This paper investigates morphemic ordering principles of Evenki verbal suffixes with special reference to suffixes with varying position with respect to the verb stem and other morphemes. Semantic (and other) factors leading to the 'violation' of the canonical morphemic order are examined. The following related problems are discussed: (1) degree of fusion (inseparability) vs. movability of verbal suffixes depending on the meaning of the suffix and the verb stem; (2) combinability of verbal suffixes in Evenki, and their semantic scope of movable verbal suffixes; (continued on page 3).

NUMERALS AND RELATED WORDS IN PENUTIAN AND WAKASHAN by Stefan Liedtke (München)

In an unpublished paper the author presented several hundreds of cognate sets between Wakashan, Salishan, and Penutian. These sets cover all semantic ranges of the lexicon and show regular sound correspondences.

Penutian includes, among others, not only the Mayan group of languages, but also the Quechua group of South America. Liedtke (1989) presented grammatical elements common to Penutian languages and Quechua. The present paper deals with numerals and related words in Wakashan and Penutian. For instance, Mayan **hun* 'one' finds its etymology as well as the numeral 'twenty' based on *win* 'person' in both Mayan and Californian Penutian.

Last, but not least, the **pen* (<*pal*) of 'Pen-utian' - the name for the family - was derived from two stems for 'two' - reoccurs in Northern Wakashan as **pal*, with a related meaning.

ARE PRONOUNS REALLY DIFFERENT FROM PRONOMINALS? by J. Gbenga Fagborun (Bradford; Ilé-Ife)

This comment (reacting to Adewole 1992) seeks to establish that the term pronominal, which in English includes 'personal pronouns', is a misnomer for some Yoruba language items that share basic features with both lexical NPs and 'personal pronouns'.

+ Linguistic News Lines

Short Reports: International Institute of Ethnological and Oriental Studies, an independent non-profit research and educational institution (A.F. Majewicz, Staszew); Arbeitsgruppe 'Bedrohte Sprachen' der DGfS; Yinka Dene Language Institute; Linguistic Society of the Philippines; Newcastle University Studies in Language and Speech (R. Leaser).

Computer Corner: The LINGUIST List (A. Aristar, Texas A&M University), Use of Computers in Comparative Linguistics (J. Gippert, Bamberg), The CTI Centre for Modern Languages (University of Hall, June Thompson).

T&U news (EUROTYP, adverbial relations; 5th Int Conf on Funct Grammar, Antwerpen)

& Calendar, news, information & linguistic advertising.

Dynamics of Attention Focus in Narrative Discourse: The Pulaar Case

by Andrej A. Kibrik (Moscow)

1. Pulaar

Pulaar is the Futa-Toro dialect of the Fula/Peul/Fulfulde language (Atlantic family: see Arnott 1970, Koval and Zubko 1987) spoken in Senegal.

Maintenance of reference in Pulaar sentence has been examined elsewhere (Kibrik 1987a, 1988:Ch. 4). Here I shall try to describe the dynamics of reference in Pulaar narrative discourse, viewed from the perspective of the speaker's attention distribution.

Several notes concerning the Pulaar grammar are due here. Pulaar is a mutli-noun-class language. There are 21 classes (see Sylla 1982), and the class membership of a noun determines its morphological, syntactic, and discourse properties. Every noun class is characterized by an abstract noun class marker, say, O (human class), NGU, NDI, and so forth. There exists a postposed definite article that formally coincides with the marker, cf.: gorko o 'the₂ man₁', mbuubu ngu 'the₂ fly₁'. Every class determines a set of anaphoric pronouns - subjective, direct-objective, indirect-objective (including possessive), emphatic, and extended (unmarked for syntactic function). Along with the class anaphoric pronouns there are special syntactic pronouns that occur only within the same sentence with their antecedents. Cf.:

		S	DO	IO	Emphatic	Extended
-----		-----	-----	-----	-----	-----
Class	O	o	mo	makko	kanko	oon
	NGU	ngu		maggu	kanngu	ngun

-----		-----	-----	-----	-----	-----
Syntactic		Ø	dum	muudum/mum	kañum	--

2. Terminological preliminaries

Among the cognitive regulators of discourse processing the distribution of the speaker's attention and especially the focus of attention play a crucial role. **Focus of attention** can be defined as a slot in the speaker's current memory that is filled at any given moment of discourse by one or a few referents spoken of (see Grosz 1977, Kibrik 1987b). The focus of attention is permanently updated and its contents are subject to quick replacement. A referent participating in the events narrated can approach or move away from the focus of attention at different moments of discourse.

Speaking in terms of discourse constituents, current attention focus (AF) is the clause level notion. The corresponding notion of the level of paragraph or whole discourse can be called global focus of attention or **focus pool** (of a paragraph or of discourse). The focus pool (FP) consists of referents being the major protagonists of the paragraph or of attention focus in discourse. First, a referent can be introduced into AF, maintained therein, and eliminated from AF. Second, a new referent can be introduced into current AF alone, or into FP at the same time; moreover, it can be reintroduced into AF when it is already in FP. Third, AF can contain one referent or more than one at a time. All these parameters affect the choice of linguistic devices coding the dynamics

of AF in discourse. The mechanisms of such choices used by Pulaar speakers will be shown below. The analysis is based on the published Pulaar texts verified with the help of my informant, and on a tale told to me by the informant himself.

3. Dynamics of AP in discourse

The first phrase of AF dynamics is AF formation, or the introduction of a referent into AF. This is done by the speaker with two or three full NP nominations of a referent. The standard sequence of nominations is as follows: full NP - full NP with a definite article - class anaphoric pronoun (not counting automatic syntactic pronouns). Cf.:

- (1) wonnoo do ko mbuubu_i ari, ø_i tawi ngaari <...>
 'It:was so that [a] fly came, found [an] ox <...>

mbuubu ngu_i sikki maa taw ø_i teddi no feewi
 The₂ fly₁ thought that (Ptc) it will:weigh much [sitting]

 e dow ngaari. ngu_i wii ngaari: ...
 on [the] top [of the] ox. It told [the] ox: ...'
(Meyer 1979:95)

Note that "the ox", not intended by the speaker to enter AF, is constantly coded with the unmarked full NPs.

In (1) the referent "the fly" is meant to enter not only AF but also FP. Referents entering only AF are usually introduced with a shorter sequence of nominations, not providing the persistent grounding of a referent:

- (2) laamdo o yetti neddo_i wii dum_i:
 'The₂ king₁ took [a] man [and] told him

 "yahanam to dobbo o!"
 Go:on:my:behalf to this₂ woman₁!"

o_i yehi to debbo o ...
 He went to the₂ woman₁ ...' (Collectif... 1978:34)

When AF is already filled with a referent, the referent often has to be maintained. The only means of long-term maintenance of focal referents are class anaphoric pronouns. If the referent is not forced out of AF by another referent, it can stay in AF for a relatively long time even without being mentioned:

- (3) ngaari-jinne ndi_i, ganndal mum_i hokki dum_i,
 'The₂ ox-jinn₁, his₂ knowledge₁ gave him [=he felt],

 taw ndi_i telliima hankadi, to ndi_i wi'ata
 (Ptc) he climbed:down then, [and] when he was:going (he)

indi_i
 [to]

 jawloo piɓol ngol doo, taw feetere jeynge
 grab the₂ amulet₁ (Ptc) (Ptc) [a] spark [of] fire

 diwi, dakkii e piɓol ngol he , piɓol ngol tayii,
 jumped, stuck to the₂ amulet₁ (Ptc), the₂ amulet₁ broke,

meemi leydi, ndi_i maayi
 touched [the] ground, [and] he [=the ox-jinn] died'
 (Meyer 1979:101)

The further stage of AF dynamics is the **elimination** of the focal referent from AF. In the following excerpt (it is the story told by the fly about events it witnessed) at the beginning there are two referents in AF - "the ox-jinn" and "the cows":

- (4) so weeeti, ko doon ngaari-jinne ndi_i jippinta
 'When it:dawns, just there the₂ ox-jinn₁ drives:down
- na'i di_j, di_j ndura. so jamma ari, o_i safa
 the₂ cows₁, they graze. When [the] night comes, he draws
- di_j, di_j njaha dow <...> o_i fa'i e safde di_j,
 them, they go up <...> [When] he began to draw them,
- njuuriimi e nagge woote, min njehi, mbaasmi
 I:flopped:down on one₂ cow₁, we started, I:didn't:have [to]
- yahde, njiirumi Kumba_k gitam de didi. o_k ari,
 walk, I:saw Kumba [with] my:eyes (Art) (two). She came,
- omo_k bira, mbii-mo(o)_k-mi : "Kumba!" o_k wii: ...
 She [began to] milk, I:told:her : "Kumba!" She told: ...
 (Meyer 1979:99)

In this example one can see two ways of wiping referents out of AF. The referent "the ox-jinn" is wiped off suddenly: it is no longer mentioned, and the narrated events do not imply it. The other referent, "the cows", is being wiped off gradually, it is extinguished little by little. The switch of attention onto a new referent "Kumba" is the signal of the completed updatedness of AF.

By the way, the easy introduction of the referent "Kumba" into AF is due to the fact that it is contained in the FP of the given text. That is, we here face not a mere introduction but a **return** of a referent into AF. The capacity of the multi-noun-class system sometimes makes it possible to return a referent into AF by using only an anaphoric pronoun. Thus in the following example the pronoun **mabbe** 'them' refers to the referent "the animals" that has not been mentioned for two pages but belongs to FP:

- (5) mbuubu naaraani ngol jam,
 '[The] fly didn't:listen [to] that [=those words] quietly,
- mbuubu diwi, yehi <...> ari e ma66e
 [the] fly flew:up, flew:away <...> [and] arrived to them'
 (Meyer 1979:97)

(Note that in this example there is one more pronoun occurrence exhibiting a peculiarity of the multi-noun-class system: in the first class the antecedentless class pronoun *ngol* stands for the word *konngol* '(magic) words'. Such cases of anaphora with the choice of a pronoun on the basis of cultural knowledge are extensively examined in Koval 1987:214ff.)

In (4) we observed how AF is updated step by step. Now consider a case of **abrupt replacement** of a focal referent. In the following excerpt the contents of AP (=the focal referent "the hyena") are replaced by a new referent:

- (6) noon tan haa o_i daanii, o_i daanii
 '[It was] so only until she fell:asleep, [as] she fell:asleep

This convention is effective and distinctive when there are two interlocutors. It is hard to explain why it is retained when three interlocutors participate in a retold conversation. At the beginning of the following excerpt a single referent is in AF and then two more referents join him:

- (12) o_i yettii tan, o_i hokki ḡinngel_j
 'He came only [=as soon as he came], he gave [the] son
debbo_k menkelde kanne. debbo_k o_k
 [of] [the] woman [the] pieces [of] gold. The₂ woman₁
 wii mo_j : "hol dokkudo ma dum?" o_j wii : "oo
 told him [=the son] : "Who gave you that?" He said: "That
 da". o_i wii : "miin de njidmi ko
 over:there" He [=the man] said: "As:for:me (Ptc) I:want (Ptc)
 yarde". o_k wii: "yarnu mo!" o_j
 [to] drink". She said: "Give:[some]drink [to] him!" He
 yarni mo_j (Collectif... 1978:34)
 gave:[some]drink [to] him'.

Here the last three boldfaced nominations are rather peculiar in the sense that they require for their interpretation prior understanding of the succeeding direct speech. My informant encountered great difficulties in analyzing this text. Apparently, the *O Wii* convention has become relatively independent of the pragmatic sources that produced it.

I have to mention two remaining types of AF dynamics that I was able to discover in Pulaar narrative discourses. The first of these is the **union** of focal referents. If there are, say, two referents in AF, and a complex referent consisting of these two referents participants in an event, this complex referent can be readily pronominalized. In the following excerpt the two interlocutors are "the man" and "the woman".

- (13) o_j wii : "<...> njidmi tan ko ndogden
 'He said : "<...> I:want only that we:run:away:together,
 njaaden". o_j wii: "njehehen!"
 we:go:away:together". She said: "Let's go!"
ḡe_{i+j} njaadi (Collectif... 1978:34)
 They went:together'

In the following text the complex referent *i+j* functions as a whole entity through a long chain of clauses. Then one more referent, "the husband" (=k) enters AF. Furthermore, the complex referent *i+j* undergoes **fragmentation**: the referent "the man" is isolated. This is done through a trivial device: the full nomination is used (with succeeding pronominalization). Then a new referent union is created:

- (14) omo_k ridda ḡe_{i+j} haa weeti, do o_k laarata
 'He pursued them until it:was:dawn, when he was:looking
 hebtaade ḡe_{i+j} do,
 [to] run:down them [=almost ran them down] (Ptc),
o_k fellli, o_k woofi, gorko_k o_i diwi
 he shot [and] (he) missed, the man jumped:down [from]

ngeloo₂ba mum_i. be_{i+k} pottii, o_i
 his₂ camel₁. They encountered [one another], he
 libi mo_k ... (Collectif... 1978:34-35)
 [=the man] downed him...'

In the last clause of this extract the *i+k* union breaks up. The referent "the man" is a member of FP and hence can be easily pronominalized in the autonomously referential position of the subject. The second focal referent is pronominalized in the nonautonomously referential objective position.

4. Conclusion

We have reviewed the major stages of the dynamics of attention focus in Pulaar narrative discourse. Among these stages are: introduction of a referent into AF, maintenance of a referent in AF and deleting it out of AF. Referents that only enter current AF are processed and coded differently from those that enter or are present in the focus pool of a paragraph or a whole discourse. Furthermore, AF can contain one referent or more than one referent at a time. This distinction affects strategies of processing and coding of focal referents. A relevant factor is also the difference vs. identity of the class membership of the simultaneously focal referents reflected in the choice of anaphoric pronouns.

Focal referents can coalesce together into a single whole; plural focal referents may undergo fragmentation.

Linguistic devices used for coding AF dynamics include, in the first place, various types of numerals full of NPs with or without definite articles, plain and extended class anaphoric pronouns), and minor conventions, such as autonomous referentiality of the subject position or nearly obligatory pronominalization applied to the author of the reported speech.

There are reasons to believe that when the cognitive perspective on language is generally accepted in linguistic studies, a description of devices used for coding the dynamics of attention focus in discourse will become an obligatory part of a full grammar of any language.

Footnotes:

1. In the examples, the functions of the words of the Pulaar text that are not required in good English translations are indicated in parentheses. Elements of glosses having no counterparts in the original text but necessary for the intelligibility of the translation are indicated in square brackets. In the glosses a colon is used if more than one English word corresponds to a single Pulaar word. Subscript number indices are used in the glosses if the order of words in a phrase or a clause differs from that in the Pulaar text.

2. Names of the referents, that is, their most neutral descriptive nominations, are indicated in double quotes.

Abbreviations in glosses: Art article, Ptc particle

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LANGUAGE AND COMPUTERS

Vol. 6 — NELLEKE OOSTDIJK: Corpus linguistics and the automatic analysis of English. Amsterdam/Atlanta, GA 1991. 267 pp.

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Hfl. 80,—/US-\$ 40.—

In recent years, corpus linguistics — the branch of linguistics that is concerned with the study of language use by means of large text corpora — has developed into a discipline in its own right, while continuing to be an important ancillary discipline to various other linguistic subdisciplines. Having emerged from the convergence of computational linguistics and descriptive linguistics, corpus linguistics stands out from other branches in linguistics mainly because of its methodology. It has gained access to linguistic data that previously could only be obtained on a very small scale or not at all while at the same time various techniques for the manipulation and interpretation of data have been discovered and/or further developed.

This book is an account of some aspects of the research in the field of corpus linguistics that was carried out at Nijmegen University from 1981 to 1989. While during this time several research projects were embarked upon, including projects aiming at the analysis of Modern Standard Arabic and European Spanish, the account presented here is restricted (basically) to the two research projects in which the author herself took part. The first of these projects was aimed at the design and implementation of computational tools for the automatic syntactic analysis of corpora, while the second project aimed at the syntactic analysis of a one million word-corpus of contemporary English.

Vol. 7 — JOS HALLEBEEK: A Formal Approach to Spanish Syntax. Amsterdam/Atlanta, GA 1992. 360 pp. ISBN: 90-5183-321-0

Hfl. 120,—/US-\$ 60.—

The use of the computer as an instrument for the linguistic research of Spanish has become increasingly important over the last few years. Still, until now a coherent, formal description of Spanish which incorporates lexical, morphological and syntactic aspects in a single model has been lacking. Such a description is vital for the development of parsers for automatic grammatical analysis. This study aims to make up for this deficiency. A great number of structures of contemporary written Spanish is analyzed and translated into formal rules. Together these rules make up a complete grammar and lexicon. By means of a parser generator the grammar and the lexicon have been converted into a computer program for automatic morphosyntactic analysis. The study evaluates the grammar on the basis of the results of the analysis of arbitrary text fragments. The presentation of the formal grammar is preceded by an introduction into descriptive Spanish linguistics and a survey of projects in the field of automatic sentence analysis of Spanish. The book was written with a primarily linguistic objective, but it is also intended for computer scientists who take an interest in linguistic applications of computer science.



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