## Person Markers and Patterns of Case Assignment in Nisgha<sup>1</sup> \*\* Robert S. Belvin University of Southern California

## 0. Introduction

In Government and Binding theory, the concept of Case stands conspicuously as one of the most important notions in explaining many types of cross-linguistic variation. Case (with a capital 'C') is meant to indicate an abstract analogue of morphological case, which is believed to be present on most noun phrases, even if it is not morphologically realized. The driving principle behind the theory of Case is the 'Case Filter' of Chomsky 1981, which states that an overt NP must be Casemarked in order for the sentence it appears in to be grammatical. His formulation of the Case Filter is shown below:

# NP if NP has phonetic content and has no Case (1981:49)

The most obvious way that NP's get Case is via direct Case-assignment from the verb (this is how Direct Objects are assigned Case). Direct Case assignment takes place only if the Case-assigner governs the NP being Case-marked. This process is distinguished from the way that Subjects receive Case.

In most current conceptions of Government and Binding theory, some notion of specifier-head agreement is believed to figure in the way that Subjects are assigned Case. The concept of specifier-head agreement is that a lexical or functional head will agree with its specifier (in the sense of X-bar syntax). It is hypothesized that there are certain functional heads which are capable of assigning their specifier a Case feature by virtue of this agreement. Since it is argued in GB that the Subject of a sentence is in the specifier position of the functional head Tense, we can say that Subjects get their Case via spec-head agreement with Tense.

In this paper I argue that the Tsimshian languages of Northwestern British Columbia display an interesting alternative to the problem of how to ensure that all the arguments of a sentence are assigned Case. Spec-head agreement does not appear to play a significant role in the language regarding this problem, and so the language finds other ways to assign Case to external argument positions, and in some cases internal arguments. Quite interestingly, however, I think it can be shown that although the language does not employ spec-head agreement to accomplish this task, it nonetheless employs agreement morphology of a different type to accomplish it. This result leads to the somewhat unexpected conclusion that there may be a strong conceptual unity between different types of agreement which do not otherwise appear to have that much in common. That is, both spechead agreement, and the agreement morphology I will present in this paper, appear to have as one of their primary functions the transmission of Case from inflectional or verbal elements to arguments.

The core of the problem can be stated in very simple terms. A typical sentence with a transitive verb has one verb and two arguments. The verb directly Case-marks the internal argument. The external argument in many languages is marked via spec-head agreement, presumably with Tense being the head. But now imagine a language which does not employ spec-head agreement to assign Case to the external argument. How will this argument be assigned Case? In this kind of language, there must be another means of solving this problem.

\*\*A slightly revised version of this paper appears under the same title in MIT Working Papers in Linguistics: Second Annual Student Conference in Linguistics. The solution that the language employs to solve this problem, I will argue, is roughly as follows: the verb directly Case-marks the internal argument. If there is no auxiliary verb, the language will generate a dummy Case-bearing element, which will be suffixed to the verb. The verb will then be able to assign the Case feature of this element to the external argument. If there is an auxiliary verb, the main verb will raise up to a position such that it is close to the auxiliary. Once it is close enough to the Aux, the Aux will transmit its Case to the verb, which will in turn assign this Case to the external argument via an agreement element. This process is what is depicted in (1) below:

Aux-Agri Verbk-Agri NPi [e]k NPj

1

 $({\sf NP}_i \text{ is the Agent and gets one type of case, } {\sf NP}_j \text{ is the Patient and gets a different type of case})$ 

In the sentence depicted by the schema, the verb has raised from its D-structure position between NP<sub>i</sub> and NP<sub>j</sub>, so that the main verb can get the Case feature of the Aux. Aux is generated in sentence-initial position. The verbal trace can be regarded as assigning the main verb's Case feature to NP<sub>j</sub>. Thus, we have two arguments, two Case features, and a way for each of the arguments to get each of the Case features.

Notice that there is something unusual about the process depicted in (1), however. An agreement element which is coindexed with one NP (Agrj) is participating in the assignment of Case to a different NP (NP<sub>1</sub>). Nevertheless, it can be shown that unless we allow something like the process in (1) in our analysis, we will fail to capture several important generalizations.

Before going on the reader should note that (i) in the assignment of Case to both the internal argument, and the external argument, it is structural Caseassignment rather than Case-assignment via spec-head agreement and (ii) that the process depicted nevertheless employs a type of agreement morphology to assign the external argument Case.

In the following section I present some very basic facts about Nisgha syntax, and in doing so I will present the reader with four puzzles. For every puzzle I will present what I believe to be its solution, and in this way I will develop the analysis in stages. The analysis I will propose borrows insights from several previous analyses of the language, and, although the analyses are from quite different perspectives, I attempt to combine them into a coherent system.

# 1. Four Puzzles from Nisgha Syntax

Please note that, although I present the following sketch of the syntax as the syntax of Nisgha, most of the features discussed are also found in the other Tsimshian languages. Within the Tsimshian family, Nisgha is claimed to be the most conservative of the languages, and is closely related to Gitksan. Coast Tsimshian and Southern Tsimshian are more distant relatives, and also more innovative. I have heard it estimated that there are somewhere between 800 and 1,000 living native speakers of Nisgha. 18

Word order in Tsimshian is essentially VSO. In INDEPENDENT-ORDER sentences (simple positive sentences having no auxiliary verb), the order is almost invariant, with one or two exceptions which are of no great consequence to the analysis I will develop. In so-called DEPENDENT-ORDER sentences, which include both true dependent sentences and also simple sentences containing an auxiliary or negative element, we typically find the order Aux-VSO, although if the Subject is pronominal we typically find the order Aux-VSO (as in (10) below), though the Subject in this case will be a pronominal clitic. I will henceforth just use the terms independent and dependent to indicate the above distinction.

The organization of Nisgha syntax is essentially ergative, so the labels Agent, Patient and Subject will be used in the sense familiar from studies in ergativity to uniquely identify arguments. Examples of these basic types are shown in (2-10). Note that t is never used in these examples to indicate trace. I will always use  $[e]_n$  for trace. The reason for this is that phonological /t/ has at least two functions in the language, and it will be crucial for the reader to remember the distinction in order to understand the analysis: one is (approximately) case, and the second is 3rd person marking (agreement (as in (4,6,9)) or possessive, as in (11)):<sup>2</sup>

## Intransitive

| In<br>2 | dependent<br>ta:ŵł-t Mary<br>leave-ACC Subject                                | 'Mary left.'      |
|---------|-------------------------------------------------------------------------------|-------------------|
| 3       | ta:ŵł ni-ỳ<br>leave pron-1s                                                   | 'I left'          |
| D<br>4  | ependent<br>yuk <sup>W</sup> -ł pax-(t)-s Mary<br>prog-NC run-3j-OBL Subjectj | 'Mary is running' |
| 5       | yuk <sup>w</sup> -i pax-ý<br>prog-NC run-1s                                   | 'I am running'    |

## Transitive

#### Independent

| 6 | 4@mo:m-@-(t)-s John-t Mary<br>help-TR-3 <sub>1</sub> -OBL Agent <sub>i</sub> -ACC Patient | 'John helped Mary.' |
|---|-------------------------------------------------------------------------------------------|---------------------|
| 7 | 4@mo:m-@-n ńi-ý<br>help-TR-2s pron-1s                                                     | 'You helped me'     |
| 0 | tamerm-a-n-t John                                                                         | You helped John!    |

8 tgmo:m-g-n-t John You helped Joh help-TR-2s-ACC Patient

## Dependent

- 9 yuk<sup>w</sup>-t<sup>4</sup>@mo:m-(t)-s John-t Mary 'John is helping Mary' prog-3; help-3;-OBL Agent;-ACC Patient;
- 10 yuk<sup>W</sup> m@-1@mo:m-y 'You are helping me' prog 2s-help-1s

# Possessive

11 nox-t mother-3

## 'Her/His/Its mother'

The morpheme-by-morpheme glosses mean the following: ACC = accusative case, OBL = oblique case, prog = progressive aspect (an auxiliary verb), TR = transitive, 3(x) = 3rd person marker, NC = non-determinate connective. The OBL and ACC morphemes are part of a class of morphemes which are traditionally called 'connectives'; the third member of this class is the non-determinate connective [4]. They are phonological suffixes, but are semantically and grammatically connected with the following word or phrase. So e.g. in (2), the /-t/, although suffixed to the verb, reflects the Case and 'determinacy' (languageparticularly defined) of the NP 'Mary'. This brings us to an important point which should be clarified early in the paper. In the above data, all of the instances of ACC are instances of what will be analyzed as marking Case which has come directly from the verb. All of the instances of OBL, on the other hand, will be analyzed as marking Case which has come through the intermediary of the agreement element (i.e. through the process in (1)). The rationale for using the terms accusative and oblique, then, is that one is assigned directly by the verb, while one is mediated Case-assignment.

An alternative to considering ACC /-t/ as case assigned directly by the verb is to regard /-t/ as 'default' case. Under this view a verb has both a Case feature, and a 'Case-assigning' feature (as in Levin & Massam 1985). In certain contexts a verb licenses Case (via its Case-assigning feature) to be assigned to a certain argument, but cannot actually assign a Case feature to that argument. Under these circumstances, the argument gets default Case. This view of Tsimshian Case assignment is carefully developed in Hunt (1987), and is completely compatible with the analysis proposed in this paper. However, I shall continue with the assumption that ACC case is the overt realization of Case-marking which has come directly from the verb. One unusual claim we are required to make if we adopt this perspective is that intransitive verbs are able to assign Case. Even under the default Case analysis, we are required to say that intransitives have a Case-assigning feature (though no Case feature proper). Some such claim will probably be required under any non-ergative analysis of the language (see (26) and the fourth puzzle below), a fact which may be interesting in and of itself.

Notice that, although I have called the order of elements in dependent sentences with full NP arguments <u>Aux-VSO</u>, there is a person-marking morpheme between the aspect marker and the verb in transitive sentences (the morpheme labelled  $3_i$  in (9)). The precise status of this element is not obvious. In this paper I propose that it is an agreement morpheme.

Notice that the agreement morpheme does not appear in the intransitive independent sentence. Where an agreement morpheme appears in parentheses, this indicates that it is phonetically null in speech, due to a deletion rule which is strictly phonologically conditioned. This important observation is due to Tarpent (1988) who interprets what I am calling agreement as the actual argument, analyzing the lexical NP's as adjuncts (basically following Jelinek's 1984 model for a W\* non-configurational language). Although I reject this interpretation, the importance of her actual observation should become apparent.

#### Agreement and Pronominal Clitics

Although, as I have just suggested, there is person agreement for third person arguments in Nisgha, there is no person agreement for first or second person arguments. Although there are pronominal clitics for first and second person arguments, whose distribution is similar to the true agreement morpheme, I claim that these are not agreement morphemes, but true pronouns.<sup>3</sup> I am thus distinguishing between two types of syntactic elements, one type which is generated in an argument position, and one type which is generated in a nonargument (agreement) position. The distinction between argument and nonargument positions has been central to GB theory since its inception. Generally speaking, lexical nominals are generated in argument positions, while functional elements, such as agreement morphemes, as well as, e.g. complementizers, are generated in non-argument positions. Thus, I am claiming that all of the instances of first or second person morphemes in the above sentences were generated in argument positions, but all of the instances of 3rd person morphemes were generated in non-argument agreement positions. So there is a morphological gap in the agreement paradigm for all of first and second person.<sup>4</sup>

One reason for making this distinction between the first and second person clitics on the one hand, and the third person clitic on the other is that, under no circumstances can there be both a 1st or 2nd person pronominal clitic on the verb and another coreferent pronominal element in the same governing category, unless a reflexive interpretation is intended. That is, the first and second person markers cannot 'agree' with any other element in the governing category, although third person can (third person can agree with independent pronouns as well as R-expressions). Although the pattern in question often is assumed to indicate forced pro-drop, I reject this anaysis for Nisgha, because it leads to loss of explanatory power. A second reason for making the distinction is that the agreement morpheme /-t/ (3;) transmits OBL Case, but the first and second person clitics do not.

Notice the shape of the person marker. It varies for first and second person depending on whether it comes before or after the verb, but it does not vary for third. The full paradigm is shown in Table I. The generalization which seems to describe the occurrence of these elements is the following: if the person marking features are in a preverbal position when lexical insertion takes place (presumably S-structure), then they will be proclitics, and must take the proclitic form (set 1), except for /-t/ (3;), which has no proclite form; if the person marking features are in a postverbal position when lexical insertion takes place, then they will be enclitics, and must take the proclitics, and must take the will be enclitics.

## Table I Person Markers of Nisgha

|   | Set 1 - Preverbal |        | Set 2 - Postverbal |       |
|---|-------------------|--------|--------------------|-------|
|   | Sing              | P1     | Sing               | Pl    |
| 1 | n@-               | d@p-   | -y                 | -m    |
| 2 | m@-               | m@s@m- | -n                 | -s@m  |
| 3 | -t                | -t     | -t                 | -di:t |
|   | l                 |        |                    | 1     |

These morphemes may be considered a morphologically uniform class in one respect, in that they will all be subject to a morphological condition to be presented shortly (what I will term the 'Case-saturation Condition'). However, they are syntactically not a uniform class, as I have just stated above (the 3rd person morpheme is usually generated in an agreement position, while the 1st and 2nd person morphemes are always and only generated in argument positions). Notice that the third person morpheme /-t/ is listed in both the 3rd singular and 3rd plural columns for the preverbal set. The reason for this is that the /-t/ is unspecified for number. The default value is singular, but it can also have a plural referent. Finally, the third person plural postverbal clitic is <u>not</u> like the /-t/ in being analyzed as agreement; /-di:t/ is a true pronoun, just like the 1st and 2nd person clitics.

There is also a series of independent pronouns composed of a pronominal base /hi-/ with the set 2 series suffixed to this base. Examples can be seen in (3,7) above. This fact will become important to the argumentation later in the analysis.

In addition to the 3rd person agreement morpheme, there is another type of agreement which holds between verbs and nominals. This agreement indicates only number, and obtains only between the verb and absolutive arguments. The morphology which indicates agreement is either reduplicative or suppletive, and for some words there is no difference in singular and plural forms. Examples follow:

## 12 <del>1</del>a:-k'atsk<sup>w</sup>-t po:t 'The boat has arrived' ASP-arrive-ND boat

## 13 <del>la</del>:-k'is-k'atsk<sup>W</sup>+p@-po:t 'The boats have arrived' ASP-RED-arrive-ND RED-boat

This phenomena can be straightforwardly accounted for in this framework, but is not central to the point of the paper, so I will not treat the matter carefully here. The basic generalization which seems to describe this number agreement pattern is as follows: the verb will agree in number with a (D-structure) governing person marker (see Walsh (1989) for an explanation within a similar framework).

## TR Suffix: The First Puzzle

This morpheme occurs in independent sentences suffixed to a transitive verb, and takes the shape /-@/. The basic pattern can be seen in (14):

14 V-Q-(agr<sub>A</sub>)-s NP<sub>A</sub>-t NP<sub>P</sub>

(intransitive: 14' V-t NP)

An example of this pattern can be seen in (6) above. The distribution of this morpheme is puzzling in that it never appears in dependent sentences. The morpheme's function is described in both Rigsby's and Tarpent's work as offseting the Agent in an independent sentence. Tarpent designates the morpheme ERG (Tarpent 1982), and CTL ('control'; 1987, 1988; the term 'control' here is meant to indicate approximately 'agentivity', rather than the generative sense of interpretation of PRO). Tarpent states that the term 'control' is 'still not fully satisfactory but seems suitably vague' (1988:140). Rigsby calls the morpheme TRN (transitivizer).

The problem with the functional 'offsetting the Agent' account is that it provides no substantial explanation for the fact that there is a dependency between the absence of subordinating elements (such as Aux or Neg) and the presence of /-@/. If the reason the /-@/ appears is to ensure that the argument following will be correctly identified as Agent, why is no such requirement placed on dependent sentences? One might argue that in dependent sentences there is no need of the /-@/ because the appearance of the preverbal person markers unequivocally identifies the Agent. But this answer simply begs the question, leading to a new problem: If it is the linear ordering of person-marking morphemes that identifies the Agent in dependent sentences, why isn't the linear ordering of person-marking morphemes enough to identify the Agent in independent sentences? That is, if it is the fact that there is one person marker before the verb and one after the verb which enables the hearer to identify the one before the verb as Agent and the one after the verb as Patient in a dependent sentence, then why can't the hearer rely on a similar strategy in independent sentences? Why is the TR /-@/ morpheme required in an independent sentence to identify the Agent argument, despite the fact that the first argument after the verb refers to the Agent, while the second argument refers to the Patient.

The reason this type of account runs into trouble, I believe, is that /-@/ has little or nothing to do with identification of a given argument's thematic role. Rather, notice this is exactly the situation I discussed in the beginning of the paper wherein we have a sentence with two arguments, but potentially only one Case-bearing word, namely the verb. Thus, we can analyze the /-@/ as a dummy morpheme bearing a Case feature, which is generated so that the external argument can get Case. This is roughly how I believe the first puzzlé should be solved.

## Patterns of Case Marking: The Second Puzzle

Case marking is reflected in the morphemes traditionally termed 'connectives', as mentioned. They appear to carry two types of information: Case and 'determinacy'.<sup>6</sup> The distribution of the two types of morphological case (ACC vs OBL) is puzzling in that it doesn't appear at first glance to correlate with anything in particular. What is completely clear is that it does not correlate with grammatical function or thematic role. Thus, if one considers the pattern in independent sentences with full NP arguments (e.g. (2,6)), an ergative/absolutive pattern is seen, schematized in (15,16) below. (Subscript S,A,P indicate Subject, Agent, Patient theta-role):

| 15 | V-t NP <sub>S</sub>                                           | (Intransitive Independent) |
|----|---------------------------------------------------------------|----------------------------|
| 16 | V-TR-(Agr <sub>A</sub> )-s NP <sub>A</sub> -t NP <sub>P</sub> | (Transitive Independent)   |

That is, the Subject of the intransitive sentence and the Patient of the transitive are both marked by the ACC case /-t/, while the Agent of the transitive is marked by the OBL case /-s/.

Compare this pattern with the distribution of the ACC and OBL case in sentences (4,9). These follow the pattern for dependent sentences, schmatized below:

| 17 | Aux-+ V-(Agr <sub>S</sub> )- s NP <sub>S</sub>                                   | (Intransitive Dependent) |
|----|----------------------------------------------------------------------------------|--------------------------|
| 18 | Aux-Agr <sub>A</sub> V-(Agr <sub>p</sub> )- s NP <sub>A</sub> -t NP <sub>P</sub> | (Transitive Dependent)   |

which is nominative/accusative. That is, the OBL case /-s/ marks the intransitive sentence's Subject, and the transitive sentence's Agent, while the ACC case /-t/ marks the transitive sentence's Patient.

Kathy Hunt (1987) was, as far as I know, the first to explicitly identify the distribution of case in Tsimshian as split-ergative, with the split between independent and dependent sentences.<sup>7</sup> This is a common enough pattern cross-linguistically, and one might be tempted to settle for this as an explanation of the distribution of case in Tsimshian. However (as observed in Hunt '87), even this characterization does not fit the facts perfectly, since when pronominal arguments and full NP's are mixed in a sentence, we get a further divergence from either of the above patterns, as follows:

19 Aux clitic<sub>A</sub>-V-(Agr<sub>p</sub>)- s NP<sub>p</sub>

# For example:

## 20 yuk<sup>w</sup> m@-1@mo:m-(t)-s Harry prog 2s-help-3;-DC Patient;

'You are helping Harry'

Thus, even though this is a dependent sentence, the Patient is marked with OBL case, which is like the pattern in the independent sentence. So even characterizing the distribution of these case markers as split-ergative does not capture the apparent complexity of the facts.

Before I present the solution to this second puzzle, I would like to present the third puzzle, which has to do with the distribution of independent versus clitic pronouns.

#### Independent and Clitic Pronous: The Third Puzzle

As mentioned, in addition to the <u>clitic</u> person markers shown in Table I above, there are independent pronouns, which are formed by suffixing the set 2 pronominal clitics onto the pronominal base /ni-/. If we look at the distribution of where we get the clitic versus the independent pronominal forms, we are struck by the fact that in most types of sentences the distribution is identical to that in which the OBL versus ACC case appears, respectively (Hunt also observes this for Gitksan 87:24). The pattern can be seen in examples (3,7) above. The pattern is schematized below, and should be compared with (15,16):

 21
 V ni-cl<sub>s</sub>
 (Intransitive Independent)

 22
 V-@-cl<sub>A</sub> ni-cl<sub>P</sub>
 (Transitive Independent)

Just as for the distribution of OBL versus ACC case, the above distribution of clitic versus independent pronouns shows an ergative/absolutive pattern.

For dependent sentences, the pattern is more complex because of the possibility of having the Agent argument expressed by the preverbal clitic forms (set 1). For intransitives, the generalization still holds that the occurrence of the OBL case is coincidental with the occurrence of the enclitic pronominal (compare 17 and 23). Moreover, if we compare (24) with the mixed argument sentence in (20), (which did not fit the split-ergative characterization of OBL case) we see that, again, we have OBL case in the same place we have an enclitic pronoun. The patterns are shown below (as seen in 5,10) above:

 23
 Aux-+
 V - clitics
 (Intransitive Dependent)

 24
 Aux clitic<sub>A</sub>-V - clitic<sub>P</sub>
 (Transitive Dependent)

Thus, although the patterns are not absolutely identical, the similarity in the distribution of OBL versus ACC case, and clitic versus independent pronouns, is unmistakable. This similarity is the third puzzle I will solve.

The way that I propose to solve both the second and the third puzzles is through what I will call the 'Case-saturation Condition', which is given below:

25 Case-saturation Condition

In order for the verb to host a person marker, it must be Case-saturated

There are two ways that a verb may become Case-saturated in Nisgha. One is by being close enough to an auxiliary verb for there to be Case transmission from the Aux to the main verb. The other is by having the TR /-@/ morpheme suffix to the

verb. When either happens, the verb will be an eligible host for person markers at S-structure. The term 'saturation' was chosen to differentiate this phenomenon from Case-marking of an NP, and to reflect a similarity to the semantic notion of saturation.

We can now say that we have the clitic pronoun forms whenever the verb is Case-saturated and adjacent to a person marker at the point in the derivation where cliticization takes place (presumably fairly late). We'll have the independent forms everywhere else.

There are two important points to be made in connection with this generalization. The first is that the verb must be Case-saturated in order to host any of the person marking morphemes, including what I am calling true pronominals (1st and 2nd person clitics) as well as what I am calling the agreement morpheme (3rd person /-t/). This suggests that we have a class of morphemes which are morphologically uniform in their behavior with respect to this condition (i.e. Case-saturation), but which are syntactically distinct (because some are generated in argument positions and some in non-argument (AGR) positions). The second point to be made is that the verb should not be considered Case-saturated by virtue of its own Case-assigning potential. This is evidenced by sentence (3), wherein we would expect the person marker to cliticize to the verb if the verb were Case-saturated.

We have now largely solved the third puzzle (i.e. the almost identical distribution of OBL/ACC case and clitic/independent pronouns). If  $/-t/(3_i)$  is a person marker, then it is able to cliticize to the verb only when the verb is Case-saturated. And if  $/-t/(3_i)$  is agreement, then, as suggested in the schema in (1), /-t/ participates in assignment of OBL case to a following NP. So if OBL is assigned only via an agreement morpheme, then OBL may be assigned only if the conditions are met for cliticization of a person marker to the verb. This is exactly the result we need to explain why there is such a close similarity between the distribution of clitic versus independent pronouns and the distribution of OBL versus ACC case. This does not mean, it should be noted, that all person-markers transmit Case. Only the third person agreement morpheme transmits Case. The other person-markers, being pronominal arguments, require the Case feature for themselves.

To see an example of how the Case-saturation Condition helps us to explain the third puzzle, consider the intransitive sentences (2) and (3). In (2) there is no Aux to Case-saturate the verb, so no person marker may cliticize to the verb, even though there is presumably an agreement morpheme present at D-structure. Since both Aux and AGR are required for the assignment of OBL case, no OBL case may be assigned. Thus ACC case is assigned directly by the verb to the following NP. (3) corresponds to (2) except it has a pronominal Subject instead of a lexical NP Subject. Since there is no Aux to Case-saturate the verb, the clitic pronoun  $-\dot{y}$  may not cliticize to the verb. Therefore, the  $/\dot{n}i$  base is generated to provide the clitic with a host. Compare the above pattern now with sentences (4,5), intransitives wherein we get OBL case and clitic pronouns. In both of these sentences the verb is Case-saturated by virtue of being adjacent to an Aux. Thus, in (4), the agreement element (being a person marker) may affix to the verb, and in turn transmit OBL case to 'Mary'. In (5), the pronominal element (also being a person marker) may likewise affix to the verb, resulting in the clitic form of the pronominal. Thus, the Case-saturation Condition enables us to explain the close distribution of OBL case/clitic pronouns versus ACC case/independent pronouns. Further illustrations of the system will be given shortly.

At this point I wish to bring to the reader's attention that in addition to providing the answer to the third puzzle, the Case-saturation Condition provides us with the means to solve the second puzzle as well, the puzzle of the seemingly erratic distribution of OBL versus ACC case. For notice that OBL case is usually assigned only when there is more than one argument requiring Case (sentence (4) is the only counter-example to this claim, and it is well within our means to show that it is not actually a counter-example; this will be taken up presently). In (2), then, the reason there is no OBL case assigned is that there is no Aux or TR morpheme to Case-saturate the verb; but this poses no problem for the language, because the verb itself can assign Case to the Subject (or at least license the assignment of default Case). In all of the other instances we see of OBL case (except (4)), there is a second argument in the sentence, so there must be some other element in the sentence besides the verb to provide a Case feature for that argument.

Thus, the answer to the second puzzle is essentially that OBL is assigned wherever there are more full NP arguments than Case features for a given verb. Which NP will be assigned OBL case is determined by which NP ends up adjacent to a Case-saturated verb.

In the exceptional example (4), we can explain the presence of OBL case on the intransitive verb's Subject as resulting from OBL case-assignment taking precedence over ACC case-assignment. In the understanding of ACC case as a type of default case (as discussed above), this makes perfect sense. When there is a Case feature as well as a Case-assigning feature present, it is natural to assume the grammar will prefer to assign the Case feature over resorting to the use of default Case. Thus, OBL appears in (4) not because it is the only way for the Subject to get Case, but because an OBL Case feature is available, and the language chooses to assign an OBL feature whenever it is available.

#### VSO from SVO Order - But Why? The Fourth Puzzle

As just indicated, the Tsimshian languages are basically VSO. In this respect the Tsimshian languages present the usual problem which other VSO languages present for GB theory. That is, the verb is separated from the Object by the Subject, and yet the verb needs to be a sister of the Object at D-structure in order to assign the Object the objective (Patient) theta-role, assuming there is a configurational D-structure.

The usual solution to this problem in the literature is verb-fronting. That is, VSO word order is derived from an underlying SVO or SOV order. The Tsimshian languages present an additional problem for standard theory though, in that they all display a variety of syntactic ergative phenomena.

The combination of VSO order and syntactic ergative patterns leads us to the question of whether we should represent Nisgha D-structure as in (26i), (ii), or (iii) (where (ii) would be Rigsby's (1975) or Marantz's (1984) analysis of a syntactically ergative language and (iii) would be a non-configurational analysis, as in Jelinek (1986) and Tarpent (1988, etc.)):



I will have to leave a treatment of these questions aside. The Accusative Dstructure in (i) is what I will assume. For arguments against (ii,iii) and in favor of (i) see Belvin (1990). Yet even if we assume (26i), we are left with the question of why the verb should raise in many cases. This is the fourth puzzle, and the question we turn to now. Kuroda (1985), Koopman and Sportiche (1988) and Sportiche (1988) propose that the underlying structure of sentences in configurational languages is not, as previously supposed, as in (27i), but rather is as in (ii) (order is variable):<sup>8</sup>



The NP marked NP\* is the so-called 'internal Subject' position, while that marked NP^ is the surface Subject position of the Subject in a language like English. Subjects are generated in NP\*, but in many languages raise from NP\* to NP^ because INFL, it is argued, is a raising category in these languages; so just as 'Mary' in the sentence 'Mary seems to be happy' is analyzed as the D-structure subject of the embedded infinitival clause (generated below 'seems'), a simple inflected sentence like 'Mary likes John' will have 'Mary' generated below the INFL element. Mary then raises into the SPEC of IP position, NP^. NP^, being in the SPEC of IP, agrees with Tense in INFL, and it is via this agreement that NP^ gets its Case. In some languages, however, NP\* does not usually raise to NP^. In these languages, if the verb raises to INFL, we get VSO surface order.

I will accept this proposal as essentially correct. Verb movement would then be depicted roughly as in (28i), resulting in structure (28ii):



There are essentially two types of explanations currently circulating for why verb raising should be forced to obtain in a given language. One type of explanation has to do with directionality parameters, while the second type of explanation concerns obligatory movement of verbal elements to positions containing functional inflectional categories (Koopman (1984), McCloskey and Hale (1984) and many others). When verb raising is due to the second factor, it is often assumed that the reason the verb raises is to support bound morphemes generated in these functional inflectional positions.

Although both of these factors (directionality and support of bound morphemes) may enter into the explanation of verb-raising in Nisgha, there is at least one other reason we have verb-raising, and this is so that the main verb can be close enough to an auxiliary verb for Case-saturation of the main verb (and subsequent Case assignment to the Agent NP) to take place. (This is, in fact, just a special case of the second type of explanation.) That is, the verb must be close enough to the auxiliary so that the process of OBL case assignment depicted in (1) can take place. When any NP is intervening between the main verb and the Aux (whether it is a clitic pronoun or an R-expression) I will assume that the auxiliary cannot Case-saturate the main verb, in which case there is no way for the external argument to get Case.

One might ask why the auxiliary itself cannot assign Case to an external argument, obviating the need for verb-raising. The answer to this question would appear to be that only lexical heads are capable of assigning Case in Nisgha, and that auxiliaries, being generated as functional categories, are therefore incapable of assigning Case, despite the fact that they are generated with a Case feature (this assumption closely resembles a claim in Hunt 1989, section 5). Thus, the answer to the fourth puzzle can be considered to be largely due to the need for the verb to be Case-saturated (so that the following argument may be assigned Case).<sup>9</sup>

One desirable result we have thus achieved is to provide an account of the four puzzles in a unified way, insofar as the solutions to all the puzzles rely to varying degrees on the same principle, that is, the Case-saturation Condition.

Before going much further with this discussion, it will be helpful to explicate what I will consider the basic underlying structure for sentences in Nisgha. I follow recent proposals by Pollock (1988), Chomsky (1988) and others in separating the elements of INFL into distinct functional categories, (most of) which head their own projection. The structure I would like to propose to account for the Nisgha facts is essentially a combination of these latter proposals with the Kuroda, Koopman, and Sportiche proposal. This hybrid structure would then be that shown in (29) below:

> TP // NP^ T' / \ Tense AsP / \ Aspect AgP / \ AgS VP / \ NP\* V' / \ AgO V' / \ V NP

29

One node which I have included in the above tree purely for the sake of uniformity with current models is Tense. It is unclear whether there is true tense morphology available in the language. Because of this I will henceforth omit tense from the tree. Note that I have included an Object agreement node (AgO) in the tree, which is in line with suggestions elsewhere in the literature (cf. Chomsky 1988). I have not, however, included it under its own projection. The reason for this is fairly obvious; to avoid saying that V is not the head of VP. There are various alternatives to the tree in (29), some of which may work better than the one I have offered. At this point, however, I will consider this issue a technicality (albeit important for the theory), since several alternatives will work with the larger analysis I am proposing.

## 2. Derivations

The rest of the paper will be devoted mostly to showing how several of the important sentence types in (2-10) will be derived. Before going on to show the derivations, two further stipulations will be required to explain the facts:

A) Only one person marking morpheme (either agreement or clitic pronominal) may be suffixed to the verb; this may be considered essentially a morphological property of the language - Tarpent has made similar though not identical claims (1982:66).

B)Only full NP arguments (i.e., no pronominals) may be marked with the overt OBL or ACC case markers /s/ and /t/.

Let us begin with sentence (9), a dependent transitive sentence with two lexical NP's as arguments. It will have the D-structure in (30i); the arrow shows the path the verb will take when raising.



In this sentence, the verb must first raise to the Object Agreement position because it is a bound morpheme, and because the agreement element will later serve to transmit Case to the Subject argument. The verb will then continue its movement up to a position above the internal Subject. The verb must raise above the internal Subject because NP, being a maximal projection, would presumably block the auxiliary element (yuk<sup>W</sup>) from licensing the verb to host a person marker (that is, it would block Case-saturation of the verb) - a condition I am assuming holds at S-structure. Once the verb has been licensed to host a person marker, the agreement marker  $/-t/(3_1)$  will affix to the verb, and the process of OBL case assignment (shown in (1)) can take place so that the external argument gets OBL case. The Object gets the verb's own Case feature by virtue of being governed and adjacent to the verbal trace. (Or, under the default Case analysis, the Object is Case-licensed by the verbal trace, and then receives default Case at S-structure.)

Three comments are in order at this point. Notice that if this analysis is correct, it implies that when the verb adjoins to a functional head, affixation/cliticization does not immediately take place. The reason for saying this is that cliticization of AgO to the verb cannot take place until the verb is Case-saturated, but the verb cannot be Case-saturated until it has moved to a position above the internal Subject. So although the verb picks up functional morphemes as it climbs up through the tree, it would appear that there is a different kind of process involved in S-structure cliticization than in the kind of attachment that happens when the verb picks up a functional morpheme on its climb up the tree. If this turns out to be a problem, we can circumvent it easily by putting the AgO element above the VP, perhaps as the head of AgP. This is one of the possible alternatives I mentioned in connection with the structure proposed in (29).

The second comment has to do with the landing site of the V-AgO complex. I am assuming it to be AgS, despite the fact that the order of morphemes is [-AgS V-AgO]. This again I will consider a technicality. If one feels the mirror principle is truly a principle rather than a decriptive generalization, then we can circumvent the whole question again by placing AgO above the internal Subject in the D-structure, saying that AgO is the landing site for V.

The third comment concerns the NP<sup>^</sup> position. I have omitted it from the Sstructure tree, because I assume that, in one way or another, it will be absent at S-structure. This might be due to either some kind of pruning operation, or possibly (and this is the alternative I find preferable) it is just not generated. Under this view, there would be two positions in which Subjects can be generated. I will have to consider this issue beyond the scope of the present study. However, because there are no cases of NP<sup>\*</sup> raising to NP<sup>^</sup> in our sentences, I will henceforth omit the NP<sup>^</sup> position from the derivations.

Let us continue now by deriving sentence (10), the dependent sentence with both a pronominal Agent and Patient. Since I am analyzing all person markers except some instances of 3rd person as generated in argument positions, this sentence will have the following derivation:



Given structure (31i), verb raising is again required in order for both arguments to be assigned Case. The Agent and the Patient argument presumably require Case, though they are weak pronouns that cliticize to the verb at Sstructure. However, because the pronominal Agent is generated as an NP in an argument position, it blocks the transmission of Case from the Aux to the main verb. Thus verb raising must take place. However, if we stopped the derivation here, we would have no account of how we get SVO order rather than VSO order. The solution of course is that the Agent, being a clitic, may climb back up to a preverbal position. Notice that VP does not serve as a barrier for the clitic, presumably because the VP is L-marked by /yuk<sup>W</sup>/. The reason we get the preverbal (set 1) clitics generated can be regarded as a morphological phenomena: since the clitic's features are in a preverbal position when lexical insertion takes place, the preverbal form is inserted.

Although I am not willing to commit myself to any particular labelling for which Case is being assigned to which clitic at this point, it seems clear enough that there are two sources of Case (the Aux and the verb), so there is one Case for each argument. No overt morphological case is assigned, however, since the arguments are pronominal (premise (B) above). Both Subject and Object Agreement positions are empty because there are no agreement morphemes available for 1st and 2nd person. The question of whether these nodes are pruned, or whether they are not ever generated, I will have to regard as beyond the scope of the essay.

Next consider the derivation of sentence (4), an intransitive dependent sentence. It will have D-structure (32i), where the arrow shows the path the verb will take when it raises. In order to understand why the verb raises in this sentence, recall that only lexical heads may assign Case. However, from the verb's position in-situ, it cannot assign Case either because it does not c-command NP\*, or else because it may only assign Case to the right. Thus, the verb must raise to a position to the left of NP\*, presumably the AgS position. The structure which results from this is that given in (32i):



The verb can now receive Case from the Aspect marker, so it is Case-saturated. Because it is Case-saturated it can host person markers, so the agreement morpheme /-t/  $(3_i)$  (which is just another person marker) suffixes to the verb. Now we have the configuration we need for assignment of OBL case to a following NP, so we predict the correct surface form. As discussed above, in order to explain the fact that we have OBL instead of ACC case assignment. Under the default Case analysis, this is exactly what is predicted.

Let us now turn to the derivation of independent sentences. An explanation of how (2,3) should be derived was offered above in connection with the solution to the third puzzle, so I will not provide any further explanation of these. Let us instead consider derivation of transitive independent sentences, such as in (6,7)above. Let us begin with (6). The D-structure of this sentence (of course) differs from the intransitive independent sentences in that it has two lexical NP arguments which must be assigned Case. Since there is no Aux in the sentence, and the verb presumably has only one Case feature, the grammar generates a 'dummy' morpheme which supplies a Case feature, and which also licenses the verb to host the Case-transmitting agreement morpheme.

As a first approximation, I am assuming this dummy Case morpheme is generated under the Object agreement position, which explains why it will only occur with transitive verbs. This morpheme is, as I suggested earlier, the TR morpheme  $/-Q_{.}$  The derivation of sentence (6) will then be as in (33) below:



The verb first raises to the AgO position, then continues up to AgS. Once this has happened, the verb is Case-saturated and adjacent to an agreement element, so the agreement element may cliticize to the verb. The way Case assignment proceeds now, is that the verb assigns its own ACC case directly to the Object NP through the verbal trace, and assigns the Case feature contained in the dummy Object agreement morpheme to the Subject NP, via the third person agreement morpheme. That is, it assigns the Agent OBL case. We thus derive the surface form (6).

The last sentence I would like to explain is (7), a transitive independent sentence with pronominal arguments. Although I will not be able to provide a full derivation due to length considerations, the derivation is essentially the same as for (6). One important question arises, however, in deriving the correct form, and that is the following: if the /-@/ morpheme renders the verb capable of hosting person markers once it has attached to the verb, why can't we get a sentence like (34), meaning 'You helped me'?

#### 34 \*m@-<del>1</del>@mo:m-@-y 2s-help-TR-1s

There are several possible answers to this question. One which seems quite plausible to me is that the /-@/ does not, in fact, Case-saturate the verb; rather, /-@/ suffixes to the verb, and /-@/, being itself Case-saturated, allows the person marker to suffix to it. The person marker is thus not technically an affix of the verb. In this way we can explain why (34) is impossible, since /m@-/ clearly is an affix of the verb.

## Conclusions

In this essay it has been argued that there are languages wherein spec-head agreement does not play a role in the assignment of Case to arguments. In these languages, only structural Case assignment is employed to mark arguments. Nonetheless, it would appear that even in these languages, Case assignment which is not directly from the verb is assigned with the help of agreement morphology. This result leads us to speculate on the possibility that there is some very basic grammatical concept, <u>agreement</u>, which may be realized in languages in different ways; in some cases it will be realized in a less local and more abstract relation which holds between an argument and a predicate (spec-head agreement), while in others it may be realized more concretely, as a person-marking clitic. But in both of these cases, agreement appears to have as one of its primary functions the transmission of Case from a verbal/inflectional element to an argument.

A further speculation which should be investigated is whether this bifurcation in types of Case-assignment is symptomatic of some deeper correlation, having to do with the type of thematic operations involved; that is, it is tempting to look for a correlation along the lines of the following:

Case-assignment through spec-head agreement: Predication

Structural Case-assignment: Direct theta-marking

Perhaps in languages which do not employ spec-head agreement for purposes of Case assignment, there is no predication relation either. Although this question is well beyond the scope of this paper, I regard it as a question of high priority for future research.

## Notes

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 $^2$  In this paper [4] = the voiceless lateral fricative, [@] = schwa, and ? = glottal stop.

 $^3$  This idea is virtually identical to a proposal by Jelinek (1986:8). What is unclear to me in Jelinek's analysis is how she will square this analysis of the 3rd person morpheme with her claim that Nisgha is non-configurational, since she has claimed elsewhere (1984) that person-markers on the verb are actual arguments in non-configurational languages, and that this is the defining characteristic of a W\* non-configurational language. It would appear to me that if Nisgha's 3rd person morpheme is agreement, then Jelinek loses her justification for the claim that the lexical NP's are adjuncts, and thus also the strength of her claim that Nisgha is non-configurational.

<sup>4</sup> This does not require us, however, to posit an exactly complementary gap in the paradigm for clitic pronouns (i.e. a gap for third person). In fact it can be shown that there are clitic pronouns for third person, which have the same morphological shape as the agreement marker, but different syntactic properties (for example they do not transmit OBL case).

<sup>5</sup> Please note that L will sometimes use the terms suffix/prefix in place of enclitic/proclitic, although in most cases the morphemes we are concerned with are probably best defined as clitics.

<sup>6</sup> 'Determinacy' is Tarpent's term. Determinacy here would somehow define the following class: proper names, ascending kinship terms, and certain other nominal

expressions (Tarpent 1982). Tarpent argues that the /t/ marker is underlyingly present with all determinate NP's, and simply marks determinacy (i.e. not Case), but deletes in the presence of /s/, which leads to the appearance of complimentary distribution between /s/ case and the /t/ determinate marker. Although I think this is a plausible analysis, I will continue to use the ACC label for the /t/ connective. Tarpent's claim is largely compatible with the current analysis, especially if we adopt the default case analysis mentioned above.

 $^{7}$  Hunt was working in Gitksan, which has virtually identical facts to Nisgha.

<sup>8</sup> The particulars of Koopman and Sportiche's development of this idea differ from Kuroda somewhat. In this paper I follow Koopman and Sportiche (1988).

<sup>9</sup> Notice there are probably other reasons that the verb needs to be Casesaturated as well, perhaps pertaining to specificity. 'That is, the verb may need to be Case-saturated to establish a certain relation between the verb and the Aux, a relation which may be conceptually similar to specification of nouns by determiners (this possibility was suggested to me by E. Benmamoun and B. Schein).

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