

Wh-Concord = Syntactic Movement + Morphological Merger

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Introduction: The main purpose of this paper is to give a novel account for *Wh-Concord* in Okinawan under the Copy Theory of Movement (Chomsky 1993) and Distributed Morphology (Halle & Marantz 1993). Specifically, unlike the previous analyses such as covert/feature movement (Sugahara 1996; Hagstrom 1998; Ginsburg 2009) and Agree (Miyara 2001), we propose that they should be analyzed as syntactic movement where multiple copies/links of a chain are phonetically realized at PF (Nunes 2004; Harizanov 2014) through *Morphological Merger* (Marantz 1984; Matushansky 2006). The proposal correctly predicts (i) island sensitivity, (ii) intermediate copy realization, and (iii) multiple *wh*-interrogative. In addition, we claim that what is involved in *Focus Concord* in Okinawan, despite its similarities with *wh*-concord, should be analyzed as Agree rather than movement.

Core Data: From the typological perspective, there are at least two types of *wh*-in-situ languages with respect to Q-particles (Hagstrom 1998; Kishimoto 2005; Cable 2010): one with a Q-particle clause-finally (e.g. Japanese) and another with a Q-particle TP-internally and a special morpheme clause-finally (e.g. Sinhala). Interestingly, Okinawan has both Japanese-type (1) and Sinhala-type (2) of *wh*-interrogatives.

(1) Japanese-type

Taro-ja nuu kada-**ga**.

Taro-Top what eat.Past-Q

“What did Taro eat?”

(2) Sinhala-type

Taro-ja nuu-**ga** kada-**ra**.

Taro-Top what-Q eat.Past-RA

“What in the world did Taro eat?”

The latter type instantiates *wh*-concord between a Q-particle (-*ga*) and a special morpheme (-*ra*).

Proposal: We propose that (1) and (2) have the following structures, respectively.

(3) Japanese-type: [...*wh-ga*...Predicate-**ga**]

(4) Sinhala-type: [...*wh-ga*...Predicate-#**r-ga**#]

Assuming the Copy Theory of Movement (Chomsky 1993), in both (3) and (4), the Q-particle -*ga* is generated TP-internally and moves to the clause final position, leaving behind a copy (Hagstrom 1998; Cable 2010). Consequently, there exist two non-distinct copies; however, the structures with them cannot be linearized at PF by *Linear Correspondence Axiom* (LCA: Kayne 1994). Thus, in (3), *Chain Reduction* (Nunes 2004) applies to the tail of a chain and only the head of a chain is pronounced. In (4), we propose that *Morphological Merger* (Marantz 1984; Matushansky 2006) applies to a higher copy created as a result of movement of the Q-particle -*ga* and the C-head -*r*. This process renders the highest -*ga* an integral part of a newly created complex head -*ra* and invisible to LCA. Thus, both higher and lower copies of -*ga* are pronounced. This theory naturally explains why multiple realization of -*ga* is impossible without any support of -*r*.

(5) * [...*wh-ga*...Predicate-**ga**] (multiple -*ga* realization without Morphological Merger with -*r*)

As correctly predicted, only the highest copy of -*ga* can be realized at PF given LCA. Finally, considering the facts that this movement can cross a Neg head as in (6) and that it undergoes Morphological Merger, we argue that the movement involved here is analogous to movement of clitics in Romance languages, which has the properties of XP and X⁰ (Harizanov 2014).

(6) √ [... [...*wh-ga*...]...Neg...Predicate-#**r-ga**#]

Predictions: **i. island sensitivity:** Sugahara (1996) observes that the Q-particle-*ga* cannot appear inside islands and should be located outside them as schematized in (7).

(7) [...[island ...*wh**-**ga**...]√-**ga**...Predicate-**ra**]

This fact straightforwardly makes sense under the proposal here that the Q-particle *-ga* undergoes movement, not base-generation, as suggested by Hagstrom (1998) and Cable (2010).

ii. intermediate copy realization: Miyara (2005, 2007) observes that when *-ga* is embedded in more than one subordinate clauses, only *-ga* attached onto the outermost subordinate clause can be pronounced (8).

(8) [CP [CP [CP...*wh**-**ga**...]*-**ga**...]-√**ga**...Predicate-**ra**]

Our proposal correctly predicts this fact. The highest copy of *-ga* undergoes Morphological Merger with the C-head *-r* and thus becomes invisible to LCA. As a result, since the highest copy of *-ga* is now ignored by LCA, Chain Reduction keeps the *second* highest *-ga* and deletes the remaining others. This data is particularly significant since other approaches to *wh*-concord (Agree, null operator movement, covert movement) fail to prevent *-ga* from appearing in the original subordinate clause.

iii. multiple *wh*-interrogative: Our account can also explain Miyara's (2005, 2007) observation that only one *-ga* can move in multiple *wh*-interrogatives (9).

(9) a. √[CP [CP...*wh*-**ga** ...*wh*-*t_j*...]-**ga_j**...Predicate-**ra**]

b. *[CP [CP...*wh*-*t_i*...*wh*-*t_j*...]-**ga_i**-**ga_j**...Predicate-**ra**]

This can be analyzed in the same way as Bošković (2002), which explains the impossibility of multiple *wh*-fronting of the same kind of *wh*-words (e.g. *ce* 'what') in Romanian in terms of the interaction between the Copy Theory of Movement and the independent **wh-wh* PF-constraint. Assuming that Okinawan has a similar OCP-like constraint (e.g. **Q-Q*) at PF, the lower copy of at least one *-ga* should be pronounced in (9) to avoid the clash at PF.

Focus Concord: Okinawan has another concord phenomenon: *Focus Concord*, which exhibits almost the same structure as *wh*-concord; the focus-particle *-du* appears TP-internally and the clause ends with the special morpheme *-ru*. In spite of their apparent similarities, we argue that the movement analysis should not apply to focus concord since a cluster of properties distinguishes it from *wh*-concord. In focus concord, (i) there are multiple clause-final morphemes which license the focus particle (*-ru*, *-ndoo*, *-sa*), (ii) multiple focus particles cannot appear in a single clause, and (iii) the focus particle can appear inside subordinate clauses (c.f. 8). From these differences, we conclude that the heads which license the Q- and focus-particle are different and focus concord is established via Agree rather than movement, assuming that Agree is not clause-bound (Bošković 2003, 2007).

Conclusion: Our analysis is superior to previous analyses in both theoretical simplicity and empirical coverage. Theoretically, we have successfully deduced various generalizations based on independently-motivated syntactic mechanisms without any stipulations (see Harizanov 2014 for a similar proposal to account for clitic-doubling in Bulgarian). Empirically, we can capture the complex patterns which others have never tackled such as intermediate copy-realization.

Selected References: Chomsky, N. 1993. A Minimalist Program for Linguistic Theory. *The View From Building 20*, 1-52, MIT Press.; Halle, M & Marantz, A. 1993. Distributed Morphology and the Pieces of Inflection. *The View From Building 20*, 111-176, MIT Press.; Harizanov, B. 2014. Clitic Doubling at the Syntax-Morphophonology Interface. *NLLT* 32, 1033-1088.; Matushansky, O. 2006. Head Movement in Linguistic Theory. *LI* 37, 69-109.; Marantz, A. 1984. *On the Nature of Grammatical Relations*. MIT Press.; Nunes, J. 2004. *Linearization of Chains and Sideward Movement*. MIT Press.