

A Semantic Basis for the Choice of Complement Clause Types in Chamorro

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A SEMANTIC BASIS FOR THE CHOICE OF COMPLEMENT CLAUSE  
TYPES IN CHAMORRO.\*

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In Chamorro, an ergative Austronesian language spoken on the Mariana Islands, certain restrictions apply on the syntactic coding of complement clauses. In this paper I will show that the choice the speaker makes as to which coding device must and/or can be used is entirely dependent on the semantic nature of the main verb. In particular, I will concern myself with two types of complement taking verbs: i) manipulative or control verbs whose Agent exerts some influence on the action performed by another Agent in the proposition of the complement clause, and ii) modality verbs where the action described in the proposition of the complement is self-induced by the Agent of the main clause. I will show that the choice of complement coding is directly related to the notion of logical implicativity and the notion of degree of control on the part of the Agent of the main verb over the action in the complement. The Chamorro data thus provide further evidence for the hierarchy of "binding" proposed by Givón (1980) (cf. section 4).

*1. Types of Complement Clauses.*

There are two syntactic coding devices attested in Chamorro for complements of control and modality verbs. The first one involves the absence of any kind of complementizer separating the complement clause from the main clause, and the insertion of the -UM- infix between the first consonant and vowel of the verbal root. Example:

- (1) Ha- na'- para si Juan si Maria k-um-anno'  
E.3s-CAUS-stop P.N. Juan P.N. Maria UM-eat  
i mansana.  
the apple.  
"John stopped Mary from eating the apple."

The second introduces each complement clause with a complementizer and the verb is marked for irrealis mood :

- (2) Ha- angongokko si Maria na u- sodda'  
E.3s-RED-expect P.N. Maria COMP IRR.3s-find  
i asagua-ña gi gima'.  
the spouse-3s.POS LOC house  
"Maria expected to find her husband home."

Following the selection pattern of complement types both control and modality verbs fall into different categories which will be described and discussed below.

## 2. Manipulative Verbs.

According to the selected complement type, verbs within this class fall into two major categories. The first class allows only -UM- type complements. As (3) shows, *na'para* "stop" belongs to this category.

- (3) \*Ha- na'- para si Juan si Maria na/para  
 E.3s-CAUS-stop P.N. Juan P.N. Maria  
 u- kanno' i mansana.  
 IRR.3s-eat the apple  
 "John stopped Mary from eating the apple."

(This sentence could actually be grammatical in the marginal sense of "John stopped Mary who was about to eat the apple.")

Other examples of manipulative verbs fitting in this class are *ataha* "prevent", and *ayuda* "help".

- (4) a. In- ataha i Chapanes h-um-atme iya Guam.  
 E.1Pl-prevent the Japanese UM-invade place Guam  
 "We prevented the Japanese from invading Guam."  
 b.\*In- ataha i Chapanes na/para u- hatme  
 E.1Pl-prevent the Japanese COMP IRR.3s-invade  
 iya Guam.  
 place Guam  
 (5) a. Ha- ayuda si tata- hu i che'lu- hu  
 E.3s-help P.N. father-1sPOS the sibling-1s.POS  
 um-arekla i kareta.  
 UM-fix the car  
 "My father helped my brother fix the car."  
 b.\*Ha- ayuda si tata- hu i che'lu- hu  
 E.3s-help P.N. father-1s.POS the sibling-1s.POS  
 na/para u- arekla i kareta.  
 COMP IRR.3s-fix the car

Verbs of the second class take only those complements which are separated from the main clause by a complementizer and in which the embedded verb is marked for irrealis. Verbs belonging to this category include *malago* "want", *kombida* "invite", *ekspekta/angokko* "expect, trust", *sangani* "tell", *sedi* "allow", *prohibi* "forbid", *afuetsas/obligao* "force, oblige, compel", *otden* "order", etc. Examples:

- (6) a. Ha- otden si Juan si Maria na u-  
 E.3s-order P.N. Juan P.N. Maria COMP IRR.3s  
 hokka i niyok.  
 pick the coconut  
 "John ordered Mary to pick the coconut."  
 b.\*Ha- otden si Juan si Maria h-um-okka i  
 E.3s-order P.N. Juan P.N. Maria UM-pick the  
 niyok.  
 coconut

- (7) a. Hu- malago'-i i asagua-hu na u-  
 E.1s-want -PRO the spouse-1s.POS COMP IRR.3s-wash  
 fagasi i kareta.  
 the car  
 "I want my husband to wash the car."  
 b. \*Hu- malago'-i i asagua-hu f-um-agasi i  
 E.1s-want PRO the spouse-1s.POS UM-wash the  
 kareta.  
 car

The major distinction between manipulative verbs of the first and the second class is that the verbs of the former are all logically implicative. Of the three examples given, one, i.e. *ayuda* "help", is positively implicative, i.e. the truth of the whole sentence implies necessarily the truth of the complement, whereas the other two, *na'para* "stop" and *ataha* "prevent" are negatively implicative, i.e. the truth of the whole sentence implies necessarily that the embedded complement is false. Thus, if it is true that my father helped my brother fix the car, it is necessarily true that my brother was fixing the car. Similarly, if it is true that John stopped Mary eating the apple, it is logically necessary that Mary, as a result, did not eat the apple.

This condition does not apply to the second class of manipulative verbs. If Mary is ordered to pick the coconut, she can ignore this order, not pick the coconut, and the whole sentence could still be true. Notice that for most speakers of English the verb "force" is implicative. Yet in Chamorro it seems not to be. Under normal circumstances *afuetsas* only allows the second type of complement. However, the -UM- construction can be used in the embedding under this verb, but produces a rather forced meaning as in (8):

- (8) Ha- afuetsas si Juan si Maria k-um-anno' i  
 E.3s-force P.N. Juan P.N. Maria UM-eat the  
 mansana.  
 apple  
 "John forced the apple into Mary's mouth." (loose tr.)

The selection of -UM- here explicitly grants more *control* to the Agent of the manipulative verb. Mary has no choice in this case but to eat the apple or choke.

It is this measure of *control* which also plays a role in the subcategorization of the manipulative verbs. Notice that in all the examples above the Agent/subjects of the complement clauses function as direct objects of the main clause. The question arises whether this Agent/subject is ever allowed to remain within the embedding. As it turns out, manipulative implicative verbs which only allow the -UM- type complement do not allow the Agent/subject of the complement to remain within the embedding:

- (9)\*Ha- ayuda si tata- hu um-arekla i  
 E.3s-help P.N. father-1s.POS UM-fix the  
 che'lu- hu i kareta.  
 sibling-1s.POS the car  
 "My father helped my brother fix the car."

Changing the type of complement does not legitimize this kind of structure either:

- (10)\*Ha- ayuda si tata- hu na/para u-  
 E.3s-help P.N. father-1s.POS COMP IRR.3s-  
 arekla i che'lu- hu i kareta.  
 fix the sibling-1s.POS the car

The second class of manipulative verbs splits up into two categories, i.e. those which allow the embedded Agent/subject to remain within the complement, and those which require its presence in the main clause. Verbs like *malago'i* "want", *sedi* "allow", *ekspekta* "expect", etc. belong to the former category, whereas *afuetsas* "force", *obligao* "oblige, compel", and *sangani* "tell" belong to the latter. Examples:

- (11) a. Ha- obligao i ma'estro i patgon para  
 E.3s-compel the teacher the child COMP  
 u- cho'gue i estudia-ña.  
 IRR.3s-do the study- 3s.POS  
 "The teacher compelled the child to do his homework."  
 b.\*Ha- obligao i ma'estro para u- cho'gue  
 E.3s-compel the teacher COMP IRR.3s-do  
 i patgon i estudia-ña.  
 the child the study- 3s.POS
- (12) a. Ha- prohibi si Tun Jose i primu- hu  
 E.3s-forbid P.N. Uncle Joe the cousin-1s.POS  
 na u- dingu i gima'.  
 COMP IRR.3s-leave the house  
 "Uncle Joe forbade my cousin to leave the house."  
 b. Ha- prohibi si Tun Jose na u- dingu  
 E.3s-forbid P.N. Uncle Joe COMP IRR.3s-leave  
 i primu- hu i gima'.  
 the cousin-1s.POS the house  
 "Uncle Joe forbade that my cousin should leave the house."

Observe that the meaning of (12) b. allows for an interpretation of an indirect order, i.e. Uncle Joe told someone else that my cousin should not leave the house. Thus, leaving the Agent/subject of the complement clause within the embedding implies some reduced control of the Agent of the main clause over the Agent in the embedded complement. The presence of the the Agent/subject of the embedded clause in direct object position in the main clause, allows the Agent of the main clause to act directly, without a mediator, on that referent. What is involved here then is a measure of direct vs. indirect control.

It is obvious that for an Agent to be successful in making someone do (or, as the case may be, not do) something, direct control is required over the individual one wants to perform (or not perform) a certain activity. Hence, the implicative manipulative verbs require the Agent/subject of the complement to be in their range of direct control, viz. in the direct object position of the main clause.

Furthermore, some non-implicative manipulative verbs semantically require some kind of direct control over the manipulated Agent in the complement. Whereas it is conceivable to issue an order, an invitation, etc. indirectly to get someone to perform a certain activity, verbs like "force" and "tell" require direct control by the manipulator over the manipulee. Hence they require the Agent/subject of the complement to function as direct object in the main clause, since this codes the referent as being within the direct range of control of the Agent of the main clause.

Summarized we can say that the Chamorro verbs of manipulation we have talked about so far fall into three distinct categories: i) manipulative implicative verbs which require the -UM- construction in the embedded complement, ii) manipulative non-implicative verbs which semantically require direct control by its Agent over the manipulated Agent in the complement clause. As such the Agent of the complement must be present in direct object position in the main clause. The embedding is separated from the main clause by a complementizer and the embedded verb is marked for irrealis mood. And iii) manipulative non-implicative verbs which allow direct or indirect control over the Agent in the complement. They, like the verbs of the second category, take complements introduced by a complementizer with irrealis marked verbs, but do not require the embedded Agent/subject to function as the direct object of the main clause.

### 3. Modality Verbs.

The facts concerning the selected complement clause types under modality verbs are similar to those described for manipulative verbs and require a similar explanation. The modality verbs I looked at also fall into three categories. The first category of modality or self-inducement verbs is restricted to taking only -UM- type complements. Verbs which belong here include *na'para* "stop", *na'possibili* "manage/succeed", *na'fonhayan* "finish/accomplish", *tutuhon* "start", *letke*, *eskapayi* "avoid", *hasso* "remember", *maleffa* "forget", etc. Examples:

- (13) a. Ha- na'possibili i asagua-hu p-um-uno'  
 E.3s-manage the spouse-1s.POS UM-kill  
 i kukuracha.  
 the cockroach  
 "My wife managed to kill the cockroach."  
 b.\*Ha- na'possibili i asagua-hu na/para  
 E.3s-manage the spouse-1s.POS COMP  
 u- puno' i kukuracha.  
 IRR.3s-kill the cockroach

- (14) a. Ha- le- letke i asagua-hu f-um-agasi  
E.3s-RED-avoid the spouse-1s.POS UM-wash  
i kareta-n-mami.  
the car- N-1Pl.POS  
"My husband has been avoiding washing our  
car."  
b.\*Ha- le- letke i asagua-hu na/para  
E.3s-RED-avoid the spouse-1s.POS COMP  
u- fagasi i kareta-n-mami.  
IRR.3s-wash the car- N-1Pl.POS
- (15) a. Maleffa yo' mu-na'- hanao este i katta.  
forget A.1s UM-CAUS-go this the letter  
"I forgot to send this letter."  
b.\*Maleffa yo' na/para bai-hu-na'- hanao  
forget A.1s COMP IRR.1s-CAUS-go  
este i katta.  
this the letter

Just like with the manipulative verbs, verbs of modality which are restricted to taking only -UM- type complements, are all implicative. *Eska-payi*, *letke*, and *maleffa* are negative implicative, i.e. if it is true that X forgot or avoided to do Y, then it necessarily follows that Y was not accomplished. *Na'para*, *na'possibili*, *tutuhon*, *na'fonhayan*, and *hasso* on the other hand are positive implicative and the truth of the whole sentence logically implies the truth of their complements. Non-implicative verbs again fall into two categories. Syntactically they are distinguished in that one class allows both constructions in which the verb takes the -UM- infix and which are not separated from the main clause by a complementizer, and constructions preceded by the complementizer with the irrealis marking on the embedded verb.

Verbs like *chagi* "try", *kompotme* "agree", *ma'aña* "be afraid", *renunsia* "refuse", *disidi* "decide", and *malago'* "want" allow both construction types.

- (16) a. Hu- komfotme k-um-uentusi i ma'gas.  
E.1s-agree UM-talk to the boss  
"I agreed to talk to the boss."  
b. Hu- komfotme para bai-hu-kuentusi i ma'gas.  
E.1s-agree COMP IRR.1s-talk to the boss  
"I agreed that I will talk to the boss."
- (17) a. Ti malago' i asagua-hu f-um-ahan  
NEG want the spouse-1s.POS UM-buy  
ayu i niyok-siha.  
that the coconut-Pl  
"My wife did not want to buy those coconuts."  
b. Ti malago' i asagua-hu na u-  
NEG want the wife- 1s.POS COMP IRR.3s-  
fahan ayu i niyok-siha.  
buy that the coconut-Pl  
"My wife did not like to buy these coconuts."

- (18) a. Ma'añao i lahi-hu um-egga'  
 afraid the son- 1s.POS UM-watch  
 este na mubi.  
 this link movie  
 "My son is afraid to watch this movie."  
 b. Ma'añao i lahi-hu na u-  
 afraid the son- 1s.POS COMP IRR.3s  
 egga' este na mubi.  
 watch this link movie  
 "My son is afraid lest he should see  
 the movie."

Verbs like *angokko* "expect, trust" and *ekspekta* belong to the second subcategory. They do not allow -UM- constructions in their complements. Compare (2) with (19):

- (19)\*Ha- angongokko si Maria s-um-odda' i  
 E.3s-RED-expect P.N. Maria UM-find the  
 asagua-hu gi gima'.  
 spouse-1s.POS LOC house  
 "Maria was expecting to find her husband home."  
 (20) a. Ha- ekspekta si Juan na u- hoksa  
 E.3s-expect P.N. John COMP IRR.3s-build  
 i gima'.  
 the house  
 "John expected to build the house."  
 b.\*Ha- ekspekta si Juan h-um-oksa i  
 E.3s-expect P.N. John UM-build the  
 gima'.  
 house

It is obvious one cannot invoke the measure of direct control by the Agent of the main clause over the Agent of the complement clause to explain the discrepancy observed in the above example. Yet, it is still some sense of control of the Agent of the main clause over the action in the embedded complement which plays a major role. The semantics of the main verb "expect" in (2) and (20) imply to some degree that the completion of the event described in the proposition of the complement is dependent on circumstances independent of the will of the Agent of the main clause. The Agent has no control over the event itself. The semantics of modality verbs which allow both types of complements, such as "want" in (17), "agree" in (16) and "be afraid of" in (18) still allow for some control over the event in the embedding. Yet, the suggested interpretations of these sentences when taking just that complement type to which *ekspekta* and *angokko* are restricted, provide some evidence that the explanation for the discrepancy between the two subcategories of non-implicative modality verbs on the basis of a semantic measurement of control is correct. In (17) b. "my wife" may not have had a choice if there were no other coconuts available. Similarly, (18) b. implies that my son is afraid he may find himself in a situation in which he is forced to watch the movie he'd rather not see. Another such example was volunteered by one of the native

speakers I worked with:

- (21) a. Malago' si Juan na u- hatsa i  
 want P.N John COMP IRR.3s-lift the  
 lamasa.  
 table  
 "John wanted to lift the table."  
 b. Malago' si Juan h-um-atsa i lamasa.  
 want P.N. John UM-lift the table  
 "John wanted to lift the table."

According to one of my consultants, a. may be used when the table is extremely heavy so that John may not be able to lift it. In b. John is assumed to be able to lift the table and will probably do so. Since the successful completion of the event in the complement clause is implied under the implicative verbs of modality, the irrealis construction, which seems to be associated with a sense of reduced control over the event expressed in the embedding, is not allowed in these instances.

#### 4. *The Binding Hierarchy.*

The observation that the selection of the complement clause types in language is correlated with the semantics of the verb under which these complements are embedded is not new. Givón (1980), on the basis of data from a number of non-related languages, suggested that the restrictions which apply on the syntactic types of complements of different verbs could be explained on the basis of a notion called "binding". The semantic dimension of binding operates on manipulative verbs, modality verbs, and cognitive-utterance verbs (such as know, say,...). Givón showed that one can hierarchize these verbs on a scale where the verbs on top of the scale are semantically most binding, i.e. the Agent of the main clause exerts a strong influence on the Agent of the complement clause so that the latter is not entirely capable of acting independently. Syntactically, the higher the main verb is ranked on the scale, the less the complement clause will be coded as an independent main clause. Semantically, the higher the main verb on the binding hierarchy, the more likely the event in the complement is to take effect and the stronger the influence exerted over the action in the embedded clause by the Agent of the main verb. The Chamorro data provide additional evidence for Givón's binding hierarchy. In addition, the language is a representative of the Austronesian language family, which was not included in the sample on which he based his typological analysis. The predictions made by the binding hierarchy are borne out by the Chamorro facts observed above. With respect to the manipulative verbs, it needs to be added that there is one more class of implicative verbs which were not included in the survey above (cf. section 2). The English verbs "make, have, cause, and let" have a Chamorro correlate in the form of a causative morpheme which is prefixed to the verbal root of the intended complement (cf. also footnote 7).

- (22) Ha- na'- kanno' si Juan si Maria ni  
 E.3s-CAUS-eat P.N. John P.N. Maria OBL  
 mansana.  
 apple  
 "John made Mary eat the apple."

The colexicalization is predicted by Givón's binding hierarchy for those verbs ranking at the very top and is not an isolated, language particular phenomenon for Chamorro. The embedded clause is syntactically coded as integrated into the main clause and loses all characteristics of an independent clause.

Moving down the hierarchy, we have the second class of implicative verbs, discussed earlier. They obligatorily take the -UM- complement type.

The -UM- construction itself in Chamorro is restricted to a limited set of derived clauses and is not marked for mood or agreement with the subject (cf. also footnote 2). Moreover, the verbs which require the -UM- type complement, at the same time require the embedded Agent/subject to be raised into direct object position. Thus, the complements of implicative manipulative verbs, whose Agent exerts enough influence on the Agent of the complement proposition, are syntactically coded as highly dependent clauses.

The complements of non-implicative manipulative verbs look more like syntactically independent clauses since they are separated from the main clause by a complementizer, and involve irrealis marking on the embedded verb, which at the same time indicates agreement of the complement Agent/subject with the verb. These non-implicative verbs fall into two categories according to the degree of control the main clause Agent has over the action in the complement. Those verbs involving more control (i.e. obligatory direct control), require the Agent of the embedded clause to function as the direct object in the main clause. On the other hand, verbs which allow indirect control allow complements which look more like independent clauses as the Agent/subject has not been raised into the main clause.

With respect to the modality verbs, similar correlations can be made. The implicative modality verbs involve complete control by the Agent of the main verb over the action in the embedding which is necessarily completed (or not completed when negative implicativity is involved) for the sentence to be true. These verbs take the -UM- complement which looks less like an independent clause than the irrealis type complement allowed or required - as the case may be - under non-implicative verbs of modality. The irrealis-complement-type-only restriction applies when the non-implicative, main verb of modality semantically excludes control by its Agent over the event in the complement.

Finally we may add that in the case of cognition-utterance verbs - which we have not discussed in this paper - the complement clause takes on more aspects of an independent main clause. It is introduced by the complementizer *na*, and the verb is not restricted to irrealis mood marking. Two examples have been given in footnote 5. It may be of interest to add that in narrative discourse, utterance verbs like "say" and "tell", which rank lowest on Givón's hierarchy of binding, often do not take sentential complements, but are instead followed by pieces of direct discourse

comprised of one or more independent main clauses.

### Footnotes

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(1) For reasons of brevity, I will limit myself in the discussion to transitive complements. Intransitive complements follow the same patterns with the exception that the -UM- construction is restricted to transitive complements only. Normal realis agreement markers are maintained in the intransitive complements where -UM- is expected for transitive complements. These complements are also not separated from the main clause by complementizers.

(2) The infix -UM- here is not to be confused with the homophonous marker for singular agreement in intransitive clauses. Wherever it appears in the syntax of Chamorro, it replaces the ergative agreement markers. It is used in cleft constructions, relative clauses, and WH-questions where it is the Agent/subject that has been focussed upon, relativized, or questioned. These complements are similar to the constructions under discussion in the sense that the Agent/subject referent has been moved (or deleted under coreference) out of the clause and into a position preceding the verb. The resulting structure deviates from the expected basic word order pattern V.S.O.

Chung (1981) has called the -UM- type complements infinitival constructions. However, the similarity with other derived clause types as the ones mentioned above, and the fact that this particular -UM- morpheme never replaces the intransitive agreement prefixes leads me to question the validity of calling these constructions infinitival. Since this rather complex question does not directly pertain to the topic of this paper, I will leave it unanswered.

(3) As far as I can tell, there seems to be a difference between the choice of *na* over *para*, which is essentially a marker for irrealis. With some verbs one is sometimes preferred over the other. The reasons behind this preference are not clear to me and I will have to treat both morphemes alike in the remainder of this paper.

(4) A number of the verbs belonging in this category are morphologically complex, i.e. they consist of a prefix *na'* which is the causative prefix in Chamorro. Thus *na'possibili*, for instance literally means "make possible". (For more details on causative constructions see Gibson 1981).

(5) Both *hasso* "remember" and *maleffa* "forget" are also verbs of cognition. When they function as such, they can take complements introduced by the complementizer *na*, but in these instances the Agent/subject of the embedded complement is not controlled by the Agent of the main clause. Examples:

- a. *Maleffa yo' na bai-hu-na'- hanao este*  
 forget A.1s COMP IRR.1s-CAUS-go this  
*na katta.*

link letter

"I forgot that I was going to send this letter."

- b. Hu- hasso na ha- dingui che'lu-  
E.1s-remember COMP E.3s-leave the sibling-  
hu i tano'.

1s.POS the country

"I remembered that my sister had left the country."

(6) Sentence (13) b. could be grammatical in a context where there is a direct object in the clause coded by 0-anaphora. The interpretation then would be that my wife made it possible for him (her) to kill the cockroach.

(7) The direct object of the underlying embedded clause becomes an oblique NP in the surface construction, indicated by the oblique case marker *ni*. The subject of the embedded clause becomes the direct object of the main clause as a result of the colexicalization of the main and embedded clauses. See Gibson (1981) for a detailed analysis of causative constructions in Chamorro.

### *Bibliography*

- Chung, S. 1981. "The ECP and Government in Chamorro." Ms., University of California, San Diego.
- Cooreman, A. 1982. "Topicality, Ergativity, and Transitivity in Narrative Discourse: evidence from Chamorro." *Studies in Language*, VI: 3.
- Costenoble, H. 1940. *Die Chamorro Sprache*. The Hague, M. Nijhoff.
- Gibson, J. 1981. *Clause union in Chamorro and universal grammar*. Ph.D. dissertation, U.C.S.D.
- Givón, T. 1979. a. "From Discourse to Syntax: Grammar as a processing strategy." In: T. Givón (ed.). *Discourse and Syntax*. Syntax and Semantics, Vol. 12, Academic Press, New York.
- 1979. b. *On Understanding Grammar*. Academic Press, New York.
- 1980. "The Binding Hierarchy and the Typology of Complements." *Studies in Language*, IV: 3.
- Safford, W. 1903-1905. "The Chamorro Language of Guam." *American Anthropologist*, 5:289-311, 6:95-117, 7:305-319.
- Topping, D. with the assistance of B. Dungca, 1979. *Chamorro Reference Grammar*. University of Hawaii Press, Honolulu.
- , D. Ogo, and B. Dungca 1975. *Chamorro-English Dictionary*. University of Hawaii Press, Honolulu.