Taking Syncretisms Seriously: A New Argument for Finite Control as Movement

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Outline

Background

"Classical" analysis of control:
Infinitival clauses without overt subjects have a non-overt subject represented as PRO ([+anaphoric, +pronominal]).

Newer proposals:
PRO is to be eliminated from the grammar system (Hornstein 1999, 2001, Manzini and Roussou 2000, Boeckx and Hornstein 2003). Control is derived by movement (see also e.g. Barrie and Pittman 2004, Kim 2004, Bowers 2005, Witkoś 2007).

Goal of this talk:
Present a reanalysis of control in Chamorro (Austronesian, VSO) as a case of finite control involving movement. The new analysis is based upon the empirical observation that 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.

Outline

Data

Morphology of [+V] Predicates \ __ No Extraction

Table 1: *Chamorro*
Verbal paradigm (Topping 1973)

TRANSITIVE [+V] PREDICATES			INTRANSITIVE [+V] PREDICATES		
	REAL	IRREALIS		REAL	IRREALIS
1 SG	hu-	(bai) hu-	1 SG	-um-	(bai) hu-
2 SG	un-	un-	2 SG	-um-	un-
3 SG	ha-	u-	3 SG	-um-	u-
1 DU IN	ta-	(u-)ta-	1 DU IN	-um-	(u-)ta-
1 DU EX	in-	(bai) in-	1 DU EX	-um-	(bai) in-
2 DU	en-	en-	2 DU	-um-	en-
3 DU	ma-	u- ha-	3 DU	-um-	u- ha
1 PL IN	ta-	(u-)ta-	1 PL IN	man-	(u-)ta-fan-
1 PL EX	in-	(bai) in-	1 PL EX	man-	(bai) in- fan-
2 PL	en-	en-	2 PL	man-	en- fan-
3 PL	ma-	u- ma-	3 PL	man-	u- fan-

Data

Morphology of [+V] Predicates \ __ Wh-Extraction

Chamorro displays a special verbal inflection in wh-dependencies: If material is extracted out of a predicate, then the verb registers the argument status of the extracted element (Chung 1998:236f.). The resulting "special" morphology is generally called **wh-agreement**. Wh-agreement thus "overwrites" the regular forms of subject-verb agreement for which the verb would ordinarily be inflected (Chung 1998:236f.).

Table 2: *Chamorro*
Verbal paradigm \ __ Wh-extraction of subject arguments

	TRANSITIVE	INTRANSITIVE
WH_{NOM}, REALIS	*-um-*	—
WH_{NOM}, IRREALIS	—	—

Observation:
Wh-agreement is overt only in realis transitive contexts (infix *-um-*); in all other contexts, the predicate exhibits the regular forms of subject agreement (indicated by '—').

Data

Wh-Extraction: Examples

(1) a. Ha-fa'gasi si Juan i kareta (trans realis)
3SG-washed DET Juan DET car

'Juan washed the car'

b. Hayi f<um>a'gasi i kareta?
who <UM>wash DET car

'Who washed the car?'

(2) a. Pära u-bendi yu' si Carmen lepblu (trans irrealis)
FUT 3SG-sell me DET Carmen books

'Carmen is going to sell me some books'

b. Hayi pära u-bendi yu' lepblu?
who FUT 3SG-sell me books

'Who is going to sell me some books?'

Data
Wh-Extraction: Examples

(3) a. **Man**-ggupu siha (intrans realis, pl subject)
MAN-fly 3PL
'They flew'

b. Kao i famagu'on-mu [**man**-mä∼maigu']?
Q DET children.2SGPOSS [MAN-PROG∼sleep]
'Is it your children who are asleep?'

Data
Control

Chamorro displays syntactic contexts in which reference to a zero subject of an embedded clause is determined by an argument of the higher predicate (=control; Chung 1998, 2004).

(4)

a. Hu chagi [h<um>atsa i lamasa] (tr sg)
1SG tried [<UM>lift DET table]

'I tried to lift the table'

b. Tafan-ä'-ayuda [k<um>umprendi yan <um>-asisti i
1PLINCL-REC-help [<UM>understand and <UM>assist DET
famagu'un siha] (tr pl)
children 3PL]

'Let us help one another to understand and assist the children'

Data
Morphology of [+V] Predicates \ __ Control

(5) a. Malago' yo' [l<um>i'of gi tasi] (intr sg)
want 1SG [<UM>dive LOC ocean]

'I want to dive in the ocean'

b. Man-malago' siha [man-ma'udai] (intr pl)
PL-want 3PL [MAN-ride]

'They want to ride'

Table 3: *Chamorro*
Subject agreement on embedded V in control contexts

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

Control
Observations

Observations:

1. The embedded predicate shows a reduced form of subject-verb agreement: shows no person or mood inflection. However, intransitive embedded predicates register the number of the non-overt argument.
2. Syncretism of the marker *-um-* in control and wh_{SUBJ}-extraction contexts.

The syncretism is already observed in Chung (1983:234):
"Infinitives do, however, display AGReement, and their agreement pattern is identical to the special WH-Agreement found in (realis) constituent questions with a subject gap."

However, the syncretism has been taken to be of little significance.
Analysis in Chung (1998):
The embedded verb is an infinitive; the markers *-um-* and *man-* are infinitive markers.

Control

Chung (1998:243f.):

The markers *-um-* in control and wh-extraction contexts are accidental homophones. Reason: The embedded predicates of control constructions are invariably infinitives, whereas wh-extraction can appear in finite clauses.

> The overt realisation of nominative Wh-Agreement is homophonous with the transitive form of the infinitive [...]. But as might be expexted by now, even this resemblance turns out to be syntactically insignificant. When we examine a wider range of examples, it becomes clear that Wh-Agreement in Chamorro is not in general restricted to nonfinite clauses. [...] I conclude from all this that although the morphology of Wh-Agreement resembles certain other types of Chamorro inflection, the resemblance is nothing more than homophony. (Chung 1998:243f.)

Control

But:

1. Control, too, is not necessarily restricted to non-finite clauses. Finite control is an empirically attested phenomenon which 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).
2. In intransitive contexts the presumably non-finite predicate still inflects for the number of its structurally highest argument.

Reanalysis

Basic Idea

Starting point of the reanalysis:

(6) *Homonymy Shmomonymy Principle (Alexiadou and Müller 2005):*
Identity of form implies identity of function (within a certain domain, and unless there is evidence to the contrary).

(7) *Null hypothesis for Chamorro:*
Syncretisms in the verbal morphology of Chamorro are not cases of homophony. Rather, syncretic forms of verbal morphology in a derivation A and a derivation B are taken to be evidence that A and B are derivationally related, so that the same marker fits in both contexts.

New analysis:
The inflectional markers *-um-* and *man-* in control constructions are not infinitive markers, but subject agreement markers (more precisely: agent voice markers, see section 4).

Reanalysis

Result:
The paradigm of verbal inflection in control contexts turns out to be entirely identical to the inflectional paradigm of wh_{SUBJ}-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 is the marker set expected with subject extraction out of intransitive realis predicates (i.e., no change in markers, thus *-um-* with singular subjects, and *man-* with plural subjects).

Consequence:
The findings suggest that embedded verbs in Chamorro control constructions are finite.

Outline

Theoretical Repercussions: Finite Control as Movement

State of the reasoning so far:
Control (=finite control) and subject extraction yield identical morphological marking on the agreeing verb.

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 α is modified due to a wh-expression being remerged at the edge of α and subsequently being extracted out of αP.

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.

Theoretical Repercussions: Finite Control as Movement

Strong conclusion:
Finite control is derived by raising the embedded external argument to the matrix clause, remerging it as the external argument of matrix V (which is argued against by Landau 2004), thus violating the Activity Condition (Chomsky 2001; but see alternative accounts of Activity Condition effects without the Activity Condition: e.g. Nevins 2004, Obata and Epstein 2008).

Weak conclusion:
Finite control involves a PRO in the embedded clause. The extraction of PRO to the edge of I due to I's EPP feature creates the same effect as the extraction of a wh-element.

Theoretical Repercussions: Finite Control as Movement

But:
Alexiadou and Anagnostopoulou (2001): The property of I having a [•D•] feature is not inherent/ universal (e.g. Alexiadou and Anagnostopoulou 2001). Though there is an EPP requirement in Chamorro, there is no evidence for an EPP feature proper on I in this inflectionally rich VSO language: The information "subject is present" is already brought into the structure by v agreeing with the "subject" argument in voice. Thus, it seems reasonable to assume that v carries the ϕ-features, and I has no EPP feature in Chamorro.

Problem: Movement of PRO to the edge of I cannot be derived in such a system. Reason: Movement is feature-driven. If I has no Attract feature, then it cannot remerge PRO as its specifier.

Theoretical Repercussions: Finite Control as Movement

Alternative 1: The EPP feature is inserted. Problem: [•D•] cannot be inserted e.g. by Phase Balance (Heck and Müller 2000; see also Müller 2007) as there is no higher probe that could possibly attract PRO.

Alternative 2: I contains a [•D•] feature only in control contexts. Problem: I cannot "foresee" that PRO is present in the numeration, especially so if vocabulary insertion is post-syntactic.

Result:
If the system is such that I in Chamorro does not have an EPP feature, then the strong conclusion holds: Finite control is derived by movement of the highest embedded argument to the matrix clause.

Outline

Voice Agreement in Chamorro

Question:
Given the Syncretism Principle, there must be an underlying function for the "special" morphology that shows up in both control and wh_{SUBJ}-extraction. So what kind of animal is *-um-*/ *man-*?

Answer:
The "special" morphology is voice inflection, i.e., inflection for theta roles. *-um-* is an agent voice marker (Donohue and Maclachlan 2005, Dukes 1992).

Voice Agreement in Chamorro

Evidence 1

Evidence 1: -um- is a predicate marker for “actor focus” (data: Topping 1973).

(8)

a. Si Pedro hatsa i lamasa
DET Pedro lifted DET table

‘Pedro lifted the table’

b. Si Pedro h<**um**>atsa i lamasa
DET Pedro <UM>lifted DET table

‘It was Pedro who lifted the table’

c. Hayi h<**um**>atsa i lamasa?
who <UM>lifted DET table

‘Who lifted the table?’

Voice Agreement in Chamorro

Evidence 1

The agent marker is at work in nominalisation, too. The infix *-um-* is used to derive an agent:

(9) Hu li'e' i h<**um**>atsa yo'
I saw DET <UM>lifted me

'I saw the one who lifted me'

For comparison: The patient voice marker *-in-* derives a patient or goal.

(10) Hu li'e' i h<**in**>atsa
I saw DET <IN>lifted

'I saw the thing that was lifted'

Voice Agreement in Chamorro

Evidence 2

Evidence 2: The very same marker also appears in related languages such as Kapampangan and Tagalog. There is general consensus in that it is an agent voice marker (e.g. Donohue and Maclachlan 2005, Dukes 1992, Rackowski and Richards 2005).

(11) Chamorro voice markers:
/fan-/↔ [VOICE:+ag, NUM:+pl, MOD:+irr]
/man-/↔ [VOICE, NUM:+pl]
/-um-/↔ [VOICE:+ag]
/-in-/↔ [VOICE:–ag]

The markers in (11) are the pieces of inflection that are inserted in the contexts of both control and wh_{Subj}-extraction.

Outline

Uniform Analysis of Control and Wh-Agreement

Approach

State of the reasoning so far:
In both wh_{SUBJ}-extraction and control the embedded subject is extracted out of v/I.

Objective:
The syntax of Chamorro must be modeled in such a way that in both cases the emergence of voice morphology is a result of subject extraction.

Uniform Analysis of Control and Wh-Agreement

Approach

Starting point of the new approach:

> *Chamorro is a Philippine-type language (PTL) which is in the process of augmenting its Philippine style voice-marking system. A recent addition to the language is a transitive sentence type that bears no voice morphology. [...] The exceptional morphological trait in Chamorro is [...] the disappearance of [the voice-marking] morphology in transitive main clauses (Donohue and Maclachlan 2005:121).*

Basic insight:
In Chamorro there are two competing agreement systems: an Austronesian-style voice marking system (markers *-um-*, *-in-*, *man-*), and a person-number marking system (*hu/yo*-marker sets; Chung 1998:26ff., Topping 1973:107).

Uniform Analysis of Control and Wh-Agreement

Approach

Possible implementation:
The predicate registers both kinds of agreement, but in most syntactic contexts only one of the two agreement systems surfaces (though they can in principle co-occur, as in intransitive irrealis plural contexts).

The person-number marking vocabulary items are more specific than the voice markers.

The “disappearance” of a marker is due to both the syntax and the morphology.

Uniform Analysis of Control and Wh-Agreement

Feature manipulation in the syntax:

(12) Probe Impoverishment (Béjar 2003:76ff.)
Feature of a probe can be deleted without valueing during the syntactic computation as a last resort mechanism to rescue a derivation.

Probe impoverishment must be modeled in such a way that it applies to the feature set of V/v/I if material is extracted to the edge of V/v/I. For a detailed analysis see Lahne (2008).

Uniform Analysis of Control and Wh-Agreement

Competition of inflectional markers in the morphology:

- Vocabulary insertion respecting the specificity principle leads to suppression of the less specified voice markers in contexts where impoverishment has not taken place.
- If, however, impoverishment takes place, then the highly specified person-number markers do not fit anymore into the relevant syntactic context. Result: A less specific voice marker is inserted (=Emergence of the Unmarked, Subset Principle, Elsewhere Principle; e.g. Kiparsky 1973, Di Sciullo and Williams 1987, Halle 1997, Stump 2001).

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