The Person Hierarchy: Primitive or Epiphenomenal? Evidence from Halkomelem Salish*

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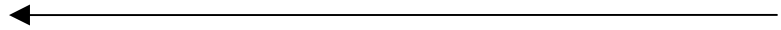
1. Introduction

It is a common assumption that there is a markedness relation between person rankings and the realization of grammatical relations (cf. Silverstein, 1976; Dixon, 1979): the higher a person is on the person hierarchy, the more likely it is that this person will function as a transitive agent (1) or as a subject (2).

(1) Person-hierarchy á la Silverstein 1976) and Dixon 1979)

$1^{st} > 2^{nd} > 3^{rd}$ Pronoun > Proper Noun > Human > Animate > Inanimate



likelihood of functioning as transitive agents

(2) Hierarchy of grammatical relations:

Subj > Object

There are two apparent person-hierarchy effects in Halkomelem Salish discussed in this paper: split ergativity, and person based gaps in the transitive paradigm. Aissen (1999) argues that Optimality Theory (OT) can be used to account for these person hierarchy effects. Since OT is a formal theory of markedness, it should naturally account for markedness effects that result from the person hierarchy. In Aissen's account, Silverstein and Dixon's intuition is formalized by means of harmonic alignment between different hierarchies (Prince and Smolensky 1993). Thus, the hierarchies in (1) and (2) are primitives in an OT account.

In contrast, in a structural approach (i.e. Principles & Parameters), the hierarchy of grammatical relations is structurally derived. If we take this seriously, we might expect that

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person-hierarchy effects are structurally derived as well. A consequence of this view would be that the person hierarchy is epiphenomenal (Wiltschko 2003c).

2. Person Hierarchy Effect I: Split Ergativity

Halkomelem[1] (Coast Salish) is described as a split ergative system (Gerdts 1988a), with 3rd person patterning as ergative/absolutive and 1st and 2nd persons as nominative/accusative (3).

(3)

	Trans. subj (**A**):	Intrans. subj. (**S**)	Trans. obj. (**O**)
a.	máy-t-**tsel**	yó:ys-**tsel**	may-th-**óx**-es
	help-trans-1sg.s	work-1sg.s	help-trans-1sg.o-3erg
	'I help him.'	'I work.'	'He helps me.'
b.	máy-t-**chexw**	yó:ys-**chexw**	may-th-**óme**-tsel
	help-trans-2sg.s	work-2sg.s	help-trans-2sg.o-1sg.s
	'You help him.'	'You work.'	'I help you.'
c.	máy-t-**es**	yóys-∅	máy-t-∅-es
	help-trans-**3erg**	work-**3sg.s**	help-trans-**3sg.o**-3erg
	'He helps him.'	'He works.'	'He helps him.'

Galloway 1980:126)

The data in (3) is summarized in the table in (4). Note that 3rd person subjects are marked only in transitive clauses (A).

(4) Split ergativity in Halkomelem agreement

	A	S	O
1sg.	**tsel**		**-óx**
2sg	**chexw**		**-óme**
1pl	**tset**		**-óxw**
2pl	**chap**		**-óle**
3sg./pl	**-es**	∅[2]	

[1] Halkomelem is a Central Coast Salish language spoken at the Southwest Coast of British Columbia. All examples in this paper are from the Upriver dialect of Halkomelem (Stó:lô Halq'eméylem), which is spoken along the Fraser river around Chilliwack BC. There are two other main dialects, namely the Downriver dialect (spoken around Vancouver) and the Island dialect (spoken on Vancouver Island). All dialects of Halkomelem are critically endangered. The data are presented in the official orthography used by the St'ó:lô people. The key to the orthography is as follows a = æ or ɛ; ch = tʃ, ch' = tʃ', e (between palatals) = ɪ, e (between labials) = ʊ, e (elsewhere) = ə, lh = ɬ, o = a, ô = o, xw = x^w, x̲ = x̣, y = j, sh = ʃ, th = θ, th' = tθ', tl' = tɬ', ts = c, ts' = c', x = x or x^j, x̲w = $x̣^w$, ' = ʔ,ˊ = high pitch stress,ˋ = mid pitch stress (see Galloway 1980 for discussion). Original data are used with permission of the Stó:lô Nation language program.

[2] Wiltschko 2003b) argues that Halkomelem does in fact have 3rd person object agreement (with allomorphs ∅ and '*-exw*'). This means that "split ergativity" in Halkomelem is not in fact "real" ergativity, which is consistent with the claim that ergativity is epiphenomenal.

3 An OT Analysis for Split Ergativity

3.1 The Formal Implementation

In this section we summarize an OT account of split ergativity in Halkomelem, using the theoretical machinery proposed by Aissen (1999). In an OT account, the two hierarchies in (5) are aligned to regulate morphological marking. Subjects and local persons (1/2), both being on the same end of the scale, are more harmonically aligned and thus less marked; the same is true of objects and 3rd persons. On the other hand, subjects and 3rd persons, being on opposite ends of the scales, are not harmonically aligned and therefore more marked; again, the same is true of objects and local persons. This results in the harmonic alignments and markedness constraints in (6) (from Aissen 1999:682).

(5)

	Su	>	Obj
	Local (=1/2)	>	3

(6)

Scales	*Harmonic Alignment*	*Constraint Alignment*
Local > 3	**Su/Local > Su/3**	***Su/3 >> *Su/Local**
i) 1 > 3	i) Su/1 > Su/3	i) *Su/3 >> * Su/1
ii) 2 > 3	ii) Su/2 > Su/3	ii) *Su/3 >> *Su/2
Su > Obj	**Oj/3 > Oj/Local**	***Oj/Local >> *Oj/3**

However, these constraints alone do not derive split ergativity. What harmonic alignment thus far predicts is that all 3rd person subjects are ruled out; this prediction results from the markedness constraint in (7):

(7) *Su/3: Avoid third person subjects.

Obviously, as the examples in (8) show, 3rd person subjects are possible:

(8)

máy-t-**es**	yóys-∅	máy-t-∅-es
help-trans-**3erg**	work-**3sg.s**	help-trans-**3sg.o**-3erg
'He helps him.'	'He works.'	'He helps him.'

What the OT account therefore needs is reference to morphology ("case marking") on the verb in order to account for 3rd person subjects being marked only in transitive clauses. This is achieved via local conjunction (10) of the markedness subhierarchies in (6) with $*\varnothing_C$; as proposed by Aissen (1999) in her analysis of split ergativity in Dyirbal. The derivation of these constraints is shown in (11). $*\varnothing_C$ penalizes absence of linguistic structure (9), and conjunction with *Su/3 results in a markedness constraint penalizing 3rd person subjects that are not case marked (12).

(9) $*\varnothing_c$: Avoid non-expression of "case-marking"
(penalizes absence of linguistic structure)

(10) Local conjunction (Smolensky 1995)
The local conjunction of Constraint 1 (C1) and Constraint 2 (C2) in some domain D, C1& C2, is violated when there is some domain of type D in which both C1 and C2 are violated. Universally, C1 & C2 >> C1, C2.

(11) Conjunction with *$\varnothing_C$

Subhierarchies	Conjunction with *$\varnothing_c$
*Su/3 >> *Su/Local	*$\varnothing_c$ & *Su/3 >> *$\varnothing_c$ & *Su/Local
*Oj/Local >> *Oj/3	*$\varnothing_c$ & *Oj/Local >> *$\varnothing_c$ & *Oj/3

(12) [*$\varnothing_c$ & *Su/3] : Avoid non-expression of case marking of 3rd person subject

However, the constraint in (12) predicts that all 3rd person subjects are marked. In Halkomelem, 3rd person is only morphologically marked as the subject of transitive verbs. This is problematic because, as we have seen, intransitive 3rd person subjects are not morphologically marked on the verb:

(13) 3rd person is only marked as transitive subject

máy-t-∅-tsel	may-th-óx-**es**	yóys-∅
help-trans-**3o**-1sg.s	help-trans-1sg.o-3erg	work-**3sg.s**
'I help him.'	'He helps me.'	work-**3sg.s**

Thus, harmonic alignment and local conjunction alone are not sufficient to derive split ergativity in Halkomelem. What the OT account needs, to ensure that 3rd person subjects in intransitives (S) are not marked, is a double conjunction. This was proposed by Aissen (1999) in her analysis of the direct/inverse system in Nocte. First, the Subject/Person constraint subhierarchy is conjoined with the constraint *Object/Person (14). The resulting constraint hierarchy is then conjoined with *$\varnothing_C$ (15). This results in the constraint in (16), which penalizes the absence of case-marking of 3rd person subjects only in transitive clauses; unmarked 3rd person subjects in intransitives do not violate this constraint, since no object is present.

(14) Conjunction with *Oj/Person

Subhierarchy	Conjunction with *Oj/Person
*Su/3 >> *Su/Local	*Su/3 & *Oj/Pers >> *Su/Local & *Oj/Pers

(15) Double Conjunction

Subhierarchy	Conjunction with *$\varnothing_c$
*Su/3 & *Oj/Pers >> *Su/Local & *Oj/Pers	*$\varnothing_c$ & *Su/3 & *Oj/Pers >> *$\varnothing_c$ & *Su/Local & *Oj/Pers

(16) [*$\varnothing_c$ & *Su/3 & *Oj/Pers]: Avoid non-expression of "case marking" when 3rd person subjects co-occur with some object.

3.2. Deriving the Rankings

The markedness constraints developed in the previous section are ranked with respect to *STRUC$_C$ given in (17). Ranked above *STRUC$_C$, any constraint regulating morphological marking and person will result in overt case marking of that person; outranked by *STRUC$_C$, the result is absence of case marking.

(17) *STRUC$_C$: Avoid linguistic structure (penalizes appearance of case marking)

In Halkomelem, 1st and 2nd person subjects and objects are always marked. This requires that [*$\varnothing_c$ & *Su/Local] and [*$\varnothing_c$ & *Oj/Local] are ranked above *STRUC. On the other hand, 3rd person objects are never marked, necessitating that [*$\varnothing_c$ & *Oj/3] is ranked below *STRUC.

3rd person subjects in intransitives are not marked, requiring that [*$\varnothing_c$ & *Su/3] is ranked below *STRUC. And, since 3rd person subjects in transitives are always marked, the constraint [*$\varnothing_c$ & *Su/3 & *Oj/Pers] must be ranked above *STRUC. This results in the overall constraint ranking in (18).

(18) Ranking for split-ergativity in Halkomelem:

*$\varnothing_c$ & *Su/3 & *Oj/Pers,

*$\varnothing_c$ & *Su/Local,	>> *STRUC >>	*$\varnothing_c$ & *Su/3,
*$\varnothing_c$ & *Oj/Local		*$\varnothing_c$ & *Oj/3

4. The Problem with this Analysis

The OT person hierarchy-based account fails here because the grammar in (18) results in a ranking reversal. As highlighted in the box, the constraint forcing the marking of local subjects outranks the constraint requiring that 3rd person subjects be marked:

(19) *$\varnothing_c$ & ***Su/Local** >> *$\varnothing_c$ & ***Su/3**

This ranking predicts that local subjects are more marked than 3rd person subjects, which is the opposite of the prediction made by the person hierarchy (20). As a result, Aissen's OT approach cannot account for split ergativity in Halkomelem while maintaining the person-hierarchy as a universal. Thus the original motivation for the OT analysis is no longer valid.

(20) *Su/3 >> *Su/Local

5. Person Hierarchy Effect II: Person-based Gaps in the Transitive Paradigm

In Halkomelem, certain logically possible person combinations of transitive sentences are excluded (see Galloway 1993, and Gerdts 1988b for Island Halkomelem). In particular, transitive sentences with a 3rd person subject and a 2nd person object (3/2) are ungrammatical.

(21) a. *Máy-th-ome-s
help-trans-2sg.o-3erg
'He/she helps you.'

b. *Máy-t-ole-s
help-trans-2sg.o-3erg
'He/she helps you.'
Galloway (1980: 126)

To express the intended meaning, a passive sentence is used:

(22) a. Máy-th-ò:m (te swíyeqe)
help-trans-2sg.pass.
'You (sg.) were helped (by the man).'

b. Máy-t-òlèm (te swíyeqe)
help-trans-2pl. pass.
'You (pl.) were helped (by the man).'
Galloway (1980: 126)

Sentences with 3rd person subjects and 1st person objects (3/1), on the other hand, are well-formed:

(23) a. May-th-óx-es
help-trans-1sg.obj-3erg
'He helps me.'

b. May-t-óxw-es
help-trans-1pl.obj-3erg
'He helps us.'
adapted from Galloway (1993: 177f.)

These facts are summarized in the table in (24).

(24) Distribution of voice by person in Halkomelem (adapted from Jelinek and Demers 1983, Aissen, 1999)

Agt / Pat	1	2	3
1	-	active/*passive	active/*passive
2	active/*passive		active/*passive
3	**active/passive**	***active/passive**	active/passive

6. An OT Account for Person-based Gaps (Aissen 1999)

The person-based gaps in Halkomelem are also attested in Squamish, another Salish language. Aissen (1999) develops an OT account of the Squamish facts using the person hierarchy as a primitive. This section summarizes Aissen's proposal.

What a person hierarchy account seems to require is a re-ranking of the hierarchy (contra Silverstein 1976 who claims that the person hierarchy is universal). This is because only 3/2 and not 3/1 clauses are ungrammatical. To explain this fact, Jelinek and Demers (1983) claim that 1st person is simply not ranked in the Halkomelem person hierarchy:

(25) Person hierarchy for Halkomelem (Jelinek and Demers 1983)

2>3 (1 is not ranked)

An advantage of the Hierarchy Alignment account proposed by Aissen is that 1st and 2nd persons are subsumed under "local," and are thus independently ranked with respect to 3rd person (see the constraint hierarchies developed in (6)). There is, therefore, no need to re-rank the person-hierarchy:

(26) 1st and 2nd person are independently ranked w.r.t 3rd person (Aissen 1999)

1>3
2>3

6.1. The Formal Implementation

The OT account again begins by aligning the hierarchies in (5) to regulate grammaticality, using the same constraints developed in (6). Since passives are possible for 3rd person agents (27), Aissen proposes that a constraint against patient subjects (28) is low-ranked in the grammar.

(27) a. Máy-th-ò:m (te swíyeqe)
help-trans-2sg.pass.
'You (sg.) were helped (by the man).'

b. Máy-t-òlèm (te swíyeqe)
help-trans-2pl. pass.
'You (pl.) were helped (by the man).'
Galloway (1980: 126)

(28) *Su/Pat: Avoid patient subjects.

Since clauses with a 3rd person subject and a 2nd person object are ungrammatical (21), a constraint against 2nd person objects (*Oj/2) must be ranked above *Su/Pat.

Finally, since clauses with a 3rd person subject and 1st person object are licit (29), a constraint against 1st person objects (*Oj/1) must be ranked below *Su/Pat. This results in the constraint ranking in (30).

(29) a. May-th-óx-es
help-trans-1sg.obj-3erg
'He helps me.'

b. May-t-óxw-es
help-trans-1pl.obj-3erg
'He helps us.'
adapted from Galloway (1993: 177f.)

(30) *Oj/2 >> *Su/Pat >> *Oj/1

The tableau in (31) shows that, given an input with a 3rd person agent and 2nd person patient, the Halkomelem grammar produces a passive clause, preferring to violate lower ranked *Su/Pat rather than high-ranked *Oj/2. On the other hand, if the patient is a 1st person (32), the output is an active clause since it is more optimal to violate low-ranked *Oj/1 rather than higher-ranked *Su/Pat.[3] Thus, the approach developed in Aissen (1999) accounts for the data seen thus far.

[3] Passives with 1st person patients are, of course, grammatical. Aissen (1999) accounts for this with higher ranked constraints that force discourse prominent arguments to be subjects, resulting in passive

(31) Halkomelem 2nd person patient

V(Agt/3, Pat/2)	*Oj/2	*Su/Pat	*Oj/1
ACTIVE Agt/Su/3 – Pat/Oj/2	*!		
☞ PASSIVE Pat/Su/2 – Agt/Obl/3		*	

(32) Halkomelem 1st person patient

V(Agt/3, Pat/1)	*Oj/2	*Su/Pat	*Oj/1
☞ ACTIVE Agt/Su/3 – Pat/Oj/1			*
PASSIVE Pat/Su/1 – Agt/Obl/3		*!	

7. The Problem with this Analysis

Aissen's OT account of person-based gaps fails to account for crucial data in Halkomelem: 3/2 sentences are only ruled out if both 3rd ergative morphology and 2nd object morphology co-occur (Wiltschko and Burton to appear, Gerdts 1988b). In environments where, for independent reasons, agreement morphology is absent, 3/2 sentences are well-formed.

The problem for the OT analysis is that, although the ill-formedness of 3/2 sentences is tied to the presence of overt morphology, the high-ranked constraint against 2nd person objects (*Oj/2) predicts that all sentences with 3rd person subjects and 2nd person objects will be ungrammatical.

7.1. The Data

If the subject undergoes A'-movement, ergative agreement is lost (Gerdts 1988a; Kroeber 1999):

(33) SUBJECT WH-MOVEMENT

a. te-wát kw'e xwmékwàth-et te Martina
det-who det/comp kiss-trans det Martina
'Who kissed Martina?' (Wiltschko 2003a: 41b)

b. xwmékwàth-et-**es** tl' Strang the Martina
kiss-trans-3erg det.obl Strang det.fem Martina
'Strang kissed Martina.'

(34) SUBJECT RELATIVIZATION

a. John te swíyeqe kw'éts-l-exw te Mali
John det man see-trans-3o det Mary
'John is the man who kissed Mary.' (Wiltschko 2003a: 41a)

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constructions. The constraints are not relevant for the argument presented here and are omitted for the sake of clarity.

b. kw'ets-l-exw-**es**te swíyeqe the Mali
see-trans-3o-3erg det man det.fem Mary
'The man saw Mary.'

(35) SUBJECT FRONTING

a. te swíyeqe kw'éts-l-exw te spáth
det man see-trans-3o det bear
'The man saw the bear.' (Wiltschko 2003a: 42)

b. kw'éts-l-exw-**es** te swíyeqe te spáth
see-trans-3o-3erg det man det bear
'The man saw the bear.'

3/2 clauses are well-formed in the absence of overt ergative agreement that results from this A'-movement of the 3rd person subject:

(36) SUBJECT WH-MOVEMENT[4]

a. te-wát kw'e le lhéts'-l-òmè
det-who det aux.3 cut-trans-2sg.o
'Who cut you?' Galloway 1993: p. 453

b. wát kw'e le yéthes-th-òmè
who det aux.3 tell-trans-2sg.o
'Who told you?' Galloway 1993: 453

(37) SUBJECT RELATIVIZATION:

lí-chexw thóthel-met te xwmékwàth-eth-òmè
aux-2sg.s admire-trans det kiss-trans-2sg.s
'Are you admiring the one who is kissing you?'

(38) SUBJECT FRONTING

a. te swíyeqe kw'éts-l-òmè
det man see-trans-2sg.o
'The man saw you.'

b. *kw'éts-l-óme-s te swíyeqe
see-trans-2sg.o-3s det man
'The man saw you.'

c. *kw'éts-l-óme te swíyeqe
see-trans-2sg.o-3s det man
'The man saw you.'

[4] On the basis of similar examples involving Clefts in Island Halkomelem, Gerdts 1988b) argues that the agent hierarchy alignment must be a surface constraint. Similar facts also obtain in Squamish (Kuipers 1967).

7.2. An OT Analysis

In this section we attempt to expand the OT account of person-based gaps in Halkomelem using constraints proposed in Aissen (1999). What the OT analysis requires to capture the connection between the ungrammaticality of 3/2 clauses and overt morphology is conjoined constraints (Aissen, 1999: 705-708). The idea is that it is the *co-occurrence* of 3rd person subjects and 2nd person objects in some domain which results in ungrammaticality. This intuition is formalized in the constraint in (39):

(39) [*Su/3 & *Obj/2]: Avoid the co-occurrence of 3rd subjects and 2nd objects

The intuition behind constraint conjunction is that *"two constraint violations are worse when they occur in the same location"* (Smolensky 1995). Recall that conjoined constraints are, by definition, evaluated with respect to some domain (see (10)). For the case at hand, 3/2 sentences are illicit only when 3rd person and 2nd person morphology co-occur – the relevant domain may be the verb, where subject and object morphology are marked. Let's call this domain one (D1). On the other hand, 3rd person subjects and 2nd person objects can co-exist in the clause outside of this V-domain – say, in domain two (D2). Applying these domains to the conjoined constraint in (39) yields two constraints:

(40) $[*Su/3 \ \& \ *Obj/2]_{D1}$: evaluates (39) in the domain (**D1**) where 3/2 morphology appears

(41) $[*Su/3 \ \& \ *Obj/2]_{D2}$: evaluates (39) outside of D1, i.e. in **D2**

These two constraints can produce a winning output candidate (42). Because both candidates are 3/2 sentences, both violate the lower ranked constraint where the co-occurrence of 3rd subjects and 2nd objects is evaluated in domain two (say, the whole CP). However, in candidate (b), overt 3rd subject and 2nd object morphology co-occur in domain one (on the verb), violating the higher-ranked constraint. In candidate (a), however, there is no co-occurrence of 3/2 morphology on the verb, so the higher ranked constraint is not violated. As a result, candidate (a) is optimal.

(42) Tableau for "The man saw you"

V(kw'áts, "see") , Ag/3, Pa/2			[*Su/3 & *Obj/2]$_{D1}$	[*Su/3 & *Obj/2]$_{D2}$
☞ a. [te	swíyeqe	[kw'éts-l-òmè]$_{D1}$]$_{D2}$		*
det	man	see-trans-2sg.o		
b*[te	swíyeqe	[kw'éts-l-òmè-s]$_{D1}$]$_{D2}$	*!	*
det	man	see-trans-2sg.o-3sg.s		

However, once we add more possible output forms to our candidate set, the OT account will make false predictions. Consider one example: a form that lacks subject fronting (the motivation for loss of 3rd person ergative agreement) yet still does not mark ergative agreement on the verb (38c) is predicted to be grammatical. This is shown in the tableau in (43), where candidate (c) is falsely predicted to be licit.

(43) Expanded tableau for "The man saw you"

V(kw'ets, "see") , Ag/3, Pa/2	[*Su/3 & *Obj/2]$_{D1}$	[*Su/3 & *Obj/2]$_{D2}$
☞ a. [te swíyeqe [kw'éts-l-òmè]$_{D1}$]$_{D2}$ det man see-trans-2sg.o		*
b. *[te swíyeqe [kw'éts-l-òmè-s]$_{D1}$]$_{D2}$ det man see-trans-2sg.o-3sg.s	*!	*
💣 c. *[[kw'éts-l-óme]$_{D1}$ te swíyeqe]$_{D2}$ see-trans-2sg.o det man		*
d. *[[kw'éts-l-óme-s]$_{D1}$ te swíyeqe]$_{D2}$ see-trans-2sg.o-3sg.s det man	*!	*

To account for the person-based gaps in Halkomelem, a simple OT account will therefore not suffice. Rather, by using conjoined constraints, we are forced to, at a minimum, define the domain in which the constraints are evaluated. Thus, we need to determine the structural position of agreement morphology to answer the question: what are domains one and two?

8. A Structural Analysis without a Person Hierarchy (Wiltschko 2003)

8.1. Deriving Ergativity (Wiltschko 2001)

The first step towards deriving the person-hierarchy effects of Halkomelem structurally is to derive ergativity. In other words we argue that ergativity in Halkomelem derives from a constellation of facts (see Johns 1992 for Inuktitut). First, we assume that in Halkomelem, subjects of transitives are introduced by v (see Chomsky 1995, Kratzer 1994, Hale and Keyser 2002). However, along with Wiltschko 2001 we depart from standard assumptions and assume that subjects of intransitives (unergative & unaccusative) are introduced VP-internally. This amounts to saying that intransitives do not project vP. If we further assume that ergative agreement is associated with v (Wiltschko 2001, 2002b) then it follows that only transitive subjects are associated with ergative agreement.

(44) a. transitives: … [$_{vP}$ [$_{v}$ **3rd**] [$_{VP}$ V]]]
b. intransitives: … [$_{VP}$ V]]

8.2. Deriving Split Ergativity in Halkomelem (Wiltschko 2002b, to appear)

Next, we show that split ergativity in Halkomelem also derives from a constellation of facts, which crucially does not involve the workings of the person hierarchy. First, we assume that 1st and 2nd person agreement endings are located in C and not in v (see Wiltschko 2002a for independent evidence). Consequently, the occurrence of 1st/2nd agreement is independent of the presence or absence of v. This in turn derives the fact that 1st and 2nd person subjects do not show an ergative/absolutive pattern

(45) a. transitives [$_{CP}$ [$_{C}$ **1st/2nd**] …[$_{vP}$ [$_{v}$ **3rd**] [$_{VP}$ V]]]
b. intransitives: [$_{CP}$ [$_{C}$ **1st/2nd**] … [$_{VP}$ V]]

This amounts to saying that agreement morphemes in Halkomelem are associated with different structural positions (cf. Davis 2000, Déchaine 1999, Jelinek and Carnie 2003, Ritter 1995, Saxon 2001 among many others): 1st/2nd person agreement is located in C whereas 3rd person agreement is located in ν. In addition, we need to assume that there are paradigmatic gaps associated with these agreement paradigms: C-agreement has no 3rd person agreement (which holds across all Salish languages) and ν-agreement has only 3rd person agreement (which does not hold across all Salish languages, i.e. there are Salish languages where ν agreement is associated with a full paradigm; see Davis 2000). This is summarized in the following table:

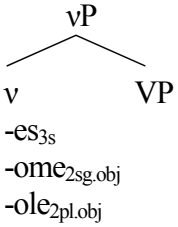
(46) Subject agreement paradigms of Halkomelem Salish

	C-agreement	ν-agreement
1sg	tsel	--
2sg	chexw	--
3sg/pl	--	-es
1pl	tset	--
2pl	chap	--

8.3. Deriving the Person-Based Gap (Wiltschko 2003c)

Finally, we show that the person-based gaps in Halkomelem also derive from a constellation of facts. We argue, following Wiltschko 2003c, that the co-occurrence of 3/2 morphology is ruled out because 3rd ergative agreement and 2nd object agreement are in complementary distribution. This in turn can be derived from the assumption that these two agreement morphemes occupy the same syntactic head position, namely ν.[5]

(47)



Of course, this analysis still leaves open the question as to why the co-occurrence of 3/1 morphology is possible. We argue (again following Wiltschko 2003c) that the 3/1 combination is well-formed because it is "lexicalized" as a single agreement morpheme (-ò*xes*; *òxwes*); i.e. it constitutes a kind of "portmanteau" morpheme. In contrast, the 3/2 combination is ruled out because it is not lexicalized and thus the agreement endings compete for the same position. Of course, this predicts that we should expect to find other kinds of gaps across the family, and this prediction is indeed borne out. For reasons of space however we cannot discuss the details in this paper (see Wiltschko to appear).

[5] This proposal is consistent with Bobaljik and Branigan 2002) who conjecture that morphological filters only arise at a single head, like portmanteau agreement.

9. Conclusion

Superficially, Aissen's (1999) account can handle apparent person hierarchy effects of Coast Salish languages. However, closer inspection of the Halkomelem data reveals severe problems. First, accounting for split ergativity requires reversing the rankings of the person hierarchy, rendering it irrelevant. Secondly, the paradigmatic gaps found in Halkomelem are strictly tied to the co-occurrence of overt morphology. This generalization resists a simple OT account, but falls out from a structural analysis of the position of agreement morphology. Again, the person hierarchy is not relevant.

In addition, passives in Halkomelem have a restriction similar to that of the *3/2 paradigmatic gap: 1st or 2nd person Agents are not permitted in passive constructions (see (24)). However, these passives are absolutely banned and not tied to overt morphology. In the OT account, the same machinery evaluates both *3/2 restrictions and *1/2 Agent passive prohibitions, missing the fact that they behave differently.

As well as the data-driven criticisms of the OT approach to apparent person hierarchy effects, there are theoretical problems. The unconstrained nature of conjunction and (as proposed by Aissen) double conjunction severely overpredicts possible language typologies (for discussion, see Fukazawa 1999; Itô and Mester 2003).

On the other hand, we have shown that split ergativity and person-based gaps in the transitive paradigm in Halkomelem can be reduced to the morpho-syntactic distribution of agreement morphemes and the fact that there are paradigmatic gaps. In other words, morpho-syntax conspires to produce apparent person hierarchy effects in Halkomelem. Consequently, we propose that the person-hierarchy is not a primitive component of the grammar of Halkomelem (contra Jelinek & Demers 1983; Gerdts 1988b, Aissen 1999). This amounts to saying that at least in Halkomelem the person–hierarchy is epiphenomenal.

References

Bobaljik, Jonathan, and Branigan, Phil. 2002. Eccentric agreement and multiple case checking. Talk presented at the Ergativity Workshop, University of Toronto, October 2002.

Chomsky, Noam. 1995. *The Minimalist Program*. Cambridge, Mass.: MIT Press.

Davis, Henry. 2000. Remarks on Proto-Salish Subject Inflection. *International Journal of American Linguistics* 66:499-520.

Déchaine, Rose-Marie. 1999. What Algonquian morphology is really like: Hockett Revisited. Paper presented at *Workshop on structure and constituency in native American languages*.

Dixon, Robert M. W. 1979. Ergativity. *Language* 55:59-138.

Fukazawa, Haruka. 1999. Theoretical Implications of OCP effects on features in Optimality Theory, Linguistics, University of Maryland: PhD dissertation.

Galloway, Brent. 1980. *The Structure of Upriver Halkomelem, A Grammatical Sketch and Classified Word List for Upriver Halkomelem*. Sardis, B.C.: Coqualeetza Education Training Center, Sardis, B.C.

Galloway, Brent. 1993. *A Grammar of Upriver Halkomelem*. Berkeley, Los Angeles, London: University of California Press.

Gerdts, Donna B. 1988a. *Object and absolutive in Halkomelem Salish*: Outstanding dissertations in linguistics. New York: Garland Pub.

Gerdts, Donna B. 1988b. A Nominal Hierarchy in Halkomelem Clausal Organization. *Anthropological Linguistics* 30:20-36.
Hale, Kenneth L., and Keyser, Samuel Jay. 2002. *Prolegomenon to a theory of argument structure*: Linguistic inquiry monographs ; 39. Cambridge, Mass.: MIT Press.
Itô, Junko , and Mester, Armin. 2003. On the sources of opacity in OT: Coda processes in German. In *The syllable in Optimality Theory*, eds. C. Féry and R. van de Vijner, 271-303. Cambridge: Cambridge University Press.
Jelinek, Eloise, and Demers, Richard. 1983. An Agent Hierarchy and Voice in Some Coast Salish Languages. *International Journal of American Linguistics* 49:167-185.
Jelinek, Eloise, and Carnie, Andrew. 2003. Argument hierarchies and the mapping principle. In *Festschrift for Jelinek*.
Johns, Alana. 1992. Deriving ergativity. *Linguistic Inquiry* 23:57-87.
Kratzer, Angelika. 1994. On external arguments. In *Functional projections, University of Massachusetts occasional papers in linguistics*, eds. Elena Benedicto and Jeff Runner, 103-130.
Kroeber, Paul D. 1999. *The Salish language family: reconstructing syntax*: Studies in the anthropology of North American Indians. Lincoln: University of Nebraska Press in cooperation with the American Indian Studies Research Institute Indiana University Bloomington.
Kuipers, Aert. 1967. *The Squamish language. Grammar, Texts, Dictionary*. The Hague, Paris: Mouton & Co.
Prince, Alan, and Smolensky, Paul. 1993. Optimality Theory: constraint interactions in generative grammar. *RuCCS Technical Report No. 2, Rutgers Univesity Center for Cognitive Science, Piscataway, NJ*.
Ritter, Elizabeth. 1995. On the syntactic category of pronouns and agreement. *Natural Language and Linguistic Theory* 13:405-443.
Saxon, Leslie. 2001. On 2 OSV constructions in Navajo. Beyond Subject object inversion. To appear in Proceedings of WECOL 2001, University of Washington. Paper presented at *WECOL*, University of Washington.
Silverstein, Martin. 1976. Hierarchy of features and ergativity. In *Grammatical categories in Australian languages*, ed. Robert M. W. Dixon, 112-171. Canberra: Australian Institute of Aboriginal Studies and New Jersey Humanities Press.
Smolensky, Paul. 1995. On the internal structure of the constraint component Con of UG. Paper presented at *Handout of talk at UCLA, Los Angeles, April 7th*.
Wiltschko, Martina. 2001. The syntax of Transitivity and its Effects. Paper presented at *WCCFL 20*, USC, Los Angeles.
Wiltschko, Martina. 2002a. Sentential Negation in Upriver Halkomelem. *International Journal of American Linguistics* 68:253-861.
Wiltschko, Martina. 2002b. Ergativity in Halkomelem (and how to split and derive it). Talk given at the Ergativity Workshop, University of Toronto, October 2002.
Wiltschko, Martina. 2003a. On the interpretability of Tense on D and its consequences for Case Theory. *Lingua* 113:659-696.
Wiltschko, Martina. 2003b. -exw as 3rd person object agreement in Halkomelem. *International Journal of American Linguistics* 96:76-91.
Wiltschko, Martina. 2003c. Person hierarchy effects without a person hierarchy. Ms. UBC.
Wiltschko, Martina. to appear. On ergative and other splits in Salish. Paper presented at *WSCLA 8*, Brandon University.
Wiltschko, Martina, and Burton, Strang. to appear. A note on Person Hierarchies. Evidence from Upriver Halkomelem. *Canadian Journal of Linguistics*.

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