Thematic Relations in Halkomelem Salish

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0. Introduction

In this paper, I will show how a theory making use of theta-grids and the discharge of theta-roles can be used to account for some of the argument-taking properties of verbs in Halkomelem Salish. Firstly, I will show that the placement of agents and themes in Halkomelem can be accounted for by a parameterized directional linking of theta-grids and case grids. Secondly, I will show how other facts follow, once we have adopted this approach to discharge: the placement of benefactives, recipients, and themes in applied-morphology constructions, as well as the demotion of themes in antipassives, all proves to be predicted by the general principles of the theory.

1. Theory of Theta-Role Assignment

A theta-grid is basically a list of thematic roles representing the arguments which a verb can take, and the notion of a theta-grid has been used in a number of approaches to argument structure, including Williams (1981), Levin and Rappaport (1986), and others. The particular grid-theory I use in this paper, and one which I think proves particularly useful in accounting for Halkomelem, is that proposed for an analysis of datives in English and Dutch given in Cowper (1987).

In the framework argued for in Cowper (1987), the roles listed in the theta-grid are ordered according to the thematic hierarchy, so that the first role in the grid is the highest in the hierarchy, and the last role in the grid is the lowest. The discharge of the positions in the grid follows in part from association to case: each -N element which assigns case is assumed to have a case grid associated with it, where each position in the case grid represents a case assigned by the -N element. The elements of these case grids are analyzed as linking, in the syntax, to the elements of theta-grids, in a one-to-one directionized mapping. Cases and their associated theta-roles are then discharged together, by indexing to an argument in the syntax. Undischarged roles and case positions percolate in the syntax to a level at which they can be discharged to an argument. Roles in a verb’s theta-grid can also be discharged indirectly, through a prepositional phrase. In Cowper’s (1987) framework, this is handled by theta-identification, following proposals in Higginbotham’s (1985) analysis of modification. In Cowper’s formulation, an indexed role in a theta-grid can assign its index to an equivalent role in the grid of a sister node, provided that the role being indexed has not already been assigned.

The mechanics of this theory are probably easier to follow with an example, so let’s look at how theta-role assignment would be analyzed in a simple English transitive sentence like “Bob hit George”, diagrammed in (1), below. In English, theta-roles link to case-positions in a R-L direction, so that in (1) the accusative case and the theme are discharged together by linking to “George.” The agent role, being undischarged, will percolate up to VP, and then to I; at I, the agent role can associate to the nominative case position in INFL, which is assumed to also percolate to I. Then, the agent role and nominative case are assigned to “Bob” in subject position.
2. Theta-Rule Assignment in Simple Transitives and Intransitives

Now let's consider how we could apply this theory to argument structure in Halkomelem. The sentences in (2) and (3), below, illustrate some of the basic elements of the language's syntax.

(2) (a) \( ni \ q^w\text{at-s} [\Theta \text{stem}] [t^\Theta \text{sce} \text{t\text{en}}] \)
    aux bake-tr-3erg-agr. det. woman det. salmon
    'The woman baked the salmon.'

(b) \( ni \ \text{l\text{am-s}t-s} [\text{pro}] [\Theta \text{stem}] \)
    aux see-tr-3erg-agr. det. woman
    'He/she/it looked at the woman.'

(c) \( ni \ \text{c}^\text{en-q^w\text{at-s}} [\text{pro}] [t^\Theta \text{sce} \text{t\text{en}}] \)
    aux 1-subj-bake-tr det. salmon
    'I baked the salmon.'

(3) (a) \( ni \ \text{?im\text{e}} [\Theta \text{stem}] \)
    aux walk det. woman
    'The woman walked.'

(b) \( ni \ \text{?im\text{e}} [\text{pro}] \)
    aux walk
    'he/she/it walked.'

In all of the sentences in our data here, a verbal auxiliary begins the sentence; this auxiliary, /ni/, indicates non-proximity. After the verbal auxiliary, the verb is normally the first element of the sentence. If a sentence is transitive, as in (2) (a), (b), and (c), then the first argument following the verb is in ergative case, as indicated by the agreement markers on the verb. The second argument of a transitive verb is in the absolutive case, which in these cases is unmarked. The sole argument of an intransitive verb, as in the data in (3), is also absolutive.
Davison (1987) argues at length that NP's bearing ergative case are VP-internal in Halkomelem, and that arguments in absolutive case are VP-external. This will entail, for example, that sentences like those in (2) and (3) should have the structures shown in (4) and (5), respectively:

(4)

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(4)
   IP
   |    NP
   |     [θə sce.ən] 'the salmon' (theme)
   |    I
   |     ni 'auxiliary'
   |    VP
   |     qʷəl-ət-as [θə səni?] 'bake-tr-3erg' 'the woman' (agent)
   V NP
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"The woman baked the salmon."

(5)

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(5)
   IP
   |    NP
   |     [θə səni?] 'the woman' (agent)
   |    I
   |     ni 'auxiliary'
   |    VP
   |     ?iəf 'walk'
   V
```

"The woman walked."

Davison's arguments for this configuration are based on extractability facts: in a variety of constructions in Halkomelem, including relative clauses, wh-questions, and cleft and pseudo-cleft constructions, it is always possible to extract an absolutive—regardless of the theta-role it bears—but it is not possible to extract an ergative. Similarly, in an analysis of quantifier extraction, Davison finds that it is possible to extract a quantifier from an absolutive quantifier phrase, but never from an ergative quantifier phrase.

If NP's bearing ergative case are always VP internal, then Davison's analysis allows us to account for these extraction facts using the theory of barriers, if we assume that Halkomelem does not allow adjunction in the syntax. Under a non-configurational
analysis, or under one in which absolute case were assigned internally, followed by verb fronting, it is not clear how we could capture these extraction facts in a principled fashion.

Since, as we can see in the analysis of (4), the agent argument can be assigned VP-internally, Davison's analysis is in accord with Marantz (1984), who argues that in syntactically ergative languages the agent NP can be assigned in this way.

Davison also draws the generalization that a transitive verb assigns ergative case, and INFL assigns absolute case. In an intransitive sentence, such as that given in (5), the V will assign no case, and so the agent NP has to surface in absolute position in order to get case from INFL.

Now, the problem for a theory of thematic-role assignment here is to motivate VP-internal assignment of agents in transitive sentences, but VP-external assignment in intransitives. So far we seem to be predicting just the opposite, since, as in the example we looked at in (1), we have a so far assumed R-L linking; this entails that the theme links to the first case position, which causes it to be assigned VP-internally. However, as in the analysis of metrics in some phonological theories, it should be possible to parameterize a linking convention such as the one linking theta-grids to case positions. Following a suggestion in Cowper (1987), we can analyze syntactically ergative languages as setting the parameter for linking in the opposite direction from that in nominative-accusative languages; that is, we can assume that Halkomelem links theta-roles to case grids in a L-R direction. If we assume that such parameterization is possible, then we can derive the difference between argument assignment in a syntactically ergative language and a nominative-accusative language simply by reversing that parameter. Then, in a transitive sentence like (4), theta-role assignment will operate as shown in (6), below:

(6)

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(6)
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In (6), the theta grid contains an agent and a theme; since we have L-R linking, the agent links to the ergative case position, and agent and ergative case are discharged by linking to the internal NP, "the woman".
The theme is then undischarged, and percolates to I; at I, the theme role links to the absolutive case position in INFL, and absolutive case and the theme role are discharged by indexing to the external NP, "the salmon."

An intransitive sentence like (3a) will involve theta-role assignment as diagrammed in (7); here, the theta-grid contains only an agent role, and the verb does not assign-case. So, the agent role percolates to I, and links to the absolutive case position in the case grid; then the agent and the associated absolutive case are discharged through indexing to the external argument, "the woman".

(7)

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IP
    /\               /
   /  \             /  \\
 I <agent>   NP    [to s*eni?]i
    /    \          |
   /     \        |
  I     VP <agent>
    /     |
   /     |
  'auxiliary' V
    /     |
   /     |
 ( abs) ?imofs
    |
   'walk'
    |
<agent>
```

"The woman walked."

In the examples we have examined thus far, the agent is the highest element of the thematic hierarchy. For sentences with an experiencer as the highest element of the hierarchy, the linking conventions will again ensure that the highest element in the hierarchy is linked to the first available case position, and discharged in the syntax accordingly.

3. Theta-Role Assignment in Forms with Applied Suffixes

This same approach to theta-role assignment will also allow us to treat two sorts of constructions in Halkomelem involving applied morphemes. In these constructions, a suffix is attached to the verb which not only increases the number of arguments taken by the verb, but also seems to re-arrange them.

For example, compare the sentences in (8) (a) and (b), below, where both forms show a benefactive applied morpheme on the verb.
(8) (a) ni con-q'wal-o-t [pro] [tə steniʔ] [ʔə kʷθə səpʔiʔ]
    aux 1-subj-bake-BEN-tr det woman P det bread
    "I baked the bread for the woman."

(b) ni q'wal-o-t-əs [pro] [tə steniʔ] [ʔə kʷθə səpʔiʔ]
    aux bake-BEN-tr-3erg det woman P det bread
    "He/she/it baked the bread for the woman."

As (8) (a) and (b) show, where the benefactive suffix is added on, the external absolutive position contains an additional NP-argument, indicating the benefactive; and the theme NP, which is normally an absolutive, surfaces as the complement of a following prepositional phrase.

This same "demotion" of the theme is also found with another suffix, /-əs/, which marks recipient constructions. Examples are shown in (9) (a) and (b), where in both cases the verb bears the recipient suffix, so that a recipient NP surfaces in absolutive position, with the theme role surfacing in a prepositional phrase:

(9) (a) ni ?am-əs-t-əs [pro] [kʷθə sqʷəmeʔ] [ʔə kʷθə sʔəmʔ]
    aux give-REC-tr-3erg det dog P det bone
    "She/he/it gave the dog the bone."

(b) ni ?am-əs-t-əs [pro] [kʷθə swiʔlaʔiʔ] [ʔə kʷθə pukʷ]
    aux give-REC-tr-3erg det man P det book
    "He/she/it gave the man the book."

Since verbs with the benefactive and the recipient suffixes assign one more thematic role than the simple transitive verbs, I assume that each form of suffixation must augment the verb's theta-grid by adding a theta-role. Now, recall that in the theory we're using here, the thematic roles are ordered according to the thematic hierarchy. Both benefactives and goals are higher than themes; so, it follows that in adding their respective theta-roles, the benefactive and recipient suffixes will alter the theta-grids of the verbs as shown in (10) (a) and (b), respectively.

(10) (a) benefactive suffix "-əs"
    <agent, theme> --> <agent, benefactive, theme>

(b) recipient suffix "-əs"
    <agent, theme> --> <agent, goal, theme>

With the thematic grids altered in this way, a verb bearing the benefactive suffix must discharge its roles as shown in the diagram in (11), which corresponds to the sentence in (8b):
"I (=agent) baked the bread (=theme) for the woman (=benefactive)."

In (11), the agent role, being highest in the hierarchy, will link to the ergative case position, and be discharged by co-indexing with the internal argument; the benefactive and theme roles, which remain undischarged, will then percolate to \( \Gamma \). But at \( \Gamma \), since linking is from L-R, the benefactive role must link to the absolutive case position in INFL; with the benefactive linked to the absolutive case position, the benefactive role will be discharged to the external argument by indexing. The theme role, then, is left hanging over, and so the theme has to be discharged by theta-identification with a following prepositional phrase.

Theta-role discharge in the recipient construction works in just the same way. (12), below, shows the assignment of roles in the sentence given in (9a), above.
(12) ![Diagram of a sentence structure]

"She/he/it (=agent) gave the bone (=theme) to the dog (=goal.)."

Here, again, the agent links to the ergative case position, and is discharged by indexing with the internal argument. The goal and theme roles then percolate up to \( \Gamma \), and the goal role must link to the absolutive case position in INFL, and the goal is discharged by linking to the external NP.

The theme is again left over, and again it is discharged by theta-identification with a PP.

4. Antipassives

Another construction handled by this approach to theta-role discharge is the Halkomelem antipassive construction. (13) (a) and (b), below, illustrate the transitive/antipassive alternation:

(13) (a) ni pen-\( \text{\`e} \) [kw\( \Theta \)e sw\( \text{\`e} \)qey\( \text{\`e} \)] [kw\( \Theta \)e sqew\( \Theta \)]
    aux plant-\( \text{\`e} \) det man det potato
    "The man planted the potatoes."

(b) ni pen-\( \text{\`e} \)m [kw\( \Theta \)e sw\( \text{\`e} \)qey\( \text{\`e} \)] [\( \text{\`e} \) kw\( \Theta \)e sqew\( \Theta \)]
    aux plant-\( \text{\`e} \)m det man P det potato
    "The man planted the potatoes."

In (13a), the transitive construction, the agent is in the internal ergative position, and the theme is in the external absolutive position. But in (13b), the antipassive construction, it is the agent which surfaces in the external absolutive position, and the theme NP surfaces inside of a following prepositional phrase.

Since the antipassive forms are intransitive, it is necessary to assume that the antipassive suffix discharges the case position of the verb. Having made this assumption, however, the demotion of the theme, and the fact that it is the theme and not the agent which is
denoted, follow. Without ergative case, there is no case position for either agent or theme to link to inside the VP, and so discharge will take place as in (14), below:

(14)

```
  IP
   / \
  I <agent<theme> NP PP
   / \       / \
  j [kwθo sweyqê] P NP
   / \       / \
  I <theme> P
   / \       / \
  ni 'auxiliary' [kwθo sqweθ]_prep_ 'the potato'
   / \       / \
  I V
   / \       / \
  pæn-em 'plant-tr'

"The man planted the potatoes."
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Since neither agent nor theme can be assigned within VP, both roles percolate to the VP, and then the I' levels. At I', since association is from R-L, the agent role will link to the absolutive case-grid from INFL; at that point, as in the benefactive and the recipient constructions, the theme role will be left over, and can only be discharged through theta-identification with a theme embedded inside of a following prepositional phrase.

5. Conclusion

The main advantage to taking this approach to theta-role assignment is that it reduces the number of stipulations we need to make in our grammar. We do not need to stipulate separately that, in a syntactically ergative language like Halkomelem, agents and experiencers are assigned internally, and themes are assigned externally. Further, we do not need to stipulate that, if a verb takes both a benefactive and a recipient argument, the benefactive or recipient will be the direct argument and the theme will become an indirect argument. And finally, we do not need to stipulate that, if a single direct argument position is available, it is the agent that will be assigned to it. Our analysis allows us to reduce all of these phenomena to two things: (i) the setting of the directionality of the linking parameter, and (ii) the ordering of roles in the theta-grid according to the thematic hierarchy. Since (ii) follows from general principles, we derive all of the argument-ordering facts from a single stipulation, the setting of one parameter.
NOTES

1. This is a slightly revised version of a paper presented at the annual meeting of the Canadian Linguistic Association, Windsor, Ontario, May 1988.

2. Halkomelem also contains a form of the passive in which, as in English, the agent role is demoted to an indirect argument. See Burton (forthcoming) for an analysis within this framework.

References


