

**Mind the gap: on plural agreement and A'-extraction in
St'át'imcets (Lillooet Salish)**

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The main purpose of this paper is to provide morphosyntactic evidence that there is a 'true' gap (a syntactic variable) at the foot of A'-dependencies in St'át'imcets, as opposed to a resumptive pronoun. I provide two arguments for this claim: first, I modify and strengthen Roberts' (1999) analysis of the distribution of plural morphology in St'át'imcets, whose obligatory absence in A'-extraction contexts is diagnostic for the presence of a gap; and second, I show that number neutralization in determiners correlates with the presence of a relative clause containing a gap rather than a null pronominal.

1 Introduction¹

More often than not, third person agreement in Salish is phonologically null, particularly in absolutive environments (i.e., with subjects of intransitive predicates and objects of transitive predicates). This is illustrated by the St'át'imcets examples in (1-2):

- (1) t'iq(=∅)
arrive(=3SU)
"S/he arrived."
- (2) ats'x-en(-∅)=lhkácw=ha
see-TR(-3OBJ)=2SG.SU=YNQ
"Did you see him/her/it?"

In A'-extraction contexts (that is, contexts consisting of a dislocated antecedent in a non-argument position and an associated null anaphor in an

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argument position) this makes it hard to tell whether the anaphor is a zero pronoun (as in (1-2)) or a genuine gap. The problem is illustrated by the WH-questions in (3-4):

- (3) swat ku=t'fq
 who DET=arrive
 "Who arrived?"
- (4) swat ku=áts'x-en=acw
 who DET=see-TR=2SG.CNJ
 "Who did you see?"

The null anaphors associated with the WH-phrases in (3-4) are phonologically identical to the zero pronouns in (1-2). This makes it tempting to treat the two as identical – that is, to hypothesize a zero resumptive pronoun analysis for (3-4), rather than treating the null anaphors as non-pronominal empty categories (i.e., as A'-traces, or 'real' gaps).

There are two ways to address the issue. One is syntactic, and involves applying the classic diagnoses for WH-movement first suggested by Chomsky (1977) to the various candidates for A'-extraction in Salish, which include relative clauses, clefts, and WH-questions. This is the approach taken by Gardiner (1993), Davis, Gardiner and Matthewson (1993), Davis (1994, 2001), and Baptiste (2002).

The second approach is morphological. It involves comparing cases where agreement morphology is overt to their extracted counterparts, to see whether agreement morphology is retained or not. There are two good potential candidates for this kind of approach. The first involves first and second person agreement, which in Salish is always overt (non-null). However, since in general the only possible first and second person A'-antecedents are (focused) independent pronouns, and in many Salish languages, including St'át'imcets, independent pronouns are treated grammatically as third person (see Kroeber 1999: 298, fn 11), this test fails for St'át'imcets, as shown in (5) and (6).

- (5) snúwh=as ku=nás
 you=3CNJ DET=go
 "You go." (Literally: "May it be you who goes.")
- (6) s7éntsa ta=kel7-amc-7úl=a qátsk-lap
 I DET=first-person-most=EXIS older.brother-2PL.POSS
 "I am your oldest brother."

The second candidate is overt third person plural marking. Though across Salish such marking is usually optional even in non-extraction contexts, it can still be used to diagnose gaps, since it is predicted to be obligatorily absent where a true gap is present, but not where there is resumptive pronominal morphology. This is the line taken by Roberts (1999) on St'át'imcets, who argues on the basis of the obligatory absence of the plural marker *wit* in A'-extraction contexts that a true gap is present when the target of extraction is absolutive. However, plural marking in St'át'imcets is also obligatorily absent

in ergative (transitive subject) extraction contexts, even when the overt third person ergative subject suffix *-as* is retained, as noted by Kroeber (1999: 295, fn 10), who comments:

This argument (that obligatory omission of plural marking provides evidence that intransitive subject pronominals are absent in extraction contexts - HD) fails in Lillooet, however, since plural subject marking is also omitted from transitive subject-centered relative clauses when the Transitive Subject proper is retained: the singular third person Transitive Subject *-as* is used, rather than plural *-it-as* or *-as-wit*. [...] In Lillooet, unlike Bella Coola, it would seem that plural marking within a relative clause is omissible if plurality is deducible from other aspects of the DP, such as the initial article.

One might conclude with Kroeber, then, that there are no strong morphosyntactic arguments for the existence of true gaps in St'át'imcets, and evidence must be adduced from subtler syntactic tests.

The principal purpose of this paper is to challenge this conclusion. In mounting this challenge, I will present two main arguments. In the first part of the paper, I will revisit Roberts' evidence for the existence of A'-bound gaps in St'át'imcets in the light of Kroeber's criticisms. I will show that Roberts' original claim can be maintained with some minor modifications. I will also introduce some new data on the retention of plural marking in ergative extraction contexts which I think throw some light on the relationship between agreement morphology, pronominals, and gaps in St'át'imcets.

In the second part of the paper, I will turn to a hitherto overlooked additional source of morphosyntactic evidence for the existence of gaps in St'át'imcets: the possibility of non-agreeing determiners in extraction contexts. This possibility is raised by the fact that in St'át'imcets, unusually for a Salish language, determiners generally agree obligatorily in number with the arguments that they introduce. I will argue that the suspension of this obligatory agreement in extraction contexts provides us with a second important diagnostic for gaps. An additional consequence of this analysis is that it provides support for the three-way distinction between nouns, adjectives and verbs argued for by Davis (2002).

Let us begin, then, by revisiting the issue of plural agreement in extraction contexts.

2 Plural morphology in absolutive extraction contexts

As shown above in (1-2), third person intransitive subject pronouns and transitive object pronouns are both phonologically null in St'át'imcets. In absolutive third person animate plural contexts, however there is an overt marker: the morpheme *wit* may be used to specify plurality, as shown in (7-8):

- (7) t'íq=*wit*
arrive=3PL.SU
"They arrived."

- (8) ats' x-en-*wít*=lhkacw=ha
 see-TR-3PL.OBJ=2SG.SU=YNQ
 "Did you see them?"

This morpheme is an enclitic when marking intransitive subjects, and a suffix when marking transitive objects, as evidenced by the 'mobility criterion' (Kroeber 1999, Davis 2000a): when one or more pre-predicative auxiliaries are present, intransitive *wít* may optionally encliticize to the first auxiliary rather than the main predicate (9), whereas transitive *wít* always remains fixed to the main predicate (10).

- (9) a. wa7 mán'c-em=*wít*
 IMPF smoke-MID=3PL
 "They are smoking."
 b. wá7=*wít* mán'cem.
 IMPF=3PL smoke-MID
 "They ARE smoking."²
- (10) a. wá7=lhkacw=ha zwát-en-*wít*
 IMPF=2SG.SU=YNQ know-TR-3PL
 "Do you know them?"
 b. * wa7-*wít* =lhkácw=ha zwát-en
 IMPF-3PL =2SG.SU=YNQ know-TR
 "DO you know them?"

When an overt plural DP in absolutive function is present in a sentence, *wít* is usually omitted. This is because in St'át'imcets - unusually for a Salish language³ - all existence-asserting determiners (that, is all determiners except for the polarity item *ku*: see Matthewson 1998) are obligatorily marked for number. Since plurality is automatically encoded on the DP by the determiner, *wít* becomes redundant when co-occurring with a plural absolutive argument DP. Nevertheless, *wít* is not ungrammatical in these circumstances, and speakers not infrequently produce sentences containing *wít* and an absolutive DP, even though they regard them as inelegant. I give some examples in (11-15) containing 'doubled' plural marking; they are marked '?' to signify redundancy rather than ungrammaticality.

- (11) ? plán=ha t'iq=*wít* i=snek' w.núk' wa7-sw=a
 already=YNQ arrive=3PL PL.DET=friend(RE DUP)=2SG.POSS=EXIS
 "Have your friends already arrived?"

² When encliticized to an auxiliary, =*wít* is interpreted emphatically, as indicated by the English gloss for (9).

³ Bella Coola is the only other Salish language with plural determiners.

- (12) ? ucwalmícw=*wit* *i*=psxfxnem=*a*
 native.person=3PL PL.DET=chilcotin=EXIS
 "The Chilcotins are native people."
- (13) ? wa7 páqu7=*wit* *i*=sk'wem.k'úk'wmi7t=*a*
 IMPF afraid=3PL PL.DET=children(REDUP)=EXIS
 "The children are afraid."
- (14) ? nás=kacw=ha áts'x-en-*wit* *i*=snek'w.núk'wa7-sw=*a*
 go=2SG.SU=YNQ see-TR-3PL PL.DET=friend/relative(REDUP)=EXIS
 "Are you going to see your friends/relatives?"
- (15) ? sucwt-en-*wit*=lhkal'áp=ha *i*=7i7mats-láp=*a*
 recognize-TR-3PL=2PL.SU=YNQ PL.DET=grandchild=EXIS
 "Did you folks recognize your grandchildren?"

(Note that in (11), (13) and (14) plurality of the subject is marked three times: by *wit*, by the plural determiner, and also by the plural reduplication on *sk'wemk'úk'wmi7t* "children" and *snek'wnúk'wa7* "friends/relatives".)

There is one set of contexts where doubling of a plural DP with *wit* is actually preferred - or at least unmarked. They involve conjunction, either of two ordinary DPs, two or more proper names, a proper name plus one or more ordinary DPs, or an independent pronoun plus one or more proper names or ordinary DPs.⁴ It is these cases which Roberts (1999) exploits as a means of distinguishing null pronominals from true gaps. In all of these cases, *wit* is usually present, and is judged non-redundant, though my consultants also allow it to be omitted in some cases - freely with conjoined ordinary DPs, less so with proper names, and only with difficulty in the case of independent pronouns conjoined with either ordinary DPs or proper names. Data are given in (16-19).

- (16) wa7 alkst(=*wit*) ta=sqatsza7-lhkálh=*a*
 IMPF work(?/√=3PL) DET=father-1PL.POSS=EXIS
 múta7 ta=skicza7-lhkálh=*a*
 and DET=mother-1PL.POSS=EXIS
 "Our father and mother are working."
- (17) wa7 p(x-em')(=*wit*) wi=s-Pikáola
 IMPF hunt-MID(=3PL) PL=NOM- Pikáola
 múta7 s-Tmícus
 and NOM-Tmícus
 "Pikáola and Tmícus are hunting."

⁴ Roberts also employs cases containing a first or second person independent pronoun conjoined with a DP to make the same point. In these cases, the DP is obligatorily doubled by a first or second person pronominal clitic or affix, either singular or plural if the independent pronoun is singular, plural if the independent pronoun is plural. I will not discuss these cases here for reasons of space.

- (18) wa7 q'welaw'-em'?(=wit) ta=skicza7-láp=a
 IMPF pick.berry-MID?(=3PL) DET=mother-2PL.POSS=EXIS
 múta7 s-Mála
 and NOM-Mála
 "You folks' mother and Mála are picking berries."
- (19) tqálk'-em*/?(=wit) áta7 Kamloops=a snilh múta7
 drive-MID*/?(=3PL) there Kamloops=EXIS s/he and
 ta=skicza7-s=a
 DET=mother-3POSS=EXIS
 "S/he and her/his mother drove to Kamloops."
- To summarize: plural marking on absolutive DP's is frequently doubled by plural marking on the predicate, which may either be optional but dispreferred (with ordinary plural DP's), optional but preferred (with conjoined DPs and proper names) or more or less obligatory (with plural independent pronouns conjoined with DPs or proper names).
- This complex (and variable) distributional pattern contrasts starkly with that in absolutive extraction contexts, where no plural marking is ever allowed on the predicate under any circumstances. This is shown in the focused structures in (20-25): (20) and (21) contain ordinary (non-conjoined) plural DP's in focus position, and (22-25) are focused counterparts of each of the conjoined structures in (16-19).
- (20) nilh i=n-snek'w.núk'w7=a
 COP PL.DET=1SG.POSS-friend(REDUP)=EXIS
 plán(*=wit) t'iq(*=wit)
 already(*=3PL) arrive(*=3PL)
 "It's my friends who have already arrived."
- (21) nilh i=n-snek'w.núk'w7=a
 COP PL.DET=1SG.POSS-friend(REDUP)=EXIS
 nas áts'x-en(*=wit)-an
 go see-TR-(*=3PL)-1SG.ERG
 "It's my friends who I'm going to see."
- (22) nilh ta=sqatsza7-lhkálh=a
 COP DET=father-1PL.POSS=EXIS
 múta7 ta=skicza7-lhkálh=a wa7 alkst(*=wit)
 and DET=mother-1PL.POSS=EXIS IMPF work(*=3PL)
 "It's our father and mother who are working."
- (23) nilh wi=s-Pikáola
 COP PL=NOM-Pikáola
 múta7 s-Tmícus wa7 p'x-em'(*=wit)
 and NOM-Tmícus IMPF hunt-MID(*=3PL)
 "It's Pikáola and Tmícus who are hunting."

- (24) *nilh ta=skicza7-láp=a*
 COP DET=mother-2PL.POSS=EXIS
múta7 s-Mála wa7 q'weláw'-em(=wit)*
 and NOM-Mála IMPF pick.berry-MID(*=3PL)
 "It's you folks' mother and Mála who are are picking berries."
- (25) *snilh múta7 ta=skicza7-s=a*
 s/he and DET=mother-3POSS=EXIS
nelh=tqálk'-em(=wit)=a áta7 Kamloops=a*
 PL.ABS.DEF=drive-MID(*=3PL)=EXIS there Kamloops=EXIS
 "S/he and her/his mother were the ones who drove to Kamloops."⁵

I conclude, just as Roberts did, that all the absolutive extraction contexts in (20-25) contain a gap, rather than a resumptive pronoun.

3 Plural morphology in ergative extraction contexts

So far, the picture looks relatively clean. However, recall that Kroeber's objection to Roberts' main argument was based not on the absolutive contexts we have examined so far but on *ergative* extraction contexts: more specifically, on the fact that while the plural component of third person plural transitive subject marking appears to show the same distributional pattern as third person plural absolutive marking – in particular, it is obligatorily absent in A'-extraction contexts – the overt third person marker *-as* does not: it is retained in extraction contexts.

Before turning directly to this argument, it will be necessary to go briefly over the rather complex patterns of transitive subject (ergative) extraction in St'át'imcets, since St'át'imcets uses a variety of morphological devices to signal ergative extraction, depending on the person and number features of the object. I will summarize the relevant facts here: for details, see Davis, Gardiner and Matthewson (1993), Davis (1994), van Eijk (1997: 158-9), Kroeber (1999: 298-9) and Davis (in prep, Chapter 31).

Retention of ergative subject morphology in ergative extraction contexts is obligatory with first and second person objects, as shown in (26) and (27):

- (26) *nilh ta=smúlhats=a áts'x-en-ts-as*
 COP DET=woman=EXIS see-TR-1SG.OBJ-3ERG
 "It was the/a woman who saw me."
- (27) *nílh=ha ta=smúlhats=a ats'x-en-ts-f-has*
 COP=YNQ DET=woman=EXIS see-TR-2SG.OBJ-3ERG
 "Was it the/a woman who saw you?"

⁵ Since independent pronouns are not generally used in clefts, I've used a nominal focus construction in (25), (equivalent to Kroeber 1999's 'bare cleft' construction, as opposed to the 'introduced' clefts with the copula *nilh* in (20-24)).

With third person objects, there are three different possibilities. First of all, though dispreferred, in certain contexts ergative subject marking may be retained. The usual such context is with two DPs, that is where neither object nor subject is a (null) pronominal, and therefore neither has privileged status as the primary discourse protagonist. (In cases with a null third person pronominal, extraction structures with ergative marking are invariably interpreted as cases of absolutive extraction, as shown in Davis 1994, and illustrated in (28) below). Note that when ergative marking is retained in cases of ergative extraction, there is no morphological difference between ergative and absolutive extraction, so examples such as (29) are ambiguous out of context. In practice, such sentences are subject to further pragmatic conditions relating to the relative animacy and topicality of object and subject, in order to allow for disambiguation of the extracted constituent.

- (28) *niłh* *ta=smúlhats=a* *áts'x-en-as*
 COP DET=woman=EXIS see-TR-3ERG
 "It was the woman who s/he saw." (only interpretation)
- (29) *niłh* *ta=smúlhats=a* *áts'x-en-as* *ta=sqáycw=a*
 COP DET=woman=EXIS see-TR-3ERG DET=man=EXIS
 (i) "It was the man who saw the woman."
 (ii) "It was the woman who saw the man."

Passive is also used by a few speakers to mark ergative extraction, generally in the same contexts where retention of ergative marking is permitted (that is, with two overt DPs, one extracted and one in argument position).⁶ The extracted agent in such cases loses its oblique marking, which is otherwise optional. As with retention of ergative marking, this strategy is dispreferred (in fact, it is apparently completely unavailable for Lower St'át'imcets speakers), and is also subject to little understood restrictions on the relative animacy and topicality of object and subject, which serve to disambiguate the extracted constituent.

- (30) % *niłh* *ta=smúlhats=a* *áts'x-en-em* *ta=sqáycw=a*
 COP DET=woman=EXIS see-TR-PASS DET=man=EXIS
 (i) "It's the woman who saw the man."
 (ii) "It's the man who saw the woman."

⁶ When there is no post-verbal DP in a transitive extraction context with passive morphology, there is a very strong tendency to interpret the agent as first person plural (as in other Interior Salish languages, first person plural transitive subject marking in St'át'imcets is homophonous with or identical to passive marking). Thus the preferred translation of a sentence such as (i) is as in (a) rather than the possible alternatives (b) or (c):

- (i) *niłh* *ta=smúlhats=a* *áts'x-en-em*
 COP DET=woman=EXIS see-TR-PAS/1PL.ERG
 (A) "It's the/a woman we saw."
 (B) "It's the/a woman who was seen."
 (C) "It's the/a woman who s/he was seen by."

The third and by far the commonest strategy in ergative extraction contexts with two third persons is to employ one of two specialized suffixes: *-tali* (with both third person singular and plural objects) and *-tanemwitas* (with third person plural pronoun objects only).

- (31) *ni*lh *ta=smúl*hats=a *ats' x-en-táli*
 COP DET=woman=EXIS see-TR-TALI
 ‘‘It was the woman who saw him/her/them.’’ (only interpretation)
- (32) *ni*lh *ta=smúl*hats=a *áts' x-en-táli* *ta=sqáycw=a*
 COP DET=woman=EXIS see-TR-TALI DET=man=EXIS
 ‘‘It was the woman who saw the man.’’ (only interpretation)
- (33) *ni*lh *ta=smúl*hats=a *áts' x-en-tánemwítas*
 COP DET=woman=EXIS see-TR-TANEMWITAS
 ‘‘It was the woman who saw them.’’ (only interpretation)

These possibilities are summarized in the table in (34):

(34) *Ergative extraction morphology*

| | ergative <i>-as</i> | passive <i>-em</i> | <i>-tali</i> | <i>-tanemwitas</i> |
|----------------------------|---------------------|--------------------|--------------|--------------------|
| 1/2 object | √ | * | * | * |
| 3sg object (pronominal) | * | * | √ | * |
| 3pl object (pronominal) | * | * | √ | √ |
| DP object | √ | % | √ | * |

Notice that the one possibility that St'át'imcets does not permit is simple deletion of the ergative subject suffix *-as*, in striking contrast to Central Salish languages, which obligatorily drop transitive subject morphology in all ergative extraction contexts (Kroeber 1999: 275-77 and references therein). We cannot therefore simply extend our account of absolutes (where we took the absence of pronominal morphology as diagnostic for the presence of a gap) to ergative extraction contexts.

Nevertheless, the distribution of plural marking in third person ergative contexts closely parallels its distribution in third person absolute contexts. The basic generalizations in ergative non-extraction contexts are exactly the same as with third person absolutes: plural morphology is optional (though dispreferred) when a plural subject DP is present, and obligatory to the same varying degrees and in the same special co-ordination contexts as absolute plural marking. This is very unlikely to be accidental.⁷ Data are given in (35-44).

⁷ It is also worth mentioning that exactly the same pattern emerges with plural possessives (see Davis in prep., Chapter 7), demonstrating fairly conclusively that

- (35) ats' x-en-ts-*as/?-álitas* *i=sám7=a*
 see- TR-1SG.OBJ-3ERG/?3PL.ERG *PL.DET=white.person =EXIS*
 "The white people saw me."
- (36) ats' x-en-tsi-*has(?-wít)=ha* *i=sám7=a*
 see- TR-2SG.OBJ-3ERG(PL?)=YNQ *PL.DET=white.person =EXIS*
 "Did the white people see you?"
- (37) ats' x-en-ts-*as/-álitas* *i=sám7=a*
 see- TR-1SG.OBJ-3ERG/-3PL.ERG *PL.DET=white.person =EXIS*
múta7 i=7ucwalmícw=a
 and *PL.DET=native.person =EXIS*
 "The white people and the Indians saw me."
- (38) ats' x-en-tsi-*has(-wít)=ha* *i=sám7=a*
 see- TR-2SG.OBJ-3ERG(-PL)=YNQ *PL.DET=white.person =EXIS*
múta7 i=7ucwalmícw=a
 and *PL.DET=native.person =EXIS*
 "Did the white people and the Indians see you?"
- (39) ats' x-en-tsas/-*álitas* *wi=s=Pikáola*
 see- TR-1SG.OBJ-3ERG/-3PL.ERG *PL=NOM=Pikáola*
múta7 s=Tmícus
 and *NOM=Tmícus*
 "Pikáola and Tmícus saw me."
- (40) ats' x-en-tsi-*has(-wít)=ha* *wi=s=Pikáola*
 see- TR-2SG.OBJ-3ERG(-PL)=YNQ *PL=NOM=Pikáola*
múta7 s=Tmícus
 and *NOM=Tmícus*
 "Did Pikáola and Tmícus see you?"
- (41) ats' x-en-ts-*as/-álitas* *i=sám7=a*
 see- TR-1SG.OBJ-3ERG/-3PL.ERG *PL.DET=white.person =EXIS*
múta7 s=Pikáola
 and *NOM=Pikáola*
 "The white people and Pikáola saw me."
- (42) ats' x-en-tsi-*has(-wít)=ha* *i=sám7=a*
 see- TR-2SG.OBJ-3ERG(PL)=YNQ *PL.DET=white.person =EXIS*
múta7 s=Pikáola
 and *NOM=Pikáola*
 "Did the white people and Pikáola see you?"

this is a general property of third person plural inflection in St'át'imcets, rather than of any particular agreement paradigm.

(43) ats'x-en-ts*?-as/-álitás snilh
 see-TR-1SG.OBJ-?*3ERG/3PL.ERG him/her
 múta7 ta=skícza7-s=a
 and DET=mother-3POSS=EXIS
 "S/he and her/his mother saw me."

(44) ats'x-en-tsi-has*?(-wít)=ha snilh
 see-TR-2SG.OBJ-3PL.ERG=YNQ him/her
 múta7 ta=skícza7-s=a
 and DET=mother-3POSS=EXIS
 "Did s/he and her/his mother see you?"

So far, we have seen the plural component of ergative marking behaving in exactly the same way as the plural component of absolutive marking. However, in ergative extraction contexts, some subtle differences emerge.

When a third person plural subject is extracted from a clause with a second person object, plural marking is obligatorily absent, as with absolutives.

(45) cúlel=tu7 nelh=7ats'x-en-tsí-has(*-wít)=a
 run.away=past PL.ABS.DET=see-TR-2SG.OBJ-3ERG(*-3PL)=EXIS
 sáma7
 white.person
 "Those white people who saw you ran away."

(46) cúlel=tu7 nelh=7ats'x-en-tamal'ap-ás(*-wít)=a
 run.away=past PL.ABS.DET=see-TR-2PL.OBJ-3ERG(*-3PL)=EXIS
 sáma7
 white.person
 "Those white people who saw you folks ran away."

On the other hand, for some speakers, plural morphology may optionally be retained when a third person plural subject is extracted from a clause with a first person object.

(47) cúlel=tu7 nelh=7ats'x-en-ts-as/%-alítás =a
 run.away=past PL.ABS.DET=see-TR-1SG.OBJ-3ERG/%3PL.ERG=EXIS
 sáma7
 white.person
 "Those white people who saw me ran away."

(48) cúlel=tu7
 run.away=past
 nelh=7ats'x-en-tumulhás/%-tumulítás=a
 PL.ABS.DET=see-TR-1PL.OBJ-3ERG/%-1PL.OBJ-3PL.ERG=EXIS
 sáma7
 white.person
 "Those white people who saw us ran away."

In plural ergative extraction contexts with a third person object, ergative morphology is usually replaced by special suffixes (see (31-33)) above). However, where ergative marking is retained, the distribution of plural inflection is the same as with first person objects: retention of plural marking is possible for some speakers, but not for others.

- (49) *cúlel=tu7* *nelh=7ats'x-en-ás/ %-ítas=a*
run.away=past PL.ABS.DET=see-TR-3OBJ-3ERG/%3PL.ERG=EXIS
sáma7
white.person
"Those white people who saw him/her/them ran away."⁸

In explaining this complex set of facts, I will make the following crucial claim:

- (50) *Third person plural features in St'át'imcets are pronominal*

Moreover, I will assume this claim holds irrespective of the morphological instantiation of plural features as clitics or affixes. Given this assumption, we can make sense of the fact that plural morphology of either the enclitic or suffixal variety disappears in A'-extraction contexts, by exploiting the well-known generalization that pronouns may not normally be directly A'-bound in 'WH-movement' contexts (including questions, relative clauses, and clefts). This is of course the same generalization that blocks resumptive pronouns in parallel English examples such as "Who did you say (*he) knows the answer."

On the other hand, by the same reasoning, we will assume ergative *-as* is *non-pronominal*: it is a pure agreement marker, which may coexist with a syntactic gap in the same way as, say English third person *-s* coexists with an A'-extraction site in sentences such as "Who did he say __ knows the answer?"⁹ This of course entails that in the ending *-aswit*, the two components *-as* and *-wit* must be syntactically decomposable, since *-wit* is pronominal but *-as* is not, even though the two are not separable and act morphologically as a single unit.

⁸ Note there is no way to distinguish third person singular from third person plural objects with a third person (ergative) subject: both are represented by \emptyset . If plurality of the object needs to be specified, speakers generally add a plural demonstrative enclitic, as in (i):

(i) *ats'x-en-(\emptyset)-ítas=iz'*
see-TR-(3OBJ)-3PL.ERG=those
" They saw those ones."

⁹ An alternative is to treat ergative *-as* not as an agreement marker, but as a marker of active voice, in opposition to passive *-em*. There are obvious advantages to such a move (it accounts for the fact that the two are in complementary distribution, occupy the same morphological slot, and both occur with object agreement). However, historically, *-as* certainly belonged to an agreement paradigm (the transitive subject suffix paradigm, which is still intact in the rest of Interior Salish: see Kroeber 1999, Davis 2000a) so I will not make this move here.

As for those speakers who unexpectedly retain plural morphology in ergative extraction contexts, a look at the third person plural transitive subject paradigm (given in (51)) sheds some light on this problem. While we see that some reflex of the basic plural morpheme *wit* (italicized in the table) is detectable as a component of all third person plural ergative subject suffixes, it varies in the degree to which it is fused with the object suffixes and the third person ergative suffix *-as*. In particular, while it retains its original shape *-wit* with second person objects, it has become reduced to just *-it-* with first person and third person objects (and also precedes *-as* rather than following it in these cases).

| (51) | plain | causative |
|---------------------|------------------------|------------------------|
| 1st singular object | - <i>tsalitas</i> | -tum(') <i>calitas</i> |
| 2nd singular object | - <i>tsihaswit</i> | -tum(') <i>ihawit</i> |
| 3rd singular object | - <i>itas</i> | - <i>twitas</i> |
| 1st plural object | - <i>tumulitas</i> | - <i>tumulitas</i> |
| 2nd plural object | - <i>tamal'apaswit</i> | - <i>tamal'apaswit</i> |
| 3rd plural object | - <i>itas</i> | - <i>twitas</i> |

Now, recall that it is precisely with first and third person objects that some speakers retain plural marking in ergative extraction contexts. There is therefore a correlation between reduction of plural morphology and retention of plural marking in extraction contexts. We can explain this correlation if we assume that for speakers who allow retention, plural marking is no longer pronominal just in case it no longer constitutes a separable morpheme. For these speakers, morphological fusion has led to the development of *plural agreement* suffixes in part of the ergative paradigm.

This account has several theoretical implications. The first concerns the relation between morphology and syntactic features. It suggests that the morphological realization of inflectional features matters to the syntax, but in a rather particular fashion. What seems to be important is that, in order to act as an independent syntactic unit, a set of features must constitute a distinct morphological unit. What does not seem to matter is whether those features are realized as an affix or a clitic, or how they are ordered relative to other morphemes. Thus, plural features can be pronominal either when they are realized as transitive object suffixes or when they are realized as intransitive subject clitics, even though in the former case they occupy a position preceding (inside) ergative suffixes, which are by hypothesis crucially non-pronominal.

Second, the analysis proposed here has obvious implications for the syntax of DPs which co-occur with plural inflectional morphology. Since plural morphology is, by hypothesis, pronominal, the prediction is that DPs which double plural inflection cannot occupy argument positions, but must instead be dislocated adjuncts coindexed with pronouns in argument positions (along the lines of Baker 1996). As such, we expect these DPs to have the properties of clitic left dislocated DPs – in particular, to have wide scope and be strongly referential. This prediction is borne out, as evidenced by the fact that *wit* is impossible in negative existentials, where only non-referential elements are

permitted: compare the negative existential sentence in (52) with (53), where *wit* is permitted, and it and its associated DP take wide scope over negation.

(52) cw7aoz ku=scwelálhp(*=*wit*)
 NEG DET=ghost(*=3PL)
 "There are no ghosts."

(53) cw7aoz kw=s=scwelálhp(=*wit*) iz' ku=7úcwalmicw
 NEG DET=NOM=ghost(=3PL) those DET=Indian.person
 "Those people are not ghosts."

The third major implication of the account given here is the one we set out to establish in the first place: the correlation between the disappearance of third person plural morphology and the presence of a 'true' gap rather than a resumptive pronoun. Given the modifications we have made to Roberts' original proposal – in particular, the crucial assumption that third person plural morphology but not ergative morphology is pronominal – we are now able not only to maintain but to strengthen his conclusions concerning the relation of plural inflection to syntactic gaps in St'át'imcets. In particular, we have now established that in *every* paradigm (including the ergative as well as the absolutive), the obligatory absence of plural morphology in extraction contexts is a reliable diagnostic for a true gap.

4 A further argument for gaps: singular determiners in plural extraction contexts

We now turn to a second major morphological argument for the existence of non-pronominal empty categories in St'át'imcets: the neutralization of number agreement on determiners in plural extraction contexts.

As mentioned above, St'át'imcets is one of only two Salish languages that obligatorily encode number in their determiner systems. The St'át'imcets system is given below in (54): see van Eijk (1997), Matthewson (1998) for further details.

| (54) | present | absent | remote | |
|------------------------|---------------|-----------------|------------------|-----------|
| singular ¹⁰ | <i>ta...a</i> | <i>na...a</i> | <i>ku...a</i> | <i>ku</i> |
| plural | <i>i...a</i> | <i>nelh...a</i> | <i>kwelh...a</i> | |
| collective | <i>ki...a</i> | | | |

As you can see, the singular-plural distinction holds throughout the core of the determiner system: it is neutralized only with the collective determiner *ki...a* (which is inherently plural) and with the non-referential determiner *ku*. It is also important to point out that unlike plural marking with *wit* or with reduplication, plural determiners are obligatory with plural nouns, even when plurality is

¹⁰ These are Upper St'át'imcets pronunciations; in Lower St'át'imcets the determiners *ta...a* and *na...a* are pronounced *ti...a* and *ni...a*, respectively.

redundantly marked either on the noun itself, as in (55), or elsewhere in the sentence, as in (56-57).

- (55) *cúy'*=lhkan s-7ats'x-s
 going.to=1SG.SU STA-watch-CAU
*i=/*ta*=sk'wem.k'úk'wmi7t=a
 PL.DET=/*SG.DET=children[REDUP]=EXIS
 "I'm going to watch the children."
- (56) *qwatsáts nelh=/*na=n7án'*was=a
 leave PL.ABS.DET=/*SG.ABS.DET=two(human)=EXIS
sáma7 *i=gáp*=as
 white.person when(past)=evening =3CNJ
 "Two white people left last night."
- (57) *snuláp*=ha *i=/*ta*=kéckec-s=a
 you.folks=YNQ PL.DET=/*SG.DET=older.sister-3POSS=EXIS
 s=John
 NOM=John
 "Are you folks John's older sisters?"
- However, in certain A'-extraction contexts, number agreement on determiners is sometimes unexpectedly suspended: either a plural or a singular determiner may be employed with a plural antecedent. This is shown in (58-60) with a cleft, a (complex) nominal predicate, and a focused (predicative) independent pronoun, respectively.¹¹
- (58) *n7án'*was *sáma7* *nelh=/na=qwatsáts*=a
 two(human) white.person PL.ABS.DET=/SG.ABS.DET=leave= EXIS
 "Two white people were the ones who left."
- (59) *nfh*=ha s=Mary *muta7* s=John
 COP=YNQ NOM=Mary and NOM=John
i=/ti=xlit-en-ácw=a
 PL.DET=/SG.DET=invite-TR-2SG.ERG=EXIS
 "Was it Mary and John you invited?"
- (60) *snuláp*=ha *nelh=/na=7áts'x-en-ts-ás*=a
 you.folks=YNQ PL.ABS.DET=/SG.ABS.DET=see-TR-1SG.OBJ-3ERG=EXIS
 "Was it you folks who saw me?"

Number neutralization occurs with both transitive and intransitive predicates (compare (58) and (59)), with both subject and object extraction (compare (59) with (60)), and with all aspectual classes, including (stage-level) states,

¹¹ Van Eijk (1997: 241) briefly mentions this possibility for focused independent pronouns, but not for other cases of A'-extraction.

activities, achievements, and accomplishments, as shown in (61-64) below, respectively.

- (61) wi=snímulh *neh=/na=qlfla*
 PL=we ABS.PL.DET=/ABS.SG.DET=angry=EXIS
 “We are the ones that got angry.”
- (62) wi=snuláp=ha *neh=/na=7ít'-em=a*
 PL=you.folks=YNQ PL.ABS.DET=/SG.ABS.DET=sing-MID=EXIS
 “Was it you folks that sang?”
- (63) snuláp=ha *i=/ta=tsícw=a* áku7
 you.folks=YNQ PL.DET=/SG.DET=get.there=EXIS to.there(invisible)
 “Were you folks the ones that got there?”
- (64) wi=snímulh *i=/ta=xilh-tal' í=ha*
 PL=we PL.DET=/SG.DET=do(CAUS)-TOP=EXIS
 “We are the ones that did it.”

Number neutralization is not possible when there is no overt plural antecedent (for obvious reasons: if number on the determiner is neutralized in such cases, there is no distinguishing mark of plurality at all):

- (65) ats'x-en=lhkácw=ha *ni=cúlel=a*
 see-TR=2SG.SU=YNQ SG.ABS.DET=run.away=EXIS
 “Did you see the one/*ones who ran away?”
- (66) t'íq ta=t'íq=a
 come.here SG.DET=come.here=EXIS
 “Someone/*some people came.” (Literally: “The one that came, came.”)

The most natural explanation for the phenomenon of number neutralization links the absence of number on the determiner to the fact that it is associated with an A'-chain. More specifically, I will make the following claims:

- (67) i. *The gap at the foot of an A' chain has no inherent number*
 ii. *A determiner agrees in number with its complement*
 iii. *Nouns are inherently specified for number*

The claim in (i), that a gap has no inherent number, follows from the fact that it is a variable created by lambda abstraction over the constituent from which extraction has taken place. See Heim and Kratzer (1998) for this by now fairly standard semantic account of extraction in relative clauses and related constructions.

The claim in (ii), that determiners acquire their number specification via agreement with their complement, is less obvious. However, together with claim (iii), it allows us to distinguish between nominal complements, which

have inherent number, and clausal complements, which do not, thus immediately accounting for the contrast in number neutralization between the two.¹²

Together, these claims account for the number neutralization facts. When a determiner introduces a nominal complement, it will agree obligatorily with the noun, which is inherently specified for number. When a determiner introduces a relative clause, however, its complement will be headed by the index of the extracted constituent, which, being a variable, has no inherent number specification. The determiner therefore shows number neutralization.

As for the lack of number neutralization in ‘headless’ relative clauses such as (65) or (66), here I will assume a null pronominal head (*pro*) inherently specified for number (singular or plural) just like an ordinary nominal head. This *pro* will trigger number agreement on the determiner, preventing number neutralization.¹³

If this account turns out to be correct, it not only provides further strong supporting evidence for the gap analysis of A’-extraction in St’át’imcets, but has a number of other non-trivial side effects. First of all, in order to account for the fact that number is obligatory on ordinary (nominal) DPs but not on relative clauses, we must obviously draw a principled distinction between two types of DP which appear superficially identical in structure:

(68) t’ak ta=nk’yáp=a
go.along DET=coyote=EXIS
“The coyote went along.”

(69) nk’yap ta=t’ák=a
coyote DET=go.along=EXIS
“The one going along was a coyote.”

In spite of surface appearances, according to our analysis, the DP’s in (68) and (69) have different structures: in (68), the determiner takes a simple NP as its complement, just like its English translation; but in (69), the DP consists of a ‘headless’ relative clause. The latter involves empty operator movement in the

¹² This claim has another interesting consequence. In discussing the arguments put forward by Davis and Matthewson (1996) that the ‘complementizers’ *kw* and *t(a)* which introduce a range of subordinate clauses in St’át’imcets are in fact identical to the determiners *ku* and *ta* which they closely resemble, Kroeber (1999: 206) points out that “... it is not obvious why the plural articles should not be used to introduce complement clauses that refer to multiple events.” However, if, as suggested by the account of number neutralization given here, determiners have no inherent number and clauses cannot provide number specification, the absence of plural articles with clausal complements follows rather straightforwardly.

¹³ Once again, this move has far-reaching implications, since it provides an indirect argument for a “*pro*-headed” analysis of so-called headless relative clauses, rather than a truly “headless” analysis where the determiner directly selects for a (predicative) CP complement. Note that semantically, the two approaches are equivalent: in fact, since the *pro* in the *pro*-headed analysis is semantically vacuous, if anything the headless approach is to be preferred on the grounds of economy. Morpho-syntactic evidence for *pro* in this environment is thus particularly significant.

syntax, corresponding to lambda abstraction in the semantics, which leaves a variable in the argument position of the predicate and allows number on the determiner to be neutralized. In order for this analysis to go through, it is of course critical that there be a lexical categorial distinction between N and V in the syntax, thus providing us with yet another argument against a category-neutral view of St'át'imcets syntax, contra van Eijk (1997), but in support of Demirdache and Matthewson (1995), Matthewson and Davis (1995), Davis, Lai and Matthewson (1997), Davis and Matthewson (1999), and Davis (2002).

However, it is important to point out that number is not always neutralized on determiners introducing a relative clause.

There is a further interesting twist to this story. When we look at number on determiners introducing (individual level) adjectives,¹⁴ we find – at first glance surprisingly – that they pattern with nouns rather than with verbs: that is, number cannot be neutralized on the determiners introducing them, as shown in (69-70):

- (69) *snuláp=ha* *i=/*ta=léxlex=a*
 you.folks=YNQ *PL.DET/*SG.DET=smart=EXIS*
 “Are you the smart ones?”
- (70) *wi=snimúlh* *i=/*ta=lheq'iq'-al'qwem'=a*
 PL-we *PL.DET/*SG.DET=short-looking=EXIS*
 “*We are the short ones.*”

This suggests – somewhat counter-intuitively - that like nouns, adjectives can be directly introduced by determiners in St'át'imcets. However, an alternative analysis is available, which I think captures the facts in a more satisfying fashion. Assume that in St'át'imcets a noun can be ellipsed when preceded by both (i) an appropriate discourse antecedent and (ii) a pronominal adjective, crucially without the creation of an A'-chain. The resulting structure will contain a (phonologically null) pro-NP, equivalent to English “one”, modified by a pronominal adjective, but crucially no relative clause, therefore no gap nor A'-chain. Since the relevant empty category will be a pronominal rather than a true gap, number will not be neutralized. In support of this analysis, it should be noted that whereas DPs containing nouns can freely introduce new discourse referents, those containing individual level adjectives cannot. Compare for example, the two sentences below, both elicited in an ‘out-of-the-blue’ context, and note the speaker’s reaction to (72):

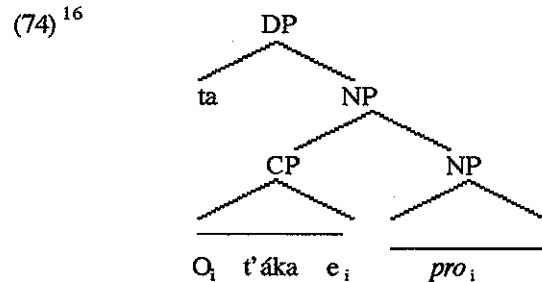
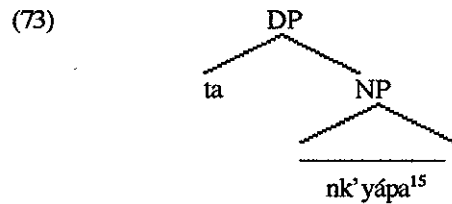
- (71) *kwánen-s=kan* *ta=sts'úqwaz'=a*
 catch- CAUS-1SG.SU *DET=fish=EXIS*
 “*I caught a fish.*”
- (72) *kwánen-s=kan* *ta=xzúm=a*
 catch- CAUS-1SG.SU *DET=big=EXIS*
 “*I caught a big.*”

¹⁴ Stage level adjectives in St'át'imcets behave like intransitive verbs: see Davis (2002) for discussion.

“Stam’? [What?]” Laughs.... “You’re left dangling, waiting for what the big thing was you caught.”

What this indicates is that in the adjectival case in (72), but not the nominal one in (71), a previously introduced referent must be available to provide an appropriate discourse antecedent. This in turn strongly suggests that there is a null pronominal heading the NP in (72), but not in (71) – exactly along the lines of the analysis proposed above.

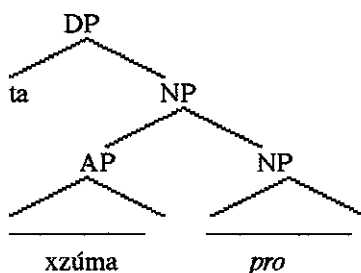
Assuming all this is on the right track, we must further subdivide DPs in St’át’imcets – into those containing a noun, which are cases of simple NP complementation by the determiner, those containing a verb, which are relative clauses, and those containing an (individual-level) adjective, which involve adjectival modification of a null NP complement. The three structures are given schematically in (73-75):



¹⁵ I am ignoring the structural position of the existential enclitic =a here. As argued in Davis (2000b), it probably projects another layer of functional structure, which I have left out for reasons of expository clarity.

¹⁶ The structure in (74) is that of a *pro*-headed ('headless') relative clause: see footnote 13. In cases of number neutralization, I assume a truly 'headless' structure, where there is no nominal or pronominal head, hence no inherent number specification which the determiner can agree with. This has the further consequence that constructions where number neutralization takes place (clefts and focus structures) contain bare CP predicates, not NPs: in other words, they are only partially relative clause structures, in that they contain the clause, but not the head NP.

(75)



5 Conclusion

The principal purpose of this paper has been to present morphosyntactic evidence for the existence of gaps (syntactic variables) rather than empty resumptive pronouns (*pro*'s) at the foot of A'-chains in St'át'imcets. I have presented two main arguments to this effect, the first extending Roberts' (1999) analysis of the obligatory absence of plural morphology in A'-extraction contexts, the second based on the neutralization of number agreement on determiners introducing A'-chains. These arguments corroborate earlier syntactic evidence (based primarily on island effects) for A'-movement in relative clauses and related constructions (including WH-questions and clefts). Together, I believe they constitute a very strong case for a movement analysis of A'-dependencies in St'át'imcets, and by hypothesis in other Salish languages.

The analysis I have provided also has a number of implications for other areas of the grammar. On the morphology-syntax interface, I have argued that the pronominal status of the plural marker is tied to its morphological integrity – where it is fused with agreement morphology, it has begun to be treated by at least some speakers as plural agreement rather than as a plural pronoun. On the other hand, the pronominal status of the plural morpheme is independent of its linear position, its grammatical function, or its degree of cohesion with its host: plural marking may be pronominal either when associated with an object and realized as a suffix, when associated with a transitive subject and realized as a suffix, or when associated with an intransitive subject and realized as an enclitic.

On the syntactic side, my analysis of plural marking argues that we must recognize a limited kind of 'pronominal argument' syntax in St'át'imcets: since plural morphology can be pronominal, associated plural DPs must (at least optionally) be represented as dislocated adjuncts, coindexed with pronominals. Conversely, ordinary DPs (in both absolutive and ergative functions) are not dislocated, but occupy argument positions, and overt (non-plural) third person marking is non-pronominal.

Number neutralization on determiners also has a number of implications for the syntax of St'át'imcets, and for Salish more generally. In terms of the ongoing debate over lexical categories, the analysis given here provides further support for the tripartite division between N, V, and A argued for in Davis (2002). In particular, the lack of number neutralization on individual level adjectives (which pattern with nouns in this respect) shows that they must constitute a distinct category from other (clausal) modifiers in not containing an A'-dependency, but instead act as phrasal modifiers to a null pronominal head. In

addition, the lack of number neutralization on determiners in both 'headed' and 'headless' relative clauses, as opposed to its presence in clefts and focus constructions argues that the former uniformly contain an NP head (either nominal or pronominal), whereas the latter contain bare CP predicates.

Appendix

Conversion chart for American Phonemic and van Eijk St'át'imcets Practical Orthography

| orthography | phonemic | orthography | phonemic |
|-------------|-----------------|-------------|----------------|
| p | p | x | ǰ |
| p' | p̰ | xw | ǰ ^w |
| m | m | r | ɣ |
| m' | m̰ | r' | ɣ̰ |
| t | t | g | ŋ |
| ts | č, c | g' | ŋ' |
| ts' | č̰ | gw | ŋ ^w |
| s | š, s | g'w | ŋ ^w |
| n | n | h | h |
| n' | n̰ | w | w |
| t' | ǰ | w' | w̰ |
| lh | ɬ | y | y |
| l | l | y' | y̰ |
| l' | ɬ̰ | z | z |
| k | k | z' | z̰ |
| k' | k̰ | ʔ | ʔ |
| kw | k ^w | a | æ |
| k'w | k̰ ^w | ao | ɑ |
| c | x | e | ə |
| cw | x ^w | v | ʌ |
| q | q | i | i |
| q' | q̰ | ii | e |
| qw | q ^w | u | u |
| q'w | q̰ ^w | o | o |

Abbreviations

ABS = absent, ACT = active intransitivizer, ADHORT = adhortative enclitic, AUT = autonomous intransitivizer, CAU = causative transitivizer, CNJ = conjunctive subject clitic, COP = copula, DET = determiner, ERG = ergative (transitive) subject suffix, EXIS = existential enclitic, IMPF = imperfective, MID = middle, NOM =

nominalizer, OBJ = object suffix, PL = plural, POSS = possessive, REDUP = reduplication, SG = singular, STA = stative prefix, SU = indicative subject clitic, TR = directive transitivizer, YNQ = yes-no question enclitic. A dash (-) corresponds to an affix boundary, a period (.) separates reduplicants, and an equals sign (=) corresponds to a clitic boundary. % indicates speaker variation with respect to grammaticality judgements.

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