Semantic agents, syntactic subjects, and discourse topics:
How to locate Lushootseed sentences in space and time[*]

David Beck
University of Alberta

In the search for linguistic universals, two of the most promising candidates have been syntactic subjects and transitive clauses, or at the very least the conceptual and functional archetypes that lie behind these. The Salishan language Lushootseed (a.k.a. Puget Salish) is interesting in this respect in that it has been claimed to lack both subjects and syntactically transitive clauses. In particular, the absence of syntactically transitive clauses—that is, clauses with two overt non-oblique actants—with third-person agents has been a cornerstone of a good deal of descriptive and theoretical work on this language (*e.g.* Hess 1973, 1993a; Jelinek & Demers 1983). In Lushootseed, as in many Salishan languages, events that correspond to prototypically transitive events in languages like English are expressed by the combination of a radical stem with an applicative or a causative suffix (Hess 1993b).[1] As it turns out, such clauses can express two overt actants only with first- or second-person agents, as in (1):[2]

(1) (a) *ʔu–gʷəč̓–əd   čəd ti sqʷəbayʔ*
PNT–look:for–ICS   1S   D   dog
'I looked for the dog'

(b) *ʔu–gʷəč̓–əd   čəxʷ ti sqʷəbayʔ*
PNT–look:for–ICS   2S   D   dog
'you looked for the dog'

(c) *ʔu–gʷəč̓–əd   ti sqʷəbayʔ*
PNT–look:for–ICS   D   dog
'[he/she/they] looked for the dog'
but *'the dog looked for [him/her/them]'

(Hess 1993a: 11)

(d) **ʔu–gʷəč̓–əd   ti stubš ti sqʷəbayʔ*
PNT–look:for–ICS   D   man   D   dog
*'the man looked for the dog'

[1]The causative morphemes in Lushootseed are *-t* 'event-internal causative' (used when the causer is directly involved in the event), *-txʷ* 'event-external causative' (used when the causer is perceived as somehow external to the event), and *-dxʷ* 'limited control' (used when the causer has less than full control over the event); these suffixes, and the interaction of their meanings with that of the middle *-b* that leads to passivization (see (2) below), are discussed in detail in Beck (1996).

[2]The abbreviations used here are given at the end of this paper. Where necessary, the terms are defined in the text.

Expression of two overt third-persons in a clause requires the use of the middle (2a) or the passive voice (2b), formed by the addition of the middle suffix *-b* to one of the causatives (Beck 1996). Both of these result in intransitive clauses where one of the two actants is realized as an oblique contained within a prepositional phrase:

(2)　(a)　*ʔu–gʷəč̓–əb　　　ti　č̓ač̓as ʔə ti　sqʷəbayʔ*
　　　　　PNT–look:for–MD　　D　boy　P　D　dog
　　　　　'the boy looked for the dog'

　　(b)　*ʔu–gʷəč̓–t–əb　　　ʔə ti č̓ač̓as ti　sqʷəbayʔ*
　　　　　PNT–look:for–ICS–MD　P　D　boy　　D　dog
　　　　　'the dog was looked for by the boy'

<div align="right">(Hess 1993a: 38)</div>

Facts such as these have led some writers (*e.g.* Jelinek & Demers 1983) to posit that Lushootseed has a split ergative system in which third-person NPs such as *ti sqʷəbayʔ* 'the dog' in (1c) and *ti č̓ač̓as* 'the boy' in (2a) are absolutive subjects and that PPs such as *ʔə ti č̓ač̓as* 'of the boy' in (2b) would be ergatively-marked agents. While the primary researcher on Lushootseed, Thom Hess, does not accept the ergative analysis, he does feel that Lushootseed has a split system in the sense that sentences with third-person agents such as (1c) allow for only a single non-oblique actant, the "direct complement" (*ti sqʷəbayʔ* in (1) and (2b)). The absence of an overt agent-pronominal in the sentence in (1c) indicates that it is, in fact, intransitive; thus, verbs such as *gʷəč̓əd* are termed "patient-oriented" in that their direct complement—the only allowable NP—refers only to a semantic patient. According to Hess (p.c.), this analysis renders the notion of "syntactic subject" largely extraneous to the treatment of Lushootseed grammar, a claim which seems to be upheld by his accurate and insightful descriptive work on the language.

Outside the immediate domain of Lushootseed, however, such a stand is highly problematic in that the syntactic role of "subject" (or its reflex in a particular theory) is widely held among linguists to be universal or near-universal and, in fact, is a cornerstone of analysis in a wide range of frameworks such as Functional Grammar (Dik 1978), Lexical-Functional Grammar (Bresnan 1982), Cognitive Grammar (Langacker 1991), and virtually all dependency-based theories (*e.g.* Mel'čuk 1988; Hudson 1990). For these—and other theories which posit or derive the universality of subjects or subject-like syntactic roles—the lack of a syntactic subject in the Lushootseed clause would represent a major challenge. While issues such as this do not touch on the criterion of descriptive adequacy, which has certainly been met in the works of Hess and others to date, they are crucial in the context of cross-linguistic comparison and in the search for widely applicable or universal principles for syntactic theory: thus, the claim that there is no syntactic subject in Lushootseed is an important one, and should be carefully scrutinized. In the paper that follows, I will examine the Lushootseed data and, in particular, sentences like those in (1) and argue that there is indeed an event-participant in such expressions that can usefully be referred to as the "syntactic subject" (Section 1). Following this, in Section 2, I will analyze some further properties of the subject role both with respect to its function in grounding Lushootseed clauses spatially and temporally and with respect to its discourse function as a referential anchor for events—that is, the pivotal role subjects play in linking new participants and events to a known or topical entity in discourse. As we shall see, while the surface patterns of Lushootseed syntax are quite remarkable and unique, they are the result of the convergence of

a number of properties of subjects and principles of discourse which are, cross-linguistically, by no means unusual or extraordinary.

1) Subject properties

Despite the fact that the terms "subject" and "object" are expressly avoided in the principle grammatical works on Lushootseed, many linguists feel that these categories—in particular that of "subject"—are universals of natural language (Keenan 1976; Perlmutter 1980; Mel'čuk 1988; Hudson 1990; Langacker 1991), and subject and object are widely held to play an essential part in the analysis of phenomena such as passivization, voice, and ergativity. Unfortunately, even among those who advocate the universality of "subject", there is no agreement as to a universal definition: while the category may be active in all languages, the particular manner in which it manifests itself and the specific properties that it has in a given language can only be defined in terms of that language itself (Keenan 1976; Mel'čuk 1988). The extent of the consensus seems to be that the subject is, at the very least, "syntactically privileged" (Mel'čuk 1988: 161) in the sense of possessing some set of syntactic properties which (a) pertain (as a set) to no other clausal elements (Keenan 1976), (b) accord the subject the highest degree of clausal saliency (Langacker 1991), and (c) make the subject "the argument to which the predication is attributed—that is, the primary syntactic argument of a sentence" (Bavin 1980: 2).[3] In the context of a specific language, however, it remains to the linguist to determine which particular properties are diagnostic of the subject and to what extent subjects play a role in that language.

To this end, a number of attempts have been made at setting out methodological procedures for identifying subjects, two of the best and most comprehensive being those of Keenan (1976) and Mel'čuk (1988). The first step in identifying the subject in a language, according to both researchers, is to identify a "basic sentence type" (Keenan 1976) and to enumerate the syntactic properties of the actants (participants) in such a clause in order to determine which of them has the greatest number of those properties typical of subjects cross-linguistically. More complex sentence types may then be examined with an eye towards identifying which of the actants in these structures share the greatest number of properties with the subject of the basic sentence. For Mel'čuk, the basic sentence type is formed on the monovalent (intransitive) verb, whose single actant is the syntactic subject. In Lushootseed, the actants of intransitive stems (when not NPs) are represented by a set of pronominal clitics:

(3) (a) *ʔu–ʔəx̌ʷ*   *čəd*   (c) *ʔu–ʔəx̌ʷ*   *čəɫ*
          PNT–come   1s   PNT–come   1P
          'I come'   'we come'

     (b) *ʔu–ʔəx̌ʷ*   *čəxʷ*   (d) *ʔu–ʔəx̌ʷ*   *čələp*
          PNT–come   2s   PNT–come   2P
          'you come'   'you folks come'

                                (e) *ʔu–ʔəx̌ʷ*   *ø*
                                     PNT–come   3s/p
                                     '[he/she/they] come'

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[3]*Cf.* Foley & van Valin (1984), who challenge the universality of subject and posit instead the notion of "pivot", which seems closely related to the characterizations of "subject" given here.

Under the approaches proposed by Keenan and Mel'čuk, participants represented by this pronominal paradigm can be put forward as candidates for subjecthood and their syntactic properties can then be compared to those typical of subjects cross-linguistically, as can the syntactic properties of the full NPs with which they can be interchanged. In sentences such as that in (3e), the *absence* of a subject-clitic indicates that the participant in the event is a (singular or plural) third-person, making the Lushootseed third person, in effect, a paradigmatic zero.[4] This ø third-person is identified with the discourse topic and is—in context—unambiguous. This will be discussed in more detail in Section 2. As we will see below, subject pronominals and ø third-persons in Lushootseed share a number of properties singled out in the literature which identify them as potential subjects and which set them apart from the "direct complements" in bivalent clauses.

1.1) Agentivity (Keenan 1976; Langacker 1991)

Very typically across languages, subjects, particularly in transitive constructions, are prototypically agents or initiators of events and actions (*e.g.* Hopper & Thompson 1980; Langacker 1991; Kemmer 1993). This observation is an essential element of (among others) Dik's (1978) Functional Grammar, which works on the principle of "alignment" between pragmatic, syntactic, and semantic roles and takes the basic, unmarked mapping between semantics and syntax to be agent → subject. It should be noted, however, that this mapping is only a tendency, not a requirement. In most, if not all, languages subjects can and do take on semantic roles other than that of agent, and it is for precisely this reason that a syntactic role of subject is necessary at all: even if the actants that we want to call subjects in a given language are prototypically agents in unmarked clauses, they frequently share important morphosyntactic and discourse properties with other actants in marked clauses that are clearly not agents or initiators. In such cases it is insufficient to treat these properties as attributes of a particular semantic role. What is needed is the attribution of syntactic and discourse properties to a syntactic role—that of syntactic subject.

This is an important observation for us here, as in Lushootseed (and in other Salishan languages—Kinkade 1990) there appears to be a very strong correlation between the semantic role of agent and the syntactic role of subject—so much so that previous treatments of Lushootseed have substituted the terms "agent" and "patient" for "subject" and "object" with a great deal of success. In sentences such as (4), only the actants represented by pronominals and ø-third persons can be interpreted as semantic agents:

(4)   (a)   *ʔu–bəča–d   čəɬ tsi luλ̓*
           PNT–fall–ICS   1P   Dƒ   old
           'we set the old woman down'

<div style="text-align: right">(Hess 1993a: 26)</div>

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[4]When a pronoun-like element is absolutely required for some purpose in discourse, the role of the third-person pronoun is filled by a deictic, which behaves syntactically as a full NP.

(b) *ʔu–bəča–d   ø ti čačas*
     PNT–fall–ICS 3 D   child
     '[he/she/they] set the boy down'
     but, *'the boy set [him/her/it/them] down'

<div align="right">(Hess 1993a: 23)</div>

In (4a), then, the agent is represented by the first-person plural pronominal, *čəɬ*, while in (4b) the agent corresponds to an elided actant (whose identity would be recoverable from discourse). The fact that the NP in (4b) is uniformly interpreted as a semantic patient or endpoint has led Hess (1993a) to dub such clauses as "patient-oriented" and to have argued for eliminating reference to the syntactic role of subject altogether and replacing it with the notion of "agent".[5]

One place where this practice falls down is with verbs of perception, where the single actant of an intransitive clause (5a)—as well as the actant represented by the pronominal clitic in a transitive clause (5b)—takes the semantic role commonly referred to as "experiencer":

(5)   (a) *ʔəs–ləq   ø*
           STAT–listen 3
           '[he/she] was listening'

<div align="right">(Bates <i>et al.</i> 1994: 136)</div>

      (b) *ʔəs–luu–dčəd   ø*
           STAT–hear 1S   3
           'I hear [it]'

<div align="right">(Bates <i>et al.</i> 1994: 139)</div>

      (c) *ʔəs–suu–ccəd   tə   haʔɬ stubš*
           STAT–see–APPL 1S D   good   man
           'I am looking at the good man'

<div align="right">(Bates <i>et al.</i> 1994: 214)</div>

Note also that in such sentences the semantic role of "patient" is not precisely the role that the observed actants are said to take, nor is the role of the subject in (5c) exactly the same as that in (5a) and (b). In (5a) and (b), the subject is presented as a passive observer, whereas in (c)—given the applicative morphology—the subject has a more active role and willfully directs its attention towards the observed.

One way around this difficulty would be to posit the conflation of the role of agent and experiencer for syntactic purposes, or to even define a new role (*e.g.* "initiator") which encompasses agents, experiencers, and observers of the type illustrated in (5c) above, much as Davis & Saunders (1989, 1997a) have done for Bella Coola under the heading of "EXECUTOR" (*cf.* also Foley & van Valin's 1984 notion of the "macrorole"). However, in Lushootseed, this solution runs into an additional, more serious, difficulty in sentences formed on bare radicals denoting events whose expressions in most languages are protoypical examples of transitive

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[5]The patient-orientation of semantically transitive clauses with single NPs appears to be widespread phenomenon in Salishan languages and is discussed by, among others, Gerdts (1988), under the heading of the "One-Nominal Interpretation Law".

verbs with clear semantic roles of agent and patient. In many such cases, it is the patient or *endpoint* of the event which is realized by the pronominal or single overt NP, as in (6):

(6)   (a) (i) *ʔu–pus*   *čəd*
                   PNT–be:hit:by:flying:OBJ   1S
                   'I [am/was] struck (by a flying object)'

          (ii) *ʔu–pusu–d*   *čəd* *ø*
                   PNT–be:hit:by:flying:OBJ–ICS   1S   3
                   'I pelted [him/her/them]'

<div align="right">(Hess & Hilbert 1976: II, 136)</div>

     (b) (i) *ʔu–čax̌ʷ*   *čəd*
                   PNT–be:struck:with:stick 1S
                   'I got hit'

          (ii) *ʔu–čax̌ʷa–d*   *čəd* *ø*
                   PNT–be:struck:with:stick–ICS   1S   3
                   'I struck [him/her/them]'

<div align="right">(Hess & Hilbert 1976: II, 136)</div>

     (c) (i) *ʔu–čax̌ʷ*   *ø*
                   PNT–be:struck:with:stick 3
                   '[he/she/they] got hit'

<div align="right">(Bates *et al*. 1994: 69)</div>

          (ii) *ʔu–čax̌ʷa–d*   *ø* *ti* *čačas*
                   PNT–be:struck:with:stick–ICS   3   D   child
                   '[he/she/they] clubbed the boy'
                   *'the boy struck [he/she/they]'

<div align="right">(Jelinek & Demers 1983: 177)</div>

     (d) (i) *ʔu–łač̓*   *tə* *ləx̌=šad*
                   PNT–be:extinguished   D   light=leg
                   'the lamp went out'

          (ii) *ʔu–łača–d*   *ø* *tə* *ləx̌=šad*
                   PNT–be:extinguished–ICS   3   D   light=leg
                   '[he/she/it/they] put out the lamp'

<div align="right">(Bates *et al*. 1994: 141)</div>

In (6a) and (b), the pronominal in the (i) sentences represents the semantic role of goal or patient, while in the transitive clauses in the (ii) sentences, the same pronominals correspond to the agent; similarly, the elided actant in (c) represents the patient in (i) and the agent in (ii). In (d), however, the semantic role taken by the direct complement of (i) and (ii), *ti ləx̌šad* 'the light', remains constant, the gloss of (ii) indicating the presence of an agent whose identity would normally be recoverable from discourse. The fact that the *čəd*-word/ø third-person in sentences

<div align="center">6</div>

formed by bare radicals are patients or goals shows clearly that their distribution is not tied to a specific semantic role, although—like subjects in many languages—they do express the agent when this role is available in transitive clauses. This is the sort of behaviour we might expect of subjects—a syntactic role which, all else being equal, corresponds to the semantic role of agent in active clauses.

We see the same type of discrepency in passives (see Section 1.2 below)—in such sentences, an actant realized by a pronominal (or a ø third-person) will typically take the patient rather than the agent role, as in (7):

(7)   (a)   (i)   *ʔu–ʔux̌ʷ–txʷ   čəd   ø*
                  PNT–go–ECS   1S   3
                  'I took [him/her/them] somewhere'

      (ii) *ʔu–ʔux̌ʷ–tu–b   čəd ʔə ti   c̓ac̓as*
            PNT–go–ECS–MD   1S P D   boy
            'I was taken by the boy'

<div align="right">(Hess 1993a: 44)</div>

(b)   (i)   *ʔu–ʔəy̓–dxʷ   ø ti sqʷəbayʔ*
            PNT–find–LC   3 D dog
            '[he/she/they] found the dog'

      (ii) *ʔu–ʔəy̓–du–b ø ʔə ti   sqʷəbayʔ*
            PNT–find–LC–MD 3   P D   dog
            '[he/she/they] were found by the dog'

<div align="right">(Hess 1993a: 29)</div>

Again, the function of the pronominal elements seems not to be tied absolutely to a given semantic role at all, but instead to a particular syntactic function. A potential solution to this problem is to define the pronominals as a special set of lexical items—or, in the terminology of Hess (1993a), "čəd-words"—and then to define the syntactic behaviour of the set in essentially the manner illustrated above, based on the association between these items and the varying semantic roles they play with given verbs and in certain voices. Such an approach is, of course, completely adequate from a descriptive point of view: however, it misses not only the syntactic parallels between sentences with agents expressed as čəd-words and those with elided third-person agents, but it also begs the question of the nature of the čəd-words in the lexicon and whether or not they have a syntactic status comparable to similar elements in other languages and/or recognizable cross-linguistic functional parallels. In addition, a number of researchers have commented on the importance of making a separation between semantic and syntactic aspects of a sentence and of distinguishing clearly the basic units of the two "modules" or "levels" of the grammar—see in particular Dik (1978), Givón (1984), Mel'čuk (1988), Hudson (1990), Pollard & Sag (1994) (*cf.* also Mel'čuk 1988 and Bavin 1980 on the pitfalls of using semantic roles to establish syntactic categories). From a theoretical point of view, it seems preferable to try to account for the behaviour of an element which appears to be definable on morphosyntactic rather than semantic grounds in terms of a syntactic role—such as that of syntactic subject.

1.2) Passivization (Keenan 1976; Mel'čuk 1993)

The syntactic subject is widely recognized to be the actant in an active clause that is "demoted" to an oblique role via passivization; by the same token, passivization "promotes" what is a non-subject of the active clause to become syntactic subject of the passive. In Lushootseed the passive is formed by combining an applicative or any causative with the middle suffix *-b*, as in:

(8)   (a)   *ʔu–ʔəy̓–dxʷ*   *čəd*   *tsi*   *čačas*
            PNT–find–LC   1S   Dƒ   child
            'I found the girl'

                                                             (Hess 1993a: 24)

   (b)   *ʔu–ʔəy̓–du–b*   *čəd*   *ʔə*   *ti čačas*
            PNT–find–LC–MD   1S   P   Dchild
            'I was found by the boy'[6]
            *'The boy was found by me'

                                                             (Hess 1993a: 34)

In (8a) the subject pronominal *čəd* corresponds to the semantic role of agent, yet in (b) the pronominal represents the goal of the action, the agent/subject having been demoted to a peripheral role in the sentence. Hess (p.c.) does not agree that such sentences are passives, particularly in the third person, as in examples such as (9):

(9)   (a)   *ʔu–ʔəy̓–dxʷ*   *ti*   *sqʷəbayʔ*
            PNT–find–LC   D   dog
            '[he/she] found the dog'

   (b)   *ʔu–ʔəy̓–du–b*   *ʔə*   *ti*   *čačas*   *ti*   *sqʷəbayʔ*
            PNT–find–LC–MD   P   D   child   D   dog
            'the dog was found by the boy'

                                                             (Hess 1993a: 29)

For Hess, the sentence in (9a) has only one actant, the direct complement, which also surfaces in non-oblique position in (9b) and, hence, undergoes no change in syntactic role. Under my own analysis, however, these sentences do show a standard passive permutation in that the subject of the sentence in (9a) is taken to be a paradigmatic ø third-person corresponding to the pronominal in (8a), whereas the subject of the sentence in (9b) is taken to be the single (and only possible) non-oblique NP, *ti sqʷəbayʔ* 'the dog'.[7] This conforms to the definition offered by Mel'čuk (1993) of the passive voice as an inflectional category which involves the permutation of the grammatical role of subject with that of one other participant in the clause (usually the direct object).

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[6]Note that the pragmatic uses and thematic structure of the Lushootseed passive are quite different from those of its English counterpart and so Lushootseed passives are often more idiomatically glossed as English actives. To avoid confusion, I have not followed this practice here.

[7]Note also that the presence of this non-oblique NP in the clause excludes the presence of a pronominal in (9b) (that is, * *ʔuʔəy̓dub čəd ti sqʷəbayʔ* 'I found the dog'), ruling out the NP's interpretation as an object as in (9a).

Hess's objections to the analysis of the sentence in (9) as a passive come largely from the absence of an overt element in (9a) that can be analyzed as having undergone demotion. While some evidence for the "presence" of an elided third-person subject in the syntax will be offered in other portions of this paper, specific support for the term "passive" (and the consequent existence of a ø third-person subject) can be found by contrasting passives with middle forms and with intransitive sentences formed on bare radicals:

(10) (a) (i) *ʔu–gʷəč̓–əb   ti čačas ʔə ti sqəlalitut*
              PNT–look:for–MD   D   boy   P D guardian:spirit
              'the boy looked for a guardian spirit'

        (ii) *ʔu–gʷəč̓–t–əb   ʔə ti čačas ti sqʷəbayʔ*
              PNT–look:for–ICS–MD   P   D   boy D dog
              'the dog was looked for by the boy'

     (b) (i) *ʔu–ʔuləx̌   ti luƛ̓ ʔə ti bəsqʷ*
              PNT–forage   D   old P D   crab
              'the old man foraged for crab'

        (ii) *ʔu–ʔuləx̌–t–əb   ʔə ti luƛ̓ ti hud*
              PNT–forage–ICS–MD   P   D   old   D   firewood
              'the wood [that he found] was kept by the old man'
              (*i.e.* 'the old man kept the wood [that he found]')

(Hess 1993a: 38)

In the middle clause in (10a-i), *ti čačas* 'the boy' is agent and is realized as a syntactically non-oblique actant, while in (a-ii) passivization makes another participant (*ti sqʷəbayʔ* 'the dog') non-oblique and demotes *ti čačas* 'the boy' to a prepositional agent-phrase. Likewise, in the intransitive clause in (10b-i), it is *ti luƛ̓* 'the old man' (the semantic agent) that is non-oblique, while when the sentence is passivized in (10b-ii), the semantic goal becomes non-oblique and *ti luƛ̓* 'the old man' is demoted to a PP. Like the shift in semantic role of the pronominals in (8), the shift of the third person subjects in (10a-ii) and (10b-ii) to peripheral syntactic roles is diagnostic of the passive voice, which in turn argues for the status of the non-oblique actants in passivized sentences as syntactic subjects.

1.3) Relativizability (Keenan 1976; Keenan & Comrie 1977; Mel'čuk 1988)

Across languages, syntactic subjects are a legitimate target for the formation of relative clauses, direct questions, negatives, etc., and occupy the top of the Accessibility Hierarchy (Keenan & Comrie 1977) which states that if only one syntactic role is accessible to relativization and related processes, it will be the subject. In Lushootseed sentences with first- or second-person subjects and third-person objects, relative clauses (RCs) can be formed on objects, but in sentences with third-person subjects and objects, only the subject itself may be relativized, as in (11):

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(11) (a) *ʔu–šu–dxʷ čəł ti čačas ʔu–təs–əd čəd*
PNT–see–LC 1P D boy PNT–be:hit–ICS 1S
'we saw the boy that I hit'

(b) *ʔu–šud–dxʷ čəł ti čačas ʔu–təs–əd tiʔił stubš*
PNT–see–LC 1P Dboy PNT–be:hit–ICS D man
'we saw the boy [that] hit the man'
but *'we saw the boy that the man hit'

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

Where English would make use of an object-centred RC, Lushootseed uses a passive construction in the embedded clause, thereby avoiding the object-centred form, as in:

(12) *ʔu–šu–dxʷ čəd ti sqʷəbayʔ ʔu–čaxʷa–t–əb ʔə tiʔił čačas*
PNT–see–LC 1S D dog PNT–be:struck:with:stick–ICS–MD P D boy
'I see the dog [that] the boy clubbed'
(lit. 'I see the dog [that] was clubbed by the boy')

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

The passivization of the lower clause allows the formation of a subject-centred—rather than an object-centred—RC. This is most likely a pragmatic constraint on the language, as there is no direct means other than the passive for allowing both of two third-person actants in a clause. Thus, if object-centred forms were allowed, they would be identical to subject-centred RCs in which the roles of the actants were reversed (that is, *ti sqʷəbayʔ ʔučaxʷad tiʔił čačas* could mean either 'the dog that the boy clubbed' or 'the dog that clubbed the boy'—*cf.* (11b) above). What this means in terms of the analysis here is that in clauses such as the embedded RC in (11b) above, the head of the RC—*ti čačas* "the boy"—should be analyzed as coreferential with a ø third-person subject in the subordinate clause. To do otherwise—that is, to posit that the overt NP in the embedded clause, *tiʔił stubš* 'this man', is the subject and the "extracted" NP is coreferential with the object (or some other lower rung on the hierarchy)—would be to occasion a violation of the Accessibility Hierarchy in that objects would be relativizable while subjects would not be. Given the robustness of the Accessibility Hierarchy, it seems preferable to opt for the analysis of the head of the RC in (11b) as being coreferential with a subject elided from the embedded clause, much as subjects are elided in subject-centred RCs in English (*e.g. we saw the boy that ø clubbed the man*).

1.4) Possessors of participles (Langacker 1991; Taylor 1994)

In many languages, including a number of Altaic and Indo-European languages, when a clause undergoes nominalization to form a gerund or participle,[8] the actant which corresponds to

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[8]In the discussion of English grammar, a distinction is traditionally made between participles and gerunds, the former filling an attributive role in a sentence and the latter acting as a nominal (Trask 1993). Aside from the facts of their distribution, however, the two categories seem to be identical and most likely reflect two uses of the same type of lexical item, a clause which has undergone a certain degree of recategorization as a noun. In Russian, the term "participle" is used to refer to the attributive form of this class of nominalization, coinciding with the English usage, whereas in some discussions of Altaic languages such as Turkish (*e.g.* Comrie 1981) "participle" is used for

the subject of the finite clause is realized in the role of possessor. This is true for Lushootseed, which uses nominalized clauses corresponding to English participles to realize oblique-centred relative clauses and to form complex NPs from finite clauses (Beck 1995, to appear), and in each case the participant realized as a pronominal in a non-nominalized clause is a possessor when that clause is nominalized. Consider (13) (participles/verbs are underlined):

(13) (a) (i) <u>ʔu–ʔabyid</u> čəd ti čačas ʔə ti sqʷəbayʔ
                PNT–give 1S D boy P D dog
                'I gave the dog to the boy'[9]

                                                    (Hess 1993a: 50)

          (ii) x̌ʷul p̓aƛ̓aƛ̓ tiʔəʔ <u>d–s–ʔabyid</u>
                only worthless D 1PO–NOM–give
                'what I give [to him/her/them] is only junk'
                (lit. 'my given [to him/her/them] [is] only junk')

                                                    (Hess 1993a: 185, line 14)

      (b) (i) <u>ʔu–ʔabyid</u> ø ti čačas ʔə ti sqʷəbayʔ
                PNT–give 3 D boy P D dog
                '[he/she/they] gave the dog to the boy'

                                                    (Hess 1993a: 50)

          (ii) x̌ʷul p̓aƛ̓aƛ̓ tiʔił <u>s–ʔabyid–s</u> tiʔił čx̌aʔ
                only worthless D NOM–give–3PO D stone
                'what he/she/they gives to Stone is only junk'
                (lit. 'his/her/their given to Stone [is] only junk')

                                                    (Hess 1993a: 187, line 32)

In the sentence in (13a-ii) the possessor of the participle *sʔabyid* 'giving' is represented by a first-person possessive affix (*d-*) and corresponds to the participant represented by *čəd* in (13a-i); similarly, the third-person possessor in (13b-ii) (the giver) corresponds to the elided (ø) actant in (13b-i), indicating that it is a ø third-person rather than the overt NP *ti čačas* 'the boy' (the recipient, who could not be represented by a *čəd*-word even if first- or second-person) that is the subject of the clause. Overt third-person NPs also surface as possessors of participles, as in (14):

(14) ʔu–šu–dxʷ tiʔił <u>s–əs–q̓ʷuʔ</u> ʔə tiʔił ʔiišəd–s ʔal tiʔəʔ hikʷ čx̌aʔ
      PNT–see–LC D NOM–STAT–gather P D relatives–3PO P D big stone
      '[he] saw the gathering of his relatives by the big stone'

                                                    (Hess 1993a: 185, line 3)

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both substantive and attributive roles; the term "gerund" is more often used in Altaic (Comrie 1981; Poppe 1970), Spanish (Solé & Solé 1977), and in traditional Russian grammars (*e.g.* Pulkina 1982) to refer to what are more accurately described as "deverbal adverbs". For this reason, I have chosen to use "participle" rather than "gerund".
[9]Note that in Salish verbs of giving, the recipient is typically treated as a direct complement (direct object) and the thing given is an oblique, contained within a prepositional phrase.

Here, the possessor of the participle *sǝsq̉ʷuʔ* 'gathering' is *tiʔił ʔiišǝds* 'his relatives', marked by the preposition *ʔǝ*. Compare this to the corresponding finite clause,

(15) *łu–as–q̉ʷuʔ*   *tiʔił ʔiišǝd–s*   *ǝlgʷǝʔ*   *ča*   *łu–łalil*
     IRR–STAT–gather D   relatives–3PO PLURAL   1P:COORDINATIVE   IRR–go:ashore
     'their relatives will gather and we will go ashore'

<div align="right">(Bierwert 1996: 291, line 718)</div>

in which the subject is not set off by a preposition, or to

(16) *tux̌ʷ* *čǝł*   *ʔǝs–q̉ʷuʔ*
     just   1P   STAT–gather
     'we are just gathered'

<div align="right">(Hess 1993a: 185, line 7)</div>

in which the pronominal occupies the same syntactic slot and takes the same semantic role as *tiʔił ʔiišǝds* in the two preceding sentences. Note also that the possessor of the participle does not correspond to a particular semantic role in the sentence, but instead corresponds to a syntactic role, as shown in the following passive sentences:

(17) (a) (i) *łu–ʔǝł–tu–b*   <u>*čǝxʷ*</u> *ʔǝ* *ti* *ʔaciłtalbixʷ*
            PNT–eat–ECS–MD <u>2S</u>   P D people
            'the people will feed you'
            (lit. 'you will be fed by the people')

       (ii) *tiʔǝʔ* *łu–<u>ad</u>–s–ʔǝł–tu–b*   *ʔǝ* *ti* *ʔaciłtalbixʷ*
            D   IRR–<u>2PO</u>–NOM–PNT–eat–ECS–MD   P   D people
            'what the people will feed you'
            (lit. 'what you will be fed by the people')

   (b) (i) *łu–ʔǝł–tu–b*   <u>*ø*</u> *ʔǝ* *ti* *ʔaciłtalbixʷ*
            PNT–eat–ECS–MD <u>3</u>   P   D   people
            'the people will feed [him/her/them]'
            (lit. '[he/she/they] will be fed by the people')

       (ii) *tiʔǝʔ* *łu–s–ʔǝł–tu–b–<u>s</u>*   *ʔǝ* *ti* *ʔaciłtalbixʷ*
            D   IRR–NOM–PNT–eat–ECS–MD–<u>3PO</u>   P   D people
            'what the people will feed him/her/them'
            (lit. 'what he/she/they will be fed by the people')

<div align="right">(Hess 1993a: 140 – 41)</div>

This example shows that in participles formed on a passive sentences, it is the *čǝd*-word (the semantic patient) in the non-nominalized clause that surfaces as the possessor of the participle. Thus, whatever participant in the finite clause corresponds to a *čǝd*-word (or a ø third-person) will be realized in participles as a possessor—and so is an excellent candidate for subjecthood.

1.5) Control of reflexivization (Mel'čuk 1988)

   Cross-linguistically, Mel'čuk (1988) observes that the subject is the actor with a reflexive verb. This is true in Lushootseed for the participant-role represented by the pronominals, as in (18):

(18)   (a)   (i)   *ʔu–ʔəɫ–tu–bš*   ø
                  PNT–eat–ECS–1S:OBJ   3
                  '[he/she] feeds me'

         (ii)   *ʔu–ʔəɫ–tu–but*   *čəd*
                  PNT–eat–ECS–REFL   1S
                  'I feed myself'

(Hess 1993a: 55)

      (b)   (i)   *ʔu–čaxʷa–t–ubuɫ*   ø
                  PNT–be:struck:with:stick–ICS–1P:OBJ   3
                  '[he/she] clubbed us

         (ii)   *ʔu–čaxʷa–t–sut*   ø
                  PNT–be:struck:with:stick–ICS–REFL   3
                  '[he/she] clubbed him/herself'

(Bates *et al*. 1994: 69)

In (18a-i) and (b-i), the pronominals and ø third-persons correspond to the actor/agent in (a-ii) and (b-ii), while the patients are represented by object-suffixes (bound morphemes which represent first- and second-person semantic patients/endpoints in transitive, patient-oriented clauses). Note, however, that direct complements (overt non-oblique NPs) also control reflexives as in (19):

(19)   *ʔu–čaxʷa–t–sut*   *tiʔiɫ*   *cxʷluʔ*
         PNT–be:struck:with:stick–ICS–REFL   D   whale
         'the whale clubed itself

(Bierwert 1996: 287, line 664)

Given that reflexive clauses have only a single syntactic actant—making them syntactically intransitive—it seems non-problematical to treat the non-oblique NPs in (19) as subjects, just as we would treat the non-oblique NPs in middles (2) and with bare radicals (6). What is especially interesting about (19), however, is the fact that even though the verb in (19a), like the verb shown in (1), denotes a semantically transitive event and bears the patient-orienting causative suffix *-t* (Hess 1993a; Beck 1996), the single NP in (19a) represents the semantic agent, not the patient, this role being filled by an object-suffix. What this seems to indicate is that the prohibition against overt third-person agents in transitive clauses in Lushootseed is, in fact, a surface constraint against the realization of two non-oblique NPs in a single clause, rather than a more deeply-rooted constraint against the realization of a particular semantic or syntactic role as an NP. Salishan languages are well-known for preferring clauses with one (or fewer) overt noun phrases (Kinkade 1990), as are the neighbouring Wakashan languages (*e.g.* Rose 1981), possibly

as a result of the absence of case-marking or rigid word-order requirements to differentiate the roles of third-person participants. In this respect Lushootseed, however, seems to have gone a step beyond its congeners and neighbours and has incorporated this constraint as an absolute prohibition against more than a single NP in a clause. This in turn may have led to the obligatory elision of the most easily recoverable of the two participants in a transitive event—the highly topical syntactic subject.

1.6) Pronominals and conjoinability (Keenan 1976)

   Across languages, subjects are often realizable as morphosyntactically independent pronouns and, according to Keenan (1976), if a language has a single set of such elements particular to a specific syntactic role, this role tends to be that of subject. The Lushootseed pronominals or čəd-words fit into this category quite nicely, being morphologically independent wordforms (clitics) which are not bound to a particular lexical element but which appear obligatorily in sentence-second position:

(20)   (a)   *ʔəs–laqil   čəd*
              STAT–late   1S
              'I [am] late'

        (b)   *daỷ–əxʷ   čəd   cicḱʷ ʔəs–laqil*
              indeed–now   1S   verySTAT–late
              'indeed, I [am] very late'

                                                                      (Hess 1993a: 116)

        (c)   *tulʔal čəd sqaǰət*
              P   1S   Skagit
              'I [am] from Skagit'

                                                                      (Bates *et al*. 1994: 6)

In the sentence in (20a), the pronominal appears in its "normal" position following (and phonologically cliticized to) the verbal predicate of the sentence; in (20b), however, the appearance of an adverb in the clause triggers the "fronting" of the pronominal to immediately follow. Note that, as in (20b), the pronominal follows only the first adverb and will precede any additional adverbs or particles, thereby maintaining sentence-second (Wackernagel's) position. (20c) illustrates much the same point, although here the pronominal interrupts contiguity of a PP—the sentence-second constraint apparently overriding the requirements of continuous constituency.
   Another property of subject pronominals that Keenan points to is their ability to be conjoined with full NPs, as in (21):

(21)   *lə–ʔibəš   čəł ʔi   tsə mali*
        PROG–walk   1P and   D   Mary
        'Mary and I are walking'

                                                                      (Hess & Hilbert 1976: 141)

Interestingly enough, ø third persons also appear to be conjoinable with full NPs, as in:

14

(22) cick̓ʷ-əxʷ sʔušəbabdxʷ əlgʷəʔ ø ʔi tsiʔił d-čəgʷas
     very–now pitiful   PLURAL 3 and Dƒ 1PO-wife
     '[they] and my wife are very poor'

<div align="right">(Hess, to appear)</div>

What looks like a plural pronoun here is, in fact, more commonly considered to be a part of the VP indicating the plurality of one of the actants (usually the agent) which can be overt (number being only optionally marked in Lushootseed NPs) or elided, as in this example (Hess 1993a: 219). While we might want a less equivocal example before deciding that ø third-persons are fully conjoinable, the example in (22) is suggestive of that fact and seems to support the contention that the elided actant does, in fact, correspond to the syntactic subject.

1.7) Non-deletability, topicality, and switch reference

Another property of the syntactic subject is that, in semantic terms, its referent can never be removed from the event's "profile"—*i.e.* the construal or mental model of the event as it is presented by the speaker (Langacker 1991)—in the sense that the event which the clause describes will always have an identifiable (or, in some cases, elemental/abstract) participant corresponding to the subject role in the clause (Mel'čuk 1988). Note that this does not prohibit the elision of the subject—that is, the non-realization of an understood (and hence semantically present) participant. Elision should not be confused with deletion, which would remove the idea of that participant from the clause entirely. Compare, for example, the meaning of *this book has been sold*, which implies an unnamed seller who has been elided from the sentence, and *this book sells well*, which profiles only an abstract series of commercial transactions but in no way includes (or permits the inclusion of) a seller, the seller having been deleted from the profile of the clause. In practice, Lushootseed subjects are more often elided than not; however, even though a third-person subject in a transitive clause undergoes elision, in well-constructed discourse the identity of the subject is understood (or at least assumed by the speaker to be understood) from context and so is included by the speaker (and hearer) in the profile of the event. Consider the sentences in (23):

(23) (a) ʔu–təlawi–s   ø ti sqigʷac
            PNT–run–APPL 3 Ddeer
            '[he/she/they] ran after the deer'

<div align="right">(Hess 1993a: 15)</div>

      (b) ʔu–šuu–c   ø tiʔił sq̓ʷəlałəd
            PNT–see–APPL 3 Dberry
            '[he (Bear)] looked at the berry'

<div align="right">(Hess 1993a: 193, line 25)</div>

In these sentences, the actors—the runner in (23a) and the perceiver in (23b)—are not named, yet they are, in context, quite unambiguous; this means, in effect, that the missing participants are still included in the event-profile and so have been elided rather than deleted: even though the syntactic subject is not realized overtly in the clause, its identity is recoverable from discourse by dint of the fact that the subject seems to be almost invariably the discourse topic.

The highly topical nature of subjects is a well-known and well-documented property across languages (Keenan 1976; Givón 1979; Li & Thompson 1979; Mithun 1991), which may be a result of their origin (in at least some languages) via grammaticalization from topics (Givón 1979; Shibatani 1991). Langacker (1991) treats a topic as an entity which acts as a primary figure for a stretch of discourse and which clausal participants are subsequently identified with; cross-linguistically, discourse topics may be clausal participants themselves—most commonly subjects (Givón 1979; Li & Thompson 1976)—but they may also be non-participants and serve as a more general reference-point to which the clause as a whole is related. In Lushootseed, the grammar requires that discourse topics be realized as syntactic subjects, and it is this obligatory identity of subject and topic that allows for the recovery of elided actants. Consider once again the example from (23b). Here, the subject of the sentence is quite unambiguous given that the sentence occurs in a stretch of discourse in which the topic has been identified as Bear. Once established as the discourse topic, Bear is held in the minds of the speaker and the listener as a reference-point for identifying the central figure in the episode and the syntactic subject in subsequent text, although Bears' overt expression in active transitive clauses is ruled out by the constraint against two overt NPs mentioned above. This results in a pattern in which the primary figure in discourse is often the one that receives the least overt expression, a pattern not unlike that found in more familiar null-subject languages like Chinese (Li & Thompson 1979), where a topical participant is frequently left unrealized, to be filled in by context.

Because of the importance of the coreferentiality of syntactic subject and discourse topic in recovering elided actants, Lushootseed has a special morphological marker in clauses that violate the subject = topic constraint. This marker seems closely related to one of Keenan's (1976) diagnostics for subjecthood, that of switch reference, wherein changes of subject in discourse often trigger the use of grammatical "switch reference" markers. In conservative Lushootseed style, the non-topical subject marker (NTS) -*ag^wid* is added to a verb whose syntactic subject is not the discourse topic (Kinkade 1990; Hess 1993a). Consider the text in (24):

(24) (a) *ʔu–k^wəda–d   ø   tiʔəʔ   p̓əč̓əb=uliča̓ʔ–s*
           PNT–take–ICS   3   D   bobcat=blanket–3PO
           '[he (Bobcat)] took his bobcat-blanket'

      (b) *g^wəl ʔal–d   ø   k^wədiʔ   ʔadᶻalus*
           and   be:located–ICS 3   there beautiful
           'and [he] put it in a beautiful [place]'

      (c) *g^wəl lə–g^wəd–il   ø   ʔəx^wčəg^w=us*
           and   CONT–be:seated–TRM   3   towards:sea=face
           'and [he] sat facing the water'

      (d) *diʔił k^wi   s–šu–d–<u>ag^wid</u>   ʔə tiʔəʔ   č̓ač̓as*
           sudden D   NOM–see–ICS–<u>NTS</u>   P D   child
           'all of a sudden the boy saw him'
           (lit. 'the seeing [him] of the boy [was] sudden')

      (e) '*dił–əx^w   bayəʔ*
           this:one–now daddy
           '"that's Daddy,'

(f) '*diɬ–əxʷ*   *bayəʔ*'
this:one–now   daddy
'"that's Daddy"'

(g) *diɬ*   *ti p̓əč̓əb ti ʔu–cut–t–əb*   *ø ʔə tiʔəʔ sqaqagʷəɬ*
this:one D bobcat D PNT–speak–ICS–MD   3 P D   noble:child
'it was Bobcat whom the noble child spoke of'
(lit. 'the one spoken of by the noble child [was] this one, Bobcat')

(Hess 1993a: 151)

This text occurs in a discourse episode where the topic is Bobcat. Bobcat corresponds to the ø third-person syntactic subject in every sentence in which he is a participant except in (24d). Here, the "subject" of the nominalized clause is its possessor, *tiʔəʔ č̓ač̓as* 'the boy' and the verb is consequently marked with the non-topical subject marker. Note, however, that since the -*agʷid* suffix does not mark a lasting shift in subject, but instead marks the subject of a single sentence as being non-topical, Kinkade (Hess, p.c.) has argued that it is not in a strict sense a switch-reference marker, as these usually serve to indicate a more permanent change of syntactic subject. Nevertheless, it seems close enough in function to switch-reference that the substance of Keenan's criterion (that changes of syntactic subject are often marked overtly in the grammar) can be extended to include this morpheme as well, making it yet another diagnostic for subjecthood and of the relation between subject and discourse topic, something to be explored in more detail in Section 2 below.

1.8) Summary: Transitivity, voice, and valency

In the final analysis, the majority of subject-properties that we have found to be applicable to Lushootseed point to the čəd-words and ø third-persons as syntactic subjects; in syntactically intransitive clauses such as reflexives, these properties are also shared by the single non-oblique NP, the direct complement, which therefore also qualifies as subject. This coincidence of the role of syntactic subject and direct complements, in fact, holds for all voice and valency alternations of the Lushootseed verb except the active-transitive (patient-oriented) clauses, as shown in (25), which lists the semantic roles taken by čəd-words, ø third-persons, and direct complements in different types of clause (initiator ≈ agent/experiencer; endpoint ≈ patient/theme/goal).

(25)   Comparative semantic roles of actant-types

clause type	*e.g.*	čəd-word	ø third-person	direct complement
bare radical	(6a)	endpoint	endpoint	endpoint
transmutative	(24c)	endpoint	endpoint	endpoint
middle	(2a)	initiator	initiator	initiator
passive	(2b)	endpoint	endpoint	endpoint
active-transitive	(1)	initiator	initiator	*endpoint*

Here we see that in intransitive clauses, the sole non-oblique actant—whether it be a čəd-word, ø third-person or full NP—represents the same event participant and plays the same semantic role. In the active-transitive or patient-oriented clause, however, the direct complement represents a

distinct event-participant from that represented by a čəd-word or a ø third person. This discrepancy is, not unexpectedly, borne out by the differences in syntactic behaviour enumerated in the previous sections: in the majority of cases, the diagnostics for subjecthood single out the čəd-words and ø third-persons in transitive clauses, but not direct complements. These are summarized in (26):

(26)   Subject properties in transitive clauses

subject property	čəd-word	ø third-person	direct complement
agentivity	✔	✔	
relativizability	✔	✔	✔*
possessor of participles	✔	✔	
control of reflexives	✔	✔	✔
pronouns	✔		
conjoinability	✔	?	✔
passivization	✔	✔	
non-deletability	✔	✔	✔
topicality	✔	✔	
switch reference	✔	✔	

*if agent is not third-person

As the table shows, čəd-words and ø third-persons share a large number of subject-properties and they also share more of these with each other than they do with the direct complements, which in fact show very few of the syntactic characteristics that we would expect of them were they subjects. The fact that direct complements do not behave as subjects but are not marked as oblique seems to indicate that they are best analyzed as direct objects in syntactically transitive clauses (*contra* the ergative analysis of Jelinek & Demers 1983). These constructions are governed by an unusual constraint that no more than a single non-oblique NP appear in the clause—a constraint that appears to be shared (but less strictly applied) by a number of other Salishan languages. Given the absence of a non-zero third-person pronominal, this results in the remarkable pattern shown in (1), wherein transitive clauses with third-person subjects undergo obligatory subject-elision, the recovery of the subject's identity depending crucially on discourse.

2)   Subject, topic, and discourse

Having made something of a case up to now for the existence of the syntactic subject in Lushootseed, there is still the question of to what degree this category plays a role in the grammar of the language. It has been noted by a number of researchers such as Keenan (1976) and Langacker (1991) that even though the role of subject may be universal, its relative importance in the grammar may vary from language to language. Lushootseed is a case in point. As witnessed by Hess's incisive descriptive treatments, the syntactic role of subject in Lushootseed seems in many ways to be a less central one than it is in a language such as English, the subject role being describable largely in terms of the discourse notion of topic and the semantic role of agent, with both of which it is closely aligned (in the sense of Dik 1978): in the transitive clause, the role of syntactic subject is nearly interchangeable with the semantic role of agent/experiencer. Because of the highly topical nature subjects in Lushootseed discourse (and in

Salish in general—Kinkade 1990), the identity of the syntactic subject is fully recoverable in connected speech and so overt mention of third-person subjects (again, as in most Salish languages) is redundant and is frequently avoided. In Lushootsed, this tendency has been carried to an extreme in transitive sentences and grammaticized as a constraint against the realization of two non-oblique NPs in a single clause. Nevertheless, even though third-person subjects are not commonly present in the surface form of a sentence, they persist in its semantic interpretation and represent individuable event-participants with important sentence-level and discourse-level functions. At the sentence-level, the syntactic subject has an important role in grounding a clause in both space and time (Section 2.1), while at the discourse-level the grounding function of the subject extends to the anchoring of entire discourse episodes, syntactic subjects—by dint of their topical nature—being the pivotal figures around which speakers organize narrative.

2.1) Subjects, possessors, and groundedness

As noted in Section 1.4 above, one of the strongest arguments for the syntactic role of subject in Lushootseed comes from the process of participial nominalization, illustrated in (13). In many other languages the subject of non-finite participial or gerund clauses is also expressed as a possessor or genitive NP, as in the Tatar sentence in (27):

(27)   min–em   kür–gän–em–ne   bel–de
       1S–GEN   see–PAST:PART–1PO–ACC   know–PAST
      'he found out that I had seen'
      (lit. 'he knew my having seen')

(Comrie 1981: 82)

Functional and structural parallels between subject and possessor have been drawn in a number of theoretical frameworks, ranging from the analogous structural positions assigned to subject (SPEC of TP or IP) and possessor (SPEC of NP or DP) in North American generativist paradigms to the common designation of subjects and some possessors as the first deep-syntactic actants of both nouns and verbs in Meaning-Text Theory (Mel'čuk 1988). While some of the motivation for these parallels is theory-specific and theory-internal, some of it is based on certain well-known cross-linguistic morphosyntactic similarities between possessors and subjects.

According to Langacker (1991), possessors are deictic elements in the sense that possession signals a relationship with the possessed wherein the possessor is seen as a sort of an index or pointer (a "reference-point") which is used to identify one specific referent among several possible referents of the same class or type—that is, *my* in *my dog* serves to distinguish that particular dog which I own or have been put in charge of from a range of other dogs. Under this type of analysis, the possessor performs an essentially deictic function in that it locates a specific object (the possessed) relative to some other object (the possessor) whose identity or location has already been established. Possessors in examples as such (27), then, serve as reference points in much the same way—locating not objects, but reified events that are realized in the syntax as nominals. In this way, the participle in (27) singles out a specific event of seeing as being that particular event of which "I" is the protagonist.

In a similar vein, Taylor (1994) argues that the possessor of a deverbal noun in English is identified with either the subject or the object of the verb from which it is derived, depending on which of the corresponding event-participants can be most effectively utilized to identify the

particular instance of the event it designates. Thus, *Harry* in *Harry's love* singles out a particular instance of love for the hearer's attention—that instance of love of which Harry is the protagonist—whereas *Harry's fright* directs the hearer towards an event in which Harry is frightened by some other entity and assigns the possessor a semantic role which the verb *frighten* realizes as a syntactic object. While some deverbals (like *love*) treat possessors as subjects and others (*fright*) treat possessors as objects, many deverbals seem to allow for either interpretation, depending on the argument's topicality and its "informativity"—that is, the precision with which it allows the hearer to differentiate a specific instance of the event represented by the noun from other events of the same type.

In Lushootseed participles, of course, the possessor always refers to the clausal subject, but nonetheless these two criteria do seem to offer an explanation of why it is that participles realize their subjects as possessors. In terms of topicality, subjects in Lushootseed are almost invariably more topical than objects, whereas on a scale of informativity it seems likely that subjects will be rated highly as well, in that they identify which of a potential set of like events is referred to by the speaker. Indeed, Taylor's definition of informativity, when translated into spatial metaphor, seems to be precisely a measure of a participant's usefulness as a deictic: identifying a particular instance of an event means locating that event in both space and time relative to the speaker. In spatial terms, clauses are situated at a particular location or spatially "grounded" by the locations of their participants (that is, events take place where event-participants happen to be), and the principal burden of spatial grounding is frequently taken on by the syntactic subject (hence, the cross-linguistic preference for topical, individuable, definite NP subjects noted by, among others, Keenan 1976, Givón 1984, and Hopper & Thompson 1980, 1984). What is particularly interesting about Lushootseed (and other Salish languages) is that this function of subjects has been extended to include the temporal grounding of clauses as well, meaning that events are located at a definite time relative to the speech act by the temporal extension of their syntactic subjects.

This function of subjects is likely a consequence of the lack of a clear-cut distinction between finite and non-finite clauses. Like other Salish languages, Lushootseed lacks inflectional marking for tense and mood, which leads to structural ambiguity between finite and non-finite constructions (Beck, to appear—similar observations are made for Stát̓imcets by Davis *et al.* 1997 and for Bella Coola by Davis & Saunders 1997b). Semantically, the finiteness of a clause is associated with the temporal groundedness of an expression—that is, whether the expression is fully located for the hearer in time (Langacker 1991)—and, in English, finiteness is realized by the inflectional marking of tense. Thus, *John gave Mary money* refers to a specific event at an identifiable time, in this case (roughly) a discrete point in the past prior to the speech act, and so the event can be said to be temporally grounded. On the other hand, *John's giving Mary money* is ambiguous as to whether the event has happened, is happening, will happen, is irreal or optative, etc.—in other words, it is *ungrounded* (or rather, grounded only within the larger expression that contains it). Generally-speaking, finite expressions represent unique grounded instances of events while non-finites are more generic. In Lushootseed, however, what appear to be non-finite participles can express specific, rather than generic, events:

(28) ʔu–lax̌–dxʷ–əxʷ   ti ʔiɬ tu–s–huy   ʔə tʔiɬ c̓ix̌c̓ix̌
     PNT–recall–LC–now   D   PAST–NOM–do–3PO   P   D   fish-hawk
     'he remembered what fish-hawk had done'[10]

In (28) the referent of the participle is a specific event which occurred at a given time and location known both to the speaker and the "rememberer" (*cf.* English **he remembered fish-hawk's doing*).

   In the absence of tense/mood, it is not clear what grounds participles such as that in (28)—or, for that matter, what grounds full clauses, which bear no marking for tense or mood. One possibility is that sentences and participles in Lushootseed are grounded temporally by their syntactic subject in the same way that nouns are grounded spatially by their possessors. This idea is consistent with some findings in other Salishan languages. In Bella Coola, for instance, Davis & Saunders (1975) note that information about the temporal location of an event relative the speech act is encoded by nominal deixis, as in (29):

(29) (a) k̓x-is ti+ʔimlk+tx   ti+staltmx+ɬ̓ayx
         see-3S:3S D+man+D   D+chief+D
         'the man sees this chief'

     (b) k̓x-is ti+ʔimlk+tx   ta+staltmx+tx̌
         see-3S:3S D+man+D   D+chief+D
         'the man saw that chief (*e.g.* yesterday)'

In the sentence in (29a), the NPs *tiʔimlktx* 'this man' and *tistaltmxɬ̓ayx* 'this chief' bear proximal deixis (*ti- -tx* 'PROXIMAL NON-DEMONSTRATIVE'; *ti- -ɬ̓ayx* 'PROXIMAL DEMONSTRATIVE'), indicating that both are currently located near the deictic centre of the speech act. Given that both the chief and the man are in close proximity to the speaker, they are also currently in "eyeshot" of each other and so the event is given a "present" reading—that is, the man is held to see the chief at the moment of speaking. In (29b), on the other hand, *tiʔimlktx* 'man' again bears proximal deixis whereas *tastaltmxtx̌* 'chief' is marked with the distal (remote) non-demonstrative, implying that the chief is absent or at a location currently remote from the speech act and, hence, can not be seen by the man at the time of speaking. Thus, the sentence has a "past" reading.

   Working along similar lines, Demirdache (1996) has shown that the temporal reading of intransitive clauses in St̓át̓imcets (Lillooet) depends crucially on the temporal extension of their syntactic subjects, as in the following example:

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[10]What looks like tense in this example is aspectual marking of a type applied to both nouns and verbs—*cf. tu-* in (28) and *ti tusc̓istxʷs* 'her ex-husband'; also, *ƛ̓u-* in *ƛ̓uʔibibəš* 'he would travel' vs. *ti ƛ̓uɬisəd* 'the habitual arrows' (*i.e.* 'the constantly-fired arrows').

(30) šəxšəx ni   kəlʔáqštən-š+a ti U.S.+a
      silly D$_{ABSENT}$ chief-3PO-D   D   U.S.+D

   (a)   'the current (unseen) president of the U.S. is a fool'
   (b)   'the past president of the U.S. was a fool'
   (c) *'the past president of the U.S. is a fool'
   (d) *'the current president of the U.S. was a fool'

<div align="right">(Demirdache 1996: 81)</div>

Here the ABSENT deictic *ni-* on 'chief' indicates that the chief/president of the United States is not visible (30a) or, by semantic extension, is past-president (30b); note, however, that the past tense reading is only available in the sentence where the sentence is interpreted as referring to the past-president—that is, the time of the event is dependent on the temporal extension of the single event-participant. These facts in Stáʼtimcets and Bella Coola, while novel, are not entirely surprising, as it seems a reasonable practice for languages that do not overtly inflect their verbs for temporal deixis (*i.e.* tense and mood) to make use of the spatio-temporal location of event-participants to ground events relative to the speech act, at least on a pragmatic level. In Salish (or at least in Stáʼtimcets), this pragmatic practice seems to have been carried a step further and been grammaticized so as to rule out those readings such as (30c) and (30d) which, while pragmatically plausible, show a mismatch between the temporal extension of the subject NP and the intended temporal reference of the clause. Although it is not clear that this further step in grammaticization has taken place in Lushootseed, the ability of both finite clauses with subjects and non-finite clauses with possessors to refer to fully grounded events in this language is at least suggestive of the pragmatic use of event-participants to ground clauses, as is the use of possessors to fulfill the same function in participles.

2.2) Subjects and the organization of discourse

Syntactic subjects in Lushootseed serve not only to ground individual clauses in discourse space relative to the speech act, but also, by dint of their topicality, serve as reference-points against which events and other clausal participants are identified in a given stretch of discourse. This property of subjects is the basis of the most fundamental pattern of Lushootseed narrative, illustrated by the following passage from the opening of "bibščəb ʔi tiʔiɫ suʔsuqaʔs, tətyika" ("Little Mink and his younger cousin, Tetyika"), as told by Mr. Edward Sam. Here, the narrator begins by setting a discourse topic—the predicate/ rheme (double-underlined) of (31a)—and uses it throughout the episode as a syntactic subject (underlined):

(10) (a) *ti<u>ʔiɫ bibščəb   ʔi   tiʔiɫ suʔsuqaʔ–s,   tətyika,</u>*
           D   (RDP)mink and D   younger:cousin–3PO Tetyika
           tiʔiɫ ɫu–d–s–yəhub–tu–bicid
           D   IRR–1PO–NOM–tell–ECS–2S:OBJ
           'what I will tell you about [is] <u>Little Mink and his younger cousin, Tetyika</u>'

   (b) *hay, ʔu–ɫiʔɫda(hə)b   <u>tiʔiɫ bibščəb   ʔi   tiʔiɫ suʔsuqaʔ–s,   tətyika</u>*
           INTJ PNT–troll   D   (RDP)mink   and D   younger:cousin Tetyika
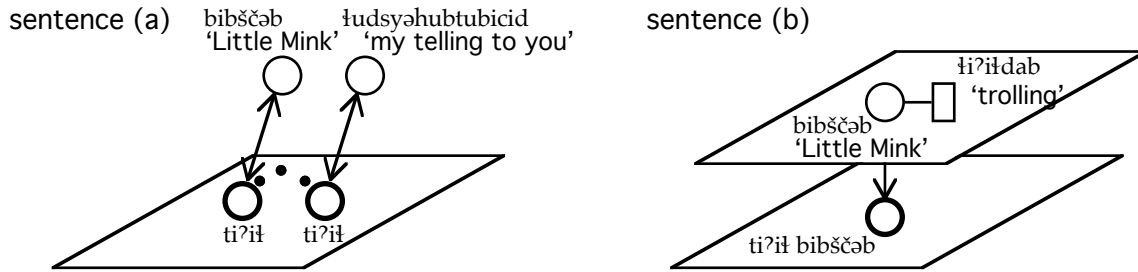   'well then, <u>Little Mink and his younger cousin, Tetyika</u>, went trolling'

(c) *ʔu–ɬiʔdaab* **ø** *əlgʷəʔ*
PNT–troll   3   PLURAL
'<u>they</u> went trolling'

(d) *huy, šu–dxʷ–əxʷ* **ø** *tiʔiɬ   čxʷəluʔ*
INTJ   see–LC–now 3   D   whale
'well, <u>they</u> caught sight of Whale'

(e) *huy,   bapa–d–əxʷ*   **ø** *əlgʷəʔ*
INTJ   annoyed–ICS–now   3   PLURAL
'well, <u>they</u> annoyed [him]'

(f) *bapa–d–əxʷ*   **ø** *əlgʷəʔ tiʔiɬ   čxʷəluʔ*
annoyed–ICS–now   3   PLURAL D   whale
'<u>they</u> annoyed that whale'

(g) *huy,   xʷak̓ʷi–s–əb–əxʷ*   **ø** *ʔə tiʔiɬ čxʷəluʔ*
INTJ   sick:of–APPL–MD–now   3   P   D   whale
'well, <u>they</u> were gotten sick of by that whale'

(h) *huy,   bəq̓–t–əb–axʷ*   **ø** *ʔə   tiʔiɬ čxʷəluʔ*
INTJ   be:in:mouth–ICS–MD–now   3   P   D   whale
'well, <u>they</u> were swallowed by that whale'

(i) <u>*ɬixʷəɬdat*</u> *tiʔiɬ s–dəgʷabac–il–s–əxʷ*   *əlgʷə   ʔə tiʔiɬ čxʷəluʔ*
three:days D   NOM–in:small:space–TRM–3PO–now   PLURAL P   D   whale
'they were inside that whale for <u>three days</u>'
(lit. 'their being inside that whale [was] <u>three days</u>')

(Hess 1993a: 175 – 6, lines 6 – 13)

The speaker here makes use of a strategy of linking rhematic information to thematic material that he has previously located for the speaker in discourse space—specifically, a topical participant (or participants) which acts as the syntactic subject, although this participant is often elided. Because any discourse episode requires a topic, the story begins with a topic-setting structure (Pu & Prideaux 1994)—in this case, a nominally-predicated sentence, (31a), that identifies the topical element to which subsequent text is linked in discourse. This is illustrated in (32):[11]

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[11]Note that I have illustrated these sentences with a singular subject, Little Mink, rather than the plural subject in the text to make the diagrams a little less cluttered.
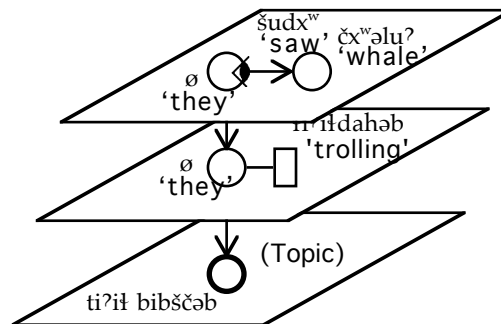
(32)   Sentences (31a) and (31b)

sentence (a)   bibščəb   ɬudsyəhubtubicid
                'Little Mink'   'my telling to you'

sentence (b)

In (32), sentence (31a) is shown linking two pieces of new information—*ɬudsyəhubtubicid* 'my telling to you' and *bibščəb ʔi suʔsusq̓aʔs Tətyika* 'Little Mink and his younger cousin Tetyika' (one a type of event and the other a set of characters)—to two "locations" in discourse space (represented by the plane, which might be conceived of as a sort of game board or tableau on which discourse-manipulable entities are arrayed). These new pieces of information are identified with one another and linked to deictics that locate both the event (the telling) and the characters (the topic of the coming narrative) to relative to the speech act. The story-telling, a shared activity of the speaker and interlocutor, is considered more thematic and realized as the syntactic subject of the sentence whereas "Little Mink and his cousin" is rhematic, and therefore implemented as sentence predicate (Beck 1997). As a topic-setting structure, (31a) establishes its rheme as the topic for subsequent discourse, and this becomes the reference-point to which all new information in the episode is linked. This is accomplished by using the discourse topic as the subject of sentence (31b), which describes the first event in the story, Little Mink and his cousin's going fishing. In line (31c), the sentence is repeated with an elided subject. This subject, once again, is identified with the discourse topic, whose spatial and temporal location serves to ground the event in discourse space.

In sentence (31d) a new participant, Whale, is introduced, but "Little Mink and his cousin" remains syntactic subject and the discourse topic to which the event—the sighting of Whale—is linked, as in (33):[12]
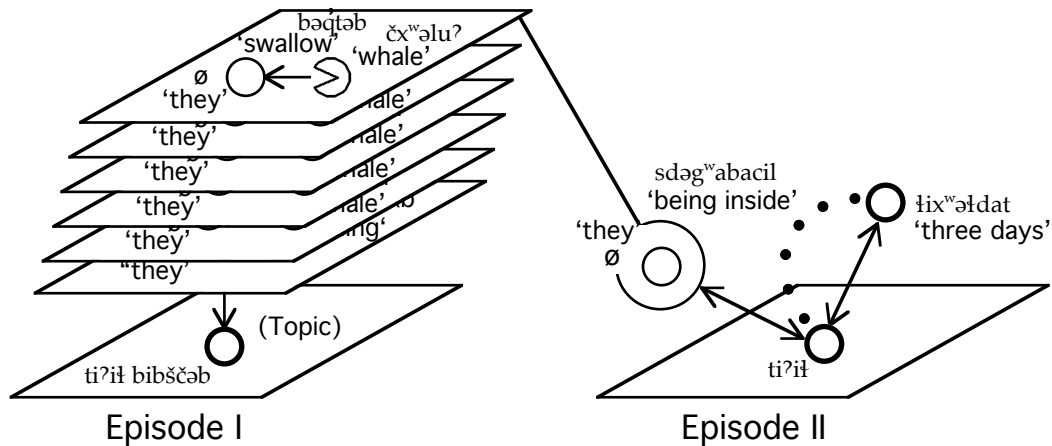
(33)   Sentence (d)

The next sentence, (31e), contains no overt actants and relies on the fact that both "Little Mink and his cousin" and Whale have been previously located in discourse space identify the

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[12]Again, for ease of presentation, I show the topic here simply as 'Little Mink' and I have removed sentence (31b) from the diagram.

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(34)   Sentence (31i)

Episode I   Episode II

participants in the event represented by the transitive verb *bapad* '[s.o.] annoyed [s.o.]'. The primary grounding function for this stretch of discourse, however, still remains with the topical "Little Mink and his cousin", which is still the syntactic subject of the clause and, hence, the agent/initiator of the event (*i.e.* Mink and Tetyika annoyed Whale, not the other way around). A further indication of this may be the storyteller's feeling that a repetition of (31e) is in order in (31f), which makes overt the less topical participant, Whale. Whale also surfaces in overt form in (31g) and (31h), where new events are introduced, the event in each case being grounded in discourse by the elided subject, "Little Mink and his cousin". Note that in these sentences, Whale surfaces as an oblique (passive agent) while "Little Mink and his cousin" remain syntactic subject (*cf.* the rather baroque (31g), *xʷakʼʷisəbəxʷ ʔə tiʔił čxʷəluʔ* 'they were gotten sick of by Whale'), the passive preserving subject/topic continuity.

Sentence (31i) signals a change in topic with a marked structure—a sentence whose predicate is "three days", the length of time that Little Mink and his cousin spent in the belly of the whale—and initiates a new discourse episode, as in (34). The information from the previous episode is still active in (31i), conferring thematic status on the subject—presupposed material based on the information in (31h) (if Little Mink and his cousin were swallowed by Whale, they must have been inside him). In addition to morphosyntactic marking, the shift in topic signaled by the nominally predicated sentence in (31i) would typically be accompanied by ultra-high F0 reset, declination in fundamental frequency being used in Lushootseed narrative as a means of grouping sentences into discourse episodes (Beck & Bennett 1998; Bennett & Beck 1998).

Interestingly, the use of subjects as discourse-level deictic elements that link new events and participants to already established, topical material is highly reminiscent of a model of language comprehension proposed by Gernsbacher (1990). Using data from experiments measuring the time required to process linguistic input in English, Gernsbacher develops a three-phase model of how incoming linguistic information is organized into conceptual structures. The first phase in the process is termed "laying a foundation" and corresponds to the stage where the listener is processing completely new information (that is, information which contains no established discourse topic); information processing is slower in this phase, but once an appropriate foundation for the communication has been laid, subsequent information can be anchored to that foundation and is processed more rapidly. This is the "mapping" stage. Finally, when the structure is complete, the process of "shifting" occurs and a new topic is introduced, laying the foundation for a new discourse structure. These three stages seem to correspond very nicely to

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the pattern observed in (31), where the storyteller begins with a topic-marking structure to identify the figure on which the discourse is to be grounded (lays a foundation), narrates the next sequence of events with respect to that figure (maps the events onto the foundation), and then makes use of a second topic-shifting structure to signal the end of that particular episode (shifts to a new structure). Because of the rather transparent deictic nature of verbless sentences, they seem ideal candidates for the foundation-laying process. Making use of this structure in (31a), the storyteller establishes Little Mink and his cousin as discourse topics and then maintains them as syntactic subjects, introducing new events and participants while at the same time keeping the narrative firmly anchored to the communicative foundation he has set out, a foundation to which every sentence is linked both semantically (via the alignment pattern illustrated in (32) and (33)) and grammatically (via the use of Little Mink and his cousin as the syntactic subject). While it is not always easy to establish clear connections between syntactic and psycholinguistic research, the parallels here are suggestive and merit further investigation.

3)   Conclusion

All in all, then, it seems that there is some motivation for the use of the term "subject" in Lushootseed. While it is certainly true that there is an unusually close "fit" between the semantic structure of an utterance and the syntactic role that each participant in an event is assigned by the grammar, this fit is not one-hundred percent and so the invocation of a syntactic role—however frequently the reference of this category corresponds to a given semantic role—seems justified. Even if this were not the case, the use of "subject" is highly desirable from a typological perspective in that it allows closer comparison of the grammatical processes of Lushootseed with those of languages in which syntactic categories are perhaps not so closely aligned with the semantic roles they prototypically represent. The notion of subject seems also to be intimately linked both to the processes of temporal and spatial grounding at the clause level and to the organization of discourse, where the syntactic subject has an important function as a deictic element or reference point in narrative, serving to identify particular instances of an event type by linking that type to a topical participant. The fact that this participant is routinely—and, in transitive sentences, obligatorily—elided seems at first paradoxical: why should it be that the expression of the principal and most important figure in the clause be dispreferred and, very often, prohibited? On the other hand, given the fact that syntactic subjects are so central to discourse and that their identity in well-constructed dialogue and narrative is well-known to all participants in the speech act, it could just as easily be said that the syntactic subject/discourse topic is that participant which is most easily elided without loss of information to the listener. If everyone knows the identity of the subject/topic there is no real need to name it other than at or near episode boundaries (where overt subjects are required by some structures and are statistically most frequent in others). This sort of observation has been made before for so-called *pro*-drop languages, where participant-elision has been closely linked to topicality (*e.g.* Li & Thompson 1979); in the case of Lushootseed, where subjects are strongly identified with topics, this linkage has become grammaticalized to the point where there is a strict prohibition against third-person NP subjects in transitive clauses and the third-person subject pronoun has become a paradigmatic zero. The fact that the subject is a zero, however, does not mean that it is syntactically or semantically "inert": as we have seen in the discussion above, subjects—zero or no—play an important role in Lushootseed grammar.

Abbreviations

+	clitic boundary	*f*	feminine	P	plural
=	lexical suffix boundary	ICS	event-internal causative	PNT	punctual
1	first person	INTJ	interjection	PO	possessive
2	second person	IRR	irrealis	PROG	progressive
3	third person	LC	limited control	RDP	reduplication
APPL	applicative	MD	middle	REFL	reflexive
CONT	continuous	NOM	nominalizer	S	singular
D	deictic	NTS	non-topical subject	STAT	stative
ECS	event-external causative	P	preposition	TRM	transmutative

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