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Kinyarwanda

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Question Strategies and
Hierarchies of Grammatical Relations in Kinyarwanda*

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1. This paper will discuss two strategies for "WH"-question formation in Kinyarwanda and the relevance of certain hierarchies of grammatical relations to these strategies. It will be shown in section 2 below, that in the Bantu language Kinyarwanda, there are two distinct strategies for forming direct Wh-questions. One, involving clefting and relativization, can be applied to any noun. The other, a 'substitution' strategy, substitutes without movement an interrogative for the questioned noun, is distinct from a relative clause-type structure, and cannot be used to question any surface subject. The existence of two strategies, one of which cannot be applied to subjects, results in a situation where subjects have less options open to them than objects. Constructs such as the Relative Clause Accessibility Hierarchy (Keenan and Comrie, 1977) and the Relational Hierarchy (Perlmutter and Postal, 1974, 1977), which will be presented in more detail in section 3 below, claim in general that subject is primary; that is, that there will be no operations which apply to grammatical relations lower on a hierarchy than subjects but do not also apply to subjects. Questioning in Kinyarwanda, therefore, could be viewed as a counterexample to these hierarchies because subjects cannot undergo a process which IS open to objects.

The claim of this paper will be that 1) the two question strategies are distinct both formally and in their communicative function, and that 2) because they are distinct and because of the nature of the hierarchies, only one strategy is in the domain of the hierarchies. It will be argued, then, that Kinyarwanda questions do not constitute a counterexample to the existing hierarchies of grammatical relations. Data paralleling the Kinyarwanda situation from the related language of Ci-Ruri which shows that Kinyarwanda is not an isolated instance of subjects being non-primary will be discussed. Finally, section 4 will conclude the paper with a general summary, with possible explanations for the restriction on subjects, and with questions which could lead to further research.

2. Question Strategies. This section contains data illustrating basic word order, declarative sentence structure, cleft sentence structure, and questions on subjects, direct objects and indirect objects. It also contains declarative relative clause structure, and examples of human and non-human subjects, transitive and intransitive and active and passive constructions.

Kinyarwanda is a Bantu language spoken by approximately seven million people in Zaire, Uganda and Rwanda; its characteristics include the common Bantu system of noun classes and noun class agreement markers, an agglutinative verbal complex, and some use of tone to mark syntactic distinctions of tense, clefting,

relativization, etc. There is some use of inherent lexical tone; the only crucial occurrence of tone is grammatical.

Basic word order in Kinyarwanda is S V IO DO, as shown in (1). Gary and Keenan (1977) and Kimenyi (1978) argue that there is only one object relation in Kinyarwanda which collapses the categories IO and DO. Because this is a controversial claim, and has been argued against by Perlmutter and Postal (1978), for the purposes of this paper we will continue to refer to both DO and IO.

(1) Basic Word Order

umugore	j	-	a	-	haa	-	je	umwaana	igitaBo
woman	subj	tns			give	asp	child	book	
	concord								
	S				V		IO	DO	
'The woman gave the child the book.'									

Subject concord is obligatorily marked on the verb in prefix-initial position. To question the direct or indirect object, the preferred strategy is to employ a question word - nde 'who' or ici 'what' - in the place of the questioned noun without changing word order; this strategy is shown in (2-3).

(2) Questioning DO

- | | | | | | |
|----|---------|---------|---------|---------|--------------------------------------|
| a. | umugore | jahaaje | umwaana | igitaBo | 'The woman gave the child the book.' |
| | woman | gave | child | book | |
| b. | umugore | jahaaje | umwaana | ici | 'What did the woman give the child?' |
| | woman | gave | child | what | |
| c. | umugore | jiše | umunhu | | 'The woman killed the man.' |
| | woman | killed | man | | |
| d. | umugore | jiše | nde | | 'Who did the woman kill?' |
| | woman | killed | who | | |

(3) Questioning IO

- | | | | | | |
|--|---------|---------|-----|---------|---------------------------------------|
| | umugore | jahaaje | nde | igitaBo | 'Who did the woman give the book to?' |
| | woman | gave | who | book | |

It is also possible to cleft DO and IO questions. Non-questioned clefting for S, DO and IO is shown in (4).

(4) Clefting

- | | | | | | | | | | |
|----|----|---|---------|---------|---------|---------|---|---------|---|
| a. | ni | - | umwaana | umugore | jaháaje | igitaBo | 'It is the child the woman gave the book to.' | | |
| | is | | child | woman | gave | book | | | |
| | | | | | (+tone) | | | | |
| b. | ni | - | igitaBo | umugore | jaháaje | umwaana | 'It is the book the woman gave to the child.' | | |
| | is | | book | woman | gave | child | | | |
| | | | | | (+tone) | | | | |
| c. | ni | - | umugore | u | - | aháaje | umwaana | ititaBo | 'It is the woman that gave the child the book.' |
| | is | | woman | rel | gave | child | book | | |
| | | | | subj | (+tone) | | | | |
| | | | | conc | | | | | |

Clefting involves moving the focused noun to the front of the sentence, prefixing the copula ni to the noun, and adding high tone to the verb. Clefted DO and IO questions are shown in (5).

- (5) Clefted DO and IO questions
- | | | |
|----|----------------------------------|----------------------------|
| a. | ni - ici umugore jaháaje umwaana | 'What is it that the woman |
| | is what woman gave child | gave to the child?' |
| | (+tone) | |
| b. | ni - nde umugore jiše | 'Who is it that the woman |
| | is who woman killed | killed?' |
| | (+tone) | |
| c. | ni - nde umugore jaháaje igitaBo | 'Who is it that the woman |
| | is who woman gave book | gave the book to?' |
| | (+tone) | |

Question words can be plural if the speaker has an idea that the person/thing being questioned is plural:

- (6) Plural Question Words
- | | | |
|----|-----------------------|--------------------------------|
| a. | umugore jiše Ba - nde | 'Who-all did the woman kill?' |
| | woman killed plu who | |
| b. | umugore jiše Ba - ici | 'What-all did the woman kill?' |
| | woman killed plu what | |

Questioning subjects in Kinyarwanda, however, does not follow the same pattern as questioning objects. As shown in (7),

- (7) a. *nde jiše umunhu
 who killed man
- b. ni - nde u - iše umunhu 'Who is it that killed the
 is who rel killed man man?'
- subj(+tone)
 conc

the subject of a sentence cannot be simply replaced by a question word. Subjects are obligatorily clefted. Furthermore, when the subject is thought to be human, the subject concord on the verb is u-, that used for the human noun class in relative clauses and clefts. (8) illustrates the ungrammaticality which results if the u- concord is not used.

- (8) *ni - nde jiš^v umunhu
 is who killed man
 (+tone)

Declarative relativization of a human subject is shown in (9). Again, relativization of a human subject must employ the u- concord, as in (9a), not the non-relative j- subject concord as shown in (9b).

(13) Inanimate--intransitive

- a. urutare rg - aguje 'The rock fell'
 rock subj fell
 conc
- b. ni - ici cj - agúje 'What is it that fell?'
 is what subj fell
 conc (+tone)
- c. *ici cjaguje
 what fell

It has been shown above that all subjects must be clefted and relativized in order to be questioned. This is a property of subjects rather than agents for the following reasons: a) subjects of 'agentless' constructions like that in (14) still must obey the strategy, and b) patient subjects of passive sentences also must cleft and relativize, as shown in (15c), whereas agents in passives can follow the substitution strategy, as in (15f).

- (14) a. umugore jaguje 'The woman fell'
 woman fell
- b. ni - nde u - agúje 'Who is it that fell?'
 is who rel fell
 subj (+tone)
 conc
- c. *nde jaguje
 who fell
- d. *nde u - aguje
 who rel fell
 subj
 conc

((15a and b) illustrate declarative passivization.)

- (15) a. umunhu jiše umugore 'The man killed the woman.'
 man killed woman
- b. umugore jiš - w - e na umunhu 'The woman was killed
 woman kill pass asp by man by the man.'
- c. ni - nde u - iš - we na umunhu 'Who is it that was
 is who rel kill pass by man killed by the man?'
 subj (+tone)
 conc
- d. *nde jiš - we na umunhu
 who kill pass by man
- e. *nde u - iš - we na umunhu
 who rel kill pass by man
- f. umunhu jiš - we na nde 'Who was the man killed
 man kill pass by who by?'

It could possibly be the case that subjects can be directly questioned but that question words simply are prohibited from occurring sentence-initially. That is, when subjects which do not occur sentence-initially are questioned, is the substitution strategy available? The answer, as illustrated by the data in (16) below, is

"no". Even when subjects do not occur sentence-initially, the substitution strategy cannot be followed; the questioned subject must be clefted and relativized.

- (16) a. umunsi umwe umugore jagije kwasa inhwi
 day one woman went to split firewood
 'One day the woman went to split firewood.'
 b. umunsi umwe ni - nde uagije kwasa inhwi
 day one is who went to split firewood
 'Who went to split firewood one day?'
 c. *umunsi umwe nde uagije kwasa inhwi
 day one who went to split firewood

The data in (16) provide yet more evidence that question strategies in Kinyarwanda must refer to SUBJECT rather than, say, position in the sentence. It has been pointed out by both Fred Householder and John Goldsmith that all of the above assertions about the necessity of referring to subject also refer to preverbal position in the sentence. That this is true does not, however, change the situation with respect to subjects. That is, subjects are always preverbal, and are always exempt from the substitution strategy.

3. Hierarchies. Based on the data presented above, it can be claimed that Kinyarwanda questions constitute a counterexample to the notion of the Relative Clause Accessibility Hierarchy (RCAH) and by extension also to the Relational Hierarchy (RH). This position crucially relies on treating "question formation" in a language as a set of operations unified by their "intent" in discourse.

3.1 First, however, the RCAH and the RH should be outlined and briefly discussed in order to understand the relevance of the question data.

Keenan and Comrie (1977) and Comrie and Keenan (1979) are the major proponents of the RCAH. They were concerned with formulating the regularity they observed in the cross-linguistic distribution of well-formed relative clauses, with making a single generalization about human language. The hierarchy they observed is the following:

- (17) Relative Clause Accessibility Hierarchy
 S > DO > IO > OBL > etc.

(17) with its associated constraints listed in (18), claims that if relative clause formation applies to a term lower on the hierarchy, it also applies to all terms higher on the hierarchy, and that relativization cannot apply to discontinuous portions of the hierarchy.

- (18) Accessibility Hierarchy Constraint (Comrie and Keenan, 1979, p. 653)
 a. If a language can relativize any position on the AH with a primary strategy, then it can relativize all higher positions with that strategy.

- (18) b. For each position on the AH, there are possible languages which can relativize that position with a primary strategy, but cannot relativize any lower position with that strategy.

Although Keenan and Comrie present their hierarchy as an observation only about relative clause formation, they speculate that, as a construct of universal grammar, the AH should have considerably greater generality than its role in characterizing cross-linguistic patterns in relative clause formation. They mention that a second extension of the range of applicability of the AH is in determining cross-language restrictions on advancement processes. This extension is essentially the Relational Hierarchy of Perlmutter and Postal (1974, 1977) which was arrived at independently and with somewhat different motivation.

Perlmutter and Postal's theory of Relational Grammar crucially depends on the Relational Hierarchy. Relational Grammar, as explained by Johnson (1977), Kimenyi (1978), Trithart (1977), and others, was an attempt to provide a single principled cross-linguistic characterization of transformations such as the Passive by means of reference not to categories such as NP and V and word order, but to the grammatical relations of noun phrase arguments to the verb, such as subject and object. It was argued that 1) a universal description of passive would be the promotion of a direct object to the status of subject and the demotion of the original subject to a status which no longer bore any relation to the verb, and that 2) this characterization would hold for any human language regardless of basic word order or morphology. A universal characterization would then surpass a traditional transformational-generative account of the passive with its necessity for language-specific rules.

The claims of Relational Grammar depend in part on the Relational Hierarchy. As presented in Johnson (1977), Kimenyi (1978) and elsewhere, Relational Grammar claims that there are certain "terms" in grammatical relation to the verb of a sentence--subject (S), direct object (DO), indirect object (IO), and oblique objects (OO)--and that these are hierarchically arranged in the following order:

- (19) Relational Hierarchy
 $S < DO < IO < OO$

That is, indirect object has precedence over oblique object, direct object outranks indirect and oblique objects, and subject takes precedence over all other terms. 'Outranks' refers to the output of promotion processes such as passivization, which is said to promote a term up the hierarchy, so that if a language can passivize indirect objects, it must also be able to passivize direct objects. (passivization being a promotion of object to subject). The similarity of the RH with the RCAH cannot be overlooked.

Although Keenan and Comrie discuss only relative clause formation in regard to their hierarchy, and although the Relational Hierarchy was designed to explain certain cross-linguistic generalizations about relation-changing processes (clefting and Wh-questioning are not relation-changing operations; the terms involved do not change their relations to the verb), there is independent evidence from a number of other languages that Wh-questions bear a marked resemblance to relative clauses and/or cleft-focus constructions. Bokamba (1977) discusses questions in Dzamba, a Bantu language, and makes the point that Wh-questions look and behave like relative clauses. A similar claim is made for Ojibwe by Truitner and Dunnigan (1972). Kokora (1976) asserts that Wh-questions in Koyo cannot be syntactically distinguished from other focus constructions (p. 183). Trithart (1977) states that although relativization and cleft are not term-changing, "the relative accessibility of major noun phrases to relative clause formation, as well as to other 'focussing' operations like wh-question and cleft, is found to follow implicational relationships similar to those posited by the Relational Hierarchy." (p.4). Cole et al (1977) group Q-formation, Relativization and Topicalization together as all having the effect of marking an NP the most prominent element in its clause. Keenan and Hull (1973) show that relative clauses, Wh-questions and cleft constructions all are similar; they propose a principle to the effect that logically similar constructions are generally realized in syntactically similar ways.

It should be noted that all discussion of the hierarchies implies a "top-inclusiveness": if any term is to have a strategy or transformation applied to it, AT LEAST subject will be the under-goer. There is no mention of the option of a process applying to a segment of a hierarchy which does not include subject; say, to IO and DO but not to S. Cole et al observe that languages may differ as to how far DOWN the hierarchy a process will go, but no one proposes that subject will be excluded. In fact, Comrie and Keenan (1979) propose a universal, the Subject Relative Universal: All languages can relativize Subjects (p. 652). If, then, Wh-questioning and clefting are foregrounding operations (Schachter, 1973) like relativization, they might be expected to obey the same hierarchies as relativization, and obligatorily apply at least to subjects.

Now that the hierarchies and the theory of Relational Grammar have been presented, the apparent counterexample to them can be discussed. If both strategies for Wh-questions in Kinyarwanda, as presented in section 2, are viewed as a process sharing a communicative intent (a request for information to which an appropriate response would be a noun phrase), a process of "questioning", then they could be considered a serious counterexample to the RCAH and by extension also to the RH because of its striking similarity to the RCAH. That is, as stated above, it has been frequently claimed that questions should be in the same domain as relative clauses and other focus constructions; if this is the case, the

hierarchy governing such a domain would be expected to also govern questions. A counterexample of this sort would require a crucial revision of the RCAH; it would have even broader implications for the RH and Relational Grammar: the theory as a whole would be somewhat discredited if its most basic tenet were shown to be non-universal.

The above problem, however, relies heavily on considering the two question strategies to be a unified set of operations, that of 'questioning'. It will be argued below that the two Wh-question strategies are separate and distinct and must be treated as such by a theory of grammar.

3.2 It was illustrated in section 2 that not only are subjects exempt from the 'substitution' strategy, but the two strategies are quite different: the substitution strategy moves nothing and replaces a noun with an interrogative, while the other operation involves clefting (which includes movement) and relativization. It was shown in section 3.1 that this second strategy in which subjects may participate shares not only in Kinyarwanda but also in other languages both structural and logical (in the sense of Keenan and Hull 1973) properties with other focusing constructions such as clefts and relatives. Furthermore, this second strategy is the one which does NOT violate either the RCAH or the RH: subjects participate as well as objects. Does this strategy, then, functionally have more in common with the other question process, the substitution strategy, or with relative clauses and focus constructions? Syntactically the two question strategies differ. Their only common ground is the general one of all interrogatives: asking for information. The substitution strategy is neither a focusing construction like relative clauses nor a term-changing operation like passivization.

It is the claim of this paper that the substitution strategy is outside the domain of the Relative Clause Accessibility Hierarchy and the Relational Hierarchy because it is distinct from the focusing strategy. Hierarchies may not be able to refer to a general process of QUESTIONING in a language if such a process has two separate and distinct strategies as its component parts. Proponents of the RCAH and of Relational Grammar will have to recognize that languages may differ in how general syntactic processes like questioning are carried out and will have to recognize that perhaps for non-term-changing and non-focusing operations the hierarchies will be irrelevant. That is, a construct such as the Relational Hierarchy may not be without exceptions; it may be a tendency that languages follow FOR MOST PROCESSES rather than an absolute universal. If, however, the nature of the exceptions to the hierarchies can be predicted, the construct retains more of its original explanatory adequacy (c.f. Chomsky 1964) than if exceptions could not be predicted. In the Kinyarwanda question example, then, perhaps the prediction would be that questions which structurally and logically resemble other constructions (such as relative clauses) which DO follow the hierarchy will also be in the domain of the hierarchy.

Conversely, the predicted exception would be a question strategy which bears NO similarity to any other operation which follows the hierarchy. These are testable claims and predictions, and would profit from further cross-linguistic research.

In summary then, it has been claimed that Wh-questions in Kinyarwanda do not constitute a counterexample to the Relational Hierarchy as long as proponents of Relational Grammar recognize the validity of a general process like 'questioning' having separate and distinct strategies, strategies that cannot be unified under the Relational Hierarchy.

One might wonder whether Kinyarwanda is an unusual and isolated example of such restrictions on subjects. Data from the related Bantu language of Ci-Ruri indicates that this is not so. As in Kinyarwanda, questioned subjects must be preceded by the copula ni; interrogative words when replacing subjects cannot stand alone as they can for objects. It may be that other Bantu languages also exhibit this phenomenon, although a preliminary investigation of Swahili, SeSotho, Lingala, Zulu and Dzamba showed that those languages do not operate similarly to Kinyarwanda and Ci-Ruri with respect to questioned subjects.

4. Conclusions. This paper has shown that languages may have more than one Wh-question strategy. If a strategy produces questions which resemble relative clauses and focus constructions, the Relational Hierarchy should be followed. If a language has a question formation operation which does not resemble any other process independently shown to be in the domain of the hierarchy, then the hierarchy would be irrelevant.

As an attempt at finding possible explanations for the questioning restriction, it might be considered that directly questioning subjects might give rise to ambiguity, and that the language prohibits this by requiring subject clefting and relativization. Ambiguity should not arise, however, since only subjects can directly precede the verb; that is, a sentence like *nde jiše umunhu, 'who killed the man?' would never be interpreted as 'the man killed who?' because of the restriction on Kinyarwanda word order.

Another possible explanation concerns word order change. It has been claimed that Bantu languages were previously of the SOV word order; that is, that they were verb-final languages (Givon, 1974; Hyman, 1974). It has further been noted that SOV languages tend to use a substitution strategy for Wh-questions (Japanese is a prime example of this). It may be that the assymetry in questions in Kinyarwanda is an artifact of the word order change which the language has recently undergone (Linda Schwartz suggested these hypotheses). Both of the above proposals are tentative and will benefit from further research.

Other questions for further study might include: "What other kinds of operations are there that might exhibit distinct subparts, subparts that might behave differently with respect to the Relational Hierarchy and the RCAH?", "Why are subjects restricted to only one question strategy?", "What other operations are subjects

excluded from, and do any of these violate the hierarchies?", "Why would a language have more than one strategy for achieving the same intent, say, of asking for information?", and "What other syntactic structures select subjects?"

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References

- Bokamba, E.G. 1974. A counter-example to Bach's questions. Presented at the Fifth Annual Conference of African Linguistics, Stanford.
- Chomsky, N. 1964. Current issues in linguistic theory. In J. Fodor and J. Katz (eds.), The Structure of Language. Englewood Cliffs: Prentice-Hall, Inc. 50-118.
- Cole, P., W. Harbert, S. Sridhar, S. Hashimoto, C. Nelson and D. Smetana. 1977. Noun phrase accessibility and island constraints. In P. Cole and J. Sadock (eds.), Syntax and Semantics Vol. 8, Grammatical Relations. New York: Academic Press. 27-45.
- Comrie, G. and E. Keenan. 1979. Noun phrase accessibility revisited. Language 55:3.649-64.
- Gary, J. and E. Keenan. 1977. On collapsing grammatical relations in universal grammar. In P. Cole and J. Sadock.
- Givon, T. 1974. Serial verbs and syntactic change: Niger-Congo. In C.N. Li (ed.), Word Order and Word Order Change. Austin: University of Texas Press. 47-112.
- Hyman, L. 1974. On the change from SOV to SVO: evidence from Niger-Congo. In C.N. Li.
- Johnson, D.E. 1976. Toward a Theory of Relationally-based Grammar. Bloomington: Indiana University Linguistics Club.
- Keenan, E. and B. Comrie. 1977. Noun phrase accessibility and universal grammar. Linguistic Inquiry 8:1.63-100.
- _____, and R.D. Hull. 1973. The logical syntax of direct and indirect questions. You Take the High Node and I'll Take the Low Node. Chicago: Chicago Linguistics Society.
- Kimenyi, A. 1978. A Relational Grammar of Kinyarwanda. Los Angeles: University of California Press.
- Kokora, D.P. 1976. Studies in the Grammar of Koyo. Doctoral dissertation, Indiana University.
- Perlmutter, D. and P. Postal. 1974. Lectures on Relational Grammar. Linguistics Society of America Summer Institute, Urbana.
- _____. 1977. Toward a Universal Characterization of Passivization. Berkeley Linguistics Society 3.394-417.
- _____. 1978. Some proposed laws of basic clause structure. To appear in D. Perlmutter (ed.), Studies in Relational Grammar 1.

- Schachter, P. 1973. Focus and relativization. Language 49.19-45.
- Trithart, M.L. 1977. Relational Grammar and Chichewa Subjectivization. Bloomington: Indiana University Linguistics Club.
- Truitner, T. and T. Dunnigan. 1972. Wh-questions in Ojibwe. CLS 8. 359-67.