

Switch reference in Washo as multiple subject agreement

Karlos Arregi & Emily Hanink, University of Chicago

Washo, a highly endangered Hokan/isolate language spoken around Lake Tahoe, has switch reference (SR) (Jacobsen 1967): SR-marking in an embedded clause tracks whether the matrix and embedded subjects are coreferent (*same subject* (SS) $-\emptyset$) or not (*different subject* (DS) $-\check{s}$). Recent theoretical work has shown that SR in other languages is of a rather different nature, as it can either track situations (not subject reference, McKenzie 2012), or be the realization of high vs. low coordination (not subordination, Keine 2013). We provide detailed argumentation that SR in Washo tracks subject reference across embedded-clause boundaries, and propose an analysis in which **SR exponents in Washo are the realization of referential index agreement by an embedded C with both the embedded and matrix subjects**. Agreement with referentially disjoint subjects results in **feature conflict**, which is allowed by the grammar, but exploited by the morphology, which realizes it as DS $-\check{s}$. While this agreement-based account has precedents in Finer 1985 and Camacho 2010, the present analysis improves on previous proposals in that it relies exclusively on independently attested crosslinguistic properties of agreement.

1. Switch reference in Washo: In (1), the DS marker in the embedded clause surfaces because the subject of the embedded clause (*Emily*) refers to an individual different from that of the matrix clause (*I*). In (2), the subjects of both clauses refer to Adele, resulting in the SS marker. (Both embedded clauses involve nominalization with the non-subject pronoun *-ge*, a feature of certain clause types in Washo.)

- (1) [DP_{CP} **Emily** t' -íšim-áŋaw k' -éʔ-i -[\check{s}] -ge] I-ášašé:s-šemu-yi
Emily NOM-sing-well 3-be-IND -DS -NOM **1**-know-well-IND

'I know well that Emily is a good singer.'

field notes

- (2) **Adele** [DP_{CP} daláʔak ʔ-ígi-yi -[\emptyset] -ge] \emptyset -hámup'áyé:s-i
Adele mountain 3-see-IND -SS -NOM **3**-forget-IND

'Adele remembers that she saw the mountain.'

field notes

SR in Washo is a **strictly embedded-clause phenomenon**, and occurs in clausal complements of factive verbs (1, 2), relative clauses (internally headed (3), headless (4)), and temporal clauses (not shown here):

- (3) [DP_{CP} **mé:hu** géwe ʔ-í:gi-yi -[\check{s}] -ge] lé-saʔ I-í:gi-yi
boy coyote 3-see-IND -DS -NOM **1**-also **1**-see-IND

'I also saw the coyote that the boy saw.'

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- (4) [DP_{CP} ʔ-émlu-yuŋil-i -[\emptyset] -ge] \emptyset -semáʔ-yi
3-eat-PST-IND -SS -NOM **3**-throw.up-IND

'He threw up what he had just eaten.'

Jacobsen 1981

Furthermore, these embedded clause types are **not structurally deficient or nonfinite** in any way, as the SR morpheme is peripheral to a full complement of verbal inflectional material also present in matrix clauses, including subject agreement (e.g. ʔ- in (3)), tense, and mood (e.g. *-i* in (1)). Thus, we follow Finer (1985) in claiming that Washo SR makers are realizations of C high in the clause, unlike languages in which SR occurs in low coordinations or otherwise structurally deficient clauses (i.a. Keine 2013).

Another relevant property of Washo SR is that it is **canonical** in McKenzie's (2015) sense: it tracks the sameness/distinctness in reference of the subjects of the embedded and matrix clauses, as opposed to event continuity or situation tracking (i.a. Dahlstrom 1982, McKenzie 2012). This can be seen, for instance, in (2): the matrix and embedded clauses describe different events and situations, but the same-subject marker is obligatory, since the two subjects corefer. The canonicity of SR in Washo is confirmed by the behavior of **clausal arguments of copula -eʔ** (Bochnak 2015), which also display SR:

- (5) a. [DP_{CP} Emily I-ášašé:s-šemu-yi -[\check{s}] -gi] k' -éʔ-i
 Emily **1**-know-well-IND -DS -NOM **3**-COP-IND

- b. [DP_{CP} Emily I-ášašé:s-šemu-yi -[\emptyset] -gi] L-éʔ-i
 Emily **1**-know-well-IND -SS -NOM **1**-COP-IND

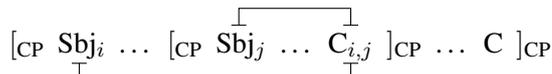
'I know Emily really well.'

field notes

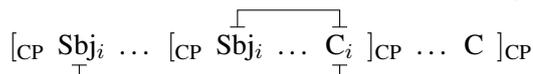
(5a) is an impersonal sentence: the sole argument of the matrix copula is a nominalized clause. The reference of the subject of the embedded clause (pro-dropped *I*, signaled by agreement on the verb) is different from that of the matrix clause (either the embedded clause or a *pro* expletive), resulting in DS in the embedded clause. (5b) is a copy-raising version of (5a): as shown by agreement, the matrix copula has a subject (*I*) coindexed with the embedded subject (both are pro-dropped), resulting in SS marking in the embedded clause. In these examples, SR correlates with agreement: the embedded verb is DS-marked if its agreement features differ from the matrix verb, and SS-marked if they coincide. The correlation between agreement and SR is however a side effect of the fact that SR tracks subject reference: in examples with a third person embedded subject (not shown) both DS and SS are possible, but agreement remains the same throughout, since the matrix subject is third person in both the impersonal and copy-raising versions. Crucially, (5a) and (5b) (and similar pairs) have the same meaning, revealing the syntactic nature of switch reference by virtue of the fact that it tracks grammatical subjects.

2. Multiple agreement and feature conflict: We propose that the DS marker in Washo is the realization of a morpheme with conflicting referential feature values. Adopting the operation Multiple Agree (Hiraiwa 2001), we propose that the C head hosting the SR morpheme **agrees with both the embedded and matrix subjects by probing selectively for the referential index of arguments bearing nominative case**. Agreement with the matrix subject is through Upward Agree (i.a. Baker 2008), reminiscent of upward complementizer agreement in Bantu (i.a. Diercks 2013), while agreement with the embedded subject is on a par with downward complementizer agreement in Germanic (i.a. van Koppen 2005). In addition, agreement is case-sensitive (i.a. Bobaljik 2008): C only agrees with nominative DPs, i.e. subjects (Washo is nominative/accusative, visible in third person pronouns). Embedded C is a probe for the feature $[ID:n]$ (n a natural number), a feature-based representation of the standard index assumed in accounts of reference. Coreferent nominals have the same value for $[ID]$, while those with disjoint reference have different values. (See Rezac 2004 and Kennedy 2014 for evidence from relative clauses and copy-raising in English that Agree can probe for index features.) With disjoint subjects (6), different values for $[ID]$ are copied onto C via Agree, resulting in **feature conflict**. Coreferent subjects (7) transmit the same value for $[ID]$ without conflict. (We assume that the matrix subject in impersonal (5a), whether an expletive or the nominalized clause, has a valued $[ID]$; see discussion below (5).)

(6) *Feature conflict with disjoint subjects:* $[C\ ID:i, ID:j]$ (where $i \neq j$)



(7) *No feature conflict with coreferent subjects:* $[C\ ID:i, ID:i] = [C\ ID:i]$



These $[ID]$ features determine the postsyntactic realization of C. We follow Harbour's (2011) treatment of inverse number marking in Kiowa by proposing vocabulary entries that are sensitive to feature conflict: if C has a conflict, it's exponed as DS (8a); otherwise, zero exponence results (8b).

- (8) a. $[ID:i, ID:j] \leftrightarrow \check{s}$ (where $i \neq j$) (different-subject marker)
 b. $[] \leftrightarrow \emptyset$ (same-subject marker)

3. Conclusion: Switch reference markers in Washo are the result of multiple subject agreement. When embedded C is valued with conflicting index features, the DS marker is inserted; otherwise the default SS form is inserted. The proposal contributes not only to the understanding of switch reference, but also to the wider study of agreement and feature conflict across disparate languages and syntactic environments.

References: Baker 2008: *The syntax of agreement and concord*, OUP • Bobaljik 2008: In *Phi-Theory*, OUP • Bochnak 2015: *NELS 45* • Camacho 2010: *NLLT* • Dahlstrom 1982: *CLS 18* • Diercks 2013: *NLLT* • Finer 1985: *LI* • Halle & Marantz 1993: In *The view from Building 20*, MIT Press • Hanink 2016: *BLS 42* • Harbour 2011: *LI* • Hiraiwa 2001: *MITWPL 40* • Jacobsen 1967: In *Studies in Southwestern ethnolinguistics*, Mouton • Jacobsen 1981: In *Conference on the Syntax of Native American Languages* • Keine 2013: *NLLT* • Kennedy 2014: *MITWPL 70* • van Koppen 2005: PhD Thesis, Leiden • McKenzie 2012: PhD Thesis, UMass Amherst • McKenzie 2015: *IJAL* • Rezac 2004: Agree and Merge; Ms., University of the Basque Country.