

PERSONAL PRONOUNS, OBJECT MARKERS,
AND SYNTACTIC EVIDENCE IN DHO-LUO

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This paper discusses the behavior of personal pronouns and the corresponding personal pronoun object markers in Dho-Luo. When pronouns and NP's are the targets of certain syntactic rules, they trigger different verbal coding properties. These differences are shown not to be based on grammatical relations, since in all cases pronouns and NP's of equivalent grammatical status are compared. A constraint against preposition stranding is also discussed. In the second section, the analysis of verbal coding triggered by pronouns, and the constraint against preposition stranding are combined to account for certain grammaticality judgments; an explanation for these results is based on the notion of contradictory verbal marking vis-à-vis the intended strategy or function of the rules in question. The paper concludes with a discussion of passive in Dho-Luo, in which the appearance and behavior of object markers provide evidence pertaining to recent claims in the theory of Relational Grammar.

0. Introduction

This paper discusses a number of syntactic phenomena in Dho-Luo, a Nilo-Saharan language spoken in Tanzania and Kenya¹ with special emphasis on the behavior and characteristics of personal pronouns (pro's) and the corresponding pronominal object markers (OM's). The first section discusses the differences between pro's and non-pronominal noun phrases (NP's) when these are targets of the rules of Topicalization (TOP), Passive (PSV), Clefting (CLF), and the rule or rules presumed to derive sentences like 'X is good/bad/etc. to VERB' from underlying structures resembling 'to VERB X is good/bad/etc.'.

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Since the latter rule will be shown to differ significantly from Tough-Movement (TGH), it will be referred to as TGH-2.

The second section discusses the rules of TGH, TGH-2, and PSV. Arguments based on the behavior of pro's and OM's are crucial in this discussion, since these elements provide evidence for the establishment of grammatical relations and, by implication, evidence for relation-changing processes. TGH and TGH-2 are shown to differ in their effects on grammatical relation change. This difference--in conjunction with other conditions concerning verbal marking and preposition-stranding--helps to account for certain otherwise puzzling grammaticality judgments. The data and analysis of Dho-Luo PSV provides empirical evidence testing two recent proposals formulated in the context of the theory of Universal or Relational Grammar.

A simplified² sketch of the morpho-syntax of Dho-Luo is given below. The SVO word order appears to be the neutral pattern, and various permutations dependent on emphasis are also allowed. Prefixal subject markers (SM's) appear in agreement with self-standing pro's, but the appearance of the latter seems to be optional. When NP's are subjects, SM's do not appear.³ OM's appear as suffixes under pronominalization and as the result of other processes to be discussed. In addition to verbs which allow no direct objects, and verbs which allow one direct object, there are a few "double object" verbs which permit two non-prepositional NP's (or OM's) to follow. Indirect objects may be preceded by ni⁴, 'for, to', and may appear with intransitive and transitive verbs. OM's corresponding to these object types

²Simplification for the purposes of presentation in this paper involves the omission of tonal data and close phonetic transcription. I have also not indicated the phonetic dialectal differences between Kenyan and Tanzanian Dho-Luo. In some cases I have not indicated vowel deletion phenomena because the loss of such information might be confusing to the reader. Self-standing pro's are simply indicated by 'I', 'you', etc. in the morpheme by morpheme descriptions.

³One morpheme appears before the verb root even when NP's are subjects. This is the morpheme o-, but it marks one of the perfect tenses and should not be confused with the 3 sg. SM o-. To avoid any confusion, I have restricted data to sentences in present tenses throughout the paper.

⁴A dialectal difference here is that Kenyan Dho-Luo pronounces this element with a higher vowel than in Tanzanian Dho-Luo.

are subject to various conditions concerning clitic order and co-occurrence. Though not the major topic of this paper,⁵ these conditions will nevertheless prove useful in providing arguments in later discussions. In many of the sentences to be cited below, a verbal suffix *-nga* optionally appears, indicating a type of habitual/continuous activity (H/C).⁶ This suffix—indisputably part of the verbal word—appears after various direct and indirect OM's, and therefore adequately demonstrates that certain of these OM's are not be analyzed as independent words, but as true clitics. This finding is matched by native speaker intuitions, and is reflected in the orthography,

1. Pro's vs. NP's

This section discusses certain anomalies found to obtain when pro's as opposed to NP's of equal grammatical status are the targets of various syntactic rules. We find that rules affecting pro's and NP's of equivalent grammatical status result in the obligatory appearance of OM's agreeing with these pro's, whereas NP's as targets of these same rules must *not* trigger the appearance of agreeing OM's. An explanation for these coding differences based on grammatical status cannot be maintained, since in all cases pro's and NP's of equivalent grammatical status are compared. A constraint against preposition-stranding is also illustrated; this constraint is of considerable importance in later discussions of section 2.

In the following sentences, the rules indicated have applied to pro's and NP's of equivalent grammatical status, yet we find that OM's appear obligatorily when pro's are targets, whereas (third person) OM's must not appear when NP's are targets of these rules.

- TOP
 (1) nyithindo Otieno goy--o-(nga)
 children O. beat V (H/C)
 'the children Otieno beats (is beating)'

⁵I hope to provide a treatment of such markers in the future.

⁶Found in Oluluyia, a neighboring Bantu language, this suffix may have been borrowed into Dho-luo, since it is recognized by Tanzanian Dho-luo speakers as a Kenyan innovation (cf. Dalglis (1976a)).

- (TOP cont.)
- (2) an Otieno goy--a----- (nga)
I O. beat OM lsg (H/C)
'me Otieno beats (is beating)'
- PSV
(3) nyithindo i⁷--goy--o- (nga) gi Otieno
children PSV beat V (H/C) by O.
'children are (being) beaten by Otieno'
- (4) an i---goy--a----- (nga) gi Otieno
I PSV beat OM lsg (H/C) by O.
'I am (being) beaten by Otieno'
- TGH-2
(5) nyithindo ok ber goy--o
children not good beat V
'children are not good to beat'
- (6) an ok ber goy--a
I not good beat OM lsg
'I am not good to beat'
- CLF
(7) nyithindo e--ma Otieno goy--o
children is REL O. beat V
'it's the children Otieno beats'
- (8) an e--ma Otieno goy--a
I is REL O. beat OM lsg
'it's I Otieno beats'

For the above odd-numbered sentences, the presence of a 3pl OM gi agreeing with nyithindo 'children' would render these sentences ungrammatical. On the other hand, in the even-numbered sentences, the absence of the lsg OM -a would also result in ungrammaticality. Thus it appears that when pro's are targets of the above rules, they obligatorily trigger the appearance of agreeing OM's, whereas when NP's of equivalent grammatical status are the targets of these same rules, no OM can appear.

⁷The passive marker i segmentally resembles the second person singular subject (and object) marker, but is distinguished from both tonally.

The preceding statement turns out to be too strong, however, since we do find examples in which the NP *nyithindo* is the target of the above rules, but an OM *gi* agreeing with *nyithindo* appears.

- TOP
- (9) *nyithindo* Otieno *wach-o-ni-----gi-----*(nga) *wehego*
 children O. tell V to/for OM 3pl (H/C) news
 'the children Otieno tells (is telling) the news to'
- PSV
- (10) *nyithindo* *i---ndik--o-ni-gi-----*(nga) *barua gi* an
 children PSV write V to OM 3pl (H/C) letter by I
 'the children are (being) written a letter to by me'
- TGH-2
- (11) *nyithindo* *ok ber ter---o chiamo ir-gi*
 children not good bring V food to OM 3pl
 'children are not good to bring food to'
- CLF
- (12) *nyithindo* *e--ma* Otieno *chung' but--gi*
 children is REL O. stand near OM 3pl

It turns out that the underlined OM *gi* must appear in all such cases. But the absence of an OM in the above cases would result in preposition stranding; such a result is not tolerated and has not been encountered elsewhere in Dho-Luo syntax. Thus, sentences (9-12) do not really affect the validity of the claim above concerning NP's (as opposed to pro's) as targets of certain rules, since the appearance of OM's in (9-12) should be viewed as the result of an independent and not unique syntactic principle concerning bare prepositions, and not grammatical relations.⁸ So, it is now clear that when pro's of a given grammatical status are the targets of certain movement rules illustrated above, they trigger the appearance of OM's. But when NP's of the same grammatical status are the targets of these rules--and when no preposition-stranding is involved--the OM's do not appear. Thus, pro's and NP's of equivalent grammatical status do not trigger the same verbal coding processes. Obviously, then, an attempted explanation of these differences in verbal coding properties cannot be based on a consideration of grammatical relations

⁸ See Baker (1976b) for a brief discussion.

alone. Since there seems to be no apparent functional explanation for these differences, it might be that a diachronic account is more suitable.

2. Pro's, OM's, and Putative Grammatical Relation-Changing Rules

Although relational grammar does not provide a ready explanation for the differences in verbal coding discussed in section 1,⁹ the behavior of pro's as targets of putative grammatical relation-changing rules can be investigated, and used further as the basis for conclusions concerning the effects of such rules on grammatical relations. It is the intention of this section to examine three syntactic rules--TGH, TGH-2, and PSV--in the context of grammatical relations and relation-changing rules. Sub-section 2.1 will discuss TGH and the evidence to demonstrate that it is a relation-changing process. With this in mind, we shall develop an explanation for the unexpected ungrammaticality of certain sentences. This explanation is based on the interplay of several of the factors and conditions elucidated in section 1, with the notion of TGH as a grammatical relation-changing rule. In sub-section 2.2, TGH-2 is analyzed and shown to be a rule which does *not* change grammatical relations. This fact, combined with the same factors and conditions discussed above, provides an interesting account for additional phenomena related to the above TGH data. In sub-section 2.3, PSV is discussed in the context of relation-change. There is clear evidence from Dho-Luo (1) that PSV sentences do not involve promotion of underlying objects to subjects and (2) that they contain transitive verbs, not intransitive verbs. These results are discussed in light of recent claims by proponents of relational grammar.

2.1. TGH as a relation-changing process. The following examples are both attested superficially, and it seems reasonable to derive (13b) from (13a) by a process similar to English TGH, which we may state informally as: promote the non-subject of the lower clause to subject of the higher clause and extrapose the remainder of the lower clause to the right. Thus:

⁹It might even be maintained that relational grammar should not be concerned with these matters at all.

- (13) a. *goy--a-----tek*
 beat OM lsg be hard
 'to beat me is hard'
- b. (an) *a-----tek* *goy--o*
 (I) SM lsg be hard beat V
 'I am hard to beat'

It seems clear that TGH is a rule which changes *grammatical* relations. The 1 sg SM *a-* before the higher verb *-tek* in the TGH moved example of (13b) shows clearly that the object of the lower verb in (13a), *-a*, has been promoted to subject. Furthermore, the *absence* of an OM *a* on (13b) is clear evidence that there is no longer a *grammatical* relation between the first person singular *pro* and the verb 'to beat'. As mentioned in section 1, (13b) with an OM *-a* would be *ungrammatical*.

Similar results obtain for double-object verbs. Notice that here the semantic indirect object *pro* may be moved:¹⁰

- (14) a. *miy--a* *pesa tek*
 give OM lsg money be hard
 'to give me money is hard'
- b. (an) *a-----tek* *miy--o pesa*
 (I) SM lsg be hard give V money
 'I am hard to give money to'

The following data is surprising. Consider the situation in which TGH applies to the object of the preposition *ni* 'for, to'. We find that NP's can be moved by this rule, but that *pro*'s may not--even though it would not be disputed that both NP and *pro* are of equivalent *grammatical* relation to the verb, i.e. that they are both objects of *ni*. Consider first the example below in which an NP object of *ni* is moved by TGH:

¹⁰The direct object *pesa* can be moved by TGH as well:

- (14c) *pesa tek* *miy---- a*
money be hard give OM lsg
 'money is hard to give me'

- (15) a. ndik--o ni Mary barua tek
 write V to M. letter be hard
 'to write to Mary is hard'
- b. Mary tek ndik--o-ni-e barua
 M. be hard write V to OM 3sg letter
 'Mary is hard to write a letter to'

The appearance of the 3 sg OM -e in (15b) clearly replaces Mary, since a plural NP in the same slot would be replaced by the 3 pl OM -gi. The OM in (15b) is clearly there to prevent preposition-stranding; we have discussed this device earlier (cf. (9-12)). Thus, (15b) is fully grammatical.

But now consider the following:

- (16) a. ndik--o-ni-a barua tek
 write V to OM lsg letter be hard
 'to write to me a letter is hard'
- b. *(an) a-----tek ndik--o-ni-(a) barua
 (I) SM lsg be hard write V to (OM lsg) letter
 'I am hard to write a letter to'

If (16b) were to parallel (15b)--in both cases we attempt the movement of the object of ni --we would expect full grammaticality for (16b). Notice that in (16b) we seem to have promoted the former object of the lower verb to subject of the higher verb--the SM a- preceding -tek shows this--and at the same time we have *not* stranded a preposition, since -a appears after ni (of course, a sentence without -a in (16b) would still be ungrammatical). The question then is: why should (16b) be ungrammatical, while (15b) is grammatical?

The answer to this puzzling question is found upon an examination of the interplay of the following conditions in Dho-Luo: (1) the nature of verbal subject marking, (2) the constraint against preposition-stranding, (3) the signalling of grammatical relations and grammatical relation changes by means of verbal marking vis-à-vis the strategy of the rule in question (in this case TGH). In what follows, I shall develop each of these conditions in more detail.

Consider first condition (1). It has already been shown that subject pro's *require* verbal subject marking, whereas subject NP's do not. Condition

(2) concerning preposition-stranding is equally straightforward: no preposition may be left "unattended"--they must be followed by an OM or NP. Condition (3) is concerned with the strategy of the rule in question, TGH. As we have seen from an examination of the non-controversial examples of TGH-sentences (13b-14b) the strategy of TGH with respect to grammatical relation change (and verbal marking) is to indicate (i) that promotion of grammatical relation takes place, signalled by the appearance of a SM on the higher verb; (ii) that the former object of the lower verb no longer bears a grammatical relationship to that verb, signalled by the absence of an OM on the lower verb. In what follows, we shall see how the above three conditions may overlap and contradict each other. It will be an appeal to such a contradiction that will help to provide an explanation for why (15b) is acceptable but (16b) is not.

Consider sentence (15b) in light of the above conditions. Note that in accordance with condition (1), no subject marker appears on the higher verb *tek*. Condition (2) is met, since the appearance of the OM *-e* after *ni* derived from the NP *Mary* serves to prevent preposition-stranding. Let us now consider the resultant verbal marking vis-à-vis the intended strategy of TGH. In (15b) it is clear that the former object of the lower verb, the NP *Mary*, has been promoted, since it appears to the left of the higher verb in subject position¹¹ while it no longer appears as the object of the lower verb. Although it is true that the OM *-e* appears on the lower verb to prevent preposition-stranding, this should not be construed as evidence that NP *Mary* has not been promoted. The only way to demonstrate that would be for the NP *Mary* to be left behind on the lower verb, but as expected this result is also ungrammatical:

- (15) c. **Mary tek ndik--o ni Mary barua*
 M. be hard write V to M. letter
 'Mary is hard to write a letter to'

¹¹Of course, many elements can appear to the left of the verb and not be subjects. The point here is that the appearance of the NP to the left of the verb is at least compatible with claiming it is the subject; it is not intended to be otherwise.

Thus although the OM -e in the grammatical (15b) "substitutes" for Mary, -e is not Mary, and so it cannot be inferred that Mary is left in the lower clause. Since Mary is not left in the lower clause--and since there is no verbal marking to the contrary--it appears that the strategy of TGH has been realized, since, as in clear cases, former objects become subjects while ceasing to bear a grammatical relation to the lower verb. Since the verbal marking of (15b) is compatible with the strategy of the TGH rule, the sentence is grammatical.

Let us now consider (16b) in greater detail. Since it is a sentence in which TGH is to have applied, we expect the strategy of the rule to result in the promotion of the underlying lower verbal object to derived subject of the higher verb, and the cessation of grammatical relations between the promoted element and the lower verb. Since condition (1) stipulates that (promoted) subject pro's trigger obligatory subject agreement, the SM a- should appear on the higher verb -tek; this is what we attempt in (16b). However, condition (2), the constraint against preposition-stranding, would require that the OM -a appear (or remain) on the lower verb. But if we now turn to a consideration of the verbal marking vis-à-vis the strategy of the rule, we see that the resultant verbal marking signals simultaneously that (a) the first person singular pro has been promoted (as evidenced by the SM on the higher verb), and (b) the first person pro has not been promoted (as evidenced by the fact that there is an OM -a on the lower verb). Thus, in order to satisfy conditions (1) and (2), the grammatical relation-changing process of TGH must result in verbal marking as in (16b) which signals effects (on grammatical relations) which are contradictory to the strategy of the rule. The contradiction is that the first person singular pro seems to be simultaneously promoted and not promoted. Such contradictory verbal marking would seem to be a reasonable culprit for the ungrammaticality of such sentence types.

Now it might be thought that the OM -a appearing on the lower verb in (16b) is, like the OM -e in (15b), simply the result of the constraint against preposition-stranding, and does not signal the retention of a grammatical relation with the lower verb. Therefore the appeal to contradictory verbal marking to account for the ungrammaticality of (16b) we have made

would have no basis. It seems, however, that speakers have no way of knowing whether the -a OM in (16b) is there to prevent preposition-stranding or whether it has been--incorrectly--left behind on the lower verb. In the case of full NP's (not pro's) like Mary in (15b), speakers can tell immediately that the OM -e replaces Mary, and that therefore Mary is not left behind on the lower verb. Thus, the strategy of the TGH rule is satisfied. But on what basis can speakers make a similar conclusion about -a, the OM, in (16b)? That is, what would be the evidence that an -a OM replaced an -e OM in the derivation of (16b), parallel to the -e OM replacing Mary in (15b)? The former "replacement" process could never be independently verified, since there is no difference between the proposed "underlying" OM -a and the "replacement" OM -a. This alleged "replacement" process would clearly be ad-hoc, and I can find no evidence in Dho-Luo which would support it.

But now, if it cannot be motivated that the OM -a appearing on the lower verb in (16b) is the result of a replacement process (to satisfy condition (2), the constraint against preposition-stranding), then its appearance on the lower verb must be due to something else. If speakers avoid other exotic or fanciful derivations, the only other reasonable alternative would be to assume that the OM -a on the lower verb has simply been left there in the course of the derivation. But if -a has been left on the lower verb, this signals that -a has not been promoted, since it still bears a grammatical relation to that verb. This of course violates the strategy of the TGH rule, which requires promotion of underlying objects and the cessation of previously held grammatical relations with the underlying lower verb. It seems reasonable to conclude that if the strategy of this rule is contradicted by verbal marking, a sentence containing such contradictory marking would be judged ungrammatical. This would therefore account for the ungrammaticality of (16b).

2.2. The analysis of TGH-2. The preceding analysis, which has been shown to depend on the interplay of three conditions concerning (1) verbal subject marking, (2) the constraint against preposition-stranding, and (3) the resultant verbal marking vis-à-vis the intended strategy of the rule in question finds further support when considered with data from the syntactic

process labelled TGH-2. We shall see first that this process in Dho-Luo differs significantly from TGH; such differences are best stated in terms of grammatical relations and not in terms of structural changes alone. After this, we shall be able to explain additional facts about the differences between TGH and TGH-2 drawing on the analysis developed earlier involving the interplay of the above three conditions.

Recall that in section 1 we discussed the sentences (repeated below for convenience) comparing TGH-2 movement of NP's as opposed to pro's. Here we include superficially attested source forms (a) and TGH-2 derived forms (b).

- (17) a. goy--o nyithindo ok ber
 beat V children not good
 'to beat children is not good'
- b. nyithindo ok ber goy--o
 children not good beat V
- =(5) 'children are not good to beat'
- (18) a. goy--a ok ber
 beat OM lsg not good
 'to beat me is not good'
- b. (an) ok ber goy--a
 (I) not good beat OM lsg
- =(6) 'I am not good to beat'

Concentrating our attention on (18b), we see that TGH-2 apparently does not promote the underlying object of the lower verb (goy) to the subject of the higher verb (ok ber). The evidence for this is of course the verbal marking in (18b), in which no SM appears on ok ber (hence no promotion) while the OM -a is still found on the lower verb (indicating that there has been no cessation of grammatical relations). This surface result is completely different from that of TGH, which involved the appearance of subject markers on the higher verb (indicating promotion) and the absence of an OM on the lower verb (indicating cessation of previously held grammatical relations). Yet these differences follow from an analysis of each rule based on grammatical relation change: TGH is analyzed as a rule changing grammatical relations,

while TGH-2 is analyzed as a rule not changing grammatical relations. The important differences between these rules are obscured by an analysis which relies exclusively on structural descriptions and structural changes, since TGH and TGH-2 both involve (a) the movement of an underlying object of a lower verb to the left of the higher verb and (b) the extraposition of the lower verb to the right of the higher verb. Although such a statement of these rules would account for sentences like (17b), (14c), and (15b), all of which involve movement of NP's, it would fail to explain why TGH and TGH-2 sentences have different verbal marking when pro's are the targets of these rules. An analysis based on grammatical relations predicts this difference exactly in the crucial cases involving the movement of pro's. The prediction is that any difference in the strategies of the two rules in terms of effects on grammatical relations will be illuminated most clearly by those elements which serve to signal grammatical relations. In Dho-Luo such elements are the pro's and corresponding OM's, and this is precisely where we find the differing verbal surface morphology.

Of further interest are the predictions of grammaticality which result from the foregoing analysis. We shall now consider TGH-2 sentences involving objects of the preposition *ni*, and compare the results with similar cases involving TGH. Consider first the following TGH-2 example:

- (19) a. *ndik--o ni Mary barua ok ber*
 write V to M. letter not good
 'to write a letter to Mary is not good'
- b. *Mary ok ber ndik--o ni e barua*
 M. not good write V to OM 3sg letter
 'Mary is not good to write a letter to (her)'

Sentence (19b) parallels the TGH example (15b) perfectly. Notice also that the grammaticality of this sentence is as expected, since none of the three conditions discussed above is violated, and there are no contradictions in verbal marking. First, there is no subject marker on the higher verb. Second, no preposition is stranded, since the *-e* OM appears after *ni*. The verbal marking vis-à-vis the strategy of TGH-2 satisfies the third condition in the following way: the absence of a SM on the higher verb and the

presence of an OM on the lower verb are compatible with the characterization of TGH-2 as a rule which does *not* change grammatical relations, since there is not sufficient evidence to suggest that Mary has been promoted.

Consider now a TGH-2 example in which we parallel the TGH examples (16a-b):

- (20) a. ndik--o-ni-a barua ok ber
 write V to OM lsg letter not good
 'to write me a letter is not good'
- b. (an) ok ber ndik--o-ni-a barua
 (I) not good write V to OM lsg letter
 'I am not good to write a letter to (me)'

The grammaticality of (20b) does not of course parallel the ungrammaticality of (16b). Consider (20b) now in light of the three conditions: (1) a SM does not appear on *ok ber*, the higher verb. Since *pro*'s trigger obligatory subject marking, then the absence of a SM here should be taken as evidence that the 1 sg *pro* is not a subject of *ok ber*; (2) no preposition is stranded, since *ni* is not left unattended; (3) the verbal marking is such that no SM appears on the higher verb, while an OM appears on the lower verb. This result is compatible with the strategy of TGH-2 and its analysis as a rule not changing grammatical relations. That is, the absence of a SM on the higher verb indicates that no promotion has taken place; the retention of the OM on the lower verb signals the same thing. The three conditions are met, there are no contradictions among them, and so the sentence is grammatical.

The situation can now be profitably contrasted with (16b), the ungrammatical TGH sentence. In the latter, we found that the verbal marking required to satisfy conditions (1) and (2) contradicted the strategy of the rule, which is that objects of lower verbs become subjects of higher verbs (i.e., that the grammatical relations are changed). Because of such a contradiction, (16b) is ungrammatical. In contrast, TGH-2 is analyzed as a process whose strategy does not affect grammatical relations; sentences like (20b) satisfy conditions (1) and (2) and do not contradict this strategy in resultant verbal marking. Thus, (20b) is fully grammatical.

In conclusion, we have compared two syntactic processes, TGH and TGH-2. The strategy of each rule was established on the basis of relatively clear-cut

examples: TGH is a relation-changing process, TGH-2 is not, although both rules involve highly similar movement processes. From the discussions of section I we were able to establish the existence of certain conditions concerning verbal marking and preposition stranding. Drawing on these conditions, and their interaction with the differing strategies of TGH and TGH-2, we have been able to account for the differences in grammaticality found to obtain between TGH sentences (15b) and (16b) as well as differences between TGH and TGH-2 sentences (16b) and (20b), respectively. Instead of idiosyncratic and ad hoc conditions on rules or on pro's, we have a unified and potentially illuminating account of otherwise confusing but interesting data.

2.3. The rule of PSV. The rule of PSV in Dho-Luo is of special importance for the study of grammatical relations and grammatical relation-changing processes. Since pro's provide the best evidence (in terms of verbal marking) for this process, we shall restrict our attention to them in the following discussion.

Consider the following pair of sentences, in which the (a) form is the active and presumed underlying source for the (b) PSV:

- (21) a. Otieno goy--a-----(nga)
 O. beat OM lsg (H/C)
 'Otieno beats (is beating) me'
- b. (an) i---goy--a-----(nga) gi Otieno
 (I) PSV beat OM lsg (H/C) by O.
 'I am (being) beaten by Otieno'

Note that, as in sentences (3), (4), and (10) above, (1) Otieno, the subject of the underlying active sentence, becomes the object of the preposition gi 'by' in the corresponding PSV sentence. Thus it is clear that former subjects are demoted, and that PSV is a rule changing grammatical relations; (2) underlying objects may be moved to the left of the verb in PSV sentences, into what is usually subject position; (3) the verbal marking involves an OM on the passive verb. We have therefore prima facie evidence that underlying objects are not promoted to subjects in Dho-Luo PSV, and that underlying subjects are demoted. The conclusion is therefore that

Dho-Luo PSV is primarily a demotional rule. This was, to my knowledge, first proposed by Keenan [1975] and will be verified with additional examples below. In addition, this analysis of Dho-Luo will show that the passivized verbs should be considered transitive verbs. In the same article, Keenan proposed that passivized verbs are intransitive, a claim that is therefore to be refuted by this analysis.

The following arguments are provided to support the position that objects are not promoted to subjects in Dho-Luo PSV sentences. These arguments are based on the nature, order, and co-occurrence restrictions found to obtain for OM's in both active and passive sentences. In each case, OM's in active sentences behave exactly like the verbal markers in PSV sentences; one would miss obvious generalizations with an analysis which denies that the markers in PSV sentences are OM's. But if these are in fact OM's, then it is clear that objects cannot have been promoted (to subject) and that verbs in passive sentences with such object markers cannot be analyzed as intransitive verbs.

(1) The first argument involves the nature of subject and object markers. Subject markers and corresponding object markers are phonologically identical, except in the third person singular form, which has *o-* for the SM and *-e* for the OM in active sentences. In examples involving an underlying 3 sg object *pro*, the corresponding PSV sentence has *-e*, the OM, and not *o-*, the SM. Furthermore, the SM's are prefixes and the OM's are suffixes; the PSV verb surfaces with changes according to person and number indicated by suffixes.

(2) The second argument involves the order of verbal OM's which is fixed in active sentences. In general, the indirect OM precedes the direct OM.¹² Consider the following active sentences involving double object verbs with two OM's:¹³

¹²There are some counter-examples to this postulated clitic order which are currently being investigated and are not discussed here. But even these problematic examples show the same (aberrant) order for OM's in active and PSV sentences, further strengthening the point of the argument.

¹³We assume that previous discourse has established the reference of these OM's.

- (22) a. Otieno miy--a-----gi
 O. give OM lsg OM 3pl
 'Otieno gives me them'

- (23) a. a-----chik----o-gi-----e
 SM lsg promise V OM 3pl OM 3sg
 'I promise (to) them him/her/it'

We find that PSV sentences derived from these active sentences maintain the same order of verbal markers (indirect OM preceding direct OM). This is true whether we "move" either the direct or indirect pro to the left of the verb. In the PSV examples, then, we have either of the pro's appearing before the verb:

- (22) b/c. (an/gIn) i---miy--a-----gi-----gi Otieno
 (I/They) PSV give OM lsg OM 3pl by O.
 'I am given them by Otieno'
 'they are given to me by Otieno'

- (23) b/c. (gin /en) i---chik----o-gi----- gi an
 (they/he,she,it) PSV promise V OM 3pl OM 3sg by I
 'they are promised him/her/it by me'
 'he/she/it is promised to them by me'

The order of the markers in the PSV sentences must be fixed as they appear; notice that this order corresponds completely to the order of OM's in active sentences.

When we examine a combination of direct objects and objects of the preposition ni, we find that the order of verbal markers in active sentences is fixed, and that same order must occur in PSV sentences:

- (24) a. Otieno chwad-o-ni--e-----gi
 O. beat V for OM 3sg OM 3pl
 'Otieno beats them for him/her'

Reversing the order of these elements results in ungrammaticality:

- (24) a'. *Otieno chwad-o-gi-----ni--e
 O. beat V OM 3pl for OM 3sg

In the PSV sentences potentially deriveable from (24a), the same order of elements must obtain:

- (24) b/c. (en /gin) i---chwad-o-ni---e-----gi gi Otieno
 (he,she/they) PSV beat V for OM 3sg OM 3pl by O.

'he,she is benefitted from the beating of them done by Otieno'¹⁴
 'they are beaten for him/her by Otieno'

Reversing the order of the two verbal OM's in these PSV sentences results in ungrammaticality exactly parallel to the active ungrammatical sentence (24a'), in which the same reversal was attempted.

(3) The third argument comes from a consideration of a constraint on third person object markers. We find that phonologically identical OM's may not co-occur, even though they are understood in discourse to be referentially distinct (this is indicated by using subscripts). Consider first active sentences with double object verbs:

- (25) a. *Otieno miy--o-gi₁-----gi₂
 O. give V OM 3pl₁ OM 3pl₂
 'Otieno gives them₁ them₂'

- (26) a. *Otieno chik----e₁-----e₂
 O. promise OM 3sg₁ OM 3sg₂
 'Otieno promises him/her it '

We find that this ungrammaticality is matched for corresponding PSV sentences involving these markers:

- (25) b/c. *(gin₁ /gin₂) i---miy--o-gi₁-----gi₂ gi Otieno
 (they₁/they₂) PSV give V OM 3pl₁ OM 3pl₂ by O.
 'they₁ are given them₂ by Otieno'
 'they₂ are given to them₁ by Otieno'

- (26) b/c. *(en₁ /en₂) i---chik----e₁-----e₂ gi Otieno
 (he,she₁/it₂) PSV promise OM 3sg₁ OM 3sg₂ by O.
 'he, she₁ is promised it₂ by Otieno'
 'it₂ is promised to him/her₁ by Otieno'

¹⁴The translation here is the best under the circumstances. It resembles the Bantu examples in which "beneficiary" objects of underlying active sentences become the subjects of passivized sentences; an English straight gloss is usually confusing. Therefore, I have resorted to a bit of circumlocution to retain the correct semantic interpretation.

The point here is not to account for the ungrammaticality of the above active sentences,¹⁵ but merely to point out that the ungrammaticality of the corresponding PSV sentences seems closely related. Since some constraint concerning identical 3 person OM's in active sentences is needed in the grammar independently, it would seem overly repetitious to require an additional constraint for completely parallel data in corresponding passive sentences. Yet this is exactly what would be required if we failed to consider the markers in passive sentences as *object* markers.

In summary, then, we have examined three separate cases comparing active sentences containing OM's with corresponding PSV sentences containing similar markers. In each case, the nature, order, and co-occurrence restrictions found to obtain for OM's in active sentences was systematically paralleled in the behavior of verbal markers in PSV sentences. To deny that these verbal markers in PSV sentences are OM's would necessitate that clearly related phenomena be treated repetitiously and separately. The conclusion is then that the verbal markers appearing in PSV sentences are in fact OM's. If they are OM's in PSV sentences, then two things must follow. First, it is clear that the OM's represent instances in which objects have not been promoted to grammatical subjects (note that in (21b) no appeal to preposition stranding can possibly be maintained). This then supports Keenan's claim that PSV is primarily a demotional process, since Dho-Luo clearly shows that underlying subjects are demoted to the objects of the preposition *gi* 'by'. Secondly, the appearance of OM's on the passive verb must surely constitute evidence that these passivized verbs are transitive, which in turn vitiates Keenan's second claim that all passivized verbs are intransitive.

3. Conclusion

In the first section we examined the behavior of pro's and OM's as targets of various rules in Dho-Luo. We first found that pro's and NP's triggered differences in verbal coding when targets of certain rules, even when grammatical relations of pro's and NP's to verbs were held constant. In the second section, we examined the behavior of OM's and pro's as targets

¹⁵McCawley reports similar problems in Pashto (personal communication) and there is the **so so* example in Spanish discussed by Rizzi (1986: 3

of putative grammatical relation-changing rules. We found evidence that TGH, but not TGH-2, is a relation-changing process. We also accounted for differences in grammaticality for pro's as targets of first TGH and then TGH-2 by an appeal to contradictory verbal marking. Finally we provided three arguments to suggest that the markers in Dho-Luo PSV sentences are OM's, and that therefore PSV is primarily demotional, and involves transitive and not intransitive verbs.

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