Essays on Language Function and Language Type

Dedicated to T. Givón

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The Misumalpan Causative Construction

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1. Introduction

In 1990, Tom Givón and his colleague, Philip Young, used data from the Misumalpan languages of Eastern Nicaragua and Honduras in an extremely interesting paper devoted to a historical explanation of a typologically curious characteristic of the Panamanian Chibchan language Ngäbére (one of the two languages spoken by the Guaymí). While Guaymí is a verb-final (SOV) language, its "auxiliary and modality verbs *precede*, rather than follow, their complements" (Young and Givón 1990: 210). The Misumalpan languages possess a construction, the causative, which has properties that are synchronically rather puzzling and surprising and whose historical source is evidently the same clause-chaining construction suggested by Young and Givón as the source of the Ngäbére pattern. The present paper, which I am very pleased to dedicate to Tom Givón, attempts to address the synchronic properties of the Misumalpan causative.

2. The Misumalpan causative

In the Misumalpan languages, 'consecutive', or 'clause sequencing' constructions, make use of subject-obviation of the type commonly called 'switch-reference' in the linguistic literature (Jacobsen 1967; Finer 1985). In the Ulwa (Southern Sumu) sentences of (1) and (2) below, the non-final verbs are inflected, respectively, for the proximate (same subject) and obviative (different subject) categories of the obviation system.

(1) *Yang nawah as tal-i îri-kda.*
I tiger one see-PROX run-PAST1SG
'I saw a tiger and (I) ran.' 'Seeing a tiger, I ran.'

(2) *Yang nawah as tal-ing îri-da.*
I tiger one see-OBV1SG run-PAST3SG
'I saw a tiger and it ran.' 'Upon my seeing a tiger, it ran.'

The non-final clauses in (1) and (2) are *dependent* clauses, not only because they cannot stand alone, but also because the interpretation of their inflectional heads (Infl) is dependent on those of the final clause. In general in clause-sequencing constructions of this type, the tense of the non-final clause is entirely unspecified, being interpreted in relation to the tense of the final clause. And the person category is interpreted as free (OBV) or anaphoric (PROX) in relation to the person of the Infl projection in the final clause which, by contrast, is independent in all respects.

In all of the languages of the small Misumalpan family, the causative construction is based on a variant of the standard clause-sequencing construction just illustrated. In fact, the causative is superficially identical to the obviative construction, as can be seen in (3):

(3) *Yang baka kau ât-ing wauhdi-da.*
I child ACC cause-OBV1 fall-PAST3
'I made the child fall.'

Thus, it would appear that Misumalpan reverses the asymmetry usually found in causatives; here, the *effect* clause is an independent clause, while the *causative* clause is dependent. The standard English causative exemplified by the translation of (3) represents the more usual construction in which the effect clause is dependent, a complement in fact, while the causative clause is the matrix.

It is as if Misumalpan simply did not have a causative at all, saying instead "I did something to the child and it fell". If this were so, there would be nothing more to say about the construction. But this will not do, it turns out. The causative construction of (3) differs from from the ordinary obviative of (2) in an important respect. For one thing, if the causative is negated, by putting the final verb in the negative (*wauhdasa dai*), the negative has scope over the entire construction — it negates the causative, not the final verb:

(4) *Yang baka (kau) ât-ing wauhda-sa dai.*
I child (ACC) cause-OVB1SG fall-NEG3 PAST
'I did not make the child fall.'
[... alas wauhdi-da. '... it fell on its own.']

This is not true in the case of the ordinary obviative clause sequencing construction in (2). There the negative has scope over the final verb alone, as in (5a), the same being true of the corresponding proximate sequencing construction (5b):[1]

(5) a. *Yang nawah tal-ing îra-sa dai.*
I tiger see-OBV1SG run-NEG3 PAST
'I saw the tiger and it did not run.'

b. *Yang nawah tal-i îra-sing dai.*
I tiger see-PROX run-NEG1SG PAST
'I saw the tiger and I did not run.'

It is expected then that if a negative polarity item appears in the initial clause of the causative construction, the result will be grammatical, since the initial clause falls within the scope of the negative. This expectation is correct:

(6) *Muih.as.bik (yang kau) yâ-ât-ak wauhda-sing dai.*
anyone (me ACC) me-cause-OBV3 fall-NEG1SG PAST
'No one made me fall.'

And it is expected that this will not be the case for the ordinary consecutive construction. Again, this is correct; the Ulwa of (7), like its English translation, is ill-formed:

(7) **Dî.as.bik yâ-tal-ak îra-sing dai.*
anything me-see-OBV3 run-NEG1SG PAST
*'Anything saw me and I did not run.'

From this evidence alone, it seems reasonable to conclude that there is a structural difference between the causative and the standard clause sequencing construction. In the causative, the two clauses are more tightly integrated than in the clause sequencing construction represented by (1) and (2). The negative is not alone in showing this however. Consider now the control construction, exemplified by (8), and the imperative exemplified by (9):

(8) *Yang [PRO baka kau ât-ing wauhda-naka] walta-yang.*
I child ACC cause-OBV1 fall-INF3] want-PRES1
'I want to make the child fall.'

(9) *Baka kau ât-am wauhda-ngh.*
child ACC cause-OBV2 fall-IMPER3
'Make the child fall.'

Normally, our expectation is that agreement and control will identify the same argument as subject. Where control involves the use of PRO and the infinitive,

it is the subject that will appear as PRO; and the subject is also the argument which controls 'subject agreement', naturally enough. In (8), the embedded causative construction (bracketed) splits these two subject-oriented phenomena between the subjects of the two verbs. Control and the associated infinitive morphology are determined by the subject of the causative verb, while (third person) agreement on the infinitival verb is determined by its 'true' (i.e., clausemate) subject. The infinitive morphology appears on the final verb, expectedly in view of its status as 'main verb', but unexpectedly on comparative grounds, where we would be led to expect it to appear on the causative verb. Thus while the controlled (PRO) subject of the causative construction is the subject of the causative verb, as expected from what we know of the world's languages, the infinitival morphology normally implicated by the controlled subject appears not on the verb of the causative clause but on that of the *effect* clause. The two pieces of the control construction which normally go together in the same clause are here *separated* by a clause boundary.

The same morphosyntactic split is seen in the imperative in (9). We expect a second person ("addressee") imperative to have a second person subject (typically non-overt), and we expect the same notion of subject to be operative here as that which is relevant to subject agreement. Here again, we find a split. The subject of the imperative is second person and it is located in the causative clause, as can be seen from the form of the obviative morphology, which agrees in person with the local subject. However, the imperative morphology itself appears not on the causative verb but on the effect verb, i.e., the final verb. And the agreement category expressed in combination with the imperative morphology is not second person. Rather, it is third person, since agreement is determined by the subject which is local in relation to the imperative inflection, and this is the subject of the final verb, a third person argument in (9). As in the case of the infinitive, since the final verb is the "main" (or non-dependent) verb in the Misumalpan causative, it is *that* verb that bears the imperative morphology; the non-final verb cannot do so, since it is dependent (obviative) in conformity with the general form of the Misumalpan causative.

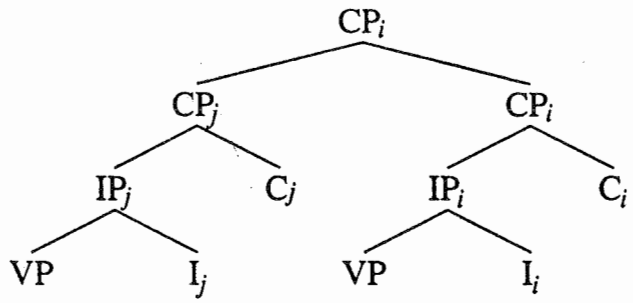
The normal clause sequencing construction cannot as a whole occur within the scope of a negative associated with the inflection of the final verb, as the ill-formedness of (7) shows. This fact is consistent with the observation that the control and imperative constructions exemplified by (8) and (9) are impossible for ordinary clause sequencing — specifically, the subject of the non-final clause cannot determine the morphological form of the inflection of the final clause:

(10) **Yang [PRO nawah tal-ing îra-naka] walta-yang.*
I tiger see-OBV1 run-INF3] want-PRES1
*'I want seeing the tiger (and) it to run.'

(11) **Nawah tal-am îra-ngh.*
tiger see-OBV2 run-IMPER3
*'You seeing the tiger (and) it run!'

I will turn now to the question of an analysis which might account for the morphosyntax of the Misumalpan causative. Before treating the causative itself, however, I will briefly discuss the regular clause sequencing construction. I will assume that this is simply a switch-reference construction of the classical type investigated by Finer (1985) and, as such, involves the adjunction of a non-final CP to a final CP, the latter being the "main clause", or host, of the adjunction configuration. This is indicated in the indexing supplied in (12) below:

(12)

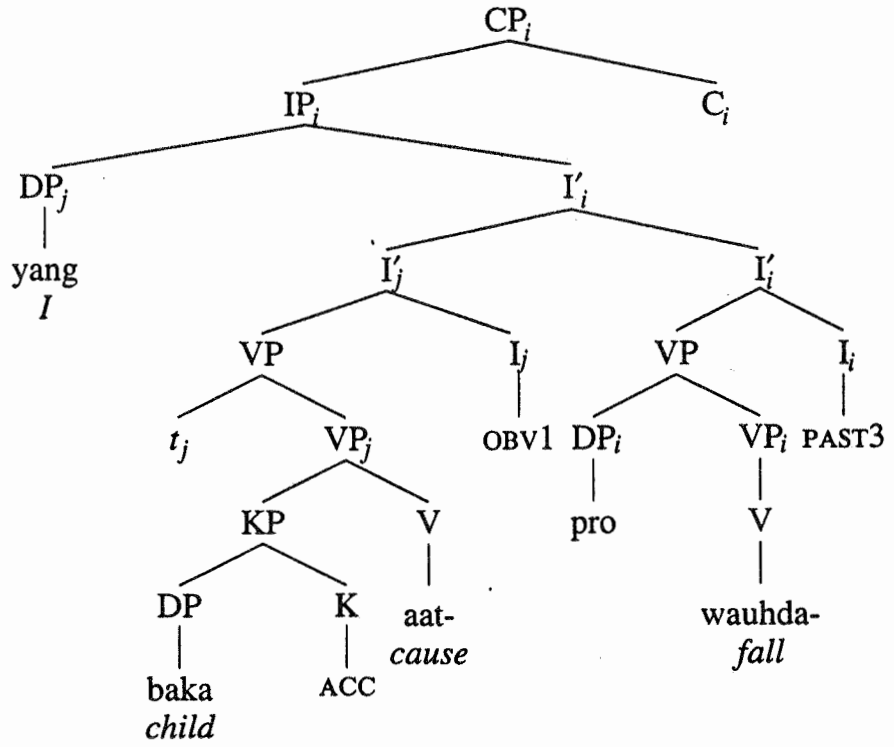


In the consecutive clause structures depicted here, the separation of C from I is an abstraction. In the observed surface form, of course, the complementizer is not overtly represented as a head separate from Infl. The two categories form a single head, overtly realizing the categories obviation, pronominal agreement, and tense, as the case may be. I will nonetheless assume that the functional element C(omplementizer) is present in both clauses and that, from the point of view of the licencing requirements of the nominal arguments, the clauses are complete in every relevant respect. The dependency relation which holds between the two clauses is expressed in the A-bar binding relation which holds between the inflections of the two clauses. Being anaphoric, the amalgam C_j-I_j, heading the non-final clause, must be bound by a like element standing in the appropriate structural relation to it. I will take that element to be the amalgam C_i-I_i , heading the final clause and projecting a path of coindexed nodes one of which c-commands the path projected by C_j-I_j, the anaphor. The binding requirement of the obviation morphology can be met if the path projected by the inflection of the final clause *binds* that of the non-final clause. This will be true,

I propose, if some node projected (coindexed with) the latter c-commands the path projected by the obviation morphology, respecting locality (cf. Bittner 1994; Bittner and Hale 1996, for a related conception of the binding relation involved here).

While (12), or something very much like it, is probably correct for the ordinary Misumalpan clause sequencing construction, it is almost certainly *not* correct for the causative. In (12), the structural relation holding between the two clauses is far too loose. It is hardly different from that of two independent clauses in sequence; each clause is essentially autonomous, if one abstracts away from the binding relation required by the Infl of the non-final clause. There is, therefore, no conceivable way in which the subject of the cause verb could influence the form of the Infl of the final clause; and there is no obvious way in which a negative operator in the final clause could take scope over the entire clause sequence. We must look for a way in which the subject of the causative verb might, so to speak, 'invade' the territory of the effect verb. The causative subject cannot occupy the subject position of the effect verb, of course, but it might, for example, come to occupy a position in the *extended projection* of the effect verb (cf. Abney 1987; Grimshaw 1991). Suppose the causative subject came to occupy the Spec position in the Infl projection of the effect clause, as in (13) below; given certain assumptions, the causative subject would then be in a position which is relevant to its behavior in the control and imperative constructions:

(13)



The crucial feature of this structure is the position of the causative subject. At d-structure, of course, it occupies the basic subject position in relation to the causative verb. This I assume to be the VP-adjoined position of the Koopman-Sportiche conception of the VP-internal subject hypothesis (cf. Koopman and Sportiche 1985, and see the modification in Bittner 1994). In that position, the causative subject determines the pronominal agreement morphology of the causative Infl — first person singular, in this case. At s-structure, however, the causative subject occupies a higher position — specifically, the Spec position of the Infl projection of the effect verb. That is to say, the causative subject raises out of its own clause and into the Infl projection of the final verb. In that location, the causative subject can participate in the canonical Subject-Infl codependency relation observed in control and imperative constructions:

(14) a. Control: PRO-SUBJECT ↔ INFINITIVAL INFL
b. Imperative: ADRESSEE-SUBJECT ↔ IMPERATIVE INFL

This is possible only if the causative subject raises into the matrix Spec position indicated in (13). In its base position, of course, it can have no 'influence' on the form of the final inflectional head.

If this is plausible, then there must be an answer to the following questions:

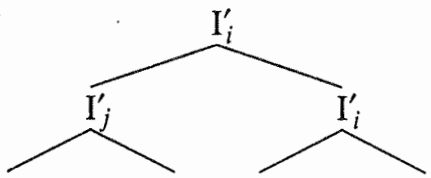
(15) a. Why *must* the causative subject raise?
b. How *can* the causative subject raise?

The first question can be answered rather easily in terms of the theory of Case developed in Bittner (1994). A bare DP argument must be governed by K (case) or C (complementizer), these being members of a single more inclusive category which has precisely this licensing property. In an accusative language, like Ulwa, the direct object of a verb is assigned Case by the verb — it therefore appears internal to a KP, as a complement to K which accordingly governs it. The subject on the other hand is not, strictly speaking, assigned Case by any head and, therefore, does not appear in a KP. It must, therefore, be governed by C. In the situation of interest here, the causative clause is not accompanied by a C-projection, being a bare IP instead. Therefore, the causative subject, a bare DP, must raise into the matrix clause to satisfy the requirement that it be appropriately governed. The causative subject differs in this respect from the effect subject, which is licenced by the final C. By hypothesis, the effect subject does not need to raise to Spec of an Infl projection; instead, the final VP is 'transparent' (cf. Bittner 1994; Bittner and Hale 1996) due to head-raising — V to I, I to C (not shown in [13]). Hence, the effect subject, being governed by C is licensed *in situ*.

The second question can be answered only partially at this point. The unanswerable part has to do with the Condition on Extraction Domains (CED, cf. Huang 1982). If the causative clause is an adjunct, as suggested, it should not be possible to extract out of it — it should be impossible, therefore, to raise the causative subject. For present purposes, I will have to suppose simply that extraction in this construction is somehow exempted from the CED, a possiblity encouraged somewhat by the observation that LF extraction of questioned constituents and relativized arguments is freely allowed from the causative clause. This is a matter for further investigation, but not one which necessarily vitiates the proposal altogether (but see Bittner 1996, for an alternative analysis to the causative which eliminates this potential problem).

The answerable part of (15b) has to do with the question of why the causative subject does not simply raise to the Spec position of its own clause. Why is it allowed to bypass that position and raise into the matrix clause? An answer is suggested by the principles inherent in the "Bare Phrase Structure" theory of constituent structure developed in Chomsky (1995). Suppose that the two I′ constructions, independently formed, are present in the array of elements to enter into the formation of a larger construction. And suppose further that these are "merged" to form (13). Just one of the two subparts will project. If this is the final I′, i.e., I'_i,the resulting structure will be as in (16):

(16)



It is now impossible for I'_j, the causative clause, to acquire a Spec, whether by merger with an element from the array or through movement (and merger) of an element from a subordinate position—assuming, as seems reasonable, that merger can only involve the dominant node in a given structure. Thus, if the causative subject raises, it must raise to the Spec of IP_i. Accordingly, the required derived structure is in fact the only possible structure, given the principles of Bare Phrase Structure in combination with the appropriate Case Theory.

3. A possible parallel in Aleut

If the analysis just suggested for Misumalpan is at all possible, it is expected that it will be applicable to phenomena in other languages as well. In the following paragraphs, I will consider data from the Aleut 'conjunctive construction' which may bear on this question. The material comes primarily from the excellent *Atkan Aleut School Grammar*, by Knut Bergsland and Moses Dirks (1981: 9). The following sentences illustrate the phenomenon at issue:

(17) a. *Piitra-X Ivaana-X kidu-ku-X.*
Peter-SG John-SG help-PRES-SG
'Peter is helping John.'

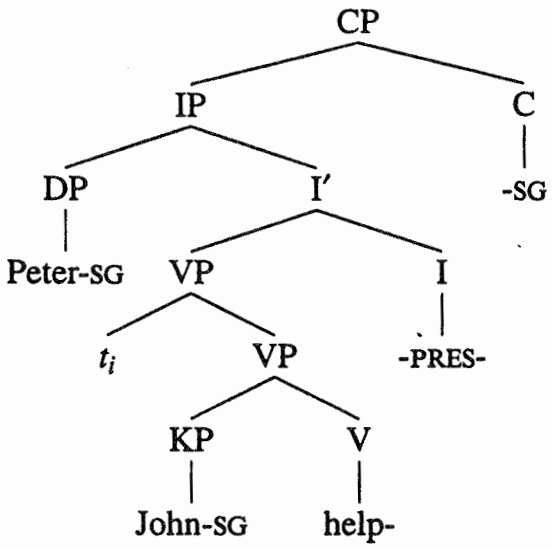
b. *Piitra-m ——— kidu-ku-u.*
Peter-REL help-PRES-SG+OBJ
'Peter is helping him.'

This is the simplest and most straightforward case. In (17a), a transitive clause, the subject and object are represented by overt nominal expressions, in the so-called absolutive (unmarked) case. In (17b), by contrast, the object is represented only by the object number suffix on the transitive verb — this is the Aleut equivalent of object 'pro-drop'. The object argument position is empty, as indicated by the dash. In this construction, the subject is no longer in the absolutive case; it appears in the "relative" (ergative) case instead.

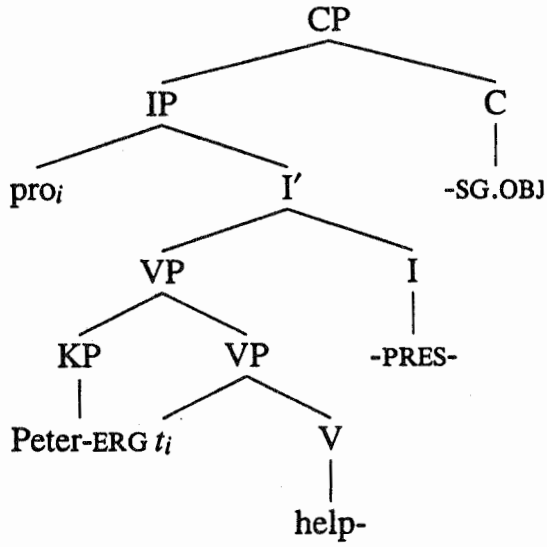
Let us pretend for the moment that (17) represents the whole story. And, for my own expository comfort, let me now switch to the 'ergative–nominative'

(as opposed to 'relative–absolutive') terminology. We can say simply that when an object is non-overt — so-called small *pro* — it fails to be case-marked by the verb, for some reason, and therefore raises to a position near the highest functional head (i.e., C[omp]) where it can be licensed as a bare DP, a nominative. In that position it is construed with the object number agreement attached to its local governor C (the final suffix in (17b), glossed -SG+OBJ). This move forces the subject to remain *in situ* and to be assigned ergative case by I(nfl), hence the suffix *-m* (glossed -REL) on the subject in (17b). Certain details aside, this is essentially the scenario assumed in Bittner (1994) for the related language West Greenlandic. The key element in this this view of Case assignment consists in the special circumstance brought about by the raising of pro_i to the Specifier position in IP (to the position of sister of I'). This makes pro_i 'visible' to I(nfl), so that there is, so to speak, 'Case Competition', within the domain of of I(nfl). In this situation, I(nfl) is forced to Case-bind (assign Case to) the argument it c-commands and governs. This is why the subject in (17b) appears in a marked structural case (called Relative or Ergative, depending on tradition). The relevant structures are as follows:

(17'a)



(17'b)



The putative raising process is not restricted to non-overt objects, it should be noted. Leer (1987) points out, citing data from Bergsland (1969), that overt extraction of an object to topic position produces the same effect as that seen in (17b).

This could have been all that needed to be said. But (17) does not represent the whole story. There is a complication in the proper structural identification of the relevant non-overt argument, *pro*, and its structural relation to the verb

which bears the associated number agreement. On the face of it, the identification of this element is wonderfully non-uniform, however intuitive it might be. In any event, it is a challenge. Two examples will suffice. Consider first (18), from Bergsland and Dirks (1981: 32):

(18) a. *Ivaana-X kanfiixta-s yaasika-m nagan aGi-ku-X.*
John-SG candy-PL box-REL in put-PRES-SG
'John put the candies in a box.'

b. *Ivaana-m kanfiixta-s ——— nagan aGi-ku-u.*
John-REL candy-PL in put-PRES-SG+OBJ
'John put the candies in it.'

In (18), the non-overt argument is not directly related to the verb which bears the number agreement construed with it. It is instead an argument of the postpositional phrase headed by *naga(a)n*. We cannot, therefore, relate the putative raising of *pro* in this instance to the case-assigning capabilities of the verb; the actual object of the verb, *kanfiixta-s* 'candies', is *in situ* and presumably case-marked in the usual way. Suppose, however, that the raising is forced by the postposition, unable to license the non-overt argument for some reason. The rest would follow.

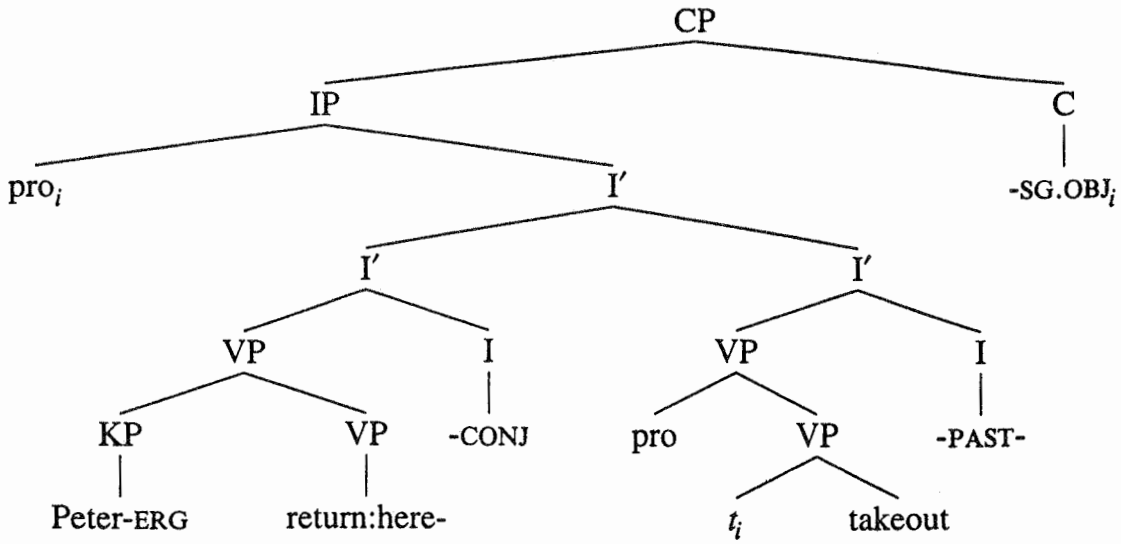
But now consider (19), from Bergsland and Dirks (1981: 98):

(19) a. *Piitra-X waaGaXta-l Paavila-X ayuxtaasa-na-X.*
Peter-SG return:here-CONJ Paul-SG take:out-PAST-SG
'Peter came back here and took Paul out.'

b. *Piitra-m waaGaXta-l —— ayuxtaasa-qa-a.*
Peter-REL return:here-CONJ take:out-PAST-SG+OBJ
'Peter came back here and took him out.'

The first clause bears the conjunctive ending (CONJ), an element which is not unlike the 'proximate' (i.e., same-subject) member of the subject obviation system of Misumalpan. If we assume that the structure of these Aleut sentences is essentially that of the Misumalpan causative, with the first clause attached beneath the Specifier of the second clause, then the structure of (19b) will be as depicted in (19'b):

(19′b)

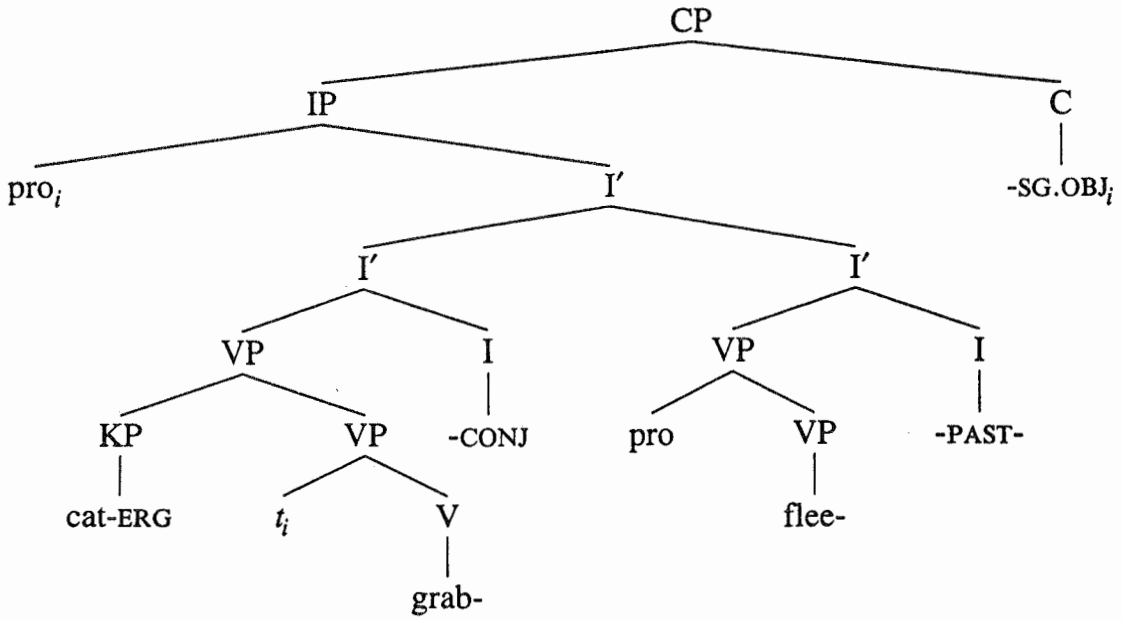


In this structure, assuming it to be correct, the covert d-structure object is not in the same clause as the subject which comes to be assigned ergative case — thus, the 'missing' object has an influence outside its own clause. The situation represented by (19b) is closely similar to that of the Misumalpan causative, in that the morphological properties of the two clauses are interdependent due to the putative raising of one of the arguments. Here, presumably, the ergative is assigned by the conjunctive I(nfl) of the first clause (i.e., by -CONJ). If this is true, then the conjunctive I(nfl) must ignore its own projection and, so to speak, 'pretend' that the Specifier of the main clause is the one relevant to it for Case competition (as in Bittner, 1994). In short, if the I(nfl) of the conjunctive clause Case-binds the subject of that clause, then the raised *pro* must be 'visible' to it in order to satisfy the requirement that there be a Case Competitor.[2]

We cannot assume that the conjunctive verb of (19b) is inserted, adverb-like, into the post-subject position of the transitive clause. Consider (20), from Bergsland and Dirks (1981:98), with its putative structural description (20′):

(20) *Kuusxi-m —— su-l amaanu-qa-a.*
cat-REL grab-CONJ run:away-PAST-SG+OBJ
'The cat grabbed it and ran away.'

(20′)



The subject of the initial clause here is ergative, not nominative, as it would be if it were the s-structure subject of the intansitive main verb. Here, we can assume that I(nfl) of the initial clause assigns ergative case to its subject, as expected on the eccentric view that the raised *pro*$_i$ (the object of the initial VP) is visible to I(nfl). The agreement morphology appearing on the final verb is, of course, to be expected if, as is generally the case, agreement is determined by the nearest Spec of IP.[3]

4. Concluding remark

The purpose here has been to present a set of puzzling data, related typologically and comparatively to data studied by Givón and Young. The analysis suggested is to be taken more as platform for presenting a particular linguistic problem than as a solution to it, in recognition of the observation that a linguistic problem is in fact a genuine *problem* only in the context of a particular framework.

In relation to the hypothesis put forth by Young and Givón, it is relevant to mention that Ulwa (Southern Sumu), the language exemplified in this paper, and Miskitu as well, fully represent the variety of construction types which they correctly attribute to Northern Sumu. In particular, in addition to the standard clause chaining and somewhat eccentric causative constructions, characterized by use of the subject-obviation (or switch-reference) morphology, there exists in

addition a standard complementation construction, employing infinitival morphology on the subordinate verb, as in (21), with Ulwa in the upper line, Miskitu in the lower:

(21) *Yang [sana as tal-naka] walta-yang.*
Yang [sula kum kaik-aia] plik-isna.
I [deer one see-INF] want/seek-PRES1
'I want to see a deer.'

And, as usual for Misumalpan infinitival complements, extraposition is possible, giving:

(22) *Yang walta-yang [sana as tal-naka].*
Yang plik-isna [sula kum kaik-aia].
I want/seek-PRES1 [deer one see-INF]
'I want to see a deer.'

This alternative ordering is quite free for infinitivals. By contrast, however, the dependent-main ordering observed in the Misumalpan causative construction is much more rigid. Although reordering of the clauses in chaining or causatives is sometimes observed, it is extremely rare and is in no way comparable to that exemplified by (21–22).

I tend to doubt that the alternation exemplified by (21–22) was involved in the development in Macro-Chibchan of the atypical S-AUX-O-V order found in Ngäbére and other innovative Chibchan languages. But I tend to agree that the chaining (or serial) construction, like that observed in the Misumalpan causative, is a highly suggestive source. This maintains, in slightly altered form, Young and Givón's notion of an intermediate 'double' pattern, crucial to their model of gradual syntactic change. The 'double' consists in the pair comprising (i) the conservative head-final complementation construction of (21) and (ii) the adjunction construction involved in chaining and serialization. It is the latter which, by hypothesis, gave rise to the second-position AUX of the innovative Chibchan languages. However, I would like to close this essay with an attempt to relate the Misumalpan causative to the theme of another of Givón's many contributions to our field, namely, his 1980 paper on the typology of complements (Givón 1980).

Why is the Misumalpan causative the way it in fact is? One part of this question has, so far as I can see, no obvious answer, though I would be open to suggestions. Why isn't the alternative complementation structure used more than it actually is? Causative complementation structures of the type represented by

(23), or its extraposed variant, are exceedingly scarce in our data on Ulwa, for example:

(23) *Yang [baka wauhda-naka] kumhp-ikda.*
I [child fall-INF] cause-PAST1SG
'I made the child fall.'

And they are rare in Miskitu and Northern Sumu as well, though examples are found in literature translated from Spanish. The as yet unanswerable question is why this construction isn't more common. In fact, why is it not the only one, given that the Misumalpan languages have all the requisite morphosyntactic machinery? One possible answer, which I do not know how to pursue, is this: the complementation construction remains unused simply because the modified verb-sequencing construction is traditional and just as good, perhaps better, for the purpose of expressiong the causative relations.

Turning now to the other question, given that the verb-sequencing construction is used to express the causative, why, in that use, does that construction have the unusual characteristics outlined above? Why does it involve the suggested restructuring (or whatever restructuring turns out to correct)? And why does the causative subject raise out of its d-structure clause?

The answer, it seems to me, is not to be found in grammar, strictly speaking, but in the functional principle of iconicity. Givón, in the article cited above, gives evidence supporting the idea that, in constructions involving two (or more) clauses, the degree of 'implicature' or 'entailment' increases as the degree of 'morphological fusion' (of one clause to another) increases. So, for example, causative verbs (e.g., English *make*, *have*, *cause*) typically take morphosyntactically dependent clausal complements (infinitivals, bare infinitives, and the like), while non-implicative verbs (like English *tell*, *ask*, *hope*) permit a range of complement types including clauses using the regular non-dependent verbal morphology of the language (Givón 1980). While Givón's discussion is concerned with complementation, it is clearly relevant to the causative in general — cf., for example, Haiman's (1983) argument that Givón's principles can be invoked to understand differences among causative constructions in a single language.

If we imagine that the 'proper expression' of a causative relation — in prototypical sense of an agent expressly bringing about an effect, doing something which leads directly to another event — is most perfectly achieved in language when the linguistic form in which it is expressed most closely mirrors the immediacy of cause and effect; the closer the expression corresponds to a single clause, the better, reflecting the common intuition that a cause and its

effect are a 'single' event, however untrue this may be in any actual real-world instance.

The terminology I use here is, of course, loose and undefined — I am somewhat out of my depth in this area — but it is intended to be a reflection of a system of true and salient intuitions. But, assuming the reality of these notions, how does this all relate to the Misumalpan causative? The answer to this question can be seen in the structural comparison of causatives and ordinary clause sequencing structures. The causative, represented by (13), involves 'greater fusion' of the clauses, than does the clause sequencing construction, corresponding, by hypothesis, to the structure depicted in (12). We cannot say for sure that restructuring has occurred in the history of these Misumalpan constructions, but it seems reasonable to suppose that it has occurred and that the original construction was the plain sequencing type. Restructuring, then, amounted to the development of a new structural alignment according to which the initial clause came to be adjoined to a node *within* the final clause. This is the sense in which the causative shows a greater degree of 'fusion' than does the sequencing construction. Crucially, the initial clause of the causative came to appear in a position c-commanded by the functional category heads C and I(nfl) at s-structure, a situation quite different from that assumed for the sequencing construction.

This is not all there is to say, however. This 'fusion,' assuming it occurred as suggested, produced its own problem for iconicity. Since the cause clause, after restructuring, is more subordinate than ever, its subject, the 'agent' of causation, is unable to assume its canonically prominent position. This, I assume, is the functional reason for the eccentric raising process which characterises the Misumalpan causative. Raising lifts the causative subject from its subordinate d-structure position into the main clause where it occupies the subject position.

Notes

1. I should mention here that many verb sequencing constructions are "ambiguous" in a way which is brought out clearly under negation. Thus, while (5a) is relatively straightforward in allowing negative scope over the final clause only, this is not true of all instances of sequencing. On the one hand, as John Haiman (p.c.) pointed out to me, proximate (same subject) sequences tend to "more tightly integrated" than obviative (different subject) sequences. I think this is probably correct for Misumalpan, and I can imagine a reading of (5b) with scope over the sequence as a whole. Be this as it may, a sentence like *yang bauting wauhdida* (I hit.OBV1SG fall.PAST3) is completely ambiguous, permitting a reading like English 'I hit him and he fell down' beside a more "tightly integrated" one corresponding to 'I knocked him down'. In the latter case, but not in the former, the negative would have scope

over both verbs. In Bittner 1996, the "tightly integrated" sequencing construction is assigned the same structure as the "pure" causative, based on the strictly causative verbs.

2. If visibility in the relevant sense reduces to government, then this requirement is not met, technically, in this structure. The conjunctive I(nfl) does not (m-command and) govern the raised *pro*. The viability of this account of ergative marking in the conjunctive clause of (19b) depends, therefore, (1) on whether visibility depends strictly on government, and, if so, (2) the precise definition of government in structures formed by merger in the suggested manner. I will assume here that the conjunctive I(nfl) does in fact have, within its visibility domain, the raised *pro*. If it does not, then this will constitute part of the evidence in favor of an alternative (cf. Bittner 1996). Be this as it may, the problem identified here for the Aleut analysis has a feature in common with the technical problem noted in relation to the Misumalpan causative. In both cases, the issue is the relationship between some part of the dependent clause (assigned the structural status of an adjunct) and the Spec position projected by the matrix I(nfl).
3. While this analysis might account for the eccentric Case-marking of subjects and for the identity of the argument which determines agreement (i.e., Spec of IP), it does *not* account for the morphology of agreement, which makes a formal distinction according to whether the agreeing argument is a d-structure subject or a d-structure object. This, again, could be fatal to this analysis, supporting an alternative.

References

Abney, Steven. 1987. The English Noun Phrase in its Sentential Aspects. Unpublished Ph.D. dissertation, Massachusetts Institute of Technology, Cambridge.

Bergsland, Knut. 1969. "A problem of transformation in Aleut." *Word* 25: 24–38.

Bergsland, Knut, and Moses Dirks. 1981. *Atkan Aleut School Grammar.* National Bilingual Materials Development Center, Rural Education. Anchorage: University of Alaska.

Bittner, Maria. 1994. *Case, Scope, and Binding.* Dordrecht: Kluwer Academic Publishers.

Bittner, Maria. 1996 "Concealed Causatives." Unpublished manuscript, Rutgers University.

Bittner, Maria, and Kenneth Hale. 1996. "The Structural Determination of Case and Agreement", *Linguistic Inquiry* 27:1–68.

Chomsky, Noam. 1995. *The Minimalist Program.* Cambridge, Mass.: MIT Press.

Finer, Daniel. 1985. "The Syntax of Switch-Reference." *Linguistic Inquiry* 16: 35–56.

Givón, Talmy. 1980 "The binding hierarchy and the typology of complements." *Studies in Language* 4: 333–377.

Grimshaw, Jane. 1991. Extended Projection. Unpublished manuscript, Brandeis University.

Haiman, John. 1983. "Iconic and economic motivation." *Language* 59: 781–819.

Huang, James. 1982. Logical Relations in Chinese and the Theory of Grammar. Unpublished Ph.D. dissertation, Massachusetts Institute of Technology, Cambridge.

Jacobsen, William. 1967. "Switch-Reference in Hokan-Coahuiltecan." In *Studies in Southwestern Ethnolinguistics*, Dell Hymes and William Biddle (eds), 238–263. The Hague: Mouton.

Koopman, Hilda, and Dominique Sportiche. 1985. "Theta-Theory and Extraction." *GLOW Newsletter* 14: 57–58.

Leer, Jeff. 1987. "The relative case in Aleut." In *Native American Languages and Grammatical Typology*, Paul Kroeber and Robert Moore (eds), 149–164. Bloomington: Indiana University Linguistics Club.

Young, Philip and T. Givón. 1990. "The puzzle of Ngäbére auxiliaries: Grammatical reconstruction in Chibchan and Misumalpan." In *Studies in Typology and Diachrony: For Joseph H. Greenberg*, William Croft, Keith Denning, and Suzanne Kemmer (eds), 207–243. Amsterdam: John Benjamins.