A Skeletal Syntax of Puget Salish

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0. Introduction

This paper is divided into two major sections. Part I, The Data, is a cursory syntactic sketch of the bare essentials of Puget Salish simplex sentences. Part II, A Transformational Analysis, is a formal treatment of these bare essentials done in a transformational frame.

Our intent is to establish a working base for further syntactic exploration. We will frankly be surprised, though delighted, if major revisions are not required as the grammar is extended beyond the most elementary constructions. We apologize to readers who are familiar with Puget or neighboring languages for the limited scope of our analysis and invite comment on areas not discussed here which might lead to revisions in the analysis.

Puget Salish is the southernmost of the Central Coast Salish languages. The examples presented here come from the speech of Mrs. Louise George, a speaker of the Skagit dialect, to whom we give our thanks.

I. The Data

0. Puget Salish has two syntactically distinct means of marking terms. By "term" we mean a referring expression. In English, for example, terms are pronouns or noun phrases. In Puget terms may be signalled by person markers (subject clitics or goal suffixes) or by complements. "Complement" is used here for noun phrases or oblique noun phrases (i.e., prepositional phrases).

The person marker systems signal first and second person only, with the exception of reflexive objects and third person subjects in depen-

dent clauses. Otherwise, third person is unmarked in the person system but may be signalled through the optional use of complements.

1. The Proposition

0.   Let us call the basic constituent of a Puget sentence the proposition. In a minimal sentence the proposition consists simply of a predicate.

     1. ʔalc'ut'ilib.   (He/she/they) is/are singing.

     2. ʔukʷaxʷad.   (He/she/they) helped (him/her/them).

Third person is not formally marked within the proposition (except for third person subjects of dependent clauses), so a minimal proposition may consist of an aspectual and a verb, as in the examples above.

     1. ʔalc'u + t'ilib

         progressive-sing

     2. ʔu   +   kʷaxʷat

         completive-help

1.1 Person Markers

    These minimal propositions may be expanded upon to include first or second person markers.

     3. ʔalc'ut'ilib čəd.   I am singing.

        ʔalc'u-t'ilib čəd   progressive-sing I
         1   2   3   1   2   3

4. ʔukʷaxʷacid čəd.   I helped you.

   ʔu-kʷaxʷat-sid čəd   completive-help-you I
   1   2   3   4   1   2   3 4

The subject markers are personal clitics, introduced in independent clauses by the formative č-.

Personal Clitics (Independent Clauses)

	singular	plural
first p.	čəd	čəɬ
second p.	čəxʷ	čələp

In dependent clauses the clitics appear in a suffix form without č-, loosely bound to the preceding word. As mentioned above, third person is marked in dependent clauses.

Personal Clitics (Dependent Clauses)

	singular	plural
first p.	-əd	-əɬi
second p.	-əxʷ	-ələp
third p.	-əs	

5. tucuuc čəd gʷəʔux̌ʷəs.   I told him to go.

  tu-cuuc čəd gʷə-ʔux̌ʷ-əs.
  1 2   3   4   5   6

        remote-tell I hypothetical-go-3rd person
        1   2   3   4   5   6

6. ʔəsx̌əc čəd gʷəʔux̌ʷəx̲ʷ   I am afraid for you to go.

   ʔəs-x̌əc čəd gʷə-ʔux̌ʷ-əxʷ
   1   2   3   4   5   6

        static-fear I hypothetical-go-you (sg.)
           1   2   3   4   5   6

7. ʔəsx̌əc čəd gʷəʔux̌ʷəd.   I am afraid to go.

   ʔəs-x̌əc čəd gʷə-ʔux̌ʷ-əd
   1   2   3   4   5   6

        static-fear I hypothetical-go-I
           1   2   3   4   5 6 .

The personal clitics, whether in independent or dependent clauses, belong to a syntactic class of particles which appear postverbally only if the clause contains no auxiliary (propositional adverb), as discussed below.

The object markers are verb suffixes which we will call "goal suffixes". Their status as verb suffixes is demonstrated by the fact that their position is fixed, unlike the clitics'. As discussed by Hess (1973), goal suffixes have two allomorphs, one after the /-t/ transitive suffix and the other elsewhere. The elsewhere case is listed in parentheses below.

Goal Suffixes

	singular	plural
first p.	-s (-bš)	-ubuɫ (-buɫ)
second p.	-sid (-bicid)	-ubuɫəd (-buɫəd)
reflexive		-sut (-but)

A proposition, then, may contain one or two person markers:

a subject clitic and a goal suffix, intransitive verbs taking a subject clitic only.

The following are some of the possibilities for person markers in transitive and intransitive contexts.

<u>Transitive</u>

8. Subject clitic only:

   ʔukʷaxʷad čəd.   I helped (him/her/them).

   ʔu-kʷaxʷat čəd   completive-help I
   1   2   3   1   2   3

9. Subject clitic and goal suffix:

   ʔukʷaxʷac čəxʷ.   You helped me.

   ʔu-kʷaxʷat-s čəxʷ   completive-help-me you
   1   2   3   4   1   2   3   4

10. Goal suffix only:

   ʔukʷaxʷac.   (He/she/they) helped me.

   ʔu-kʷaxʷat-s   completive-help-me
   1   2   3   1   2   3

   Neither:

2. ʔukʷaxʷad.   (He/she/they) helped (him/her/them).

<u>Intransitive</u>

11. Subject clitic:

   ʔutəlawil čəd.   I ran.

   ʔu-təlawil čəd   completive-run I
   1   2   3   1   2   3

12. No subject clitic:

ʔutəlawil.   (He/she/they) ran.

1.2 Auxiliaries

A proposition may be further expanded to include auxiliaries (propositional adverbs), such as ckʷ'aqid "always", laʔb "very", x̌al "also", tiləb "right away" and x̌ʷul' "just".

13. ʔəstagʷəxʷ čəd.   I am hungry.

ʔəs-tagʷəxʷ čəd   static-hungry I
  1   2   3   1   2   3

14. ckʷ'aqid čəd ʔəstagʷəxʷ.   I am always hungry.

ckʷ'aqid čəd ʔəs-tagʷəxʷ   always I static-hungry
   1   2   3   4   1   2   3   4

15. laʔb čəd ʔəstagʷəxʷ.   I am very hungry.

laʔb čəd ʔəs-tagʷəxʷ   very I static-hungry
  1   2   3   4   1   2   3   4

Note that the subject clitic is attracted to the auxiliary. If more than one auxiliary is present, the subject clitic is attracted to a position after the first.

16. ckʷ'aqid čəxʷ laʔb ʔəstagʷəxʷ.   You are always very hungry.

ckʷ'aqid čəxʷ laʔb ʔəs-tagʷəxʷ
   1   2   3   4   5

     always you very static-hungry
       1   2   3   4   5

1.3 Particles

The proposition may be further expanded to include various particles. Particles form a class of elements which occur after the verb if there is no auxiliary but which are attracted by the first auxiliary in a clause. The particle class includes subject clitics (discussed above), modal particles and the question particle ʔu. Modal particles include jəɬ "must", kʷəda "maybe", kʷʼəɬ "reportedly" and sixʷ "again".

The sequencing of particles is an area for further research. Apparently the subject clitic always precedes the other particles. We have, however, examples of the question particle both preceding and following modal particles.

17. ʔəsqʷəɬəb čəxʷ ʔu sixʷ.   Are you tired again?

ʔəs-qʷəɬəb čəxʷ ʔu sixʷ
1   2   3   4   5

      static-tired you question again
        1   2   3   4   5

18. ʔəstagʷəxʷ čəxʷ jəɬ ʔu.   You must be hungry?

ʔəs-tagʷəxʷ čəxʷ jəɬ ʔu
1   2   3   4   5

      static-hungry you must question
        1   2   3   4   5

We do not know at this time whether this reflects subclass differences among modal particles or optional word-order differences (presumably with corresponding semantic differences). For the purpose of discussion, we assume that the question particle comes last in unmarked word-order, as this is more frequent.

The following schemata summarize the categories which may appear in a proposition, where parentheses indicate optional elements.

Aspect + Verb + (Goal Suffix) + (Subject Clitic) + (Modal) (Question)

<u>or</u>

Auxiliary + (Subj. Clitic) + (Modal) + (Question) + Aspect + Verb + (Goal Suff.)

We return to a formal treatment of the proposition after discussing complements.

2. Complements

In addition to the proposition, a sentence may contain one direct complement (nonoblique noun phrase) and various oblique complements. The direct complement may be either the subject or the object of the sentence. We use the terms "subject" and "object" somewhat loosely here, with no implication that the subject is a daughter of the sentence and the object is a daughter of a verb phrase (as in Chomsky, 1964). By "subject" we mean fulfilling a role which may be fulfilled by a subject clitic. For example, the direct complement of (19), <u>tə stubš</u>, plays the subject role, as does the subject clitic of (20), <u>čəd</u>.

19. ɬukʷaxʷacid tə stubš.   The man will help you.

     ɬu-kʷaxʷat-sid tə stubš
     1   2   3   4   5

     future-help-you the man
       1   2   3   4   5

20. ɬukʷaxʷacid čəd.   I will help you.

     ɬu-kʷaxʷat-sid čəd
     1   2   3   4

     future-help-you I
       1   2   3 4

By "object" we mean fulfilling a role which may be fulfilled by a goal suffix. In the following example the direct complement in (21), tə stubš, plays the object role, as does the goal suffix of (20), -sid.

> 21. ɬukʷaxʷad čəd tə stubš.   I will help the man.
>
> ɬu-kʷaxʷat čəd tə stubš
> 1   2   3 4 5
>
> future-help I the man
> 1   2   3 4   5

In (19) and (21) the direct complements must be subject and object respectively. In (19) the goal suffix -sid fulfills the object role, so the direct complement must be the subject. Similarly, in (21) čəd is the subject, so tə stubš must be the object.

A Puget sentence does not permit two direct complements. This may seem at odds with the system of person markers within the proposition, since it is possible to mark both subject and object by the use of person markers, as in (20) above. Further, the one direct complement, as we have seen, may be interpreted as either a subject or an object. But in a transitive construction if both subject and object are third person, a direct complement is always interpreted as the object. So, for example, the following sentence is unambiguous.

> 22. ʔukʷaxʷad tə stubš.   (He/she/they) helped the man.

The only way of expressing both terms of a transitive construction as complements is to use the passive, where the patient (object of a transitive) is expressed as a direct complement and the agent (subject of a transitive)

is an oblique complement, introduced by the catch-all preposition ʔə.

23. ʔukʷaxʷatəb ʔə tə stubš cə sładəyʔ.   The woman was helped by the man.

ʔu-kʷaxʷat-b ʔə tə stubš cə sładəy?
1 2   3 4 5 6   7   8

completive-help-passive oblique the man the woman
1   2   3   4   5   6   7   8

We turn to the passive construction below.

3. The Passive

The passive construction is based morphologically on transitive verbs, marked with a -b suffix.

Active: ʔukʷaxʷad   (He/she/they) helped (him/her/them).

Passive: ʔukʷaxʷatəb   (He/she/they) was/were helped.

Within the proposition the passive construction is parallel to many European languages in that the object of a transitive verb corresponds to the subject of a passive.

Active: ʔukʷaxʷac   (He/she/they) helped me.

ʔu-kʷaxʷat-s   completive-help-me
1 2   3   1   2 3

Passive: ʔukʷaxʷatəb čəd   I was helped.

ʔu-kʷaxʷat-b čəd   completive-help-passive I
1 2   3 4   1   2   3   4

A passive proposition contains no object marker, since the first or second

person element signalled by a goal suffix in an active construction is
signalled by a subject clitic in the passive. Passive agents are not
expressed in the proposition.

Outside the proposition, a passive agent may be expressed by an
oblique complement. It is by means of the passive-oblique agent that
both agent and patient may be expressed by complements. In the passive,
the direct complement is always interpreted as the patient (corresponding
to the object of an active construction).

23. ʔukʷaxʷatəb ʔə tə stubš cə sɬadəyʔ.
     _____ _____
     OBLIQUE   PATIENT
     AGENT

     ʔu-kʷaxʷat-b ʔə tə stubš cə sɬadəyʔ
     1   2   3 4 5 6   7   8

     completive-help-passive oblique the man the woman
          1   2   3   4   5   6   7 8

24. ʔukʷaxʷatəb cə sɬadəyʔ   The woman was helped.
     _____
     PATIENT

4. Concluding Remarks

It is our intent in this very brief sketch to deal only with the
most essential points of Puget syntax in attempting a first approximation
of a formal treatment which appears below.

We have analyzed Puget sentences as consisting of a proposition
plus optional complements (noun phrases). Further, only one nonoblique
complement is permitted in a simplex sentence. Perhaps the propositional
constituent deserves some justification. We have posited this unit because

it forms the core constituent of the sentence, complements being optional.

Further, complements act as though they are external to the constituents

of the proposition. Particles normally do not follow complements. Similar-

ly, complements are not attracted to auxiliaries (as are subject clitics),

so complements do not appear within the constituents of a proposition.

II. A Transformational Analysis

0. Theoretical Preliminaries

The nature of underlying structures in a transformational analysis is, in part, a function of the model. In a semantically based grammar (e.g., Lakoff, 1971), where underlying phrasemarkers are at the semantic level, presumably all languages have the same set of phrase markers (assuming universal semantics). But in a syntactically based grammar with deep structures distinct from semantic representation it is at least an open question whether the base is universal (excluding lexical items which clearly are language specific). In a syntactically based grammar it is even an open question whether all languages draw from one set of deep structure categorical symbols. That is, it is possible that such major constituents posited in Chomsky (1965) as verb phrase, noun phrase and predicate phrase provide optimal descriptions for some but not all languages.

The following transformational analysis of Puget Salish is syntactically based. We assume Chomsky's Standard Theory (Chomsky, 1971), with a syntactic level of deep structure mapped onto surface structures by transformations and an interpretive semantic component mapping deep structures onto semantic representations. We offer no empirical evidence in favor of this model over a semantically based grammar. Our selection is based on practical considerations, not theory, and it should not imply any preference one way or the other on our part. The practical consideration at this point in our research is observational adequacy, providing a description that accounts for at least a restricted subset of the data.

The syntactic analysis presented here is superficial in the sense that the deep structures posited closely reflect potential surface structures. As a first approximation, this seems to be a reasonable approach. If it turns out that a "superficial" analysis is compatible with the facts and is as revealing of significant generalizations as a more "abstract" analysis, we feel the "superficial" analysis is preferable. Whenever the grammatical patterns of Puget seem to reflect universal categories these have been employed, as in the case of noun phrases. Wherever Puget grammatical categories do not, in our opinion, reflect universal categories we have used distinct labels. Thus while we have not gone out of the way to avoid a universal base, we have opted in favor of Puget-specific deep structure categories wherever these more closely reflect surface structure.

1.   Constituent Structure

A deep structure analysis of sentences is in part a function of surface structure and the most economical set of transformations mapping deep structure onto surface structures. In this section we consider deep structure categories in Puget syntax. Their plausibility is partially a function of the transformational rules discussed in the next section.

Categorial rules forming the structures discussed here are presented in the appendix. We assume lexical insertion rules are local transformations and that they take place in a block before all other transformations.

1.1   Sentential Constituents

As suggested above, the proposition is the core constituent of the sentence with complements outside it.

```
        S                      S                    S              S
      / | \                  /   \                /   \            |
Proposition AGENT NP  Proposition AGENT    Proposition NP     Proposition
            / \                  / \
          ?ə  NP               ?ə  NP
```
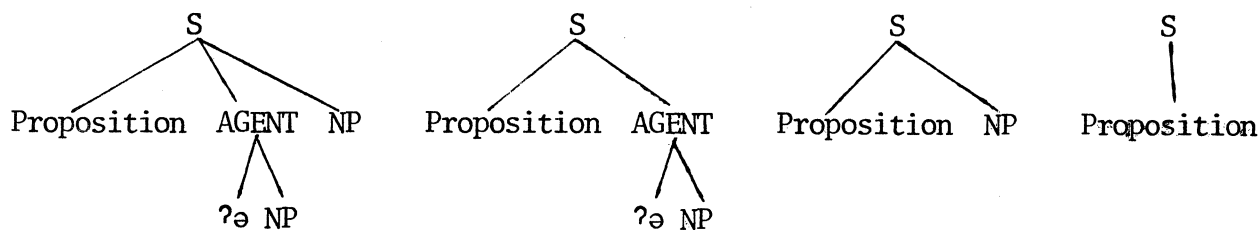
The fact that a Puget sentence cannot have more than one direct complement
will be reflected in the formation rules, so even at the level of deep struc-
ture no more than one direct complement will appear in a simplex sentence.
The node AGENT should not be equated with semantic case. As shown below,
it is possible for a semantic agent to appear in either an oblique or a direct
complement.

1.2 Propositional Constituents

Inside the proposition are three major constituents: an optional
auxiliary (AUX), the inflected verb (VB) and a particle phrase (Part Ph).

```
        Proposition                      Proposition
         / | \                            /     \
       AUX VB Part Ph                    VB      Part Ph
```

We assume here that AUX is a terminal category, immediately dominating a
lexical item. In point of fact, it may dominate more than one item, suggesting
it has internal structure. This is an area for further research.

1.3 The Particle Phrase

The particle phrase contains minimally an empty clitic node (discussed
below), plus an optional modal (M) and an optional question marker (Q).

```
    Part Ph           Part Ph           Part Ph           Part Ph
     /|\               / \               / \                |
clitic M  Q        clitic  Q        clitic  M            clitic
```
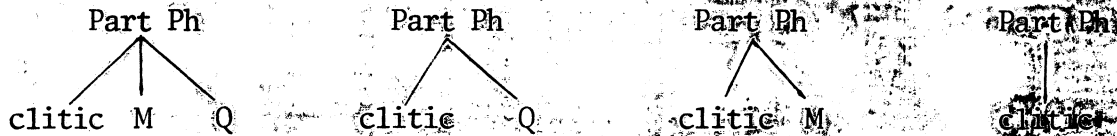
It is convenient to treat all particles, including the subject clitic, as
one constituent as this simplifies Particle Attraction, the transformation
which moves particles to the first auxiliary.

As in the case of the auxiliary, we will assume here that the modal
(M) is a terminal category, immediately dominating a lexical item, where
in point of fact it may dominate more than one item, suggesting again that
there is internal structure.

1.4 VB

The VB node contains an spectual (ASP), the verb stem (V) plus one
or two person markers (PER) (one for intransitives and two for transitives).

```
          VB                            VB
        / |  \                        / | \
     ASP  V  PER  PER              ASP  V  PER
```

We assume the interpretation of these person markers to be semantic. For
a verb such as $k^{w}ax^{w}at$ "help", the leftmost person marker is interpreted as
the patient and the second as the agent. As shown below, it is the outermost
(rightmost) person marker that is converted into a subject clitic by being
moved into the empty clitic node (see Clitic Filling).

The spectual node (ASP) dominates an "internal" aspectual prefix.
The internal aspectuals of Skagit are ?alc'u- "continuative", lə-

sive", ?u- "completive" and ?əs- "static". The language has in addition external aspectual-like prefixes, including g^wə- "subjunctive", ƛu- "habitual", ƛu- "future", tu- "remote" and bə- "anew" or "again". These probably arise outside the VB node.[1]

1.5 Person Markers

The person markers will be assigned feature bundles by the formation rules:

$$PER \longrightarrow [\pm I]$$

$$[- I] \longrightarrow [\pm II]$$

$$[+ I] \longrightarrow [\pm Plural]$$

$$[+ II] \longrightarrow [\pm Plural]$$

First Singular
+ I
- Plural

First Plural
+ I
+ Plural

Second Singular
- I
+ II
- Plural

Second Plural
- I
+ II
+ Plural

Third
- I
- II

---

[1] T. Hess (1974) calls these "auxiliary prefixes", as distinct from the internal aspectuals. These auxiliary prefixes occur before possessive prefixes in nominalizations while internal aspectuals follow possessive prefixes. Possibly the auxiliary prefixes should be assigned to the auxiliary node.

We assume that lexical forms are not assigned to person markers in deep structure, but that they are inserted in a late pass through a special subset of the lexicon. This is necessary as the form of a person marker depends on whether it is converted into a clitic and this depends in part on the passive rule.

1.6 Complements

We will not focus on the internal structure of complements here. We leave it as an open question whether or not oblique complements should have special category labels or all be labeled something such as "prepositional phrase". In any case, we have labeled the oblique agent as AGENT, which in turn consists of an oblique marker ?ə plus a noun phrase (NP).

The direct complement, as indicated in section 1.1, is simply a noun phrase. A noun phrase may consist minimally of a determiner (DET) and a noun (N). The determiner could be viewed as a feature bundle, although we will treat it here simply as a terminal category dominating a lexical item.

We leave as matters for further research the status of noun modifiers, including the possessives, and various types of subordination, including nominalization.

1.7 Some Deep Structures

As noted above, deep structures are in part a function of the transformational rules mapping them onto surface structures. The greatest discrepancy between the following deep structures and the surface structures they underlie is the position of person markers, which will be discussed

in section 2.

?uk^wax^wacid čəd.   I helped you.

```
                        S
                        |
                   Proposition
                  /            \
                VB              Part Ph
        /    /    \      \           |
     ASP   V     PER      PER      Clitic
      |    |      |        |          |
      ?u  kʷaxʷat ┌  -I ┐  ┌ + I  ┐   △
                  │ + II │  │-Plural│
                  └-Plural┘ └       ┘
```

?uk^wax^wac tə stubš.   The man helped me.

```
                        S
                   /          \
            Proposition        NP
           /          \       /   \
         VB          Part Ph Det    N
      /   /  \  \       |     |     |
   ASP  V   PER  PER  Clitic  |     |
    |   |    |    |     |      |     |
    ?u kʷaxʷat    │     △     tə  stubš
         ┌ + I ┐ ┌ -I ┐
         │-Plural│ │-II│
         └      ┘ └    ┘
```
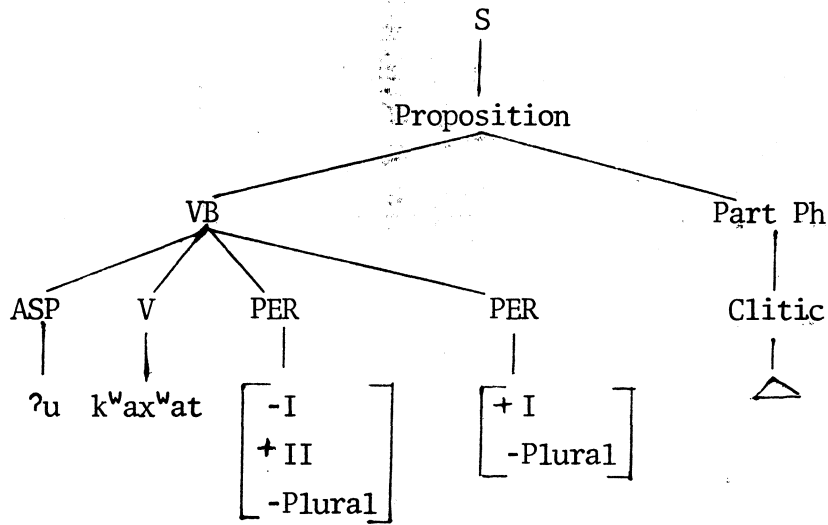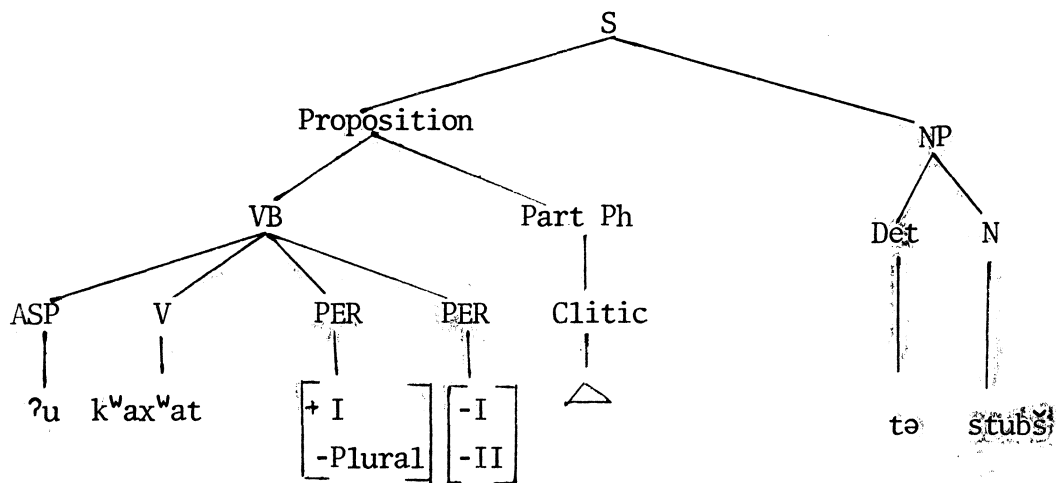
ʔukʷaxʷatəb ʔə tə stubš.   (He/she/they) was/were helped by the man.

```
                              S
                   _____/ _____
              Proposition              AGENT
            ___/    \___              /    \
          VB          Part Ph       ʔə      NP
      __/ | \__          |                 /  \
   ASP  V  PER  PER     Clitic           Det   N
    |   |   |    |        |               |    |
   ʔu kʷaxʷat ┌ -I ┐ ┌ -I ┐      △        tə  stubš
             └ -II┘ └ -II┘
```

ʔukʷaxʷatəb ʔə tə stubš cə sɬadəyʔ.   The woman was helped by the man.

```
                              S
                   _____/ _____
              Proposition         AGENT           NP
            ___/    \___          /    \          /  \
          VB          Part Ph    ʔə     NP       Det   N
      __/ | \__          |             /  \       |    |
   ASP  V  PER  PER     Clitic       Det   N      |    |
    |   |   |    |        |           |    |      |    |
   ʔu kʷaxʷat ┌ -I ┐ ┌ -I ┐    △      tə  stubš  cə  sɬadəyʔ
             └ -II┘ └ -II┘
```
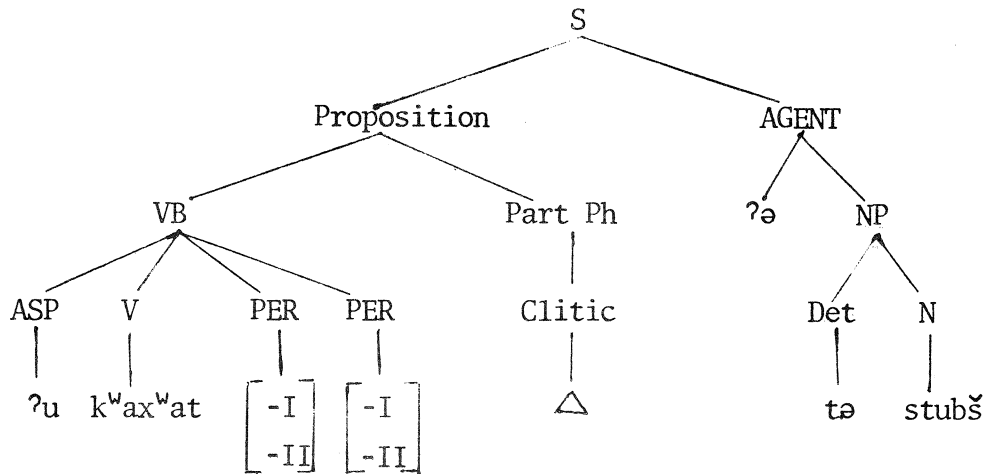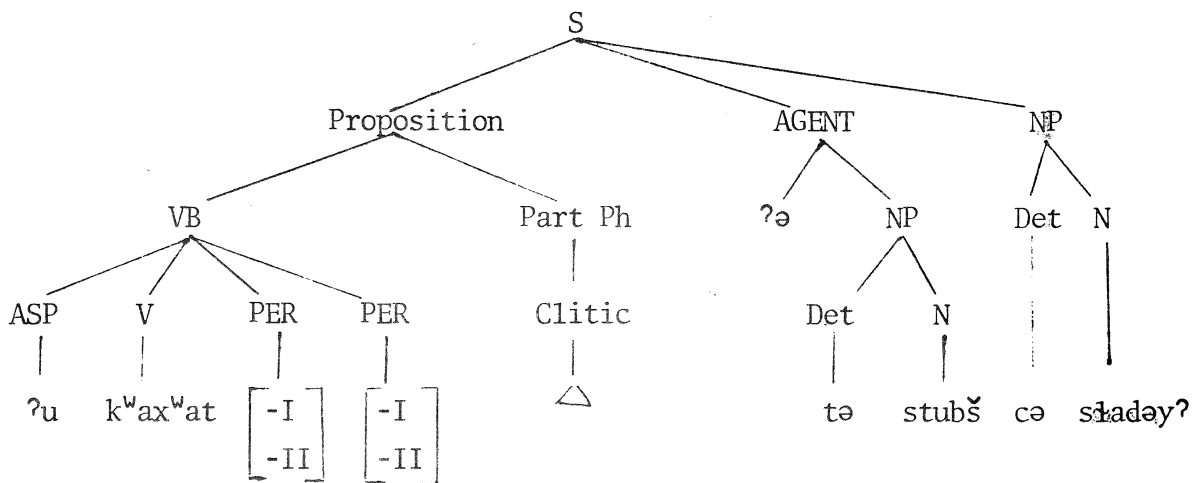
2. Transformations

Having discussed deep structures, we turn to the transformations which map them onto surface structures. Only major obligatory rules are considered here. We assume optional word orders are derived through the

application of optional movement rules.

2.1 Clitic Filling

The outermost person marker of the VB node is raised into an empty clitic node.

ʔukʷaxʷacid čəd.   I helped you.
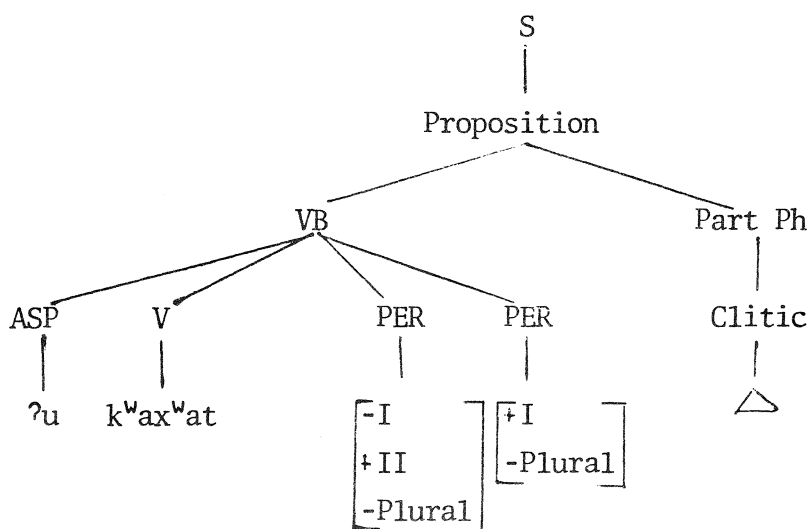
```
                              S
                              |
                        Proposition
                       /            \
                  VB                  Part Ph
            /   /    \    \              |
        ASP   V     PER    PER         Clitic
         |    |      |      |            |
        ʔu  kʷaxʷat ⎡-I ⎤  ⎡+I     ⎤    △
                    ⎢+II⎥  ⎣-Plural⎦
                    ⎣-Plural⎦
```

Clitic Filling

```
                              S
                              |
                        Proposition
                       /            \
                  VB                  Part Ph
            /   /    \                  |
        ASP   V     PER               Clitic
         |    |      |                  |
        ʔu  kʷaxʷat ⎡-I  ⎤           ⎡+I     ⎤
                    ⎢+II ⎥           ⎣-Plural⎦
                    ⎣-Plural⎦
```
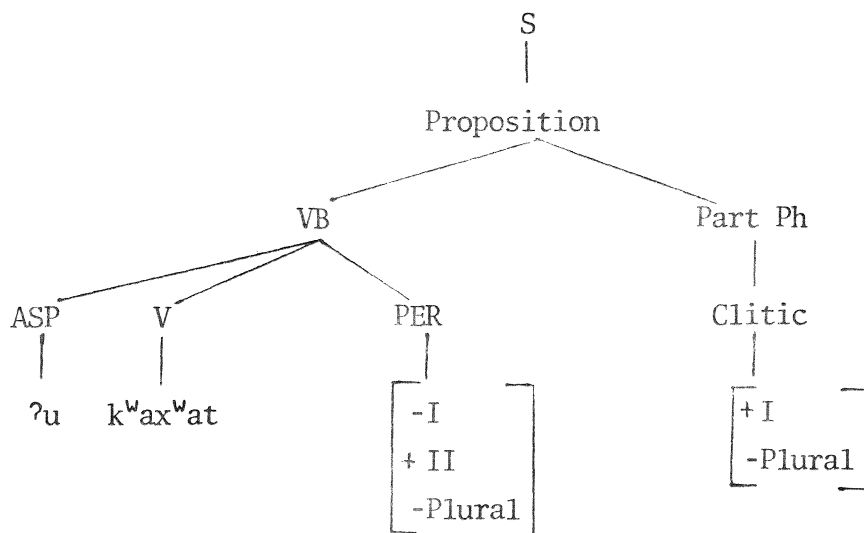
Formally, the clitic node may be viewed as containing a dummy symbol before Clitic Filling applies. While a person marker could be directly generated in the clitic by the formation rules, it is convenient for our analysis of the passive to generate both person markers in the VB node and to raise the outermost one, as discussed below.

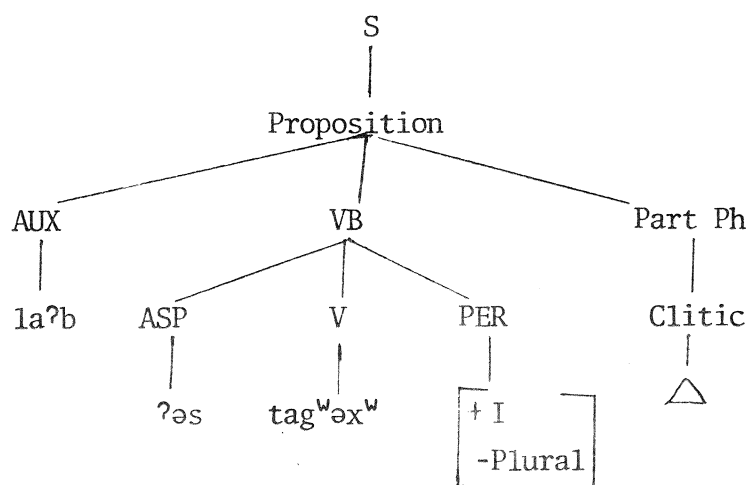If an auxiliary is present, the particle phrase is attracted to it after clitic filling has applied.
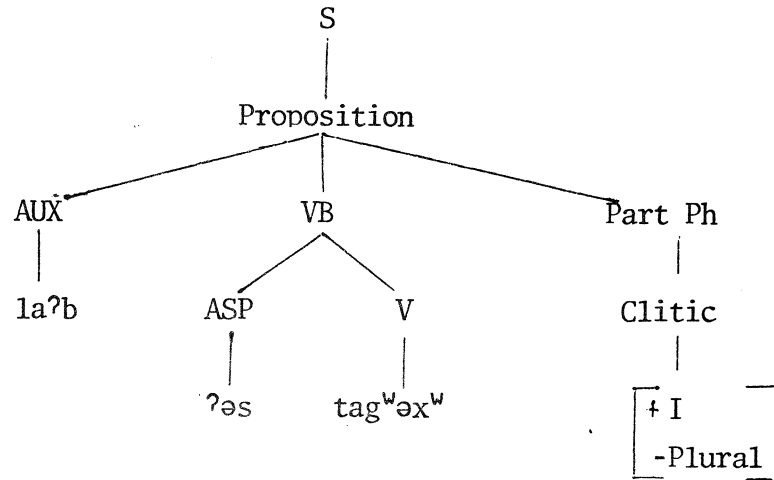
2.2 Particle Attraction

Since particles maintain a fixed sequential order when they are attracted to an auxiliary, the simplest description is to generate them in their appropriate order as a constituent, moving the whole constituent to the auxiliary.
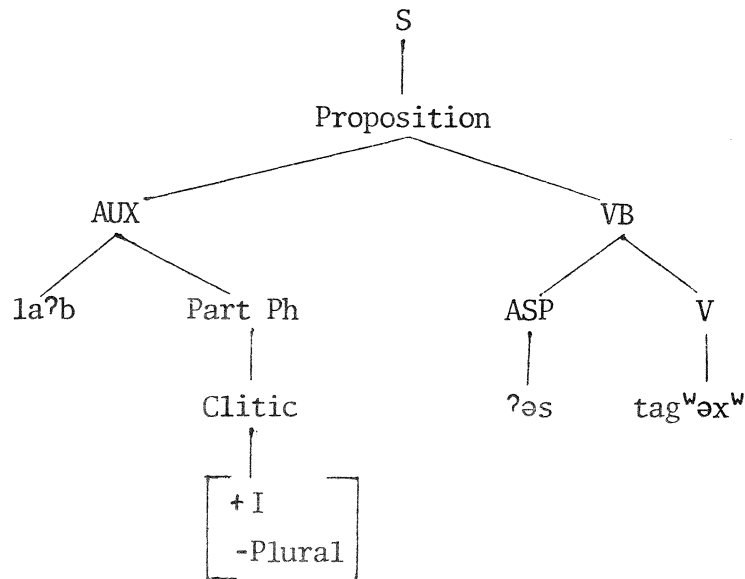
laʔb čəd ʔəstagʷəxʷ.   I am very hungry.

Clitic Filling:

```
                              S
                              |
                         Proposition
              _____|_____
             |                |                |
           AUX               VB             Part Ph
             |           _____|_____            |
           la?b        ASP         V          Clitic
                        |           |            |
                       ?əs      tagʷəxʷ      ⎡ + I    ⎤
                                             ⎢ -Plural ⎥
                                             ⎣         ⎦
```

Particle Attraction:

```
                              S
                              |
                         Proposition
              _____|_____
             |                                 |
           AUX                                 VB
        _____|_____                       _____|_____
       |           |                     |           |
     la?b       Part Ph                ASP          V
                   |                    |            |
                 Clitic               ?əs       tagʷəxʷ
                   |
              ⎡ + I    ⎤
              ⎢ -Plural ⎥
              ⎣         ⎦
```

This rule accounts for the word order difference between sentences with or
without an auxiliary.

25. laʔb čəxʷ ʔu ʔəstagʷəxʷ.   Are you very hungry?

     laʔb čəxʷ ʔu ʔəs-tagʷəxʷ   very you question static-hungry
      1   2   3 4   5   1   2   3   4   5

26. ʔəstagʷəxʷ čəxʷ ʔu.   Are you hungry?

     ʔəs-tagʷəxʷ čəxʷ ʔu   static-hungry you question
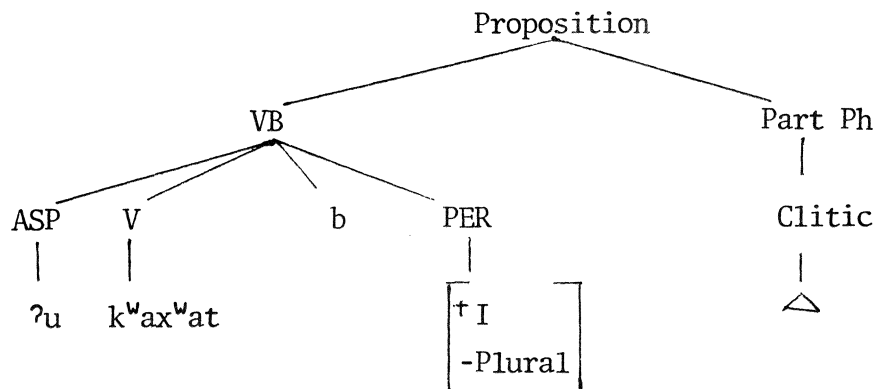   1   2   3   4   1   2   3   4

2.3 Passive
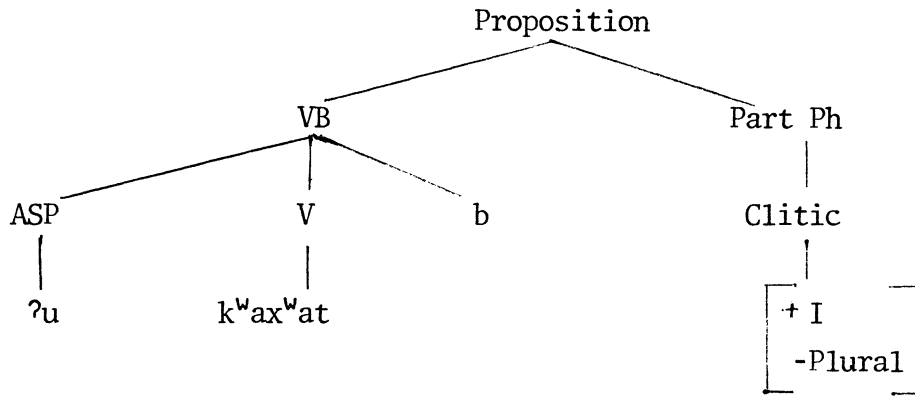
2.3.1 Passive and the Proposition

The treatment of the passive is the key element in our analysis. Looking first within the proposition, passive applies only of the outermost person marker is third person. The rule deletes this person marker and inserts -b immediately after the verb stem.
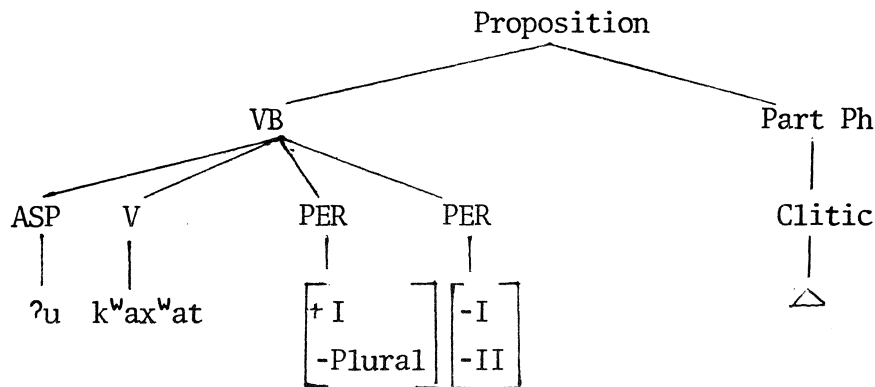
Passive:

Passive precedes Clitic Filling, which then applies, moving the remaining person marker (now outermost) into the empty clitic node.

```
                          Proposition
                         ╱          ╲
                 VB                    Part Ph
               ╱  │ ╲                     │
        ASP       V    b               Clitic
         │        │                       │
                                      ┌─        ─┐
         ?u     kʷaxʷat               │  + I     │
                                      │  -Plural │
                                      └─        ─┘
```

This is followed by a late lexical insertion rule which replaces the person features of the clitic with čəd.

By ordering Passive before Clitic Filling we account for the fact that the goal suffix of an active construction corresponds to the subject clitic of a passive. If Passive had not applied to the structure above the first person marker would not have been outermost, so it could not have undergone Clitic Filling.

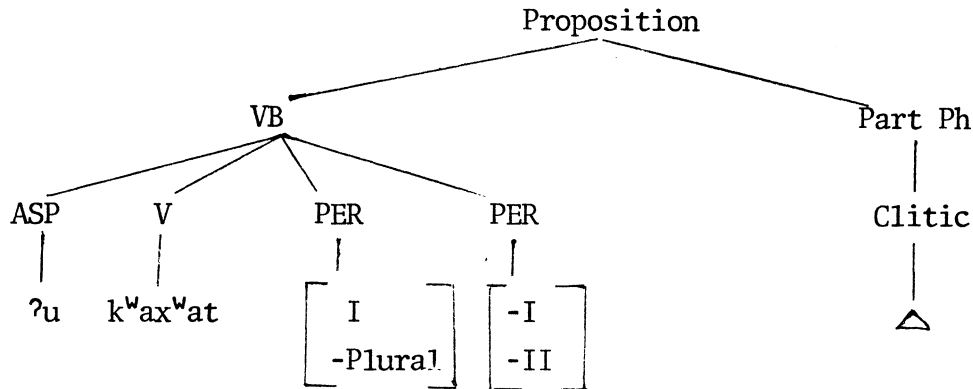Active: ?ukʷaxʷac.   (He/she/they) helped me.

         ?u-kʷaxʷat-s   completive-help-me
         1   2   3   1   2   3

Passive: ?ukʷaxʷatəb čəd.   I was helped.
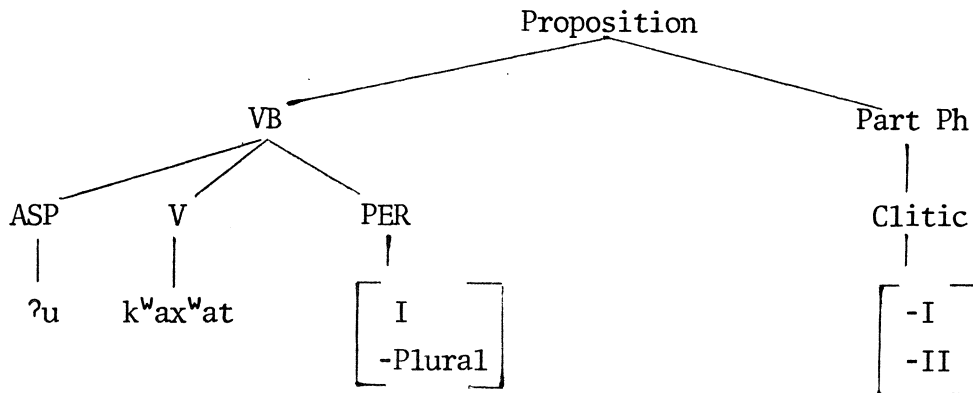
         ?u-kʷaxʷat-b čəd   completive-help-passive I
         1   2   3   4   1   2   3   4

The active counterpart to the passive above undergoes the following derivation.

Deep Structure:

Clitic Filling:

Note that the grammar generates third person subject and object markers, though neither is superficially marked in independent clauses. An alternative is to allow for the generation of empty person nodes which are automatically deleted. We chose the former analysis, since the outermost third person marker has the overt shape -əs in dependent clauses and is syntactically parallel to the suffix forms of the first and second person clitics (e.g., undergoing particle attraction). We assume that all third person markers are deleted in independent clauses and that a third person

marker remaining within the VB node (a goal suffix) is always deleted. The conditions for deletion in the former case cannot be stated until more is known about the internal structure of dependent clauses.

2.3.2 Complements and The Passive

The central consideration in our treatment of the passive is the relationship of complements to the proposition. As stated above, a Puget simplex sentence may contain only one direct complement. Under the appropriate conditions, this direct complement may signal either the agent subject of the patient object of a transitive construction.

27. ʔukʷaxʷac tə stubš.   The man helped me.
    SUBJECT/AGENT

 ʔu-kʷaxʷat-s tə stubš   completive-help-me the man
 1 2 3 4 5   1 2 3 4 5

28. ʔukʷaxʷat čəd tə stubš.   I helped the man.
    OBJECT/PATIENT

 ʔu-kʷaxʷat čəd tə stubš   completive-help I the man
 1 2 3 4 5   1 2 3 4 5

But the agent may also be introduced in an oblique complement, an agent phrase. Only in this case may both agent and patient be represented by complements.

23. ʔukʷaxʷatəb ʔə tə stubš cə sɬadəyʔ. The woman was helped by the man.
     AGENT   PATIENT

 ʔu-kʷaxʷat-b ʔə tə stubš cə sɬadəyʔ.
 1 2 3 4 5 6 7 8

   completive-help-passive oblique the man the woman
    1   2 3   4 5 6 7 8

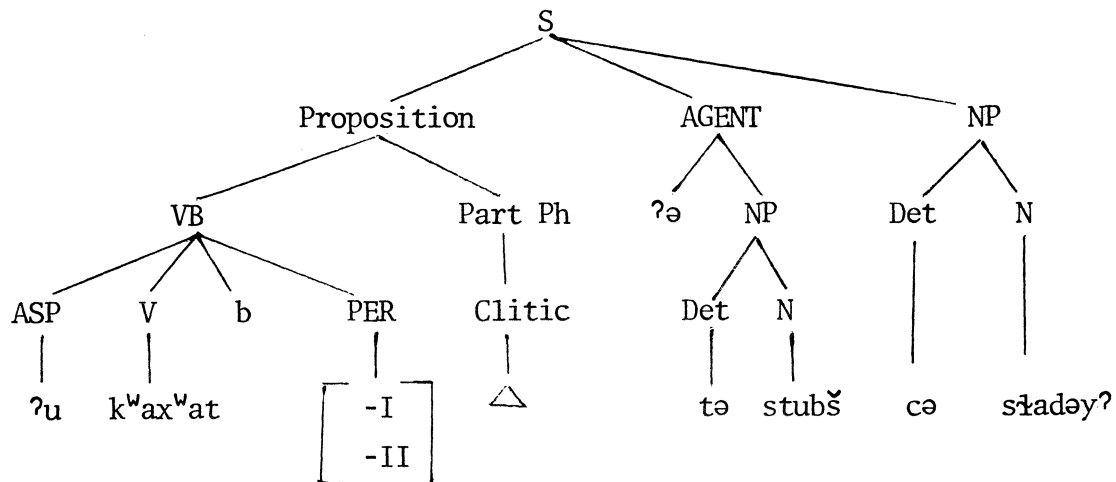As indicated in the example, when an agent phrase appears, the verb is passive. We will, in fact, use the presence of an agent phrase as the triggering factor in the passive transformation.

Deep Structure:

```
                              S
             ┌────────────────┼──────────────────┐
        Proposition         AGENT                NP
         ┌──────┴───┐       ┌──┴──┐            ┌──┴──┐
        VB        Part Ph   ?ə    NP          Det    N
    ┌────┼────┐     │           ┌──┴──┐        │      │
  ASP   V   PER   PER        Clitic  Det   N    cə   sładəy?
   │    │    │     │           │     │     │
  ?u kʷaxʷat [-I] [-I]        △    tə  stubš
            [-II] [-II]
```

Passive:

```
                              S
             ┌────────────────┼──────────────────┐
        Proposition         AGENT                NP
         ┌──────┴───┐       ┌──┴──┐            ┌──┴──┐
        VB        Part Ph   ?ə    NP          Det    N
   ┌────┼───┬────┐   │           ┌──┴──┐       │      │
  ASP  V   b   PER Clitic       Det   N        cə   sładəy?
   │   │        │    │           │     │
  ?u kʷaxʷat  [-I]  △           tə  stubš
              [-II]
```

Clitic Filling:

```
                              S
                _____|_____
           Proposition              AGENT      NP
         ____|_____            __|__       _|__
       VB          Part Ph      ?ə   NP     Det   N
    ___|___           |              _|__    |    |
  ASP   V    b      Clitic         Det   N   cə  sładəy?
   |    |             |             |    |
   ?u  kʷaxʷat     ┌─────┐         tə  stubš
                   │ -I  │
                   │ -II │
                   └─────┘
```
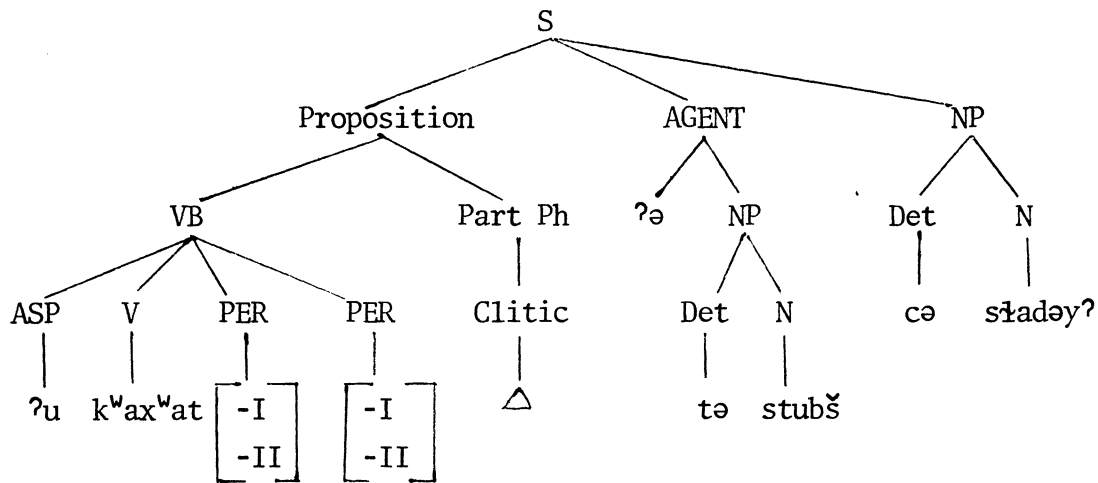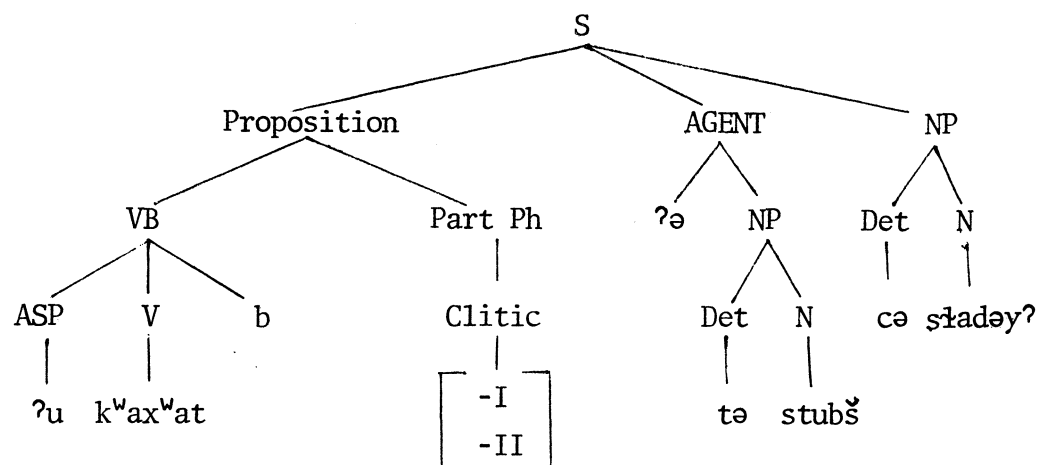
The third person clitic will of course be deleted unless it appears

in a dependent clause.

The agent node should not be equated with the semantic agentive

case. A semantic agent may or may not appear in an oblique agent phrase.

The following pair differ in this respect at the level of deep structure.

27. ?ukʷaxʷac tə stubš.   The man helped me.

    ?u-kʷaxʷat-s tə stubš   completive-help-me the man
     1   2   3 4   5   1   2   3   4 5

29. ?ukʷaxʷatəb čəd ?ə tə stubš. I was helped by the man.
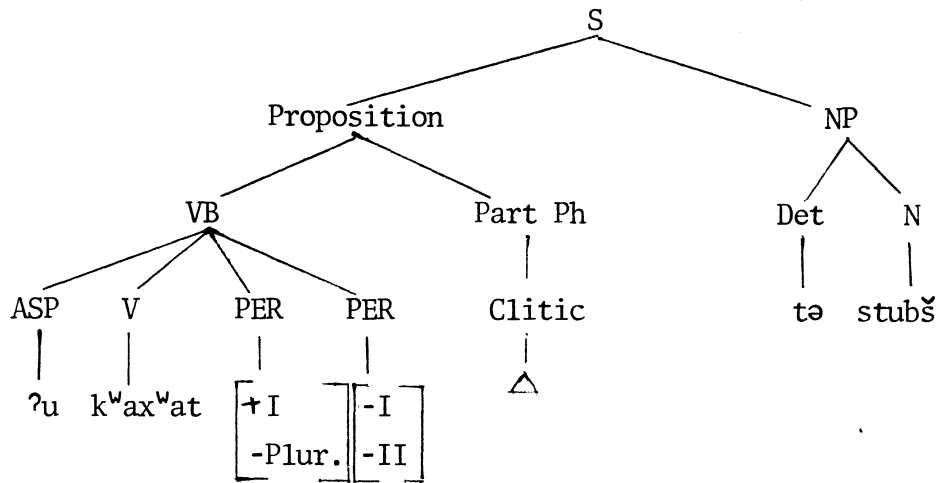
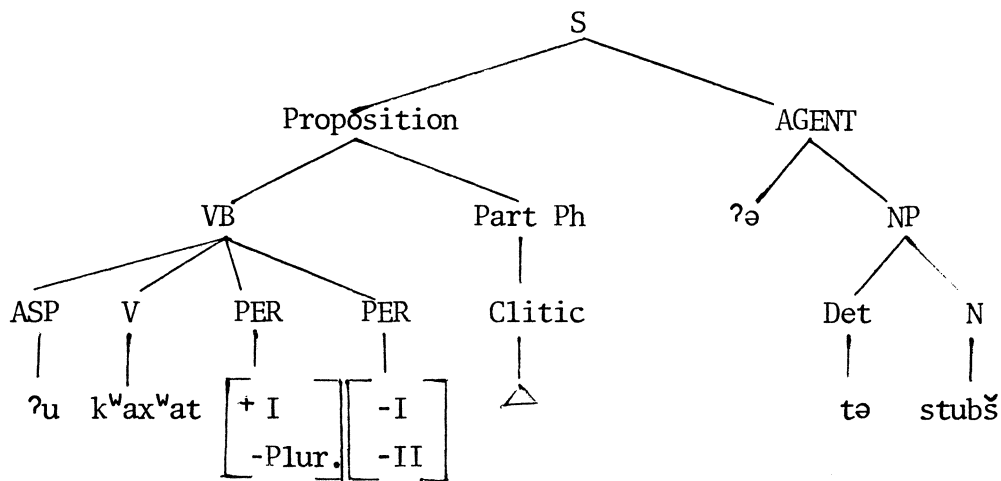   ?u-kʷaxʷat-b čəd ?ə tə stubš completive-help-passive I oblique the man
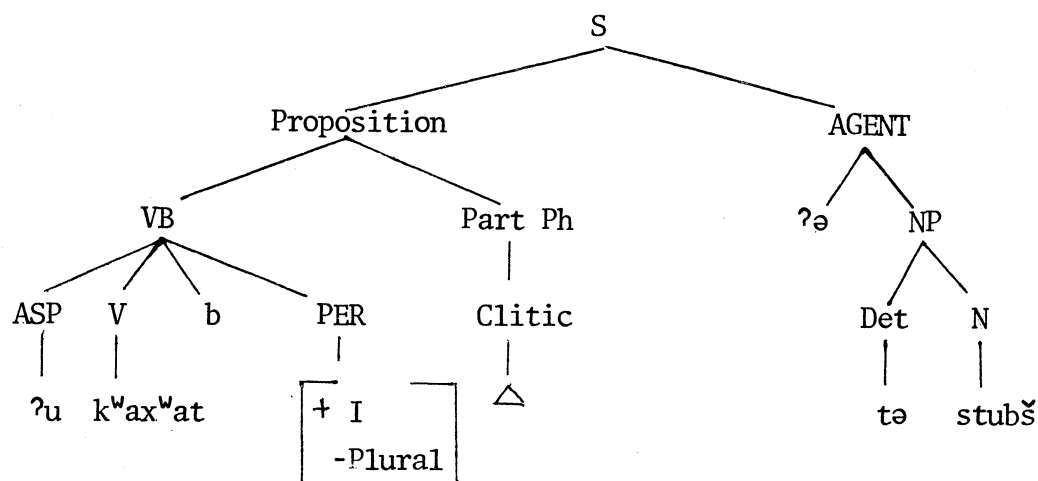   1   2   3 4   5 6   7   1   2   3   4   5   6   7

27.

S
├── Proposition
│   ├── VB
│   │   ├── ASP — ?u
│   │   ├── V — kʷaxʷat
│   │   ├── PER — $\begin{bmatrix} +\text{I} \\ -\text{Plur.} \end{bmatrix}$
│   │   └── PER — $\begin{bmatrix} -\text{I} \\ -\text{II} \end{bmatrix}$
│   └── Part Ph
│   └── Clitic — △
└── NP
    ├── Det — tə
    └── N — stubš

29.

S
├── Proposition
│   ├── VB
│   │   ├── ASP — ?u
│   │   ├── V — kʷaxʷat
│   │   ├── PER — $\begin{bmatrix} +\text{I} \\ -\text{Plur.} \end{bmatrix}$
│   │   └── PER — $\begin{bmatrix} -\text{I} \\ -\text{II} \end{bmatrix}$
│   └── Part Ph
│   └── Clitic — △
└── AGENT
    ├── ?ə
    └── NP
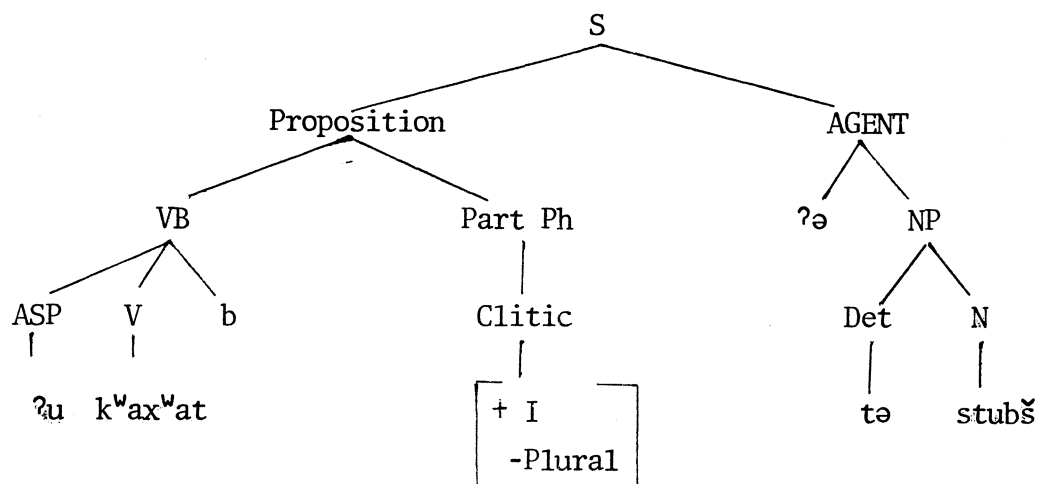   ├── Det — tə
        └── N — stubš

Tree (27) will undergo <u>Clitic Filling</u> with subsequent deletion of the third person clitic. Tree (29) obligatorily undergoes <u>Passive</u> due to the presence of the agent phrase.

```
                              S
                  _____/ _____
          Proposition                     AGENT
         ___/      \___                    /\
       VB          Part Ph              ʔə    NP
    ___/\___          |                      / \
  ASP  V   b  PER    Clitic              Det    N
   |    |    |  |       |                 |      |
   ʔu  kʷaxʷat [+ I]    △                 tə   stubš
              [-Plural]
```

Clitic Filling:

```
                              S
                  _____/ _____
          Proposition                     AGENT
         ___/      \___                    / \
       VB          Part Ph              ʔə    NP
    ___/\___          |                      / \
  ASP  V   b         Clitic              Det    N
   |    |              |                  |      |
   ʔu  kʷaxʷat      [+ I]                 tə   stubš
                    [-Plural]
```

Note that deep structure propositions of (27) and (29) are identical. The sole reason for the application of <u>Passive</u> in (29) is the agent phrase.

A question arises as to the status of passive sentences with no overt agent phrase, since such sentences occur.

30. ʔukʷaxʷatəb čəd.   I was helped.

     ʔu-kʷaxʷat-b čəd   completive-help-passive I
      1   2   3 4   1   2   3   4

31. ʔukʷaxʷatəb tə stubš.   The man was helped.
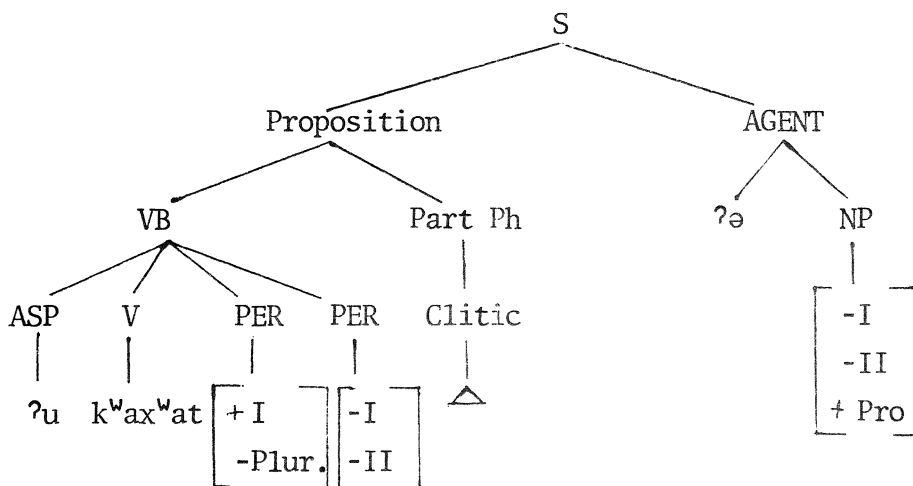
    ʔu-kʷaxʷat-b tə stubš   completive-help-passive the man
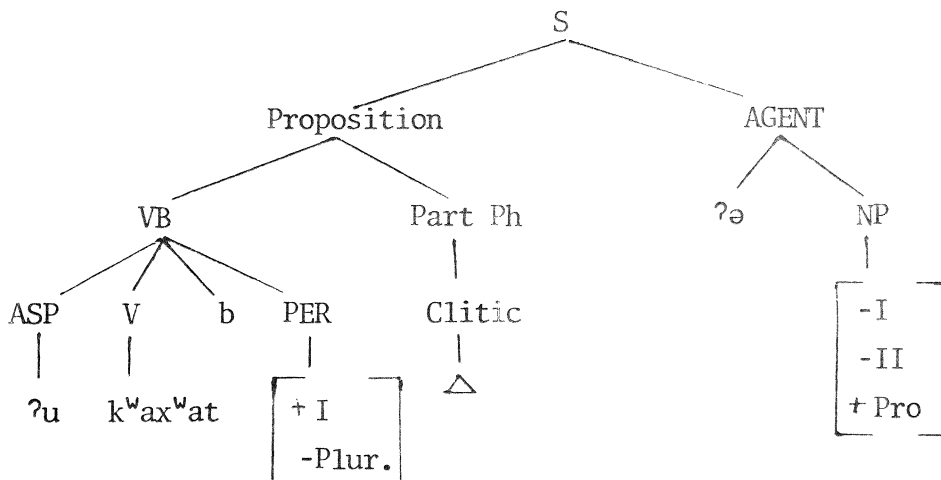   1   2   3 4   5   1   2   3   4   5

The agentless passive could be explained by allowing the node AGENT

to be unfilled (i.e., to contain the dummy symbol). Alternatively, and

preferably, as we will see in section 3, the NP of the agent phrase may

simply contain a pronominal feature matrix which is not realized lexically

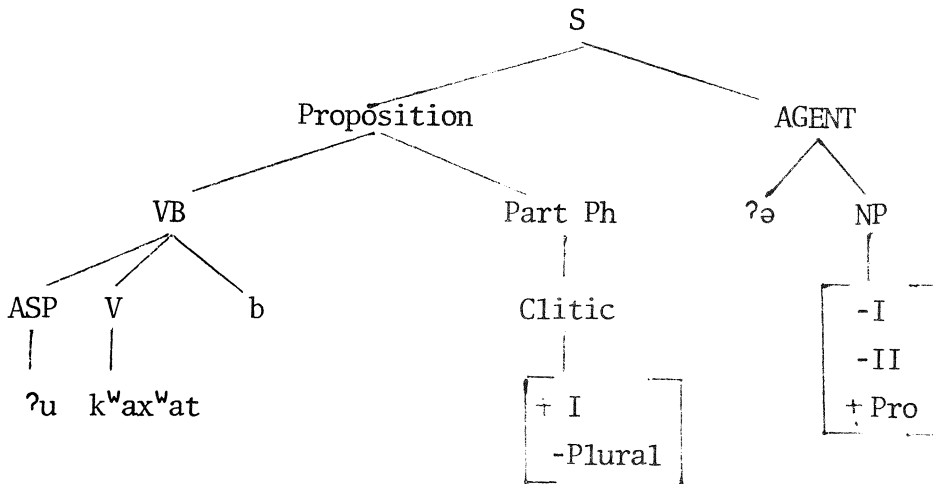and which triggers the deletion of the agent phrase after Passive applies.
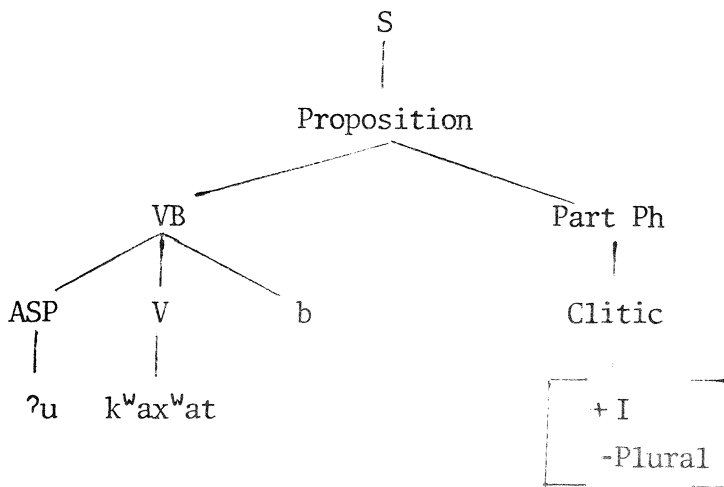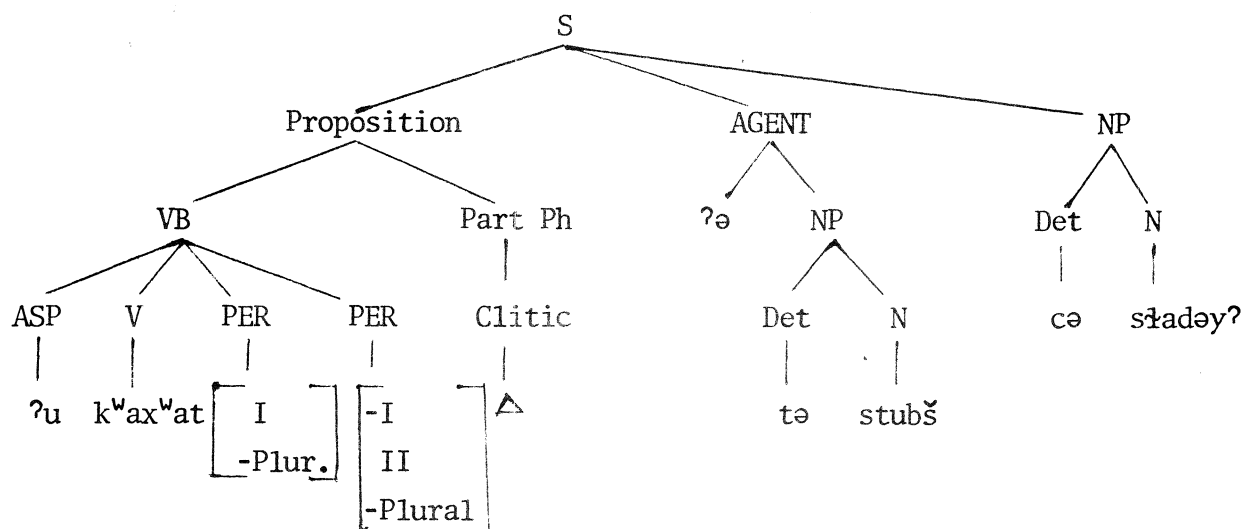
Deep Structure:

Passive:

Clitic Filling:

```
                              S
                   _____/   _____
              Proposition              AGENT
            ____/     \____           /     \
          VB          Part Ph       ?ə      NP
        /  |  \          |                   |
     ASP  V    b       Clitic            ┌────────┐
      |   |               |              │  -I    │
      |   |            ┌──────┐          │  -II   │
     ?u  kʷaxʷat       │ + I  │          │ + Pro  │
                       │      │          └────────┘
                       │-Plural│
                       └──────┘
```

Agent Deletion:

```
                       S
                       |
                  Proposition
              ____/       \____
            VB               Part Ph
          /  |  \               |
       ASP   V    b           Clitic
        |    |                   |
        |    |               ┌──────┐
       ?u  kʷaxʷat           │ + I  │
                             │      │
                             │-Plural│
                             └──────┘
```

3. Deep Structure Constraints

As a consequence of freely generating person markers in the propo-
sition, independently of complements, the grammar requires deep structure
well-formedness constraints on coreferentiality between person markers and

and complements. The following phrase marker, for example, cannot underlie a surface structure and hence is not a deep structure.

```
                              S
          _____/___|_____
      Proposition                 AGENT              NP
     ____|_____               __/\__            __/\__
    VB        Part Ph        ʔə     NP         Det     N
 ___|____        |                 /\           |      |
ASP  V  PER  PER  Clitic         Det   N        cə   sɬadəy?
 |   |   |    |     |             |    |
ʔu kʷaxʷat ⌈ I ⌉ ⌈-I   ⌉  △      tə  stubš
           ⌊-Plur.⌋ │ II  │
                    ⌊-Plural⌋
```

The person markers are filled by first and second person features and hence the subject and object roles are filled, making it impossible to accomodate an agent phrase or a direct complement. Since this phrase marker can be generated by the formation rules, constraints must be imposed at the level of deep structure which filter out such ill-formed structures.

Direct Complement Constraint: the NP of the sentence (the direct complement) must be coreferential with

    a) the innermost person marker, if this is [-I] and [-II]

    b) otherwise, it must be coreferential with the outermost person marker, which must be [-I] and [-II].

AGENT Phrase Constraint: the NP of an agent phrase must be coreferential with the outermost person marker of two person markers, which must be [-I] and [-II].

A formal statement of these constraints will guarantee that subject
and object roles are not doubly filled by complements and first or second
person markers. We will not offer formalizations of these constraints here,
though this can be done by various means. If, for example, all noun phrases
and person markers contain a referential index in deep structure, it is simp-
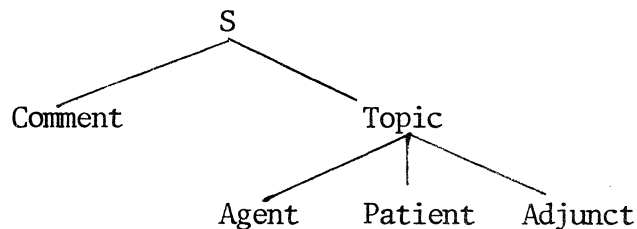ly a matter of checking for identity.

4. Conclusions

The syntactic sketch of Puget Salish presented above gives a rather
"superficial" (close-to-surface) level of deep structure. We have opted for
a language-specific approach in the following areas:

1. the dichotomy between propositions and complements,

2. deep structure person markers,

3. the existence of only one direct complement in deep structure.

The analysis is not unique however, and perhaps it is not as language-spe-
cific as it may at first appear, though it is motivated on language-specific
grounds. McCawley (1971) suggests a dichotomy between propositions and noun
phrases in universal grammar, arguing from a semantic point of view. Keenan
(1972) also proposes that noun phrases are, in universal grammar, outside
the basic sentence, although his underlying (semantic) structures introduce
them through multiple sentential embeddings. Further, he proposes that pro-
nominal elements are in the basic sentence (as in our proposition), bound
referentially to the external noun phrases. Again, the analysis is primarily
semantically motivated, although he cites various languages which make use
of both person markers and noun phrases, doubly marking terms in some cases.

It would be interesting to see how the base given here compares
to that of other Salishan languages. Unfortunately, the productivity
and originality within the school of transformational grammar has yielded
so many possible approaches that analyses are often incomparible. To cite
a case in point, the radical differences between our Puget deep structures
and those proposed for Bella Coola by Davis and Saunders (1973) can largely
be attributed to different theoretical approaches. Davis and Saunders pro-
pose the following as the basic elements of a deep structure sentence.

```
                    S
            _____/_____
       ____/                  \
   Comment                     Topic
                          _____/_____
                         /       |       \
                     Agent    Patient   Adjunct
```

The elements of the topic are full noun phrases or person markers. Infor-
mation is copied transformationally from the topic elements onto the predi-
cate in the comment. In our analysis, such information (i.e., person) is
generated within the proposition (roughly corresponding to their Comment)
in deep structure. Further, we have no motivation for treating complements
as one constituent in Puget (i.e., Topic), though such an analysis is pro-
bably compatible with the data.

Our differing approaches may reflect in part differences between the
languages. As Davis and Saunders state, "Bella Coola is a VSO language."[1]
Superficially at least, Puget is not, since the situation never arises where
the subject and object roles are both expressed by nonoblique complements.

---

[1] Phillip W. Davis and Ross Saunders, "Bella Coola Syntax", presented to the
Eighth International Salish Conference, Eugene, Oregon, August 1973.

This has had a profound influence on our analysis, causing us to handle person markers and complements in very distinct ways.[1] It is formally possible to treat Puget as a VSO language, deriving all person markers transformationally from complements, though such an analysis would be much farther removed from the surface facts.

---

[1] I am indebted to Thomas Hess and our informal discussions of Puget syntax, as well as Hess (1973).

Appendix A: Tentative Base Rules

The following context free phrase structure rules (1-7) generate
the categorial symbols of deep structure phrase markers. In addition, we
have included rules (8-11) specifying person features for person markers.
Possibly other categories, such as the determiner and noun phrases will
be expanded by feature specifications. Lexical insertion will be done by
local transformations, using lexical subcategorization features as structu-
ral descriptions (as suggested at one point in Chomsky (1964)).

1. S → Proposition + (AGENT) + (NP)

2. Proposition → (AUX) + VB + Part Ph

3. NP → Det + N

4. Part Ph → Clitic + (M) + (Q)

5. VB → ASP + V + PER + (PER)

6. AGENT → ʔə + NP

7. NP → Det + N

8. PER → [±I]

9. [-I] → [±II]

10. [+I] → [±Plural]

11. [+II] → [±Plural]

Appendix B: Tentative Transformations

The following is a partial list of the rules described above, deriving surface structures from deep structures.

Passive

X - V - PER - PER - Part Ph - AGENT - Y

SD: 1	2	3	4	5	6	7 $\Rightarrow$
SC: 1	2+b	3	$\emptyset$	5	6	7

Clitic Filling

$$X - V - Y - [\alpha F] - [\wedge] - Z$$
$$\qquad\qquad\quad PER \quad Clitic$$

SD: 1	2	3	4	5	6 $\Rightarrow$
SC: 1	2	3	$\emptyset$	$\begin{bmatrix} 5 \\ \alpha F \end{bmatrix}$	6

>   That is, all feature specifications of the outermost
>   person marker are assigned to the dummy clitic.

Particle Attraction

$\#\# [+AUX]$ - X - Part Ph -Y

SD: 1	2	3	4 $\Rightarrow$
SC: 1+3	2	$\emptyset$	4

>   That is, the particle phrase becomes a sister to the
>   first lexical item marked [AUX]. We assume that lexi-
>   cal items are specified with features for lexical categories.

Agent Deletion

$$X - [_{AGENT}\ ?_{\ni}\ [_{NP}\ [\ Pro]\ ]_{NP}\ ]_{AGENT} - Y$$

SD: 1   2   3 ⇒

SC: 1   ∅   3

That is, if an agent phrase contains a noun phrase marked
[Pro] it is deleted.

References

Chomsky, Noam (1964), *Aspects of the Theory of Syntax*, The M.I.T. Press.

_____ (1971), *Deep Structure, Surface Structure, and Semantic Interpretation*, in D.D. Steinberg and L.A. Jakobovits (1971).

Davis, Philip W. and Ross Saunders (1973), *Bella Coola Syntax*, presented at the Eighth International Salish Conference, Eugene, Oregon.

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McCawley, James D. (1971), *Where Do Noun Phrases Come From*, in D.D. Steinberg and L.A. Jakobovits (1971).

Steinberg, Danny D. and Leon A. Jakobovits (1971), *Semantics: An Interdisciplinary Reader in Philosophy, Linguistics and Psychology*, Cambridge University Press.