WOLOF: A LANGUAGE WITH NO DIRECT OBJECT*

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0. Introduction

Relations like Subject, Direct Object (DO), and Indirect Object (IO) have other things, they comprise a wide variety of semantic sub-classes. For example, in the following sentences,

(a) he came upon the antelope   (= encounter)

(b) he came up on the antelope   (= stalk),

the semantic relation of <u>he</u> to the verb in (a) is quite different from its relation to the verb in (b): in (a), the action is accidental while in (b) it is intentional. Nevertheless, in both (a) and (b), <u>he</u> can be shown to be the Subject, regardless of the semantic disparity: e.g., the form <u>he</u> alone is acceptable, as opposed to <u>him</u> or <u>his</u>; <u>he</u> must occur in pre-verbal position; and so on. Across languages, Subjects tend to manifest certain properties (Keenan 1976) - positionally, morphologically, syntactically, semantically.

The other grammatical relations - DO and IO - have not received as much attention as Subject but the case for each category within a particular language rests on the same kind of argument: can it be demonstrated that semantic relations are as diverse as those in (c-f)

(c) he built the house

(d) he burned the house

(e) he saw the house

(f) he liked the house

(where in (c), the house is created - in (d) it is destroyed; in (e), it is simply perceived; and in (f) it is the source of an emotion) are sub-classes of some larger class, namely, DO? Such a semantically heterogeneous class could be shown to exist if certain properties obtained across all (or most) of the sub-classes - position, case-marking, verb-agreement, pronominalization, and so on. So, in many languages, the DO will have a distinct inflection - as in Turkish:

(c') o   ev-i   yapti
      3sg house-DO built
      "he built the house"

(d') o   ev-i   yakti
      3sg house-DO burned
      "he burned the house"

(e') o   ev-i   gördü
      3sg house-DO saw
      "he saw the house"

(f') o   ev-i   sevdi
      3sg house-DO liked, loved
      "he liked the house"

or, it will have a distinct pronominal form - as in French:

(c") il l'a construite   (l' = maison "house")
      he it- built
      "he built it"

(d") il l'a brûlée
      he it- burned
      "he burned it"

(e") il l'a vue
      he it- saw
      "he saw it"

(f") il l'a aimée
be it- liked
"he liked it"

(where naison would otherwise pronominalize as Subject elle or IO lui).

In this paper, I attempt to show that there is no DO in Wolof, a Niger-Congo language of Senegal (West Africa). To do this, I examine a number of cross-linguistic DO properties -

1. Position
2. Case-marking
3. Verb-concord
4. Pronominalization
5. Reflexivization
6. Passivization
7. Ergativization
8. Clefting
9. Topicalization
10. Relativization
11. Nominalization
12. Object-incorporation
13. Equi-NP constraints
14. Comparative reduction
15. Causative denotation -

for their reflexes in Wolof. I do not expect all (or even most) of these properties to show up in any one language. In one language, perhaps, only position (say, immediately post-verbal) would be used to signal DO_i in another, there might be verb-concord and passivization; and so on. But if none of these properties can be detected, then we can fairly conclude that there is no DO in that system.

The Keenan-Comrie hierarchy (1977) claims that the grammatical relations Subject, DO, and IO are "accessible" to certain morphological and syntactic processes in the order Subject first, DO second, IO third. For example, a language does not have verb concord with DO if it does not also have it with Subject; it does not relativize IO if it does not relativize DO; etc. The K-C hypothesis forces us to predict that if Wolof fails to manifest DO, then it must likewise fail with respect to IO. Subject, of course, is in no way implicated by the lack of DO.

1. Position

Wolof is an SVO language, as illustrated in the following sentences:

(a) <u>xale bi fecc nǎ</u> (ci mbedd mi)
child the dance ASP in street the
"the child danced (in the street)"

(b) <u>jigeen ji nekk nǎ doktor</u>
woman the become ASP doctor
"the woman became a doctor"

(c) <u>góór gi dóór nǎ xale bi</u>
man the hit ASP child the
"the man hit the child"

(a-c), in their intended senses, are ungrammatical in any other order: e.g.,
<u>xale bi dóór nǎ góór gi</u> can only mean "the child hit the man." The only
exception to this strict positioning of Subject-Verb-Complement(s) is the
equational sentence:

(d) <u>man doktor laa</u>
1sg doctor COP-1sg
"I am a doctor"

(e) <u>góór gi xale lě</u>
man the child COP-3sg
"the man is a child"

(f) <u>yaw xaj ngě</u>
2sg dog COP-2sg
"you are a dog"

But, of course, if one considers <u>doktor</u>, <u>xale</u>, etc. as predicates (with <u>laa</u>,
<u>lě</u>, <u>ngě</u>, etc. as person-number markers), then the V-final aspect is no more
than other complement-less predicates like <u>xiif</u> "hungry", <u>rey</u> "big", <u>rus</u>
"embarrassed", and so on.

The question posed by sentence (c) above is whether immediate post-verbal
position is a DO property in Wolof. Considering just two-argument predicates,
we find, of course, that this is true: e.g., <u>góór gi gis nǎ xale bi</u> "the man
saw the child," <u>xale bi dóór nǎ xaj bi</u> "the child hit the dog," etc. But posi-
tional property of DO is not established until the ordering possibilities
of IO are known. In Wolof, there is no positional preference.

(g) <u>jigeen ji jox nǎ gaynde gi góór gi</u>
woman the give ASP lion   the man the
"the woman gave the lion to the man"
"the woman gave the man to the lion"

(h) jigeen ji jox nē góór gi gaynde gi
    woman the give ASP man the lion the
    "the woman gave the man to the lion"
    "the woman gave the lion to the man"

The same interchangeability of position without change of meaning can be shown for verbs like jaay "sell," sanni "throw," and qol "feed." It is definiteness, not order, that has an effect on the interpretation of Patient and Recipient:

(i) góór gi jox nē xale bi muus
    man the give ASP child the cat
    "the man gave a cat to the child"
    *"the man gave the child to a cat"

(j) góór gi jox nē muus mi xale
    man the give ASP cat the child
    "the man gave a child to the cat"
    *"the man gave the cat to a child"

The only constraint on the positioning of non-clausal complements seems to be in terms of prepositional marking:

(k) (i) góór gi teg nē muus mi ci tabal ji
       man the put ASP cat the on table the
       "the man put the cat on the table".

(ii) góór gi teg nē ci tabal ji muus mi
      man the put ASP on table the cat the
      "the man put the cat on the table"

(ii) is acceptable but less natural than (i).[1] What this means is that the basic order of constituents in the verb phrase is felt as

    VP: V   (NP)   (NP)   (PP)   (PP)

where notions like DO, IO, etc. are not relevant (unless one wishes to extend DO to such NP as doktor in jigeen ji nekk nē doktor "the woman became a doctor").

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[1] ci is optional with a verb like teg, so that forms such as góór gi teg nē tabal ji muus mi and góór gi teg nē muus mi tabal ji occur. Interestingly, whatever the order of the complements, the sense is "... the table on the cat", and no other. The constraint, it seems, refers to animacy - in general, a property of the Goal-Recipient in Wolof. This same semantic constraint manifests itself in several other constructions as well.

This preference for unmarked over marked nominals and in the order unmarked-marked, is worth taking note of. The sentence xale bi dem në (ci) butik bë "the child went to the store" shows the optionality of the locative/ directional particle ci. Note then the contrast in the comparative:

(l) (i) xale bi gën në dem butik bë lekool bë
     child better go store   school
     "the child went more to the store than to the school"

(ii) *xale bi gën në dem ci butik bë ci lekool bë

The constraint is not limited to "primary complements" but includes secondary adjuncts like instrumentals as well:

(m) (i) xale bi gën në bindd-ó estilo bii estilo bë
             write-AUG pen this pen that
     "the child wrote more with this pen than with that pen"

(ii) *xale bi gën në bindd ag estilo bii ag estilo bë
                    with   with

Finally, when clausal complements are involved (for example, with verbs like wax "tell"), the simplex NP complement must follow the verb immediately:

(n) (i) góór gi wax në [jigeen ji [ne xale bi dem në...]
     men the tell ASP woman the that child the go ASP
     "the man told the woman that the child went ..."

(ii) *góór gi wax në [ne xale bi dem në...]
      jigeen ji;

and this complement, jigeen ji, is clearly IO in other languages. Thus, the notion "post-verbal position" does not seem to be the property of any one large heterogeneous class of NP. (In the section under Verb Coding, however, we will see it as the property of a restricted class, "semantically" characterizable.)

2.   Case-marking

Some languages mark their NPs for the case relation they bear to the

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2 The only way to retain prepositional marking is to accord each phrase its own clause, by means of the cleft construction (see section 8).

predicate: e.g., Japanese ga for Subject, o for DO, ni for IO. As sentences (g-j) of section 1 show, Wolof does not case-mark for any grammatical relation. Prepositionally, it uses a general locative-directional particle ci (which can also function pronominally), and comitative-instrumental particle ag (which can also function as a coordinating conjunction).

ci xale bi dem nǝ ci lekool bi
child the go ASP to school the
"the child went to the school"

xale bi teg nǝ teere bi ci tabal ji
child the put ASP book the on table the
"the child put the book on the table"

xale bi jǝl nǝ estilo bi ci kǝr gi
child the take ASP pen the in house the
"the child took the pen in the house"

xale bi daw nǝ ci guddi
child the run ASP at night
"the child ran at night"

ag xale bi dem nǝ ci butik bi ag gǝǝr gi
child the go ASP to store the with man the
"the child went to the store with the man"

xale bi jaxase nǝ ndox ni ag farin si
child the mix ASP water the with flour the
"the child mixed the water with the flour"

xale bi bindd nǝ letar bi ag estilo bi
child the write ASP letter the with pen   the
"the child wrote the letter with the pen"

xale bi gisё nǝ ag jigeen ji
child the consult ASP with woman the
"the child consulted with the woman"

As is clear from the above, ci and ag mark what would traditionally be called "adverbial" relations and "oblique" complements.

3. **Verb Coding**

Some of these adverbial relations and most of the oblique complements can

be marked in the verb itself with the suffix -ē, which generally renders the prepositional sign dispensable. For example, instrumental ag estilo "with a pen" can also appear as

> a xale bi bindd-ē nē estilo
>   child the write-AUG ASP pen
>   "the child wrote with a pen"

But this augmentation of the semantic scope of the verb does not affect the admissibility of its primary arguments; thus,

> (b) xale bi bindd-ē nē letar bi estilo
>   child the write-AUG ASP letter the pen
>   "the child wrote the letter with a pen"

> (c) xale bi bindd-ē nē letar bi gōōr gi estilo
>   child the write-AUG ASP letter the man the pen
>   "the child wrote the man the letter with a pen"

In other words, there is no displacement of the original range of the predicate - but simply an augmentation. In fact, beneficiary phrases can only be introduced in this secondary manner:

> (d) xale bi bindd-al nē jigeen ji letar bi
>   child the write-AUG ASP woman the letter the
>   "the child wrote the letter for the woman"

> (e) xale bi woy-al nē jigeen ji ay woy
>   child the sing-AUG ASP woman the some song
>   "the child sang some songs for the woman"

Alone among the complement phrases, whether basic or augmented, Beneficiary are strictly positioned immediately after the verbal word: sentence (f)

> (f) xale bi bindd-al nē jigeen ji gōōr gi letar bi
>   child the write-AUG ASP woman the man the letter the
>   "the child wrote the letter to the man for the woman"

>   *"the child wrote the letter to the woman for the man"

is thus unambiguous. But being restricted to the Beneficiary relation, this positional constraint can hardly be considered a DO property.

It is important to note that these secondary augmentations of the predicate

do not create DO, but serve merely to bring more peripheral or "oblique" adjuncts into the complement orbit of the verb. For example, sentence (g) is ambiguous:

(g) xale bi jël ne tééré bi ci kër gi
     child take book   house
     (i) "the child took the book in the house" (in, not into)
     (ii) "the child took the book from the house"

Interpretation (i) suggests that ci kër gi is a S-level locative adverbial, not especially constrained by a predicate like jël. Interpretation (ii) treats ci kër gi like a complement of jël; and indeed, sense (ii) can also be expressed by sentence

(h) xale bi jël-é né tééré bi ci kër gi
              take-AUG
     (i) *"the child took the book in the house"
     (ii) "the child took the book from the house"

Notice that sentence (h) cannot have the S-level locative interpretation: the facts suggest that the augment -é demands that a second complement be understood, and this requirement rules out interpretation (i). Sentence (g) is ambiguous because the augment -é is often optional in the presence of marked complements, sg as well as ci. If one attempts to regard -é and -al augmentation as devices to promote oblique phrases to DO status, ci kër gi would then have to be regarded as a DO in (h). As we shall see, this view runs into difficulties in accounting for other data - pronominalization, clefting, topicalization and relativization.

4. Pronominalization

The category DO could receive support if, for some class of complements, a distinct pronominal form were required; e.g., a dön as opposed to a dor, des, dem, etc. We will consider in this section two types of pronoun in Wolof - one interrogative, the other anaphoric.

Interrogative pronouns occur in several constructions, among them
direct and indirect questions:[3]

(1) (a) kan 1ê góór gi gis?
     who man see
     "who did the man see?"

(aa) xam naa ki góór gi gis
     know I who man see
     "I know who the man saw"

(b) lan 1ê góór gi def?
    what do
    "what did the man do?"

(bb) xam naa li góór gi def
     what
     "I know what the man did"

(c) fan 1ê góór gi dem?
    where go
    "where did the man go?"

(cc) xam naa fi góór gi dem
     where go
     "I know where the man went"

(d) nan 1ê góór gi lekk-é?
    how eat-AUG
    "how did the man eat?"

(dd) xam naa ni góór gi lekk-é
     how eat-AUG
     "I know how the man ate"

Judging by the xam/ki, lan/li distribution above, it would appear that these
might be candidates for a DO pronominal (with perhaps a human/nonhuman sub-
categorization). However, these same forms have other functions - for exam-
ple:

(2) (a) kan moo dem ci butik bi?
    who 3sg go to store
    "who went to the store?"

(aa) xam naa ki dem ci butik bi
     who go to store
     "I know who went to the store"

(b) lan moo toj?
    what 3sg break
    "what broke?"

(bb) xam naa li toj
     what break
     "I know what broke"

or, as a Recipient complement:

(3) (a) kan 1ê góór gi jox tééré bi
    who man give book
    "who did the man give the book to?"

(aa) xam naa ki góór gi jox tééré bi
     who nan give book
     "I know who the man gave the book to"

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3 The so-called indirect question form has other nominal functions: e.g.
li góór gi def bett nā mā "what the man did surprised me".

(b) lan lɛ̄ góór gi qol jɛ̄n wi?
      what man feed fish
   "what did the man feed the fish to?"

(bb) xam naa li góór gi qol jɛ̄n wi
      what man   feed fish
   "I know what the man fed the fish to"
   (also: "I know what the man fed (to) the fish")

or, Location:

(4) (a) kan lɛ̄ góór gi teg tééró bi?
        who   man put book
     "who did the man put the book on?"

   (aa) xam naa ki góór gi teg tééró bi
        who man   put book
     "I know who the man put the book on"

   (b) lan lɛ̄ góór gi teg tééró bi?
        what
     "what did the man put the book on?"

   (bb) xam naa li góór gi teg tééró bi
         what
     "I know what the man put the book on"

Since they also appear with prepositions - ag kan/lan "with whom/what,"
ci kan/lan "to whom/what" - they cannot be construed narrowly as indicative
of DO.

What I will call (non-Subject) clitic pronouns appear post-verbally:
e.g., góór gi jangg nɛ̄ tééró bi "the man read the book" alongside góór gi
jangg nɛ̄ ko "the man read it". The following correspondences might therefore
suggest that ko "3rd singular" is a DO pronoun:

(5) góór gi gis nɛ̄ xale bi   góór gi gis nɛ̄ ko
    man the see ASP child the   man the see ASP it/him/her
    "the man saw the child"   "the man saw it/him/her"

    góór gi gas nɛ̄ kamb gi   góór gi gas nɛ̄ ko
    dig   hole gi
    "the man dug the hole"   "the man dug it"

<table>
<tr><td>góór gi <u>ajji nё koko bi</u>
      pick nut
"the man picked the coconut"</td><td>góór gi <u>ajji nё ko</u>

"the man picked it"</td></tr>
</table>

góór gi <u>ajji nё koko bi</u> góór gi <u>ajji nё ko</u>
    pick nut
"the man picked the coconut" "the man picked it"

góór gi <u>joge nё dёkk bё</u> góór gi <u>joge nё ko</u>
    leave town
"the man left the town" "the man left it"

góór gi <u>nob nё xale bi</u> góór gi <u>nob nё ko</u>
    love
"the man loves the child" "the man loves it"

góór gi <u>dimbeli nё xale bi</u> góór gi <u>dimbeli nё ko</u>
    help
"the man helped the child" "the man helped it"

This view of <u>ko</u> is particularly inviting because the varied nature of the
predicates suggest that a semantic characterization would not be feasible.
But <u>ko</u> is not solely a representative of this class, as the following senten-
ces show:

(6) góór gi <u>jox nё ko ko</u>
      give 3sg 3sg
"the man gave it/him/her to it/him/her"

góór gi <u>bindd nё ko ko</u>
      write
"the man wrote it to him/her"

Moreover, it can stand for instrumental and beneficiary augments:

(7) góór gi <u>bindd-ó nё ko letar bi</u>
      write-AUG   letter
"the man wrote the letter with it"

góór gi <u>dimbeli-l nё ko xale bi</u>
      help-AUG   child
"the man helped the child for her/him"

and even locatives:

(8) góór gi <u>rey nё ay nag fii bё (cё) kёr gё</u>
      kill some cow here (to) house
"the man killed cows from here to the house"

<u>fii bё (cё) kёr gё</u>, góór gi <u>rey nё ko ay nag</u>
                          there
"from here to the house, the man killed cows (there)"

In order to save the conception of _ko_ as a DO property, the nature of DO in Wolof will have to be more broadly conceived. But this "broader conception" will in turn then have to include the Subject of reduced comparatives:

(9) góór gi gën në nob xale bi jigeen ji
    man   more   love child   woman
    "the man loved the child more than (he did) the woman"
    "the man loved the child more than the woman (did)"
    "the man loved the woman more than (he did) the child"
    "the man loved the woman more than the child (did)"

because when one of the complement NPs is pronominalized,

(10) góór gi, gën në ko, nob xale bi.

the four-way ambiguity remains. That is to say, one of the meanings of (10) is "the man$_i$ loved the child more than he$_i$/she$_j$ (did)".[4]

Finally, there is another pronoun representing "oblique" (≡ non-Subject) complements of a locative-directional nature:

    (11) (a) xale bi sanni në téérë bi ci tabal ji
            throw book   to table
            "the child threw the book on the table"

    (b) xale bi sanni në ci téérë bi
                 PRO
      "the child threw the book there"

(_ci_ at times alternates with _fɛ_, and their respective distributions is not clear to me. That they are pronouns is supported by their obligatory position after the verbal word in strict sequential relation to other pronouns, as well as their phonological effect on the negative morpheme suffix on the verb in exactly the same way as other pronouns.) _ci_ and _fɛ_ are the forms used even when the verb has been augmented:

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[4] Of course, it is an open question whether Subjects, after ellipsis of their predicates, remain Subjects. Cf. English _he likes her more than I do_ vs. _...than me_; _they came before we did_ vs. _...before us_; etc. But, being non-Subjects clearly is not equivalent to "becoming DO".

(12)(a) xale bi jël-ó në tóóró bi ci kër gi
              take-AUG   house
    "the child took the book from the house"

(b) xale bi jël-ó në $\left\{ \begin{array}{c} ci \\ ré \end{array} \right\}$ tóóró bi

    "the child took the book from it"

Thus, if augmentation of the verb is viewed as a "promotion to DO", then
pronominalization argues for different kinds of DO. Of course, such differen-
tiation contradicts the basic reasoning for positing DO in the first place
– i.e., uniformity of behavior. Wolof resembles other languages that make a
sharp distinction between a Subject pronoun and a non-Subject pronoun which
functions for most oblique relations (e.g., English). What is at issue here
is whether "non-Subject" is the same thing as DO. The fact that the inter-
rogative set differentiates kan from lan, and these in turn from fan and nan
also militates against a DO thesis.

(13)(a) nan la góór gi lekk-ó jën wi?
     how   man   eat-AUG fish
    "how did the man eat the fish?"

(b) lan la góór gi lekk?
     what
    "what did the man eat?"

Sentence (13a) shows that nan "how" is what is used to question the augment,
and not lan "what"[5] which is what is used in (13b) to question the primary
complement of lekk "eat". As (13c) shows, the pronouns can not be substituted
for one another:

(13)(c) *lan la góór gi lekk-ó jën wi?
     what   eat-AUG
    "what did the man eat the fish with?"

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5 I.e., not lan alone: (13c) in the text is acceptable if understood as
ag lan la góór gi lekk-ó jën wi? "with what did the man eat the fish?"

(4) *man lē góór gi lekk?
      how
      "what did the man eat?"

Pronominalization data, at least, do not support the uniformity of behavior
that one would expect of a class of DO.

5.   Reflexivization

    The two most common properties associated with reflexivization are
subject-control and clause-boundedness. To my knowledge, it does not relate
uniquely to DO when the reflexive is an independent pronoun (rather than an
"intransitivization" of the verb, as in Dyirbal). French uses a reflexive
pronoun for its DO:

(a) il lave la voiture
    he wash   car
    "he's washing the car"

il se lave
   PRO
   "he's washing himself"

but uses the same form for the reflexive of its IO:

(b) elle envoit un paquet à Jean
    she send   a package to John
    "she's sending a package to John"

elle s'envoit un paquet
    PRO
    "she's sending herself a package"

Notice that this indifference to a DO-IO distinction in the reflexive is all
the more striking for the usual pronominal DO-IO contrast le/la as opposed to
lui.

    The same is true for German, where the reflexive form is sich:

(c) er wäscht das auto
    he washes the car
    "he's washing the car"

er wäscht sich
        PRO
"he's washing himself"

Verbs like <u>schicken</u> "send" can express the IO in two ways:

(d) (i) <u>er schickt ein paket an sie</u>
        he sends   a package to her-DO
        "he's sending a package to her"

   (ii) <u>er schickt ihr   ein paket</u>
                   her-IO
        "he's sending her a package"

But, in the reflexive, the same form appears regardless of the DO-IO relation:

(e) (i) <u>er schickt ein paket an sich (selbst)</u>
                          to PRO (self)
        "he's sending a package to himself"

   (ii) <u>er schickt sich (selbst) ein paket</u>
                   PRO (self)
        "he's sending himself a package"

Even in languages like Latin and (classical) Greek, where DO and IO pro-
nominal forms are distinct throughout the paradigm, reflexivization is not
constrained to the DO relation. In Latin, <u>se</u> functions as the (3rd person)
DO reflexive, <u>sibi</u> as the IO reflexive. (Moreover, <u>se</u> also serves as the ref-
lexive of the senses "by, with, from".) In Greek, reflexives are based on the
noun <u>autos</u> "self"; and like any noun, it declines for all the cases. DO ref-
lexives are inflected like other DO (= accusative) forms -- and so reflexivi-
zation <u>per se</u> is not a DO phenomenon. Thus, it seems generally true that the
reflexive -- when an independent pronoun -- does not associate uniquely with
the DO relation. Still, the matter is an empirical one, and some language
may turn up in which the reflexive is indeed restricted to DO.

In Wolof, the reflexive form is taken from the noun <u>bopp</u> "head," which
still has that literal sense. As in many languages, the same form serves as
both reflexive and emphatic (i.e., <u>I saw myself</u> as well as <u>I did it myself</u>);

and, as in English, it is obligatorily possessed:

(f) xale bi gis nŏ bopp-am
child see self-POSS/3sg
"the child saw itself"

*xale bi gis nŏ bopp   (only acceptable in the sense
"the child saw a head")

The following sentences show that reflexivization is not semantically controlled by a narrow set of predicates:

(g) xale bi gis nŏ bopp-am
see
"the child saw itself"

(h) xale bi xam nŏ bopp-am
know
"the child knows itself"

(i) xale bi wŏq nŏ bopp-am
kick
"the child kicked itself"

In (g), the verb is one of perception; in (h), one of cognition; in (i), one of action. Those in (g) and (i) are active -- and therefore convey past tense; the verb in (h) is stative, and therefore translates as present tense. Clearly, reflexivization operates across a semantically heterogeneous class of Verb-NP relations. But does it motivate DOT?

In sentences like

(j) xale bi jox nŏ tééré bi bopp-am
give book
"the child gave itself the book"

(k) xale bi teg nŏ doolin ji bopp-am
put oil
"the child put oil on itself"

the reflexive appears in Recipient (j) and Locative (k) relations to the predicate. In fact, the Locative relation for teg is elsewhere prepositionally marked:

(1) xale bi teg nā doolin ji ci tabal ji
"the child put the oil on the table"

Thus, the reflexive, while not semantically restricted, is not sufficiently restricted syntactically to motivate a class of NP complements as DO.

The Wolof reflexive is however clause-bound but not Subject-controlled. Sentence (m) shows the first property --

(m) gōōr gi xam nā [$_S$ ne xale bi gis nā bopp-am]
     man   know   that child   see   self-its
     "the man knows that the child sees itself"
     *"the man$_i$ knows that the child sees him(self)$_i$"

where bopp-am is co-referential only with xale "child" because they are clause-mates. Sentence (n) shows that reflexivization in Wolof is not Subject-controlled:

(n) wax nēñu xale bi lujem ci bopp-am
     tell 1plur child   about self-its
     "we told the child about itself"

where bopp-am is controlled by xale bi, a NP within its clause but not the Subject. Wolof reflexivization, therefore, manifests some familiar features -- among them, the one that interests us, that it is not a correlate of the category DO.

6. Passivization

In some languages, the passive is an identifying feature of DO. That is to say, there exists a secondary construction bearing a systematic relation to the active, in which the DO of the active appears as Subject of the passive. In general, the passive is marked -- either morphologically (e.g., verb affixation), syntactically (e.g., auxiliary verb), or semantically (e.g., perfectiveness or stativity).

One kind of passive, as in Tera, shows no morphological marking of the verb -- but has stativization as a semantic correlate. Thus, one possible

passive in Wolof might be

(a) *xaj bi dóór në
     dog   hit
     "the dog was/is hit"

But (a) -- if it means anything at all -- can only mean "the dog hit (some-
thing or someone)".

Another common type of passive employs an auxiliary verb, often with the
sense of "become" (like German *werden*) or "receive" (like English *get* or
Vietnamese *bi*). Possible passives in Wolof might use the verbs *nekk* "be,
become" or *jot* "receive":

(b) (i) *xaj bi jot në dóór (ag xale bi)
         dog   get hit   by child
         "the dog got hit (by the child)"

    (ii) *xaj bi jot dóór në (ag xale bi)

In (bi), *jot* is treated as a main verb with its own tense/aspect marking, and
dóór as an uninflected infinitive. In (bii), *jot* and *dóór* are treated as a
syntactic unit, with the tense/aspect inflection following the verbal group.
But neither (i) nor (ii) are possible constructions in Wolof. The same facts
hold for *nekk*, when that verb is substituted for *jot* in the above sentences.

As for the copula as an auxiliary verb in the passive (English *be*, French
être, etc.), Wolof does indeed use its copula in a construction such as

(c) xaj bi là xale bi dóór
    dog   COP child   hit

in which *xaj* "dog" bears the same semantic relation to *dóór* as it does in the
active

(d) xale bi dóór në xaj bi
    child   hit   dog
    "the child hit the dog"

But this construction, which we consider later under the label Clefting

(section 8), admits a class of adjuncts in pre-copula position which hardly

supports a DO category: for example,

> (e) (1) ci butik bi là xale bi dem
>   to store   COP child go
>   "it was to the store that the child went"

> (ii) lekk gerte là xale bi def
>   eat peanut COP child do
>   "eat peanuts is what the child did"

are cleft derivatives of the basic forms

> (f) (1) xale bi dem nà ci butik bi
>   go   to store
>   "the child went to the store"

> (ii) xale bi lekk nà gerte
>   eat   peanut
>   "the child ate peanuts"

In (ei) and (fi), we are dealing with an intransitive verb of motion; in

(eii) and (fii), we are dealing with the clefting of a verb phrase (note:

there is no *xale bi def nà lekk gerte "the child did eat peanuts" in which

lekk gerte might be considered the DO of def "do").

As a final candidate for a possible passive in Wolof, we might inquire

into an impersonal construction. To be sure, one occurs:

> (g) dóor néñu xaj bi
>   hit   dog
>   "we hit the dog"
>   "they hit the dog"
>   "(somebody) hit the dog" (= the dog was hit)

As the translations indicate, the form is actually three-ways ambiguous: in

two meanings, the Subject is referential -- 1st plural "we" and 3rd plural

"they"; but in the third meaning, there is no referent for the Subject and

the import is essentially that of an agentless action. This construction is

apparently of the impersonal dummy-Subject type found in French (on) and

German (man), but without pronominal expression of the Subject in an indepen-

dent form. It is in fact very much like the Hebrew impersonal:

(h) ex carim   et ze?
    how say   DO that
        3plur
    "how do you say that?"

The verb form carim is plural, but, strictly speaking, not indicative of person. However, if the question were put in the past tense, the auxiliary verb used would be hayu "were" (3rd plural) rather than, say, hayinu "were" (1st plural).

While the impersonal construction is certainly related to the passive in a number of languages (Russian, Finnish, Turkish) -- sharing with it the essential feature of backgrounding the agent -- it is applicable to a range of predicates going beyond the transitive. Thus, in all these languages, one can find impersonal intransitives of motion (e.g., the verb "go"). For example, in Hebrew:

(i) ex holxim   le Haifa?
    how go-3pl to Haifa
    "how do you go/get to Haifa?", "how does one ...?"

So also in Wolof:

(j) dem nééu   ci butik bi
    go   to store
    "we went to the store"
    "they went to the store"
    "there was (a) going to the store", "people were going..."

Consequently, the impersonal construction in Wolof, not being limited to transitive predicates, cannot serve to motivate the category DO.

7. Ergativization

Even if the passive is not used in Wolof, it is still possible for there to be an ergative-like construction. Such a construction might motivate the category DO by showing a correspondence of the following sort: she handles

the car well alongside the car handles well; he erased the board easily
alongside the board erases easily; etc. If the range of predicates is wide
enough (so that a semantic characterization is precluded), then the class
car, board, etc. in the above alternation could be considered a manifestation
of DO.

In Wolof, we do find correspondences like

(a) (i) xale bi toj në kaas bi
       child   break   cup
       "the child broke the cup"

   (ii) kaas bi toj në
       cup   break
       "the cup broke"

which holds for other predicates, such as lakk "burn" and ubbi "open" (e.g.,
the stick burned; the door opened). However, alongside active constructions
like

(b) (i) xale bi togg në yapp wi
       cook   meat
       "the child cooked the meat"

   (ii) xale bi jangg në tééré bi
       read   book
       "the child read the book"

we do not find *yapp wi togg në "the meat (is) cooked" or *tééré bi jangg
në... "the book (is) read..."

The relation holding in this correspondence is therefore semantically
characterizable -- perhaps limited to predicates whose complements are capa-
ble of undergoing a change of state without any apparent outside agency
(sticks burning, fire spreading, water flowing, etc. on their own, but not
books reading or meat cooking).

8. Clefting

As mentioned earlier, English passives can be rendered in Wolof by means

of what we will call the cleft construction:

(a) tééré bi   lā góór gi jàngg
    book   COP man read

Sentence (a) seems to be best translated as "it's the book that the man read" or "the book is what the man read". Most constituents can be so cleft. From a basic three-argument verb like jox "give", one can form at least three variants:[6]

(b) (i) góór gi jox në tééré bi jigeen ji
      man give   book   woman
      "the man gave the book to the woman"

(ii) góór gi moo jox tééré bi jigeen ji
           PRO
           3sg
      "the man is the one who gave the book to the woman"

(iii) tééré bi lā góór gi jox jigeen ji
          COP
      "the book is what the man gave the woman"

(iv) jigeen ji lā góór gi jox tééré bi
      "the woman is who the man gave the book to"

Note that the only distinctive variant is the cleft Subject (ii): for all non-Subjects, the form is based on the copula l-. It is not the case that constituents accessible to clefting must be prepositionally unmarked:

(c) ci butik bi lā xale bi dem
    to store COP child go
    "it's to the store that the child went"

(d) ag estilo bi lā xale bi bindd-é leter bi
    with pen   COP child write-AUG letter
    "it's with the pen that the child wrote the letter"

or even nominal in character:

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6 The cleft also allows S and VP constituents: e.g., jàngg tééré bi lā góór gi def "read the book is what the man did." But these are not of immediate concern. def "do" functions like the English pro-verb do, in addition to being a lexical predicate -- e.g., lan lā góór gi def? "what did the man do?"

(e) <u>dem ci butik bi</u>   <u>lā</u>   <u>xale bi def</u>
   go to store   COP child   do
   "go to the store is what the child did"

Thus, clefting offers no support for a category DO.

9. Topicalization

Although the cleft construction serves to foreground material, Wolof allows in addition a further fronting of a second constituent. This topicalization is distinct from clefting in (i) not making use of the copula; (ii) foregrounding NPs only; and (iii) leaving a pronoun trace in the clause of origin. To illustrate the process, we form (aii) by clefting a WH-question from the base (ai); and from the cleft, we extract a NP for topicalization in (aiii):

    (a) (i) <u>góór gi</u>   <u>jox ñə</u>   <u>tééré bi</u>   NP
        man   give   book   someone
        "the man gave the book to someone"

      (ii) <u>kan</u>   <u>lā</u>   <u>góór gi jox tééré bi</u>?
         who   COP
         "who did the man give the book to?"

     (iii) <u>tééré bi</u>$_i$,   <u>kan</u>   <u>lā</u>   <u>ko</u>,   <u>góór gi jox</u>?
        book   it
        "the book, who did the man give it to?"

The topicalized NP can be Subject as well:

      (iv) <u>góór gi</u>$_i$,   <u>kan</u>   <u>lā</u>,   <u>jox tééré bi</u>?
        man   who   give book
        "the man, who did he give the book to?"

The pronominal trace in (aiv) appears in the copula <u>lā</u>. When <u>mu</u>, one of the 3rd singular Subject pronouns, is allowed to surface, <u>kan lā</u>, which ordinarily is a free variant of <u>ku</u>, cannot appear:

      (v) <u>góór gi</u>$_i$, $\left\{ \begin{array}{c} \text{*kan lā} \\ \text{ku} \end{array} \right\}$ <u>mu</u>,   <u>jox tééré bi</u>?
        "the man, who did he give the book to?"

At any rate, it is clear that topicalization in no way singles out a class of NP designable as DO for any special treatment.

In section 3 on Verb Coding, I questioned the idea that augmentation of the verbal scope to include adverbial complements (like instrument and beneficiary) was a "promotion to DO". In section 4 on Pronominalization, I pointed out that there was no uniform treatment of these putatively promoted DO: that is, some pronominalized as ko, others as ci/fE. Moreover, interrogative pronominalization showed even greater semantic differentiation: kan "who" vs. fan "where" vs. nan "how". At this point, with some exposition of clefting and topicalization behind us, additional evidence against "promotion to DO" can be found. From the base (bi), we can develop certain secondary constructions:

(b) (i) xale bi bindd̃ nĕ ag estilo bi   BASE
    child write with pen
    "the child wrote with the pen"

   (ii) xale bi bindd̃-é nĕ estilo bi   AUGMENTATION
    write-AUG
    "the child wrote with the pen"

  (iii) xale bi gĕn nĕ bindd̃-é estilo bi góór gi   COMPARATIVE
    more
    "the child wrote more with the pen than the man"

  (iv) góór gi lĕ xale bi gĕn bindd̃ estilo bi   CLEFT
    COP
    "the man is who the child wrote with the pen more than"

   (v) *estilo bi, góór gi lĕ ko, xale bi gĕn bindd̃   TOPICALIZATION
    "the pen, it's the man that the child wrote
    more with it than"

Construction (ii) is the one that interests us especially: is "augmentation" of the verb in Wolof the same thing as "promotion to DO"? After forming a comparative (iii), and clefting (iv), we attempt to topicalize the putative DO estilo bi "the pen". As (v) indicates, it is not possible. Let us now

compare these facts with an unpromoted "DO":

(c) (i) xale bi bindā nā letar yi   BASE
            letter PL
        "the child wrote the letters"

(ii) xale bi gēn nē bindā letar yi góór gi   COMPARATIVE
        "the child wrote more letters than the man"

(iii) góór gi lē xale bi gēn bindā letar yi   CLEFT
        "the man is who the child wrote more letters than"

(iv) letar yi$_i$, góór gi lē leen$_i$ xale bi gēn bindā   TOPICALIZATION
               them
        "the letters, it's the man that the child wrote
        more of them than"

As (civ) indicates, the topicalization of letar yi is acceptable where that
of estilo bi had not been. Assuming that "augmentation" is a "promotion to
DO", we must nevertheless invoke some semantic distinction so as to block
topicalization of the wrong "DO". But that semantic distinction is really
all that is needed anyhow (in the process of augmentation, at the very least).
Thus, the category DO does no work here and is without motivation.

10. Relativization

In Wolof, relative clauses usually require deletion-without-trace of the
subordinate co-referential NP. As far as I can determine, there is no phono-
logical, morphological, or syntactic reflex to indicate the ellipsis. The
following sentences (ii-iv) illustrate the possible relativizing of a three-
argument verb like jox "give":

(a) (i) góór gi jox nā tééré bi xale bi
      man   give   book   child
      "the man gave the book to the child"

(ii) góór gi [$_S$ jox tééré bi xale bi]
      "the man who gave the book to the child"

(iii) tééré bi [$_S$ góór gi jox xale bi]
      "the book that the man gave to the child"

(iv) xale bi [_S góór gi jox tééré bi]
"the child that the man gave the book to"

Notice that these nouns are not prepositionally marked. Certain preposi-
tional phrases can be relativized just in case the preposition is optional:
thus, (bi) shows the optionality of ci in the presence of the verb dem,

(b) (i) xale bi dem nē (ci) butik bi
child go (to) store
"the child went to the store"

(ii) butik bi [_S xale bi dem]
"the store that the child went to",

and (bii) shows that the unmarked butik bi can be thus relativized. In the
same way, an instrumental marked by the preposition ag cannot be relativized,
but can undergo relativization after augmentation of the verb (which renders
the preposition optional):

(c) (i) xale bi bindd nē ag estilo bi
write with pen
"the child wrote with the pen"

(ii) xale bi bindd-ó nē (ag) estilo bi
-AUG
"the child wrote with the pen/used the pen to write with"

(iii) estilo bi [_S xale bi bindd-ó]
"the pen that the child wrote with"

Again, the relativizability of such augmented complements has nothing
to do with their "promotion to DO". Their accessibility to the process is
strictly determined by their ability to appear in a preposition-less form.
Note that if a relative clause like (di) is possible,

(d) (i) guddi gi [_S góór gi bindd letar bi]
night man write letter
"the night the man wrote the letter",

it is because ci guddi "at night" can also appear as guddi in a sentence
like (dii):

(11) góór gi bindd nê letar bi (ci) guddi
                                   (at)
"the man wrote the letter at night"

and, as **bindd** indicates in (dii), no augmentation has taken place.

The only semantic constraints on relativization in Wolof involve relativizing the genitive. Normally, the genitive leaves a pronominal trace:

(e) (i) góór gi   dem nê   ci kêr-u   xale bi
     man   go   to house-GEN child
     "the man went to the child's house/village"

    (ii) xale bi$_i$ [$_S$ góór gi dem ci kêr - am$_i$]
        child   man   go   to house-its
       "the child whose house the man went to"

But even the genitive can be entirely suppressed in the case of kinship and body part terms:

(f) xale bi$_i$ [$_S$ baay bi wéq nag wi]
    child   father kick cow
    "the child whose father kicked the cow"

(g)[7] xale bi$_i$ [$_S$ nag-am wéq baay bi]
      child   cow-its kick father
      "the child$_i$ whose cow kicked its$_{i,j}$ father"

(h) xale bi$_i$ [$_S$ nag wi wéq biir bi]
                      belly
    "the child whose belly the cow kicked"

The genitive, it should be noted, is preposition-less (Wolof marks the possessed -- as kêr in (e) is marked -- with the suffix -u, subject to certain phonological constraints).

The Keenan-Comrie accessibility hierarchy does not claim that the categories stipulated in the hierarchy are obligatory in every language: it

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7 I would like to note in passing that co-referentiality must be observed in terms of the first possible position within the clause: thus, (g) cannot mean "the child whose father its cow kicked".

simply observes that IF these categories occur in the language (i.e., can be established independent of the hierarchy), then they will conform to the proposed ranking -- Subject first, DO next, etc.[8] But relativization in Wolof is itself offers no support for DO.

11. Nominalization

Under this heading, I wish to consider two constructions -- one more clearly productive than the other. Both have the internal structure of the Wolof NP -- that is, Noun (Determiner)(Noun Phrase)(Clause). For convenience, I will refer to them as the action and the actor nominalizations. The action nominal allows its full complementation to appear:

(a) (i) pecc mi bett nɛ̃ jigeen ji
    dance surprise woman
    "the dancing surprised the woman"

   (ii) pecc-u xale bi bett nɛ̃ jigeen ji
    dance-GEN child surprise woman
    "the child's dancing surprised the woman"

   (iii) pecc mi ci mbedd mi bett nɛ̃ jigeen ji
    dance in street surprise woman
    "the dancing in the street surprised the woman"

   (iv) pecc-u xale bi ci mbedd mi bett nɛ̃ jigeen ji
    dance-GEN child in street surprise woman
    "the child's dancing in the street surprised the woman"

Transitive verbs allow the same form. So, from dóór "hit" we have dóór-u xale bi "the hitting of the child" -- which is ambiguously either Agent or Patient. But if both arguments of the verb are to be expressed, the

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[8] In fact, Gary and Keenan (1977) make explicit this "non-uniqueness assumption". That is to say, the terms of a syntactic category in the AH may, in any one language, range from ∅ upward, perhaps to as many as four. Actually, no upper limit is set, although it is clear from the Case Relation framework posited that there are just so many "promotable" terms, and no more.

only form possible uses a clausal appositive:[9]

    (b) (a) <u>dóór-u xale bi</u>, [$_S$ <u>mu, dóór góór gi</u>] <u>bett në̃ ko</u>
            hit-GEN child   it hit man   surprise her
            "the hitting of the child, such that it hit the man,
            surprised her"

    (b) <u>dóór-u xale bi</u>, [$_S$ <u>ko, góór gi dóór</u>] <u>bett në̃ ko</u>
            hit-GEN child   it man hit   surprise her
            "the hitting of the child, such that the man hit it,
            surprised her"

With a three-argument verb like <u>jox</u> "give," the form is the same — but certain constraints emerge very clearly and are startling. In isolation, one would expect a phrase like <u>jox-u xale bi</u> "the child's giving" to be three-ways ambiguous — with either an Agent, a Patient, or a Recipient interpretation. Remarkably, however, it is understood <u>in the Agent sense only</u>. This constraint is particularly striking in view of the obligatory animacy of the Recipient with a predicate like <u>jox</u>. Moreover, clausal appositives do not help the situation:

    (c) (i) <u>jox-u xale bi</u>, [$_S$ <u>mu, jox téérë bi góór gi</u>] <u>bett në̃...</u>
           give-GEN child   it give book   man   surprise...
           "the giving of the child, such that it gave the book
           to the man, surprised..."

    (ii) *<u>jox-u góór gi</u>, [$_S$ <u>ko, xale bi jox téérë bi</u>] <u>bett në̃...</u>
         give-GEN man   him child give book   surprise...
         "the giving to the man, such that the child gave
         him the book, surprised..."

    (iii) *<u>jox-u téérë bi</u>, [$_S$ <u>ko, xale bi jox góór gi</u>] <u>bett në̃...</u>
         give-GEN book   it child give man   surprise...
         "the giving of the book, such that the child gave it
         to the man, surprised..."

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9 This appositive is not a relative clause because restrictive relatives on definite head nouns do not (except for the genitive) leave pronominal traces: "the child who hit the man" is <u>xale bi dóór góór gi</u>, and not *<u>xale bi mu dóór góór gi</u>; "the child the man hit" is <u>xale bi góór gi dóór</u>, and not *<u>xale bi góór gi dóór ko</u> or *<u>xale bi ko góór gi dóór</u>.

In fact, the Patient can only appear with the augmented form of the verb but without a clausal appositive: jox-á-u tééré bi "the giving of the book",[10] Once again, semantic distinctions (like Patient and Recipient) are the necessary parameters, not syntactic like DO and IO. If DO were really a category in Wolof syntax, it is difficult to see why déér-u xale bi would be ambiguous while jox-u xale bi would not be.

The second nominalization I wish to discuss, the actor nominal, is expressed by suffixing -kat to the verb root. rébb "hunt" yields rébbkat "hunter". "Lion-hunter" cannot be expressed. ("Lion-hunting" similarly is not possible, except in the action nominalization just discussed: rébb-u gaynde "hunting of lion".) The actor, like the action nominal, admits a genitive adjunct: rébbkat-u gaynde "hunter of lion". (This is the closest Wolof gets to compounding of the type lion-hunter.) Apparently, it is not confined to "Agentiveness" since one finds forms like fattkat "forgetter" and bēggkat "liker". Clearly, there is no distinction along stative-active lines, which otherwise play a significant role in Wolof verb morphology and syntax.

Verbs of motion illustrate the arbitrariness of the construction: dem ci sinema "go to (a) movie" can yield demkat-u sinema "movie-goer", and yéég ci garab "climb up (a) tree" can yield yéégkat-u garab "tree-climber", but daw ci mbedd "run in (a) street" cannot yield *dawkat-u mbedd "street-runner", although dawkat "runner" is possible. On the other hand, from dugg (ci kër) "enter (into house)" one cannot even form *duggkat. The verb doxman "court,

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10 The optionality of -u is a phonological matter: -u generally is suppressed after polysyllabic vowel-final forms. Its possible retention here is a little surprising: cf. tééré xale bi "the child's book" vs. *tééré-u xale bi.

woo" can yield doxsankat but seeti "visit" cannot yield *seetikat. Finally, a verb like fattëli "remind" allows fattëlikat "one who reminds" but of the two NP complements normally associated with this sort of predicate, only the second (abstract) is permitted as the genitive adjunct: fattëlikat-u dëgg "reminder of truth" but not *fattëlikat-u xale "reminder of children". If anything, xale should be in a DO relation to fattëli in Wolof. Obviously, the genitive adjunct to the actor nominal goes beyond anything like a DO category. If constrained in a systematic way, it is not clear at the moment what the semantic factors are. But a construct like DO does not seem relevant to the process.[11]

12. Object-Incorporation

In many languages, there is a process whereby indefinite generic "accusative" complements attach to the verb (Sapir 1911; Mardirussian 1975). The degree of phonological attachment varies, and is irrelevant to the issue which concerns us. In choosing a certain class of complements to be so incorporable, a language manifests its class of DO. But, in Wolof, indefinite generic complements cannot be so incorporated:

(a) (i) góór ñi rëbb nëñu gaynde ag fetal
man PL hunt 3PL lion with gun
"the men hunted lion(s) with a gun"

(ii) *góór ñi { rëbb-gaynde / gaynde-rëbb } nëñu ag fetal
"the men lion-hunted with a gun"

rather, they remain phonologically free NPs to be moved, cleft, etc.:

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11 E.g., from bëró "wrestle" one can form bëróskat "wrestler", but not *bëróskat-u góór "(a) wrestler of men" analogous to bëró naa ag góór gi "I wrestled with the man". So also, from gisë "consult" the form gisëkat is perhaps possible, but not *gisëkat-u doktor "a consulter of doctors" (cf. gisë naa ag doktor bi "I consulted (with) the doctor").

(b) gaynde lë góór ñi rëbb ag fetal
    lion COP
    "lion is what the men hunted with a gun"

13, Equi-NP Constraints

As in many languages, verbs meaning "want" (= like, desire), "try", "begin", etc. require co-referential Subjects in the embedded clause; Wolof, like a number of these, requires deletion as well:

(a) xale bi bëgg-oon në dem ci kër gi
    child want-PAST go to house
    "the child wanted to go to the house"

    *xale bi, bëgg-oon në mu, dem...

(When a pronoun is at all admissible, it is obligatorily non-coreferential.) Other verbs, like néé "say, tell" and wax "tell" -- with the sense of persuasion or command -- require co-referentiality between the person told and the Subject of the embedded proposition:

(b) góór gi, wax në jigeen ji, [ₐ mu, dem...]
    man tell woman ⁼PRO⁼ go
    "the man told the woman to go..."
    *"the man told the woman he would go..."

But there are many predicates with NP-S complement structure that do not require co-referentiality: in addition to néé and wax in the report sense, there are verbs like fattëli "remind" and laaj "ask":

(c) xale bi fattëli në jigeen ji [ₛ ne góór gi dem...]
    child remind woman that man go
    "the child reminded the woman that the man had gone..."

(d) xale bi laaj në jigeen ji [ₛ ndax góór gi dem...]
    child ask woman if man go
    "the child asked the woman whether the man had gone..."

(In their coercive senses, fattëli and laaj also require co-referentiality between jigeen and the Subject of the proposition.) The class of verbs that require co-referentiality of this sort (verbs of coercion, persuasion, manipulation, etc.) is semantically restricted, as is the class of NP to be so

manipulated. Besides, in languages that distinguish accusative DO from da-
tive IO, the animate being thus addressed is most often found as the IO. Con-
sequently, there seems to be no motivation for DO in this kind of complement
co-referentiality: indeed, if DO were mentioned in the rule, the very same
semantic restriction would be needed to limit the class of nouns appropriately
to just those capable of being persuaded to some action or belief.

Another construction involving equi-NP constraints is the purpose clause.
In some languages, like English, a special relation obtains between the Subject
of the main clause and that of the purpose:

(e) (i) I visited Tom in order to save money

(ii) I gave the book to Tom in order to save money

Tom, whether as DO in (i) or IO in (ii), cannot control deletion of the Subject
in the purpose clause. In other languages, like Indonesian (Chung 1977), both
Subject and DO control reduction of the purpose clause, to the exclusion of IO.

In Wolof, as in English, Subject exercises a special control whereas DO,
IO, etc. seem to have no privileged part in the construction. The purpose
clause in Wolof is introduced by ndax or ngir, and can either precede or
follow the main clause; co-referentiality constraints are unaffected by the
position of the purpose clause.

MAIN CLAUSE	PURPOSE CLAUSE

(f) góór gi$_i$ seeti në jigeen ji$_j$ ngir $\begin{Bmatrix} \text{mu}_{i,k} \end{Bmatrix}$ gis xaj bi
       visit   so   see dog

"the man visited the woman"   so that $\begin{Bmatrix} \text{he}_i \\ \text{she}_j \end{Bmatrix}$ could see the dog"

(g) góór gi$_i$ jox në jigeen ji$_j$ tééré   ngir mu$_{j,k}$ jangg ko
      give   book   read it

"the man$_i$ gave the woman a book so that she$_j$/he$_k$ could read it"

(h) góór gi̱ teg ná tééré ci jigeen ji̱ ngir mu̱ₗₖ jàngg ko
    put   on

"the man put a book on the woman   so that she₁/he₁ could read it"

(i) góór gi̱ dem ñá ci butik bi ag jigeen, ngir $\left\{\begin{array}{c}\emptyset \\ mu\end{array}\right\}_{i,k}$ gis xaj

    go   to store with

"the man went to the store with a woman, so that $\left\{\begin{array}{c}\text{he}_i \\ \text{she}_j\end{array}\right\}$ could see a dog"

The critical judgments that concern us involve the interpretations of $\emptyset$ (deletion) as opposed to mu (pronominalization) as the Subject of the purpose clause. Consistently, deletion is interpretable only as controlled by the Subject of the main clause; mu is consistently interpreted as anything or anyone but the Subject of the main clause. In the sentences given, the noun jigeen "woman" exercises the same degree of control over the deletion of the Subject of the purpose clause regardless of whether jigeen is the sole complement of the verb (as with seeti "visit"), or is Recipient (as with jox "give"), or is Locative (as with teg "put"), or is Comitative (as with dem "go"). In other words, except for Subject, there appears to be no other grammatical relation controlling deletion in the purpose clause. Hence, this construction does not support DO in any way.[12]

But since the ngir/ndax purpose clause can also occur in clause-initial position, it is possible that some aspect of Linearity is influencing the control over deletion. There is another type of clause introduced by the verb-preposition bà, which must follow the main predicate. The sense of the clause can vary between result and time, as in the English "she hit him until he fell

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12 It should also be noted, in the context of co-referentiality control, that mu — whenever it appears in the purpose clause — can always have an "outside" referent. But this is not true of the deleted $\emptyset$: $\emptyset$ always is co-referential with the main clause Subject.

down". In either sense, the deletions and pronominalization possibilities
confirm the behavior of co-referentiality control in the purpose clause:

      MAIN CLAUSE   TIME/RESULT CLAUSE

(j) jigeen ji$_i$ dóór nñ góór gi$_j$ bñ $\begin{Bmatrix} \phi_i \\ mu_{j,k} \end{Bmatrix}$ daanu
          hit   until   fall

    "the woman$_i$ hit the man$_j$ until $\begin{Bmatrix} she_i \\ he_{j,k} \end{Bmatrix}$ fell down"

(k) jigeen ji$_i$ sanni nñ doj yi góór gi$_j$ bñ $\begin{Bmatrix} \phi_i \\ mu_{j,k} \end{Bmatrix}$ daanu
          throw rock

    "the woman$_i$ threw rocks to the man$_j$ until $\begin{Bmatrix} she_i \\ he_{j,k} \end{Bmatrix}$ fell down"

(l) jigeen ji$_i$ daw nñ ag góór gi$_j$ bñ $\begin{Bmatrix} \phi_i \\ mu_{j,k} \end{Bmatrix}$ daanu
          run with

    "the woman$_i$ ran with the man$_j$ until $\begin{Bmatrix} she_i \\ he_{j,k} \end{Bmatrix}$ fell down"

As in the case of the purpose clause, control over deletion of the Subject
in the result clause is exercised exclusively by the Subject of the main
clause. The NP, góór gi "the man", has no effect on this deletion, regard-
less of its relation in its own clause -- Patient in (j), Recipient in (k),
Comitative in (l). This construction then supports no grammatical relation
other than Subject.

14. Comparative Deletion

There is a certain construction in Wolof involving the comparative
which, at first glance, seems to indicate a Subject-DO contrast. However, I
hope to show that semantic considerations are operative, and not grammatical.
Some preliminaries are needed.

Wolof, like English, allows deletions in its comparative which lead to

ambiguity:

(a)   <u>jigeen ji</u> <u>moo</u> <u>gën-oon</u> <u>nob</u> <u>xale bi</u> <u>góór gi</u>
    woman 3sg more-PAST love child man
    (i)   "the woman loved the child more than (she did) the man"
    (ii) "the woman loved the child more than the man (did)"
    (iii) "the woman loved the man more than (she did) the child"
   (iv) "the woman loved the man more than the child (did)"

As indicated by the translations, Wolof has two more interpretations than
English because it allows unmarked post-verbal NPs to be freely positioned
(as with the verb <u>jox</u> "give" -- see page 222). The four senses would appear
to derive from the fact that at some point in the formation of sentence (a)
the representation of senses (i) and (ii) are as in (bi):

(b)(i)
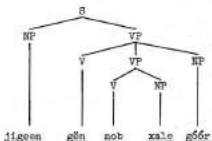
where <u>xale</u> "child" is the Patient of surface <u>nob</u> "love", while <u>góór</u> "man" is
the sole remnant of the subordinate clause expressing the standard -- one
clause in which it (like <u>xale</u>) was Patient, one clause in which it (like
<u>jigeen</u>) was Experiencer. Senses (iii) and (iv) of sentence (a) would derive
from a structure like (bii)

(b)(ii)
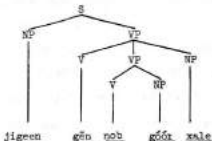
where _xale_ and _góór_ have reversed clause assignments, _xale_ now being the
sole remnant of the clause expressing the standard of comparison.

The evidence for the constituency claimed in representations (bi) and
(bii) is as follows. The cleft allows the VP constituent, as in _lekk gerte
lā góór gi def_ "eat peanuts is what the man did". With a verb like _jox_ "give",
the following judgments occur:

(c)   (i)   *téérā bi xale bi   lā   góór gi jox
        book   child   COP   man   give
        "the book is what the child is what the man gave"

    (ii)   ??jox téérā bi   lā   góór gi def xale bi
         give book   COP   man   do   child
         "give the book is what the man did to the child"

   (iii)   ??jox xale bi lā   góór gi def téérā bi
         give child COP   man   do   book
         "give to the child is what the man did (with?) the book"

    (iv)   jox téérā bi xale bi lā   góór gi def
         give book   child   COP   man   do
         "give the book to the child is what the man did"

Variant (i) is definitely unacceptable, (ii) and (iii) are very peculiar,
while (iv) is perfectly normal. These judgments point to _jox téérā xale_ as
a tripartite constituent, i.e., VP. In contrast to the relative unacceptabil-
ity of (cii), consider the perfectly acceptable

(d)   nob xale bi   lā   jigeen ji gēn def góór gi
        love child COP   woman   more do man
        "love the child is what the woman did more than the man"

so that while ..._nob xale bi góór gi_ and ..._jox téérā bi xale bi_ look the
same in linear terms (V NP NP). The fact that (d) is well-formed while (cii)
is not suggests that _góór gi_ is outside the VP, as represented in (bi).

On the other hand, _góór gi_ seems to be a constituent of the higher VP
whose nucleus is _gēn_ on the basis of the following data. Time adverbials
like _leegi_ "now" seem to be S-level constituents, usually clause-final or

at least outside the VP of basic predications like *jigeen ji nob-oon nã xale bi* "the woman loved the child". The same facts are true of *leegi* when it appears in a comparative:

(e) (i) *jigeen ji moo gãn nob xale bi gõõr gi LEEGI*
    woman   3sg more love child man   now
    "the woman now loves the child more than the man"
    "the woman now loves the man more than the child"

(ii) **jigeen ji moo gãn nob xale bi LEEGI gõõr gi*

(iii) **jigeen ji moo gãn nob LEEGI xale bi gõõr gi*

If the standard of comparison, *gõõr gi*, were an S-level constituent like *leegi*, one might expect variant (eii) to be acceptable, or at least more acceptable than (eiii). But it is not. Therefore, *gõõr gi* seems to be a constituent of a VP, as given in representation (bi), even after the reduction of its clause, in which it could play either the Experiencer role or the Patient.

With these preliminaries on the Wolof comparative as background, we turn now to a constraint that might suggest a Subject-DO differentiation. It involves the interaction of clefting and topicalization with the comparative. From the basic comparative *jigeen ji moo gãn-oon nob xale bi gõõr gi* with its four-fold ambiguity (see page 255), we can form the cleft

(f) *gõõr gi lã jigeen ji gãn nob xale bi*
    man   COP woman   more love child

which retains the four interpretations. But when we topicalize *xale bi*, as in

(g) *xale bi₁, gõõr gi lã ko, jigeen ji gãn nob*
    "the child, it's the man that the woman loves more than it"

we only get two interpretations; and in both senses, *gõõr gi* can only be understood as Patient. What these facts suggest is another linear principle in

Wolof: the sequence TOPIC, CLEFT... does not allow a DO, Subject... interpretation, but only a Subject, DO... or DO, DO... interpretation.

However, the question again is whether the constraint is general enough to warrant DO rather than a semantic characterization. The following facts indicate that the appropriate parameter is one of animacy (perhaps even human-ness) rather than some grammatical relation:

(h) jigeen ji gën në jangg letar yi góór gi
    woman   more   read letter   man
    "the woman read the letters more than the man"

From (h), a basic comparative, we can form clefts like (i):

(i) letar yi là jigeen ji gën jangg góór gi
    "the letters is what the woman read more than the man"

    góór gi là jigeen ji gën jangg letar yi
    "the man is who the woman read the letters more than"

and freely topicalize, as the (j) sentences indicate:

(j) góór gi, letar yi là ko, jigeen ji gën jangg
    "the man, the letters is what the woman read them more than he (did)"

    letar yi, góór gi là leen, jigeen ji gën jangg
    "the letters, the man is who the woman read them more than"

The (j) topicalizations, in contrast to the restrictions evident in (g), make clear that there is no Subject-DO constraint where animates (or humans) are not in competition. The relevant notions are rather Patient, Experiencer, Animate, etc - just as in earlier sections we found Agent, Coercive, Kinship, Instrument, and so on. The only grammatical relation that receives support in Wolof is Subject.

15. _The Causative Construction_

In this concluding section, I wish to examine a construction which, like the passive, focusses on the DO relation, but which, unlike the passive, is universal. To my knowledge, every language has a causative of at least one

of the following forms:

(a) I made the room dark

(b) I darkened the room

The first (a) may be called analytic or periphrastic, in that it manifests two surface predicates (<u>made</u>, <u>dark</u>); the second may be called synthetic or morphological, in that it manifests only one surface predicate (via a process that has come to be called "clause-union"). Of course, as is often the case, there is no discreteness between these two types, either synchronically or diachronically. In contemporary French, for example,

(c) (i) il <u>fait sourire</u> l'enfant
he make smile child
"he makes the child smile"

*il <u>fait</u> l'enfant <u>sourire</u>

(ii) il le <u>fait sourire</u>
he it make smile
"he makes it smile"

*il <u>fait</u> le <u>sourire</u>,

neither noun (ci) nor pronoun (cii) can intervene between the two predicates, but there is little evidence as yet of phonological fusion.[13]

Clause-union causatives are interesting because, cross-linguistically, they show consistent tendencies (Comrie, 1976):

(1) the Subject of an embedded intransitive shows up as DO;

(2) the DO of an embedded transitive retains its DO status, while the Subject of that transitive shows up as IO (less often, Instrumental);

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[13] Negative elements, like <u>pas</u> and <u>jamais</u>, do intervene however (e.g., <u>il ne fait pas sourire les enfants</u> "he doesn't make the children smile"), including <u>rien</u> in the function of DO to the infinitive: <u>je ne lui fais rien faire</u> "I don't have him do anything".

(3) the DO of a di-transitive (e.g., give) retains its DO

status, as does the IO, while the Subject (if

permitted at all) shows up as Instrumental.

These generalizations bear on the question of whether Wolof has a DO or not
in the following way: across the board -- regardless of surface or deep
"accusativity" -- languages tend to behave ergatively in their causatives by
treating the underlying Subjects of intransitives (cf. 1) and the underlying
DO of (di-) transitives (cf. 2 and 3) alike. In fact, the Subject of a tran-
sitive is, under certain circumstances, not allowed. For example, in Sonrai,
with a predicate like neere "sell", only two of the three underlying arguments
can surface (Shopen and Konare 1970:215):

(4)   Garba neere-ndi bari di Musa se
        Garba sell-CAUSE horse Musa
    (i) "Garba had Musa sell the horse (to someone)"
    (ii) "Garba had the horse sold to Musa (by someone)"

     *Garba neere-ndi bari di Musa se Ali se
     "Garba had Musa sell the horse to Ali"

Notice that it is either the underlying IO (di) or the underlying Subject
(dii) that is excluded, but not the underlying DO (bari "horse"). As far as
I know, there are no languages whose causative blocks the appearance of the
underlying DO.[14] This fact, in conjunction with other aspects of the syntax
and semantics of transitivity, reinforces the conviction that it is the DO
relation to the predicate that is the primary one, rather than the Subject

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14 In Swahili, the underlying Subject of a transitive may usurp the position
   of "closest" DO (see Comrie 1976:286-94), but does not block its appear-
   ance. In fact, the Subject is optional -- but the DO is not.

(or the IO). If a language has a DO category, it should show up in the
causative if at all.

Wolof has both an analytic and a synthetic causative:

(e) góór gi tax né (bå) gaal gi suux
   man   cause (until) ship sink
    "the man caused the ship to sink"

(f) góór gi suux loo né gaal gi
   man   sink CAUSE   ship
    "the man sank the ship"

It is the second construction (f) that interests us because there is good
evidence that (f) manifests clause-union. The phonological behavior of suux
loo supports it: in the Wolof version of Pig Latin, the initial consonant
of a word is moved to the end together with a copy of the following vowel.
Thus, góór becomes óórgóó; tax becomes axta; etc. In our case, suux loo be-
comes uuxloosuu, not *uuxsuu ooloo. But this phonological evidence is offset
by the fact that suux can be cleft from suux loo by means of the pro-verb def
"do": suux lå góór gi def loo gaal gi "sink is what the man had-done to the
ship".

To show that suux loo is a single predicate, we must consider the typical
properties of Wolof verbs: tense/aspect marking, negation, pronoun clitici-
zation, imperative inflection, and so on. Taking pronoun cliticization as
illustrative, compare suux loo with jox:

(g) góór gi suux loo né ko
   man   sink CAUSE   it
    "the man sank it"

  *góór gi suux ko loo né

(h) góór gi jox né ko xale bi
   man give   it   child
    "the man gave it to the child"

  *góór gi jox ko né xale bi

The pronoun ko must, in clauses of this type, follow the verbal complex (VERB + ASPECT), and not interrupt it. But there are sequences of predicates (say, AUXILIARY + MAIN VERB) which do allow such pronouns to intervene:

(i) góór gi di né ko xam
    man   FUT it know
    "the man will know it"

As (i) indicates, the auxiliary verb di (imperfective, future) and main verb xam "know" allow ko to come between them, whereas suux and loo do not (cf. (g) above).

How, then, might a putative DO under Wolof clause-union causativization manifest itself? First, clause-union might demote the underlying Subject in some way or perhaps disallow it altogether. Or the DO itself might appear marked distinctively, or positioned a-typically. But nothing like any of these happens. From the basic form (ji),

(j) (i) xale bi jangg né tééré bi
       child   read   book
       "the child read the book"

we can form the causative (jii):

    (ii) góór gi jangg-loo né xale bi tééré bi
         man   read-CAUSE   child   book
         "the man had the child read the book"

and this causative behaves like any double complement predication (e.g., jox "give"): thus there is no positional preference (ki), either nominal can be cleft (kii), they pronominalize undistinctively (kiii), and so on,

(k) (i) góór gi jangg-loo né tééré bi xale bi (cf. jii)
       "the man had the child read the book"

    (ii) xale bi lé góór gi jangg-loo tééré bi
         "it's the child that the man had read the book"

         tééré bi lé góór gi jangg-loo xale bi
         "it's the book that the man had the child read"

(iii) góór gi janqg-loo në <u>ko</u> <u>xale bi</u>
                            it
"the man had the child read it"

góór gi janqg-loo në <u>ko</u> <u>tééré bi</u>
                      it
"the man had her/him/it read the book"

To illustrate in another way the Wolof indifference to DO, we turn to
Finnish where the salience of DO is made clear by the behavior of the verb
<u>opeta</u> "teach". It can be used as a pseudo-intransitive, as in (li), or tran-
sitive (lii), or di-transitive (liii).–

(1) (i) hän opetaa (Suomessa)
        he teaches (Finland-INESSIVE)
        "he teaches (in Finland)"

    (ii)(a) hän opetaa ranskaa
                       French-PARTITIVE
            "he teaches French"

        (b) hän opetaa lapsia
                       children-PARTITIVE
            "he teaches children"

    (iii) hän opetaa lapsille ranskaa
                     children French
                     ALLATIVE PARTITIVE
          "he teaches children French"

Now, in the causative, we find the form –

(n) hän opetytti   lapsia
        teach-CAUSE children-PARTITIVE
    "he had the children taught"
    *"he had the children teach"

which unambiguously gives a DO reading: the children can only be on the
receiving end of the teaching -- in spite of the fact that pseudo-intransi-
tives like (li) can occur. Furthermore, the form

(n) hän opetytti { lapsille } ranskaa
                 { lapsilla }
    "he had the children taught French"
    *"he had the children teach French"

has again an unambiguous DO interpretation, in spite of the optional appearance

of the adessive -lla which is normally the Agent/Instrument marker. This curious use of the adessive to signal the Recipient relation is no longer available when a true Agent appears:

(o) (i) hän opetytti lapsille ranskaa sinulla
children French you
ALLATIVE PARTITIVE ADESSIVE
"he had you teach the children French"

(ii) *hän opetytti lapsilla ranskaa sinulla
children
ADESSIVE
"he had you teach the children French"
"he had the children teach you French"

The significant fact, however, is that the adessive in (n) cannot have an Agentive interpretation.

Now, in Wolof, as in Finnish and English, the verb meaning "teach" janggэl(э) can be used pseudo-intransitively (pi), transitively (pii), as well as di-transitively (pii):

(p) (i) janggэl-э naa (ci Dakar)
teach-AUG ASP/1sg (in Dakar)
"I taught (in Dakar)"

(ii)(a) janggэl naa ay xale
some child
"I taught some children"

(b) janggэl-э naa faranse
French
"I taught French"

(iii) janggэl naa ay xale faranse
"I taught some children French"

But the form

(q) janggэl-э-loo naa ay xale
teach-AUG-CAUSE some child
"I had some children teach"
*"I had some children taught"

can only have children in a Subject interpretation -- the causative counter-

part of (pi), where janggël is used pseudo-intransitively. And the form

(r) *janggël-loo naa ay xale

if intended as the causative counterpart of (pii-a) with the meaning "I had some children taught" is ungrammatical. The ungrammaticality of (r) should be compared with the grammaticality of (m), which is the exact Finnish equivalent and which can only have the DO interpretation. In order to "correct" (r) into acceptable Wolof, a Subjective nominal must be added:

(s) janggël-loo naa ay nit ay xale
                     person   child
    "I had some children teach some people"
    "I had some people teach some children"

Remarkably, then, a DO interpretation of xale (as in (r)) depends on the appearance of a possible Subject. But this requirement - that DO be dependent on Subject in a causative - goes against the generalizations (1-3, page   ) for languages with DO and clause-union. The implication is that the generalizations hold only for languages with DO, and that Wolof has no DO.

16. Conclusion

As indicated in the sections on pronominalization and verb coding, there is good evidence that Wolof allows the complement scope of a predicate to be extended. The most obvious signal of this attraction to the predicate is the absence of prepositional marking. But whether these secondary complements are DO or not is another matter. If DO is a category in Wolof, then it is a salient one -- and verb augmentation is a major promotional device in the system. But if this view is correct, we simply confront another question: why are there no further reflexes of this significant grammatical relation? As we have seen, there is no passive and no ergative; compounding and nominalizing make no special mention of such a category; neither do topicalizing

and clefting; and the causative -- among the most DO-oriented of constructions -- similarly neglects it.

I will assume, then, that a convincing case against a DO in Wolof has been made. Since the category exists in some languages (but not all), it stands in general linguistic theory as an option -- a grammatical relation chosen and/or developed after Subject (perhaps along with Subject), but never independent of Subject. What of Subject itself? Elsewhere (Schwartz, forthcoming), I have argued for Subject as obligatory for every language. If that case can be made convincingly, and Subject is the only required grammatical relation, then an interesting question presents itself with respect to transitive predicates. Since the Verb-Patient relation is closer than the Verb-Agent, what happens in those systems where a natural constituency between Verb and Patient is precluded? It appears that such a natural constituency never appears in VSO and SOV types (Schwartz 1972), and rarely in VOS. It also seems to be the case that ergativity as a systemic feature (even at just the morphological level) only appears in these three types - never in the SVO (where, not coincidentally, VP constituency typically manifests itself). The question that arises, therefore, is whether the guarantee of the Subject relation (in direct contrast to the optionality of the DO), "induces" ergativity in just those systems where the natural constituency between Verb and Patient cannot find expression.

References

Chung, S. 1976. "An Object-creating Rule in Bahasa Indonesia", _Linguistic Inquiry_ 7:41-88.

Comrie, B. 1976. "The Syntax of Causative Constructions", in _Syntax and Semantics_, vol. 6, ed. M. Shibatani, pp. 261-312, Academic Press, New York.

Gary, J. O. and E. L. Keenan. 1977. "On Collapsing Grammatical Relations in Universal Grammar", in _Syntax and Semantics_, vol. 8, pp. 83-120, Academic Press, New York.

Keenan, E. L. 1976. "Towards a Universal Definition of 'Subject'", in _Subject and Topic_, ed. C. N. Li, pp. 303-333, Academic Press, New York.

Keenan, E. L. and B. Comrie. 1977. "Noun Phrase Accessibility and Universal Grammar", _Linguistic Inquiry_ 8:63-99.

Mardirussian, G. 1975. "Noun-incorporation in Universal Grammar", _Chicago Linguistic Society Papers_, no. 11, pp. 383-389.

Sapir, E. 1911. "The Problem of Noun Incorporation in American Languages", _American Anthropologist_, n.s., 13:250-282.

Schwartz, A. 1972. "The VP-constituent of SVO Languages", in _Syntax and Semantics_, vol. 1, ed. J. Kimball, pp. 213-235, Academic Press, New York.

Schwartz, A. forthcoming. _Grammatical Subject as a Universal_.

Shopen, T. and M. Konare. 1970. "Sonrai Causatives and Passives: Transformational versus Lexical Derivations for Propositional Heads", _Studies in African Linguistics_, 1:211-254.