Unidirectional flexibility and the noun–verb distinction in Lushootseed[*]

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Recent work on the typology of parts-of-speech systems has shown that a significant parameter of variation in the organization of the lexicon concerns the number of open or major word classes that are recognized in a language. While languages with the familiar Indo-European system distinguish four major "contentive" classes (noun, verb, adjective, and adverb), it is not uncommon for languages to distinguish fewer. In many such cases, a language with a reduced parts-of-speech inventory conflates two or more major classes, creating a *flexible* part of speech that fills a variety of syntactic roles. One of the most contentious issues that falls out from this observation is whether or not it is possible for a language to conflate all of the major lexical classes, grouping all of its contentive lexical items into a single, maximally flexible class of words (opposed only by the minor, grammatical classes) and thereby neutralizing the distinction between nouns and verbs. Claims for the absence of a noun–verb distinction have been advanced for a number of languages and are discussed most extensively for languages from the Salishan, Polynesian, and Munda families. Examining these cases reveals that they fall into two general types which I will refer to in this paper, loosely following Evans and Osada (2005), as *precategorial* and *omnipredicative*. The precategorial type of language, as represented by languages of the Munda and Polynesian families, has received the most attention in the recent literature (e.g., Broschart 1991; Croft 2000; Vonen 2000; Hengeveld and Rijkhoff 2005); the omnipredicative type has not been discussed to the same extent, although languages of this kind, particularly those belonging to the Salishan family, are frequently offered uncritically as examples of languages that lack a distinction between nouns and verbs.

In this paper, I will present data from the Salishan language Lushootseed[1] which demonstrates that, while the noun–verb distinction is neutralized in syntactic predicate position, it is still relevant for words used as syntactic arguments, giving us a pattern that will be referred to here as *unidirectional flexibility*. Unidirectional flexibility as the term is used here is intended to complement the notion of "bidirectional flexibility" put forward by Evans and Osada (2005) as a criterion for determining whether or not a language has genuinely neutralized a part-of-speech distinction. For Evans and Osada, a particular part of speech is considered to be bidirectionally flexible if all of its members can occupy the syntactic roles

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[1] Lushootseed is a member of the Central Coast Salish branch of the Salishan family of languages, and was formerly spoken throughout the Puget Sound region of Washington State. It is currently the native language of no more than a handful of elders. Lushootseed data not cited as being from published sources are drawn from my own textual database built from materials collected by Thomas M. Hess; these sources are cited by speaker's initials, title of text, and line number. Re-glossing and reanalysis of some examples from older published sources has occurred in a few cases for the sake of consistency, and to bring them into line with the conventions followed in Beck (in progress) and Beck and Hess (n.d.).

typical of two (or more) parts of speech, thereby conforming to the definitions of both lexical classes. Unidirectional flexibility, on the other hand, entails that for a particular pair of lexical classes, X and Y, X can appear in the syntactic roles criterial for Y, but Y can not appear in the roles criterial for X. While unidirectional flexibility entails the neutralization of a parts-of-speech distinction in a particular syntactic environment, it can not be equated with the complete absence of the distinction. Unidirectional flexibility and methods for establishing it will be discussed in Section 1 of this paper, following which Lushootseed data illustrating this pattern will be presented in Section 2. The facts in Lushootseed closely parallel those of other Salishan languages, which in turn seem substantially the same as the patterns seen in other languages that have been claimed to follow the omnipredicative pattern of noun–verb neutralization, implying that omnipredicative languages in general show only unidirectional, rather than genuine bidirectional, flexibility between nouns and verbs. Since precategorial languages are also argued (for different reasons) by Evans and Osada (2005) not to represent a genuine example of noun–verb flexibility, it seems probable that a distinction between nouns and verbs is indeed a universal of human language (Croft 2003). Evans and Osada's position, some counter-arguments to it, and some of the more general implications of this discussion for typological approaches to parts-of-speech systems will be discussed in Section 3.

1   Flexibility in parts-of-speech systems

The notion of flexibility in parts-of-speech systems is first articulated in the context of a full typology of lexical classes by Hengeveld (1992a, b), who uses the term "flexible" to refer to a part of speech that meets two or more of the definitions for lexical classes given in (1), these definitions hinging crucially on the morphosyntactic properties of classes of lexical items appearing in certain criterial syntactic environments:[2]

(1)   *verb*—a lexical item which, without further measures being taken, has predicative use only

       noun—a lexical item which, without further measures being taken, can be used as a syntactic argument

       adjective—a lexical item which, without further measures being taken, can be used as the modifier of a noun

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[2] Note that I have re-formulated the definitions, which are couched in the terminology of Functional Grammar (Dik 1997), using more neutral descriptive terms for syntactic environments. I will continue to follow this practice throughout the remainder of this discussion.

adverb—a lexical item which, without further measures being taken, can be used as the modifier of a syntactic predicate[3]

<div align="right">(adapted from Hengeveld 1992b: 58)</div>

Thus, a class of lexical items is said to be flexible if it meets, say, both the definition of an adjective and of an adverb simultaneously. Hengeveld further proposes, based on a moderately large sample of languages, that the patterns of flexibility thus defined are not unconstrained, but follow the implicational hierarchy shown in (2):

(2)   Parts of Speech Hierarchy
   Syntactic predicate > Syntactic argument > Adnominal modifier > Adverbal modifier
<div align="right">(adapted from Hengeveld, Rijkhoff and Siewierska 2004)</div>

According to (2), a part-of-speech system that has a class of words used both as unmarked syntactic predicates and as unmarked syntactic arguments will also use the same class of words for adnominal and adverbal modification; a flexible class of words that is used as a syntactic argument and adnominal modifier must also be flexible with respect to adverbal modification; and so on. The resulting taxonomy of flexible parts-of-speech systems is shown in Fig. 1:

Part-of-speech systems		SYNTACTIC ROLE			
		SYNTACTIC PREDICATE	SYNTACTIC ARGUMENT	ADNOMINAL MODIFIER	ADVERBAL MODIFIER
Flexible systems	Type 1	Contentive			
	Type 2	Verb	Non-verb		
	Type 3	Verb	Noun	Modifier	

Figure 1: Taxonomy of flexible parts-of-speech systems (adapted from Hengeveld 1992a)

Since its inception, this taxonomy has been influential and controversial, both in terms of the typological predictions it makes and in terms of the methodological implications it has for the investigation of lexical class systems.

One methodological question that is of importance to us in the context of the present discussion is the notion of "without further measures," which is defined by Hengeveld in rather vague terms and seems to correspond roughly to additional morphological or syntactic means required for the use of a particular lexical item in a non-canonical syntactic role (referred to by Tesnière 1934, 1959 as "transfer"). Some of the implications of this are discussed in Beck (2002), where it is proposed that "further measures" be re-defined in terms of the relative markedness of particular lexical classes of item in specific syntactic roles. Of the criteria for determining relative markedness, the most relevant for this paper is the notion of Structural Complexity:

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[3] Adverbs in many languages can modify other elements such as adjectives and other adverbs as well, but this is by no means universal. Jesperson (1965) also notes that adverbs in English do not modify nominal syntactic predicates; once again, this is not universal, but the implications of this for this definition of adverbs merit some consideration.

(3) **Structural Complexity**: An element X is marked with respect to another element Y if X is more complex, morphologically or syntactically, than Y

Applying this measure to parts-of-speech typology, establishing the markedness of a lexical class X relative to lexical class Y requires showing that members of Class X are relatively more structurally complex than those of Class Y in a criterial syntactic environment A. This is in essence the equivalent of the descriptive claim that words of Class X are the target of morphosyntactic rules (aimed specifically at Class X, which must therefore be recognized in the lexicon) allowing for their use in environment A. Re-formulating this in terms of markedness allows the analyst a principled way to establish language-specific diagnostics and criteria for structural complexity (thereby avoiding what Croft 2005: 434 refers to as "methodological opportunism"). When a part-of-speech distinction exists between two word classes, each with its own distinct unmarked syntactic role, the comparison of the properties of Classes X and Y in two of the criterial syntactic roles identified in (1), A and B, would give us the pattern shown in Fig. 2:

	ROLE A	ROLE B
CLASS X	*marked*	*unmarked*
CLASS Y	*unmarked*	*marked*

Figure 2: Bidirectional lexical class distinction

Here, Class X (say, for English, nouns) is relatively more complex in terms of derivational or syntactic means, and therefore marked, in Role A (syntactic predicate) than Class Y (verbs), while in Role B (syntactic argument) Class Y is relatively more complex than Class X, giving us a clear bidirectional lexical class distinction.[4]

In the case of a truly flexible part of speech, we would expect that for an established class of words, any bipartition of that class into two putative sub-classes X and Y (at random or based on semantic criteria) would show the pattern in Fig. 3:

	ROLE A	ROLE B
CLASS X	*unmarked*	*unmarked*
CLASS Y	*unmarked*	*unmarked*

Figure 3: Bidirectional flexibility

In this case, no criteria for relative structural markedness can be found that distinguish between Class X and Class Y in criterial Role A or between Class X and Class Y in criterial Role B (that is, there is no lexical class distinction between the two sets). This situation corresponds to what Evans and Osada (2005) refer to as "bidirectionality," and contrasts with the situation illustrated in Fig. 4, which might be termed "unidirectional" flexibility:

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[4] The same type of argumentation can, of course, be made on the basis of markedness established by other criteria.

	ROLE A	ROLE B
CLASS X	*unmarked*	*unmarked*
CLASS Y	*unmarked*	**marked**

Figure 4: Unidirectional flexibility

In this situation, words belonging to Class X are unmarked in both criterial Roles A and B, whereas words in Class Y are unmarked only in Role A, but are marked in Role B — in effect, the distinction between Classes X and Y is present in the language but is "neutralized" for Role A. Situations such as this are not uncommon in languages, but do not constitute genuine flexibility: it is still possible to define distinct word-classes based on the contrastive properties of the two classes in Role B. Thus, for instance, in a language where words with substantive meanings (Class X) are both unmarked as predicates (Role A) and as syntactic arguments (Role B), but words expressing events (Class Y) are unmarked predicates but marked arguments, Class Y still conforms to the definition of "verb" given in (1) but does not conform to the definition of "noun." Class X, on the other hand, conforms to both (or would, without the stipulation that verbs be "only" syntactic predicates), but, given the contrast with Class Y, can be classified as a flexible class of nouns. As will be shown in Section 2 below, the apparent neutralization of the noun–verb distinction in Salishan languages constitutes a clear case of this type of unidirectional flexibility; because Salishan provides a typical case of what Evans and Osada (2005) refer to as an "omnipredicative" language (borrowing the term from Launey 1994) the discussion below strongly suggests that languages in this category do not constitute a genuine case of noun–verb flexibility.

Another controversial aspect of the definitions of parts of speech in (1) is the absence of semantic criteria associated with any of the word classes (Beck 2002). This seems unfortunate from a theoretical point of view, given the well-known and quite robust clusterings of certain meaning-types around certain parts of speech, shown in Fig. 5 (cf. Croft 1991):

Substantives (people, place, thing)	Events (action, process, state)	Property concepts (dimension, age, value, etc.)
Noun	Verb	Adjective

Figure 5: Proto-typical associations of meaning-type and lexical classes

While it is well-known that semantic category membership is (at best) problematic for establishing lexical-class membership, it is nevertheless true that accounting for these patterns is a desirable feature for a parts-of-speech typology. One of the unintended consequences of this focus on syntactic over semantic criteria is that it often leads to a tacit methodological bias towards strictly morphosyntactic comparisons of related wordforms in different syntactic environments without attention to concomitant differences in their meanings (a similar point with respect to the Salishan noun/verb issues is made in Van Eijk and Hess 1986: 328). In cases where the two wordforms being compared are phonologically identical, however, inattention to semantics — particularly changes in the meaning of one of the forms associated with its appearance in a particular syntactic role — leaves the door open to a (mis)analysis wherein two words are judged to be morphosyntactically equivalent in spite

of a significant semantic difference between them. This approach begs the question of whether or not the two items being compared are, in fact, the same word with a flexible distribution, rather than two homophonous forms, each with its own meaning and syntactic distribution. While such cases generally pass without comment in languages like English, which has a number of such pairs of homophonous forms (e.g., *hammer*$_N$ vs. *hammer*$_V$, *cook*$_N$ vs. *cook*$_V$), there appear to be languages (the most frequently cited examples being languages from the Munda and Polynesian families) where such pairs are very common, perhaps to the point of constituting the bulk of the lexicon. As Evans and Osada (2005) note, languages of this type, often referred to as *precategorial* languages, constitute a second language-type that is often analyzed as having a flexible class of words fitting the definition of both nouns and verbs.[5] For the case of Mundari, Evans and Osada argue (on different grounds) that this situation is, like the omnipredicative case, not an example of true flexibility. Thus, with both putative types of noun–verb flexibility in doubt, it would seem that the case for the typology in Figure 1 is considerably weakened, at least insofar as the possibility of having a language with a single major part of speech is concerned. I will return to this point in the conclusion to this paper.

2   Unidirectional flexibility: Noun and verb in Lushootseed

One of the most frequently-cited cases of a language family that is flexible with respect to the noun–verb distinction is that of Salishan languages. These claims were put forth initially in the specialist literature (e.g., Kuipers 1968; Kinkade 1983; Jelinek and Demers 1994) and then adopted by typologists interested in variation in parts of speech systems (e.g., Broschart 1991; Sasse 1993; Bhat 1994; Hengeveld and Rijkhoff 2005), although the current consensus in the Salishanist community seems to be against this position (e.g., van Eijk and Hess 1986; Demirdache and Matthewson 1995; Matthewson and Davis 1995; Davis and Matthewson 1998, 1999; Kroeber 1999; Beck 2002). The primary argument for the absence of a noun–verb distinction in Salishan is data such as that from Lushootseed shown in (4):[6]

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[5] In actual fact, Evans and Osada list four types of putative noun–verb flexibility. In addition to the omnipredicative and precategorial type, they mention the "Broschartian" language and languages with "rampant" conversion. The thrust of their article, however, is to show (I believe correctly) that the precategorial and Broschartian types of language are, in fact, better analyzed as languages with rampant conversion — and that this last category does not in fact represent a true example of noun–verb flexibility. Since the term "rampant conversion" language presupposes the outcome of this discussion, I have chosen to use "precategorial" for the moment as a more neutral cover term.

[6] The abbreviations used in this paper are as follows: – = morpheme boundary; = = clitic boundary; • = lexical suffix boundary; 1, 2, 3 = first-, second-, third-person; ADD = additive; ADNM = adjunct nominalizer; ALTV = allative; ATTN = attenuative; CLS = classifier; CNTRFG = centrifugal; CNTRPT = centripetal; CTD = contained; DAT = dative; DC = diminished control; DEF = definite; DET = determiner; DIST = distal; DMA = demonstrative adverb; DSD = desiderative; DSTR = distributive; ECS = external causative; FEM = feminine; FOC = focalizer; HAB = habitual; HMN = human; ICS = internal causative; INCH = inchoative; INT = interrogative; INTJ = interjection; IRR = irrealis; NEG = negative; NM = nominalizer; NSPEC = non-specific; OBJ = object; PASS = passive; PFV = perfective; PL = plural; PO = possessive; PR = preposition; PROG = progressive; PROP = propriative; PROX =

(4) a. *sbiaw ti ʔux̌ʷ*

   sbiaw   ti   ʔux̌ʷ
   coyote   SPEC go
   'the one who goes is Coyote'

<div align="right">(Van Eijk and Hess 1986: 324)</div>

   b. *p'q' adᶻəxʷ tiʔəʔ ʔəxʷx̌qabac*

   p'q'adᶻ=əxʷ   tiʔəʔ   ʔəs–dxʷ–x̌q•abac
   rotten.log=now   PROX   STAT–CTD–wrapped•body
   'what is wrapped up in it is a rotten log'

<div align="right">[HM Star Child, line 52]</div>

   c. *t'əq'ʾʷ tiʔił x̌ʷaqʷabac*

   t'əq'ʾʷ   tiʔił   x̌ʷaqʷ•abac
   snap   DIST   wrapped•body
   'what was wrapped around her waist snapped'

<div align="right">[DS Star Child, line 134]</div>

   d. *ʔəbilʾ čəxʷ łušudxʷ tiʔił łuləgʷax̌ʷ …*

   ʔəbilʾ   čəxʷ   łu=šuł–dxʷ   tiʔił   łu=lə=gʷax̌ʷ
   if   2SG.SUB   IRR=see–DC   DIST   IRR=PROG=walk
   'if you see someone traveling …'

<div align="right">(Hess 2006: 49, 180)</div>

Sentences such as (4a) represent a fairly common type of construction where the syntactic predicate is a word with a substantive meaning, *sbiaw* 'Coyote', whose subject appears to be a word expressing an event, *ʔux̌ʷ* 'go'. As in all sentences with substantive syntactic predicates, the meaning of the construction here is equative. Likewise, in (4b) the syntactic predicate is the substantive *p'q'adᶻ* 'rotten log' and has as a subject what appears to be the translation equivalent of a verb, *dxʷx̌qabac* 'be wrapped up inside', inflected for the stative aspect and preceded by a determiner. As shown in (4c), words corresponding to English verbs are not confined to argument-position in constructions with substantive predicates: in this sentence, the predicate is *t'əq'ʾʷ* 'snap', but the subject is apparently the expression of an event *x̌ʷaqʷabac* 'be wrapped around body'. Likewise, (4d) shows that event-words can be direct objects of transitive predicates. Such words can also appear in other syntactic argument roles such as agentive complement of a passive (5a), as well as being found in (non-criterial) roles such as complement of a preposition (5b) which are cross-linguistically most typical of nouns:

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(5)   a. *diʔɬ kʷi sgʷəgʷaʔtubs ʔə kʷədiʔ ʔugʷəgʷaʔtxʷ*

      di?ɬ   kʷi   s=gʷə–gʷaʔ–txʷ–b=s   ?ə   kʷədi?

      sudden REM   NM=ATTN–accompanied–ECS–PASS=3PO PR   that.one

            ?u–gʷə–gʷaʔ–txʷ

            PFV–ATTN–accompanied–ECS

      'suddenly she was joined by the one who accompanied her'

      (lit. 'her being joined by that one who accompanied her was sudden')

                                            [DS Star Child, line 76]

    b. *gʷəl ləxʷəbtəb əlgʷəʔ dxʷʔal ʔəsqʼil*

      gʷəl   lə=xʷəb–t–b   əlgʷəʔ dxʷ–?al   ?əs–qʼil

      SCONJ   PROG=thrown–ICS–PASS PL   CNTRPT–at PFV–aboard

      'and they were thrown aboard'

                                            (Hess 2006: 58, line 399)

In fact, if judged on superficial distributional criteria, there appear to be no syntactic roles that are open to words with substantive meanings (i.e., words we would expect to be nouns) that are not also open to words that express events (words we would expect to be verbs).

    On the basis of evidence such as that presented in (4) and (5), it would seem that a *prima facie* case for the absence of a noun and verb distinction in Salishan languages can be made. However, closer examination of data from Lushootseed reveals that all in fact is not as it seems: while it may be true that the noun–verb distinction is neutralized in syntactic predicate position (Section 2.1), it can be shown to persist for words from these two classes in syntactic argument position (2.2). The primary piece of evidence for this persistence is that argument-phrases like *ti ʔuxʷ* 'the one who goes' in (4a) are, as their translation implies, headless relative clauses (2.2.1). Furthermore, there are constructions in which words expressing events appearing in argument position show clear morphological and syntactic evidence of recategorization as nominals (2.2.2), as well as constructions in which the treatment of particular words depends crucially on whether they belong to a nominal or a verbal lexical class (2.2.3). Thus, Lushootseed (and most likely Salishan languages in general) do not meet Evans and Osada's (2005) criteria of bidirectionality, and so do not constitute a true case of noun–verb flexibility, but instead correspond to a case of unidirectional flexibility.

2.1   Neutralization in predicate position

As shown in the previous section, word classes in Lushootseed do show flexibility in that the noun–verb distinction in the lexicon is neutralized in syntactic predicate position, as illustrated by the sentences in (4a) and (b), which have as syntactic predicates words with substantive meanings ('coyote' and 'rotten log', respectively). Lushootseed is a predominantly predicate-initial language, and so in the matrix clause the syntactic predicate is the first word belonging to a major word class:

(6)   a. *ʔux̌ʷəx̌ʷ tiʔəʔ sgʷəlub*

        ʔux̌ʷ=əx̌ʷ   tiʔəʔ   sgʷəlub
        go=now   PROX   pheasant
        'Pheasant goes now'

                                               (Hess 1998: 79, line 40)

    b. *kʷədatəb tiʔił*

        kʷəda–t–b   tiʔił
        taken–ICS–PASS   DIST
        'that one was taken'

                                               (Hess 2006: 59, line 428)

    c. *sx̌aʔhus tsiʔəʔ čəgʷas diič'uʔ*

        sx̌aʔhus   tsiʔəʔ   čəgʷas   diič'uʔ
        sawbill   PROX:FEM   wife   one:HMN
        'one of the wives is Sawbill'

                                               (Hess 2006: 22, line 5)

    d. *sʔuladxʷ tiʔił*

        sʔuladxʷ   tiʔił
        salmon   DIST
        'that is a salmon'

                                      (Hess and Hilbert 1976: vol. I, 7)

As shown here, overt subjects immediately follow the predicate phrase both in sentences predicated on words expressing events and in sentences with substantive predicates. Lexical subjects may be full argument phrases as in (6a) and (6c), or simply demonstrative determiners as in (6b) and (d). Subject inflection in matrix clauses without NP subjects is marked by subject markers, the full paradigm for which is given with *ʔux̌ʷ* 'go' in (7):

(7)   a. *ʔux̌ʷ čəd*   b. *ʔux̌ʷ čəł*

        ʔux̌ʷ   čəd   ʔux̌ʷ   čəł
        go   1SG.SUB   go   1PL.SUB
        'I go'   'we go'

    c. *ʔux̌ʷ čəxʷ*   d. *ʔux̌ʷ čələp*

        ʔux̌ʷ   čəxʷ   ʔux̌ʷ   čələp
        go   2SG.SUB   go   2PL.SUB
        'you$_{SG}$ go'   'you guys go'

e. *ʔux̌ʷ*

   ʔux̌ʷ   Ø
   go   3SUB
   'he/she/it/they go'

These same subject markers are also used with substantive predicates, as in (8):

(8)   *ʔaciɬtalbixʷ čəd*

   ʔaciɬtalbixʷ   čəd
   Indian   1SG.SUB
   'I am an Indian'

<div align="right">(Hess and Hilbert 1976: vol. I, 36)</div>

Subject markers immediately follow the predicate, preceding any objects (9a), but only as long as the predicate is clause-initial; otherwise, the subject marker migrates to sentence-second position, immediately following any predicate modifiers as in (9b) and (9c):

(9)   a. *ɬugʷiid čəd kʷsi sxʷiʔuq'ʷ*

      ɬu=gʷii–d   čəd   kʷsi   sxʷiʔuq'ʷ
      IRR=call–ICS 1SG.SUB   REM:FEM   Basket.Ogress
      'I'll call the Basket Ogress'

<div align="right">[AJ Basket Ogress, line 27]</div>

      b. *cick'ʷ čəd ʔəxʷʔux̌ʷəb*

      cick'ʷ   čəd   ʔəs–dxʷ–ʔux̌ʷ–ab
      very   1SG.SUB   STAT–CTD–go–DSD
      'I very much want to go'

<div align="right">(Hess 1995: 90)</div>

      c. *ɬuhikʷ čəd stubš ɬuluƛ'iləd*

      ɬu=hikʷ   čəd   stubš   ɬu=luƛ'–il=əd
      IRR=big   1SG.SUB   man   IRR=old–INCH=1SG.SBJ
      'I will be a big man when I grow old'

<div align="right">(Bates, Hess and Hilbert 1994: 109)</div>

As the data in (9) show, migration applies equally to the subjects of event-word and substantive predicates.

   The examples in (9a) and (9c) illustrate another common source of confusion about the distinction between lexical classes is the existence of phrase-level inflectional or quasi-inflectional proclitics marking tense and mood. This set of proclitics includes the irrealis *ɬu=* seen in (9a) and (9c), the subjunctive clitic *gʷə=* (11a), the additive *bə=* (11b), and the habitual *ƛ'u=* (30b). These proclitics tend to appear on the first "contentive" word (as opposed to clitic, particle, determiner, etc.) in a phrase, whatever its lexical class, as illustrated by the fifth member of this set, the past tense marker *tu=*:

(10) a. *tukʷaʔtəbəxʷ*
       tu=kʷaʔ–t–b=əxʷ
       PAST=released–ICS–PASS=now
       'he was let go'

<div align="right">(Hess 2006: 20, line 220)</div>

    b. *tuqʼiyaƛʼəd tiʔił tusčʼistxʷs*
       tu=qʼiyaƛʼəd tiʔił   tu=sčʼistxʷ–s
       PAST=slug   DIST   PAST=husband–3PO
       'Slug had been her husband'

<div align="right">(Hess 1998: 70, line 135)</div>

    c. *huy čəxʷ tascutəb ʔə tiʔił tabsbədaʔ*
       huy   čəxʷ   tu=ʔas–cut–t–b   ʔə tiʔił tu=ʔas–bəs–bədaʔ
       SCONJ 2SG.SUB PAST=STAT–say–ICS–PASS PR DIST PAST=STAT–PROP–offspring
       'for you were told to by the (deceased) one who had a daughter'

<div align="right">(Hess 1998: 98, line 203)</div>

    d. *dił tux̌ʷulʼ tubəłaʔ*
       dił   tu=x̌ʷulʼ   tu=bə=łaʔ
       FOC   PAST=just   PAST=ADD=arrive
       'it was he who had just kept arriving there'

<div align="right">(Hess 2006: 21, line 244)</div>

These clitics can appear on event-word predicates, as shown in (10a), or on substantive arguments, as in (10b) and (c). (10b) also shows the past-tense clitic appearing on a substantive predicate, *qʼiyaƛʼəd* 'slug'.[7] The phrase-level clitics may appear more than once in a clause, (10b) and (c), or even be iterated within a single phrase, (10d). The fact that all of these clitics are found attached to all types of words in both predicate and argument phrases has been in some measure responsible for the misapprehension that lexemes of all classes take word-level inflections for tense, aspect, and mood categories.[8]

    Just as subject inflection is the same for substantive and event-word predicates in matrix clauses, it is also the same in subordinate subjunctive clauses whose syntactic predicates are words of either type. These clauses take a special series of subject enclitics, illustrated in (11) by =*əs* '3 subjunctive':

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[7] Further discussion of the issue of tense in Salishan languages can be found in Bates (2002), Burton (1997), Matthewson (2002, 2005), and Wiltschko (2003).

[8] There is in fact an inflectional difference between substantives and words expressing events — namely, that the latter take aspectual inflections, such as the stative aspect-marker *ʔas-* in (10c), whereas the former do not. However, this distinction is true in all environments, not just in predicate position, and so the absence of aspectual inflections on substantive predicates can not be used as a measure of their markedness in this syntactic environment.

(11) a. *ʔəsx̌əc gʷəxʷit'iləs əlgʷəʔ*

      ʔəs–x̌əc   gʷə=xʷit'–il=əs   əlgʷəʔ
      STAT–afraid   SBJ=descend–INCH=3SBJ   PL
      'he is afraid they will fall'

<div align="right">(Hess 1967: 76)</div>

      b. *xʷɫub bəhikʷ tiʔiɫ bəshuyitəbs əlgʷəʔ stuləkʷ, gʷəstuləkʷəs*

      xʷɫub   bə=hikʷ   tiʔiɫ   bə=s=huy–yi–t–b=s   əlgʷəʔ stuləkʷ
      ultimately   ADD=big   DIST   ADD=NM=made–DAT–ICS–PASS=3PO   PL   river

          gʷə=stuləkʷ=əs
          SBJ=river=3SBJ
      'finally an even bigger river was made for them, if it was a river'

<div align="right">(Hess 2006: 36, line 354)</div>

The full set of subjunctive person-markers is given in Fig. 6:

	SG	PL
1	*=ad/=əd*	*=aɬi/=əɬi*
2	*=axʷ/=əxʷ*	*=aləp/=ələp*
3	*=as/=əs*	

<div align="center">Figure 6: Subjunctive person-markers</div>

These subjunctive person-markers are enclitics that become phonologically dependent on the immediately preceding word, irrespective of its lexical class:

(12) *gʷəck'ʷaqidələp gʷučaləc*

      gʷə=ck'ʷaqid=ələp   gʷə=ʔu–čala–t–s
      SBJ=always=2PL.SBJ   SBJ=PFV–chased–ICS–1SG.OBJ
      'if you folks always chase me'

<div align="right">(Hess 1967: 52)</div>

Here, the subjunctive person marker appears in a clause introduced by an adverb, *ck'ʷaqid* 'always'; because the adverb is clause-initial, the person-marker is encliticized to this word rather than to the syntactic predicate, maintaining its clause-second position. Once again, the fact that these person inflections are sentence-second clitics is often overlooked, and these morphemes have been used as evidence for the claim that words of any class (including adverbs) can be inflected for person and number of their subjects in subjunctive clauses.

    As noted by Kinkade (1983) for Salishan in general, the patterns shown by words expressing events and substantives in predicate position also apply to other types of word. Thus, Lushootseed has clauses predicated on a variety of word classes such as lexical pronouns (13), adverbs (14), numerals (15), and interrogative words (16):

(13) *ʔəca kʷi łułiłič'id tiʔił tatačulbixʷ*

ʔəca	kʷi	łu=łi–łič'i–d	tiʔił	tatačulbixʷ
I	REM	IRR=ATTN–cut–ICS	DIST	big.game

'the one who will cut up the big game animal is me'

[DS Star Child, line 304]

(14) *tudiʔ tə dukʷibəł*

tudiʔ	tə	dukʷibəł
over.there	NSPEC	Changer

'Changer is way over there'

(Hess 1995: 81, ex. 6)

(15) *saliʔ kʷi łuʔəƛ'txʷ čəxʷ č'ƛ'aʔ*

saliʔ	kʷi	łu=ʔəƛ'–txʷ	čəxʷ	č'ƛ'aʔ
two	REM	IRR=come–ECS	2SG.SUB	stone

'you will bring two stones' (lit. 'the stones that you will bring will be two')

[AW Basket Ogress, line 80]

(16) a. *tučadəxʷ čəxʷ*

tu=čad=əxʷ	čəxʷ
PAST=where=now	2SG.SUB

'where have you been?'

b. *tul'čad čəxʷ*

tul'–čad	čəxʷ
CNTRFG–where	2SG.SUB

'where are you coming from?'/'where are you from?'

(Bates et al. 1994: 59)

Kroeber (1999) also notes that many Salishan languages, including Lushootseed, allow prepositions to head clauses, as in (17):

(17) a. *dxʷʔal tə hud tə sxʷit'il ʔə tə biac*

dxʷ–ʔal	tə	hud	tə	s=xʷit'–il	ʔə	tə	biac
CNTRPT–at	NSPEC	fire	NSPEC	NM=descend–INCH	PR	NSPEC	meat

'into the fire falls the meat' (lit. 'the fall of the meat is into the fire')

(Kroeber 1999: 381)

b. *tul'ʔal čəd sqaǰət*

tul'–ʔal	čəd	sqaǰət
CNTRFG–at	1SG.SUB	Skagit

'I am from Skagit'

(Bates et al. 1994: 6)

Note that in (17b) the subject marker immediately follows the preposition, separating it from its complement in order to maintain sentence-second position.

Predicates such as those in (13)–(16) also take the subjunctive person-markers in subjunctive subordinate clauses:

(18)   a. *gʷudaʔatəb dᶻəɫ gʷəcədiɫəs kʷi gʷəuʔatəbəd*

   gʷə=ʔu–daʔa–t–b   dᶻəɫ   gʷə=cədiɫ=əs   kʷi   gʷə=ʔu–ʔatəbəd
   SBJ=PFV–named–ICS–PASS PTCL SBJ=him/her=3SBJ   REM   SBJ=PFV–die
   'it seems that the one who died should be named!'

   (Hess 1998: 71, line 158)

   b. *gʷəl wiliq'ʷitəb tutul'čadəs*

   gʷəl   wiliq'ʷi–t–b   tu=tul'–čad=əs
   SCONJ   ask–ICS–PASS   PAST=CNTRFG–where=3SBJ
   'and they asked him where he might be from'

   (Hess 1998: 97, line 166)

   c. ... *ʔaləs tadiʔ siq'gʷas ʔə tə šəgʷɫ*

   ʔal=əs   tadiʔ   siq'gʷas   ʔə   tə   šəgʷɫ
   at=3SBJ   over.there bifurcation   PR   NSPEC   path
   '… where there is a fork in the path over there'

   [AW Basket Ogress, line 99]

(18a) shows the third-person subjunctive clitic attached to a lexical pronoun, (18b) shows it cliticized to an interrogative word, and in (18c) it is bound to a preposition, meaning that the putative neutralization of the noun–verb distinction in predicate position applies to a much broader range of lexical items than simply to nouns and verbs (cf. the proposal made by Kinkade 1983 that the Salishan lexicon distinguishes only "predicate" and particles, the former class subsuming nouns, verbs, and anything else that is an eligible syntactic predicate).

Based on the data presented here, then, it does seem that Lushootseed (like most of the languages in the family) shows a great deal of flexibility with respect to what class or classes of word are unmarked syntactic predicates. Nevertheless, the neutralization of lexical class distinctions in predicate position is not enough to demonstrate that the noun–verb distinction is non-existent in the Lushootseed lexicon or is irrelevant to Lushootseed syntax: in addition to showing that all words are unmarked in the criterial syntactic role for verbs, it is also necessary to show that all words are unmarked in the criterial syntactic role for nouns. As will be seen in the following section, this is clearly not the case.

2.2   Contrastive behaviour in argument position

As demonstrated in the preceding section, the syntactic parallels between substantive and event-word predicates in Lushootseed are exact, and the similarities between the two are heightened by the behaviour of person-markers and phrase-level inflectional clitics, which

contribute to the illusion that the inflections pertaining to the predicate phrase are morphological categories of a conflated noun–verb lexical class.[9] This pattern of neutralization in predicate position, however, is not all that uncommon, and is found in a variety of languages (e.g., Buriat, Arabic, Nanay, Beja) where the noun–verb distinction is not in question (Beck 2002: 107–108). Although bare nominal predicates are allowed in such languages, the distinction between nouns and verbs is rarely in doubt once other types of evidence are taken into consideration. In Lushootseed, the crucial evidence is found by examining the syntax of argument phrases: of the open lexical classes, only words with substantive meanings are unmarked syntactic arguments. Consider the following:

(19) a. *tiləb ʔuʔəƛ’ tiʔə qaw’qs*

        tiləb   ʔu–ʔəƛ’   ti?ə   qaw’qs
        immediately PFV–come   PROX   raven
        'right away Raven showed up'

                                           [MW Star Child, line 101]

    b. *gʷəl diɬ ɬučəgʷas tiʔiɬ ɬučəbaʔtxʷ tiʔiɬ*

        gʷəl   diɬ   ɬu=čəgʷas tiʔiɬ   ɬu=čəbaʔ–txʷ tiʔiɬ
        SCONJ   FOC   IRR=wife   DIST   IRR=pack–ECS   DIST
        'and so the one who (can) carry that will be (my) wife'

                                           [MW Star Child, line 77]

    c. *x̌ʷul’ buusaɬ kʷi sp’ic’ids*

        x̌ʷul’   buus•aɬ   kʷi   s=p’ic’i–d=s
        just   four•CLS   REM   NM=wrung.out–ICS=3PO
        'just four times she wrings it out' (lit. 'her wringing it out is just four times')

                                           [HM Star Child, line 66]

On the surface, the subjects of the sentences in (19) all appear to have a similar syntactic structure: a determiner followed by a lexical item with either a substantive meaning (19a) or a meaning expressing an event (19b–c). However, closer examination of the syntactic properties of argument-phrases based on event-words reveals that constructions of the type shown in (19b) are, in fact, headless relative clauses (Section 2.2.1), while those in (19c) are non-finite clauses resembling English gerunds (2.2.2): in other words, when event-words are used in argument position, they are marked in terms of Structural Complexity, requiring us to make a distinction between these words (marked syntactic arguments — i.e., verbs) and substantives (unmarked syntactic arguments — i.e., nouns). Further evidence for the necessity of maintaining this distinction can be found in other non-criterial syntactic environments such as negative constructions (2.2.3), where the interpretation and syntactic treatment of complements of the negative predicate depends on whether the complement is a word with a substantive meaning (a noun) or a word expressing an event (a verb). This

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[9] See also Jacobsen (1979), who makes the same observation about the putative noun–verb neutralization in Nootka, another omnipredicative language.

evidence strongly supports the conclusion that any flexibility in the Lushootseed lexicon that neutralizes the distinction between noun and verb applies only to the syntactic role of predicate, but is unidirectional and does not apply to the role of syntactic argument.

2.2.1 Headless relative clauses

In spite of the frequent appearance of event-words in argument position in sentences such as (19b) above, these constructions can be shown to be marked in the sense of being syntactically more complex than ordinary nominal arguments: they are, in fact, headless relative clauses (Beck 2002: 113–122).[10] The best evidence for this comes from the restrictions on accessibility to relativization (in the sense of Keenan and Comrie 1977) that hold for both nominally-headed and headless relative clauses: all else being equal, in clauses with a third-person subject and a third-person object, only the subject can be relativized:

(20) a. *ʔušudxʷ čəɫ ti č'ač'as ʔutəsəd tiʔiɫ stubš*

ʔu–šuɫ–dxʷ	čəɫ	ti	č'ač'as	ʔu–təs–əd	tiʔiɫ	stubš
PFV–see–DC	1PL.SUB	SPEC	child	PFV–hit–ICS	DIST	man

‘we saw the boy that hit the man’
*‘we saw the boy that the man hit’

b. *ʔušudxʷ čəd ti sqʷəbayʔ ʔuč'axʷatəb ʔə tiʔiɫ č'ač'as*

ʔu–šuɫ–dxʷ	čəd	ti	sqʷəbayʔ	ʔu–č'axʷa–t–əb	ʔə	tiʔiɫ
PFV–see–DC	1SG.SUB	SPEC	dog	PFV–clubbed–ICS–PASS	PR	DIST

č'ač'as
child

‘I see the dog that was clubbed by the boy’

<div align="right">(Hess and Hilbert 1976: II, 124–125)</div>

(20a) gives an example of a modifying relative clause with a third-person subject and a third-person object; in this case, the only interpretation of the sentence possible is that of a subject-centred relative clause. When the object-centred reading is desired, it is necessary to passivize the embedded clause as in (20b). The same holds for headless relative clauses such as those shown in (21):

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[10] The term "headless" here should be taken to refer only to the absence of a substantive (nominal) head modified by the clause—the constructions are in fact headed syntactically by the preceding determiners. See Kroeber (1999: 258–261) for a general discussion of the construction in the family.

(21) a. *wiw'su **ti?ə? ?učalad ti?ə? sqʷəbay?***

    wiw'su   ti?ə?   ?u–čala–d   ti?ə?   sqʷəbay?

    children PROX   PFV–chased–ICS   PROX dog

    'the ones who chased the dog are the children'

    *'the ones who the dog chased are the children'

  b. *sqʷəbay? **ti ?učalatəb ?ə ti?ił wiw'su***

    sqʷəbay? ti   ?u–čala–t–əb   ?ə   ti?ił   wiw'su

    dog   SPEC PFV–chased–ICS–PASS PR   DIST children

    'the one who is chased by the children is the dog'

                                        (Hess 1995: 99)

In (21a), the only interpretation open to the sentence is the one where the headless relative clause identifies the subject of the embedded verb, in spite of the fact that the opposite interpretation, where the dog chases the children, is semantically and pragmatically quite plausible. Again, where this is the desired interpretation, the embedded clause appears in the passive, as in (21b).[11]

    When the subject of the embedded clause is first- or second-person, only object-centred relative clauses are possible:

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[11] When discourse context leaves no room for ambiguity as to the syntactic roles of the third-person arguments of the verb in the embedded clause, object-centred relatives and headless relatives are possible:

  i. *tułiltubuł ?ə **ti sqigʷəc tuq'ʷəx̌ʷəd***

    tu=łil–txʷ–buł   ?ə   ti   sqigʷəc tu=q'ʷəx̌ʷ–əd

    PAST=give.food–ECS–1PL.OBJ PR DEF deer   PAST=butchered–ICS

    'he gave us the deer which he had butchered'

                               (Hukari 1977: 53)

  ii. *taxʷčəłəb s?əłəd ?ə **ti?ə? di?ə? stawixʷ?ł tasčəba?əd tul'?al tudi? ča?kʷ***

    tu=?as–dxʷ–čəł–əb   s?əłəd ?ə ti?ə? di?ə? stawixʷ?ł

    PAST=STAT–CTD–make–DSD food   PR PROX here   children

    tu=?as–čəba?–əd   tul'?al tudi?   ča?kʷ

    PAST=STAT–backpack–ICS PR   over.there waterward

    'she wanted to make food of the children she carried up from the water'

                            [DM Basket Ogress, line 73]

Even in such cases, object-centred relatives are unusual, the more common pattern being for the embedded verb to be used in the passive voice.

(22) a. *ʔušudxʷ čəɬ **ti č'ač'as ʔutəsəd čəd***

    ʔu–šuɬ–dxʷ   čəɬ   ti   č'ač'as   ʔu–təs–d   čəd

    PFV–see–DC 1PL.SUB SPEC child   PFV–hit–ICS 1SG.SUB

    'we saw the boy that I hit'

<div align="right">(Hess and Hilbert 1976: II, 125)</div>

    b. *skəyu təɬ **tiʔiɬ ʔucucuuc čələp***

    skəyu   təɬ   tiʔiɬ   ʔu–cut–cut–c   čələp

    ghost   truly   DIST   PFV–DSTR–say–ALTV 2PL.SUB

    'what you guys are talking about is truly a ghost'

<div align="right">(Hess 1998: 94, line 107)</div>

This is almost certainly a syntactic restriction, as the subject-markers are not themselves nominals and so cannot head an NP or be modified by a relative clause. There are no examples of first- or second-person pronouns heading a relative clause construction, but there are numerous examples of pronouns functioning as predicates of sentences with headless relative clause subjects. In these cases, the pronoun and the headless relative express the same event-participant, and the predicate of the embedded clause is in the third-person:

(23) a. *ʔəca **tiʔəʔ ləčalad tə sqʷəbayʔ***

    ʔəca   tiʔəʔ   lə=čala–d   tə   sqʷəbayʔ

    I   PROX   PROG=chased–ICS NSPEC   dog

    'the one who is chasing the dog is me'

    b. *dibəɬ **ti ʔut'uc'utəb ʔə tiʔiɬ šəbad***

    dibəɬ   ti   ʔu–t'uc'u–t–b   ʔə   tiʔiɬ   šəbad

    we   SPEC PFV–shot–ICS–PASS PR   DIST   enemy

    'the ones who were shot by the enemy are us'

<div align="right">(Hess 1995: 99)</div>

    c. *gʷəl dəgʷi **kʷi ɬukʷədatəb dᶻixʷ***

    gʷəl   dəgʷi   kʷi   ɬu=kʷəda–t–b   dᶻixʷ

    then   you   REM   IRR=held–ICS–PASS   first

    'and so the one who will be taken first is you'

<div align="right">[LA Basket Ogress, line 26]</div>

These headless relative clauses are obligatorily subject-centred. When expression of the PATIENT or ENDPOINT of the event is the sentence predicate, the subject-phrase appears in the passive voice, as in (23b) and (c).

    The syntactic properties of event-words in argument position in Lushootseed point quite clearly to their analysis as embedded predicates contained within a relative construction, something which is quite widely accepted as evidence of structural markedness in other contexts (for instance, in the discussion of property-concept verbs in languages with re-

duced classes of adjectives — e.g., Dixon 1982; Hengeveld, Rijkhoff and Siewierska 2004). Even though in Lushootseed there are no overt markers of this embedding such as special inflections or unambiguous complementizers, the added syntactic complexity of these embedded structures is manifest in the patterns of accessibility and voice restrictions discussed in the sections above. All of these properties of event-words in argument position point to their being significantly different (and more complex) constructions than a simple English noun phrase like *the boy*. Kinkade (1983) addresses this point by arguing, in effect, that substantive syntactic predicates like those discussed in Section 2.1 are evidence that a word like Lushootseed *sbiaw* 'coyote' in (4a) is the expression of the underlying semantic predicate 'be a coyote'.[12] Thus, according to Kinkade, all the translation-equivalents of nouns in languages like English are, in Salishan languages, the expressions of semantic predicates based on 'be'. If this is the case, then it must be true that not only are substantives predicative in constructions such as (4a), but they must also be predicates in sentences where they are syntactic arguments, as in (24):

(24) *ʔuʔəɫəd tsi č'ač'as ʔə ti bəsqʷ*

ʔu–ʔəɫəd	tsi	č'ač'as	ʔə	ti	bəsqʷ
PFV–feed.on	SPEC:FEM	child	PR	D	crab

'the girl fed on crab'

<div align="right">(Hess 1995: 28, ex. 12b)</div>

Crucial to this line of reasoning is the fact that in Lushootseed, as in most Salishan languages, nominal arguments are almost invariably introduced by determiners, as are headless relative clauses.[13] Thus, under Kinkade's analysis, each of the argument phrases in (24) would actually be the equivalent of a relative clause, the determiner in reality being a complementizer. According to Kinkade, Lawrence Nicodemus, a native speaker of Coeur D'Alene Salish with some linguistic training, regularly glosses argument phrases as relative clauses, as in:

Coeur D'Alene

(25) *x̌esiɫc'əʔ x̌ʷe c'iʔ*

x̌es•iɫc'əʔ	x̌ʷe	c'iʔ
good•flesh	DET	deer

'they are good to eat those which are deer'

<div align="right">(Nicodemus 1975, cited in Kinkade 1983: 34)</div>

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[12] Kinkade's proposal is given a formal treatment in Jelinek and Demers (1994).

[13] In actual fact, proper names in Lushootseed often appear without a determiner. In addition, there are rare instances of bare common nouns in texts, although the conditions on this are not well understood. It should also be pointed out that nouns used as appositives, as predicate complements in negatives (see 35 below), and as complements in constructions with meanings like 'make an X' do not require a determiner, but do not have predicative 'be an X' readings.

A better literal gloss for Kinkade's purposes might be 'the ones who are deer are good meat', the deictic *xʷe* introducing a headless relative clause formed from *c'iʔ* 'be a deer'. Presumably, Nicodemus would also gloss the Lushootseed sentence in (24) as 'the one who is a girl fed on the one who is a crab'. The facts that subjects are gapped in subject-centred relative clauses and intransitive verbs show no overt agreement with third-person subjects lend a semblance of credibility to Kinkade's position in that if *tsi č'ač'as* in (24) were a subject-centred relative clause formed on a predicate 'be a child' with a zero subject, this is the form that it would be expected to take (a determiner followed by a bare intransitive predicate—cf. *ti ʔux̌ʷ* 'the one who goes' in 4a) (a similar point is made in Van Eijk and Hess 1986: 324–325).

Although Kinkade's interpretation of Nicodemus has had a certain intuitive appeal, it is difficult to know how seriously to take such considerations. What is needed before accepting such a radical claim — that all NPs are, in fact, syntactically relative clauses — is hard syntactic evidence, evidence which captures aspects of Salishan syntax and differentiates it from languages like English where such a position is clearly undesirable (although it has been argued for in the past — Bach 1968). So far none has been forthcoming, or at least none that can not be handled in other ways such as a DP-analysis of noun phrases (Matthewson and Davis 1995; Beck 1997), which nonetheless maintains the noun–verb distinction. In the absence of such evidence, the more parsimonious analysis is to treat argument-phrases such as *tsi č'ač'as* in (24) as a simple substantive preceded by a determiner, a structurally less complex (and therefore unmarked) construction than that required for event-words in the same position, which — for subject-centred and some object-centred constructions — are clearly relative clauses.

2.2.2 Oblique-centred constructions

Further evidence for the markedness of event-words in argument position, and the formal identity of these constructions with relative constructions, comes from the consideration of oblique-centred modifying and argument phrases. Since Lushootseed does not allow the relativization of oblique objects or adjuncts, it creates the structural equivalent of oblique- and adjunct-centred relative clauses through the formation of gerund- or participle-like constructions. Such constructions are used both as adnominal modifiers and as syntactic arguments, and have essentially the same internal syntax as matrix clauses in terms of the valency and transitivity of the embedded predicate. However, an important difference between the two clause types is that these non-finite clauses mark their subjects with the possessive series of subject-marking clitics, as shown in (26) for oblique-centred constructions formed with the proclitic *s=*, generally analyzed by Salishanists as a nominalizer:

(26) a. *x̌ʷul' čəd ɬuləʔux̌ʷtxʷ tiʔəʔ ɬadsʔəɬtxʷ*

        x̌ʷul'   čəd   ɬu=lə–ʔux̌ʷ–txʷ   tiʔəʔ   ɬu=ad=s=ʔəɬ–txʷ

        just   1SG.SUB   IRR=PROG–go–ECS   PROX   IRR=2SG.PO=NM=eat–ECS

        'I will just be taking [them] what you will feed [them] with'

        (lit. 'I will just be taking them your future-feeding them')

<div align="right">(Hess 1998: 58, line 56)</div>

b. *huyəxʷ tiʔił dsyəhubtubicid, siʔab dsyaʔyaʔ*

huy=əxʷ	tiʔił	d=s=yəhub–txʷ–bicid	siʔab	d–syaʔyaʔ
be.done=now	DIST	1SG.PO=NM=recite–ECS–2SG.OBJ	noble	1SG.PO–friend

'my telling to you is finished now, my noble friend'

<div align="right">(Hess 1995: 142, line 51)</div>

In (26a) the subject of the non-finite clause *ładsʔəłtxʷ* 'your future feeding him/her/them' (based on the transitive *ʔəłtxʷ* 'feed someone with something') is expressed by the second-person singular possessive subject clitic, *ad=*. Similarly, in (26b) the subject of *syəhubtubicid* 'telling to you' is expressed by the first-person singular subject proclitic, *d=* (cf. the first-person matrix subject marker *čəd* in 20 above). The full set of possessive subject markers is given in Fig. 7:

	SG	PL
1	*d=*	*čə*
2	*ad=*	*=ləp*
3	*=s*	

Figure 7: Possessive subject-markers

This set is somewhat heterogeneous as it includes two proclitics, two enclitics, and a first-person plural clitic borrowed from the matrix subject paradigm shown in (7) above. When the possessive subject is a full NP, a periphrastic construction with the preposition *ʔə* is used (see 31 below).

The possessive subject paradigm is homophonous with the paradigm of affixes used to mark nominal possession:

(27) *d–sqʷəbayʔ* 'my dog'
   ad–sqʷəbayʔ 'your dog'
   sqʷəbayʔ–s 'his/her/their dog'
   sqʷəbayʔ čəł 'our dog'
   sqʷəbayʔ–ləp 'your_PL dog'
   sqʷəbayʔ ʔə ti wiw'su 'the children's (*wiw'su*) dog'

However, the possessive subject markers differ from the possessive affixes in that they are mobile, and are obligatorily attached to the first element in the nominalized clause, whether or not this element is the sentence predicate, as in (28):

(28)   *ʔa əw'ə sixʷ tiʔił adsuhuy ti ƛ'ubəstiləbsəxʷ ƛ'ubəšaq*

    ʔa əw'ə   sixʷ   tiʔił   ad=s=ʔu–huy
    be.there   PTCL   PTCL   DIST   2SG.PO=NM–PFV–be.done

      ti   ƛ'u=bə=s=tiləb=s=əxʷ   ƛ'u=bə=šəq
      SPEC   HAB=ADD=NM–suddenly=3PO=now   HAB=ADD=high
    'There is something you do to make it suddenly go high again'
    (lit. 'what you do [so that] it suddenly goes high again is there [i.e., exists]')
<div align="right">(Hess 2006: 26, line 102)</div>

In this example, the adverbial *ti ƛ'ubəstiləbsəxʷ ƛ'ubəšaq* 'its habitually suddenly being high again' contains an adverb *tiləb* 'suddenly' which precedes the clausal predicate *šəq* 'be high', and it is the adverb (rather than the clausal predicate) that bears both the possessive subject clitic and the nominalizing proclitic. Possessive affixes, on the other hand, are not mobile and remain affixed to the possessed, even in the presence of a pre-posed modifier (see the phrase *siʔab dsyaʔyaʔ* 'my noble friend' in 26b above, where the first-person possessive remains on *syaʔyaʔ* 'friend' rather than migrating to *siʔab* 'noble').[14]

    As the example in (28) shows, it is not only the possessive subject clitics that are mobile, it is also the nominalizing proclitic itself. This property differentiates it from the homophonous (and certainly cognate) nominalizing prefix *s-* which forms a part of a great many nouns whose etymology is transparently that of a verbal radical plus this prefix, as well as a great many more where the etymology is no longer transparent. For many nouns formed with *s-*, the meaning of the derived form is fairly predictable: for intransitive verbs, the *s*-form refers to the subject of the verbal radical (e.g., *q'axʷ* 'be frozen' > *sq'axʷ* 'ice'), while for bivalent verbs it refers to the object (*xʷiʔxʷiʔ* 'hunt something' > *sxʷiʔxʷiʔ* 'game'). However, it is also very common for *s*-forms to have unpredictable, lexicalized meanings (e.g., *x̌əł* 'be sick' > *sx̌əł* 'sickness', *x̌aʔx̌aʔ* 'be forbidden' > *sx̌aʔx̌aʔ* 'in-laws'). Even more significantly, the *s-* prefix—unlike the *s=* proclitic—is not mobile and can never separate from the radical to which it is attached:

(29)   *laʔbəxʷ haʔł stalx̌əxʷ*

    laʔb=əxʷ   haʔł   s–talx̌=əxʷ
    really=now   good   NP–be.able=now
    'now he is really a very capable one'
<div align="right">(Hess 2006: 40, line 461)</div>

Note also that *s*-forms do not require an expression of a possessor, whereas nominalizations with the *s=* proclitic always appear with a possessive clitic expressing their subject.

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[14] Hess (p.c., 2006) reports that for some older speakers the possessive affixes were optionally mobile, although there are no attestations of this pattern in the current corpus. Even if this were a frequent pattern, clitic migration is obligatory for possessive subject clitics, whereas at best it is only optional for possessive affixes.

In addition to the proclitic *s=*, Lushootseed also has a second proclitic, *dəxʷ=*, which forms non-finite clauses with essentially the same syntactic properties as those formed with *s=*, including the use of possessive subject clitics to express their subjects:

(30) a. *ləliʔəxʷ tiʔəʔ cəxʷuʔibəš*

    ləliʔ=əxʷ   tiʔəʔ   d=dəxʷ=ʔu–ʔibəš

    different=now   PROX   1SG.PO=ADNM=PFV–travel

    'where I am traveling is different now'

                  (Hess 2006: 27, line 128)

   b. *ƛ'uləbəlx̌ʷ ʔal tiʔiɬ čad dəxʷʔaləp*

    ƛ'u=lə=bəlx̌ʷ   ʔal   tiʔiɬ   čad   dəxʷ=ʔa=ləp

    HAB=PROG=go.by   PR   DIST   where   ADNM=be.there=2PL.PO

    'he goes by there where you guys come from'

                  (Hess 2006: 66, line 592)

(30a) shows the first-person singular proclitic *d=* marking the subject of the non-finite clause *cəxʷuʔibəš* 'where I travel'. The next example in (30b) contains a non-finite clause with a second-person plural subject, which is in turn contained within an prepositional phrase acting as a locative adverbial modifier. The distinction between *s=* and *dəxʷ=* is, roughly, that *s=* forms the equivalent of oblique-centred relative clauses, whereas *dəxʷ=* is used with adjunct-centred expressions referring (among other things) to locations, motives, and instruments.

  When the subject of either type of non-finite clause is third-person, it shows the same patterns as the expression of the third-person possessor, using the possessive subject enclitic *=s* if there is no overt subject NP, otherwise making use of a periphrastic possessive construction:

(31) a. *x̌ʷul' p'aƛ'aƛ' tiʔiɬ sʔabyids tiʔiɬ č'ƛ'aʔ*

    x̌ʷul'   p'aƛ'aƛ'   tiʔiɬ   s=ʔab–yi–d=s   tiʔiɬ   č'ƛ'aʔ

    just   worthless   DIST   NM=extend–DAT–ICS=3PO   DIST   rock

    'what he gives to that rock is simply worthless'

                  (Hess 1995: 148, line 32)

   b. *tiʔiɬ tusʔukʷukʷ ʔə tə wiw'su*

    tiʔiɬ   tu=s=ʔukʷukʷ   ʔə   tə   wiw'su

    DIST   PAST=NM=play   PR   NSPEC   children

    'what the children were playing with'

                  (Hess 1998: 89, line 299)

In (31a) the subject is realized with the third-person possessive subject marker, *=s*, while in (31b) the subject is an overt NP, *tə wiw'su* 'the children', and so the periphrastic possessive construction with *ʔə* is used. The same two patterns are also observed with *dəxʷ=*constructions:

(32) a. *ƛ’al’ bədiɬ dəxʷʔa ʔə tiʔiɬ dəxʷʔəy’dubs ʔə tiʔiɬ sgʷəlub*

    Ⱦ’al'   bə=diɬ   dəxʷ=ʔa   ʔə   tiʔiɬ   dəxʷ=ʔəy’–dxʷ–b=s

    also   ADD=FOC   ADNM=be.there PR   DIST   ADNM=find–DC–PASS=3PO

          ʔə   tiʔiɬ   sgʷəlub

          PR   DIST   pheasant

    'it was the very same place where they had been found by Pheasant'

                                     (Hess 1998: 85, line 187)

    b. *ʔəsɬaɬlil tiʔiɬ ʔaciɬtalbixʷ dəxʷʔa ʔə tiʔacəc sbiaw*

    ʔəs–ɬaɬlil   tiʔiɬ   ʔaciɬtalbixʷ dəxʷ=ʔa   ʔə   tiʔacəc   sbiaw

    STAT–live   DIST   person   ADNM=be.there PR   UNQ   coyote

    'people were living where Coyote was'

                                          (Hess 1998: 91, line 1)

Again, here we see the use of the subject enclitic *=s* when there is no overt subject NP present (32a), and the periphrastic construction with *ʔə* used with an overt NP (32b).

    A second function of the *s=*nominalizer is to form *sentential nominals* (Beck 2000), non-finite clauses whose reference is the event rather than a particular event-participant. Compare the non-finite clauses in (31) with those in (33):

(33) a. *tul’t’aq’t tiʔəʔ suʔəƛ’ ʔə tiʔəʔ qʷuʔ*

    tul’–t’aq’t   tiʔəʔ   s=ʔu–ʔəƛ’   ʔə   tiʔəʔ   qʷuʔ

    CNTRFG–waterward PROX   NM=PFV–come PR   PROX   water

    'the coming of the water is waterward'

                                  (Hess 1998: 69, line 108)

    b. *ʔəsluud əlgʷəʔ tiʔiɬ suƛ’əladiʔs ʔal kʷədiʔ t’aq’t*

    ʔəs–lu–d   əlgʷəʔ tiʔiɬ   s=ʔu–ƛ’əladiʔ=s   ʔal kʷədiʔ

    STAT–heard–ICS PL   DIST   NM=PFV–make.noise=3PO PR REM:DMA

          t’aq’t

          waterward

    'they heard her making noise over there on shore'

                                    (Hess 2006: 17, line 134)

The non-finite clauses in these examples refer to entire events — the coming of the water in (33a) and the making of a noise in (33b). In neither case is the reference of the non-finite clause an argument of the verb in the nominalized clause.

    As it turns out, the interaction of the *s=*proclitic and words with a substantive meaning offers some evidence against the analysis of NPs as relative clauses and, as such, helps to establish the distinction between verbs and nouns. Consider the sentences in (34):

(34) a. *łustitčulbixʷ čəxʷ*

      łu=s=titčulbixʷ   čəxʷ

      IRR=NM=small.animal   2SG.SUB

      'you are the one who will be a small animal'

<div align="right">(Hess 2006: 8, line 136)</div>

   b. *huy, qʷiʔadəxʷ tiʔəʔ skikəwič*

      huy   qʷiʔadəxʷ   tiʔəʔ   s=ki–kəwič

      SCONJ   call.out=now   PROX   NM=ATTN–hunchback

      'then Little Hunchback calls out'

      (lit. 'the one who is Little Hunchback calls out')

<div align="right">[AJ Basket Ogress, line 30]</div>

Recall that Kinkade (1983) claims that all noun phrases in Salishan languages are in fact relative clauses, making an expression like *tiʔił titčulbixʷ* 'the small animal' in (34a) more literally 'the one who is a small animal' — that is, a subject-centred relative construction based on a monovalent predicate 'be a small animal'. Similarly, the form *skikəwič* in (34b) (based on the proper noun *kikəwič* 'Little Hunchback') would also seem to correspond to a subject-centred relative clause. If this were the case, however, then the occurrence of the proclitic *s=* with such words should, as it does with words expressing events, result in a sentential nominalization in which the subject is expressed as a possessor (meaning something along the lines of 'his being a small animal' or 'his being Little Hunchback'). Yet in the constructions in (34) the subject of the putative *s=*nominal is in fact not expressed at all; instead, such constructions seem to be interpreted as subject-centred relative clauses, which for event-words do not require the proclitic *s=*. Since *s=* is usually reserved for the "relativization" of arguments that are not part of a predicate's core valency (i.e., not the subject or direct object), the obvious conclusion is that the subjects of substantive predicates are not in fact part of their core valency, which is consistent with the idea that substantives have a semantic valency of zero. This is fairly good evidence against the proposal that NPs are underlying relative clauses formed on 'be an X' type semantic predicates, given that such an analysis predicts that substantives should pattern in the same way as intransitive expressions of events and form full non-finite clauseswhen affixed with the *s=* proclitic.[15]

    Although *s=* and *dəxʷ=*clauses are not relative clauses *per se*, they represent the same type of structural markedness that headless relatives do — they are phrasal or clausal syntactic units and so count as being structurally complex. Further evidence for the markedness of these constructions of a different kind can adduced from the fact that they undergo a certain degree of *recategorization* (Bhat 1994) (also "recategorialization" — Hopper and

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[15] An alternative analysis is that the /s/ here is not the nominalizing proclitic but rather the nominalizing prefix, *s-*, in which case a more accurate gloss of the forms in (34) might be something along the lines of 'the small-animal being' (34a) and 'the Little-Hunchback being' (34b). Even if this proves to be the case, the substance of the argument remains the same: the formation of sentential nominals is blocked for substantive predicates but allowed for words expressing events.

Thompson 1984) in that, by expressing their subjects as possessors, they take on some of the inflectional properties of the part of speech that is unmarked in the same syntactic role — that is, they become more like nouns (cf. Van Eijk and Hess 1986). Recategorization (and its counterpart, decategorization) falls under the heading of Contextual Markedness (Beck 2002: 23), and constitutes a clear example of what Hengeveld (1992a, 1992b) would classify as a "further measure." The fact that the morphosyntactic properties of event-words in Lushootseed in argument position become more like those of substantives seems to be strong evidence of the link between this syntactic role and the latter class of words — that is, evidence of the existence of a class of nouns in the Lushootseed lexicon.

2.2.3 Negative constructions

Once the existence of a lexical class distinction has been established by the examination of criterial syntactic environments, it is almost always the case that the distinction can also be shown to be present in other constructions as well. In Lushootseed, for instance, nouns and verbs can be shown to be clearly distinct in the context of negative constructions headed by the impersonal negative predicate *xʷiʔ* 'it is not, there is no'. This predicate is used to negate the existence or reality of an object or the realization of an event, and can take either a noun or a verb as its complement.[16] When the complement is a noun, the expression has the reading 'there is no' and the nominal complement appears with the subjunctive proclitic, *gʷə=*:[17]

(35)   a. *xʷiʔ gʷəstutubš*

     xʷiʔ   gʷə=stu–tubš

     NEG   SBJ=ATTN–man

     'there are no boys'

                                            [LA Basket Ogress, line 119]

    b. *xʷiʔ gʷəstabəxʷ*

     xʷiʔ   gʷə=stab=əxʷ

     NEG   SBJ=what=now

     'there is nothing (left)'

                                        [ML Mink and Tutyika II, line 101]

When the complement is a verb, the subjunctive proclitic also appears, but the verbal predicate is obligatorily nominalized with the proclitic *s=*:

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[16] The negation of propositions such as 'X is not a boy' or 'X did not reach it' is carried out by different means, identical for nouns and verbs, involving the use of *xʷiʔ* as an adverb and the negative mood marker *lə=* (see Hess 1995:94–95). The point being made here only concerns the subcategorization patterns of *xʷiʔ* used as syntactic predicate.

[17] This proclitic, one of the phrase-level inflectional proclitics discussed in Section 2.1, indicates that the phrase that contains it refers to a non-existent entity or a non-achieved eventuality.

(36) a. *xʷiʔ uʔxʷ gʷəsɬaʔ ʔə tiʔəʔ čaləs*

        xʷiʔ   uʔxʷ   gʷə=s=ɬaʔ   ʔə   tiʔəʔ   čaləs–s
        NEG   PTCL   SBJ=NM=arrive   PR   PROX   hand–3PO
        'his hand still can not reach it'
        (lit. 'there is no his hand's reaching it')

                                                     (Hilbert and Hess 1977: 23)

    b. *xʷiʔəxʷ gʷəsx̌aabs dxʷʔal sɬčil ʔə tsiʔəʔ bədaʔs*

        xʷiʔ=əxʷ   gʷə=s=x̌aab=s   dxʷ–ʔal   s=ɬčil   ʔə   tsiʔəʔ
        NEG=now   SBJ=NM=cry=3PO   CNTRPT–at   NM=arrive   PR   PROX:FEM

         bədaʔ–s
         offspring–3PO
        '(the baby) isn't crying (even) when her daughter arrives'

                                                   [HM Star Child, line 48]

As with all of the other distinctions discussed in this section, this difference in the treatment of the two classes of words is categorical and requires reference in the syntax to a word-class designation that maps a set of syntactic behaviours onto specific items in the lexicon — in other words, a designation which constitutes a part-of-speech distinction. The fact that the semantic makeup of one of the classes corresponds almost exactly with the semantic category of substantives and the other contains those meanings belonging to the semantic category of events points us squarely to the conclusion that the distinction is one that any typologically-responsible analyst would characterize as one between nouns and verbs.

2.3   Unidirectional flexibility in the Salishan lexicon

As seen in the preceding sections, Lushootseed shows some flexibility as to the treatment of substantives versus event-words in its syntax, but this flexibility is unidirectional and only applies in predicate position. In argument position, event-words are either contained within headless relative clauses or are recategorized as non-finite argument phrases with some of the morphological properties of nouns (specifically, that they realize their subjects as possessors). The same type of recategorization applies when substantives and event-words are found in certain types of complementizing constructions such as negatives. In these cases, as in the case of non-substantive arguments, the syntax of Lushootseed makes reference to the lexical class of a word in determining its syntactic treatment: words that express substantive meanings appear in syntactic argument position without further meas-ures, whereas words expressing events must be contained in some sort of embedded (head-less relative or non-finite) clause when used as syntactic arguments. The fact that this syn-tactic distinction groups words into the semantic classes that it does (substantive versus event-word) shows quite clearly that Lushootseed makes a robust lexical class distinction between noun and verb.

    Of course, this is not to say that the Lushootseed part-of-speech system is precisely the same as the traditional Indo-European system, nor that nouns and verbs behave in Lushoot-

seed exactly as they do in English or Latin. Like other Salishan languages, Lushootseed quite freely allows nouns and other non-verbal elements to serve as syntactic predicates without requiring the use of a copula, thereby neutralizing lexical class distinctions between verbs and nouns in predicate position. The situation can be summarized as in Fig. 8:

	PREDICATE	ARGUMENT
NOUN	*unmarked*	*unmarked*
VERB	*unmarked*	***marked***

Figure 8: Unidirectional flexibility between nouns and verbs

Thus, the flexibility displayed by Lushootseed is particular only to one of the relevant criterial syntactic positions, but the noun–verb distinction can by no means be said to be absent from the Lushootseed lexicon or irrelevant to Lushootseed syntax. Rather, the distinction between verbs and nouns is not relevant to the behaviour of either class of word in predicate position — but it is relevant in argument position, as it is in languages like English and others that are said to have a "rigid" distinction between noun and verb. This means, of course, that Lushootseed is like English in that it does distinguish between nouns and verbs as they are defined by Hengeveld (1992a, 1992b), but that it differs from English in that it shows flexibility with respect to the behaviour of nouns in predicate position. This is the type of unidirectional flexibility that Evans and Osada (2005) point to as a frequent source of claims for the absolute neutralization of the noun–verb distinction. As they correctly observe, such flexibility is a necessary but not a sufficient condition for the claim that a particular language does not distinguish the two lexical classes.

3   <u>Omnipredicative and precategorial languages</u>

The type of unidirectional flexibility shown by Lushootseed (and, to the best of my knowledge, other Salishan languages as well) is a typical case of what Evans and Osada (2005) refer to as the "omnipredicative" pattern of putative noun–verb flexibility — that is, languages where all open-class lexical items are claimed to be semantic predicates with a minimum syntactic valency of one, those words with substantive meanings expressing predications of the type 'be an X'. As argued in the preceding sections, there is no positive empirical evidence for such a claim in Lushootseed, and some syntactic evidence against it. Taking the opposite point of view, that Lushootseed does have a noun–verb distinction and argument phrases headed by substantives are not syntactic predications (that is, they are not headless relative clauses), allows for a satisfactory account of the behaviour of open-class words in criterial and non-criterial syntactic positions without recourse to needless exoticisms in the syntax or the structure of the lexicon. Given that the facts in other languages where similar claims of omnipredicativity have been made (e.g., Nootkan — Swadesh 1939, Nahuatl — Launey 1994) look, to the non-specialist at any rate, to be substantially the same, it would seem that the case for this type of language representing a true case of bidirectional noun–verb flexibility does not stand up to careful scrutiny.

There is, of course, a second logically-possible type of language that neutralizes the syntactic distinction between words with substantive meanings and those that express events. In these languages, rather than substantive interpretations of 'be an X' semantic predicates being forced by syntactic context, it is the substantive interpretations of event-words that are context-dependent. Languages that follow this pattern fall under Evans and Osada (2005)'s heading of precategorial languages. Rather than subdividing lexical items into classes based on their syntactic behaviours and distributions, precategorial languages organize their lexicon around roots that are not specified for any particular syntactic distribution, and thus do not conform to any of the definitions of parts of speech offered in (1) above. The meanings of these roots are often claimed to be "vague" (Hengeveld et al. 2004; Hengeveld and Rijkhoff 2005) and to remain indeterminate between substantive or event-readings until they appear in a particular syntactic context. This situation is illustrated by the following by-now-familiar examples from Tongan:

Tongan

(37) a. *naʔe siʔi ʔae akó*
      PST   small ABS   school:DEF
      'the school was small'

    b. *ʔi ʔene siʔi*
      in   3SG:POSS small:DEF
      'in his/her childhood'

    c. *naʔe ako ʔae tamasiʔi siʔi iate au*
      PST   study ABS child   little LOC 1SG
      'the little child studied at my house'

    d. *naʔe ako siʔi ʔae tamasiʔí*
      PST   study little ABS   child:DEF
      'the child studied little'
                        (Tchekoff 1981: 4, cited in Hengeveld 1992b: 66)

This data shows the root *siʔi* in a variety of contexts — as a syntactic predicate (37a), as the complement of a preposition (37b), as an adnominal modifier (37c), and as an adverbial (37d). These represent all four of the criterial syntactic contexts listed in (1) and so, given the absence of obvious morphosyntactic differences between the instances of *siʔi* in the various contexts, it is claimed that this root conforms to the definition of all four lexical classes.[18]

An obvious objection to this interpretation of the data is, of course, that *siʔi* does not mean the same thing in each of these four contexts (Croft 2000; Vonen 2000; Beck 2002). In (37a), (37c), and (37d), *siʔi* expresses a semantic predicate, something like 'be small' or

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[18] In fact, (37b) does not present a canonical example of *siʔi* in a criterial syntactic position for a noun — a more convincing example would give *siʔi* as the argument of a verb rather than as the complement of a preposition.

'be of reduced scale or intensity'; however, in (37b), *si?i* expresses a more substantive concept, 'childhood' — that is, 'stage of human development during which a person is mentally and physically immature (and therefore small)'. While clearly not random, the exact semantic relationship between the two meanings of the root is not transparent or predictable, but rather is reminiscent of the relationship between homophonous pairs of English words such as *hammer_N* vs. *hammer_V* or *cook_N* vs. *cook_V,* which are generally held to be distinct lexical items related by a process of conversion (Mel'čuk 2006). Conversion posits the existence in the lexicon of homophonous but semantically-related words whereby each has a particular meaning associated with its use in a particular syntactic role or roles.[19] The semantic relationship between members of a conversive pair is not arbitrary but at the same time is not entirely predictable and is established by linguistic convention, requiring the speaker to learn and enter into the mental lexicon the particular meaning of a root associated with its use in a particular semantic role. Evans and Osada (2005) make a similar observation for a large number of noun–verb pairs in Mundari and suggest that this pattern is evidence that precategorial languages are those that make extensive use of conversion in the lexicon, the distinct meanings of words like *si?i* in (37) in fact constituting different lexical items (see also Vonen 2000).

   Hengeveld and Rijkhoff (2005) counter this argument by claiming that data like that in (37) are evidence that roots of this type have "vague" meanings which become specified only once the root appears in a given syntactic context. Rijkhoff (2008) illustrates this idea using Fig. 9, which is based on the Samoan data in (38):

   Samoan

(38) a. *'Ua   lā   le   aso*
         PERF   sun   ART   day
         'the sun is shining today' (lit. 'the day suns')

      b. *'Ua   mālosi   le   la*
         PERF   strong   ART   sun
         'the sun is strong' (lit. 'the sun strongs')
                  (Mosel and Hovdhaugen 1992: 80, 73, 74, cited in Rijkhoff 2008: 729)

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[19] It should be pointed out that the claim of conversion is not (as suggested by some common misnomers for "conversion"—"zero conversion" and, worse, "zero-derivation") a claim that there is some sort of class-changing zero affixation. Zero affixation requires an explicit formal contrast between a zero and a non-zero exponent of the same category, and it is precisely the nature of conversion that there is none. Furthermore, the existence of zero derivational elements is, under any viable theory of morphological zeroes, at best problematic, and more likely impossible (see Mel'čuk 2006: Chapter 9 and the references therein for further discussion).

	A	B	C	D	E	Highlighted properties of *lā*:
Slot: head of Clause	+		+		+	A C E ⇒ verbal meaning (*lā* 'be_sunny')
Slot: head of 'NP'		+		+	+	B D E ⇒ nominal meaning (*lā* 'sun')
Slot: modifier of 'noun'	+	+	+			B C D ⇒ adjectival meaning (*lā* 'sunny')

Figure 9: Meaning components of Samoan *lā* (A B C D E) (Rijkhoff 2008: 731)

According to Rijkhoff's proposal, the meaning of the root *lā* consists of a set of components or features which comprise the sum total of the components of the meanings of its contextualized use. Speakers learn to associate certain subsets of the semantic components of *lā* with its appearance in particular semantic slots, giving rise to the more specific meanings that are lexified as different words in languages such as English.

In a sense it is certainly true, even under the conversion analysis, that the different context-bound meanings of precategorial roots share certain semantic elements and could, possibly, be shown to be extensions or subsets of a single, abstract schematic meaning; however, it is not clear how this impacts on the question of parts of speech. Hengeveld and Rijkhoff (2005) imply that a schematic relationship between the meanings of two signs with homophonous signifiers is sufficient for their treatment as the same lexical item. Nevertheless, the fact remains that the context-bound meanings of precategorial roots are quite specific, and that speakers must learn and memorize which specific sub-schematic meaning of the precategorial root (or which subset of its semantic components) is associated with which particular syntactic context.[20] Even for a carefully chosen example like *lā*, where the context-specific meanings of the root seem almost to be predictable (assuming that these meanings are exactly the same as their English glosses), it remains the case that speakers must learn and memorize the fact that, for instance, in the "head of 'NP'" slot *lā* expresses the meaning components B D E (= 'sun') and not A D E (say, 'sunshine').

The issue of predictability of the meanings of roots in particular semantic slots is discussed extensively by Evans and Osada (2005: 367–375) for another putative precategorial language, Mundari, under their heading of "compositionality." For Evans and Osada, a pair of words such as *lā* 'be sunny' and *lā* 'sun' can only be considered instances of the same lexeme if the difference in their meaning as it is manifest in two different syntactic slots is predictable as a function of that syntactic environment. Even a small shift such as 'sun' to 'be sunny' (that is, 'environment is illuminated brightly by the sun') seems not to be entirely predictable (why does the predicative use of *lā* not mean 'be a sun'?). However, the problem becomes even more acute for a root like the Tonga *siʔi* in (37) which in its predi-

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[20] This is not to say that there may not be systematic patterns in these associations; however, the best attempt to-date to come up with a classificatory scheme for a precategorial language (Tongan — Broschart 1997) reveals a complex system in which membership in one of 24 lexical classes (as defined by these patterns) appears to be to a certain extent non-arbitrary but is by no means predictable. Acquisition of such a system maybe facilitated by the semantics of roots, but class membership — that is, which semantic relationship holds between the predicative and substantive interpretations of the word — must nevertheless be learned (and stored in the lexicon) on an item by item basis.

cative and modificative function means 'small' and in its argument function means 'childhood' (i.e., 'stage of human development during which a person is mentally and physically immature'). In this case, the meaning of the precategorial root would have to include not only a component meaning 'small' but also all of the components that make up the meaning of the much more complex notion of 'childhood'. Furthermore, a speaker would have to learn (and store) the information that *only* the meaning component 'small' is associated with its use in predicative and modificative syntactic roles, and that the meaning 'childhood' (and not 'child' or 'short person' or any other conceivable recombination of the semantic component-set comprising the union of the components of 'small' and 'childhood') is associated with its use in syntactic argument roles.

Speakers may (or may not) be aware of the semantic relationship between the two meanings of the precategorial root, but the fact of the matter is that the speaker's knowledge of *siʔi* must include a learned pairing between a particular meaning (sub-schematic or not) and a syntactic distribution. And this pairing of meaning and unmarked distribution is what is generally understood by "part-of-speech." The abstract schemas or vague meanings underlying the networks of related words may constitute part of the lexicon of a precategorial language (as may the schemas shared by non-homophonous forms related by overt derivation and other word-formation processes); however, it is not the precategorial roots that meet the definitions of lexical classes shown in (1), it is the context-bound uses of the roots. Like most approaches to parts of speech, the definitions in (1) are based on the premise that parts of speech define high-level taxonomic groupings of lexical items (i.e., lexical signs that pair a signifier and a particular signified) according to their (unmarked) syntactic distribution. For a language like Tongan, such definitions fit quite naturally if we recognize that the term "lexical item" applies separately to each member of a pair like *siʔi* 'be small'/*siʔi* 'childhood', rather than to an under-specified, abstract root *siʔi*, which seems more than anything else to define the semantic domain of the word-family. Like the analysis of omnipredicative languages suggested above, this approach effectively removes precategorial languages from the putative group of languages that show bidirectional noun–verb flexibility, and avoids treating the lexicon in such languages as being overly exotic, instead showing them to be extreme examples of a lexicon built on the cross-linguistically well-attested process of lexical conversion.

Seen from this perspective, the type of noun–verb flexibility manifested by omnipredicative languages and that seen in precategorial languages represent markedly different phenomena. In the former case, words with specific meanings fall into clear categories based on their morphosyntactic behaviour, but rather than showing bidirectional patterns of markedness in both of the criterial syntactic roles for nouns and verbs, the class of verbs shows itself to be marked in the role of syntactic argument, while both nouns and verbs are unmarked syntactic predicates. In precategorial languages, homophonous lexical items appear in various syntactic roles, but have divergent (albeit not always unrelated) meanings associated with their different uses. The homophonous lexical items undoubtedly form related sets and so may be linked to an abstract precategorial schema, but the sets are in a sense "pre-lexical," representing a more abstract level of the lexicon than has traditionally been of interest to syntacticians and lexicographers. Irrespective of the internal structure of these sets, it is the individual members (that is, the distributionally-specified meaning–form pairs) that constitute the genuine parts of speech in such languages, making the precate-

gorial language — like the omnipredicative language — a false case of noun–verb flexibility.

Thus, both possible types of noun–verb flexibility proposed by Evans and Osada (2005) seem (as they suggest) not to stand up to careful consideration. This is an unsurprising result, given the widely-held position among typologists that the noun–verb distinction is one of the best candidates we have for a genuine universal of human language (Croft 2003). Naturally, this raises a question with respect to the status of the typology of parts-of-speech systems in Fig. 1 and the implicational hierarchy in (2), given that both predict, or at any rate allow for, the existence of languages that do not distinguish verbs and nouns. While this may not be a terribly serious shortcoming of the typology, as it could simply be stipulated that all languages make at least the first-order distinction on the hierarchy and the Type 1 language could then be removed from the typology, the fact that we need to make such a stipulation at all seems significant, and lays the groundwork for future investigation into the origins and motivations of this restriction on the logically-possible range of variation in human languages.

A second, and perhaps more serious, objection to the proposed typology that seems to fall out from the analysis of the data presented here has to do with the relative rankings of the different word-classes in the hierarchy, in particular with respect to the rankings of noun and verb. Even if it is the case that no language fails to distinguish between nouns and verbs, the way that the hierarchy is presently constructed characterizes languages that distinguish only two lexical classes as making a two-way distinction between verbs and everything else. However, the distributional evidence from both Salishan and Tongan seem to point us in the opposite direction: that languages with only two lexical classes distinguish between nouns and everything else. In Salishan, this is manifest in the pattern of distributional markedness. Nouns are syntactically privileged in that they have a syntactic role (syntactic argument) that is not open without further measures to other lexical classes, effectively subdividing the lexicon between words which are marked and unmarked syntactic arguments, rather than between words that are marked and unmarked syntactic predicates, as predicted by the typology in Fig. 1.[21] In the Tongan case, assuming that the pattern shown by *siʔi* is typical of all precategorial roots in the language, the two interpretations of the root are divided along similar lines — the substantive interpretation is restricted to "nominal" syntactic roles and the predicative interpretation is found elsewhere, once again dividing the lexicon between words (or interpretations of precategorial roots) which are without-further-measures syntactic arguments and words which are found without further measures in the other criterial syntactic environments. Thus, it seems that the cross-linguistically attested patterns of flexibility in lexical classes favour a typology, like those argued for in Dixon (1982) and Beck (2002), that allows for the flexible grouping of nouns against verbs, adjectives, and adverbs rather than verbs against a potentially-conflated class of nouns, adjectives, and adverbs. From a semantic perspective, this makes a great deal of

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[21] It should be pointed out here that, in addition to verbs, Lushootseed has a number of smaller, closed classes of word — one of which, adverbs, contains what are often thought of as "contentive" (as opposed to "grammatical") meanings. The fact that Lushootseed has adverbs but not adjectives is also somewhat problematic from the point of view of the typology in Fig. 1, although this is mitigated by the fact that adverbs are a closed class of words.

sense, given that verbs, adjectives, and adverbs are expressions of semantic predicates and share the property of having non-zero syntactic valency, as opposed to nouns which in Langacker's (1987) terms are "conceptually autonomous" and generally have a syntactic (and semantic) valency of zero. If this pattern turns out to be cross-linguistically robust, it constitutes an important finding, as it offers us an example of the influence of the semantic structure (as opposed to the content) of meanings on the organization of their expressions in lexicon.

A final implication of this study for the approach to parts-of-speech typology being discussed here concerns the issue of the directionality of lexical flexibility. Although the principle of bidirectionality was proposed by Evans and Osada (2005) as a test for determining whether or not a part-of-speech distinction is truly absent in a language, it also sheds light on an important potential difference in types of lexical flexibility, highlighted by the contrast between Fig. 3 and Fig. 4 above, repeated here for convenience in Fig. 10:

	BIDIRECTIONAL		UNIDIRECTIONAL	
	ROLE A	ROLE B	ROLE A	ROLE B
CLASS X	*unmarked*	*unmarked*	*unmarked*	*unmarked*
CLASS Y	*unmarked*	*unmarked*	*unmarked*	***marked***

Figure 10: Types of flexibility

While flexibility between lexical classes has often been assumed to entail bidirectionality, languages like Lushootseed provide us with a clear example of a different, unidirectional type of flexibility. Unidirectional flexibility does not equate with the absence of a lexical class distinction, but it does correspond to the neutralization of that distinction in one (or more) of the criterial syntactic positions. This type of neutralization is a relative commonplace across languages, and seems like a good candidate for inclusion as a parameter for a comprehensive typology of parts of speech systems. The patterns shown by unidirectional systems and the ways in which they parallel and depart from the patterns observed for bidirectionally-flexible systems seem sure to inform parts-of-speech typology and will advance the cause of understanding the parameters of variation open to human languages.

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