

SUBJECT IDENTIFICATION STRATEGIES AND FREE WORD ORDER:

THE CASE OF SANDAWE*

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A discussion of some of the major morpho-syntactic and syntactic constructions of Sandawe, a Khoisan language of Tanzania, is presented. The role of what are called Subject Identification Strategies is discussed and shown to interact with the free word order found in most main clauses and with the more restricted word order found in certain syntactic constructions. Some generalizations and conclusions concerning these Strategies are then discussed.

0. Introduction

This work is intended to serve a number of purposes. First, it is a fairly thorough account of a number of syntactic constructions in Sandawe, a largely unexplored and poorly documented Khoisan language spoken in Tanzania. Only one book has been published concerning any aspects of Sandawe [Dempwolff 1916], and in that work, some thirty pages are on vocabulary, phonology and grammar (the rest is an ethnographic study). For this reason, this work is data-oriented; whenever possible, numerous examples are given in order to demonstrate as thoroughly as possible the point at hand, and hopefully to gain the confidence of the reader in the depth and reliability of the data.

Secondly, the language is of theoretical interest in that it has largely free word order in main clauses, coupled with a truly remarkable system

*The research on Sandawe, conducted in 1976-78, was supported by a grant from the University of Dar es Salaam, where I was a Lecturer in the Department of Foreign Languages and Linguistics. Thanks largely to the efforts of the late Professor I. Richardson, Head of the Department of Foreign Languages and Linguistics, and the members of the Research and Publications Committee of the Faculty of Arts and Social Sciences, the research was funded in record time. I received very valuable support, encouragement, and ideas from Mr. E.D. Elderkin, Senior Lecturer in the De-

of marking many diverse elements of a clause for its subject. I have chosen to examine the overall system of S(subject) I(identification) because that system is of theoretical interest and also because it is an excellent springboard for presenting the data in an orderly way. There are a number of what I hope are interesting generalizations to be found concerning the identification of subject in a largely free word order language.

The word order in Sandawe is, to a great extent, free, in that meaningful lexical elements may appear in any order without significantly affecting topic, focus, definiteness, etc. It seems that SOV word order is statistically more prevalent, and might be taken therefore as the underlying word order. In some obscure cases it is the only possible order. But it is also true that other orders are fully acceptable without necessarily implying greater emphasis in one way or another. Topicalization does exist with full pause and intonation breaks separating the topicalized element from the rest of the sentence, but this is completely different from the permutations we will examine in this work. So, with that caveat, Sandawe can be considered a "largely" free word order language.

In the first two sections, we shall examine the basic morphology and syntax of the language in main clauses of simple sentences. We shall be

partment of Foreign Languages and Linguistics, on various aspects of my research. He, too, was and is examining Sandawe, with emphasis on the tonal system, and he helped me with numerous suggestions and guidance. We had a very free and open exchange of ideas, and it was a pleasure to work with someone who is so scholarly, methodical, and yet so cooperative and helpful. In anticipation of his work on tone, which I know to be of the highest caliber, I am excluding that aspect in my study. I would also like to thank Paul Neubauer, Jan Jakes, Kim Hodges, Susan Stucky, and Chuck Kisseberth for their comments on some of the data presented orally at the Linguistic Institute, Summer, 1978. My principal language assistants were Mr. J.G.D. Wagine, from Ovada, and Ms. R. Duma, from Mtoro. There are a few dialectal differences between them not included in these data and probably not significant. They were both very patient, hard-working, careful, and forgiving, but not unmindful, of my mistakes, and they were happy to consult other speakers on finer points. The elicitation process was in English and occasionally in Swahili for Mr. Wagine and Ms. Duma and in Swahili for other speakers consulted. The use of both languages in elicitation was unavoidable and probably did not have a significant effect on the findings.

primarily interested in the various strategies the language employs to identify the subject. In the third section, we shall examine various syntactic constructions and their formation strategies, and examine the interaction of these strategies with the strategies used to identify the subject. This will take us through the WH-question construction, the cleft construction, and relativization. Various subordinate and complement clause constructions are discussed in Section 4. Finally, a conclusion summarizes the findings of the previous sections.¹

1. Subject-Identification Strategies of the Language

Sandawe has four morpho-syntactic strategies for identifying the subject:

1.1. Verbal Subject-markers (SM). SM's are illustrated in the following singular forms:

- (1) a. (ci) ta-s ?iě
 (I) run-SM1sg PROG
 'I am running'
- b. (hapu) ta-i ?iě
 (you) run-SM2sg PROG
 'you are running'
- c. (hewe) ta-a ?iě
 (he) run-SM3sgM PROG
 'he is running'
- d. (hesu) ta-sa ?iě
 (she) run-SM3sgF PROG
 'she is running'

¹As do other Khoisan languages, Sandawe has several clicks in its phoneme inventory. The following symbols are used for these: / = dental click, ! = palatal click, // = lateral click. These are found in plain, nasalized, and aspirated contrastive series. Other orthographic conventions are the following: ejective consonants are marked with a raised comma (k' , ts'); t| represents a voiceless and d| a voiced lateral fricative; c is phonetic [tʃ] (which contrasts with aspirated ch); s^w represents a labialized s (which contrasts with non-labialized s); nasalized vowels are marked with a tilde (?iě , etc.).

The Progressive auxiliary may be inflected for subject:

- (2) a. ?ie-sĩ ta
 PROG-SM1sg run
 'I am running'
- b. ?ie-ĩ ta
 PROG-SM2sg run
 'you are running'

1.2. Nominal case marking. In some cases, nouns may be suffixed with a nominative or an accusative marker. However, these markers are not always used and are actually required in a very small number of cases.

The following example contains the nominative marker -a :

- (3) ci-a ta ?iẽ
 I-NOM run PROG
 'I am running'

In certain examples and under conditions not fully understood, human direct-object NP's can take an accusative suffix (ACC) -ts'-, but again it is not the case that *all* such direct objects must appear with this element. In any event, when the -ts'- marker appears on NP's, they are typically human direct objects:

- (4) a. /omese //o-ts' /a-i
 man child-ACC see-SM3sgM,FUT
 'the man will see the child'
- b. mancha /a-i /omese
 food see-SM3sgM,FUT man
 'the man will see the food'

Without the ACC marker in (4a), speakers would be unable to determine the assignment of roles for the various arguments in the verb (recall that in Sandawe word order is largely irrelevant to a determination of case). Although sentence (4b) is potentially ambiguous also, it is part of the speaker's knowledge of the world that inanimate items typically do not *see*, so role assignment follows the pattern: animates tend to be subjects, inanimates tend to be objects. Not surprisingly, other languages separate animate (sometimes definite) from inanimate (or indefinite) objects and

typically mark the former in special ways. In Sandawe, a language with fairly free word order, the use of an ACC marker is especially functional in role assignment of animate objects.

Again, it should be emphasized that these case-marking strategies are not available in all of the various syntactic constructions of the language. As we shall see below, subjects tend to be unmarked, while objects receive marking which may be unique to Sandawe but which is *not* ACC marking.

It should also be pointed out that the use of an ACC marker is not, strictly speaking, a SI strategy, because this element does not point to the subject. But as it turns out, speakers can infer by a process of elimination that some other non-ACC-marked NP must be the subject. In the remainder of this paper there will be little further discussion of this ACC marker.

1.3. Marking non-subjects for subject. There is nothing especially striking or unusual about the subject and non-subject identification strategies discussed above, but the following type of SI strategy found in certain (but not all) tenses is certainly highly unusual and possibly is unique to Sandawe: all non-subject NP's (direct, indirect, oblique post-positional, and locative objects) and sometimes even adverbs and complementizers may be marked to agree with the subject. (The verb, too, will be marked to agree with the subject under conditions to be discussed.) To appreciate this, consider the following:

- (5) (ci) mancha-s /iwaka koo-na-s hapu-me-s ?iē
 (I) food-1sg bring house-to-1sg you-for-1sg PROG
 'I am bringing food to the house for you'
- (6) andika-sa barua-sa Leba-//ana-sa //Hopi-me-sa
 write-SM3sgF letter-3sgF Leba-to-3sgF Hopi-for-3sgF
 'she is writing a letter to Leba for //Hopi'
- (7) ?ie-sī ?i?wa hapu-gari-n-s /omesu-tsexe-s
 PROG-SM1sg give you-car-DEF-1sg woman-one-1sg
 'I am giving your car to one woman'

- (8) mana-s k'i-s k'a? /omesw-i tl'apa ?iě
 know-SM1sg COMP-1sg COMP woman-2sg beat PROG
 'I know that you are beating a woman'
- (9) hapu tlapume-i /omese-i ute-i
 you beat,PAST-SM2sg man-2sg yesterday-2sg
 'you beat a man yesterday'

There are no conditions on this extraordinary marking of non-subjects except those to be discussed below. That is, permutation of word order, the appearance of the full subject NP, animateness, definiteness, or other conceivable adjustments to these sentences will not affect the pattern of markers which agree with the subject. I shall distinguish in the morpheme-by-morpheme descriptions between verbal subject agreement markers (cf. section 1.1) and these cases in which objects are marked for subjects by labelling the former as true "SM's", while the latter will be abbreviated simply as to the person and gender of the subject being referred to. We shall see that there are some differences in behavior between the two sets of suffixes, so the distinction is not made lightly.

In the remainder of this paper I will discuss certain restrictions, conditions, and interactions of these various SI strategies and show how they are crucially bound to word order in main and non-main (subordinate or embedded) clausal constructions.

2. Conditions on Verbal Subject Marking

The topic I shall consider in this section concerns the marking of verbs in agreement with their subjects. As we have mentioned, Sandawe word order is extremely "free" in the sense that words (and in some cases, constituents) in a main clause may appear in any order whatsoever for a given meaning with little or no change in emphasis or focus on a particular item. There will however be various morpho-syntactic rules concerning verbal subject marking which are crucially dependent on the actual word order selected. I will explicate these rules in the following sections and then lead to a generalization of the SI strategies which are found in more complicated syntactic constructions.

2.1 Constant Subject Marking. In this section I will discuss the simplest possible interaction of word order and verbal marking for subject in main clauses. This is when verbs are marked for subject without restrictions on word order, i.e. "Constant Subject Marking". This is found in the Future and Negative examples which follow; note also that in these tenses objects are *not* marked for subject:

- (10) tanga dlomo-che
 melon buy-lsgSM,NEG
 'I do not buy melon(s)'
- (11) ci hewe tlapumee-s
 I him beat,FUT-lsgSM
 'I will beat him'

Although the SOV word order is statistically the most common, it may be replaced by any possible permutation in the above sentences without necessarily implying special focus on a particular item. Thus, corresponding to (11), we have the following equally acceptable (and attested) examples, all meaning 'I will beat him':

- (11) a. ci tlapumee-s hewe
 b. tlapumee-s ci hewe
 c. tlapumee-s hewe ci
 d. hewe ci tlapumee-s
 e. hewe tlapumee-s ci

Thus, verbal subject marking is always present in examples like these.

2.2 Conditional subject marking. In the present and past tenses, we find the following situation in main clauses:

- (a) the verb is marked for subject under certain conditions,
 (b) the objects are marked for subject invariably.

2.2.1. Intransitive verbs. Consider first examples involving an intransitive verb, as in the following, meaning 'I run':

- (12) a. (ci) ta-s (*ta)
 (I) run-SMlsg (*run)
- b. ta-s (ci) (*ta ci)
 run-SMlsg (I) (*run I)

The PROG item $\text{?ie}\sim$ may also appear, but when it does, note the alternations both it and the verb root *ta* may undergo,² as in the following, all meaning 'I am running':

- | | | | | | | | | |
|------|----|--------------------------------|--------------------------------|-----------------------------|-----|-------------------------------|--------------------------------|--------------------------------|
| (13) | a. | ci | ta-s | $\text{?i}\check{\text{e}}$ | cf. | *ci | ta | $\text{?i}\check{\text{e}}$ |
| | | I | run-SMlsg | PROG | | *ci | ta | $\text{?ie-s}\check{\text{I}}$ |
| | b. | ci | $\text{?ie-s}\check{\text{I}}$ | ta | | *ci | $\text{?i}\check{\text{e}}$ | ta(-s) |
| | | I | PROG-SMlsg | run | | | | |
| | c. | $\text{?ie-s}\check{\text{I}}$ | ci | ta | | * $\text{?i}\check{\text{e}}$ | ci | ta(-s) |
| | | PROG-SMlsg | I | run | | | | |
| | d. | ta-s | ci | $\text{?i}\check{\text{e}}$ | | *ta | ci | $\text{?i}\check{\text{e}}$ |
| | | run-SMlsg | I | PROG | | *ta | ci | $\text{?ie-s}\check{\text{I}}$ |
| | e. | $\text{?ie-s}\check{\text{I}}$ | ta | ci | | * $\text{?i}\check{\text{e}}$ | ta(-s) | ci |
| | | PROG-SMlsg | run | I | | | | |
| | f. | ta-s | $\text{?i}\check{\text{e}}$ | ci | | *ta | $\text{?i}\check{\text{e}}$ | ci |
| | | run-SMlsg | PROG | I | | *ta | $\text{?ie-s}\check{\text{I}}$ | ci |

It is impossible to mark both the PROG and the verb for subject in one sentence:

- (13) g. *ta-s $\text{?ie-s}\check{\text{I}}$
 h. * $\text{?ie-s}\check{\text{I}}$ ta-s

As the preceding data show, the verb or PROG item is marked for subject in the context $\#(\text{NP})___$ (where # = beginning of sentence).

2.2.2. Transitive verbs. Consider now the situation when an object is expressed. As mentioned above, objects *must* be marked for subjects in this tense. To simplify the presentation, I shall (a) omit momentarily the permutations with an "expressed" subject, (b) exclude those examples in which objects are *not* marked for subject (which would render the sentences automatically ungrammatical). Thus, we have the following examples, meaning 'she buys melon':

²The nasalization of the vowel "floats" from the vowel of the progressive element to the vowel of certain subject markers.

- (14) a. tanga-sa dlomo (*-sa)
 melon-3sgF buy (*-SM3sgF)
- b. dlomo-sa tanga-sa
 buy-SM3sgF melon-3sgF
- c. *dlomo tanga-sa
 buy melon-3sgF

When we include the PROG element, we find again that only the PROG or the verb can be marked for subject, but not both, as in (15), meaning 'she is buying melon':

- (15) a. ?ie-sã tanga-sa dlomo (*-sa)
 PROG-SM3sgF melon-3sgF buy (*-SM3sgF)
- b. ?ie-sã dlomo (*-sa) tanga-sa
 PROG-SM3sgF buy (*-SM3sgF) melon-3sgF
- c. dlomo-sa tanga-sa ?iě (*?ie-sã)
 buy-SM3sgF melon-3sgF PROG (*PROG-SM3sgF)
- d. dlomo-sa ?iě (*?ie-sã) tanga-sa
 buy-SM3sgF PROG (*PROG-SM3sgF) melon-3sgF
- e. tanga-sa ?iě (*?ie-sã) dlomo (*-sa)
 melon-3sgF PROG (*PROG-SM3sgF) buy (*-SM3sgF)
- f. tanga-sa dlomo (*-sa) ?iě (*?ie-sã)
 melon-3sgF buy (*-SM3sgF) PROG (PROG-SM3sgF)

Note that these examples show that the verb or PROG is marked for subject only if either the verb or the PROG is first in the sentence. However, if a full NP subject appears first in the sentence, then a verb or PROG immediately following it is also marked for subject, as in (16), meaning 'the/a woman is buying melon':

- (16) a. /omesu dlomo-sa tanga-sa ?iě
 woman melon-SM3sgF melon-3sgF PROG
- b. /omesu ?ie-sã tanga-sa dlomo
 woman PROG-SM3sgF melon-3sgF buy

Thus, we must amend our earlier statement concerning the context in which verb or PROG is marked to agree with the subject to the following: "Mark the verb or PROG in the environment #(SUBJ)___."

2.2.3. Subject + Nominative Suffix examples. In an additional tense used with present tense meaning in some main and subordinate clauses, the subject NP is marked with the nominative suffix -a. Objects are still

marked for subjects and so are verbs, but there are conditions on verbal marking for subject which are slightly stronger than those encountered before. Consider the following, meaning 'the/a woman is buying melon':

- (17) a. dlomo-sa /omesw-a ʔiě tanga-sa
 buy-SM3sgF woman-NOM PROG melon-3sgF
- b. /omesw-a dlomo (*-sa) ʔiě tanga-sa
 woman-NOM buy (*-SM3sgF) PROG melon-3sgF
- c. ʔie-sã /omesw-s dlomo tanga-sa
 PROG-SM3sgF woman-NOM buy melon-3sgF
- d. /omesw-a ʔiě (*ʔie-sã) dlomo tanga-sa
 woman-NOM PROG (*PROG-SM3sgF) buy melon-3sgF

The difference between this tense and the present and past tense examples of 2.2.1-.2 is that in these examples, the verb or PROG is marked for subject only if it is sentence-initial. Thus, the conditions on verbal subject-marking for this tense are a subset of the conditions noted for present and past tense examples; the difference here is that in this present tense, the subject is marked with the nominative marker *-a*, whereas in the examples of 2.2.1-2, the subject is always unmarked.

2.3. Generalizations on the subject identification strategy of verbal marking. We have noted in the preceding examples that in the present and past tenses and the subject + *a*-marked present tense, the verb or AUX is marked for subject when these are sentence-initial. Objects are always marked for subjects in these tenses, while subject is either unmarked or suffixed with *-a*. The upshot of this system of marking is that despite the possible permutations in a given sentence, *the subject is always identified by the first argument in the sentence.* To appreciate this, consider the following examples, meaning 'the/a woman buys melon':

V-Initial Examples:

- (18) a. dlomo-sa tanga-sa /omesu (-a)
 buy-SM3sgF melon-3sgF woman (-NOM)
- b. dlomo-sa /omesu (-a) tanga-sa
 buy-SM3sgF woman (-NOM) melon-3sgF

Object-Initial Examples:

- (18) c. tanga-sa dlomo /omesu (-a)
 melon-3sgF buy woman (-NOM)
- d. tanga-sa /omesu (-a) dlomo
 melon-3sgF woman (-NOM) buy

Subject-Initial Examples:

- (18) e. /omesu dlomo-sa tanga-sa
woman buy-SM3sgF melon-3sgF
- f. /omesu (-a) tanga-sa dlomo
woman (-NOM) melon-3sgF buy
- g. /omesw-a dlomo tanga-sa
woman-NOM buy melon-3sgF

The underlined sentence-initial elements in the preceding examples are either the markers for subject or are the subjects themselves. Thus, the process of verbal subject marking in combination with object marking for subject may be viewed as part of a general overall SI-strategy which guarantees that despite the potential confusion created by unbounded linear permutations of lexical items in a given Sandawe sentence, the subject will, at least in a large number of cases, be identified in the first lexical argument of the sentence.

It should be clear that I am not claiming that this SI strategy is the only one operative in the language or even that it is applicable to all Sandawe sentences. The future and negative examples illustrated earlier are obvious counter-examples, since if the verb is sentence-final, the identification of subject would be the very last bit of information in the sentence.

Consider again sentences (11) and (11d) repeated below as (19a-b), in which future tense forms are given:

- (19) a. ci hewe tlapumee-s 'I will beat him"
 I he beat,FUT-SM1sg
- b. hewe ci tlapumee-s (same meaning)
 he I beat,FUT-SM1sg

Identification of subject is provided only by the last item in the sentence in such examples. Nevertheless, the SI strategy of marking the first argument for the subject is used in a very wide range of Sandawe syntactic constructions and interacts with other aspects of the syntax of the language

in a number of interesting ways. For this reason it has been developed in the preceding sections; it will form the basis of discussion in the following sections.

3. Subject Identification Strategies Within Syntactic Constructions Which Limit Word Order

In this section, I will discuss certain syntactic constructions which require more fixed word order. For example, in Sandawe WH-Q's, the WH element appears first. In cleft constructions, the clefted element must be first. In relative clauses, the embedded verb (or PROG) must be last. These constructions restrict the number of word-order permutations within a clause, and, as we shall see, there are further restrictions on some of the SI strategies already discussed. What is interesting then is how the language employs the various SI strategies available to it under the conditions imposed by the syntactic construction in question.

3.1. WH-Questions. As already mentioned, the questioned NP must be first, but after that, various permutations are permissible.

3.1.1. WH-Q of subject. The WH-NP subject is suffixed with the NOM marker -a . Recall that when the subject NP is marked with -a , the verb is marked for subject only when it is sentence-initial. Since the WH-element must appear first, it follows that the verb will never be marked for subject:

- (20) a. ho-a ta ?iě 'who is running?'
 WH-NOM run PROG
 b. ho-a ?iě ta (same meaning)
 WH-NOM PROG run

A further restriction on SI strategies found in WH-Q of subject is that objects are not marked for subject:

- (21) a. ho-a dlomo tanga (*-a) ?iě 'who is buying melon?'
 WH-NOM buy melon (*-3sgM) PROG
 b. ho-a tanga (*-a) ?iě dlomo (same meaning)
 WH-NOM melon (*-3sgM) PROG buy

Animate direct objects may be marked with the ACC suffix -ts'- , but this is not mandatory:

- (22) ho-a tlape ?iě //o(-ts') (*-a)
 WH-NOM beat PROG child(-ACC) (*-3sgM)
 'who is beating a/the child?'

In this construction then, the SI strategy is simple. The WH-element is first and is marked with the NOM suffix -a as the subject.

3.1.2. WH-Q of direct objects. The questioned direct object appears first, but unlike the case involving questioned subjects, this direct object is marked for the subject:

- (23) a. ho-co-sa dlomo /omesu ?iě 'what is the woman buying?'
 WH-thing-3sgF buy woman PROG
 b. ho-co-sa /omesu dlomo ?iě (same meaning)
 WH-thing-3sgF woman buy PROG

In questioning of human direct objects, the ACC marker -ts' may appear:

- (24) a. ho(-ts')-is tlape ?iě (ci) 'whom am I beating?'
 WH(-ACC)-lsg beat PROG (I)
 b. ho(-ts')-is (ci) tlape ?iě (same meaning)
 WH(-ACC)-lsg (I) beat PROG

The SI strategy of marking objects for subjects interacts with the WH-Q formation strategy in an interesting way here. The WH-Q formation strategy puts the questioned object first, but the SI strategy of marking objects for subjects also applies to mark the questioned element for subject. Thus, once again the subject is identified by the first argument in the clause.

To appreciate the full significance of the SI strategy of marking the questioned object, we should consider sentences in which there are additional objects not being questioned:

- (25) ho-co-sa dlomo /omesu ci-me (*-sa) ?iě
 WH-thing-3sgF buy woman I-for (*-3sgF) PROG
 'what is the woman buying for me?'
 (26) ho-co-s ?iě ?i?wa hesu-t's' (*-is)
 WH-thing-lsg PROG give she-ACC (*-lsg)
 'what am I giving to her?'

Obviously, only the questioned object is marked for subject and other objects are not. This fact becomes significant, however, when viewed in

terms of a SI strategy. Only questioned objects are marked for subject, and questioned elements must appear sentence-initially. Thus, this special marking of questioned NP's (special because other objects not being questioned in this construction are *not* marked for subject) is an essential component of the SI strategy which guarantees that the first argument in the sentence will be marked for the subject.

3.1.3. WH-Q of indirect objects. Indirect objects are in some cases marked with the postposition *-me-* (cf. examples (6) and (25)) and by \emptyset in certain double-object constructions (cf. examples (7) and (26), the latter with *-ts'-*). When the indirect object is questioned, it is marked for subject but again no other objects in the clause are marked for subject:

(27) ho-me-i ?iě //o-ts' (*-i) tlape
 WH-for-2sg PROG child-ACC(*-2sg) beat

'for whom are you beating the child?'

(28) ho-ts'-is ?iě ?i?wa tanga (*-s)
 WH-ACC-1sg PROG give melon (*-1sg)

'whom did I give a melon to?'

Once again, the extraordinary marking of the questioned element for subject of the sentence combined with the fronting of the questioned element to sentence-initial position guarantees that the first item in the sentence identifies the subject.

3.1.4. Which-NP constructions.

3.1.4.1. Which NP (subject). When the 'which NP' questioned is a subject, we find similar patterns as in WH-Q of subjects: the questioned subject NP is suffixed with *-a* and no objects are marked for subject:

(29) ha-suns^w /omesw-a ?iě tanga dlomo
 WH-Fem woman-NOM PROG melon buy

'which woman is buying melon?'

3.1.4.2. Which NP (object). The construction for 'which NP' (object) parallels the example of WH-Q of objects: the questioned NP is marked for subject, but no other objects are:

- (30) ha-we //o-ts'-i ?iě tɬ'ape
 WH-M child-ACC-2sg PROG beat
 'which child are you beating?'
- (31) ha-susuns^w /omesu-ts'-i ?iě ?i?wa mancha
 WH-F woman-ACC-2sg PROG give food
 'which woman are you giving food?'

3.1.5. Whose NP. When questioning the possessive element, the WH element ho- precedes the possessed NP, followed by na? and the remainder of the clause.

3.1.5.1. Whose NP (subject). As might be expected, the possessed NP functioning as a subject is followed by -a ; no objects are marked for subject:

- (32) ho tamechw-a na? ?iě //o-ts' tɬ'ape
 WH woman-NOM POSS PROG child-ACC beat
 'whose woman is beating the/a child?'

3.1.5.2. Whose NP (object). Paralleling previous questioning of objects, in the WH-possessive construction the object NP is marked for subject; no other objects are marked:

- (33) ho gari-sa na? dlomo ?iě ci-me
 WH car-3sgF POSS buy PROG I-for
 'whose car is she buying for me?'

3.1.6. When? The WH construction for the adverb of time seems to behave as in the construction for (inanimate) objects. That is, the WH element is marked for subject; verbs and objects are not marked for subject:

- (34) ha-?su-s ci /i
 WH-TIME-1sg I come
 'when did I come?'
- (35) ha-?sw-i ci-ts' tɬ'apumee
 WH-TIME-2sg I-ACC beat, past
 'when did you beat me?'
- (36) ha-?su-sa tanga dlomo
 WH-TIME-3sgF melon buy
 'when did she buy a melon?'

3.1.7. Summary. To summarize the findings of this section on WH-questions,

we can note that the following SI strategies are employed in this construction:

- 1) Questioning of subjects (including 'which NP' (subject) and 'whose NP' (subject)) involves the use of the nominative suffix *-a* on the questioned subject.
- 2) Questioning of non-subjects involves marking the questioned non-subject for subject, but no other non-subjects in the sentence are marked for subject.

In other words, in WH-Q constructions, the SI strategy of marking non-subjects for the subject is restricted to only those non-subjects being questioned; at no other time are non-subjects marked for subject in this construction. Now, since the questioned element must be sentence-initial in the WH-Q construction, the result is that either (1) the first element in a WH-Q is identified as subject, i.e. by being in the nominative form with the suffix *-a* when subjects are WH-Q'd; or (2) the first element is marked *for* subject (in the case of WH-Q of objects, where *only* those objects being questioned are marked for subject).

We find then that even when syntactic constructions like WH-Q formation impose limitations on word order (the questioned element must be sentence-initial) and restrictions on the use of the SI strategy of marking non-subjects for subject (that strategy is only employed for the non-subject being questioned), the language nevertheless succeeds in utilizing the general SI strategy of marking the first item of the sentence for the subject.

3.2. Cleft formation. The next construction to be discussed is the cleft formation construction. We shall find that this construction shares a number of properties with WH-Q's on the one hand and relative clause formation on the other. The discussion of cleft sentences will then bridge the WH-Q discussion and the relativization data to be discussed below. As in WH-Q structures, the cleft formation strategy moves the clefted-NP to the front of the sentence. The clefted NP is suffixed with *ga?*, meaning roughly 'it is that'.

3.2.1. Cleft of subject. The cleft construction for subjects utilizes

relative clause markers on the verb, which must be clause-final (also as in relative clauses). Consider the following:

- (37) ci-ga? ?iě //o (-ts') tlape-si-si-n-s
 I-CLEFT PROG child (-ACC) beat-REL-SM1sg-REL-SM1sg
 'it's I who is beating the child'
- (38) tamechu-ga? ?iě ta-si-su-n-su
 woman-CLEFT PROG run-REL-SM3sgF-REL-SM3sgF
 'it's the woman who is running'
- (39) hapu ga? ?iě gari Boba ?i?wa-si-po-m-po
 you is PROG cars Boba give(PL)-REL-SM2sg-REL-SM2sg
 'it's you who are giving Boba cars'

Note that in these constructions, the clefted subject is not marked with the NOM suffix *-a* in contrast to the situation in WH-Q of subject. But as in that construction, objects are not marked for subject when subjects are the victims of the rule. The verb is inflected to agree with the clefted subject, but as we shall see, that strategy is not available when clefting non-subjects.

3.2.2. Cleft objects. Although the cleft construction for subjects exploits certain aspects of the REL construction, the cleft construction for objects does not resemble relativization in this way. In the following examples of cleft-objects, the verb does not contain REL formation morphemes or marking for subject:

- (40) hapu-ts'-ga?-s ?iě tlape
 you-ACC-CLEFT-1sg PROG beat
 'it's you whom I am beating'
- (41) mancha-ga?-sa ?iě dlomo ci-me-sa
 food-CLEFT-3sgF PROG buy I-for-3sgF
 'it's food she is buying for me'
- (42) mancha-ga?-sa ?iě ?i?wa //o-n-ts'-sa
 food-CLEFT-3sgF PROG give child-DEF-anim-OBJ-3sgF
 'it's food she is giving the child'

We note first of all that the clefted object is invariably marked for subject. Notice, too, that the additional non-clefted objects are also marked for subject in these cases. This differs from the clefting of sub-

jects and from the WH-Q construction for subjects and objects, where all non-victim objects were not marked for subject. We shall return to discuss this perhaps gratuitous marking of extra objects in our discussion of relative clauses, but for the moment, we can observe that once again the requirements of the SI strategy of marking the first item for the subject are met.

3.2.3. Cleft of indirect objects. The following are examples of clefted indirect objects:

- (43) hapu-me-ga?-sa ?iě time mancha-sa
 you-for-CLEFT-3sgF PROG cook food-3sgF
 'it's for you she is cooking food'
- (44) ci-ts'-ga?-sa se-?wa mancha-sa ?iě
 I-ACC-CLEFT-3sgF lsgOM-give food-3sgF PROG
 'it's me she is giving food to'

Again, non-clefted objects are marked for subject in these examples, as, of course, are the clefted indirect objects.

3.2.4. Clefting of obliques.

- (45) koo-taŋ-ga?-s //ume
 house-front-CLEFT-lsg stand,PAST
 'it's in front of the house I stood'

The clefted oblique postpositional NP is marked for the subject of the clause.

3.2.5. Summary of object-cleft. In these examples we note that once again the clefted objects are marked for subject and that any additional objects in the clause are also marked. Thus, the SI strategy of marking the first item for the subject of the clause is accomplished, but in addition any other objects present are also marked for subject.

3.2.6. Summary. To summarize the cleft construction, then, all clefted NP's appear sentence-initially. Clefted subjects are not marked at all and thus are identified as subjects. Clefted objects are marked for subject and thus identify the subject. The result is that once again the sentence-initial item identifies the subject of the clause. We shall return to dis-

cuss some of these data after an examination of the REL construction.

3.3. Relativization. Relativization (REL) is another syntactic construction which limits the possible number of word order permutations in a clause. This is because the REL strategy is to have the verb (or PROG) in clause-final position, with the REL markers (suffixes) attached. The morpheme *seq*, from a more abstract /si-e-N/ is the suffix used for a masculine antecedent, while *susuns^w* (from /si-su-N-su/) appears when the antecedent is feminine.

In addition, the REL verb can be suffixed with the ACC marker *-ts'* if the role of the embedded NP deleted under the REL process is non-subject. This *-ts'* suffix *precedes* the REL masculine and feminine suffixes. As for word order, both Head + REL Clause and REL Clause + Head are attested. Finally, the entire REL clause can be marked for its role in the *main* clause under the appropriate conditions, e.g. a REL clause modifying an object head could be followed by a marker agreeing with the subject of the main clause. For this reason, I shall discuss the REL formation processes with respect to the role of both the head NP and the (deleted) embedded NP.

3.3.1. Relativization of subject. The strategy for relativizing the subject is simply to have the relative marker *-sen* or *-susuns^w* attached to the verb of the relative clause.

3.3.1.1. Head subject, Rel. subject.

- (46) /omese [ʔiě gari dlomo-*seq*] ta-a ʔiě
 man PROG car buy-Rel,M run-SM3sgM PROG
 'the man who is buying a car is running'
- (47) /omesu [ʔiě tanga dlomo-*susuns^w*] ta-sa ʔiě
 woman PROG melon buy-Rel,F run-3sgF PROG
 'the woman who is buying melon is running'

Note that the Head-REL structure is treated as a subject for the purposes of verbal subject-marking in the matrix sentence (cf. discussion in 2). Of course, if a non-subject constituent of the main clause were to intervene, the verb would not be marked for subject:

- (48) /omesu [ʔiẽ tanga dlomo-susuns^u] //o-ts'-sa t!ʔapumee
 woman PROG melon buy-REL F child-ACC-3sgF beat,PAST
 'the woman who is buying melon beat a child'

3.3.1.2. Head object, REL subject. In this configuration, we find that the entire REL clause is marked as any object of the matrix sentence would be, namely, marked for the subject of the matrix (and in some cases, with the ACC marker -ts'-):³

- (49) /iwaka-s //o-n-ts'-is [tanga dlomoo-sen-ts'-is]
 carry-SM1sg child-DEF-ACC-1sg melon buy,PAST-Rel M-ACC-1sg
 'I am bringing the child who bought melon'
- (50) //o-i [ʔiẽ ta-sen- ts'-i] /ikaa
 child-2sg PROG run-Rel M- ACC-2sg carry,PAST
 'you carried the child who is running'

3.3.1.3. Summary. To summarize constructions we have examined containing embedded REL subjects, we find that within the REL clause, objects are not marked for the embedded subject. Recall that we found the same results in our discussion of cleft and WH-Q formations on subjects, a point to which we shall return shortly. As for the Head NP-REL Clause structure, it was taken as an NP constituent for determining matrix verbal subject marking, as well as for the purposes of matrix marking of objects for subject.

3.3.2. Relativization of direct objects. In this section we shall examine cases in which the relative clause NP is a direct object. As before, we shall sub-divide the section to discuss the different possibilities for the role of the head NP in the matrix clause as well.

3.3.2.1. Head subject, Rel object. In the following examples, the head NP is followed by the REL clause, which contains the accusative suffix -ts' followed by the masculine or feminine relative marker:

³I shall use a close bracket] to mark the end of the relative clause in these examples, but it should be noted that the ts'- and marker-for-subject suffixes are determined by the role of the *Head* NP, in these cases, the object.

- (51) //o-n [hap-a tɬ'ape-ts'-sen] ta-a ʔiẽ
 child-DEF you-NOM beat-ACC-Rel M run-SM3sgM PROG
 'the child whom you are beating is running'
- (52) //o-n-su [ci-a ʔiẽ hapu-me-s tɬ'ape-ts'e-susuns^w]
 child-DEF-Fem I-NOM PROG you-for-lsg beat-ACC-Rel F
 !awe-sa
 fall-SM3sgF
 'the girl whom I am beating for you is falling'

In these examples we find that the subject of the embedded relative clause is marked with the nominative suffix *-a*, while objects in the relative clause are marked to agree with the subject of the embedded clause. Again, the entire REL clause is treated as the subject NP for the matrix verb, so the verb is marked to agree with the subject when the verb is in the appropriate position in the matrix sentence.

3.3.2.2. Head object, REL object. This construction is basically similar to that of 3.3.2.1; the role of the head NP in the matrix clause can also be marked on the relative clause:

- (53) [hap-a tɬ'ape-ts'-sen- -ts'i-s] //o-n-ts'i-s /iwaka
 you-NOM beat-ACC-Rel M -ACC-lsg child-DEF-ACC-lsg bring
 'I bring the child whom you are beating'
- (54) tike-s /omesu-ts'is [hap-a tɬapume-ts'e-susuns^w -ts'-is]
 carry-SMlsg woman-ACC-lsg you-NOM beat,PAST-ACC-Rel F -ACC-lsg
 'I am carrying the woman whom you beat'
- (55) barua-n-s [hesu-me-i ʔiẽ soma-ts'e-sen -s] /ika
 letter-DEF-lsg her-for-2sg PROG read-ACC-Rel M -lsg bring
 'I brought the letter which you are reading to/for her'

The ACC suffix *-ts'-* is not found in (55) marking the matrix REL object clause, because the head is not human.

3.3.3. Relativization of other objects. To facilitate discussion in the following, I shall ignore the role of the head NP and the REL clause in the matrix sentence and concentrate on the relations found in the embedded clause.

3.3.3.1. Objects of double-object verbs. Objects of an embedded double-object verb may be relativized, as in the following:

- (56) tanga [/omesw-a //o-sa ?ie-iŋ]...
 melon woman-NOM child-3sgF give-REL MASC OBJ
 'the melon which the woman gave to the child...'
- (57) //o-n [/omesw-a tanga-sa ?ie-iŋ]...
 child-DEF woman-NOM melon-3sgF give-REL MASC OBJ
 'the child whom the woman gave melon to...'

In these examples, the morpheme *-iŋ-* collapses the notions of MASC + REL OBJ usually expressed by *-tse-sen-*; in most cases the forms are interchangeable. Note that any remaining objects in the embedded clause are marked for the subject of that clause.

3.3.3.2. Oblique objects. To relativize oblique post-positional objects, a resumptive pronoun is necessary:

- (58) /omesu [hap-a pesa-i hesu-//ache-i ?isa-ts'e-susuns^W]...
 woman you-NOM money-2sg she-from-2sg steal-ACC-REL F
 'the woman from whom you are stealing money...'
 lit: 'whom you are stealing money from her'
- (59) gari [ci-a hesu-taŋ-is //ume-suns^W]...
 car I-NOM she(=car)-front-lsg stand-REL F
 'the car which I stood in front of...'
 lit: 'which I stood in front of her (it)'

3.3.4. Possessives. Relativizing a possessive also requires a resumptive element, but in this case the resumptive pronoun is the possessor element of the possessive construction. Compare:

- (60) hesu //owe
 she boy
 'her boy'
- (61) /omesu //owe
 woman boy
 'the woman's boy'
- (62) /omesu hesu //owe-ts'i-s (ci-a) tI'ape-ts'e-sen⁴...
 woman she boy-ACC-lsg (I-NOM) beat-ACC-REL M
 'the woman whose boy I am beating...'

⁴No brackets marking the boundaries of the REL clause are given here for reasons given in the discussion in the following paragraphs.

In the last example, we see clearly that the possessed element (a) triggers relative marker agreement (the verb has *-seŋ*, the masculine relative marker, and not *-susuns^w*, the feminine relative marker) and (b) is marked for the subject of the embedded clause. Both of these facts are unexpected in that the semantic head NP which is restricted by the REL clause in (62) is /omesu 'woman', but apparently //owe-ts'-is 'boy' is being considered the syntactic head NP.

But if //owe-ts'-is 'boy' is the *head*, it should not be marked with the ACC suffix *-ts-* and with the marker for lsg subject, *-is-*, since these morphemes pertain to the role of the *embedded* NP. In all previous examples, a head NP is, appropriately enough, marked for its role in the *matrix* sentence.

It would seem that the possessed NP has an almost indeterminate status in these structures. On the one hand, it is the head NP for the purposes of relative verbal marking, and on the other hand, it is marked for its role in the embedded clause, with a marker indicating the subject of the embedded clause.

It is also relevant to point out the word order in these clauses. As in the following additional example, the embedded subject, when expressed, *follows* the possessed NP:

- (63) a. /omesu hesu //owe-sa (?iē) //onsw-a tɬ'ape-ts'e-seŋ...
 woman she boy-3sgF (PROG) girl-NOM beat-ACC-REL M
 'the woman whose boy the girl is beating...'

In this case //onsw-a 'girl' is the embedded subject and occurs after //owe-sa 'boy', the embedded object. This contrasts strongly with the situation involving post-positional expressions, since there the embedded subject usually *precedes* the NP + post-position element (cf. examples (58) and (59)).

This suggests that the possessed NP is somehow "out" of the relative clause. This is because the dominant word order in relative clauses is usually SOV, but in no cases may the possessed NP follow the subject of the embedded clause:

(63) b. */omesu hesu //onsw-a //owe-sa (ʔiě) tlape-ts'e-seŋ
 woman she girl-NOM boy-3sgF (PROG) beat-ACC-REL M

Apparently, then, the REL of possessives has a number of unusual conditions:

(1) a resumptive pronoun functions to link the possessor and the possessed;

(2) the relative clause treats the possessed NP as the head, in that (a) the relative verbal marking agrees in gender with the possessed NP; and (b) the possessed NP *precedes* the subject of the embedded clause and may not follow it, which suggests that the possessed NP is not in the embedded clause;

(3) yet the possessed NP is marked to agree with the subject of the embedded verb as if it were an embedded object.

Notice, however, that the unexpected marking of //owe-ts'is in (62) and //owe-sa in (63a) does serve the function of identifying the subject of the embedded verb. It would seem then that as we encounter greater complexity in REL strategies, the need becomes greater for extraordinary SI strategies; in this case the SI strategies mark what is syntactically the *head* noun for the subject of the *embedded* clause.

3.3.5. Summary of SI strategies in relative clauses. We may now summarize the SI strategies employed in relative clause formation. For convenience we will examine cases in which subjects are relativized and then cases in which non-subjects are relativized.

3.3.5.1. REL subject summary. When subjects are relativized, there is no overt marking for subject on the various objects within the relative clause, and since subject is deleted, no chance to mark it with the nominative *-a* suffix, or even to leave it unmarked and thus identify it as subject as opposed to objects. These SI strategies utilized in main clauses are apparently unavailable when subjects are relativized. The only SI strategy present in these structures is the REL agreement verbal suffix, which is, unlike the other SI strategies, a *clause-final* SI strategy.

This fact—that objects are not marked for the deleted subjects within these relative clauses—is perhaps not what might be expected, given our

attempt to provide a functional account of the entire range of SI strategies. If SI strategies are important to the language and if the language has a syntactic construction in which subjects are deleted, then we might expect that it would be exactly in such constructions that remaining non-deleted elements (objects or verbs) should be marked to identify subjects. As we shall see in later discussions, however, there are other constructions involving the deletion of embedded subjects under identity with elements in the higher clause which also fail to mark objects of the embedded clause for the subject.

Another possible explanation for the failure of embedded objects to be marked for their deleted subjects may have to do with the general notion of the "relative accessibility hierarchy". Since subjects are highest on this hierarchy, we expect to find less elaborate mechanisms to be necessary for relativizing on them. Perhaps this is being reflected in Sandawe by not requiring objects to be marked for subject in such structures. Accordingly, we would expect that as we proceed down the hierarchy, the relativization strategies, and perhaps even the SI strategies employed within the REL clause, will increase in morpho-syntactic complexity. This is in fact what we find when we examine the REL object construction.

3.3.5.2. REL object summary. The REL formation strategy becomes more complex for objects than for subjects in that the embedded verb is marked with *-ts'-*; the employment of SI strategies increases in that (a) the subject, when expressed, is marked with the nominative suffix *-a* and (b) any other objects found in the embedded clause will be marked for the embedded subject. Note that since the verb is clause-final, the embedded subject is once again identified by the first argument in the relative clause (be it subject or non-relativized additional objects).

Thus, compared to the REL subject construction, the REL object formation represents an instance in which morpho-syntactic complexity is increased (both in terms of the REL formation strategy and in terms of the SI strategies used) corresponding to a move down the accessibility hierarchy.

3.3.5.3. REL oblique summary. And if we next consider REL formation

strategies for oblique post-positional objects, we find that all the REL strategies for objects are employed, with the addition of a resumptive pronoun preceding the post-positional element; the entire post-positional phrase is then marked for the subject of the embedded clause.

3.3.5.4. REL possessive summary. Proceeding further down the hierarchy to possessive constructions, we find even greater complexity in that (a) the semantic head is not the syntactic head and (b) the possessed NP functions as syntactic head (for embedded verbal relative marker agreement), while also being marked for its role in the embedded clause and identifying the subject of that clause.

3.3.5.5. General REL summary. Thus, as we proceed down the accessibility hierarchy in relativization, we find that SI strategies are employed in increasing measure the further down we go. At the highest point on the hierarchy, subject position, we find no SI strategies used. At the next point down, non-oblique objects, we find identification of subject and marking of additional objects for subject. As for obliques, we find resumptive pronouns which, combined with their post-positional elements, are marked for the subject of the embedded clause. Finally, in the strange case of the possessive relative clause formation strategy, the "quasi-head" is marked for the subject of the embedded clause.

Thus, the degree to which SI strategies are employed within REL clauses is related to the "complexity" of the REL clause, which in turn is related to the position of the grammatical relation on the accessibility hierarchy for relativization.

3.3.6. Summary relating relativization and cleft formation. The preceding discussion concerning SI strategies and syntactic complexity encountered as we proceed down the accessibility hierarchy in relative clause formation was mirrored in the cleft construction discussed earlier in Section 3.2. There, too, we found that when subjects were clefted, no objects in the clause were marked for subject. As we proceeded to direct objects and indirect objects, we found that any non-clefted objects in the clause were also marked for subject (resumptive pronouns are not attested in my cleft data). Thus, in at least two syntactic constructions, the degree to which

SI strategies were employed could be related to the degree of complexity encountered in the constructions when one proceeds to victimize various grammatical relations in descending order on the accessibility hierarchy.

With respect to the generalized SI strategy of marking the first argument in the sentence as or for the subject, in the cleft construction this was invariably accomplished. In the REL formation construction, that SI strategy—applicable to the embedded *clause*—was realized in all cases except those in which subjects were relativized.

And, of course, in other main clause phenomena, that SI strategy was employed again and again. Its functional importance in the language in both main and embedded clauses cannot be underestimated.

4. Non-Relative Subordinate Clauses

In this section we shall examine various non-Relative subordinate clause and complement structures, and the interaction of certain slightly different SI strategies. Although some of the SI strategies employed in these clauses are different in *form* from those previously discussed, their *function* will be shown to be closely related to previous strategies.

4.1. "And-then" clauses. To express the notion of "and then" between two clauses, Sandawe has a set of conjunctions which agree with the subject of the second clause. These introduce the second clause, followed by the subject and then optionally by *ki(a)*, a conjunctive element:

- (64) /omesu-s tlapumee pa hewe kya /omese-a tlapumee
 woman-lsg beat,PAST CONJ,3sgM he CONJ man-3sgM beat,PAST
 'I beat a woman and he then beat a man'
- (65) /omese-s tlapumee sa //okochw-a tanga-sa dlomoo
 man-lsg beat,PAST CONJ,3sgF girl-NOM melon-3sgF buy,PAST
 'I beat a man and then a girl bought a melon'

Note that the use of these conjunctions agreeing with the subject of the second clause results in the marking of the first item of the embedded clause for subject.

4.2. "When" clauses. Within the lower adverbial clause expressing "when" the various SI strategies found in main clauses are employed.

4.2.1. si? structures. In one "when" construction, the element *si?* appears embedded-clause-finally, followed by a marker agreeing with the subject of the main clause (cf. certain REL (49,50,53,54) clauses in which the head NP is an object, for a similar instance of an entire clause being marked for the subject of the upper clause). Note that if the adverbial clause precedes the main clause verb, that verb is not marked for its subject:

- (66) hesw-a /i si? -is ta
 she-NOM come when -lsg run,PAST
 'when she came, I ran'
- (67) //o-n-sa /ika si? -is ta
 child-DEF-3sgF bring when -lsg run,PAST
 'when she brought the child, I ran'

Of course, if the verb of the main clause precedes the adverbial clause, then the main verb is marked for its subject (and again the adverbial clause agrees with the main subject):

- (68) ta-s hesw-a /i si? -is
 run-SMlsg she-NOM come when -lsg
 'I ran when she came'

4.2.2. hi- structures. Another construction expressing "when" employs the element *hi-*, which is then inflected for the subject of the embedded clause. When this happens, *hi-* appears first in the lower clause:

- (69) hi-a hew-a /i -sa ta
 when-3sgM he-NOM come -3sgF run
 'when he came, she ran'
- (70) hi-o /ati -ʔaa giʔbe
 when-lpl come,pl -3pl run,pl
 'when we came, they ran'

4.2.3. Summary of "when" structures. Note that there are a number of SI strategies involved in these examples. In the lower clauses with clause-final *si?*, the SI strategies of main clause phenomena are used. In lower clauses with *hi-*, the SI strategy of marking the first item of the

clause (hi-) for the subject of that clause is utilized. As for the main clauses, the SI strategy of marking the first item for subject is guaranteed by marking the adverbial clause for the subject of the higher sentence or, when appropriate, by marking the higher verb for its subject.

4.3. "Because" clauses. Within a subordinate "because" clause, the subject typically takes the NOM suffix -a , objects are marked for subjects, and the clause final verb is the infinitival form; the suffix me (the same element added to nouns, meaning 'for') is added to the verb. In the above examples involving "when" clauses, we saw that the adverbial clauses were themselves consistently marked for the subject of the main clause. In the following "because" clauses, the lower clause is marked for the subject of the upper clause only when the adverbial clause precedes the main clause:

- (71) ?ie-sã ta hap-a //o-ts'-i ?iě tlape-o-me
 PROG-SM3sgF run you-NOM child-ACC-2sg PROG beat-INF-for
 'she is running because you are beating the child'
- (72) hap-a //o-ts'i tlape-o-me -sa ?iě ta
 you-NOM child-ACC-2sg beat-INF-for -3sgF PROG run
 'because you are beating the child she is running'

Considering once again the SI strategies for main and lower clauses, we see that for lower clauses, SI strategies are essentially similar to those found in independent clauses. As for the SI strategies for main clauses, the marking of the "because" clause for the subject of the main clause occurs only when needed: whenever the "because" clause precedes the main clause. When the "because" clause follows the main clause, the main clause subject will be identified by the usual main clause SI strategies.

4.4. Summary of non-relative subordinate clauses. The structures involved in embedded non-relative clauses contained some previously unencountered SI strategies. For "and-then" clauses and certain "when" clauses, these SI strategies were the marking of conjunctive elements for the subject of the embedded verb. In addition, the regular SI strategies employed in main clauses were available in the embedded clauses. Finally, in the "when" and certain "because" clauses, there were strategies for identifying the main

clause subject which involved the marking of the entire embedded clause in agreement with the upper subject. The overall SI strategy of marking the first element of a main or embedded clause as or for its subject is once again successfully carried out.

4.5. Object complement clauses. In this section we shall examine various verbal object complement types. In the first section we shall examine clausal complements of verbs like 'say', 'see', and 'know'. In later sections we shall examine complements of verbs like 'want' and 'persuade', with EQUI and non-EQUI situations discussed. We shall then summarize the findings.

4.5.1. Sentential complements.

4.5.1.1. k'i...k'a? complements. In the following examples, the verbs 'say', 'know', and 'hope' take complement clauses as their objects. The complementizers in these cases agree with the subject of the higher verb:

- (73) bo-s k'i-s k'a? //o-i tlapumee
say-SM1sg COMP-1sg COMP child-2sg beat,PAST
'I say that you beat a child'
- (74) mana-sa k'i-sa k'a? /omesu-s tlape ?iě
know-SM3sgF COMP-3sgF COMP woman-1sg beat,PROG
'she knows that I am beating a woman'
- (75) dime k'i-i k'a? /omesu tlapumee-su //o⁵
hope COMP-2sg COMP woman beat,FUT-SM3sgF child
'you hope that the woman will beat a child'

Note that within the complement clauses, the regular main clause SI strategies are used exactly as in main clauses.

4.5.1.2. 'see' complements. The verb 'see', /an, has some unusual properties. In the first place, it does not take k'i- k'a? as a complementizer. Secondly, the verb may take an object marker agreeing with the subject of the lower clause. SI strategies in the lower clause are exactly like those in main clauses:

- (76) /am-po-sa tang-i dlomo ?iě
see-OM2sg-SM3sgF melon-2sg buy PROG
'she sees you are buying a melon'

⁵The verb dime is never inflected for person.

4.5.2.2. 'want' complements in non-EQUI constructions. There is an interesting development in non-EQUI situations with the verb *taka* suggesting the existence of B-Raising. When the embedded clause is intact, i.e. not separated by main clause items, only the entire clause is marked for the subject of *taka* :

(81) a. hapu ta-ʔö -sa taka
 you run-inf -3sgF want

or

b. taka-sa hapu ta-ʔö -sa
 want-SM3sgF you run-inf -3sgF

'she wants you to run'

(82) a. (ci-a) hapu //o-n-su tlap-ume-ö -ts'-is taka
 (I-NOM) you child-DEF-Fem beat-PAST-inf -ACC-lsg want

or

b. taka-s hapu //o-n-su tlap-ume-ö -ts'-is
 want-SM1sg you child-DEF-Fem beat-PAST-inf -ACC-lsg

'I wanted you to beat the girl'

But these examples alternate with the following, in which the subject of the embedded verb becomes marked for the subject of the upper verb, and in some cases with the ACC marker *-ts'-* :

(83) (hesw-a) hapu-sa taka ta-ʔö
 (she-NOM) you-3sgF want run-inf

'she wants you to run'

(84) (ci-a) hapu-(ts'-)is taka //o-n-su tlap-ume-ö-ts'-is
 (I-NOM) you-(ACC-)lsg want child-DEF-Fem beat-PAST-inf-ACC-lsg

'I wanted you to beat the girl'

Apparently, when subjects are B-Raised, embedded transitive and intransitive verbs trigger slightly different morpho-syntactic features: in intransitive verbs, the infinitive is not marked for its role in the main clause, nor is it marked for the subject of the main clause; whereas for transitive embedded verbs, the ACC marker and a marker for the subject of the upper verb are found.

A rule of B-Raising would account for the appearance of the main clause markers *-ts'-* and the marking for the main clause subject on the elements *hapu-sa* in (83) and *hapu-ts'-is* in (84), since according to this analy-

sis these items are derived main clause objects.

Notice that in the non-B-Raised examples of (81-82) and in the B-Raised items (83-84), the objects of the embedded verb are not marked for the embedded subject. We shall discuss this in later sections.

4.5.2.3. 'persuade' object complements. A complementizer introducing the clausal object of 'persuade' appears in the following examples. The NP's functioning as the underlying object of 'persuade' and as subject of the embedded clause appear in the upper clause, and the complementizer agrees with the NP's and introduces the embedded clause. (Note: the verb in this case is not the future tense because verbal SM's are obligatory in that tense.)

(85) mamaʔse-s /omesu-s sa //o tlapume
persuade-SM1sg woman-1sg COMP,3sgF child beat
'I persuaded the woman to beat the child'

(86) mamaʔse-s ʔiě hapu-ts'-is ko //o tlapume
persuade-SM1sg PROG you-ACC-1sg COMP,2sg cjo;d beat
'I am persuading you to beat the child'

Note that in these examples, the object of the embedded clause is not marked for its subject.

4.5.2.4. Summary of 'want' and 'persuade' complements. We may now summarize some of the findings of this section. Clauses which are the embedded objects of verbs like 'want' and 'persuade' do not utilize the SI strategies found in main clauses. In such clauses, we note that neither verbs nor objects are marked for the subject of the embedded verb. How, then, are subjects of these lower clauses identified? And furthermore, is there any generalization available concerning the *absence* of the main clause SI strategies in these examples?

4.5.2.4.1. EQUI summary. Let us first consider the EQUI NP-deletion cases with taka 'want'. Assuming that speakers have access to derivational history, the deleted, underlying subject of the embedded verb can be recognized as being identical to the appropriate NP of the upper clause. Therefore, subjects of embedded clauses can be identified.

As for the fact that objects are not marked for the subject of these

object complement clauses, we might propose then that whenever subjects are deleted under identity with elements of a higher clause, there is no marking of objects for subject.

There are other verbs in addition to *taka* which involve EQUI and no marking of the embedded object:

- (87) *daa-s //o tlapume-õ-ts'*
 be able-SM1sg child beat-Inf-ACC
 'I was able to beat the child'
- (88) *//o tlapume-õ-sa daa*
 child beat-Inf-3sgF be able
 'she was able to beat child'
- (89) *//?ue-sa //o tlap-õ-sa*
 try-SM3sgF child beat-Inf-3sgF
 'she is trying to beat a child'

In each case, the embedded object *//o* is not marked for the subject of the embedded clause which has been deleted by EQUI. Presumably, then, speakers have access to the derivation of these forms, and thus to the underlying embedded subject. In all cases involving EQUI, objects are not marked for the deleted subject.

In the examples with *mama?se* 'persuade' we find that there are several strategies to identify the subject of the lower clause. Assuming access to the EQUI analysis, the upper object is identified as the lower subject. Furthermore, the complementizer introducing the embedded clause also identifies the subject of that clause. Once again, objects in the embedded clause are not marked for subject in accordance with our proposal stating that this occurs whenever subjects are deleted.

4.5.2.4.2. B-Raising summary. In the examples with B-Raised objects, we may again assume that speakers have access to the derivation in which those derived upper clause objects (marked as such in the upper clause) originated as subjects of the lower clause.

To account for the absence of any marking of lower objects for subject, we might amend the above generalization involving deletion of embedded subjects to something like: whenever an embedded subject is *removed* from its clause, there is no marking of objects for subject. "Removal" would then

include deletion, as in the EQUI situations, and B-Raising, as in the examples of this section.

4.5.2.4.3. Removal of subject summary. We have proposed that objects of embedded clauses whose subjects have been deleted or removed are not marked for the deleted or removed subject. This analysis can be extended beyond the EQUI and B-Raising structures to the REL and cleft formations of subject discussed earlier. Recall that just when subjects are the victims of these rules, objects in those structures are not marked for the subject. Of course, it is precisely in those structures that subjects are deleted or removed from their clauses. Finally, in imperative forms, objects are not marked for the deleted 2sg subject: (Note: The postulation of a higher clause like: 'I order you' dominating the underlying 'you beat child' has been suggested by Ross [1967] as the deeper structure for such sentences. EQUI deletes the lower "you".)

(90) tlapume-ko //o (*-i)
 beat-IMP child (*-2sg)
 'beat the child'

So, we may summarize our findings in the following statement: "If the subject of a clause is removed, then the objects of that clause are not marked for the subject."

This statement cannot account for all instances in which objects are not marked for subject. For instance, in WH-Q's, only the questioned object is marked for subject, whereas others are left unmarked. And, of course, in future and negative main clauses, objects are not marked for subject. These are restrictions on object marking for subject that go beyond the conditional statement here; there may or may not be a generalization in those cases.

4.5.2.4.4. Word order as an SI strategy. There are sentences in which none of the SI strategies discussed so far are applicable. These are represented by examples (82a-b), in which embedded object clauses contain transitive verbs. Example (82b) is repeated below for convenience as (91):

- (91) taka-s hapu //o-n-su tɬ'apume-õ -ts'-is
 want-SMlsg you child-DEF-Fem beat-Inf -ACC-lsg
 'I want you to beat the girl'

In the embedded clause, how are we to determine which argument is the subject, and which the object? It turns out that in such cases, speakers will rely on word order to identify the roles of the arguments in the clause. So, speakers will rely on the SOV word order as an SI strategy. It should be pointed out that within my corpus the B-Raised structures which correspond to examples (82a-b) are far more numerous than the non-B-raised examples. Of course, the B-Raised examples do not rely on word order as an SI strategy for the subject of the lower clause. Thus, only in a small minority of cases is the SOV word order actually used as the sole SI strategy in the language. As was mentioned earlier, SOV word order is statistically favored, and so when the order of the embedded constituents of (91) is switched, a different meaning is assigned, as in (92):

- (92) taka-s //o-n-su hapu tɬapume-õ -ts'-is
 want-SMlsg child-DEF-Fem you beat-Inf -ACC-lsg
 'I want the girl to beat you'

Perhaps future research on this issue will account for the fact that objects are not marked for the subjects in the embedded clause, since removal is certainly not involved in these cases. Note: The reason cannot be due to the presence of finite vs. non-finite verb forms in the clause, since in the REL object construction non-finite verbs are employed but objects are marked, whereas in REL-subject constructions, and many of these complement forms, non-finite verbs are used but objects are not marked. Furthermore, in future and negatives, finite forms of the verb are used but objects are not marked for subjects.

5. Conclusion

We have examined a fairly wide range of syntactic structures in Sandawe, and discussed the use of various SI strategies within these structures. In early sections, we examined the interaction of conditioned verbal marking for subject and word order, and discovered that verbs are marked for subject in certain tenses only when the verbs are sentence-initial or preceded by the unmarked subject. Since objects are marked for subject in

these examples, we were led to the following SI strategy: the first argument in the sentence is marked either as or for the subject of the sentence.

We then examined a number of syntactic constructions whose formation strategies imposed restrictions on word order and on the use of SI strategies. Thus, in WH-Q's, the questioned element must be sentence-initial, and objects not questioned are not marked for subject. We saw that the language overcame the possible difficulties in subject identification caused by such restrictions by requiring nominative marking on questioned subjects and marking for subject only on the questioned object (or adverb). The use of these special markings served to guarantee that the overall SI strategy of marking the first element in the sentence or clause as or for subject was realized.

Additional SI strategies were used in the cleft and REL structures. When objects were victims of these rules, either the objects were themselves marked for the subject of the clause (only in cleft formation) or the subject was expressed (with or without the NOM suffix) thus identifying the subject. If there were other objects in the clause in addition to the object victims of these rules, then these objects were marked for the subjects of their clauses, again guaranteeing that, whatever the word order chosen, the subject is readily identified.

Finally, in complement clauses, either the SI strategies of main clauses were employed, or the marking of complementizers for the subject of the embedded clauses were used. It was claimed that in EQUI and B-Raising cases, speakers have access to derivational history to enable them to identify embedded clause subjects. The fact that the SI strategy of marking objects for subject was never employed in these structures allowed us to uncover the generalization that whenever subjects of embedded clauses are deleted or removed, the objects of such clauses are not marked for subject. This generalization could also account for the absence of objects marked for subject in other cases such as Imperative Formation, REL of subject and cleft of subject. So, speakers can identify subjects of these clauses with the knowledge of that generalization as part of their grammar.

Thus, the SI strategies found in Sandawe range from fairly commonplace processes such as verbal agreement marking and nominal case marking to the

more exotic system of marking objects, complements, and complementizers for subject.

In the same way, marking of elements for subject can be a derivational process ranging from the system of derived verbal marking dependent on word order to a (syntactic-) construction-specific condition to mark objects for subject only when such objects are questioned. As we have seen, such strategies interact in a variety of ways with many of the syntactic construction formation strategies to guarantee that the subject is readily identified despite the numerous permutations of word order permissible in the language.

The whole system is remarkable and interesting, and calls for further research, which I hope to undertake in the future.

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NOTES AND QUERIES

This section is for short remarks on articles dealing with African languages which have appeared in *Studies in African Linguistics* or elsewhere and for contributions which are too short to constitute full articles. These may be short descriptive or historical statements of interesting phenomena in African languages or theoretical comments utilizing African language data.

Contributions to "Notes and Queries" should be less than 1000 words, including examples. No footnotes should be used, but references may be listed at the end.

