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# Aligning restricted objects\*

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## *Abstract*

*The hierarchy of grammatical functions currently employed by harmonic alignment (Aissen 1999a) makes use of the distinction between the core relations of subject and object. Evidence from languages with unregistered objects indicates that this hierarchy must be expanded to include a restricted set of objects as well. For example, a certain type of derived intransitive clause in Halkomelem Salish results in a ranking paradox under the normal conception of harmonic alignment due to the unexpected presence of an object in an intransitive construction. To relieve the pressures that these objects place on accounting for valency distinctions, it is proposed that constraints refer to both objects and to a class of restricted objects in order to make the distinction between transitive constructions and intransitives with objects.*

## **1. Introduction**

The markedness relation between person hierarchies and grammatical relations (Silverstein 1976; Dixon 1979) has recently been formalized within the framework of optimality theory by Aissen (1999a, 2003). It has been shown that under this type of analysis, the selection of optimal subjects (Aissen 1999a) and objects (Aissen 2003) could be accounted for by language-specific rankings of universal constraints. From a typology of constraint rankings, a full range of case and agreement patterns can be predicted to emerge.

The claims of harmonic alignment must be tested against a range of different voice phenomena found in natural languages. The purpose of this article is to do just that: outline the problems involved in accounting for languages with unregistered objects. In short, unregistered objects appear in constructions whereby an argument would normally be registered

on the predicate, but is not. Such constructions are not uncommon (see, for example, Austin and Bresnan 1996), yet are analytically elusive. This article presents a case of a language with unregistered objects, Halkomelem, and presents a proposal based in the framework of harmonic alignment.

Halkomelem, a Central Coast Salish language spoken in southwestern British Columbia, Canada,<sup>1</sup> displays split-ergative properties. The principle split is along the person dimension in that 1<sup>st</sup> and 2<sup>nd</sup> person subjects are marked for case by means of agreement on the verbal morphology,<sup>2</sup> and both transitive and intransitive subjects pattern together in a nominative-accusative way. On the other hand, 3<sup>rd</sup> person subjects pattern as ergative-absolutive, as only transitive and not intransitive 3<sup>rd</sup> person subjects trigger subject-verb agreement (Dixon 1979; for Halkomelem, see Hukari 1976; Gerdtz 1980, 1988a; Jelinek and Demers 1983; Wiltschko 2003a, 2003b, 2006).

In addition, Halkomelem also exhibits a type of “antipassive” or derived intransitive construction. These exceptional constructions, or quasi object constructions (QOCs),<sup>3</sup> display surface patterns of both transitives and intransitives. These constructions are morphologically intransitive and are unmarked for case, yet they take an object. In this respect, QOCs share surface properties of both intransitive and transitive constructions, which is problematic for the harmonic alignment account. Under the standard approach, QOCs result in a ranking paradox, whereby the constraints governing the expression of linguistic structure and the expression of case on third person subjects (\*STRUC and \*Øc & \*Su/3, respectively) must be re-ranked in order to correctly derive each construction.

In order to alleviate the ranking paradox forced by the QOCs, I propose the alignment of an additional grammatical function to the already existing set: the “restricted” object. This proposal buys Aissen’s (1999a) harmonic alignment framework wholesale, but enriches one of the available hierarchies. I wish to show that in order to model the difference between transitives and QOCs, some reference must be made to the difference between direct and restricted objects, and that this difference must be somehow encoded in the grammar.

Just as 1<sup>st</sup> and 2<sup>nd</sup> person are not bound by a fixed ranking with respect to each other in Aissen’s (1999a) framework, I propose that object constraints break down into direct and restricted objects (see Bresnan and Kanerva 1989; Bresnan and Zaenen 1990), and that they are independent in the same way. The classification of these two independent categories under the larger notion of “object” enables us to encode a distinction between regular objects of transitives and restricted objects in intransitive constructions.

Within the framework of harmonic alignment, which centers around markedness constraints, the most natural expression of object difference would be found in the relational hierarchy proposed by Keenan and Comrie (1977), whereby within core grammatical functions, primary objects are higher on the scale than secondary objects. By aligning this extended hierarchy of grammatical functions with other available constraints, the ban on case marking on intransitive constructions with objects can be explained without the need to stipulate rules or reference construction-specific constraint definitions. Adopting a more articulated hierarchy also enriches OT in that it allows the theory to model how languages make use of different degrees of transitivity (cf. Hopper and Thompson 1980).

In Section 2 the agreement system of Halkomelem is described, with some discussion of split-ergative phenomena. In Section 3 the problems with harmonic alignment are addressed. In particular, the ranking paradox forced by QOCs will be discussed, with special attention paid to the dynamic between intransitive and transitive constructions as it relates to constraint rankings. Section 4 presents alternative analyses, based primarily on antipassive and inverse approaches. In Section 5 evidence is presented for classifying the object of an intransitive construction in Salish as a restricted type of object. Syntactic evidence includes oblique marking and facts surrounding extraction. In Section 6 the augmentation of the relational hierarchy is proposed, and a new set of constraints is added to the existing set. The section also outlines the revised constraint rankings with the restricted object constraints for Halkomelem, and Section 7 offers a conclusion and brief discussion of split-ergative phenomena.

## 2. The data

Upriver Halkomelem exhibits a split-ergative<sup>4</sup> system of morphologically marking case and agreement. 1<sup>st</sup> and 2<sup>nd</sup> person subjects pattern alike in intransitive and transitive constructions.<sup>5</sup>

|     | A  | S  | O   |
|-----|--|--|---|
| (1) | a. máy-t- <u>tse</u> l<br>help-TRANS-1SG.SUB<br>'I help him'   | b. yó:ys- <u>tse</u> l<br>work-1SG.SUB<br>'I work'   | c. may-th- <u>óx</u> -es<br>help-TRANS-1SG.O-3ERG<br>'He helps me'    |
| (2) | a. máy-t- <u>chexw</u><br>help-TRANS-2SG.SUB<br>'You help him' | b. yó:ys- <u>chexw</u><br>work-2SG.SUB<br>'You work' | c. may-th- <u>óme</u> -tsel<br>help-TRANS-2SG.O-1SG.S<br>'I help you' |

In contrast to this, 3<sup>rd</sup> person subjects will trigger subject-verb agreement only in transitive constructions, resulting in split ergativity down the person<sup>6</sup> dimension.

- |     | A                  | S          | O                  |
|-----|--------------------|------------|--------------------|
| (3) | a. máy-t-Ø-es      | b. yóys-Ø  | c. máy-t-Ø-es      |
|     | help-TRANS-3O-3ERG | work-3O    | help-TRANS-3O-3ERG |
|     | ‘He helps him’     | ‘He works’ | ‘He helps him’     |
- (adapted from Galloway 1980: 126)

In addition to the regular intransitive (4) and transitive (5) constructions found in Halkomelem, there is also what is known as an antipassive or “quasi-object construction”, illustrated in (6).

- (4) Intransitive  
 í:mex te Strang  
 walking DET Strang  
 ‘Strang is walking’  
 (Wiltschko 2006: 197)
- (5) Transitive  
 a. q’ó:y-t-es te Strang te sqelá:w  
 kill-TRANS-3ERG DET Strang DET beaver  
 ‘Strang killed the beaver’  
 (Wiltschko 2006: 197)  
 b. ní? q’wəl-ət-əs tθə sce:łtən  
 AUX bake-TRANS-3ERG DET salmon  
 ‘He cooked/barbecued the salmon’  
 (Gerds and Hukari 2000: 95)
- (6) Quasi-Object Construction  
 a. qwél-em te Strang te sth’óqwi  
 barbecue-INTR DET Strang DET fish  
 ‘Strang barbecues the fish’  
 (Wiltschko 2006: 202)  
 b. ní? q’wəl-əm ʔə tθə sce:łtən  
 AUX bake-INTR OBL DET salmon  
 ‘He cooked/barbecued the salmon’  
 (Gerds and Hukari 2000: 95)

In Halkomelem, transitives are obligatorily marked with a transitivizing suffix. Roots are unmarked for valency, while a set of intransitives is marked by suffixation. QOCs are marked with an intransitivizing suffix (in this case the morpheme *-em*). This suffixal alternation<sup>7</sup> is shown below:

## (7) Valency alternations

| Root              |              | Transitive          |           | Intransitive        |         |
|-------------------|--------------|---------------------|-----------|---------------------|---------|
| pán               | ‘get buried’ | pánət               | ‘bury it’ | pánəm               | ‘plant’ |
| k <sup>w</sup> án | ‘get taken’  | k <sup>w</sup> ánət | ‘take it’ | k <sup>w</sup> ónəm | ‘get’   |

(adapted from Suttles 2004: 229)

Assuming that all roots in the language are unaccusative (cf. Davis 1997), the presence of either suffix introduces an external argument. Wiltschko (2001, 2006) has asserted that the set of suffixed intransitives in Upriver Halkomelem are a set of derived unergatives, and this has been supported in work by Hukari (1979), Gerdts and Hukari (1998).

There are many semantic restrictions imposed on quasi-objects. For instance, only nonspecifics or generics are allowed (Galloway 1993: 423; Gerdts and Hukari 2000: 99), only inanimates (Galloway 1993; Gerdts 1988b), etc. These restrictions have been debated, and they do not hold uniformly across Salish languages, or even oftentimes across speakers; therefore, I will not pursue a discussion of the semantic properties of quasi objects here (see Gerdts and Hukari 1998, 2000; and Davis and Matthewson 2003 for specifics regarding morphological and semantic properties of quasi objects in Halkomelem and St’át’imcets [Lillooet Salish], respectively). Regardless, the status of the object in these cases in terms of grammatical function will be discussed in section 5, but it should be noted that the thematic role is the same as the direct object of transitives: a theme.

### 3. Problems with harmonic alignment

Aissen (1999a) has imported the insights of the person hierarchy of Silverstein (1976) into optimality theory by employing the notion of harmonic alignment. For instance, the hierarchy in (8) can now be expressed in formal terms by aligning it with other scales.

## (8) The Agent Hierarchy (Silverstein 1976)

Local (1<sup>st</sup> and 2<sup>nd</sup>) > 3<sup>rd</sup> Pron > Proper Names > Human N > Animate N > Inanimate N

Under harmonic alignment, two scales are aligned in order to derive a fixed hierarchy of markedness constraints (see Prince and Smolensky 1993). For instance, the hierarchy of grammatical relations can be aligned with the person hierarchy to construct a basic set of constraints.

## (9) Alignment of person and grammatical relation

(from Aissen 1999a: 682)

| Scales                             | Harmonic alignment                                  | Constraint alignment   |
|------------------------------------|---|--|
| Local > 3<br>1 > 3<br>2 > 3        | Su/Local > Su/3<br>Su/1 > Su/3<br>Su/2 > Su/3       | *Su/3 >> *Su/Local<br>*Su/3 >> *Su/1<br>*Su/3 >> *Su/2       |
| Su > Non-Su<br>Su > Oj<br>Su > Obl | Oj/2 > Oj/Local<br>Oj/3 > Oj/1<br>Oj/3 > Oj/2       | *Oj/Local >> *Oj/3<br>*Oj/1 >> *Oj/3<br>*Oj/2 >> *Oj/3       |
|                                    | Obl/3 > Obl/Local<br>Obl/3 > Obl/1<br>Obl/3 > Obl/2 | *Obl/Local >> *Obl/3<br>*Obl/1 >> *Obl/3<br>*Obl/2 >> *Obl/3 |

The scales are constructed according to how each component stands in relation to another on the hierarchy, and the harmonic alignment of these scales is an expression of the markedness relation between the components. The harmonic alignment scale is then translated into a constraint by inverting the components and adding the “avoid” operator (\*). Crucially, the rankings of these constraints with respect to each other is universally fixed, such that \*Su/Local will always outrank \*Su/3, etc.

Following Aissen’s (1999a) analysis of split-ergativity in Dyirbal, I assume a set of conjoined constraints which are composed of the base set of constraints above and the constraint \*Ø<sub>C</sub>, which penalizes the non-expression of case (i.e., “the morphological category of case should be expressed”).

- (10) Conjunction of constraints with \*Ø<sub>C</sub>  
(from Aissen 1999a: 698)

| Subhierarchies involving alignment of grammatical function and person | Conjunction of subhierarchies with *Ø <sub>C</sub>   |
|---|--|
| *Su/3 >> *Su/2<br>*Su/3 >> *Su/1                                      | *Ø <sub>C</sub> & *Su/3 >> *Ø <sub>C</sub> & *Su/2<br>*Ø <sub>C</sub> & *Su/3 >> *Ø <sub>C</sub> & *Su/1 |
| *Oj/2 >> *Oj/3<br>*Oj/1 >> *Oj/3                                      | *Ø <sub>C</sub> & *Oj/2 >> *Ø <sub>C</sub> & *Oj/3<br>*Ø <sub>C</sub> & *Oj/1 >> *Ø <sub>C</sub> & *Oj/3 |

These constraints necessitate the marking of case on grammatical functions. In addition, the present analysis also adopts from Aissen (1999a) a general constraint on linguistic structure:

- (11) \*STRUC: Avoid linguistic structure

Aissen (1999a: 700) states that this constraint “delimits the point at which zero exponence is preferred by the grammar over morphological expression”. These constraints can now be used to demonstrate how case in Halkomelem is assigned.

Transitives are the most straightforward case, and will be dealt with first. Because of the need to mark case on 3<sup>rd</sup> person subjects, for a simple transitive construction such as in (5), the constraint ranking must be  $*\emptyset_C$  &  $*Su/3 \gg *STRUC$ . This is illustrated by the tableau in (12):

(12)

| Input: Agt/3 — Pat/3                                   | $*\emptyset_C$ & $*Su/3$ | $*STRUC$ |
|--|--------------------------|----------|
| a. Agt/Su/3/case — Pat/Obj/3/case                      |                          | **!      |
| $\text{E}\text{S}\text{b}$ . Agt/Su/3/case — Pat/Obj/3 |                          | *        |
| c. Agt/Su/3 — Pat/Obj/3/case                           | *!                       | *        |
| d. Agt/Su/3 — Pat/Obj/3                                | *!                       |          |

In contrast to this, an intransitive construction, where 3<sup>rd</sup> person subjects are not marked (example 13 below), would require the exact opposite ranking of  $*STRUC \gg *\emptyset_C$  &  $*Su/3$ . Tableau (14) illustrates this point:

(13) í:mex te Strang  
 walking DET Strang  
 ‘Strang is walking’  
 (Wiltschko 2006: 197)

(14)

| Input: Agt/3                          | $*STRUC$ | $*\emptyset_C$ & $*Su/3$ |
|---------------------------------------|----------|--------------------------|
| a. Agt/Su/3/case                      | *!       |                          |
| $\text{E}\text{S}\text{b}$ . Agt/Su/3 |          | *                        |

The QOCs pattern with intransitives in that they surface with no case marking on 3<sup>rd</sup> person subjects. This would be achieved through the same constraint ranking as in (14) above.

(15) Quasi-Objects

qwél-em te Strang te sth’óqwi  
 barbecue-INTR DET Strang DET fish  
 ‘Strang barbecues the fish’  
 (Wiltschko 2006: 202)



(16) Quasi-Objects<sup>2</sup>

| Input: Agt/3 — Pat/3              | *STRUC | *Ø <sub>C</sub> & *Su/3 |
|-----------------------------------|--------|-------------------------|
| a. Agt/Su/3/case — Pat/Obj/3/case | *!*    |                         |
| b. Agt/Su/3/case — Pat/Obj/3      | *!     |                         |
| c. Agt/Su/3 — Pat/Obj/3/case      | *!     | *                       |
| d. Agt/Su/3 — Pat/Obj/3           |        | *                       |

Representing both intransitives and transitives (along with quasi objects) in the same grammar results in a ranking paradox whereby intransitives require a ranking of \*STRUC >> \*Ø<sub>C</sub> & \*Su/3 and transitives require exactly the reverse ranking of \*Ø<sub>C</sub> & \*Su/3 >> \*STRUC. This paradox is schematized below:

- (17) Intransitives:                      Transitives:  
       \*STRUC >> \*Ø<sub>C</sub> & \*Su/3    \*Ø<sub>C</sub> & \*Su/3 >> \*STRUC

As Aissen (1999a: 702–703) notes, the given inventory of constraints is not adequate to account for intransitives in split-ergative languages like Dyrbal. She rightly states that since the constraint \*Ø<sub>C</sub> & \*Su/3 “does not distinguish transitive from intransitive clauses, it leads to outputs in which overt case marking is forced for all 3<sup>rd</sup> person subjects” (1999: 702–703). This leads Aissen to posit a constraint formed through embedded conjunction: [\*Ø<sub>C</sub> & \*Su/3] & \*Oj/PERS (where PERS ranges over all persons). The result of a high ranking of this constraint is that only clauses with an object will be penalized if there is a 3<sup>rd</sup> person subject without case marking. This is illustrated in tableau (18):

## (18)

| Input: Agt/3         | [*Ø <sub>C</sub> & *Su/3] & *Oj/PERS | *STRUC | *Ø <sub>C</sub> & *Su/3 |
|----------------------|--------------------------------------|--------|-------------------------|
| a. Agt/Su/3/case     |                                      | *!     |                         |
| b. Agt/Su/3          |                                      |        | *                       |
| Input: Agt/3 — Pat/3 | [*Ø <sub>C</sub> & *Su/3] & *Oj/PERS | *STRUC | *Ø <sub>C</sub> & *Su/3 |

|                                   |    |     |   |
|-----------------------------------|----|-----|---|
| a. Agt/Su/3/case — Pat/Obj/3/case |    | *!* |   |
| b. Agt/Su/3/case — Pat/Obj/3      |    | *   |   |
| c. Agt/Su/3 — Pat/Obj/3/case      | *! | *   | * |
| d. Agt/Su/3 — Pat/Obj/3           | *! |     | * |

The doubly conjoined constraint is adequate in accounting for the distinction between case marking in transitive versus intransitive clauses, but there is an added empirical issue to deal with: it cannot account for the quasi-object constructions. This is the crux of the problem. Forcing 3<sup>rd</sup> person subjects to be marked for case only when objects are present derives the correct surface forms for transitives, but it incorrectly predicts surface case marking on QOCs (and by extension, other potential cases of unregistered objects). This is another case where the constraint rankings trigger the wrong result in the output, failing to derive the shared surface properties of transitives and QOCs.

#### 4. Alternative analyses

This section will outline two alternative analyses: an antipassive/inverse analysis along the lines of Aissen's (1999b) approach to agent-focus constructions in Tzotzil, and the pronominal argument hypothesis, which has been applied to Salish languages by Jelinek (1995, etc.). Both will be shown to be insufficient in terms of accounting for the data at hand.

##### 4.1. *The antipassive/inverse analysis*

The QOCs in Halkomelem share many of the properties exhibited by agent focus (or “antipassive”) constructions in some Mayan languages (Aissen 1999b). They show the same general pattern of theme/object demotion with a corresponding effect on agreement morphology. However, there are numerous reasons for not considering QOCs as antipassives.

A typical approach to the intransitivizing suffix in Halkomelem is to treat it as an antipassive marker (Gerds 1988a, 1993; Gerds and Hukari 1998). Under this view, the suffix “suppresses” the internal argument. This approach, however, is problematic. Wiltschko (2003b) raises a specific problem: An antipassive analysis requires roots to be transitive in order to ensure syntactic compositionality. This approach would view unaccusatives as morphologically complex, and transitive predicates as

morphologically simplex. This, however, does not seem to be the case, as unaccusatives are bare roots, while transitives are derived through suffixation.

Furthermore, the prototypical function of an antipassive construction is to make available the ergative argument of a transitive clause by reducing the valency of the clause, thereby mapping an A argument to S. However, it is not entirely clear what type of process the subject is being made available for in examples which display no extraction of the subject (or any other special operations targeting the subject). Example (19) illustrates the canonical VSO word order in one QOC:

- (19) QOC with no extraction  
 qwél-em            te    Strang   te    sth'óqwi  
 barbecue-INTR   DET   Strang   DET   fish  
 'Strang barbecues the fish'  
 (Wiltschko 2006: 202)

Heath (1976) notes that there is a range of functions that antipassives play cross-linguistically. According to Heath's classifications, the Halkomelem antipassive is of the "indefinite" type, which serves to delete or demote objects which are indefinite, insignificant, or obvious (1976: 202). Heath's observations indicate that there is no unified phenomenon to be considered "antipassive", which casts doubt on universal constraints designed to target such constructions.

Finally, an inverse analysis must be considered. Aissen (1999b) has argued that the antipassive in Tzotzil actually functions as an inverse. This type of analysis cannot be extended to Halkomelem for the following reasons. First, an inverse function would give incorrect results in the sense that the Halkomelem QOC does not hinge on hierarchy-type effects. Prominence hierarchies such as person,<sup>8</sup> animacy, etc. have no effect on the surface realization of the construction. Second, the inverse already holds a place in Coast Salish morphology as what has been traditionally labeled the passive (Jacobs 1994). Finally, the "inverse" function maintains the transitivity of the input, but as has been argued extensively by Gerdts (1988a), the Halkomelem antipassive is resolutely intransitive in its morphology. Thus, there are no strong reasons for adopting an inverse-type analysis for the Halkomelem QOC.

#### 4.2. *A pronominal argument analysis*

An alternative to analyzing the problem above is to treat the agreement morpheme as the actual argument of the clause.<sup>9</sup> For instance, Bresnan

and Mchombo (1987) have shown that in Chicheŵa, when no object marker is present, the NP acts like the argument of the clause. When an object marker is present, however, it serves as an incorporated pronoun and the NP is an adjunct. Broadly speaking, Bresnan and Mchombo's approach could be characterized as a limited version of a pronominal argument analysis. Jelinek's (1984) pronominal argument hypothesis (PAH) states that in some languages, agreement morphemes constitute argument positions, and full NPs are adjuncts which have nonargument status. The PAH has more recently been applied specifically to Salish, especially in works by Jelinek (1995) and Jelinek and Demers (1994). Jelinek and Demers claim that certain relative clause and other phenomena suggest that Straits Salish is a pronominal argument language. However, there have been numerous recent works arguing against this hypothesis, among them Davis (1994, 1999b, 2001 and references therein), Gardiner (1993, 1998), Matthewson and Davis (1995), Matthewson (1998), etc. for Northern Interior Salish. Following these authors, I will assume that Halkomelem is not a pronominal argument language. Furthermore, applying Bresnan and Mchombo's (1987) limited version of the analysis would predict that these constructions are actually "quasi-subject constructions", and that it is the subject that is restricted in these environments. This approach is *prima facie* unlikely, as the One Nominal Interpretation (Gerds 1988a) forces single NPs to be interpreted as absolutes.<sup>10</sup> The most striking evidence against the approach is the fact that while the agreement morpheme in question is indeed subject agreement (see examples 1–3 above), it is not the subject which is syntactically restricted; the quasi subject analysis would have to explain the syntactic restrictions on objects.

## 5. Evidence for an object division

Across Salish languages, there are certain syntactic restrictions placed on the behavior of the object in a QOC. In Halkomelem, these include obligatory oblique marking and restrictions on extraction (including asymmetries in relativization). Importantly, the relativization patterns, and facts from related languages indicate that the "oblique" in Halkomelem patterns differently than other obliques, such as instrumentals and locatives.

### 5.1. *Oblique marking*

In many of the Central Coast Salish languages, quasi objects take an oblique (prepositional) determiner rather than a regular determiner.

Although the oblique determiner has been lost in Upriver Halkomelem (see Galloway 1993),<sup>11</sup> it exists in Island Halkomelem.

- (20) ni q<sup>w</sup>əl-ət-əs θə sɛni? t<sup>θ</sup>ə sce.ɬtən  
 AUX cook-TRANS-3ERG DET woman DET salmon  
 ‘The woman cooked the salmon’  
 (Gerds 1988b: 20)
- (21) ni q<sup>w</sup>əl-əm θə sɛni? ʔə t<sup>θ</sup>ə sce.ɬtən  
 AUX cook-INTR DET woman OBL DET salmon  
 ‘The woman cooked the salmon’  
 (Gerds 1988b: 20)
- (22) ni pənʔ-əm k<sup>w</sup>θə swəyʔqe? ʔə k<sup>w</sup>θə sqewθ  
 AUX plant-INTR DET man OBL DET potato  
 ‘The man planted the potatoes’  
 (Gerds 1988b: 25)

In (20), the object of the morphologically transitive construction is preceded by the determiner t<sup>θ</sup>ə. The oblique determiner is ungrammatical for an object in regular transitive constructions. In contrast, the QOCs in (21–22) show that quasi objects obligatorily take the oblique determiner (Gerds 1988a; Hukari 1977, 1979). This difference in oblique marking indicates that the object of a transitive and the object of a QOC do not share the same status.

## 5.2. *Extraction*

With regard to extraction, objects of QOCs behave like restricted objects, not like direct objects. As Gerds (1988a) and Hukari (1976) have pointed out, the extraction of an oblique object (quasi object) requires a nominalization strategy. As we can see in the relativization examples below, the extracted oblique must be prefixed with the nominalizer *s-*.

5.2.1. *Relativization.* In Coast Salish languages, there is a different strategy in relativizing direct arguments from oblique arguments. The relativization strategy for subjects and objects is illustrated below. For subject-centered relative clauses, the subject is extracted to initial position, while the subject agreement suffix disappears.

- (23) Subject-centered relative clause  
 níʔ ɬə sɛni? [ni q<sup>ʔ</sup>áqw-ət]  
 it's DET woman AUX club-TRANS  
 ‘It's the woman who clubbed it’  
 (Gerds 1988a: 83; cited in Kroeber 1999: 276)

In object-centered relative clauses, the object is extracted to initial position, while subject inflection is restored (-ʔé:nʔ) in the relative clause.

- (24) Object-centered relative clause  
 scé:ʔtən k<sup>w</sup>θə [ni q<sup>w</sup>əl-ət-ʔé:nʔ]  
 salmon DET AUX bake-TRANS-1S.TRANS.SUB  
 ‘Salmon is what I baked’  
 (Gerdts 1988a: 65; cited in Kroeber 1999: 279)

Oblique arguments (what are here termed quasi objects), on the other hand, are relativized by predicate nominalization (with the prefix s-):

- (25) səplíl k<sup>w</sup>θə [ni s-q<sup>w</sup>əl-əm-s ʔə sléniʔ]  
 bread ART DET NZ-bake-INTR-3.PO DET woman  
 ‘It’s the bread that the woman baked’  
 (Gerdts 1988a: 154; cited in Kroeber 1999: 316)
- (26) səplíl k<sup>w</sup>θə [ni s-q<sup>w</sup>əl-əʔc-θ-ámʔs-s ʔə sléniʔ]  
 bread DET AUX NZ-bake-DITR-TRANS-1S.O-3.PO DET woman  
 ‘Bread is what the woman baked for me’  
 (Gerdts 1988a: 103; cited in Kroeber 1999: 316)
- (27) níʔ k<sup>w</sup>θə púk<sup>w</sup> [ni s-ʔám-əs-t-s k<sup>w</sup>θə  
 it’s DET book AUX NZ-give-DITR-TRANS-3.PO DET  
 swíw’ləs]  
 boy  
 ‘It’s a book that he gave the boy’  
 (Gerdts 1988a: 103; cited in Kroeber 1999: 316)

Kroeber (1999: 317) notes that other obliques, such as locatives, instrumentals, etc., are relativized with different morphology. In the cases here, the particular morpheme is (NZ<sub>2</sub>), š-ǰ<sup>w</sup>-:

- (28) níʔ tənáʔ šé:ʔ [yaθ ʔu š-ǰ<sup>w</sup>-ánčənəm-s]  
 it’s DEM road always LINK NZ<sub>2</sub>-run-3.PO  
 ‘It’s that road that he always runs on’  
 (Gerdts 1988a: 72; cited in Kroeber 1999: 318)
- (29) níʔ k<sup>w</sup>θə ʔənʔ-šápəl-ʔəʔ [ni nə-š-q<sup>w</sup>áq<sup>w</sup>-ət]  
 it’s DET 2S.PO-SHOVEL-PAST AUX 1S.PO-NZ<sub>2</sub>-club-TRANS  
 ‘It’s your shovel that I clubbed it with’  
 (Gerdts 1988a: 72; cited in Kroeber 1999: 318)

Crucially, the different strategies in relative clause formation in Halkomelem illustrate the point that oblique arguments form a different natural class to the other set of obliques (locatives, instrumentals, etc.<sup>12</sup>). This holds true in St’át’imcets as well, Davis and Matthewson (2003) note

that there are different extraction strategies for the different classes outlined above.

### 5.3. *Summary*

The evidence presented above justifies classifying the objects of QOCs differently from objects of transitives. Although both types of object may be a theme in thematic terms, the relational role that each plays seems to be quite different. The objects of QOCs do not function like direct objects, hence they can be considered restricted objects. Further, there is a prominent dichotomy between restricted objects and obliques such as locatives in the Salish family (Kroeger 1999). The restricted objects of QOCs do not pattern with the locative-type of oblique (see Kroeger 1999 and the discussion of relativization above), leaving the restricted object somewhere on a scale between what can be considered direct objects and obliques.

Employing restricted object constraints which reference these types of entity can help the grammar distinguish between transitive objects and quasi objects. This can be viewed as a strategy of exploiting different degrees of transitivity — QOCs are just lower on the transitivity scale (cf. Hopper and Thompson 1980) than the formally transitive constructions. The next step is to determine how the different object constraints interact.

## 6. **Formalizing object differences**

This section is dedicated to formalizing the difference between direct and quasi (or restricted) objects. The feature representations are outlined first, which the constraints and evaluation will be based on.

### 6.1. *Lexical features*

The next step in developing a constraint ranking that will account for all degrees of transitivity in Halkomelem is to formalize the difference between quasi and direct objects. Such a mechanism exists in the literature on lexical mapping theory (Bresnan and Kanerva 1989; Bresnan and Zaenen 1990; Bresnan 1990). Within this framework, there are sets of features (of *a*-structure) which constrain surface (or *f*-structure) mappings of thematic roles. The primitive features employed are [ $\pm$ o(bject)] and [ $\pm$ r(estricted)]. Functions that are [+o] are objects or restricted objects,

those with  $[-o]$  are subjects or obliques. As for the restricted feature, Aلسina and Mchombo (1993: 25) note that, ‘‘Intuitively, the restrictedness of a syntactic function refers to whether it can only be linked to a specific set of thematic roles ( $[+r]$ ) or whether it can be associated with any thematic role ( $[-r]$ ).’’ The feature decompositions for each grammatical relation is listed in (30).

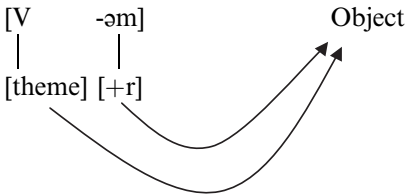
(30) Function decomposition in Lexical Mapping Theory

- a. SUBJ =  $[-o, -r]$
- b. OBJ =  $[+o, -r]$
- c. OBJ<sub>0</sub> =  $[+o, +r]$
- d. OBL =  $[-o, +r]$

(from Sells 2001: 368)

A natural interpretation of the quasi object in Halkomelem is to consider it as bearing a  $[+r]$  feature. Since this feature is assigned by the predicate, or more accurately in this case, by the intransitivizing suffix, it renders the object restricted on the surface.<sup>13</sup>

(31) Assignment of features and roles to object



Rather than define constraints by the resulting feature compositions (see e.g., Sells 2001), the approach here uses the same harmonic alignment constraints as in Aissen (1999a), but makes them sensitive to certain features in output representations. This allows the EVAL function to correctly identify an object which either has or lacks a  $[+r]$  feature and to assign violations accordingly.

With this representation in place, the new restricted object constraint can be developed.

## 6.2. The grammatical function hierarchy

The framework of harmonic alignment makes use of the grammatical relation hierarchy in (32) below.

- (32) Hierarchy of grammatical relations  
 Subject > Non-Subject



In order to maintain at least one binary scale for each alignment, Aissen (1999a) concludes that the category Non-Subject is composed of the sub-categories object and oblique. This maintains a subject-dominated hierarchy while retaining a binary scale<sup>14</sup>, and at the same time allows reference to more than just two categories.

The grammatical function of object does not seem to be adequate to account for the Halkomelem data. Since the only surface difference between transitive clauses and QOCs is the status of the object and the valency suffixes, some reference to object type must be made so that the grammar can distinguish between the two clause types. I propose extending the hierarchy of grammatical function to include an additional, restricted object, or  $\text{Obj}_e$ .

(33) Relational hierarchy

$\text{Subj} > \text{Obj} > \text{Obj}_e > \dots$

(modified from Bresnan 2001; Keenan and Comrie 1977)

The goal is to augment the alignment of person and grammatical relation by splitting object into primary and restricted object, each independently ranked of the other. This is schematized in the revised table in (34) below (omitting oblique functions):

(34)

| Scales              | Harmonic alignment                           | Constraint alignment                              |
|---------------------|--|---|
| Local > 3           | $\text{Su}/\text{Local} > \text{Su}/3$       | $*\text{Su}/3 \gg * \text{Su}/\text{Local}$       |
| 1 > 3               | $\text{Su}/1 > \text{Su}/3$                  | $*\text{Su}/3 \gg * \text{Su}/1$                  |
| 2 > 3               | $\text{Su}/2 > \text{Su}/3$                  | $*\text{Su}/3 \gg * \text{Su}/2$                  |
| Su > Non-Su         | $\text{Oj}/2 > \text{Oj}/\text{Local}$       | $*\text{Oj}/\text{Local} \gg * \text{Oj}/3$       |
| Su > Oj             | $\text{Oj}/3 > \text{Oj}/1$                  | $*\text{Oj}/1 \gg * \text{Oj}/3$                  |
| Su > $\text{Obj}_e$ | $\text{Oj}/3 > \text{Oj}/2$                  | $*\text{Oj}/2 \gg * \text{Oj}/3$                  |
|                     | $\text{Obj}_e/2 > \text{Obj}_e/\text{Local}$ | $*\text{Obj}_e/\text{Local} \gg * \text{Obj}_e/3$ |
|                     | $\text{Obj}_e/3 > \text{Obj}_e/1$            | $*\text{Obj}_e/1 \gg * \text{Obj}_e/3$            |
|                     | $\text{Obj}_e/3 > \text{Obj}_e/2$            | $*\text{Obj}_e/2 \gg * \text{Obj}_e/3$            |

### 6.3. *The Halkomelem ranking*

Using the original harmonic alignment constraints mentioned above in section 3, the relative ranking for Halkomelem would be as follows:

- (35) [ $*\emptyset_C$  &  $*Su/3$ ] &  $*Oj/PERS$  >>  $*STRUC$  >>  $*\emptyset_C$  &  $*Su/3$  >>  $*\emptyset_C$  &  $*Oj/3$

This ranking of course is inadequate for the QOCs, which necessitates the adoption of a  $*Oj_e$  constraint and ranking it relatively low:

- (36) [ $*\emptyset_C$  &  $*Su/3$ ] &  $*Oj/PERS$  >>  $*STRUC$  >>  $*\emptyset_C$  &  $*Su/3$  >>  $*\emptyset_C$  &  $*Oj/3$  >> [ $*\emptyset_C$  &  $*Su/3$ ] &  $*Oj_e/PERS$

For the phenomena at hand, it does not matter where the constraint [ $*\emptyset_C$  &  $*Su/3$ ] &  $*Oj_e/PERS$  is ranked, just as long as it is ranked below  $*STRUC$  in order to block subject agreement on QOCs (although it must be ranked below  $*STRUC$ , a relative ranking with  $*\emptyset_C$  &  $*Oj/3$  or  $*\emptyset_C$  &  $*Su/3$  cannot be determined from the given data). This ensures that the grammar distinguishes two sets of objects, although the fundamental ranking of the constraint does not matter. The [ $*\emptyset_C$  &  $*Su/3$ ] &  $*Oj_e/PERS$  constraint will target only candidates with a [+r] feature in their output structures<sup>15</sup> (while [ $*\emptyset_C$  &  $*Su/3$ ] &  $*Oj/PERS$  will NOT target candidates with a [+r] feature). This is illustrated by the tableau in (37):

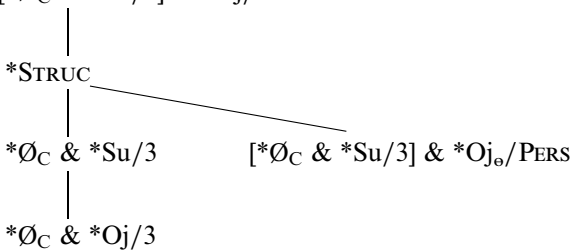
- (37) Ranking with restricted object constraint

| Intransitive<br>Input: Agt/3         | [ $*\emptyset_C$ & $*Su/3$ ] & $*Oj/PERS$ | $*STRUC$ | $*\emptyset_C$ & $*Su/3$ | $*\emptyset_C$ & $*Oj/3$ | [ $*\emptyset_C$ & $*Su/3$ ] & $*Oj_e/PERS$ |
|--------------------------------------|---|----------|--------------------------|--------------------------|---|
| a. Agt/Su/3/case                     |   | *!       |                          |                          |   |
| ☞ b. Agt/Su/3                        |   |          | *                        |                          |   |
|                                      |   |          |                          |                          |   |
| Transitive<br>Input: Agt/3 — Pat/3   | [ $*\emptyset_C$ & $*Su/3$ ] & $*Oj/PERS$ | $*STRUC$ | $*\emptyset_C$ & $*Su/3$ | $*\emptyset_C$ & $*Oj/3$ | [ $*\emptyset_C$ & $*Su/3$ ] & $*Oj_e/PERS$ |
| a. Agt/Su/3/case<br>— Pat/Obj/3/case |   | **!      |                          |                          |   |
| ☞ b. Agt/Su/3/case<br>— Pat/Obj/3    |   | *        |                          | *                        |   |
| c. Agt/Su/3 —<br>Pat/Obj/3/case      | *!  | *        | *                        |                          |   |
| d. Agt/Su/3 —<br>Pat/Obj/3           | *!  |          | *                        | *                        |   |

|  |  |        |                            |                            |  |
|--|--|--------|----------------------------|----------------------------|--|
|  |  |        |                            |                            |  |
| QOC<br>Input: Agt/3 —<br>Pat/3 <sub>[+r]</sub>       | [*Ø <sub>C</sub> &<br>*Su/3] &<br>*Oj/PERS | *STRUC | *Ø <sub>C</sub> &<br>*Su/3 | *Ø <sub>C</sub> &<br>*Oj/3 | [*Ø <sub>C</sub> &<br>*Su/3] &<br>*Oj <sub>o</sub> /Pers |
| a. Agt/Su/3/case —<br>Pat/Obj/3/case <sub>[+r]</sub> |  | *!*    |                            | *                          | *  |
| b. Agt/Su/3/case<br>— Pat/Obj/3 <sub>[+r]</sub>      |  | *!     |                            |                            | *  |
| c. Agt/Su/3 —<br>Pat/Obj/3/case <sub>[+r]</sub>      |  | *!     | *                          | *                          | *  |
| d. Agt/Su/3 —<br>Pat/Obj/3 <sub>[+r]</sub>           |  |        | *                          |                            | *  |

Example (38) illustrates the final ranking for Halkomelem in diagrammatic form, showing that \*STRUC must outrank [\*Ø<sub>C</sub> & \*Su/3] & \*Oj<sub>o</sub>/PERS.

(38) Diagram for final ranking  
[\*Ø<sub>C</sub> & \*Su/3] & \*Oj/PERS



Although violations of the constraint do not rule out any candidates, the presence of the constraint allows the [\*Ø<sub>C</sub> & \*Su/3] & \*Oj/PERS constraint to operate in a much more restricted way, essentially modifying the criteria for what counts as a violation of the constraint. The function of the constraint is to allow EVAL to assign violations based on feature compositions.

There is some question as to the independence of the two object constraints. For the purposes of maintaining a binary scale with which to align other scales, the two separate object constraints must be lumped together under the heading Non-subject and perform independently of each other, much like 1<sup>st</sup> and 2<sup>nd</sup> person do in Aissen's (1999a) model. Interestingly, in this case, (and perhaps crosslinguistically), the restricted

object must be ranked lower than the primary object. This could be a coincidence, or it could be a larger indication that the constraints must be ranked that way because of reasons of markedness. This issue will be left open-ended.

## **7. Conclusion**

The phenomenon of Quasi Object Constructions and unregistered objects in general poses a potential problem for harmonic alignment, or for any theory which attempts to capture only surface patterns of language, because of the surface properties that they share with both intransitive and transitive constructions. The absence of case marking on 3<sup>rd</sup> person subjects places them in the same category as intransitives, yet the presence of an object is a shared property of transitive clauses. Since the constraint ranking under harmonic alignment results in an identical output candidate for both QOCs and transitives, some fundamental difference between the two constructions must be built into the grammar in order to derive surface-true output candidates. The key difference is in the status of the objects involved in each case. Objects of transitives are direct objects and the relevant constraints reference them as such; objects of QOCs are restricted objects, and the proposed  $Oj_o$  constraints function to target only restricted objects. This analysis can in part be framed in the spirit of Hopper and Thompson's (1980) discussion of transitivity in the sense that Halkomelem, and hence other languages that exhibit the phenomena of unregistered objects, are exploiting the relational hierarchy as a strategy to not only achieve transitive and intransitive constructions, but also constructions that exist on a continuum between the two.

It should be noted that other aspects of split ergativity were not addressed, namely 1<sup>st</sup> and 2<sup>nd</sup> person case marking. The framework of harmonic alignment, and the role of the person hierarchy in general, has been claimed to be inadequate in accounting for certain person (and other) splits (Brown et al. 2004, 2005); however, the role that morphology plays in constraint evaluation is not entirely clear at this point. Since 1<sup>st</sup> and 2<sup>nd</sup> person case marking has a different morphology than 3<sup>rd</sup> in Halkomelem (clitics vs. affixes, see Davis 2000; Brown et al. 2004; Wiltschko 2006), this could very well be a case of clitics and agreement being in competition (Woolford 2001). I leave the status of 3<sup>rd</sup> person in relation to local persons in split ergative systems for future research.

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## Notes

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1. Galloway's data are from the Upriver dialect (Stó:lō Halq'emélem), spoken along the Fraser River from Yale BC to Chilliwack BC Gerdt's and Hukari's data are from the Island dialect, spoken on Vancouver Island. Suttles' data is from the Downriver dialect.
  2. Halkomelem is a head-marking language; agreement is cross-referenced with case. For the purposes of this article, I will use the term "case" in its broad sense to include agreement as well.
  3. There are several terms for these types of constructions across Salish languages. For Halkomelem, the terms "antipassive" (Gerdt 1988a, 1988b; Kroeber 1999) and "transitive intransitive" (Wiltschko 2003) have been used. For the purposes of this article, the term quasi object construction will be used, following Davis and Matthewson (2003), who investigate a parallel construction in St'át'imcets (Lillooet Salish). From this point on I will adopt Davis and Matthewson's term in order to emphasize the role of the object.
  4. Davis (1999a, 2000) has argued that historically, the "split ergativity" in Salish languages is a superficial morphological effect of the gradual replacement of subject suffixes by subject clitics in transitive clauses. He notes that this can be tracked systematically from the Interior (where every language except St'át'imcets uses subject suffixes in transitive clauses and subject clitics in intransitive clauses) to Lushootseed and Twana, where there are no longer any "ergative" suffixes at all. Kroeber (1999) comes to the same conclusion.
  5. Unless otherwise noted, data appears as in original sources. Morpheme glosses for some examples have been modified for the sake of consistency. Abbreviations are as follows: 1 = 1<sup>st</sup> person, 2 = 2<sup>nd</sup> person, 3 = 3<sup>rd</sup> person, AUX = auxiliary, DET = determiner, DEM = demonstrative, DITR = ditransitive, ERG = ergative, INTR = intransitive, LINK = linking particle, NZ = nominalizer, NZ<sub>2</sub> = nominalizer<sub>2</sub>, O = object, OBL = oblique, PO = possessive, SUB = subject, SG = singular, TRANS = transitive. The key to the Upriver practical orthography is as follows: a = æ or ε; ch = tʃ; ch' = tʃ'; e (between palatals) = i; e (between labials) = u; e (elsewhere) = ə; lh = ɬ; o = a; ó = o; xw = x<sup>w</sup>; x̄ = χ; y = j; sh = ʃ; th = θ; th' = tθ'; tl' = tɬ'; ts = c; ts' = c'; x = x or x<sup>l</sup>; x̄w = χ<sup>w</sup>; ' = ?; ´ = high pitch stress; ˘ = mid pitch stress (more discussion on orthography can be found in Galloway 1980). The orthographies for the Island and Downriver dialects are closely based on the standard used for many northwest languages (see Gerdt 1988a; and Suttles 2004, respectively).
  6. Wiltschko notes that Halkomelem displays an additional split between subjunctive and indicative agreement, which has interesting interactions with negation (see Wiltschko 2001, 2003a). For the purposes of the present work, these cases will be set aside. It should be noted, however, that third person subject agreement crucially only occurs in indicative clauses. For instance, in conjunctive and nominalized clauses, third person marking shows up as a clitic (sometimes in addition to the subject suffix).

7. For the purposes of this article, I will ignore the other intransitivizing suffix, *-els*.
8. Quasi objects are limited to 3<sup>rd</sup> person (Gerdt and Hukari 2000), however, the presence of a 3<sup>rd</sup> person argument in object position does not force the QOC to surface.
9. Thanks to an anonymous reviewer for pointing this out.
10. Though in more recent work exceptions have been found to the one nominal interpretation (see Gerdt and Hukari 2004).
11. Wiltschko (2003b) argues that the objects are introduced by a covert preposition in Upriver Halkomelem. Incidentally, Kroeber (1999) postulates that all “oblique” determiners in Salish are in fact prepositions.
12. Davis and Matthewson (2003) point out that at least one class of quasi objects (the second objects of ditransitives) show NO such effects in St’át’imcets; a fact that they use to argue against a semantic incorporation analysis.
13. In addition to the arguments above, there is also now a theory-internal reason for not considering these clauses as quasi subject constructions: subjects can’t bear a +r feature; only object or oblique functions can.
14. For discussion concerning the binarity of scales in harmonic alignment, see Prince and Smolensky (1993: 134–136).
15. Assuming faithfulness to lexical features.

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