

## Finite Control as Movement: An Argument from Chamorro

Antje Lahne, University of Leipzig

**1. Claim.** The goal of this talk is to present a reanalysis of control in Chamorro (Austronesian) as a case of finite control involving movement. The new analysis is based upon a new empirical observation: the verbal morphology of the embedded predicate in control constructions is identical to verbal inflection in the context of *wh*-extractions out of finite predicates. Consequently, I will argue that Chamorro control involves finite control, and that finite control and *wh*-extraction are derivationally related.

**2. Background Assumptions.** The new analysis works within a formal, cyclic spellout-based grammar model. Movement is assumed to proceed successive-cyclically, and internal merge positions of successive-cyclic movement correspond to phase edges (see e.g. Ross 1967, Chomsky 1973, 2001, 2005, Epstein and Seely 2002).

**3. Data.** Chamorro displays syntactic contexts in which reference to a zero subject of an embedded clause (i.e., the argument with which the embedded verb agrees) is determined by an argument of the higher predicate. This type of syntactic context has been analysed as control (Chung 1998). The embedded predicate shows a reduced form of subject-verb agreement: it inflects for number in intransitive contexts only, and shows no person or mood inflection (see table 1). On the basis of this observation, the embedded verb has been analysed as an infinitive (Chung 1998). Examples from Topping (1973) and Chung (1998) are given in (1).

- (1) a. Hu chagi [humatsa i lamasasa ] (tr sg)  
 1SG tried [<UM>lift DET table ]  
 ‘I tried to lift the table’
- b. Tafan-ä'-ayuda [kumumprendi yan um-asisti i famagu'un siha ] (tr pl)  
 1PLINCL-RECIPR-help [<UM>understand and <UM>assist DET children 3PL ]  
 ‘Let us help one another to understand and assist the children’
- c. Malago' yo' [lumi'of gi tasi ] (intr sg)  
 want 1SG [<UM>dive LOC ocean ]  
 ‘I want to dive in the ocean’
- d. Man-malago' siha [man-ma'udai ] (intr pl)  
 PL-want 3PL [MAN-ride ]  
 ‘They want to ride’

Table 1

*Chamorro*

*Subject agreement on embedded V  
 in control contexts*

	TRANSITIVE	INTRANSITIVE
SG	-um-	-um-/ -
DU	-um-	-um-/ -
PL	-um-	man-

Furthermore, Chamorro displays a special verbal inflection in *wh*-dependencies. The inflection is “special” in that under certain conditions the verbs that a *wh*-expression passes encode the type of verbal argument that is extracted (*wh*-agreement, e.g. Chung 1998). *Wh*-agreement thus “overwrites” the regular forms of subject-verb agreement for which the verb would ordinarily be inflected (Chung 1998:236f.). The paradigm for *wh*-extraction of nominative arguments is shown in table 2: *Wh*-agreement is overt only in realis transitive contexts (infix -um-); in all other contexts, the predicate exhibits the regular forms of subject-verb agreement (indicated by ‘—’).

Table 2

*Chamorro*

*Verb morphology under wh<sub>NOM</sub>-extraction*

	TRANSITIVE	INTRANSITIVE
WH <sub>NOM</sub> , REALIS	-um-	—
WH <sub>NOM</sub> , IRREALIS	—	—

What is striking here is the apparent syncretism of the marker -um- in control and *wh*<sub>NOM</sub>-extraction contexts. However, according to Chung (1998:243f.), -um- and man- in control con-

structions are merely infinitive markers, and the markers *-um-* in control and wh-extraction contexts are accidental homophones. This conclusion is drawn from the observation that the embedded predicates of control constructions are invariably infinitives, whereas wh-extraction is not limited to non-finite clauses.

**4. Reanalysis.** I would like to propose a new analysis of the Chamorro data according to which the inflectional markers *-um-* and *man-* in control constructions are not infinitive markers, but subject agreement markers. This view is supported by the observation that in intransitive contexts the embedded verb indeed inflects for the number of its structurally highest argument. Under this assumption, the paradigm of verbal inflection in control contexts turns out to be entirely identical to the inflection paradigm of wh<sub>NOM</sub>-extraction contexts: If the embedded predicate is transitive, then the agreement marker is the marker expected with subject extraction out of transitive realis predicates (invariably *-um-*). If, on the other hand, the embedded predicate is intransitive, then its agreement morphology must be identical to the pattern expected with subject extraction from intransitive predicates. As can be seen from table 2, no special morphology shows up in this context. The expected pattern is thus the regular inflection of intransitive verbs in contexts without wh-extraction. This is indeed borne out: as can be seen from the paradigm of intransitive verbs shown in table 3, the inflectional pattern of intransitive embedded verbs in control constructions is identical to the pattern of realis intransitives. This leads to the conclusion

Table 3

*Chamorro*  
*Subject agreement on intransitive*  
*verbal predicates*

	REALIS	IRREALIS	
1 SG	-um-	(bai) u-	
2 SG	-um-	un-	
3 SG	-um-	u-	
1 INCL DU	-um-	(u) ta-	
1 EXCL DU	-um-	(bai) in-	
2 DU	-um-	in-	
3 DU	-um-	u-	
1 INCL PL	man-	(u) ta-	fan-
1 EXCL PL	man-	(bai) in-	fan-
2 PL	man-	in-	fan-
3 PL	man-	u-	fan-

that control and subject extraction yield identical morphological marking on the agreeing verb.

**5. Consequences.** The new analysis yields a strong new argument in favour of control by movement (which has been argued for e.g. by Hornstein 1999): If control constructions behave exactly like wh-movement constructions with regard to the morphology of the embedded verb, then they are highly likely to be derivationally related. The special verbal morphology in the context of wh-movement is generally assumed to be the result of successive-cyclic wh-movement: the feature set of a phase head  $\alpha$  is modified due to a wh-expression being remerged at the edge of  $\alpha$  and subsequently being extracted out of  $\alpha$ P. If the reasoning is on the right track, then control, too, must involve a constituent that is merged or remerged at the edge of embedded v/I and subsequently extracted out of v/I. It seems reasonable to assume that this constituent is the embedded subject which is extracted out of the embedded clause and remerged as the external argument of matrix V, thus potentially violating the Activity Condition (Chomsky 2001).

Furthermore, the new analysis shows that embedded verbs in Chamorro control constructions are finite (finiteness in control constructions has been reported e.g. for Romanian (Farkas 1985), Albanian (Dobrovie-Sorin 2001), Greek (Roussou 2001), Malagasy (Polinsky and Potsdam 2005) and Hebrew (Landau 2004)). This becomes obvious in intransitive contexts, where the embedded verb shows the number-sensitive inflection characteristic of finite intransitive verbs in realis mood. The finiteness also shows up in transitive contexts, where the embedded verb behaves like a finite realis transitive verb in that it shows the marker *-um-* (with control involving movement, the “normal” finite inflection of embedded transitive verbs in control contexts never shows up). An insight of this analysis is that it provides a strong argument against Landau’s (2004) analysis of finite control as PRO-based.

## References

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