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Electronic version

URL: <http://journals.openedition.org/rlv/1695>

DOI: 10.4000/rlv.1695

ISSN: 1958-9239

Publisher

Presses universitaires de Vincennes

Printed version

Date of publication: 1 June 2008

Number of pages: 31-54

ISBN: 978-2-84292-214-6

ISSN: 0986-6124

Electronic reference

Leora Bar-el, « Verbal number and aspect in Skwxwú7mesh », *Recherches linguistiques de Vincennes* [Online], 37 | 2008, Online since 01 June 2012, connection on 19 April 2019. URL : <http://journals.openedition.org/rlv/1695> ; DOI : 10.4000/rlv.1695

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VERBAL NUMBER AND ASPECT IN SKW̥XWÚ7MESH*

ABSTRACT

This paper examines two productive patterns of reduplication in Sk̥wxwú7mesh (Squamish; Salish), exploring the relation between aspect and verbal number. The paper proposes that the CVC reduplicant, which attaches to both nouns and verbs, is a plural marker; the observed aspectual meanings (e.g., habitual, unbounded iteration) are the salient readings associated with plural events. This paper further proposes that the CV reduplicant, which attaches to verbs only, is an aspectual marker; i.e., it marks the progressive and not a plurality of sub-events. This paper adopts Lasnik's (1995) account of pluractionality, but proposes that the distributivity requirement is not a necessary condition for plurality in Squamish.

KEYWORDS

reduplication, aspect, verbal number, pluractionality, Salish

1. Introduction

Cross-linguistically, the process of reduplication operates on items from various categories (nouns, verbs, adjectives, etc.) and covers a broad range of meanings, such as plurality, completive events, intensity, diminutiveness, possession, among many others. Reduplication is a common morphological process in the Salish language family; the most common reading associated with it being augmentation (i.e. greater in number, intensity, size, etc.)¹. S_kw_xwú7mesh (a.k.a., and henceforth, Squamish²) exhibits two productive patterns of reduplication: CVC and CV. CVC reduplication usually involves a copy of the first and second consonants of the base, and the insertion of a schwa. CV reduplication on the other hand, copies the first consonant and the first vowel of the base. Stress is quality sensitive; the leftmost full vowel receives primary stress (though not usually marked orthographically). The CVC and CV reduplicants are in boldface in the examples below:

- (1) a. chen kw'ach-nexw-as 7alhi slhanay'
 1s.SG look.at-TR(LC)-3ERG DEM woman
 'I saw the woman'
- b. chen **kw'ech**-kw'ach-nexw-as
 1s.SG REDUP-look.at-TR(LC)-3ERG
- 7alhi slhanay' 7i7_xw skwayl
 DEM woman all/every day
 'I see the woman everyday'³
- (2) a. chen xitl'-in ta stsek
 1s.SG chop-TR DET tree
 'I chopped the wood'
- b. chen **xi**-x_itl'-in ta stsek
 1s.SG REDUP-chop-TR DET tree
 'I continuously chopped the wood'

The readings associated with CVC and CV reduplication in Squamish, for example, habitual for CVC in (1) and continuous for CV in (2), suggest that these reduplicants might be aspectual morphemes. However, the plurality of events or sub-events denoted by these predicates suggests that these reduplicants could also be argued to be plural markers. The goal of this paper is to explore these two possible analyses and show how both are correct, but each for a different reduplicant.

The proposals I put forth in this paper are the following: (i) the CVC reduplicant is a *plural* marker in Squamish; the observed aspectual meanings are the salient readings associated with plural events, and (ii) the CV reduplicant is an *aspectual* marker, not a plural marker; the aspectual

meanings that arise are due to the fact that the CV reduplicant is the progressive marker in squamish.

This paper is outlined as follows: I first examine CVC reduplication and show that in the verbal domain, it induces habitual and iterative readings (§2). I then explore two possible analyses for the CVC reduplicant, as an aspectual morpheme and as an instance of verbal number, and argue that the number analysis is preferred (§3). I present Lasersohn's (1995) account of pluractionality and propose a revised version for the Squamish data, exploring the notion of temporal distribution (§4). I continue with an examination of the CV reduplicant in Squamish and propose that it is not a plural morpheme but instead an aspectual one, namely, the progressive (§5). The paper ends with some concluding remarks and an outline of issues for further research (§6).

2. CVC reduplication in Squamish.

The sentences below illustrate that CVC reduplicated verbs in Squamish are translated by speakers as plural events.⁴

The plurality denoted by the reduplicated verb is sometimes expressed as habituality, as illustrated by the speaker's translations/comments "always" and "all the time", as in (3) and (4), as well as the fact that the reduplicant is used to express the English generic/habitual sentence 'He's a smoker' in (5).

- (3) a. lha Linda na kwe'lh-nexw-as kwetsi staḱw
 DET Linda RL spill-TR-3ERG DEM water
 'Linda spilled the water (by accident)'

b. *Context: Linda is accident prone*

- lha Linda na **kw'elh**-kw'elh-nexw-as ta staḱw
 DET Linda RL REDUP-spill-TR-3ERG DET water
 'Linda spills the water all the time'

Speaker's comments: "She's always spilling...it's a (bad) habit..."you can say that instead of lhiḱ' ['always']"

- (4) a. chen tl'exwenḱ
 1S.SG win.INTR
 'I won'

- b. chen **tl'ex**-tl'exwenḱ
 1S.SG REDUP-win.INTR
 'I'm winning all the time'

- (5) na **lhelh**-lhelh-sp'utl'em
 RL REDUP-ingest-smoke
 'He's a smoker'

In other cases, this plurality is expressed as (unbounded) iteration, suggested by the speaker's translations "several/many times" in (6) and (7).⁵ Note also that the possibility of using (6b) in a context where the subject's job is to hunt suggests a habitual reading as well:

- (6) a. chen kwelesh-t ta sxwi7shn
 1s.SG shoot-TR DET deer
 'I shot a deer'
- b. chen **kwel**-kwelesh-t ta sxwi7shn
 1s.SG REDUP-shoot-TR DET deer
 'I shot it several times' / 'I shot the deer continuously'⁶
 (Also possible in the context: I hunt for a job)

- (7) chen **7exw**-7exw-i7n
 1s.SG REDUP-cough-INTR
 'You coughed many times'
 *Speaker's comments: "almost like keɣalh [many times]"*⁷

The use of the progressive in the translations of (8) and (9), along with the speaker's translation "for a while" in (9), are also suggestive of iteration or continuity:

- (8) a. chen tselkw-an ta smant
 1s.SG kick-TR DET rock
 'I kicked the rock'
 Speaker's comments: "you did it once"
- b. chen **tsel**-tselkw-an ta smant
 1s.SG REDUP-kick-TR DET rock
 'I'm kicking the rock'
- (9) a. chen kw'ach-nexw-as 7alhi slhanay'
 1s.SG look.at-TR(LC)-3ERG DEM woman
 'I saw the woman'
- b. chen **kw'ech**-kw'ach-nexw-as 7alhi slhanay'
 1s.SG REDUP-look.at-TR(LC)-3ERG DEM woman
 'You've been watching her for a while'⁸

In even other cases, the reduplicated verb seems to simply express 'more than once', as indicated by the comments and contexts in (10), (11) and (12):

- (10) a. chen sak'-an ta seplin
 1S.SG cut- TR DET bread
 'I cut the bread'
Speaker's comments: "just once"
- b. chen sek'-sak'-an ta seplin
 1S.SG REDUP-cut- TR DET bread
 'I sliced the bread'
Context: I cut it more than once or entire loaf is cut up in pieces
- (11) a. chen lixw
 1S.SG fall
 'I fell down'
- b. chen lexw-lixw
 1S.SG REDUP-fall
 'I tripped' (Context: 'more than one time')
- (12) a. chen lhikw'-shn
 1S.SG hook-foot(LS)
 'I tripped' (lit. get your foot hooked)
- b. chen lhek'w'-lhikw'-shn
 1S.SG REDUP-hook-foot(LS)
 'I tripped' (Context: 'more than one time')
Speakers' comments: "you were getting tripped constantly"

Whether the reduplicated verb yields a habitual, iterative, or other plural reading does not seem to be dependent on the verb type, as illustrated by the data in (6), where the same reduplicated verb yields either a habitual-like interpretation or an iterative-like interpretation (cf. also (1b) and (9b)). I suggest that either reading is available for any CVC reduplicated verb and it is the context and the meaning of the verb itself that determines which (habitual, iterative, etc.) is the more salient reading. In other words, these interpretations are not different readings, but are contextually determined.

The readings associated with the CVC reduplicated verb could suggest that on the one hand, this is an aspectual morpheme that encodes a type of imperfectivity. On the other hand, the observed readings associated with the reduplicant are the same as those associated with verbal number. In the following section I examine these two approaches.

3. Aspect or verbal number?

This section outlines two possible accounts of CVC reduplication: (i) as an

instance of verbal number (ii) as a marker of aspect. I propose that an analysis of the CVC reduplicant as an instance of verbal number is the correct analysis and that the observed aspectual readings are contextually determined.

3.1. Imperfective aspect

Languages that grammaticalize aspect distinguish between at least two classes: perfective and imperfective. Comrie (1976) describes perfectivity as involving a “lack of explicit reference to the internal temporal constituency of a situation” (p. 21). Imperfective, on the other hand, involves “explicit reference to the internal temporal structure of a situation” (p. 24). Some languages express imperfectivity in general while others further sub-divide it. Comrie identifies the most typical case as that given in (13):

(13) The most typical sub-divisions of imperfectivity (Comrie 1976: 25)

Comrie states that habituais “describe a situation which is characteristic of an extended period of time” (p. 27-28). On the difference between habituais and iterativity, he states that “[i]f the individual situation is one that can be protracted indefinitely in time, then there is no need for iterativity to be involved,..., though it is not excluded...If the situation is one that cannot be protracted, then the only reasonable interpretation will involve iterativity”.⁹

Given that the two main readings associated with CVC reduplication in the verbal domain are habituality and iterativity/continuity, one possible analysis is that the reduplicant is an aspectual morpheme that indicates imperfectivity. Another possible analysis is that the CVC reduplicant is an instance of number and in particular, that number is also a verbal category in Squamish. We turn to this in the next section.

3.2. Verbal number

There are numerous languages spanning a variety of language families that exhibit a distinction between singular and plural events via overt morphological marking on the verb (see Corbett 2000, Cusic 1981, Lasersohn 1995, Mithun 1999, among others for references). In these languages, *number* is not only a

nominal category but a verbal category. Verbal number is defined as morphological number marking on the verb that refers to the events denoted by the verb and not the arguments of the verb (alone). The fact that the singular/plural number distinction typical of the nominal domain also appears in the verbal domain is not entirely unexpected given that processes such as quantification are seen as applying both to events and individuals (see Bach et al. 1995, Landman 1997 and Lasersohn 1995). Furthermore, parallels have been drawn between the mass/count distinction of the nominal domain and the atelic/telic distinction in the verbal domain (see Bach 1986, Krifka 1992 and references therein).

Across the world's languages, verbal number gives rise to a variety of readings, including repetitiveness, repeated occasions or events, persistent consequences, habitual agency, distributed quality, cumulative result, intensity, plurality of sites of action, duration, continuity, distribution, augmentation, habituality, frequency, among others (see Corbett 2000, Cusic 1981, Lasersohn 1995 and references therein). Many languages that exhibit verbal number do so via reduplication. Of the languages that have a distinction between singular and plural verbs, Corbett (2000) claims that there are two main types of plural number marking: *event number* and *participant number*. Event number is characterized by readings in which the event is repeated. Participant number is characterized by readings in which multiple participants are required in addition to multiple events.

In Chechen, plural form of verbs can yield what Yu (2003) calls a “frequentative/habitual” reading. The pluractional verb (indicated by PLR in the gloss) encodes multiple events of the type denoted by the non-pluractional (singular) verb, as shown in (14) below (p. 294) (WP=perfective form of the verb):

- (14) a. adama takhan duqqa ‘a chai **melira**
 Adam.ERG today many tea **drink.WP**
 ‘Adam drank a lot of tea today.’
- b. adama takhan duqqa ‘a chai **miilira**
 Adam.ERG today many tea **drink.PLR.WP**
 ‘Adam drank a lot of tea over and over again today.’

In addition to plural events, verbal number can also serve to indicate plurality distributed over participants. Operating on an ergative basis (Corbett 2000), plural intransitive verbs can encode plurality distributed over the subject; in the example below from Chechen, the sentence does not have “the expected repeated-event reading...[it] means that all the family members woke up more or less around the same time” (p. 295):

- (15) ceera~ duezalsh takhana
 their members of family today
 duqa hxaalkhie **ghittira**
 very early **wake up.plr.wp**
 ‘Their family members woke up very early.’

Plural transitive verbs, on the other hand, can mark the plurality distributed over objects; in the examples below from Chechen, plural verbs must appear when a plural object is used (p. 297):

- (16) a. eekha swohxtiahx maliikas **eesharsh** **liiqira**
 half hour.LOC Maliika.ERG **song.PL** **sing.PL.R.WP**
 ‘Malika sang a song/songs for half an hour.’
- b. takhana as duqqa’a **ch’eerii** **liicira**
 today 1s.ERG many=& **fish.PL** **catch.PL.R.WP**
 ‘I caught a fish/a lot of fish today.’

Chechen could be considered an example of a mixed system (Corbett 2000) in which the same construction (in this case, plural forms of the verb) indicate both event number and participant number.

3.3. CVC reduplication as an instance of verbal number

Where Squamish (and Salish languages in general) depart from other languages that exhibit verbal number is the fact that the morpheme associated with verbal number in Squamish (namely, the CVC reduplicant) also appears in the nominal domain.¹⁰ As van Eijk (1997) notes, the four major semantic functions of the CVC reduplicant across Salish ((i) plurality/collectivity (ii) repetition or intensiveness (iii) persons vs. objects or animals (in numerals), and (iv) to act like X) “are almost certainly interrelated and reducible to a common augmentative denominator which has developed into two basic functions: (I) many participants (II) many applications” (p. 458). The data in (17-20) illustrate that a CVC reduplicated noun encodes plural individuals in both argument and predicate position:

- (17) a. hiyí ta mǐxalh
 big DET bear
 ‘The bear is big’
- b. hiyí [_{DP}ta **mex**-mǐxalh]
 big DET REDUP-bear
 ‘The bears are big’

- (18) a. na wa lulum [_{DP} ta slhanay']
 RL IMPERF sing DET lady
 'The woman is singing'
- b. na wa lulum [_{DP} ta s-**lhen**-lhanay']
 RL IMPERF sing DET NOM-REDUP-lady
 'The women are singing'
- (19) a. slhanay' chen
 woman 1S.SG
 'I'm a woman'
- b. [s-**lhen**-lhanay']_{PRED} 7itsi-wit
 NOM-REDUP-woman DET-PL
 'Those are women over there'
- (20) a. [laplait]_{PRED} chen
 priest 1S.SG
 'I am a priest'
- b. [**lep**-laplait]_{PRED} chet
 REDUP-priest 1S.PL
 '[We are] many priests' ¹¹

The fact that CVC reduplication also occurs in the nominal domain suggests that an analysis of the CVC reduplicant as an instance of number is the correct one. Under an analysis of the reduplicant as a marker of imperfective aspect we are left to explain why the reduplicant also appears on nouns. To retain the imperfective aspect analysis, we would have to propose two instantiations of the CVC reduplicant; we would then lose the generalization that the readings that arise via CVC reduplication in the verbal and nominal domain are one in the same. The analysis of the CVC reduplicant as number does not dispense with this problem automatically; we must still account for the fact that the reduplicant appears in both domains. The central point is that the number analysis is more appealing than the aspectual one.

As noted in §3.1. above, it seems that either a habitual or (unbounded) iterative reading is available for the CVC reduplicant. An analysis of the CVC reduplicant as a plural marker can deal with this as well; I propose that the reduplicated verb denotes event plurality, and not specifically habituality or iterativity. The most salient readings of event plurality are habituality and iterativity. As we saw above, the two types of readings can occur with the same predicate, and so are contextually determined.

The question is then how to account for the fact that the CVC reduplicant in an instance of verbal number, that it marks event plurality and induces different readings, but at the same time also occurs in the nominal domain to indicate plural participants. In the following section, we examine Lasersohn's (1995) analysis of verbal plurality that accounts for the variety of readings associated with verbal number across languages.

4. Pluractionality in Squamish

In this section, we examine Lasersohn's analysis of pluractionality which accounts for the various readings associated with verbal number cross-linguistically. Extending the analysis to Squamish, I present an adapted version of pluractional markers that accounts for plurality in the nominal and verbal domain. I suggest that distribution in time is not a necessary component of Lasersohn's analysis.

4.1. Pluractional markers (Lasersohn 1995)

Pluractional markers encode verbal plurality. Lasersohn describes pluractional markers as morphemes that “attach to the verb to indicate a multiplicity of actions, whether involving multiple participants, times, or locations...Pluractional markers do not reflect the plurality of a verb's arguments so much as the plurality of the verb itself” (p. 240-1). Lasersohn's account of pluractional markers is based on Cusic's (1981) cross-linguistic survey of the meanings associated with pluractionality where he observes plural marking on the verb giving rise to a wide range of readings. Lasersohn incorporates the variety of readings of the plural verb into the following definition of pluractional markers to account for the different types of distributivity that a plural verb may yield. The definition in (21) states that a pluractional verb holds true of a group of events if and only if the corresponding “singular” verb holds true of each individual event in the group. P can be defined as the verb itself or a sub-portion of the verb that is lexically determined. V=verb, PA=pluractional marker, X ranges over sets of events and P is a free variable ranging over properties of events (p. 242):

$$(21) \quad V\text{-}PA(X) \Leftrightarrow \forall e, e' \in X [P(e) \ \& \ \neg f(e) \circ f(e')] \ \& \ \text{card}(X) \geq n^{12}$$

The square bracketed portion of the definition is the *non-overlapping condition*. The *f* variable in (21) can be replaced by one of three variables, accounting for the fact that distributivity can be spatio-temporal (*f*=K), participant-based (*f*=q, a thematic relation assigned by V) or temporal (*f*=t).

The definition in (21) suggests that the running spaces (K), running times (t), or participants (q) of any two events (e, e') in the set of events (X) cannot overlap. This accounts for languages where a pluractional marker indicates that there are plural events, each event having a different agent, or theme, or both (participant-based distributivity). The cardinality requirement must be specified as not less than two. There are various languages where a pluractional marker refers to many and not just more than two, in which case the cardinality requirement may be slightly different.

The same definition is also meant to account for languages where pluractionality encodes spatio-temporal distributivity, as in (i) below from Hausa, or simply temporal distributivity, as in (ii):

- (22) na a''aikee su
 I send.PL them
- (i) ‘I sent them at the same time to different places’
(ii) ‘I sent them at the different times to the same place’
(iii) * ‘I sent them at the same time to the same place’
(Corbett 2000, from Eulenberg 1971: 73-4)

The semantics of pluractional markers provides a straightforward way of predicting the readings associated with plurality via CVC reduplication of verbs in Squamish. However, we will have to modify it to capture the fact that the same morpheme appears on nouns as well to indicate plural individuals. I first provide a definition accounting for the reduplicant's appearance on verbs and nouns and the readings that result. I then explore Lasersohn's temporal distributivity requirement.¹³

4.2. Defining pluractionality in Squamish

The Squamish CVC reduplicant parallels other pluralactional markers in that when it appears on verbs, it denotes plural events; however, it differs from the pluralactional markers discussed by Cusic in that the reduplicant appears in the nominal domain as well. The plural events denoted by the CVC reduplicant are multiples of the entire event (and not a sub-event), and thus should be considered repeated events as opposed to repetitive events. Given that the readings associated with the CVC reduplicant are the same for nouns and verbs, that is, plurality (of either events or individuals), as well as the fact that it is the same morpheme in both domains, I propose that only one lexical entry for the reduplicant that will capture both plural readings is necessary. The Squamish data show that the CVC reduplicant marks simply PLURAL on both verbs and nouns. It creates plural individuals out of singular nouns and plural events out of singular events. The semantics should then be able to account for this plurality in both domains.

Lasersohn's definition of pluractional markers is particular to verbs in that it specifies not only verbs, but events. His definition can provide us with the Squamish facts in the verbal domain, but not for the nominal domain. Our definition should specify that the CVC reduplicant indicates PLURAL only (without specifying the domain in which it applies). What is crucial in the definition is a specification of the type of plurality involved with CVC reduplication (whole events/individuals, and not anything less or more than that). The definition I propose for the CVC reduplicant in Squamish is given in (23), where $Y = \text{noun or verb}$, X ranges over sets of events *or* individuals and P is a free variable ranging over properties of events *or* individuals:

$$(23) \quad Y\text{-PA}(X) \Leftrightarrow \forall x \in X[P(x)] \ \& \ \text{card}(X) \geq n$$

Since this definition is vague with respect to whether it refers to individuals or events, it accounts for the plurality of both nouns and verbs. This definition states that a pluractional noun/verb holds true of a set of individuals/events if and only if the corresponding "singular" verb/noun holds true of each individual/event in the set. P is defined as the verb or noun itself since it yields *repeated* readings only (and not *repetitive* readings). This definition also differs from Lasersohn's in that it does not make reference to temporal distribution. This is discussed in further detail in the following section.¹⁴

4.3. Temporal distribution

Reduplication in Squamish exhibits temporal distribution in the verbal domain, illustrated in (24) below where the gloss in (i) is volunteered. Given that plural subject and object marking is optional in Squamish (see Bar-el, Jacobs and Wiltschko 2001, Kuipers 1967), the gloss in (ii) is also possible, though in an out of the blue context, it is not offered. What appears to not be possible is the gloss in (iii) where each individual saw the woman just once:

- (24) na **kw'ech**-kw'ach-nexw-as 7alhi slhanay'
 RL REDUP-look.at-TR(LC)-3ERG DET woman
 (i) 'He's been watching her [the woman]'
 (ii) 'They've been watching her [the woman]'
 (iii) */?'They each saw her (once) [the woman]'

If Squamish had a participant-based distributivity system, we might expect the reading in (iii) where the plural events are distributed over the plural subjects, in which each individual participates in exactly one event. The same is true for the example in (25) below. If Squamish plurals had exhibited a participant-based distributivity system, we would expect the sentence below to be compatible with a context in which each individual jumped (once) at the same time (ii), and not simply the pluralized event in (i):

- (25) chet **xwet-xwit-im**
 1s.PL **REDUP-jump-intr**
 (i) We are jumping'
 (ii) */? 'We jumped' (Context: "we each jumped once")

The question this raises is how can we generalize our definition to account for reduplication in the verbal and nominal domain if there is a clause in our definition that refers specifically to verbs (without complicating the definition more than necessary)? I suggest that the distributivity requirement in Lasersohn's definition of pluractional markers is not necessary to account for the Squamish facts.

A reduplicated predicate in Squamish will always be distributed in time because the plural verb always encodes plural events. Even if there are plural participants, each participant seems to be required to participate in plural events. Recall that plurality is optionally marked in Squamish; I suggest that in cases where there are both plural subjects and a CVC reduplicated predicate, it is not the plural predicate that yields the plural participants. Instead, the plural participant reading is always an available reading of any DP not overtly marked for plural. As a result, the definition of CVC reduplication in Squamish does not need to specify that the distribution denoted by the plural verb is temporal, since this is the default. This is also more appealing for the present analysis because we want to account for plurality in the verbal *and* nominal domain, and the fact that we do not specify distribution in time in the lexical entry for the CVC reduplicant allows us to straightforwardly generalize across nouns and verbs.¹⁵

In Cusic's descriptions of pluractional markers cross-linguistically, it is not clear whether the morphemes labeled pluractional in the languages reviewed are found in both the nominal domain and the verbal domain. It may be the case that in languages in which a pluractional marker is found in both domains, plurality in the verbal domain does not yield participant-based distributivity. That is, a language that can mark participant-based plurality (i.e. plural individuals) on nouns in the same way that it marks temporal plurality on verbs (as the CVC reduplicant does in Squamish), might not mark participant-based plurality in the exact same way on both nouns and verbs (i.e. with the same morpheme). If this is the case, the fact that CVC reduplicated verbs in Squamish do not exhibit participant-based distributivity may be a result of the fact that the CVC reduplicant is found in the nominal domain in addition to the verbal domain.

There is evidence that this may not be the case across Salish. Thompson (2006) examines verbal plurality in Upriver Halkomelem (a closely related Central Salish language) and observes that temporal distribution, spatio-temporal distribution and participant-based distribution is

available for all three allomorphs of the verbal number marker in the language. The example in (26) below illustrates the various readings available:

- (26) yáleq'-et-es te theqát (cf. yáq'et)
 fall.PL-TR-3S DET tree
 (i) 'He felled all the trees'
 (ii) 'He felled all the trees (with one swing)'
 (iii) 'They felled the trees'
 (iv) 'He felled the same (magic) tree over and over'
 (v) 'They felled the tree' (Thompson 2006: 1)

Preliminary evidence in (24-25) above suggests that the same range of readings are not available for Squamish CVC reduplicated predicates. I leave this issue and a broader cross-Salish analysis of verbal plurality for further research.

4.4. Summary and other issues

In this section I have shown that the CVC reduplicant in Squamish parallels many types of pluractional markers in that when it appears in the verbal domain it pluralizes events and not individuals; however, this morpheme also appears in the nominal domain and pluralizes individuals. I accounted for the Squamish facts by assuming one lexical entry for the CVC reduplicant which does not specify in which domain it applies. The fact that the readings induced by plurality in the verbal domain denote what Cusic labels *repeated* (and not *repetitive*) readings, is further evidence for a single version of the reduplicant analysis. It suggests that the two are exact parallels of one another, but simply occur in different domains. I further suggested that Lasersohn's distribution in time requirement is not a necessary condition for plurality in Squamish.

Thus far, we have examined CVC reduplication, which is an instance of plurality of events of the type denoted by the verb (repeated events). Lasersohn's analysis predicts that pluractionality can yield pluralization of sub-events (repetitive events). A remaining question is whether Squamish exhibits verbal plurality that encodes pluralization of sub-events. This is the focus of the next section.

5. No “durative” pluractionality in Squamish

Lasersohn distinguishes between repetitive and repeated action readings of pluractional markers. As he notes, “*repeated* action involves multiple events of the type denoted by the verb, while *repetitive* action involves multiple events of a different type, but which sum up to form a single token of the event type corresponding to the verb” (p. 244). The following are corresponding examples:

- (27) a. John hit the ball over and over.

REPEATED ACTION = MULTIPLE HITS

- b. The mouse nibbled the cheese.

REPETITIVE ACTION = MULTIPLE SMALL BITES

Formally, Lasersohn proposes that *repeated* actions arise when P in the given definition is the verb itself (as in (28a) below). We have already seen that CVC reduplication is of this type. On the other hand, repetitive actions arise when P is lexically fixed (as in (28b) below); that is, the multiple events are dependent on what the sub-events of a given verb are – in the case of nibbling, this is a series of small bites, but this will differ depending on the verb:

- (28) a. $\text{HIT-PA}(X) \Leftrightarrow \forall e \in X[\text{HIT}(e)]$

REPEATED ACTION; P=V

- b. $\text{NIBBLE-PA}(X) \Leftrightarrow \forall e \in X[\text{SMALL BITE}(e)]$

REPETITIVE ACTION; P=lexically fixed

One possible candidate for a morpheme that induces plurality which denotes repetitive actions is the Squamish CV reduplicant. The data in (29-31) illustrate that CV reduplicated verbs give rise to in progress/continuous readings:

- (29) a. na nam' kew na7 ta stakw
 RL go descend LOC DET water
 ‘He went down by water’

- b. na nam ke-kew na7 ta stakw
 RL go REDUP-descend LOC DET water
 ‘He went down and down’

- (30) a. chen xitl'-in ta stsek
 1s.SG chop-TR DET tree
 ‘I chopped the wood’

- b. chen xi-xitl'-in ta stsek

- 1S.SG REDUP-chop-TR DET tree
 ‘I continuously chopped the wood’
- (31) a. chen xwitim
 1S.SG jump
 kwi-s na-s tl’ik lha Linda
 DET-NOM RL-3POSS arrive DET Linda
 ‘Oh I jumped when Linda arrived’
- b. t’ut chen **xwi**-xwitim
 former 1S.SG REDUP-jump
 kwi-s na-s tl’ik lha Linda
 DET-NOM RL-3POSS arrive DET Linda
 ‘[Previously] I was jumping when Linda got here’

I have suggested in this paper that the readings associated with the CVC reduplicant, while similar to readings associated with aspect, are reducible to plurality. Given that the readings available for CV reduplicated verbs parallel “progressive” aspect, we may want to explore whether this reduplicant is truly a marker of aspect, or whether this is another instance of verbal number.¹⁶ I argue in the following section that this is not the case.

5.1. CV reduplication is not an instance of verbal number

One analysis is that the CV is another instance of plural marking, but in the case of CV, the plurality is of a sub-event. This was first suggested in Bar-el (1998) with respect to *wa*, which seems to yield the same readings associated with CVC (habitual) and CV reduplication (in progress). It was further argued to possibly be the case for the squamish CV reduplicant in Bar-el (2001). As the CV reduplicant is not associated with habitual readings, but in progress readings only, I previously proposed that these repetitive readings result when P is lexically fixed; this is illustrated below:

- (32) na p’a-p’ayak-ant-as ta snexwilh-s
 RL REDUP-fix-TR-3ERG DET canoe-3POSS
 ‘He’s in the process of fixing it.’

REPETITIVE ACTION P=lexically fixed
 FIX-PA (x) $\Leftrightarrow \forall e \in x[\text{FIX-SUB-EVENT}(e)]$

Wiltschko (p.c) suggests that this is indeed the case in Upriver Halkomelem; she argues that the two types of reduplication target different syntactic projections. This analysis, however, makes an incorrect prediction. If we assume that CV is simply number, we lose the fact that although in a perfective sentence like that in (33a) below, there is no reference to the sub-events that make up the activity of *fixing*, there is an entailment that those sub-events exist (though they are not visible in the perfective). Thus, while the sentence in (33b) appears to refer to a plurality of sub-events of fixing, the CV does not create those sub-events, they are already there, they simply are visible in the progressive due to the fact that the reference time of the event is properly included in the event time:

- (33) a. na p'ayak-ant-as ta snexwilh-s
 RL fix-TR-3ERG DET canoe-3POSS
 'He fixed the canoe.'
- b. na p'a-p'ayak-ant-as ta snexwilh-s
 RL REDUP-fix-TR-3ERG DET canoe-3POSS
 'He's in the process of fixing it.'

Unless the event of fixing the canoe in (33a) happened "all at once" (as though it were an instantaneous event), there had to have been some time that passed where fixing took place (even though the predicate is not CV reduplicated, we assume that there are still sub-events of fixing). In other words, if CV were only an instance of number and not viewpoint, it would suggest that a non-reduplicated predicate is a single event with no sub-events (like an achievement) and that a perfective predicate such as the one in (33a) takes place at an instant rather than an interval. If that were the case, the following sentences would not be expected to be grammatical:¹⁷

- (34) a. na p'ayak-ant-as ta tetxwem ta John
 RL fix-TR-3ERG DET car DET John
 welh haw k-as i huy-nexw-a
 CONJ NEG SBJ-3CNJ PART finishTR(LC)-3
 'John fixed the car, but he didn't finish.'
- b. na7-t p'ayak-ant-as ta tetxwem ta Peter
 RL-PAST fix-TR-3ERG DET car DET Peter
 kwi chel'aklh... iw'ayti na7-xw wa p'ayak-ant-as
 DET yesterday maybe RL-still IMPERF fix-TR-3ERG
 'Peter fixed the car yesterday...maybe he's still fixing it.'

In other words, it cannot be possible to *not have finished*, or *still be fixing* if the event was instantaneous to begin with.

A second argument against the analysis of CV reduplication as a plural marker relates to the question of the limits on types of sub-events. Given the Lasersohnian analysis of pluractionality, we might expect that plural sub-events should be identical to one another; while the definition states that P is an idiosyncratic property, it does not state that these sub-events can be of different types. We might then expect that CV reduplication would only be compatible with the types of events that contain sub-events that are identical (e.g., *singing* or *reading a book* but not *building a house* or *fixing a car*). The evidence suggests that the CV reduplicant is not limited in this way (it is compatible with events of different types). Although further evidence is needed in order to establish whether indeed a reduplicated sentence such as that in (33b) consists of identical sub-events, there is nothing thus far that suggests this would be the case. An analysis of the CV reduplicant as a progressive marker, on the other hand, predicts both possible contexts (identical and non-identical sub-events).

The claim here is that the CV reduplicant is not a plural morpheme, but an aspectual morpheme. Under this view, the fact that this reduplicant targets only verbs is explained since aspect targets verbal predicates alone.

There is a variety of evidence *for* an analysis of the CV reduplicant as a progressive marker. The characteristics of the Squamish CV reduplicant are consistent with progressives cross-linguistically (Dahl 1985), including independence of time reference, lack of habitual extension and prototypical use as an 'on-going' activity (see Bar-el 2005 for further discussion of the progressive analysis of CV reduplication in Squamish).

6. Conclusions and further issues

In this paper I have shown that a CVC reduplicated noun yields plural individuals and a CVC reduplicated verb yields habitual and/or iterative events. I have argued that the correct account is to treat the reduplicant in the verbal domain as an instance of verbal number and not verbal aspect. I have proposed that since the common reading associated with the CVC reduplicant in the nominal and verbal domain is *plurality*, the definition of the CVC morpheme is reducible to one meaning, PLURAL, that is unspecified for domain so that when it applies in the nominal domain, the output is plural individuals and when it applies in the verbal domain, the output is plural events. This paper extends Lasersohn's (1995) analysis of pluractional markers, to cover both verbs and nouns. To account for the readings available for CVC reduplicated verbs, I proposed that the habitual/iterative readings

result from repetition of the entire event denoted by the verb. Furthermore, I argued for a weaker version of Lasersohn's analysis of pluractional markers: one that does not make reference to temporal distributivity. Lastly, I suggested that while the Squamish CV reduplicant may appear to be a good candidate for verbal plurality in which sub-events of the type denoted by the verb are pluralized, this analysis would not yield the correct result. Instead, I propose that the CV reduplicant is an aspectual morpheme, and in particular, the progressive.

It has long been noted that there is a parallel between the verbal domain and the nominal domain. Bach (1986) and Krifka (1992), and references therein, discuss this parallel with respect to the mass/count distinction in the nominal domain and aspectual classes in the verbal domain. This paper adds to this discussion by drawing one more parallel between the two domains, that of plurality.

6.1. On the status of singular predicates

There is a remaining question about the status of singular predicates. The adopted proposal for pluractional predicates in Squamish suggests that PLURAL operates on "single" events or individuals. Kratzer (2005), however, suggests that universally, verbs start out with cumulative denotations (and thus contain both singular and plural events). It is not yet clear whether this condition holds for Squamish; it may be the case that the reduplicant in Squamish restricts the denotation of the predicate to singular events/individuals. There is a debate in the Salish literature on the status of individuals in the nominal domain; Wiltschko (2005) argues that nouns are unmarked (with respect to the mass/count distinction) in Upriver Halkomelem (Central Salish), while Davis and Matthewson (1999) argue that all nouns are count in St'át'imcets (Lillooet; Interior Salish). I leave this issue for further research.

6.2. Aspect and verbal number revisited

The data and analysis put forth in this paper raise a question about the relationship between verbal number and aspect. Is it the case that verbal number is simply aspect or should imperfective aspect be re-analyzed as verbal number?

Corbett (2000) suggests that while the two are closely related, we should not collapse them but instead explore the notion of verbal number as separate from aspect. He gives the following three reasons: (i) the parallelism of number in the nominal and verbal domain is worth noting (ii) verbal number in some languages indicates not simply event plurality, but participant

plurality as well, a meaning which is difficult to explain by verbal aspect (iii) literature on various language families refer to the ‘plural verb’ thus if we simply thought of verbal number as aspectual, we would not see the connection cross-linguistically.

The data from Squamish suggests a stronger version of (i) above. This is to say that it is not simply that the parallelism between the nominal and verbal domain is worth noting. In Squamish, this parallel would be lost completely if we did not consider the reduplicant an instance of verbal number since it affixes to both verbs and nouns, and is the exact same morpheme. I further suggest that verbal number is not simply aspect but that there is a close connection between verbal number and imperfective aspect that needs to be explored further. It may not be the case that every morpheme across the world’s languages that has been labeled imperfective should be re-analyzed as verbal number, though there are some (e.g., unbounded iterativity) that might be potential candidates.

NOTES

* I would like to thank the Squamish elders LJ, ML, the late LB, the late TC, the late EL, the late YJ, the late FM and the late DW whom I am indebted to for their time and patience in sharing the Squamish language with me and without whose efforts this work would not be possible. An earlier version of this paper appeared as Bar-el (2001). There is never enough room to thank everyone who helped shape a piece of work. However, I must extend my sincere thanks to Peter Jacobs, Lisa Matthewson, Doug Pulleyblank and Martina Wiltschko and to audience members at SULA 1 and ICSNL 36 for helpful feedback on earlier versions of this work. I’d also like to extend a warm thank you to Lucia Tovená not only for her feedback but for the invitation to contribute to this volume. Thank you also to Hamida Demirdache for her invaluable review comments. The Squamish data presented in this paper is based on fieldwork and can be found in Bar-el (2001) and Bar-el (2005). The data are presented in the orthography used by the Squamish Nation. Fieldwork was funded by SSHRCC grant #410-951-519 to Henry Davis. Any errors are the author’s and should not reflect in any way on the speakers or linguistics with whom I have worked.

1. See Demers and Jelinek (1997) for a brief outline of, and references relating to, the types of reduplication found in Salish and the various meanings associated with reduplicants in each language.
2. squamish is a Central Salish language traditionally spoken in the Burrard Inlet, Howe Sound and squamish Valley area in British Columbia, Canada.
3. In one fieldwork session, the speaker added *ʔiʔxw skwayl* ‘all day’ when he repeated the Squamish sentence I offered. It is not clear whether this sentence has a reading where on each day there are a number of seeing events, i.e. ‘I see the woman many times each day’. What is clear, however, is the fact that there are a plurality of events and this plurality arises from the CVC reduplication, given the translation of other sentences that do not involve the addition of an adverbial phrase. As for the tense differences in the two sentences, Squamish sentences not overtly marked for tenses have

both past and present readings available. See Matthewson (2006) and references therein for a discussion of null tense morphemes in Salish. See also Demirdache et al. (1994) for further discussion on ‘all’ in Salish.

4. Translations and comments are those volunteered by the speakers. In some cases where a pronoun instead of a full DP was given by the speaker during elicitation, for ease of exposition, the full DP is provided in the translation. Abbreviations used in this paper are as follows: 1,2,3=first, second, third person, CNJ=conjunctive, DEM=demonstrative, DET=determiner, ERG=ergative, IMPERF=imperfective, INTR=intransitivizer, LC=limited control, LOC=locative, LS=lexical suffix, NOM=nominalizer, PAST=past tense, PL=plural, POSS=possessive, REDUP=reduplicant, RL=realis, S=subject, SBJ=subjunctive, SG=singular, TR=transitivizer.

5. I distinguish *unbounded* iteration here from *bounded* iteration (which suggests a certain number of times). We might also call this unbounded reading *frequentative*, which Yu (2003) suggests is the pluractional reading that is translated as ‘repeatedly’, or we might label this reading as *continuousness*. I will use the term unbounded iteration here and leave open the discussion of whether these readings are distinguished in Squamish. As to whether CVC reduplication is compatible with an iterative adverbial which explicitly states how many times an event occurred, I will have to leave for future research (see Doetjes 2007 for discussion of iteration and frequency in French).

6. The translations were offered by the same speaker at different elicitation sessions.

7. I assume this to be a repeated event reading (rather than repetitive event), given that CVC reduplication seems to yield repeated event readings only.

8. See also (1) above; these were checked in two separate fieldwork sessions.

9. It is not clear where Comrie would put “iterativity”. It seems as though it could be a sub-class of habituals (given his definition), or a sub-class of “nonprogressive”.

10. There has been a debate in the literature on the existence of a noun-verb distinction in Salish. Following Demirdache and Matthewson (1995), I assume that there are category distinctions in Squamish. See references therein for further discussion of this issue across Salish.

11. The translation offered by the consultant was limited to “many priests”. I assume that a possible translation is “We are many priests”. Note that even in predicate position, a reduplicated noun is interpreted as plural individuals, not events. This is even further illustrated in examples where a reduplicated noun cannot be used with a singular person clitic:

- (i) ***lep-laplait** chen
REDUP-priest 1S.SG

X Context 1: became a priest, left the priesthood and became a priest again

X Context 2: priest for many churches at one time

It is not yet clear how to treat the following example, however:

- (ii) **chesh-chesha** chen
REDUP-mother 1S.SG
‘I’m a mother to a lot of kids’

Speaker’s comments: “for a big family..for a dog with a lot of puppies”

12. In English, the semantics of the verb can affect the cardinality requirement; for example, we might want to say that the cardinality of the subjects or objects for the verbs *scatter*, *gather*, *collect*... would be no less than three.

13. Although Lasersohn's analysis allows for the addition of a *between* clause to account for the contrast between distributivity which is separated in time or continuous in time, neither this clause nor the non-overlapping condition seem to distinguish between cases where the continuity is due to the sub-events having the same participants and cases where the sub-events have different participants.
14. Note that the definition for the CVC in Squamish makes reference to verbs and nouns only, leaving adjectives aside. However, there are some colour terms and stative derivatives that show CVC reduplication in Squamish, though they do not seem to denote habitual/iterative or plural events. Although examples such as these are 'misbehaved' across Salish (M. D. Kinkade, p.c.), it is worth noting that these may be individual-level predicates. Further investigation may uncover an account of these data.
15. We may want to ask whether it is necessary to specify that a plural verb does *not* indicate plural participants. I suggest that this is not necessary for the definition of the Squamish CVC reduplicant. The basic system would be one in which a pluractional marker indicates plural events only and the more complex system is one in which the plural verb can also indicate plural subjects. Thus, it is only necessary to specify a plural subject when it arises due to the plural verb. This may imply that Lasersohn's definition of pluractional markers, while it covers a variety of readings cross-linguistically, may be simplified.
16. See Thompson (2006) for discussion of continuative readings of verbal number in Upriver Halkomelem.
17. For discussion of these data, see Bar-el (2005) and references therein. Note that overt past tense is not obligatorily marked in Squamish. See Matthewson (2006) and references therein for further discussion of tense in Salish.

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RÉSUMÉ

Cet article examine deux structures de reduplication en Skwxwú7mesh (Squamish; langue salishienne), en explorant la relation entre l'aspect et le nombre verbal. Il montre que la reduplication CVC, qui s'attache aux noms aussi bien qu'aux verbes, est un marqueur de pluralité; les valeurs aspectuelles observées (valeur d'habitude, itération non bornée) sont des interprétations saillantes associées aux événements pluriels. Il montre également que la reduplication CV, qui s'attache seulement aux verbes, est un marqueur aspectuel, c'est-à-dire, elle marque l'aspect progressif et pas une pluralité de sous événements. Cet article adopte l'analyse de la pluractionnalité de Lasersohn (1995), mais suggère que la contrainte de distributivité n'est pas une condition nécessaire sur la pluralité en Squamish.

MOTS-CLÉS

reduplication, aspect, nombre verbal, pluriactionnalité, Salish