

## Switch reference in Washo as inverse marking

**Introduction:** Washo, a highly endangered Hokan/isolate language spoken around Lake Tahoe, exhibits switch reference (SR) (Jacobsen 1964), a feature common in native North America (McKenzie 2015): SR-marking in an embedded clause tracks whether the embedded subject and the matrix subject are coreferent (*same subject* (SS) - $\emptyset$ ) or not (*different subject* (DS) -š). In this paper, we draw a parallel with inverse number-marking in Kiowa (i.a. Harbour 2007, 2011), which marks whether the semantic number of a nominal agrees with the inherent number of its head noun. Similarly, SR in a Washo embedded clause marks whether its subject agrees in reference with the matrix subject. We implement this in terms of a head in the embedded clause (C) that undergoes **Multiple Agree** with both its own subject and the matrix subject. **Agreement is for the index feature** [ID] encoding sameness or distinctness in reference. Agreement with referentially disjoint subjects results in **feature conflict** (e.g. [ID:3, ID:7]), which is allowed by the grammar, but exploited by the morphology (as in Harbour’s analysis of Kiowa inverse marking), which realizes it as DS -š. The paper thus contributes the first explicit account of switch reference in Washo, which makes use of feature conflict already known to exist elsewhere in entirely unrelated constructions.

**Switch reference in Washo:** In (1), the different-subject marker surfaces because the subject of the embedded (relative) clause (*heron*) differs from that of the matrix clause (*woman*).<sup>1</sup> In (2), the subjects of both clauses are the same (*Adele*), resulting in the same-subject marker. (Both embedded clauses involve nominalization with -ge, a feature of certain clause types in Washo.)

- (1) [CP **da?mó?mo?** [DP[CP **k’ák’a?** dá: gé:gel -i -[š]] -ge] yá:m-a?] Jacobsen (1981)  
 woman heron there 3.sit -IND -DS -NOM 3.speak-DEP  
 ‘The woman spoke to a heron who was sitting there.’
- (2) [CP **Adele** [DP[CP **dalá?ak ?- ígi -yi -[ $\emptyset$ ]] -ge] hámu?áy-e:s-i] field notes  
 Adele mountain 3- see -IND -SS -NOM 3.forget-NEG-IND  
 ‘Adele remembers that she saw the mountain.’**

**Inverse number marking in Kiowa:** Abstracting away from certain complexities not relevant here (Harbour 2007, 2011), nouns in Kiowa have inherent number, and inverse marking appears when inherent number is in conflict with semantic number. Thus, inherently nonplural *óópíí* ‘fish’ is bare in the singular and dual, but inverse-marked (*óópíí-dó*) in the plural, while inherently nonsingular *áá* ‘stick’ is bare in the dual and plural, but inverse-marked in the singular (*áá-dó*). According to Harbour, inverse-marking in nominals is the realization of D, which agrees in number features with both the head noun (inherent number) and a Num head (semantic number). This can result in feature conflict in D, e.g. [+singular, –singular] for the singular of inherently nonsingular *áá*. Syntactic feature conflict is realized morphologically as inverse-marking, that is, inverse-marking exponents realize formatives with feature conflict. Harbour’s analysis capitalizes on the standard assumption that feature sets are sets, so that feature conflict resulting from agreement with controllers with different feature values (e.g. [+singular, –singular]) is still well-formed, and agreement with controllers with the same feature values (e.g. in the plural/dual of inherently nonsingular *áá*) results in a representation that is equivalent to one containing a single feature (e.g. [–singular, –singular] = [–singular]), giving rise to no conflict in feature values. In Kiowa nominals, D without feature conflict has null realization.

<sup>1</sup>Glosses: DEpendent mood; DS: different subject; INdependent mood; NOMinalizer; SS: same subject.

**Switch reference in Washo as feature conflict:** We propose that the different-subject marker in Washo is the realization of a morpheme with conflicting referential feature values, much in the same way as the Kiowa inverse is the realization of conflicting number-feature values. Following *Finer 1985*, we claim that switch reference markers are a realization of C (cf. *Keine 2012*, *McKenzie 2012* for a lower position in other languages). Evidence for a high position of SR-marking comes from the fact that it surfaces peripheral to overt tense and mood affixes, as shown in (3):

- (3) [DP<sub>[CP</sub> Béverli wát 1 -í:gi -gab -i -ṣ̌ ] -gi k'-éʔ-i  
 Beverly tomorrow 1 -see -FUT -IND -DS -NOM 3-be-IND

‘I will see Beverly tomorrow.’ (Lit: ‘My seeing Beverly tomorrow exists.’) Washo Archive

Adopting the operation Multiple Agree (*Hiraiwa 2000*), we propose that this C head agrees with both the embedded and matrix subjects though Upward Agree (i.a. *Baker 2008*). Both subjects are located in [Spec, CP] in their respective clauses, both structurally higher than embedded C. This 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 and binding. Coreferent nominals have the same value for [ID], while those with disjoint reference have a different value for this feature.

With disjoint subjects (4a), different values for [ID] are copied onto C via Agree, resulting in feature conflict. Coreferent subjects (4b) transmit the same value for [ID], and no conflict arises.

- (4) a. *Different Subject:* [ID:*i*, ID:*j*] (where  $i \neq j$ )  
 [daʔmóʔmoʔ<sub>*i*</sub> [k'ák'aʔ<sub>*j*</sub> dá: gé:gel-i-ṣ̌ ] -ge] yá:m-aʔ]
- b. *Same Subject:* [ID:*i*, ID:*i*] = [ID:*i*]  
 [Adele<sub>*i*</sub> [pro<sub>*i*</sub> daláʔak ʔ<sub>*i*</sub>-ígi-yi-∅ ] -ge] hámpup'áy-e:s-i]

These features determine the realization of C, as in (4c) (implemented as vocabulary entries in Distributed Morphology, *Halle & Marantz 1993*). When there is a feature conflict, an inverse form surfaces—the different-subject marker; otherwise, zero exponence results (cf. both *Langdon & Munro (1979)* and *Finer (1985)*, who suggest that Washo lacks a same-subject marker altogether):

- (5) a. [ID:*i*, ID:*j*] ↔ ṣ̌ (where  $i \neq j$ ) (different-subject (=inverse) marker)  
 b. [ ] ↔ ∅ (same-subject marker)

**Conclusion:** Switch reference markers in Washo are the result of agreement between embedded C and two structurally higher subjects. When embedded C is valued with two index features that are in conflict with one another, the DS marker is inserted as the inverse form; otherwise the null, default SS form is inserted. The proposal presented here contributes not only to the understanding of switch reference and agreement in Washo, but contributes also to the wider study of feature conflict and the use of inverse morphology across disparate languages and syntactic environments.

**References:** Mark Baker. 2008. *The syntax of agreement and concord*. • Daniel Finer. 1985. *The syntax of switch-reference*. • Morris Halle and Alec Marantz. 1993. *Distributed Morphology and the pieces of inflection*. • Daniel Harbour. 2007. *Morphosemantic number: From Kiowa noun classes to UG number features*. • Daniel Harbour. 2011. *Valence and atomic number*. • Ken Hiraiwa. 2001. *Multiple agree and the defective intervention constraint in Japanese*. • William Jacobsen. 1967. *Switch reference in Hokan-Coahuiltecan*. • William Jacobsen. 1981. *Headless relative clauses in Washo*. • Stefan Keine. 2012. *Deconstructing switch reference*. • Margaret Langdon, and Pamela Munro. 1979. *Subject and (Switch-)Reference in Yuman*. • Andrew McKenzie. 2012. *The role of contextual restriction in reference tracking*. • Andrew McKenzie. 2015. *A survey of switch reference in North America*.