

ON LEXEMIC AND MORPHEMIC CASE

by David G. Lockwood

INTRODUCTION

In traditional grammar, syntactic descriptions are typically based on the morphological description of a language. For a language having morphological distinctions of case, a traditional treatment would handle the expression of case forms in the morphology, leaving the syntax to handle the function of these same case categories within the bounds of larger structures, particularly phrases and clauses. This paper is intended to discuss some examples which, when viewed in the light of stratificational linguistics, illustrate two partially distinct case systems within the grammar of a single language. One of these systems will be seen to operate on the lexemic stratum, which deals with the basic grammatical syntax of phrases, clauses, and sentences, while the other will be found on the morphemic stratum, the stratum dealing with the internal form of words, both inflectional and stem-formational.

The discussion will deal primarily with two situations in non-Indo-European data, and will then consider the implications of the principles set forth for several problems within Indo-European.

As used in this paper, the term CASE will refer exclusively to the grammatical categories traditionally called by that term, not any of their analogues in semology. It is to the latter class that the "deep cases" proposed by Fillmore (1968) should be relegated. The term ROLE is an appropriate one for these kinds of semological markers, which were recognized by stratificationalists several years before the publication of Fillmore's work, though they were usually mentioned only in passing in the literature.¹

I. GRAMMATICAL OBJECTS IN ESTONIAN

According to the accounts provided in various grammatical references,² grammatical objects in modern Estonian may be expressed in any of three

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morphological cases, depending on further factors. Let us consider first the following sentences (Collinder 1957:142):³

- (1) ma lugesin raamatut
 I_{Nom} read_{Pt-1s} book_{Prt}
I was reading the book.
- (2) ma lugesin raamatu läbi
 I_{Nom} read_{Pt-1s} book_{Gen} through
I read the book through.
- (3) osta see raamat
 buy_{Ip-2s} this_{Nom} book_{Nom}
Buy this book!

Example (1) illustrates the PARTIAL OBJECT, which is used when the action is not viewed as directed toward the object in its entirety. This contrasts with the TOTAL OBJECT, as seen in (2) where the totality of the object has been affected by the action. The partial object in (1) is in the PARTITIVE CASE, while the total object in (2) is in the GENITIVE CASE. In some special constructions, among them the affirmative imperative, the total object is placed in the NOMINATIVE CASE, as illustrated by example (3).

Let us next consider three further sentences that illustrate the expression of grammatical objects in the plural:

- (4) ta toi mulle raamatuid (Collinder 1957:142)
 he_{Nom} bring_{Pt-3s} I_{All} book_{PrtPl}
He brought me books.
- (5) ta toi mulle raamatud (Collinder 1957:142)
 he_{Nom} bring_{Pt-3s} I_{All} book_{NomPl}
He brought me the books.
- (6) paneme trikood selga (Oinas 1966:237)
 put_{Ip-1p} swimming trunks_{NomPl} on
Let's put on our swimming trunks!

In (4) we find, as expected, the partial object in the partitive. In (5) and (6), however, we find the nominative. We would have expected this in (6), since it is an imperative construction, but in (5) the singular examples would have led us to expect the genitive. These examples show that in the plural all total objects are in the nominative in Estonian.

Given this much information, and the additional fact that various constructions demand the genitive regardless of number, we can see already that there is a particular set of syntactic functions associated with the total objects of the types illustrated by (2) and (5). If we interpret this as a functional ACCUSATIVE CASE, we can tentatively diagram the situation as in figure 1,

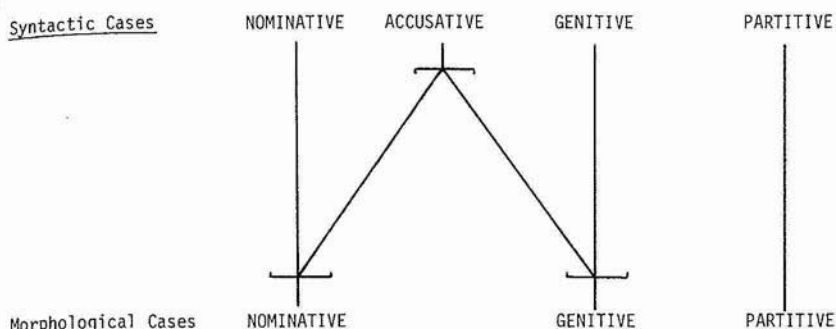


FIG. 1. CASE DISCREPANCIES IN ESTONIAN: PRELIMINARY REPRESENTATION.

which shows the relation of functional or syntactic cases at the top to morphological cases at the bottom.

This representation is incomplete, however, because it does not take into account the representation of these same syntactic functions in the personal pronouns of the language. Partial objects offer no problems, since they are consistently represented in the partitive case. Consider, however, the following examples of total objects (Oinas 1966:261-262):

- (7) ta juhatas mu-mind tuppa
 he_{Nom} show_{Pt-3s} I_{Gen-Prt} room_{III}
He showed me into the room.
- (8) ma viin su-sind linna
 I_{Nom} take_{Pr-1s} you_{Gen-Prt} town_{III}
I'll take you to town.
- (9) palun vii mind linna
 beg_{Pr-1s} take_{Ip-2s} I_{Prt} town_{III}
Please take me to town.
- (10) ma votan teid kaasa
 I_{Nom} take_{Pr-1s} you(pl)_{Prt} along
I'll take you along.
- (11) vii ka meid linna
 take_{Ip-2s} also we_{Prt} town_{III}
Take us to town too!

Examples (7) through (9) show singular pronouns in total object constructions. The first two illustrate the ordinary total object type for which the accusative function was postulated above. In addition to the expected genitive realization, however, these examples show an alternate realization as the

morphological partitive, apparently in free variation with the genitive. Example (9) is an imperative, which as we have seen takes a nominative noun object in either singular or plural. This time, however, it shows a partitive object instead. Examples (10) and (11) show similar functions with plural pronouns, and both show only the partitive realization. Either one would show the nominative of a plural noun, as we have seen above. For our accusative function, then, these examples show that we need to deal with its realization as a morphological partitive with these pronouns: obligatorily in the case of a plural pronoun, and optionally to the genitive in the singular. It also shows that the nominative-object function in nouns will be realized as a partitive with any pronoun.⁵ In view of the latter fact, it will be necessary to distinguish the nominative object function from the true nominative, as used for the subject, for example. The true nominative will be realized as the morphological nominative regardless of context. The other function, which we may term the OBJECTIVE CASE, is realized as the morphological partitive with these pronouns, and as a nominative elsewhere.

These additional facts also justify a refinement of our diagram to that shown in figure 2, which shows that Estonian has two syntactic cases, the accusative and objective, whose realization completely syncretizes with that of other cases.⁶

1.1. A stratificational interpretation

The facts above will fit fairly readily into the stratificational model of grammatical structure presented in Lockwood (1972). In the terms of this model, we are dealing here with a series of *structural discrepancies* between the case categories of the *lexemic stratum*, in which the basic surface syntax of a language is to be handled in a grammatical description, and of the *morphemic stratum*, which is responsible for individual details of the morphological structure of words. This view would suggest that we should deal with Estonian

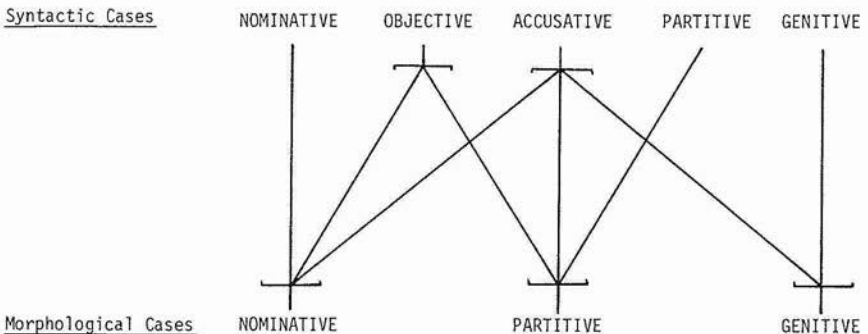


FIG. 2. CASE DISCREPANCIES IN ESTONIAN: REVISED REPRESENTATION.

syntactic constructions using the case lexemes $^L/Ob/$ 'objective,' $^L/Ac/$ 'accusative,' $^L/Pr/$ 'partitive,' and $^L/Ge/$ 'genitive,' in addition to other, mostly local, cases whose details need not concern us here.⁷ The realization of these categories, however, will be handled with just three morphological cases in a pattern of diversification (involving $^L/Ob/$ and $^L/Ac/$) and syncretization⁸ (involving all of the morphological cases, which may be labeled $^M/Nom/$ 'morphological nominative,' $^M/Gen/$ 'morphological genitive,' and $^M/Prt/$ 'morphological partitive').

A definitive treatment of the syntax of these various types of objects would, of course, demand an extensive study of large parts of Estonian syntax. All we can offer here is a sketch of the general pattern that seems to emerge from the facts at hand, which is summarized in figure 3. The portion of the diagram above the dashed line is a part of the lexemic stratal system, primarily the lexotactics, whose principal function is to account for the syntactic relations and structures of phrases, clauses, and sentences. The categories of the lexotactics will be related both to the semology above and to the morphology below. Neither of these connections will need to be simple, however, and this fact is part of the reason for their treatment on a separate stratum in the first place.

The central part of the lexotactics in figure 3, which is encircled, deals with the syntax of the various verbal objects on which our primary attention is being focused. At the upper right of this encircled portion, we see the labels 'Object_A' and 'Object_B.' The lines bearing these labels are assumed to connect higher in the tactics to constructions associated, in the case of total objects, with the Accusative and Objective cases, respectively. Object_B will be governed by the affirmative imperative, as mentioned above, and also by impersonal verbs,⁹ while Object_A will be governed by the remaining kinds of transitive verbs. The fact that both of these objects express the semological relationship of 'patient' is shown by upward connection of each to a sememe $^S/PATIENT/$, via a diamond node. Below each of these diamonds is an ordered OR node dealing with the difference between partial and total objects in each instance. The partial object will involve a connection to a special sememe $^S/PARTIAL/$. When this sememe is activated, as well as when the other partitive functions not detailed are called for, a line causing the activation of the partitive marker $^L/Pr/$ will be taken. Under other circumstances, the path from Object_A will lead to a diamond signaling the accusative ($^L/Ac/$), and the path from Object_B will lead to another diamond for the objective ($^L/Ob/$).

At the bottom of the lexotactic portion of this diagram, there is an upward OR node leading downward to the label 'Nominals,' and upward to functions marked by various case markers, including one for Genitive as well as for those cases involved directly in the expression of objects. It is assumed here that the nominative case can be regarded as syntactically unmarked in Estonian, as it is in many other languages with case systems. In line with the assumption,

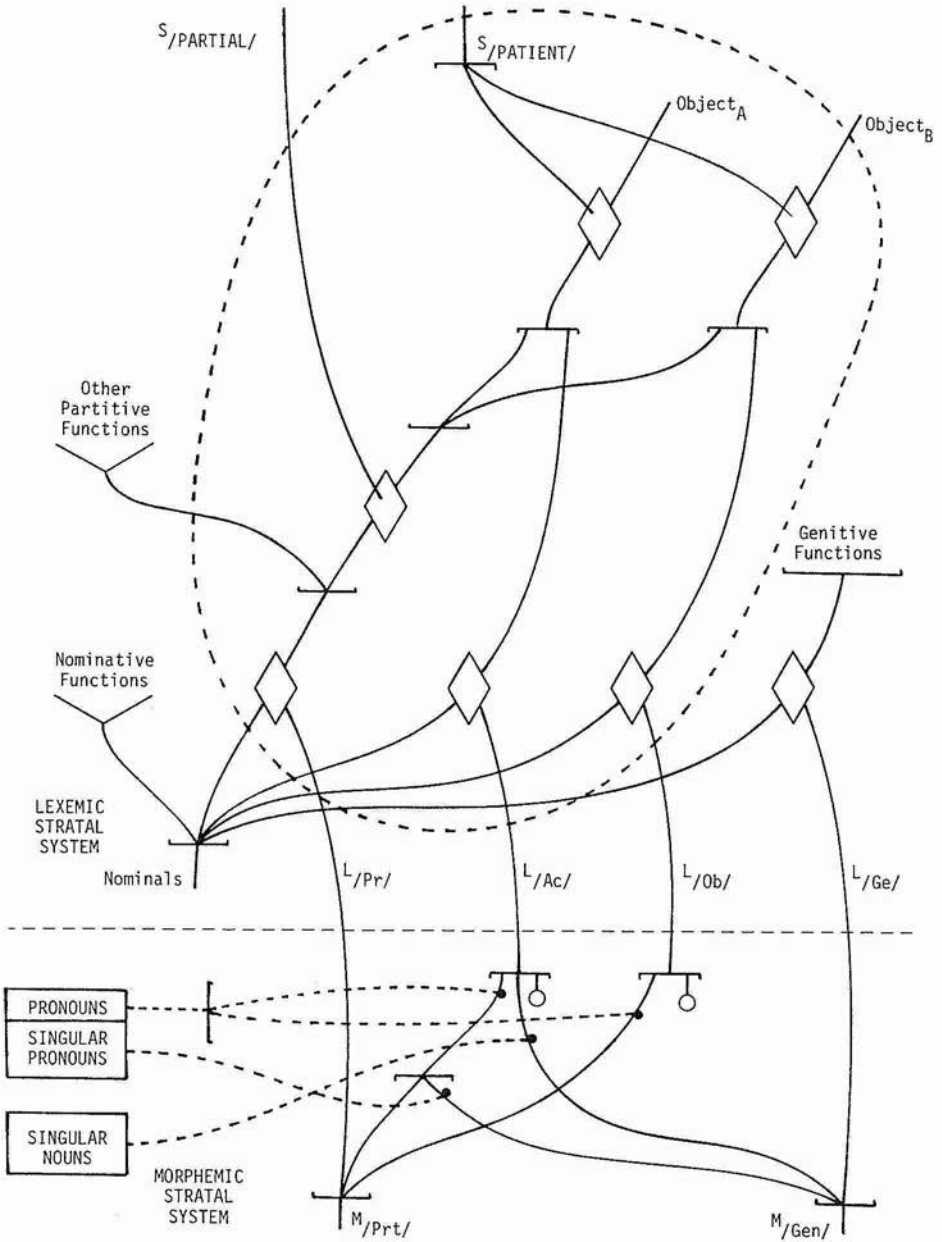


FIG. 3. CASES FOR OBJECTS IN ESTONIAN.

the nominative functions are shown to connect directly into the upward OR above 'Nominals' without the explicit signaling of any case marker.

The part of figure 3 below the dashed line is a portion of the morphemic stratal system, more specifically a part of the lexonic alternation pattern dealing with the alternate realizations of our lexemic cases in terms of morphemic cases. This portion of the diagram is in fact a revised and more explicit version of figure 2. The revision involves the elimination of an overt signal for the nominative, in line with our assumption that it should be viewed as the unmarked case: the nominative will correspond to the absence of a lexemic case, or else to the zero realization of the lexemic case called for. The greater explicitness involves the inclusion of conditioning factors governing the various alternations. Details of the latter are provided below.

At the top of the alternation pattern shown, there is a line for each of the four marked cases involved. Technically, these four case markers will be *lexons* at the point where they cross the boundary between stratal systems, though they are in one-to-one correspondence with the lexemes emerging from the lexotactics. The realization of $^{LN}/Pr/$ as $^M/Prt/$ and of $^{LN}/Ge/$ as $^M/Gen/$ is simple and unproblematical. The realization of $^{LN}/Ac/$ and $^{LN}/Ob/$, however, involves the discrepancy of diversification conditioned by classes specified by the morphotactics of the language. The downward OR nodes indicate the existence of the diversification, and its conditioning is shown by a series of dotted *conditioning lines* connecting to enabler nodes governing each conditioned choice. The realization of $^{LN}/Ob/$ is still quite simple: when a pronoun (of the relevant class) is involved, the marked realization $^M/Prt/$ will occur, since the conditioning line leads to a box labeled 'PRONOUNS'; otherwise the line will go to the zero element to produce the morphological nominative. The realization of $^{LN}/Ac/$ is more complex: one priority choice involves pronouns, as shown by a conditioning line, and the line thereby activated can always lead to $^M/Prt/$, but if the pronoun is also singular, it can alternatively lead to $^M/Gen/$, so we correctly get the free variation with the singular pronouns but only $^M/Prt/$ with plural pronouns;¹⁰ the other priority choice is for the singular nouns, leading to the realization of $^M/Gen/$; and in the remaining case of plural nouns, the zero choice equivalent to the morphological nominative will be taken. It should be emphasized that the boxes out of which the conditioning lines originate are shorthand devices representing points in the morphotactics, the details of which are beyond the scope of the present paper.

1.2. Alternative treatments

We should now consider the consequences of rejecting the approach of figure 3 with its separate lexemic cases and insisting that everything be done using only the morphological case categories of the traditional treatments: nominative, genitive, and partitive. This alternate approach would, of course,

eliminate the need for alternations in the lexonic alternation pattern, but this simplification would come only at the expense of various complications in the lexotactics and higher strata:

1) It would require that the various object functions be fragmented from the outset according to the sememes realized, type of object function involved (A, B, or either), and the surface case required. This fragmentation would produce a pattern along the lines sketched in figure 4.

2) It would also require the fragmentation of the class of nominals into four within the lexotactics, in order to deal with the different cases involved with singular and plural noun phrases and singular and plural nouns. Some such fragmentation would have to be made in morphotactics of the language in order to deal with differences of declensional pattern between nouns and personal pronouns.¹¹ The syntactic functions of the two are basically the same, however; it would otherwise be unnecessary to separate them in the lexology. Figure 5 shows the structure needed to deal with this class fragmentation. This figure should be seen as connecting to figure 4 via the circled labels.

A simplicity count comparing the representation of figures 4 and 5 with a version of figure 3 having the same effective information¹² confirms that it is simpler to posit the accusative and objective cases, since the analysis of figure 3 turns out to be three points simpler.¹³

1.3. A general principle

Our treatment of the Estonian data suggests the following principle governing the recognition of syntactic cases:

When a given syntactic function seems to be realized by alternative case forms coinciding sometimes with one case and sometimes with another, depending on the independent variables (such as grammatical number) and subclassifications (such as noun vs. pronoun), it is desirable to recognize a separate lexemic case for each such function and deal with its alternate realizations as a matter of morphology.

To show the further applicability of this principle, we may cite some parallels in Indo-European data, both attested and reconstructed:

1) Russian has a set of syntactic functions roughly paralleling those of the Estonian partitive, which seems to be realized by the genitive except in the singular of certain masculine nouns, where it takes the form of the dative. This is seen in these examples:

(12) u nas nedostatok xleba
 by we_{Gen} insufficiency_{Nom} bread_{Gen}
We have a shortage of bread.

(13) u nas nedostatok čaju

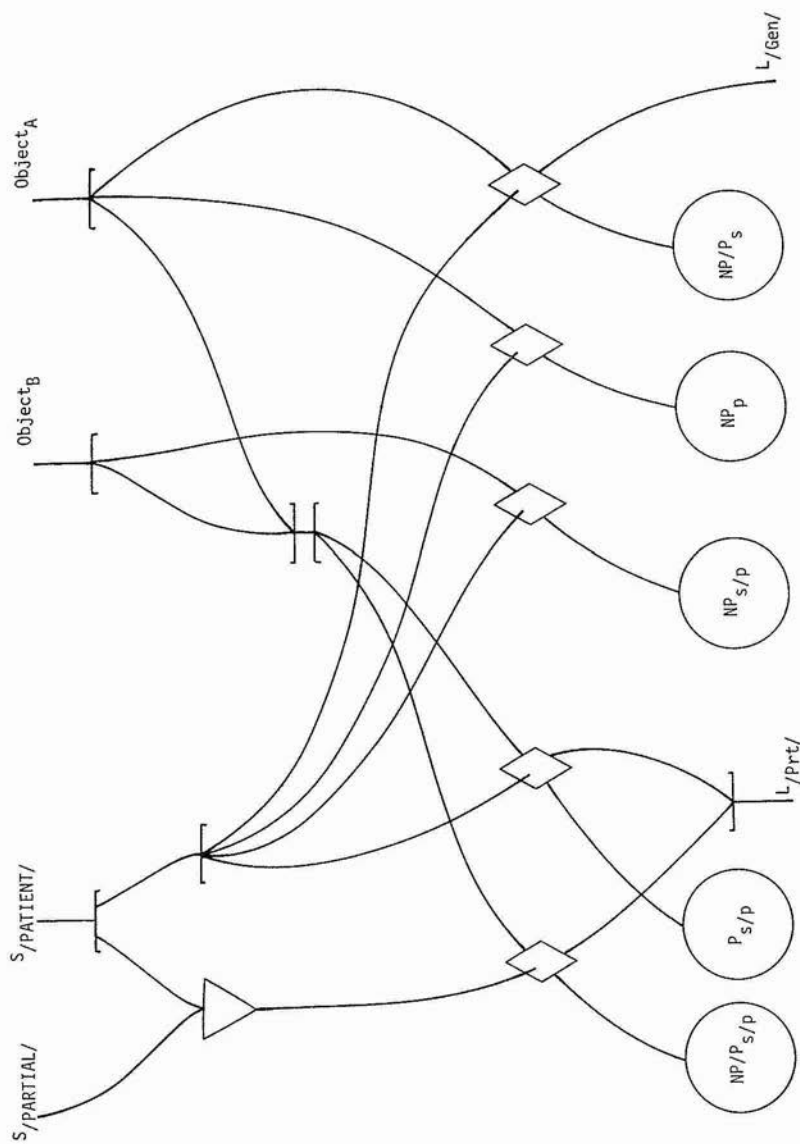


FIG. 4. CASES FOR OBJECTS IN ESTONIAN: ALTERNATIVE APPROACH I.

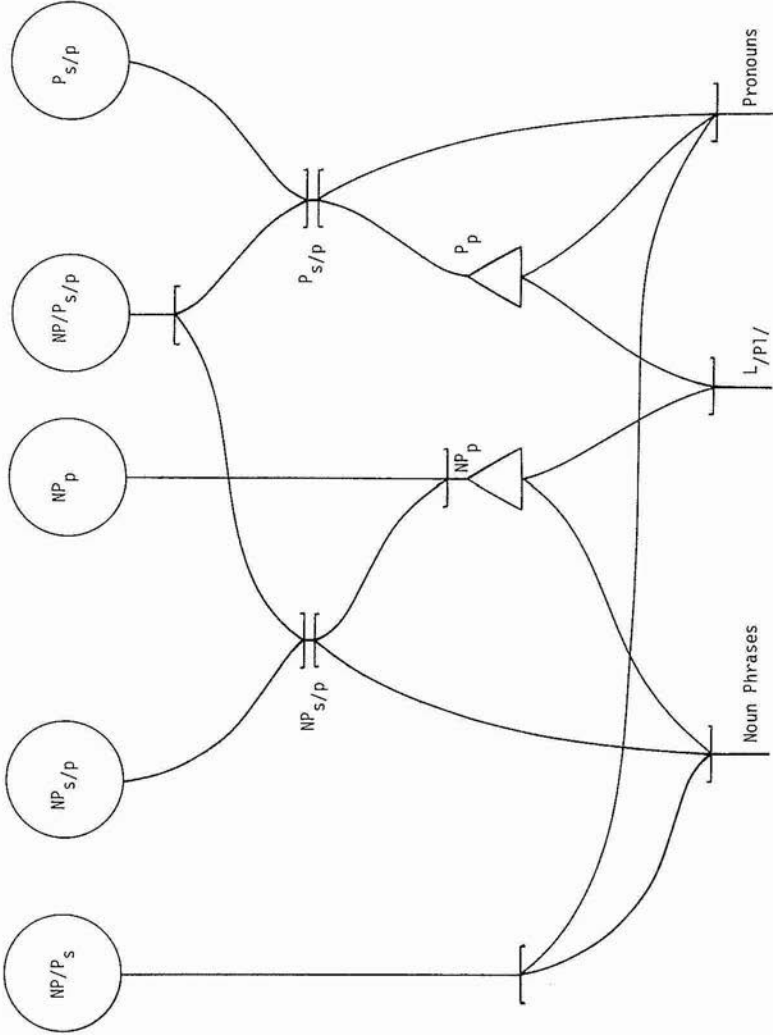


FIG. 5. FRAGMENTATION OF NOMINALS IN ALTERNATE APPROACH TO ESTONIAN OBJECTS.

by we_{Gen} insufficiency_{Nom} tea_{Dat}
We have a shortage of tea.

(14) my xotim xleba
 we_{Nom} want_{Pr-1p} bread_{Gen}
We want some bread.

(15) oni xotjat kitajskogo čajju
 they_{Nom} want_{Pr-3p} Chinese_{GenM} tea_{Dat}
They want some Chinese tea.

Example (15) shows, it should be noted, that adjectives will always be in the surface genitive form in this function, even though the noun they modify is in the surface dative form. With a true dative, the adjective will have a distinct form for masculine or neuter genders. For these data, the principle stated above leads to the establishment of a separate lexemic case which may be called the PARTITIVE, with a morphological realization as the dative for nouns in the class containing *čaj* 'tea' (if singular), and otherwise as the genitive.¹⁴

2) In Classical Sanskrit and reconstructed Proto-Indo-European the ablative case always coincides with the dative in the dual and plural of nouns, pronouns, and adjectives, but in all but one singular class it coincides with the genitive. In the exceptional class in question, it has a distinct ending. In Baltic and Slavic we find that the PIE genitive and ablative have completely merged, with the widespread syncretism in the singulars of the proto-language apparently serving as the model for analogical leveling. A possible, but unattested, intermediate stage in the development of the latter situation from the former would be one in which we would find a complete syncretism in the singular between the genitive and ablative, but the retention of the inherited ablative-dative syncretism in the dual and plural. According to our principle, we would recognize a distinct ablative case lexemically, but morphemically this case would be realized as the genitive in the singular, and as the dative in the dual and plural. Such a situation would be parallel with that of the Estonian accusative, if we disregard the additional complications occasioned by the pronouns.

It should be noted that this principle will not justify separations of cases on the basis of semantic function alone. The Latin grammarian Quintilian, for example, proposed a separation of the Latin ablative of means as a separate instrumental case, even though it would always have the same realization as the ablative.¹⁵ While we would doubtless be justified in recognizing distinct sememic roles in such an instance, there would be no syntactic justification for such a distinction on a lower level.

2. ERGATIVITY AND TRANSITIVITY IN DYIRBAL

According to the description provided by Dixon (1972), Dyirbal of northern

Queensland is typical of Australian indigenous languages in showing an ergative system in the noun phrase, while reflecting in its pronominal forms the type of nominative/accusative distinction typically found in Indo-European languages. Halliday has termed the latter type of system a *transitivity system*.¹⁶ The following examples (Dixon 1972:59) illustrate the ergativity found in the noun phrase:¹⁷

- (16) bayi yaɾa baniɲu
 Mk_{1As} man_{As} is-coming
A man is coming.
- (17) balan ɟugumbil baniɲu
 Mk_{1As} woman_{As} is-coming
A woman is coming.
- (18) balan ɟugumbil baɲgul yaɾangu balgan
 Mk_{1As} woman_{As} Mk_{1EG} man_{EG} is-hitting
A man is hitting a woman.
- (19) bayi yaɾa baɲgun ɟugumbiɾu balgan
 Mk_{1As} man_{As} Mk_{1EG} woman_{EG} is-hitting
A woman is hitting a man.

These examples show the typical characteristics of an ergativity system, in that the 'subject' of an intransitive action and the 'object' of a transitive one are placed in the same case, here termed the ABSOLUTE,¹⁸ while the 'subject' of a transitive action is in a second case, termed the ERGATIVE.

The next set of examples shows the situation in sentences involving pronouns, which show the pattern typical of transitivity systems, whether they occur alone (20-23) or in combination with noun phrases (24-25) (Dixon 1972:60):

- (20) ɲaɟa baniɲu
 I_{Nm} is-coming
I'm coming.
- (21) ɲinda baniɲu
 you_{Nm} is-coming
You're coming.
- (22) ɲaɟa ɲinuna balgan
 I_{Nm} you_{Ac} is-hitting
I'm hitting you.
- (23) ɲinda ɲayguna balgan
 you_{Nm} I_{Ac} is-hitting
You're hitting me.

- (24) *ḡaḡa bayi yaḡa balgan*
 I_{Nm} Mk_{IAS} man_{As} is-hitting
I am hitting a man.
- (25) *ḡayguna baḡgul yaḡaḡgu balgan*
 I_{Ac} Mk_{IEg} man_{Eg} is-hitting
A man is hitting me.

It would be rather awkward to deal with the syntax of this language using the traditional approach, which bases the syntactic description on the morphological categories, since a different set of such categories will be involved depending on whether one is dealing with a noun or a pronoun. Such difficulties will be minimized, however, in the context of a stratificational model having one tactic pattern for the morphology and another for the syntax. Using such a model, one finds it easy when appropriate to use in the syntax a completely different set of categories from those found in the morphology.¹⁹ In the case of Dyrbal and languages of similar structure, we can use three lexemic cases in dealing with the syntactic facts:

SUBJECTIVE (Sj): the case of the subject of an intransitive clause;

AGENTIVE (Ag): the case of the subject of a transitive clause;

OBJECTIVE (Ob): the case of the object of a transitive clause.

These distinctions will be sufficient for the syntax regardless of whether they are associated with nouns or pronouns. For the morphology of nouns and pronouns, however, we will need two distinct subsystems of case.²⁰ The subsystem used for the nouns and their modifiers will contain the above-mentioned ERGATIVE and ABSOLUTIVE categories, while that used for the pronouns will involve the NOMINATIVE and ACCUSATIVE. The interrelationships of these three sets of case categories are depicted in figure 6, which diagrams part of the realizational portion of a stratificational account between the lexemic and morphemic strata.

The reasons for establishing such a system are basically similar to those used in connection with the Estonian data of section I. The results in the two

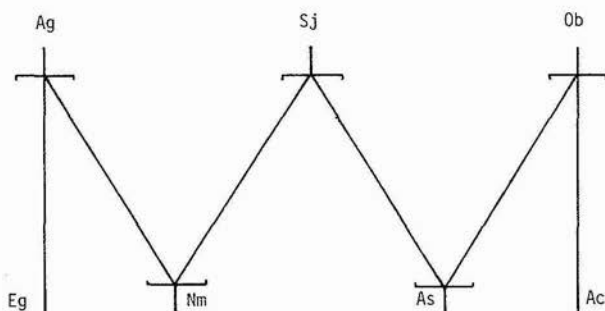


FIG. 6. LEXOMORPHEMIC REALIZATION OF DYRBAL CASE CATEGORIES.

situations are basically similar in that in each instance a different set of case categories is involved on the two strata of grammar. A basic difference will also be seen, however, since in Estonian the discrepancies involve the same set of morphological categories in both noun and pronoun, while in Dyirbal we have a single overall set of categories of these on the lexemic stratum where similarities of syntactic function can be dealt with, but distinct noun and pronoun subsystems in the morphology. Despite these differences, however, the Dyirbal data can be seen as another manifestation of the basic principle set forth in section 1.3; we have three instances here of a single syntactic function realized by different surface cases. The example differs from the Estonian only in detail, however, in that it does not require any additional principles or even slight amendment to the stated principle in order to deal with it. This Dyirbal situation is, at the same time, different enough to warrant inclusion in our present discussion, in order to show that the application of the general principle may sometimes result in different subsystems of case categories for different subclasses, and thus a larger number of case categories in the morphology than in the lexology. In the Estonian material, on the other hand, the lexology has more case categories than the morphology.

2.1. Some dialectal details

No fuller account of the lexotactics of the case system of Dyirbal, even in the preliminary form illustrated by figure 3 for Estonian, will be attempted here, principally because of complications resulting from the allegedly free word order of the language. To quote Dixon (1972:291):

Word order is exceptionally free in Dyirbal. . . . However, there is a most frequent order; the preferences include: . . . (3) a +actor pronominal NP [our nominative pronouns] will precede any other NP; (4) nominative NPs [our absolutive noun phrases and accusative pronouns] precede ergative and dative NPs; (5) ergative NPs precede the verb. . . . However, any or all of these 'preferences' can be ignored in a particular sentence.

We can account for the described preferences, to which all our examples (16-25) conform, with the diagram of figure 7. This diagram deals with the preferred internal element order in intransitive clauses (Cl_i) and transitive clauses (Cl_t). The diagram can be as simple as it is only because it does not deal with the restriction that requires either the first or the third line from Cl_t to be taken, but not both. This can readily be dealt with by means of realizational connections to the semotactics, so it need not be repeated. In order to deal with more marked orders as well, this diagram would have to be considerably expanded, and we would need much more information than Dixon provides us on the various situational and discourse factors involved in the possible variations. In the absence of such further data, it is probably most appropriate to avoid attempting any more complete formalization of this material.

It is appropriate, however, to mention some additional pertinent facts about the morphological realization of case in pronouns and nouns.

The clearest of these additional situations, as treated by Dixon, concerns the pronominal cases of one of the Dyirbal dialects. In this dialect, known as Giramay, all three of the lexemic cases recognized above have separate realizations in the singular pronouns meaning 'I' and 'you.' Thus the examples above involving pronouns (20-25) are representative of only the other two dialects, termed Dyirbal (proper) and Mamu.²¹ Table I (extracted from Dixon's Table

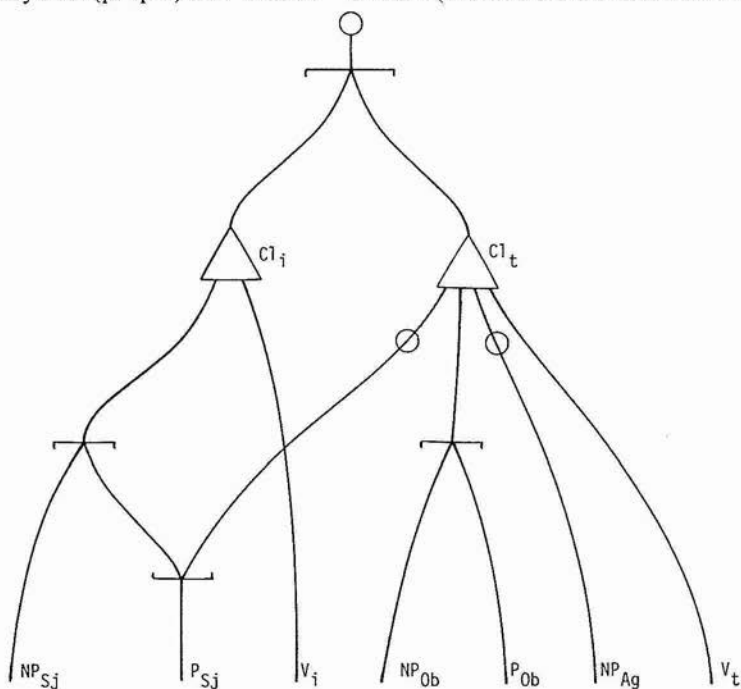


FIG. 7. PREFERRED ELEMENT ORDERS IN DYIRBAL CLAUSES.

TABLE I
MORPHOLOGICAL REALIZATIONS OF LEXEMIC CASES FOR THE
SINGULAR PRONOUNS IN THE THREE DYIRBAL DIALECTS

PRONOUN GLOSS	LEXEMIC CASE			DIALECT
	Subjective	Agentive	Objective	
'I'	{	ŋaɖa	ŋayguna	Dyirbal
	{	ŋaɖa	ŋayguna	Mamu
	{	ŋayba	ŋaɖa	ŋaɳa
'you'	{	ŋinda	ŋinuna	Dyirbal
	{	ŋinda	ŋinuna	Mamu
	{	ŋinba	ŋina	Giramay

3.4, 1972:50), shows the realizations of the three lexemic cases in the various dialects for these two pronouns. For the remaining pronouns, those in the dual and plural, all three dialects show the general syncretism of subjective with agentive as described above, though the particular forms vary from one dialect to another.

On the basis of this evidence, we are forced to conclude that the Giramay dialect maintains the SUBJECTIVE/AGENTIVE case distinction in its morphology, at least for these two pronouns. It is an empirical question whether it will be simpler to postulate a general three-way case system for all the pronouns in this particular dialect and recognize individual syncretisms in the dual and plural forms, or to postulate a distinct three-way subsystem for these two items only.

Another special situation involves the optional occurrence of an additional ending for a noun in the lexemic objective, but not the subjective, thus making the morphological syncretism of these two cases less than complete. Dixon (1972:43) tells us that this optional ending is found on "proper and some common nouns (usually just those referring to humans)." As an example he cites the male personal name *burbula* in subjective function, corresponding to either *burbula* or *burbulaña* in the objective. His statements about this situation leave the impression that these alternates are in completely free variation, though his grammatical examples usually use the simpler forms, leaving the impression that these are somehow less marked. One suspects that further research might reveal further social, age, or other factors governing at least to some extent the selection of these alternants.

In the absence of further data to clarify this situation, it will be sufficient to postulate two stylistic dialects: an unmarked Dialect A with no differentiation of subjective and objective in personal nouns, and a marked Dialect B allowing the additional suffix (at least as an option).²² Given this, we can simply state that the morphological syncretizations of Dyrirbal case apply completely only to the Dyrirbal and Mamu geographic dialects spoken in stylistic Dialects A and B.²³

2.2. Remarks on semological roles

This paper deals primarily with lexomorphemic case discrepancies, but in reference to Dyrirbal, it is of interest to make some remarks on the semological roles realized by the three case lexemes we have recognized. These roles (the equivalent of the "underlying cases" postulated by Fillmore [1968]) appear to differ from those found in similar situations in languages without ergativity systems, while at the same time they are not in a simple one-to-one correspondence with the three lexemic cases either.

Dixon devotes a section of his book (1972:128-137) to demonstrating that in Dyrirbal "there is only one UNDERLYING constructional pattern—the nominative-ergative [i.e., an ERGATIVITY SYSTEM in Halliday's terms]—that

applies to all sentences, whether involving nouns or pronouns or both" (1972: 130). His evidence involves relations in so-called "topic chains," which he shows follow ergativity patterns regardless of whether nouns or pronouns are involved. Though it is phrased in transformational terms, the argument appears to have cross-theoretical validity and thus to demand a translation into stratificational terms. In such terms, it can be interpreted as meaning that the realizations of the three case lexemes we have been dealing with are the role sememes ^S/CAUSER/ (realized in our examples as ^L/Agentive/) and ^S/AFFECTED/ (realized in our examples as ^L/Subjective/ or ^L/Objective/).

Further data will show, however, that the picture involving the realization of these two role sememes is more complex when we consider the Dyirbal equivalent of the active/passive distinction in transitivity languages. Compare, for example, the following examples (Dixon 1972:65):

(26) bayi bargan baᅅgul yaᅅaᅅgu ᅅurᅅaᅅᅅu
 Mk_{IA_S} wallaby_{AS} Mk_{IE_G} man_{EG} is-spearing₁
The man is spearing the wallaby.

(27) bayi yaᅅa baᅅgul bargandu ᅅurᅅanaᅅᅅu
 Mk_{IA_S} man_{AS} Mk_{IE_G} wallaby_{EG} is-spearing₂
The man is spearing the wallaby.

(28) balan ᅅugumbil baᅅgul yaᅅaᅅgu balgan
 Mk_{II_{AS}} woman_{AS} Mk_{IE_G} man_{EG} is-hitting₁
The man is hitting the woman.

(29) bayi yaᅅa baᅅgun ᅅugumbiᅅu balᅅaᅅᅅaᅅᅅu
 Mk_{IA_S} man_{AS} Mk_{II_G} woman_{EG} is-hitting₂
The man is hitting the woman.

Here the constructions in (26) and (28) are the less marked ones corresponding to our earlier examples. They place the semological ^S/AFFECTED/ in the absolutive case, and the semological ^S/CAUSER/ in the ergative. But examples (27) and (29), paraphrases of (26) and (28), respectively, place the ^S/CAUSER/ in the absolutive (=Lexemic Subjective) and the ^S/AFFECTED/ in the ergative (=Lexemic Agentive), marking the reversal by a special form of the verb, termed by Dixon (1972:65) the "ᅅay-form." In the analytic transcriptions of these examples, ordinary verb forms are subscripted by 1, while "ᅅay forms" are subscripted by 2. The use of Roman type in the glosses is an attempt to convey concisely the difference of meaning as Dixon (1972:66) explains it. In every case, the noun phrase placed in the morphological absolutive case (the lexemic subjective in our treatment) is treated as what Dixon terms "topic." We could further compare this to the passive in languages such as English, glossing (26) and (28) as passives: *The wallaby is being speared by the man; The woman is being hit by the man;* and their counterparts in (27) and (28) as

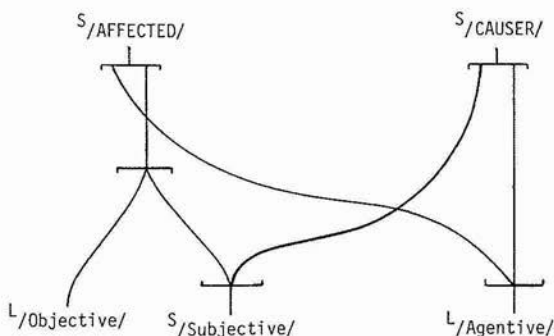


FIG. 8. REALIZATIONAL RELATIONSHIPS BETWEEN SEMOLOGICAL ROLES AND LEXEMIC CASES IN DYIRBAL.

actives, basically as shown. The only difficulty with this, of course, is that in English the active is unmarked, the passive marked, while in Dyirbal the situation is just the reverse. Such a glossing and explanation, at any rate, seem to constitute the easiest way to explain the differences involved. Reflecting this, Comrie adopts the term ANTIPASSIVE for the voice showing these properties, and cites this as "a convenient nomenclature and one that has recently become widespread" (1978:361).²⁴ These considerations lead us to the picture of the relationship of semological roles to lexemic cases diagrammed in figure 8. Although no explicit conditioning is shown in this diagram, downward ordered OR nodes are used to show that the realization of ^S/CAUSER/ as ^L/Subjective/ and ^S/AFFECTED/ as ^L/Agentive/ is the marked situation, to be taken, along with the -*ɲay* verb form, only when the causer is marked as being on focus in the semology.

These additional data show, therefore, that the semolexic relations involving case are also rather complex in Dyirbal.²⁵

3. ACCIDENTAL AND SYSTEMATIC CASE SYNCRETIZATIONS

The lexomorphemic case discrepancies dealt with in this paper are taken to be systematic rather than accidental. Many instances of syncretizations involving case and other grammatical categories, however, are of a more accidental nature. This third section of the paper will present some remarks on how the situations of systematic and accidental syncretization of case may be distinguished in the context of stratificational grammar.

First, an example of a purely accidental case syncretization may be in order to contrast with the systematic examples discussed above. Such an example is provided by the Latin *a*-stem nouns belonging to the so-called first declension,

a class including, for instance, the nouns *puella* 'girl' and *nauta* 'sailor.' In this class the genitive and dative singular share the same ending *ae*, but since dative and genitive are always distinct in the Latin plural, and are always distinct in the singular of all the other declension classes,²⁶ it seems fairly clear that this is a purely accidental syncretization.

In a formal stratificational account, it would seem that systematic and accidental syncretizations of case would be distinguished in the following manner: the systematic ones will be those treated in the realizational portion of the grammar somewhere between the lexemes and the morphemes, while the accidental ones will be treated somewhere below the level of morphemes. It would further appear that the accidental types can be subdivided into two subtypes: morphological syncretizations involving the connection of distinct morphemes to be the same morphemic sign in the morphemic alternation pattern, and phonological syncretizations, which result from a syncretization somewhere below the morphemic stratal system, in the phonology.

The Latin example would appear to be of the morphological type. An example of the phonological type of accidental syncretization is provided by the Russian instrumental singular and dative plural desinences with the respective morphonic shapes ^{MN}/om/ and ^{MN}/am/, which apply to most masculine and neuter nouns in the language. The phonological form of these will usually be distinct, but it will be syncretized when both of these desinences turn out to be unstressed. Examples are provided in table II.²⁷ Only the last two examples show complete syncretization of the forms involved, and such a syncretization results from the completely general phenomenon syncretizing ^{MN}/o/ and ^{MN}/a/ in unstressed positions.

TABLE II
INSTRUMENTAL SINGULAR AND DATIVE PLURAL FORMS OF
SOME RUSSIAN MASCULINE AND NEUTER NOUNS

LEXICAL ITEM	CASE FORM		GLOSS	STRESS TYPE
	Instr. Sing	Dative Pl		
jazyk	jizikóm	jizikám	<i>tongue</i>	DESINENTIAL
vorovstvo	varafstvóm	varafstvám	<i>thief</i>	
zubok	zupkóm	zúpkam	<i>toothlet</i>	DESINENTIAL/STEM
selo	s,ilóm	s,ólam	<i>village</i>	
večer	v,ečiram	v,ičirám	<i>evening</i>	STEM/DESINENTIAL
slovo	slóvam	slavám	<i>word</i>	
voron	vóranam	vóranam	<i>raven</i>	STEM
otečestvo	at,éčistvam	at,éčistvam	<i>fatherland</i>	

There are, of course, further examples of case syncretization whose status as systematic or accidental is much less clear. Elsewhere in Latin, for example, we find syncretization of genitive singular and nominative plural in the declension of all masculine and feminine nouns except those belonging to the third declension: first declension *ae*, second declension *i*., fourth declension *u:s*, and fifth declension *e:s*. This syncretization is certainly not a phonological one, but is it to be regarded as a systematic (supramorphotactic) matter, or is it an accidental matter to be treated in the morphemic alternation pattern? According to stratificational theory, such a question should be answered empirically rather than by speculation. To answer it, we would need to work out a complete account of the Latin declensional system using each of the alternatives being tested to see which way is simpler. Without such experimentation, it is not obvious what the answer will be. Even the clearer cases, of course, can and should be subjected to such experimental verification.

4. A NOTE ON TYPOLOGICAL AND DIACHRONIC IMPLICATIONS

It would be of considerable interest to conduct a broader survey of lexemic and morphemic case discrepancies to determine their relative frequency in the languages of the world. This paper has aimed mainly at pointing out the existence of such discrepancies and the justification for postulating them in the context of a stratificational treatment. It is probable that systematic case discrepancies such as those treated here will not turn out to be particularly frequent, unlike accidental syncretizations, which are very frequent indeed.

If further investigation proves that this conjecture about the relative infrequency of systematic lexomorphemic case discrepancy is indeed correct, it would be of further interest to investigate the matter from a diachronic perspective. Such an investigation might be able to determine, for example, whether the relative rarity of the discrepancies in question is due to a tendency to level in the direction of an isomorphism between lexemic and morphemic case systems. Diachronic investigation into how such discrepancies as those found in Estonian and Dyrbal have arisen would also be of considerable interest.

NOTES

1. They can be seen, for example, in Lamb (1964:212, 216-217); and also in Lamb (1966:185-186).

2. The works consulted were Collinder (1957) and Oinas (1966).

3. The second line of each Estonian example (1) through (11) is an analytical transcription based on the English gloss of the stem involved with a subscript indication of the relevant inflectional categories from the morphology. The following abbreviations are used in these subtitles: Cases—Nom 'nominative,' Prt 'partitive,' Gen 'genitive,' Ill 'illative'; Nominal Number—Pl 'plural'

(singular unmarked); Tenses/Moods—Pr 'present,' Pt 'past,' Ip 'imperative'; Persons—I 'first,' 2 'second,' 3 'third'; Verbal Numbers (after 1, 2, or 3)—s 'singular,' p 'plural.'

4. Oinas simply states that "where the genitive case is used for noun total objects . . . the partitive case may also be used for pronoun total objects" without mentioning any stylistic or other conditioning for the alternation seen in examples (7) and (8) (Oinas 1966:262). Collinder mentions only the use of the partitive for these personal pronoun objects (1957:142).

5. These special realizations apply only to the reflexive pronoun *ise* and the first- and second-person pronouns *mina* 'I,' *sina* 'you(sg),' *meie* 'we,' and *teie* 'you(pl)'. The regular third-person pronouns *tema* 'he, she, it' and *nemad* 'they' behave in the same way as nouns (Oinas 1966:262). (Collinder [1957:142] confirms this except for not mentioning the behavior of *ise*.)

6. Comrie (1975) describes Finnish as having an "anti-ergative" case in its traditional accusative, in that it uses this case for objects only in constructions where an overt subject is or could be expressed, while using the nominative for objects of imperative or impersonal constructions similar to those of Estonian. This is seen as anti-ergative, since we can see the ergative as marking the *subject* in a special way in those constructions where an object is or could be expressed. This interesting view could also be applied to the Estonian material if we do not assume that a single syntactic case system is to be applied to both nouns and pronouns. If we do make this assumption, however, the Finnish lexemic case inventory would appear to be about the same, in the areas treated here, as the Estonian, though Finnish does have a separate accusative (Comrie's "anti-ergative") in its nominal morphology.

7. Additional cases listed by Collinder (1957:140) are the following: Inessive 'in,' Elative 'out of,' Illative 'into,' Adessive 'at,' Ablative 'from,' Allative 'to,' Terminative 'as far as,' Essive 'as,' Translative 'into (change of state),' Abessive 'without,' and Comitative 'with.' The absence of an overt nominative lexeme is explained below.

8. This term is preferable to the former term "neutralization," since it can be used to refer solely to a discrepancy between structural levels, whereas many uses of 'neutralization' also refer to the existence of *suspension*, the situation in which a contrast relevant in some environments on a particular level is irrelevant (suspended) in others. The coincidence of the two phenomena is frequent, but not inevitable. See Lockwood (in press) for further discussion.

9. This is the term used by Oinas (1966:249), while Collinder calls them "passives" (1957:155). The former term seems more accurate, in that such verbs, unlike passives as normally understood, take objects but have no subjects.

10. This happens because the OR node governing the choice of ^M/Gen/ or ^M/Prt/ is unordered, and further because an enabler node allows the line it is attached to to be taken, but does not require it. Only in combination with an ordered node would it be imposed as a requirement.

11. Though such differences exist in Estonian, it should be pointed out that they are not as great as those typically found in Indo-European languages with case systems.

12. Figure 3 must be modified for these purposes by 1) disregarding those parts that deal with the functions of the lexemic nominative and genitive, and the additional functions of the partitive, and 2) breaking down the category 'Nominals' to the same ultimate constituents as those shown at the bottom of figure 5: ^L/Pl/, Noun Phrases, and Pronouns.

13. The count for the amalgam of figures 4 and 5 is $25 + 8 = 33$. The count for figure 3, as modified according to the suggestions set forward in note 12, is $26 + 4 = 30$.

14. The functions of this case in Russian are broadly similar not only to those of the partitive in Estonian, but also to those of a similarly-named case in Finnish (Collinder 1957:17-19).

15. In his *Institutio Oratoria*, chapter 4, as reprinted by Salus (1969:82), from the translation by Watson: "let the tutor consider, also, whether there is not among the Greeks ground for a

sixth case and among us Romans even for a seventh; for when I say *hasta percussi* 'I have struck with a spear' I do not express the sense of an ablative case, nor if I say the same thing in Greek, that of a dative." Robins criticized such a suggestion (1967:53), as has Dinneen (1967:113), the latter commenting, "Were we to follow such a criterion, we would have to admit as many different cases in any language as there are important meanings." Romeo and Tiberio, on the other hand praise the idea, suggesting that "if Quintilian's main interest had been grammar he might further have posited a system of underlying relationships . . . between nouns and verbs; a system . . . that could have anticipated Fillmore's case grammar" (1971:36-37). On the face of it, Quintilian's statement merely suggests a topic for consideration and discussion without indicating what his resolution of the question might have been. Had he provided further discussion of his passing suggestion, he might ultimately have dismissed it on similar grounds to those set forth by Dinneen. Had he been a proto-Fillmorean, on the other hand, he might have accepted it and integrated it into a broader system as suggested by Romeo and Tiberio. And had he been a proto-stratificationist, he might have seen each conclusion as valid in its own way, each on its own stratum! In the absence of further discussion from the works of Quintilian, however, it is rather pointless either to praise or to condemn him for this idea.

16. Halliday (1968) discusses such systems, the transitive one distinguishing actor and goal, the ergative distinguishing causer and affected.

17. Analytical transcriptions of the Dyirbal examples use the following abbreviations: Mk 'Marker' (a determiner-like element agreeing with each head noun in gender and case); Gender subscripts—I 'first class,' II 'second class' (two additional classes are not represented in the examples); Case subscripts—As 'absolute,' Eg 'ergative,' Nm 'nominative,' and Ac 'accusative.'

18. Dixon follows a tradition by which the term *nominative* is used both in contrast to *accusative* in a transitivity system and in contrast to *ergative* in an ergativity system. It would be confusing to follow this usage here since we have both sorts of subsystems in the morphology of one and the same language. The present term *absolute* is suggested in Van Valin (1977) and Van Valin and Foley (1979). Compare also Comrie's use (1975, 1978) of the roughly similar term *absolute*.

19. Since they belong to different strata and each is defined by its particular set of relationships in the tactic and realizational patterns of its own stratum, such categories are *logically* distinct in any event. In the examples under discussion here, however, such categories are not isomorphic even between the lexemic and morphemic strata.

20. Dixon's treatment recognizes the following cases in addition to those dealt with in the present paper: Dative 'to,' Allative '(motion) to,' Locative 'at,' Simple Genitive 'physical possession,' General Genitive 'past or present ownership without present physical possession,' and Ablative 'from.' He also speaks of an Instrumental 'by means of,' which, however, always syncretizes with the Ergative in nouns and apparently does not occur in pronouns. Since his reasons for distinguishing the Instrumental and Ergative (1972: 94-95) are entirely matters of paraphrase possibilities and the like, they would appear to apply to semological role rather than syntactic case when considered in the context of a stratificational model. Dative and Allative appear to exemplify an additional instance of partial syncretization, in that they always syncretize in the noun while remaining distinct in the marker (1972:42).

21. Dixon's map (1972:25) locates the speakers of all three dialects in a rain forest region between the towns of Cairns and Cardwell near the Pacific coast of northern Queensland. None of these dialects is reported as having a large number of fluent speakers today. For Dyirbal the total is reported as "two dozen," for Giramay "eight or ten," and for Mamu "not many more than six," all as of 1970 (1972:37).

22. We are not told by Dixon how much stylistic coherence to expect in the use or non-use of the differentiating suffix when it is possible.

23. Dixon does not tell us whether speakers of all three geographic (and tribal) dialects use both of the stylistic dialects.

24. Comrie (1978) cites evidence for an antipassive in several other languages: Quiché (Mayan: Guatemala); Kala Lagau Langu (Australia); Walbiri (Pama-Nyungan: Central Australia); and the Bzhedukh dialect of West Circassian (Northwest Caucasia: U.S.S.R.).

25. Dixon in fact cites further examples in which a -*ŋay* construction shows the ^S/CAUSER/ in the ^L/Subjective/ (^M/Absolutive/) and the ^S/AFFECTED/ in the ^L/Dative/. A further alternative to (26) and (27), for example, would be (1972:65):

bayi yara bagul bargangu durgananu
Mk_{IA_s} man_{As} Mk_{ID_s} wallaby_{D_s} is-spear_{g_s} (Dt=Dative)

He seeks to explain the difference between this and (27) by pointing out that the agent is treated as "topic" in both cases, but that the use of the Dative indicates in addition "that the actor is positively implicating the goal in the event" (1972:66). Neither this nor a more extended discussion in terms of transformational "deep syntax" (1972:147-176) is sufficiently lucid about the semantic facts to justify even a preliminary guess about the semological interpretation of this distribution.

26. For example: second-declension nouns have genitive singular in *i*: and dative singular in *o*; third-declension nouns have genitive singular in *is* and dative singular in *e* or *i*; fourth-declension nouns have genitive singular in *u*:s and dative singular in *u*; fifth-declension nouns have genitive singular in *e*:s and dative singular in *ei*.

27. Items in the column labeled "LEXICAL ITEM" are cited in a transliteration of the nominative singular form. The examples of individual case forms, however, are cited in a classical phonemic transcription, which in stratificational terms may be seen as an essentially segmental way of writing bundles of phonons.

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