On "ergative" agreement and "anti-agreement" in Halkomelem Salish.[*]

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This paper provides a formal analysis for the loss of ergative agreement in subject-centered relative clauses in Halkomelem. It is established that ergative agreement marks agreement between the verb and the thematic subject. Thematic agreement is argued to be in complementary distribution with operator binding. The proposed analysis sheds light onto the properties of other types of agreement in Halkomelem: indicative, subjunctive, and object agreement. Neither subjunctive nor object agreement is thematic and consequently they are not lost in the context of operator binding. Indicative agreement is argued to instantiate operator binding and consequently is in complementary distribution with thematic agreement.

1. The Problem

At a descriptive level, Halkomelem[1] (like the other Coast Salish languages), displays certain ergative properties (see Hukari 1976, Gerdts 1980, 1988a and Jelinek and Demers 1983, Jelinek 1993 among others). In other words, for certain phenomena, transitive subjects (A) behave differently from both intransitive subjects (S) as well as transitive objects (O). Most notably, there is an agreement morpheme which only occurs with A but not with S or O:[2]

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[1] Halkomelem has three main dialects: Upriver Halkomelem, Downriver (Musqueam) Halkomelem, and Island (Cowichan) Halkomelem, If not otherwise indicated, the data are from the Upriver dialect but to the best of my knowledge, the generalizations hold across the three dialects.

[2] All Upriver data appear in the official Stó:lō orthography, the key to which 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, ō = o, xw = xʷ, x̱ = x̣, y = j, sh = ʃ, th = θ, th' = tθ', tl' = tɬ', ts = c, ts' = c', x = x or xʲ, x̱w = x̣ʷ, ' = ʔ, ´ = high pitch stress,ˋ = mid pitch stress (see Galloway 1980 for discussion on this orthography and Galloway 1993 on the properties of stress in Upriver Halkomelem). Data from the other Halkomelem dialects or other Salish languages are presented in whatever form they appear in their sources. If not otherwise indicated, the data have been collected in field-work by the author and are cited with permission of the Sto:lo nation language program

(1) a. q'ó:y-t-<u>es</u>   te   Strang   te   qwá:l
            kill-trans-3erg   det   Strang   det   mosquito
            'Strang killed the mosquito.'

     b. í:mex   te   Strang
            walking det   Strang
            'Strang is walking.'

Ergative agreement (-*es*) in (1) is restricted to 3rd person in the Coast Salish languages and as a consequence, these languages are often described as "split ergative". In this paper I will not be concerned with the apparent *ergative* properties of this agreement morpheme. That is, I will systematically abstract away from the fact that it is not found in intransitive predicates (see Wiltschko 2001a, to appear for a detailed discussion). However, the empirical property of ergative agreement I am interested in is the fact that it cannot appear in subject-centered relative clauses (see Gerdts 1988, Galloway 1993):

(2) a. *tl'ó   te íle   swíyeqe [q'óy-t-<u>es</u>   te qwá:l]
            3Indep det here man   kill-trans-3erg det mosquito
            'This is the man who killed the mosquito.'

     b. tl'ó   te íle   swíyeqe [q'óy-t   te   qwá:l]
            3Indep det here man   kill-trans det   mosquito
            'This is the man who killed the mosquito.'

As shown in (2), in subject centered relative clauses the ergative agreement is obligatorily absent, a phenomenon often referred to as *anti*-agreement in the theoretical literature (see for example Chung 1998, Ouhalla 1993).

       Many descriptions of this phenomenon in Halkomelem are implicitly or explicitly accompanied by a functional explanation to the effect that the lack of ergative agreement in subject-centered relative clauses serves as a disambiguation device: "… the absence of the subject marker in the relative clause is what distinguishes it from 'the one he helped', [an object centered relative clause; MW]." (Suttles 2004: 76). Even though the phenomenon is well-documented across the Salish family an in depth analysis of the Coast Salish pattern is missing.[3] The closest to a formal analysis of the coastal pattern is Gerdts 1988a, who argues that in these contexts the argument interpreted as the transitive subject is no longer "ergative" and thus ergative agreement is lost. However, Gerdts does not give an explicit reason as to why this argument is no longer ergative. In other words, her analysis lacks a formal definition of what it means to be "ergative". This is precisely the question I would like to take on in this paper.

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[3] For completeness note that most Salish languages employ certain strategies to mark subject relativization (see Kroeber 1999 for a detailed discussion). Davis 1994, 2003 gives a formal analysis of the pattern found in Lillooet (=NIS), which cannot be carried over to the Coast pattern (as shown in Wiltschko 2003c).

In particular, I will attempt to answer the question as to why "ergative agreement" is lost in subject centered relative clauses from a formal point of view. My analysis will be grounded in the principles and parameters framework and its minimalist versions (Chomsky 1981, 1995 and subsequent work). Within this framework the question presents itself slightly different. First, the question we need to ask cannot be construction-specific and thus cannot merely address subject-centered relative clauses. Second, I will assume that natural languages despite their obvious differences have much in common (i.e., the idea of a "universal grammar"). From this point of view, the problem as to why Halkomelem agreement is lost in certain environments is particularly pressing, because this seems to be a precisely a property where languages differ. Take for example English as a representative of an Indo-European language. Here subject verb agreement is present in main clauses as well as in subject centered relative clauses:

(3)   a.   John often kill<u>s</u> mosquitoes.

        b.   this is the man [who often kill<u>s</u> mosquitoes]

The English data in (3) show that the loss of subject agreement is not a universal property of natural languages. In other words, there is significant cross-linguistic variation which needs to be accounted for. Consequently, in this paper I will attempt to provide answers to the following two questions:

(4)   i)   How is subject agreement in English different from ergative
                agreement in Halkomelem?

        ii)   Why is ergative agreement in Halkomelem lost in certain
                contexts?

The paper is structured as follows. In order to answer the question in (4)i, we need to clearly establish the nature of English subject verb agreement and why it is not lost in subject centered relative clauses. I will summarize the standard principles and parameters answer to this question in section 2. In section 3, I will show that Halkomelem ergative agreement differs significantly from English subject verb agreement. In a nutshell, I will show that English subject verb agreement is between a tensed verb and the grammatical subject whereas in Halkomelem ergative agreement is between a "bare" verb and the thematic subject (i.e. "thematic agreement"). In section 4 I will then argue that it is precisely this independently motivated difference which is responsible for the difference in behavior in the context of subject centered relative clauses. In particular, I will propose that thematic agreement prohibits operator variable binding. In section 5 I will discuss the properties of other types of agreement in Halkomelem. I will show that in addition to the ergative thematic agreement, Halkomelem also has sets of non-thematic agreement (of a similar kind than English subject verb agreement). As expected non-thematic agreement in Halkomelem is not lost, providing independent evidence for the proposed analysis. I section 6, I conclude.

2. English subject verb agreement

In order to understand why ergative agreement in Halkomelem is lost, it is necessary to understand the nature of ergative agreement in the first place; and in order to understand the nature of Halkomelem ergative agreement it will be useful to start by comparing it with English subject verb agreement. Thus, we will start our investigation with an attempt to answer the question in (4)i, repeated below for convenience:

(4)   i)   How is subject agreement in English different from ergative
                  agreement in Halkomelem?

We start by a brief discussion of the nature of subject verb agreement in English. It is well-known that subject verb agreement in English is not so much agreement between the subject and the verb itself but between a **tensed verb** and the **grammatical subject**.
       That it is the tensed verb (and not the verb itself) which triggers agreement can be seen on the basis of the following facts. In the presence of an auxiliary, it is the auxiliary and not the verb which displays subject verb agreement:

(5)   a.   John has killed the mosquito.

       b.   *John has/have killed the mosquito.

Moreover, in infinitival clauses (i.e., clauses without tense) verbs do not display agreement:

(6)   a.   John wants to kill a mosquito.

       b.   *John wants to kills a mosquito.

       The second part of the assumption, namely that agreement is with the *grammatical subject* requires a brief clarification of terminology. Grammatical subjects in English are those constituents, which appear in the position preceding the verb (English is SVO), which receive nominative case, and which are repeated in so called tag-questions, to name just a few tests.

(7)   He$_{nom}$ killed   it$_{acc}$, didn't **he**?

       Since the grammatical subject bears case (namely nominative), I will refer to agreement between the tensed verb and the grammatical subject as K(ase)-agreement (see Déchaine 2000) and to the grammatical subject as *K-subject*.
       There is a second notion of "subject" which is sometimes referred to as the *thematic (θ-) subject* (a.k.a. underlying subject). The θ-subject corresponds to the constituent which saturates the external argument of the verb. Typically, this argument is interpreted as the *initiator* of the event denoted by the verb

(Dowty 1991) and as such corresponds to the AGENT or CAUSE of the event. In many cases the grammatical subject does in fact correspond to the thematic subject but this is not necessarily so and therefore it is crucial that these two notions be distinguished: the passive voice in English is a typical example for such a mismatch. Here the AGENT is realized as an oblique argument and the PATIENT (i.e. the thematic object) is realized as the grammatical subject.

(8)   John$_{KS=\theta S}$ kisses Mary.

(9)   Mary$_{KS}$ was kissed by John$_{\theta S}$

Similarly, certain verbs are not associated with an argument which is interpreted as the initiator of the event, i.e. not all verbs are associated with thematic subjects. Nevertheless, sentences containing such verbs still require a grammatical subject because the latter is an obligatory constituent in English. For example, the verb *seem* lacks a thematic subject and thus a meaningless (expletive) element (*it* or *there*) is used as a grammatical subject:

(10)   a.   **It$_{KS}$** seems that John has kissed Mary.

        b.   **There$_{KS}$** seems to be a unicorn in the backyard.

Given these mismatches between thematic and grammatical subjects we have evidence that we need to distinguish the two notions. And now – what is crucial for the present purposes – we can observe that subject verb agreement in English is indeed with the grammatical subject and not with the thematic subject:

(11)   a.   **They$_{KS}$ were** kissed by John$_{\theta S}$.

        b.   *They$_{KS}$ **was** kissed by **John$_{\theta S}$**.

The standard formal account of this pattern within the Principles and Parameters framework is roughly as follows. Thematic positions including the thematic subject (see Fukui and Speas 1986, Kitagawa 1986, Koopman and Sportiche 1991) are all found within the projection of the verb (υP). Since the grammatical subject position is tightly connected with tense, it is typically assumed to be associated with an abstract functional category T(ense). This category like other categories projects to a phrase (TP) and serves a number of functions (besides encoding temporal relations):
i) Tense licenses the grammatical subject in its specifier position (Spec) by means of assigning nominative case to this position;
ii) Tense establishes an agreement relation between the verb (which is the head of its complement) and the grammatical subject.
This is shown in the representation in (12):

(12)

```
                    TP
              /          \
          Spec            T'
          KS           /      \
                  T(ense)      υP
                     |       /     \
           K-agreement    Spec      υ'
                          θS      /     \
                                 υ        VP
                                        /  \
                                       /____\
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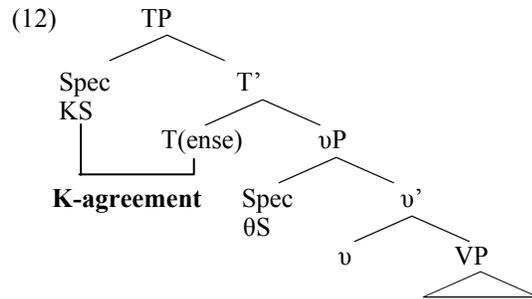
It has long been assumed in the generative tradition that Tense (formerly INFL) is the only position where an agreement relation can be established. However, it has become increasingly clear that this assumption is too simple and cannot capture agreement patterns we find in languages other than English. For example, in certain dialects of German complementizers display agreement with the grammatical subject.

(13) *Bavarian*
      Du sollst song an   waichan Schuah dass-**st**   *pro* wui-st
      you should say indef which   shoe   that-2sg.s   want-2sg.s
      'You have to tell which shoe you want.'   Bayer 1984: 237 ex. (63)

      <u>*Groningen*</u>
      of-**s**   doe   kom-s
      if-2sg   you   come-2sg
   'if you come'   Zwart 1996: 603 ex. (70b)

Given data like (13), it must acknowledge that subject verb agreement is not restricted to T; rather we observe that subject verb agreement can at least be found in C as well as in T. Consequently, we might expect that we might find agreement elsewhere. In particular, we might expect that agreement can also be found in v in which case we would expect it to relate an untensed verb with the thematic subject. In the next section, I will argue that this is precisely the right analysis of ergative agreement in Halkomelem.

3. Ergative agreement in Halkomelem is thematic agreement

In a nutshell, I propose that ergative agreement in Halkomelem is an instance of **θ-(thematic) agreement** (cf. Déchaine 2000 for this term). In other words, I argue that in Halkomelem there is an agreement relation established between the **θ-subject** and the verb (i.e., υ).[4] This is shown in the following configuration:
(14)   …   υP

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[4] This proposal is compatible with Davis' 2000 claim that across the Salish language family, we find three different types of agreement, associated with three different positions. However, Davis proposal differs from the one advocated here in that he assumes that all three agreement forms are with a grammatical subject.

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            /\
       Spec    υ'
       θS      /\
       __     υ
      |  |___
      θ-agreement
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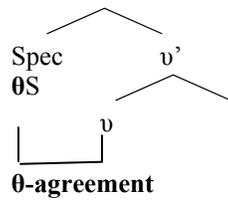
In the remainder of this section I will provide empirical evidence for this claim.

Recall from above that in English agreement is with the tensed verb and as a consequence it is always triggered by the highest verbal element which need not be the lexical verb. That is, in the presence of an auxiliary, the verb no longer displays the agreement ending but rather the auxiliary does (cf. (5) above). This is in striking contrast with ergative agreement in Halkomelem, which always appears attached to the verb, no matter whether an auxiliary is present or not.

(15)   a.   máy-t-es
               help-trans-3s
               'He helps someone.'

        b.   *li-s   máy-t
               aux-3s   help-trans
               'He helped someone.'

        c.   li   máy-t-es
               aux   help-trans-3s
               'He helped someone.'

This property of ergative agreement lead Davis 2000 to analyze ergative agreement as "suffixal" contrasting it with other types of agreement which are clitic-like. However, the suffixal nature of ergative agreement has to date not received a principled analysis. Under the present proposal, this property follows because we are dealing with an agreement relation between the "bare" verb and the thematic subject and as such we expect it to always occur on the verb. Thus, its "suffixal" nature is a byproduct of its "thematic" nature.

Next, recall that English subject verb agreement is impossible if the verb is untensed, i.e. in infinitival constructions. Interestingly, Halkomelem does not have infinitival constructions of the type found in English.[5] However, in many contexts where English makes use of an infinitival clause, Halkomelem makes use of a subjunctive clause which displays subjunctive agreement (discussed in section 5.2). Crucially, despite the appearance of another type of subject agreement, ergative agreement is still present:

(16)   a.   éwe   lí-**s**   í:mex

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[5] See Wiltschko 2003a for a principled reason for this.

neg aux-3ss walking
'He is not walking.'   (Galloway, 1993: 186)

b. éwe lí-**s** tl'ils-th-óx-**es**
 neg aux-3ss want-tr-1sg.o-3s
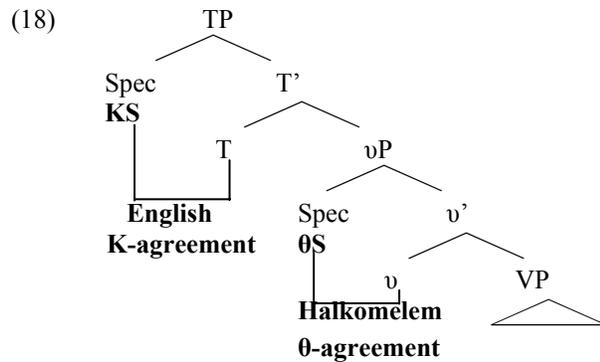 'He doesn't like me.' (Galloway, 1993: 186)

The presence of ergative agreement in addition to subjunctive agreement, follows immediately from the assumption that ergative agreement is thematic agreement (whereas subjunctive agreement is not; see section 5.2). Consequently the latter cannot replace the former.

 Next, we have seen in section 2, that the θ-subject of a verb does not necessarily correspond to the grammatical subject of the clause. Crucially, in English agreement is always with the grammatical subject. Again, in Halkomelem the situation is strikingly different. For example, Halkomelem has a construction similar to the passive in English.[6] It is marked with the suffix –*em* following the transitivizer –*t*. Crucially, ergative agreement is missing in Halkomelem passives:

(17) máy-t-em   te   Konrad
  help-trans-em det Konrad
  'Somebody helped Konrad.'/'Konrad was helped.'

The data in (17) establishes that ergative agreement in Halkomelem is different in nature from subject verb agreement in English.

 In sum, I have shown evidence that Halkomelem ergative agreement is agreement between the bare verb and the thematic subject whereas English subject agreement is agreement with the tensed verb and the grammatical subject. This difference is summarized in the following tree-structure:

(18)

       TP
     / \
   Spec   T'
   KS   / \
      T   υP
         / \
   English Spec υ'
  K-agreement **θS** / \
         υ VP
     Halkomelem
     θ-agreement

---

[6] As we will see in section 6, the Halkomelem passive is more akin to impersonal constructions (cf. Kroeber 1999) such that the demoted subject is necessarily interpreted as an indefinite agent and the thematic object does not get promoted , Gerdts 1988a, Hukari 1980, Wiltschko 2001b, 2003a).

4. Accounting for the loss of ergative agreement

Recall from section 1 that the aim of this paper is to answer the two questions in (4) repeated below for convenience.

(4)   i)   How is subject agreement in English different from ergative agreement in Halkomelem?

          ii)   Why is ergative agreement in Halkomelem lost in certain texts?

At this point we have an answer to the first question and in this section I argue that the difference between English and Halkomelem agreement we have established in the last section can be utilized to answer the second question.

4.1 The analysis

Again, we will approach this question by contrasting English with Halkomelem. In other words, we want to know why in Halkomelem ergative agreement is lost in subject centered relative clauses but subject agreement in English is retained. The relevant examples are repeated below for convenience:

(19)   a.   tl'ó   te   íle swíyeqe [q'óy-t   te   qwá:l]
                3Indep det here man   kill-trans det mosquito
                'This is the man who killed the mosquito.'

        b.   this is the man [who has killed the mosquito]

To do so we need to briefly discuss the analysis of English relative clauses. It is a standard assumption that the relativized phrase (i.e. the subject in (19)) no longer appears in the position for the grammatical subject (SpecTP), but rather in a higher position, namely SpecCP. In this position, the wh-word functions as an operator which A'-binds a variable. I will assume that the A'-bound variable occupies the thematic subject position (i.e. SpecvP). This is illustrated in (20):[7]

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[7] In the classical definition, variables were defined as the foot of a chain, i.e., trace in A-position. At the time, subjects were assumed to be base-generated in SpecIP (i.e. SpecTP). Consistent with the VP-internal subject hypothesis I will assume that the position of the variable is SpecvP, which functions as the foot of the A'-chain.

(20)

```
                CP
          ┌──────┴──────┐
        Spec            C'
        who      ┌───────┴───────┐
                 C              TP
                          ┌──────┴──────┐
                        Spec           T'
                        KS      ┌───────┴───────┐
                                T              υP
                               has       ┌──────┴──────┐
                                       Spec            υ'
                                      θS = vbl    ┌─────┴─────┐
                                                  υ          VP
                                                killed    ╱────╲
                                                       the mosquito
```

Operator binding
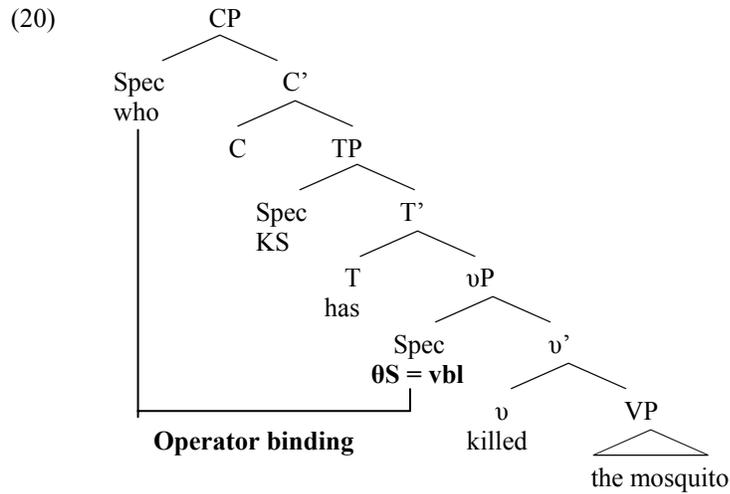
Now we turn to the question as to why subject agreement is retained in English relative clauses. In order to capture this property, we need a mechanism in place which ensures that the constituent which instantiates the grammatical subject does not have to be spelled out in the position for grammatical subjects (i.e. SpecTP) in order to trigger subject agreement. Under most analysis this is captured by the assumption that the θ-subject is first copied to SpecTP, where it is licensed as the grammatical (K-) subject. The same constituent is then copied to SpecCP, where it is interpreted as an A'-operator. By hypothesis, the head of the chain (i.e. the topmost copy) in SpecCP is the only copy that is spelled out whereas other copies are not (which is indicated by strikethrough in (21).

(21)

```
              CP
         ┌─────┴─────┐
       Spec          C'
       who     ┌──────┴──────┐
               C            TP
                      ┌──────┴──────┐
                    Spec           T'
                    ~~who~~   ┌──────┴──────┐
                            T(ense)        υP
                             has      ┌─────┴─────┐
                                    Spec         υ'
                                    θS      ┌─────┴─────┐
                                   ~~who~~  υ          VP
                                          killed    ╱────╲
                                                  the mosquito
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K-agreement

Operator binding
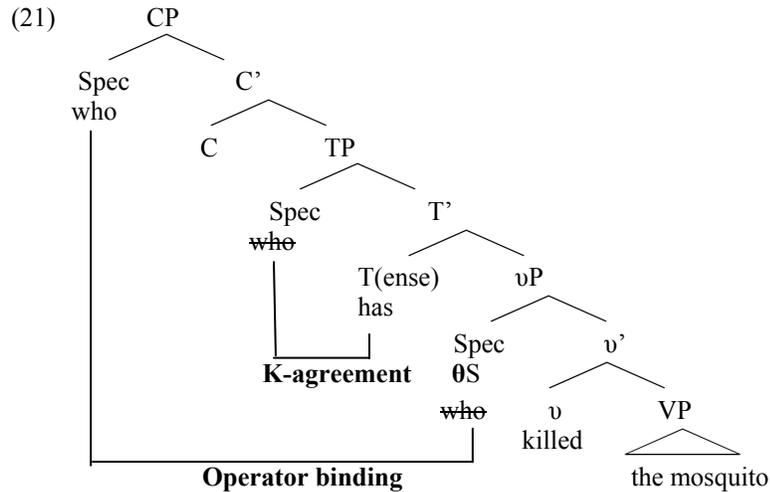
Turning to the question as to why subject agreement is not lost, we must conclude that the silent copy in SpecTP is sufficient to trigger subject agreement with the tensed verb in English.

Next, we turn to Halkomelem where ergative agreement is not possible in the context of subject-centered relative clauses. Within the structural analysis espoused here, we can restate this generalization in the following way: thematic agreement cannot be triggered by an A'-bound variable. In other words, operator binding bleeds thematic agreement as illustrated in (22):[8]

(22)   [$_{CP}$ **OP**   …   [$_{VP}$ [**θS**] V-**agr**]
         |_____| |____|
              operator binding   **θ-agreement**

Let us assume that θ-agreement fulfills the same function as variable binding; in other words θ-agreement equals a form of binding. If so, we immediately derive the fact that ergative agreement is lost in Halkomelem but subject agreement in English is not. In Halkomelem, ergative agreement is θ-agreement and as such agrees with - and by hypothesis binds – the variable in the thematic subject position. Consequently, in the presence of ergative agreement, the operator in SpecCP no longer has a variable to bind in violation of the Bijection Principle (Koopman and Sportiche 1982) according to which every operator must A'-bind exactly one variable, and each variable must be A'-bound by exactly one operator. The only way in which the θ-subject can remain a variable is without thematic agreement. And this is precisely the pattern we find in Halkomelem where ergative agreement is in complementary distribution with operator binding. The situation is different in English. Here agreement is established between T and SpecTP and consequently does not interfere with operator-variable binding (21).

4.1   Independent evidence for the analysis

Assuming that Halkomelem ergative agreement (as an instance of thematic agreement) is in complementary distribution with operator binding, we predict that ergative agreement is lost in all cases where the thematic subject is interpreted as an operator in SpecCP. This prediction is indeed borne out as I will now show.[9]

In subject wh-questions ergative agreement is lost, as shown in (23):

(23)   tewat   kw'   q'óy-t-(*es)   te   qwá:l
         who   det   kill-trans-(3erg) det mosquito
         'Who killed the mosquito?'

(24)   wh   kw'   [$_{CP}$ **OP (∅)**   …   [$_{VP}$ [**θS**]   V-~~**agr**~~]
                             |_____| |____|

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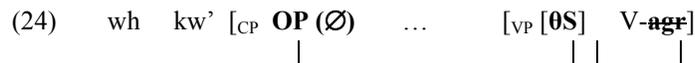
[8] Note that there is no equivalent of a relative pronoun in Halkomelem consequently SpecCP is not overtly occupied. Following standard practice, I will assume that there is an empty operator in SpecCP.

[9] As noted by Kroeber 1999, ergative agreement is lost in case of subject oriented clefts. However, since clefts contain relative clauses in the sentential part of the construction this type of construction does not provide any further evidence.

Operator binding   ~~θ-agreement~~

Note however that wh-questions of the type found in (23) with a complementizer/determiner following the wh-word are arguably instances of clefts. As such they involve a relative clause and therefore do not provide a new argument.

However, in Halkomelem it is possible to form wh-questions without clefting. In such questions, there is no complementizer/determiner and we can interpret this construction as an instance of true wh-movement:

(25)   tewat   q'óy-t-(*es)   te qwá:l
        who   kill-trans-(*3erg) det mosquito
        'Who killed the mosquito?'

(26)   [CP **OP(wh)**   **…**   [VP [**θS**]   V-~~agr~~]

                operator binding   ~~θ-agreement~~

Note that here, too, ergative agreement is lost, as expected and this time there is (arguably) no relative clause involved.[10]

Another construction involving A'-movement of the subject is found in cases where the subject is quantified. Again, ergative agreement is lost, as expected by the present analysis.

(27)   mékw'   sí:wíyeqe   hálp'ex te   qw'óp
        all   man.pl   eat   det   apple
        'Every man was eating an apple.'

(28)   [CP **OP(Q)**………   [VP [**θS**]   V-~~agr~~]

                operator binding   ~~θ-agreement~~

Finally, ergative agreement is also lost in cases of subject fronting. That is, even though the unmarked word order of Halkomelem is VSO, SVO order is possible as well. Crucially, if the subject appears in preverbal position, ergative agreement is sometimes lost:[11]

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[10] Note that we might still analyze (25) as involving a cleft with the complementizer/determiner dropped. On the basis of various constraints associated with this type of construction where the determiner/complementizer is missing, Gillon and Wiltschko 2004 argue that they are best analyzed as instances of direct fronting as opposed to clefts.

[11] It also seems to be marginally possible to have SVO order with ergative agreement retained:
(i)   te   Strang q'óy-t-<u>es</u>   te   qwá:l
         det   Strang kill-trans-3erg   det   mosquito
         'Strang killed the mosquito.'
Given the present analysis, the pattern in (i) can receive one of the following analyses. Either we assume (following Davis 2000) that this type of SVO is derived via A-movement (i.e. movement to the position of a grammatical subject). However, on independent grounds I assume that Halkomelem does not have such a position. Consequently, I am lead to the second option, according to which the preverbal subject functions as a "hanging topic"). If so, then there is no A'-movement involved and

(29)   te   Strang q'óy-t   te   qwá:l
        det   Strang kill-trans det   mosquito
        'Strang killed the mosquito.'

Note that one cannot argue that the SVO order in (29) involves a cleft construction, with an interpretation like *It was X who V'ed*. If it was indeed a cleft construction, then one would expect OVS order to be equally well-formed, contrary to fact. That is object centered relative clauses and wh-clefts are grammatical (30) whereas object fronting is not (31):

(30)   a.   tl'ó   te íle sth'óqwi í-lh   hélpex-es tl'   Strang[12]
                3Indep det here fish   aux-past eat-erg det.obl Strang
                'This is the fish that Strang is eating.'

        b.   Stam kw'e i-lh   lepex-es the   slhálì?
                What det aux–past   eat-3s   det.fem   woman
                'What did the woman eat?'

(31)   *te   qwá:l   q'óy-t-(es)   te   Strang[13]
        det   mosquito   kill-trans(3erg)   det   Strang
        'Strang killed the mosquito.'

Thus, we have established that the apparent loss of ergative agreement is not restricted to subject centered relative clauses but happens in all cases of a subject undergoing A'-movement as expected by the present analysis.

5. Other types of agreement

So far, I have argued that ergative agreement in Halkomelem is an instance of thematic agreement and as such is incompatible with operator binding. As a consequence, ergative agreement is lost in Halkomelem subject centered relative clauses. This contrasts with English, where agreement is with the grammatical subject (thus not thematic in nature) and as a consequence is not lost in subject centered relative clauses. In sum, we have argued for a correlation between thematic agreement and loss in context of A'-binding to the effect that they are in complementary distribution. This is summarized in the table below:

	agreement	lost in context of A'-binding

ergative agreement is retained. Initial evidence for the hanging topic analysis stems from the fact that in the presence of ergative agreement the preverbal subject is followed by a heavy intonation break which is absent in case of preverbal subjects that do not trigger ergative agreement.

[12] Note in passing that in object centered relative clauses like (30) ergative agreement is retained. This is of course expected since ergative agreement does not bind the same variable as operator: the former binds the thematic subject whereas the latter binds the variable corresponding to the thematic object.

[13] The sentence in (31) without ergative agreement is of course grammatical under the SVO interpretation (i.e. *The mosquito killed Strang*.)

	type	
Engl. subject verb agr	K-agreement	no
Hk ergative agr	θ-agreement	yes

Table 1

In this section we will test whether this proposed correlation does indeed hold. In particular, at this point it might well be that English and Halkomelem simply differ in whether or not agreement is lost. Obviously, the relevant test will involve other types of agreement within the same language. English does not have any other kind of agreement and thus we cannot test the correlation, however Halkomelem provides us with an ideal testing ground in that it has a number of different agreement types. In what follows, we will investigate indicative agreement (§5.1), subjunctive agreement (§5.2) and object agreement (§5.3) from the point of view of the present analysis. That is, for each of these agreement types, we will establish i) whether or not it is thematic and ii) whether or not it is lost in context of A'-binding.

5.1. Indicative agreement

In matrix indicative clauses, Halkomelem makes use of so called "subject clitics". Crucially, these clitics are restricted to 1^{st} and 2^{nd} person and they show a nominative/accusative pattern (i.e. they mark both A and S, but not O), as shown in the following examples:

(32) a. máy-t-**tsel**
    help-trans-1sg.s
    'I help him.'

  b. máy-t-**chexw**
    help-trans-2sg.s
    'You help him.'

  c. máy-t-es
    help-trans-3erg
    'He/they help/s him.'

  d. máy-t-**tset**
    help-trans-1pl.s
    'We help him.'

  e. máy-t-**chap**
    help-trans-2pl.s
    'You_pl help him.' Galloway 1980: 126

(33) a. yó:ys-**tsel**
    work-1sg.s
    'I work.'

b. yó:ys-**chexw**
work-2sg.s
'You work.'

c. yó:ys
work
'He/they work/s.'

d. yó:ys-**tset**
work-1pl.s
'We work.'

e. yó:ys-**chap**
work-2pl.s
'You_pl work.' Galloway 1980: 126

In this section we will investigate indicative agreement from the point of view of the analysis proposed in section 4. In particular, we will establish i) whether indicative agreement is an instance of thematic agreement and ii) whether indicative agreement is lost in the context of A'-binding. We start with the first question.

Recall that θ-agreement marks an agreement relation between the bare verb and the θ-subject. As a consequence, thematic agreement always appears attached to the main predicate. This is clearly not the case for indicative agreement as is well documented in the relevant literature (Davis 2000, Galloway 1993, Gerdts 1988a, Kroeber 1999, among many others) First, in the presence of an auxiliary, indicative agreement is attached to the auxiliary, not the main verb (in other words indicative agreement is clitic-like rather than suffixal; Davis 2000):

(34) a. li-**tsel** máy-t
aux-1sg.s. help-trans
'I helped him.'

b. li-**chexw**máy-t
aux-2sg.s help-trans
'You helped him.'

c. li máy-t-es
aux help-trans-3erg
'He/they helped him.'

d. li-**tset** máy-t
aux-1pl.s help-trans
'We helped him.'

e. li-**chap** máy-t

aux-2pl.s help-trans
'You_pl helped him.' Galloway 1980: 126

  Secondly, even in the absence of an auxiliary, indicative agreement need not attach to the main predicate. It can simply appear in sentence initial position (Galloway 1993):

(35) a. **tsel** máy-t
    1sg.s. help-trans
    'I helped him.'

   b. **chexw** máy-t
    2sg.s help-trans
    'You helped him.'

   c. **tset** máy-t
    1pl.s help-trans
    'We helped him.'

   d. **chap**   máy-t
    aux-2pl.s help-trans
    'You_pl helped him.' Galloway 1980: 126

  This much establishes that indicative agreement does not mark an agreement relation with the bare verb. Next, it can be shown that indicative agreement is not tied to a particular θ-role and as such cannot be analyzed as an instance of θ-agreement. This can be seen on the basis of the fact that it does not only mark an agreement relation with the thematic subject (i.e. the initiator or AGENT of the event). Rather, indicative agreement is also triggered by so called 'object-oriented' (i.e., unaccusative) verbs, which are not associated with an AGENT/CAUSE argument but rather with the *undergoer* of the event (i.e., a PATIENT/THEME) argument:

(36) a. íkw'-tsel
    lost-1sg.s
    'I'm lost.'

   b. íkw'-chexw
    lost-2sg.s
    'You are lost.'

   c. íkw'-tset
    lost-1pl.s
    'We are lost.'

   d. íkw'-chap
    lost-2pl.s

'You$_{pl}$ are lost.'

We can now safely conclude that indicative agreement is not thematic in nature.[14] This further predicts that indicative agreement is not lost in the context of A'-binding. Unfortunately, this prediction is harder to confirm for the following reason. A'-movement is restricted to 3rd person because all wh-words and heads of relative clauses are formally interpreted as 3rd person (see the discussion in section 5.3).

However, there is no overt 3rd person indicative agreement as shown in (34)c above repeated below for convenience:

(34)   c.   li   máy-t-es
              aux   help-trans-3erg
              'He/they helped him.'

The 3rd person agreement on the verb in (34)c is an instance of ergative agreement as we can see on the basis of the fact that it appears on the verb despite the presence of an auxiliary. Consequently, cases of A'-movement will not help us to establish whether our prediction is borne out.

However, I believe that we can at least construct indirect evidence on the basis of the fact that the present analysis allows us to understand a peculiar property of indicative agreement. Recall that indicative agreement is restricted to 1st and 2nd person. Of course, one might argue that this is just an accidental paradigmatic gap. However, it is striking that it holds across the Salish family. Furthermore, as we have seen in section 3, ergative agreement is restricted to 3rd person. Thus, if we compare the two paradigms, we observe a striking complementarity:
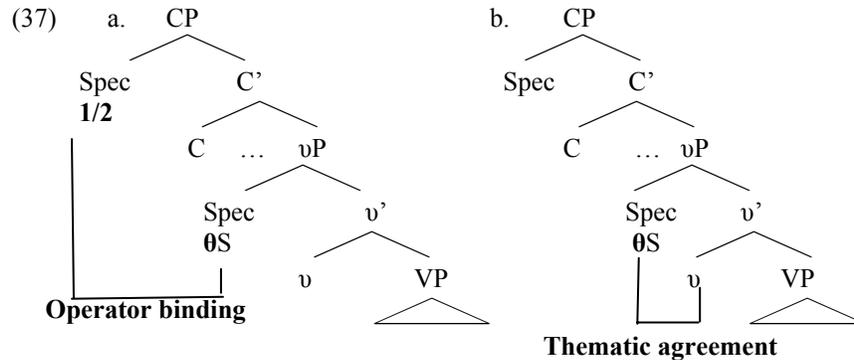
	indicative agreement	ergative agreement
1sg	**tsel**	--
2sg	**chexw**	--
3sg	--	**-es**
1pl	**tset**	--
2pl	**chap**	--
3pl	--	**-es**

Table 2: indicative vs. ergative agreement

Again, if the absence of a 3rd person indicative agreement form were accidental this complementarity would be accidental as well. In other words, it looks like we are missing a generalization. However, I believe that the present analysis allows for a principled account.

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[14] Note that his is consistent with Wiltschko's 2002a independently established claim that indicative agreement in Halkomelem is best analyzed as agreement in C, similar to the inflected complementizers of German (see section 5.1).

Recall that the essence of our proposal is that operator binding and θ-agreement are in complementary distribution. Suppose that the complementarity of indicative agreement and ergative agreement reduces to exactly the same type of complementarity. In other words, I propose that indicative agreement is to be analyzed as an instance of operator binding. If that is the case, we do in fact predict that indicative agreement (analyzed as operator binding) is in complementary distribution with ergative agreement (analyzed as θ-agreement):

(37)   a.   CP   b.   CP

Spec   C'   Spec   C'
1/2
            C   …   υP   C   …   υP

        Spec   υ'   Spec   υ'
        θS   **θS**
                    υ   VP   υ   VP
Operator binding

Thematic agreement

In other words, the absence of ergative agreement in the context of indicative agreement (i.e., the absence of 1st and 2nd person ergative agreement) is reduced to the same analysis as the absence of ergative agreement in context of A'-movement. If this analysis is on the right track, we have indirect evidence for the validity of the main proposal.

Of course, one could argue that the absence of 3rd person indicative agreement is merely an instance of an empty (∅) 3rd person agreement marker. If so we would not in fact deal with a complementarity between operator binding and θ-agreement. Rather, one would have to assume an empty 3rd person operator in SpecCP. However, there is cross-Salish evidence available which strongly favors the present analysis. In particular, ergative agreement is not restricted to 3rd person in all of the Salish languages. For example, in Shuswap (Interior Salish) ergative agreement is found with 1st, 2nd, and 3rd person. Crucially, in all of these cases indicative agreement is absent:

(38)   a.   píc'-n-**x**
                squeeze-trans-2sg.subj.suffix
                'You squeeze him/her/it.'

        b.   lx-nt-**és**
                squeal.on-trans-3subj.suffix
                'She/he squeals on him/her.' Kuipers 1974: 48

This follows from the claim that ergative agreement (an instance of θ-agreement) is in complementary distribution with indicative agreement (an instance of operator binding). Note that in the absence of ergative agreement (i.e., with intransitive predicates) Shuswap makes use of indicative agreement (just like Halkomelem):

(39)   a.   cút-**kt**
                intend-1pl.subj.cl
                'We intend.'

         b.   cút-**k**
                intend-2sg.subj.cl
                'You intend.'

         c.   cút
                intend
                'S/he intends.'   Kuipers 1974: 44

In sum, the present analysis allows us to reduce the loss of ergative agreement in context of operator binding to the same phenomenon as the absence of 1st and 2nd person ergative agreement in Halkomelem providing indirect evidence.

5.2   Subjunctive agreement.

In this section, we turn to subjunctive agreement in Halkomelem, which appears in certain embedded contexts as well as negative clauses (see Galloway 1993). Subjunctive agreement differs from ergative agreement (as well as indicative agreement) in that it is associated with a full paradigm (there are no gaps). It further differs from ergative agreement in that it shows a nominative/accusative pattern, like indicative agreement:

(40)   a.   éwe-tsel   t'ílem-**el**   wáyeles
                neg-1sg.s   sing-1sg.ss   tomorrow
                'I won't be singing tomorrow.'

         b.   éwe-chexw   t'ílem-**exw**   wáyeles
                neg-1pl.s   sing-2sg.ss   tomorrow
                'You won't be singing tomorrow'

         c.   éwe   t'ílem-**es**   wáyeles
                neg   sing-3ss   tomorrow
                'He/they will not be singing tomorrow.'

         d.   éwe-tset   t'ilem-**et**   wáyeles
                neg-1pl.s   sing-1pl.ss   tomorrow
                'We won't be singing tomorrow.'

         e.   éwe-chap   t'ílem-**ap**   wáyeles
                neg-2pl.s   sing-2pl.ss   tomorrow
                'You folks won't be singing tomorrow.'
                                         Wiltschko 2002a: 272 (31)

As I will now show, subjunctive agreement does not behave like θ-agreement.[15] First, in the presence of an auxiliary, subjunctive agreement (like English subject verb agreement) appears on the auxiliary and not on the verb (subjunctive agreement is clitic-like; cf. Davis 2000):

(41) a.   éwe-tsel   lí-**l**   tl'íls-th-òmè
              neg-1sg.s   aux-1sg.ss   want-trans-2sg.o
              'I don't like you.'

      b.   éwe-chexw   lí-**xw**   tl'íls-th-òx
              neg-2sg.s   aux-2sg.ss   want-trans-1sg.o
              'You don't like me.'

      c.   éwe   lí-**s**   tl'íls-th-òx-es
              neg   aux-3ss want-trans-1sg.o-3s
              'He/They doesn't/don't like me.'

      d.   éwe-tsel   lí-**t**   tl'íls-th-òmè
              neg-1sg.s   aux-1pl.ss   want-trans-2sg.o
              'We don't like you.'

      e.   éwe-chexw   lí-**p**   tl'íls-th-òx
              neg-2sg.s   aux-2pl.ss   want-trans-1sg.o
              'You don't like me.'   Galloway 1993: 186

Furthermore, the assumption that subjunctive agreement is not thematic agreement is confirmed by the fact that in passive sentences subjunctive agreement is retained wherever ergative agreement is not:

(42) éwe   í-s   máy-t-em   te   Konrad
      neg   aux-3ss help-trans-em det   Konrad
      'Nobody helped Konrad.'/'Konrad wasn't helped.'

Similarly, we can see that subjunctive agreement is not thematic in nature because it is also triggered by so called 'object-oriented' (i.e., unaccusative) verbs, which are not associated with an AGENT/CAUSE argument:

(43) éwe   lí-**s**   íkw'
      neg   aux-3ss lost
      'He is not lost.'

The example in (43) shows that subjunctive agreement is not tied to a particular θ-role (unlike ergative agreement). Consequently, we have clearly established

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[15] This claim is consistent with Davis 2000 analysis according to which subjunctive agreement is higher than ergative agreement.

that subjunctive agreement is not an instance of θ-agreement. According to the present analysis, this immediately predicts that subjunctive agreement is not lost in subject-centered relative clauses. This prediction is indeed borne out:

(44)   tsel   lhq'élexw kw'e   swíyeqe…
        1sg.s   know   det   man
        …éwe   i-**s**   i   chxélcha   kw'e   sth'óqwi[16]
         neg   aux-3ss aux catch   det   fish
        'I know the man who didn't catch a fish.'

The presence of subjunctive agreement in subject centered relative clauses is expected by the present analysis which claims that only θ-agreement is lost in the context of operator binding: subjunctive agreement does not show any of the properties of θ-agreement and is not lost. For completeness note that subjunctive agreement (unlike indicative agreement) cannot be analyzed as triggering operator binding either. This can be seen based on the fact that subjunctive agreement can co-occur with ergative agreement (see for example (41)c). In the next subsection we turn to another type of agreement, namely object agreement.

5.3   Object agreement

In addition to the various types of subject agreement discussed above Halkomelem also has object agreement (which is not sensitive to clause type):

(45)   a.   may-th-**óx**-es
                help-trans-1sg.o-3s
                'He helps me.'

        b.   may-th-**óme**-tsel
                help-trans-2sg.o-1sg.s
                'I help you.'

        c.   máy-t-es
                help-trans-3erg
                'He helps him/them.'

        d.   may-t-**óxw**-es
                help-trans-1pl.o-3s
                'He helps us.'

        e.   may-t-**óle**-tsel
                help-trans-2sg.o-1sg.s

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[16] Note that this clause contains two auxiliaries, one carrying subjunctive agreement the other one bare. At present, I have no account for this auxiliary doubling.

'I help you_{pl}.'   Galloway 1980: 126

Note that in (45)c where the verb is suffixed by the control transitivizer -*t*, 3rd person object agreement is not overt. However, there are two other transitivizers, namely the limited control transitivizer –*l*, and the causativizer –*st*, which show up as –*lexw* and –*stexw* in context of 3rd person objects.

(46)   a.   kw'éts-l-**exw-**tsel
               see-tr-3o-1sg.s
               'I see him.'

         b.   ímex-st-**exw-**tsel
               walk-caus-1sg.s
               'I make him walk.'

In Wiltschko 2003b, I have argued that these forms are best analyzed as involving an overt 3rd person object marker (-*exw*) as indicated in the examples in (46). (This overt object agreement suffix is in allomorphic variation with Ø). For reasons of space, I refer the reader to Wiltschko 2003b for detailed arguments. I will assume this analysis of –*exw* for the rest of the paper but whenever I am basing an argument on this analysis I will point out that it rests on this assumption.

        I will now show that object agreement must be analyzed as agreement with a grammatical function (i.e. K-agreement) rather than θ-agreement. The evidence is as follows. Recall that the essence of θ-agreement is the fact that it is necessarily tied to a specific θ-role whereas K-agreement is not. Given what we have seen so far, if object agreement were θ-agreement, we would expect it to be tied to the argument corresponding to the *undergoer* of the event denoted by the V (cf. Dowty 1991); i.e., the θ-role usually referred to as PATIENT/THEME. Even though this is often the case (as in the examples in (45) and (46)) this is not necessarily so. Object agreement is clearly not tied to a specific θ-role. This can be most easily seen if we compare transitive verbs with verbs suffixed with an applicative marker. In the transitive clause in (47)a, it is the PATIENT/THEME, which triggers object agreement whereas in the applicative construction in (47)b the BENEFACTIVE/GOAL argument is realized as the direct object and triggers object agreement. In this case the original direct object is realized as an oblique; see Galloway 1993, Gerdts 1988a:

(47)   a.   yéqw-th-**òx**-chexw
               burn-trans-1sg.o-2sg.s
               'You burn me.'

         b.   yéqw-elhts-th-**òx**-chexw
               burn-appl-trans-1sg.o-2sg.s
               'You burn it for me.'   Galloway 1993:255f.

Similarly, as we have partly seen in section 5.1, so called object centered (or unaccusative) verbs, i.e., verbs which are only associated with a thematic object do not trigger object agreement but always subject agreement:

(48)   a.   * íkw'-óx
                   lost-1sg.o

         b.   íkw'-tsel
               lost-1sg.s

A final piece of evidence stems from the Halkomelem passive, which (as I briefly mentioned above) is really an impersonal construction such that the θ-object does not get promoted to a grammatical subject. It is interesting that the agreement with the θ-object differs from regular object agreement. In other words, Halkomelem has a special set of passive object agreement suffixes which differ from active object suffixes:

(49)   a.   máy-th-àl-èm
                  help-trans-1sg.pass-em
                  'Somebody helped me.'/'I was helped.'

         b.   máy-th-ò:-m
                  help-trans-2sg.pass-em
                  'Somebody helped you.'/'You were helped.'
                                      Galloway 1980: 127

If object agreement was indeed an instance of θ-agreement (and as such necessarily tied to a given θ-role), we would not expect that there is a different set of agreement suffixes with exactly the same θ-role.

The data discussed in this section clearly establish that object agreement is not θ-agreement but rather agreement with a grammatical object. If so, we expect that object agreement is not triggered by the same predicate which introduces the θ-object. In other words, we predict that object agreement is not agreement with the bare verb. This is indeed the case as I will now show. First, in case of object-oriented (unaccusative) verbs, which in Halkomelem are always bare roots, object agreement is simply not possible as we have already seen in (48). Second, in case of transitive predicates, object agreement necessarily follows the transitive suffix (see the examples in (45)- (47)) and cannot appear attached to the bare root (i.e., in a position preceding the transitivizer):

(50)   *may-**óx**-th-es
        help-1sg.o-trans-3s
        'He helps me.'

If our analysis is on the right track we expect that the transitivized verb is not a single predicate (otherwise object agreement would indeed be with the same

predicate which introduces the thematic object). This conclusion is in line with much current research. In particular, the VP-internal subject-hypothesis has been reanalyzed since the work of Kratzer 1994 who argues that the main verb (V) is only associated with the θ-object (i.e. the undergoer argument) whereas the θ-subject is introduced by another (secondary) predicate which Kratzer identifies as Voice and which is now standardly labeled as ν. Halkomelem fits this analysis very well in that bare roots are indeed only associated with the thematic object. To add a θ-subject, Halkomelem roots must be transitivized by means of an overt transitive suffix. Witness the following minimal pairs which exemplify this property:

(51)   unaccusative predicates: transitive predicates:
        q'óy   'die'   q'óy-**t**   'kill sthg/so.'
        íkw'   'lost'   íkw'-**et**   'throw sthg away'
        tás   'get hit, mashed'   tás-**et**   'mash sthg (berries)'
        qw'és   'fall into water'   qw'sé-**t**   'push sthg./so. into water'
        tl'éxw   'covered'   tl'xwé-**t** 'cover so/sthg'
        xélh   'hurt'   xlhé-**t**   'beat so. up/'hurt so.'
        xwét   'tear'   xwté-**t**   'tear sthg'
                                                           Galloway 1993: 245-247

This suggests that transitive VPs in Halkomelem can be straightforwardly analyzed along the lines of Kratzer 1994, whereby V introduces the thematic object (θO) and the transitive suffix (associated with ν) introduces the thematic subject (θS).[17]

(52)
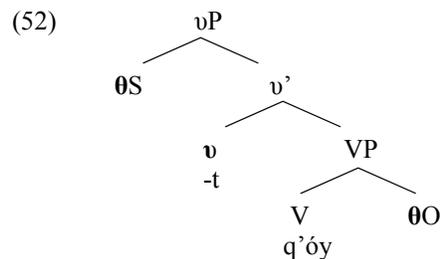
Given this independently motivated analysis, we have now a solution to our apparent problem. Object agreement, which always appears following the transitivizer, is indeed not triggered by the predicate which introduces the thematic object (i.e., V). Rather, object agreement is with the transitivizer which corresponds to the predicate in ν which introduces the θ-subject. Note in passing that this assumption is in line with standard research within the minimalist program where it is assumed that ν is responsible for introducing the θ-subject as well as assigning accusative case to the object.

Under the present analysis, we can view object agreement as a licensor of an argument which is introduced in a lower position (e.g. VP internally) and

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[17] Again, I'm abstracting away from intransitive predicates which introduce a thematic subject (i.e., unergative verbs). See Wiltschko 2001a, to appear for discussion.

consequently object agreement belongs to the system of grammatical relations (like accusative case) and not to the system of θ-relations.

Having established that object agreement is not θ-agreement it is predicted that object agreement is not lost in case of A'-movement of the object. In what follows I will conclude that the prediction is indeed borne out. However, it turns out that the evidence is somewhat difficult to interpret. This is reflected in the fact that there is in fact an ongoing debate in the relevant literature as to whether or not object agreement is lost in cases of object-centered relative clauses (see Kroeber 1999 for an overview). The reason for why the evidence is so hard to interpret has to do with the fact that in many cases object agreement is simply Ø. That is, since in most relevant examples the A'-moved constituent is 3rd person the remaining gap must be 3rd person as well. As we have already seen, 3rd person object agreement is Ø at least in some cases (see the discussion at the beginning of this section). Obviously, it is hard to tell whether the Ø 3rd person object agreement we hypothesize in (53)a is absent or present in (53)b[18], which involves object A'-movement:

(53) a.   q'ó:y-t-**Ø**-<u>es</u>   te   Strang te   qwá:l
          kill-trans-**3obj**-3erg   det Strang det   mosquito
          'Strang killed the mosquito.'

    b.   stám   te   q'óy-t-es   tú-tl'ò
          wh   det   kill-trans-**??**-3s det-3Indep
          'What did he kill?'

If however, we assume, following Wiltschko 2003b, that there are in fact cases with overt 3rd person object agreement (namely in the context of the limited control transitivizer *–l* and the causativizer *–st*) then the evidence would be straightforward. As shown in (54), *-exw* is retained in contexts where an object has undergone A'-movement.

(54)   stám   kw'e   kw'éts-l-<u>exw</u>-es
         what   det   see-trans-3o-3erg
         'What did he see?'

This would indeed be conclusive evidence supporting our prediction: object agreement is not lost in context of A'-movement. However, since the analysis of *–exw* as 3rd person object agreement is not uncontroversial, we cannot take (54) as conclusive evidence.[19]

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[18] For Lillooet Salish, the former position is argued by Roberts 1999 whereas the latter is argued by Matthewson 1993. Roberts main argument has to do with a plural agreement marker, which is unavailable in Halkomelem. Since this plural agreement cannot appear in case of extraction, Roberts argues that there is no agreement present at all. I suggest (without further discussion) that this plural marker might be an instance of θ-number agreement and as such it is unable to occur with a variable. In other words, the plural marker might not be of the same kind as the personal agreement markers discussed in this section.

[19] For completeness, let me point out that if –exw is indeed part of the transitivizing suffix, the data in (54) are simply mute in regard to the question as to whether object agreement is retained or not.

Since 3[rd] person object agreement is only partly conclusive, we need to turn to 1[st] and 2[nd] person object agreement. Relevant examples can only involve relative clauses including clefts with independent pronouns as heads because there is no 1[st] or 2[nd] person equivalent for wh-words. We start by looking at the Island dialect of Halkomelem, where the evidence conclusively shows that object agreement is indeed not lost, as predicted by the present analysis:

(55) *Island Halkomelem*

    a.   nə́wə   [ni   ləm-θ-<u>ámə</u>-ʔén̓ʔ][20]

              2sg.Indep aux   look-trans-2sg.obj-1s.subj

              'It's you that I looked at.'

    b.   ʔén̓ʔθə [ni   q'ʷàqʷ-ə-θ-<u>ám̓š</u>-əs

              1sg.Indep aux   club-LV-trans-1sg.obj-3s.subj

              'It's me who he clubbed.'   Gerdts 1988b: 83 (194, 195)

However, if we look at the Upriver and Downriver dialect, we observe that there is no 1[st] or 2[nd] person object agreement:

(56)   *Uprivver Halkomelem*

        tló   ta'á'altha   [kw'ets-l-exw-es   te   qwá:l]

        3Indep det-1sg.Indep   see-trans-3o-3erg det mosquito

        'I'm the one the mosquito saw.'

(57)   *Downriver Halkomelem*

    a.   nə́wə   [ni   k'ʷə́c-nəxʷ-èn]

              2sg.Indep aux see-trans-1sg.trans.subj

              'You are the one that I saw.'

    b.   ʔén̓θə   [ni-ɬ   k'ʷə́c-nəxʷ-əs]

              1sg.Indep aux-past   see-trans-3trans.subj

              'I am the one he saw.'

                    (Suttles 1984, cited from Kroeber 1999: 278)

At first sight, these data seem to directly contradict our expectation: object agreement is lost, which is only expected if it was θ-agreement. However, at closer inspection, the problem is not actually a real problem. In particular, I argue (following Matthewson 1993) that the absence of object agreement is only apparent in that we are really dealing with a 3[rd] person agreement ending (which of course is Ø and thus is indistinguishable from a lost agreement suffix). This suggests that even though the head of the cleft/relative clause is notionally 1[st] or 2[nd] person, respectively, formally it is in fact 3[rd] person and as such triggers 3[rd] person agreement. In what follows, I will briefly discuss evidence to this effect. First, we observe that the same is true in English. 1[st] and 2[nd] person subjects do not trigger overt subject verb agreement but if a 1[st] or 2[nd] person acts as the head

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[20] Note that in this example the subjunctive agreement appears attached to the verb despite the presence of an auxiliary. This differs from the pattern of Upriver Halkomelem.

of a subject-centered relative clause, 3rd person subject verb agreement is obligatorily triggered:[21]

(58)   a.   I often see a mosquito.

       b.   You often see a mosquito.

(59)   a.   I am the one who often sees a mosquito.

       b.   It's me who often sees a mosquito.

       c.   You are the one who often sees a mosquito.

       d.   It's you who often sees a mosquito.

This is consistent with the fact that the overt operator (*who*) which binds the variable in the thematic object position is formally 3rd person.

　　　　We observe the same effect in subject-centered relative clauses in Upriver Halkomelem. In (60) the head of the relative clause is a 1st or 2nd person independent pronoun, respectively, but the also associated with 3rd person subjunctive agreement if they are associated with a moved subject:[22]

(60)   a.   tl'ó   ta-áltha...
               3Indep   det-1sg.indep
               …éwe lí-<u>s</u>   q'óy-t   te   qwá:l
                neg   aux-3ss   kill-trans det   mosquito
               'It was me who didn't kill the mosquito.'

       b.   tl'ó   ta-léwe …
               3Indep   det-2sg.indep…
               …éwe lí-<u>s</u>   q'óy-t   te   qwá:l
                neg   aux-3s   kill-trans det   mosquito
               'It was you who didn't kill the mosquito.'

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[21] The relevance of the English examples was pointed out to me by an anonymous reviewer.

[22] Henry Davis (p.c.) suggests that the 3rd person subjunctive agreement could be analyzed as agreement with an expletive subject which appears in addition to a 1st or 2nd person subject. However, in other cases, subjunctive agreement has to match the person of the 1st and 2nd subject as shown in i) and ii)
i) éwe   tsel   lí-<u>l</u>   tl'íls-th-òmè
　 neg   1sg.s   aux-1sg.ss want-trans-2sg.o
　 'I don't like you.'
ii) éwe   chexw   lí-<u>xw</u>   tl'ils-th-óx
　 neg   2sg.s   aux-2sg.ss want-trans-1sg.o
　 'You don't like me.'   Galloway 1993: p.186
Consequently, expletive subjects would have to be restricted constructions involving subject A'-movement. Since this doesn't seem to be plausible, I will dismiss this analysis.

We interpret this to mean that the empty operator binding the variable in the thematic object position must be 3rd person just like the overt operator (*who*) in English.

Note that this is consistent with the fact that independent pronouns, no matter whether they denote the speaker (1st person), hearer (2nd person) or a 3rd person seem to always formally behave like 3rd person (see Wiltschko 2002b for a detailed discussion). Thus, we have conclusive evidence that the absence of overt 1st and 2nd person object agreement in Upriver Halkomelem is not to be interpreted as an instance of agreement loss but rather as an instance of 3rd person agreement, which happens to be $\varnothing$.

Before we conclude, let us briefly return to the Cowichan examples, where 1st and 2nd person object agreement is retained. These data now appear in a different light, namely it looks like Cowichan has the option of formally interpreting the empty operator binding the variable in the thematic object position as 1st or 2nd person, respectively. This leads us to the conclusion that languages can differ as to whether an operator can or cannot be formally 1st or 2nd person. That this is indeed the case can be seen on the basis of German where operators can be formally 1st or 2nd person if they precede a copy of the relevant personal pronoun which functions as the head of the relative clause:

(61) a.   Ich seh-e   oft   Gelsen.
           I   see-1sg.s often   mosquitoes.
           'I often see mosquitoes.'

      b.   Du   siehst   oft   Gelsen.
           You see-2sg.s often   mosquitoes
           'You often see mosquitoes.'

(62) a.   Ich, die ich oft   Gelsen   sehe.
           I, who I   often mosquitoes see-1sg.s
           'I, who often sees mosquitoes'

      b.   Du, der du   oft   Gelsen   siehst.
           You, who you often mosquitoes see-2sg.s
           'You, who often sees mosquitoes'

Recall from the data in (59) that this possibility does not exist in English, where the operator must be formally 3rd person. Thus, there seems to be significant cross-linguistic difference as to whether or not a given operator can or cannot be interpreted as 1st or 2nd person respectively. This seems to be responsible for the difference between Upriver and Cowichan Halkomelem.

We have now established that the absence of 1st and 2nd person object agreement in object-centered relative clauses does not in fact contradict our prediction. This leaves us with conclusive evidence from Cowichan Halkomelem as well as evidence relying on the analysis of –*exw* as 3rd person object agreement. However, we have not encountered any contradictory evidence and thus I conclude that the present analysis is indeed on the right

track: object agreement is not thematic in nature and as a consequence is not lost in the context of operator binding.

6. Conclusion

The main goal of this paper was to provide an explanatory formal account for a peculiar property of so called ergative agreement in Halkomelem, namely that it is obligatorily lost in subject-centered relative clauses. This property is particularly striking since subject verb agreement in English is not lost in the same context. According to the analysis developed here, ergative agreement is formally very different from subject agreement in English. In particular, I have argued that ergative agreement in Halkomelem is agreement with the θ-subject (i.e. θ-agreement) whereas English subject agreement is agreement with the grammatical subject (i.e., K-agreement). I further argued that θ-agreement is in complementary distribution with operator binding. This complementarity was analyzed as the byproduct of an independently established principle (the bijection principle) which states that each operator must bind a variable. Moreover, ergative agreement was viewed as signaling that the variable introduced in the thematic domain is bound by an argument within the thematic domain and as a consequence can no longer be bound by the operator in A'-position. Thus, it was shown that the loss of ergative agreement is not tied to subject centered relative clauses but can also be found in other instances where the subject appears in operator position.

The proposed complementarity between θ-agreement and operator binding was further tested against other types of agreement found in Halkomelem. First, I have argued that indicative agreement is not an instance of θ-agreement but rather instantiates operator binding. As a consequence, we were able to derive the (previously unaccounted) complementarity between ergative agreement and indicative agreement across the Salish family. Second, I have shown that subjunctive agreement is not an instance of θ-agreement either and consequently is not lost in the context of subject-centered relative clauses, and all other instances where subjects appear in an operator position. Third, I have argued that object agreement is also not an instance of θ-agreement and consequently is not lost when an object appears in operator position. These findings are summarized in the following table:

	agreement type	lost in context of A-binding
English subject verb agr	K-agreement	no
Halkomelem ergative agr	θ-agreement	yes
Halkomelem indicative agr	OP-binding	n/a
Halkomelem subjunctive agr	K-agreement	no
Halkomelem object agr	K-agreement	no

Table 3

The present paper is the first attempt to offer a principled and formal analysis of anti-agreement in Halkomelem Salish. As mentioned at the beginning of this paper most descriptive work implies a functional explanation for this pattern.

Accordingly, the loss of ergative agreement would ultimately be functional in nature in that it serves as a disambiguation device. In particular, the absence of ergative agreement is the only way to distinguish between subject- and object-centered relative clauses as shown below:

(63)   a.   tl'ó   te   í   swíyeqe [q'óy-t   te   qwá:l]
                3Indep det here man   kill-trans   det mosquito
                'This is the man who killed the mosquito.'

        b.   tl'ó   te   i   qwá:l   [q'óy-t-es   te Strang]
                3Indep det here mosquito kill-trans-3erg det Strang
                'This is the mosquito that Strang killed.'

In other words, if it were not for the loss of ergative agreement in subject centered relative clauses, the two types of relative clauses would be surface identical. I am not denying that the loss of ergative agreement serves the function of disambiguation, but this alone does not predict the actual **form** of the disambiguation device. For example, there is no principled reason as to why ergative agreement but not subjunctive agreement should be lost. Moreover, if the loss of ergative agreement is purely functional, we predict that it is only lost in case of an actual ambiguity. However, the potential for ambiguity only arises in the context of a 3[rd] person subject combining with a 3[rd] person object. If the object is either 1[st] or 2[nd] person as below, then this ambiguity does not arise, nevertheless ergative agreement is still lost:

(64)   tl'ó   te   í   swíweles [kw'ets-l-óx]
        3Indep det   here   boy   see-trans-1sg.o
        'This is the boy who saw me.'

In (64) we find a 1[st] person object and consequently there is no potential ambiguity: it is clear that the 3[rd] person argument must correspond to the thematic subject of the clause. Nevertheless ergative agreement is lost as predicted by the formal but not by the functional analysis.

      In sum, I conclude that an analysis which derives the formal properties of subject A'-movement in a principled fashion is necessary and as such the present paper contributes to our understanding of ergative agreement as well as other patterns of agreement in Halkomelem.

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