

The *Lemmings* Theory of Case*

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1 Introduction

This paper gives a unified and feature-based account of the typology of Case systems. In particular the following three criteria will be used to classify the different Case systems that are considered. The first criterion is the traditional one between ergative and accusative systems. The second criterion, taken from Bittner & Hale (1994), is the distinction between stative and active languages, where active languages are those that assign different Cases to the subjects of unaccusative and unergative verbs, e.g. Basque and Eastern Pomo. The third criterion is the distinction between languages that allow quirky Case on the subjects of experiencer verb like Icelandic and those that do not e.g. Classical Latin and German.

The distinction between linguistic parameters and classical criteria which are used to classify the data in the typological literature is important here. There are a number of reasons not to take the above-mentioned criteria as parameters. Firstly, a conceptual motive against this approach is that it would not fit into a more restrictive theory of linguistic variation which adopts the lexical parameterization hypothesis (Borer (1981), Manzini & Wexler (1987)) and the reduction of syntactic variation to the setting of the feature strength values (Chomsky (1993)). Secondly, a system with the parameters \pm ergative, \pm active, and \pm quirky would make an incorrect empirical prediction for the case of split ergative languages where the setting of the parameter \pm ergative varies with the aspectual properties of the verb. Given the above parameterization we would expect the setting of the parameter \pm active to be insensitive to this variation in a language. All we find however are languages like Georgian which are ergative active

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in the aorist tenses and accusative stative in the present tenses, whereas no language as far as I know shows the expected variation between an ergative active and an accusative active system. This shows that we should not use the classical classification criteria directly as the linguistic parameters. Rather we should look for deeper parameters that may be only indirectly related to the variation in the overt forms.

The system presented ascribes the linguistic variation to the feature strength of the Case morphemes. Within a general framework that reduces the theory of syntax entirely to economy considerations and a formal system of feature checking as it is proposed in Chomsky (1995b) a solution of the type presented here is the only acceptable one.

In the course of the discussion, I will argue for a modification of the notion of feature strength that Chomsky (1995b) presents. In the framework of the *Minimalist Program* feature checking is the sole motivation for syntactic movement. Despite its central importance, the viability of alternatives to the Chomskyan *strong/weak*-dichotomy have not been investigated, with the exception of Pesetsky (1989). The system I will adopt is a version of Pesetsky's (1989) earliness presented in a feature-based formulation.¹

2 Problems with the Position-based Case Theory

In this section, I will present the position based theory of Case that underlies much of the current work in syntax, and subsequently present three reasons that, in my opinion, require us to abandon this hypothesis.² While I here argue against one element of the positionists proposal, I should make it clear that I agree with two conclusions of the recent work in this framework: Firstly, with Bobaljik's (1993) conclusion that in ergative languages the subject is structurally higher than the object; Secondly, with Chomsky's (1995a) formulation of the Case-Filter as overt licensing of the D-Feature.

The positionists' proposal is to equate four aspects associated with the grammatical roles subject and object with respect to Case, binding properties, agreement, and linear position. For *subjects* these are: nominative/ergative Case, possible antecedenthood for subject oriented anaphora, subject agreement, and in languages with rigid word-order a specific linear position in the clause. And for *objects* the corresponding properties are: accusative/absolute Case, possible antecedenthood for anti-subject oriented anaphora, object agreement, and a linear position. In the strongest form of positionism all four of the above properties are claimed to be the invariable properties of one specific structural position which are only absent in lexical exceptions. The critiques of the positionists' idea I will address below all

¹See also Diesing & Jelinek (1993) for an argument in favor of *Earliness* based on the syntactic distribution of objects in Scandinavian languages and Egyptian Arabic.

²For reasons of space, I will not discuss the alternative views on case theory presented in Marantz (1991), Bittner & Hale (1994), and King (1994). As the reader will see, my proposal has certain similarities with the system of Marantz (1991).

have the character of showing the domain that for the positionist belongs to the class of lexical exceptions shows equal regularity as the domain that in positionism forms the small domain of the regular.

Most clearly spelled out in a cross-linguistic perspective is the positionists' proposal in Bobaljik (1993). He assumes that two functional projections Agr1 and Agr2 are the positions that the nominal arguments in a clause move to, to check off their Case features. Agr1 checks nominative/ergative Case, and Agr2 checks accusative/absolute Case. In intransitives a parameter—the Obligatory Case Parameter (OCP)—decides which Case has to be checked off: In accusative languages this is the Case of Agr1, in ergative languages the Case of Agr2.³

2.1 Quirky Case

A first kind of counterexample to the positionist proposal is that of nominative Case on the object in Icelandic. Since Icelandic with most verbs has a nominative-accusative Case pattern as in (1-a) below, this is unexpected on the positionists' theory. I greatly abbreviate the argument of Harley (1994): Example (1-a) shows that in normal transitive clauses the subject is marked with nominative Case, the object with accusative Case. As (1-b) shows, subject experiencer verbs form an exception to this. Here the subject *Calvini* is marked with dative Case, and the object is marked with nominative Case.

- (1) a. Calvin luku prófinu (Icelandic, Harley (1994))
 Calvin_{NOM} finished test-the_{ACC}
 ‘Calvin finished the job.’
 b. **Calvini** líki verkið
 Calvin_{DAT} like job-the_{NOM}
 ‘Calvin likes the job.’

Further evidence given in Zaenen *et al.* (1985) and Harley (1994) on the subject experiencer verbs of Icelandic establishes the following three facts: Firstly, the dative subject has subject properties with respect to the binding theory which the nominative object is lacking, and hence it is correct to identify *Calvini* as the subject of (1-b). Secondly, that the nominative Case on the object of (1-b) is structural. And thirdly, that the nominative

³An interesting extension and modification of Bobaljik's (1993) proposal was presented in Austin & Lopez (1994). Adopting the clause structure of Collins & Thráinsson (1993), Austin & Lopez (1994) assume a third Case-checking position—the Specifier of AgrP3. Their Unmarked Case Principle (UCP) enforces that the subjects of intransitives check their Case features with one specified Agr, if the movement necessary for this checking is upward. This allows Austin & Lopez (1994) to represent a third type of language; one where the Case of Agr3 is obligatory—Basque is the example they use. However, since the Austin & Lopez's (1994) analysis of the other two classes of languages is the same as that of Bobaljik (1993), the criticisms below still apply.

Case on the object cannot be checked in the second, lower subject position Spec(TP) of Jonas & Bobaljik (1993). Hence, I conclude that (1) provides direct counterevidence to positionism.

2.2 Nominative and Absolutive in Split Ergativity

In the positionist proposal, nominative Case is licensed in the subject position Spec(AgrS), whereas absolutive Case is licensed in the object position Spec(AgrO). This would lead one to expect that the two Cases are different in languages which show both Cases. Such languages are the split ergative languages, which exhibit a nominative-accusative Case pattern in one tense, a ergative-absolutive one in a different tense. However, the nominative and absolutive Cases in an overwhelming number of the split-ergative languages, are morphologically identical.⁴ The following examples from Georgian show this clearly.⁵

- (2) Georgian, King (1994)
- a. dedam **Cerili** daCera
 mother_{ERG} letter_{ABS} write_{3S-3O-Aorist}
 ‘Mother wrote a letter.’
- b. **Cerili** gKlavs
 the-letter_{NOM} kill_{3S-2O-Present}
 ‘The letter is killing you.’

Example (2-a) is a sentence in the Aorist tense, which enforces ergative-absolutive Case-marking. (2-b) makes the point that the absolutive form *Cerili* is the same as the nominative subject of (2-b), which is in the present tense and hence exhibits a nominative-accusative case-marking system.

2.3 Accusative Agreement and Ergative Case Simultaneously

The third kind of counter-evidence in this section suggests that the correlation between agreement and Case marking postulated by positionism is incorrect. Such evidence comes from Warlpiri. In Warlpiri the Case pattern is always ergative, but the agreement morphology follows an accusative pattern where subjects of intransitives pattern with the subjects of transitives. This is exemplified in (3): (3-a) shows that the agreement affixes on the auxiliary in second position are *npa* with the second person ergative subject, *ju* with the first person absolutive object. (3-b) and (3-c)

⁴Yimas, according to the analysis of Phillips (1994a, 1994b), seems to be an exception. However, the Yimas data involves only the positioning and shape of affixes internal to the verb. Hence, there might be a number of reasons for the noted difference to the bulk of the split-ergative languages.

⁵In all the examples in this paper I will follow the conventions for glosses that were used in the original source of the example.

show that in intransitives the agreement used is subject agreement; (3-c) is ungrammatical with the first person object agreement *ju* used in (3-a).

- (3) Warlpiri, Bittner & Hale (1994)
- a. nyuntulu-rlu ka-**npa-ju** ngaju nya-nyi
you-ERG Pres-2SG-1SG me_{NOM} see-NPST
‘You see me.’
 - b. nyuntu ka-**npa** parnka-mi
you PRS-2SG RUN-NPST
‘You are running.’
 - c. ngaju ka-**rna** parnka-mi
me PRS-1SG run-NPST
‘I am running.’

Hence, I conclude that Agreement projections do not offer a successful unification of all the properties associated with the grammatical roles subject and object. Case-marking in particular seems to be independent of the other properties of subjects/objects. In the following section, I will develop an alternative to the positionists proposal.

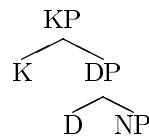
3 The *Lemmings*-Theory of Case

3.1 Theoretical Background

Before I state the proposal, I have to explain three assumptions that I adopt. These assumptions have been argued for in the literature I refer to, and I will not repeat the argumentation here.

Assumption I: Case-morphemes belong to the category K, that selects a DP-complement (Lamontagne & Travis (1993), Bittner & Hale (1994)).

Hence the structure of the nominal phrases with a Case morpheme is the following:



Assumption II: The subject is structurally higher than the object in both ergative and accusative languages (Marantz (1991), Bobaljik (1993)).

Whereas this assumption is uncontroversial for accusative languages, for ergative languages the opposite is frequently assumed, e.g. in Murasugi (1992). Especially Bobaljik (1993) presents a number of convincing binding asymmetries which favor the above assumption.

Assumption III: Nominative/absolute Case is the morphological reflex of the absence of Case features (Bittner & Hale (1994), Mahajan (1994)).

This assumption expresses an endorsement of two ideas: Firstly, that nominative and absolute Case are the same Case as I also argued in section 2.2. Secondly, that this Case, which I will call *Nominative* henceforth, is represented by the absence of Case features. Suggestive in favor of this assumption is that in many languages the nominative is marked by no phonological affixation.⁶

3.2 The Proposal I: Distribution of Underlying Case

The question arising, once we take the above three assumptions together is, is: Why can the K-head of a nominative noun phrase be empty? I adopt the assumption of Mahajan (1994) that the Case features disappeared in the course of the derivation and hence are not pronounced. Specifically, the Case morpheme of the argument surfacing with nominative Case, incorporates into the Tense-head. More generally the hypothesis I will pursue in this paper is the following:

Suicidal Case Hypothesis (SCHY): The Case-morphemes of all nominal arguments incorporate into Tense, overtly or covertly. At most one of them incorporates overtly, which surfaces as nominative/absolute Case.

This hypothesis is inspired by Mahajan's (1994) proposal for Hindi Ergativity, but different in some important respects. Mahajan proposes that subjects are universally marked with ergative Case in the underlying representation. Furthermore he assumes that in accusative languages the ergative marker incorporates into the verb, whereas in ergative languages incorporation is blocked because subject and verb are not adjacent. Hence Hindi as a verb-final language is predicted to be ergative, which is correct.

However, Mahajan's (1994) explanation of ergativity has a number of problems. The most serious one is the following: His link between OV word-order and ergativity, is supposed to account for the following implicational universal: If a language is ergative, then it is verb-peripheral. However, the implication Mahajan's (1994) theory predicts is the opposite one: If a language is verb-peripheral, that it is ergative. Whereas the first implication is, as far as I know, true, the second one is definitely false. Japanese and Korean are clear examples of verb-final languages which do exhibit an accusative Case-marking system. Of Mahajan's (1994) approach, I only adopt the idea that nominative Case is the result incorporation of the Case

⁶That nevertheless in some languages, e.g. Latin and German, nominative Case is marked with an overt affix forces us to adopt the assumption of the late insertion of phonological information in the course of the derivation as argued for in Anderson (1982) and Halle & Marantz (1993).

morpheme into the verbal complex. To describe the restrictions on this incorporation I will develop a novel feature system.

A important question lurking in the background is here: Assuming that nominative Case is derived, how is the underlying Case of a nominal argument determined? I postulate here that the underlying Case of an argument is predictable from its thematic properties. I assume that the following relations between thematic role and underlying case of an argument hold, where I follow Pesetsky (1994) in assuming that Psych-verbs have special thematic properties:

θ -role	underlying Case
Agent	Ergative
Patient	Accusative
Subject Experiencer	Oblique
Object Experiencer	
Partitives, ...	

Taken at face value, the system so far makes predicts that all languages should have the same Case system, except for the distribution of nominative Case. However, as already mentioned, we assume the theory of late insertion of phonological information within a morphological component following syntax following Halle & Marantz (1993). It is within this morphological component that conversions between different cases may take place. The most frequent conversion process is absence of one Case morpheme, which is then spelled out by a less specified Case morpheme. We find this historically attested as the loss of a Case morpheme, e.g. in Old High German (Braune (1963)) where the instrumental case was lost and dative was used in the same positions. The explanation I propose is that dative is the default oblique Case and hence less marked than instrumental, which is a more specified oblique Case. That the loss of instrumental Case endings automatically triggered the insertion of the dative endings is an instantiation of the morphological competition of Distributed Morphology, where the less specified lexical item is used only no more specific one is available.

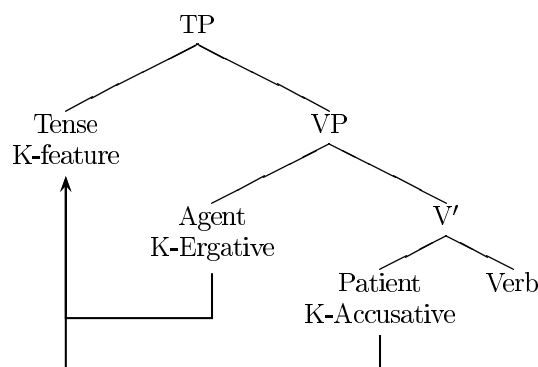
Also crosslinguistic evidence in favor of the semantic determination of Case-marking has been found. See e.g. Blume (1995) and the references therein. Blume (1995) investigates the Polish, Hungarian, and Rumanian equivalents of German verbs that mark their object with dative case. One of her findings is that the German Dative often corresponds to the more specific oblique Cases allative, comitative, ablative, elative, sublative, and translative of Hungarian (Blume (1995:Anhang III)).

3.3 The Proposal II: Distribution of Nominative Case

Two thirds of the proposal have already been presented: Firstly, the cross-linguistically uniform assignment of underlying Case according to thematic

properties. Secondly, the representation of nominative Case as the absence of K-features due to incorporation of the underlying Case-features into tense. In this section, I will lay out the mechanism which will account for the distribution of nominative Case.

The underlying representation of an ordinary transitive clause like the English sentence *Bill hit John* is according to my proposal the following, where the arrows indicate the incorporation of the ergative and accusative morpheme into tense in the process of the derivation:



Since I made the assumption the incorporation of the Case-morpheme into Tense is driven by feature-checking, the Tense-head has to contain a K-feature. This is the K-feature the Case-morphemes of the nominal arguments can check off their K-features with.

The only distinction that exists is whether the checking off of the K-features happens overtly (before Spell-Out) or covertly (after Spell-Out). In the system of Chomsky (1993) this distinction can be made using the strong/weak distinction. There, a strong feature is one which only if checked off overtly does not cause the derivation to crash.⁷ By looking at Icelandic data, we will see that the notion of a *strong* feature in this sentence has to be replaced by the slightly different notion of an *early* feature.

The attested Case markings in Icelandic are: Ordinary nominative-accusative Case-marking with most verbs, but with subject experiences predicates (see example (1-b) above) dative Case on the subject and nominative Case on the object. Under the above assumptions this surface patterns are derived from the following underlying Case marking patterns:

<i>Icelandic</i>	unerg.	unacc.	trans.	exp. pred.	exp. pred.
underlying	ERG	ACC	ERG ACC	DAT ACC	DAT GEN
surface	nom	nom	nom ACC	DAT nom	DAT GEN

⁷In Chomsky (1995a) the interpretation of a strong feature is slightly different: It has to be checked off by an merge/move operation that targets a projection the strong feature is heading. Since this proposal prohibits strong features to figure themselves as the motivation for movement, it is obviously incompatible with the analysis presented below.

The generalization is that ergative Case disappears by incorporation into Tense whenever the subject is in the ergative Case. Accusative Case disappears only, if no ergative case marked argument is present in the same clause. If all nominal arguments are marked with oblique case none of the underlying case markings changes. It can be easily seen, that this distribution of Case cannot be explained using the strength-values of features that Chomsky (1993) assumes. The fact that does not fit into the strong/weak dichotomy is that the accusative case morpheme sometimes moves overtly but not if an ergative case morpheme is also present in the clause. Since, accusative does not always move in the strong/weak-system we have to represent it as weak. But then we have to assume for the cases where accusative moves that the K-feature of Tense is strong. However this cannot be the case, since sentences where no K-morpheme incorporates exist, e.g. those with a dative subject and an genitive object.

The reason the strong/weak system cannot account for the Icelandic pattern, is that the movement of accusative case is enforced by a violable constraint. Three descriptive conditions can characterize the distribution of nominative case in Icelandic: Firstly, there is at most one argument with nominative case. Both, the ergative and accusative case morphemes, prefer to incorporate overtly, but incorporation of the ergative is always preferred over that of the accusative.

More formally this can be expressed using the Earliness-idea of Pesetsky (1989). I propose that strong features do not exist, and that the strong/weak dichotomy should be supplanted by an early/late system. Intuitively, early features prefer to be overtly checked, whereas late features prefer to be covertly checked. Derivationally, the first statement is expressed in the following condition:

Earliness: At any point of the derivation do that (one of the) move(s) next, that checks the greatest number of *early* features.

The behavior of late features can be explained by appeal to the *Procrastinate* condition of Chomsky (1993), which states that covert movement is preferred over overt movement.

The *Earliness*-proposal will enable us to give an accurate account of the distribution of nominative case in Icelandic. In addition it will give us a whole typology of possible case markings, which is described and illustrated with attested examples in the following section.

3.4 Case Typology

Accusative Quirky Languages With earliness at our disposal we can describe with the following settings for the feature strength of the K-features:

K-feature on	ERG	ACC	oblique Cases ⁸	Tense
Strength	early	early	late	late

Let us see how these settings account for the examples in (1) repeated in (4). For the transitive clause with the verb *finish*, which has the thematic roles Agent and Theme, the underlying Case-marking is ergative on the subject and accusative on the object. Both K-morphemes have an early Case feature. Hence both movements, that of the ergative morpheme to Tense and that of the accusative morpheme are equally good from the perspective of earliness, as both check off one early feature. In the case of such a tie the shortest move requirement of Chomsky (1993) decides which movement takes place first.⁹ Because the subject is structurally higher the movement of the ergative morpheme to Tense is shorter than that of the accusative morpheme. For this reason the ergative morpheme moves first checking off its own K-feature against that of Tense. Hence the subject appears in the nominative case. Furthermore, I assume that for morphological reasons in all the languages I will be looking at most one K-morpheme can incorporate overtly into Tense.¹⁰ The result is then, that the subject surfaces with nominative case and the object with accusative case.

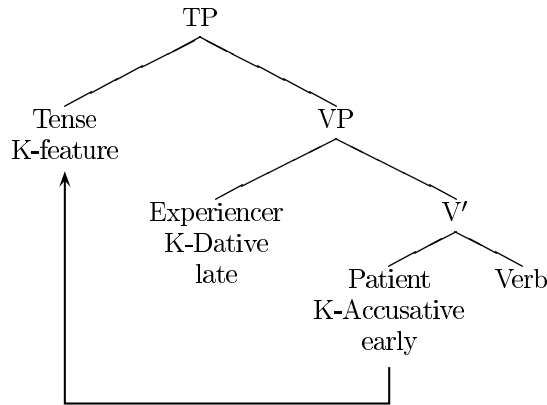
- (4) a. Calvin luku prófinu.
 Calvin_{NOM} finished test-the_{ACC}
 ‘Calvin finished the job.’
- b. **Calvini** líki verkið.
 Calvin_{DAT} like job-the_{NOM}
 ‘Calvin likes the job.’

In the quirky case example (4-b) the subject does not have an agent theta-role. Hence it receives an oblique case-marking in the underlying representation, which has a weak K-feature. This situation is shown in the following diagram:

⁸The K-features of the oblique Cases in all the languages under consideration will turn out to be *late* in these sections. I think, that in principle the potential for an *early* oblique case is there, and its rarity can be explained on different grounds. This issue is discussed in section 3.5.

⁹This can be expressed, using the idea of ranked constraints from Prince & Smolensky (1994) as: earliness \gg shortest move. Note that the opposite ranking (shortest move \gg earliness) would have the effect that no movement takes place, because shortest move will prefer non-movement to all other possibilities. I assume hence that the ranking of the two constraints is not subject to typological variation.

¹⁰It is possible that this morphological requirement does not hold for languages which have no overt case-marking and hence all the K-features incorporate overtly which would cause all case marking to disappear. Also in the case of multiple nominative constructions of e.g. Japanese and Korean, I assume that the K-feature of two nominal arguments check their K-feature against that of Tense, though probably by different mechanisms.



In this case the accusative Case morpheme moves first as the arrow indicates, because this movement checks-off one early feature, whereas incorporation of the oblique K-morpheme of the subject, though shorter, checks off no early-features and hence is dispreferred. The result is oblique (dative) case on the subject and nominative case on the object, as seen in (4-b). Note again, that for this explanation earliness has to be more important than shortest move.

Accusative Languages Whereas Icelandic is not unique as an accusative language with quirky case marking—Korean, Japanese, Russian, and Kashmiri show similar facts—there are also languages which have overt case marking, but do not seem to exhibit quirky case. Three examples are German and Classical Latin¹¹, and also English though English does not distinguish between Accusative and Dative Case. The case marking pattern of these languages is the following:

<i>German</i>	unerg.	unacc.	trans.	exp. pred.	exp. pred.
underlying	ERG	ACC	ERG ACC	DAT ACC	DAT GEN
surface	nom	nom	nom ACC	erg ACC	nom GEN

The German examples in (5) translations of the Icelandic ones in (4), but the German sentence (5-b) exhibits a nominative subject and an accusative object, whereas in Icelandic the case marking was dative-nominative.

- (5) a. Calvin beendete den Test.
 Calvin_{NOM} finished the test_{ACC}
 b. Calvin mag die Arbeit.
 Calvin_{NOM} likes the job_{ACC}

¹¹Ura (p.c.) pointed out, that the same Dative Subject Construction as in Icelandic was found in Late (Vulgar) Latin.

The German system can be described with the following parameter settings. As in Icelandic the *early* K-feature on the ergative morpheme ensures that ergative case never surfaces, but always appears as nominative. The K-feature of accusative has to be late, since with subject experiencer verbs we would otherwise expect that the incorporation of the accusative morpheme of the object is preferred over that of the dative morpheme on the subject. We however need to enforce incorporation of the dative morpheme. This is done by assigning to Tense an *early* K-feature, because this also explains that with an unaccusative predicate the single argument, which is underlyingly accusative, surfaces with nominative case. In both cases incorporation of the *late* K-feature of the subject is enforced because the *early* K-feature of Tense is thereby checked. In summary the analysis of accusative languages is the following:

K-feature on	ERG	ACC	oblique Cases	Tense
Strength	early	late	late	early

Ergative Quirky Languages The Case-system corresponding to Icelandic in the domain of the ergative languages is that of Niuean (cf. Massam (1994)). In Niuean most transitives exhibit ergative-nominative case marking. There are however circumstances which force the thematic object to surface in an oblique case. In these cases the subject always appears in the nominative case instead of ergative. An paradigm illustrating this property is given in (6): (6-a) has ergative Case on the subject and nominative Case on the object. The object can also surface in the locative case which brings about a partitive interpretation as (6-b) shows. The oblique case on the object also enforces nominative Case on the subject. This is also true with a class of perception and Psych-verbs

- (6) a. Koe kai **he**-tama e-talo. (Niuean, Massam (1994))
 Pres eat ERG-we_{Excl} NOM-taro
 ‘The child is eating up the taro.’
 b. Koe kai **e**-tama he-talo. (partitive)
 Pres eat NOM-we_{Excl} LOC-taro
 ‘The child is eating of the taro.’

In summary, the possible underlying and surface Case-distributions I assume for Niuean are given in the following table:

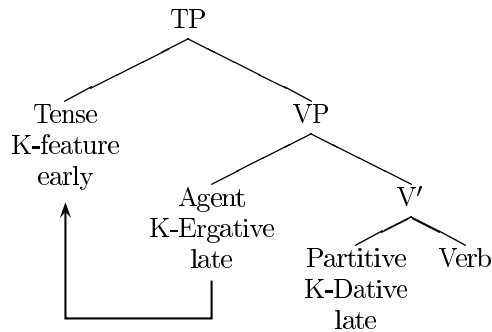
<i>Niuean</i>	unergatives	unaccusatives	transitives	perception vs.
underlying	ERG	ACC	ERG ACC	ERG LOC
surface	nom	nom	ERG nom	nom LOC

This system can be described by the following settings of strength-values for the K-features.

K-feature on	ERG	ACC	oblique Cases	Tense
Strength	late	early	late	early

In general if ergative Case has a *late* K-feature and accusative Case has an *early* one the result will be overt incorporation of the accusative. Hence all languages with this combination will be ergative languages. Niuean has in addition an *early* K-feature on tense, which ensures that in all clauses with nominal arguments one of them will surface with nominative Case.

The derivation for example (6-b) can be seen in the tree diagram below. Both KPs in the argument positions have a late early K-feature. The only *early* K-feature is that of tense. This however enforces overt movement of one of the K-morphemes to Tense, because this movement checks off one early K-feature, namely that of Tense.



Ergative Active Languages The next kind of Case-system is exemplified by Basque. The term *active* as introduced by Bittner & Hale (1994) indicates that the Basque case-marking system draws a distinction between unaccusative and unergative predicates. What we find in Basque is ergative-nominative case marking in transitive clauses as shown in (7-a), ergative on the subjects of unergatives in (7-b), but nominative on the subjects of unaccusatives in (7-c).

- (7) a. **Miren-ek** ni jo n-au (Basque, transitive)
 Miren-ERG 1SG_{NOM} hit 1SG-have-3SG
 ‘Miren hit me.’
- b. **Miren-ek** hitz egin du (unergative)
 Miren-ERG word done have-3SG
 ‘Miren spoke.’
- c. **Miren** erori d-a (unaccusative)
 Miren_{NOM} fallen 3SG-be
 ‘Miren fell.’

The following table summarizes the distribution of underlying and surface Case marking in Basque.

<i>Basque</i>	unergatives	unaccusatives	transitives
underlying	ERG	ACC	ERG ACC
surface	ERG	nom	ERG nom

The analysis I propose for Basque differs from that for ergative quirky languages only in the strength of the K-feature of Tense. Hence only underlying accusatives will ever incorporate into Tense in Basque; in clauses which contain no *theme*-argument the underlying Case marking surfaces unchanged.

K-feature on	ERG	ACC	oblique Cases	Tense
Strength	late	early	late	late

Accusative Active Languages A discovery of Bittner & Hale (1994) is that a class of accusative ergative languages corresponding to the ergative active languages of the previous section has to be recognized. One example of such a language is Eastern Pomo (McLendon (1978)).¹² Eastern Pomo is a split ergative language which exhibits ergative case marking with non-pronominal arguments and a system similar to an accusative one with pronominal arguments that is exemplified in (8). The pronouns appear only in two cases, nominative or accusative/oblique. Only the agent-subject of a transitive in (8-a) and the subject of an unergatives in (8-b) exhibit nominative case; the object of the transitive in (8-a) the subject of an unaccusative in (8-c) and both subject and object of a subject-experiencer verb in (8-d) surface with accusative case.

- (8) a. **ha** mípal šáka (Eastern Pomo, McLendon (1978:(2)))
 1SG_{NOM} 3SG_{ACC} killed
 b. **ha** wádukiya
 1SG_{NOM} am-going
 c. **wí** ?éčkiya (McLendon (1978:(8)))
 1SG_{ACC} sneezed
 d. míral **wí** mará (McLendon (1978:(15)))
 3SG_{ACC} 1SG_{ACC} love

The underlying and the corresponding surface Case marking possibilities of Eastern Pomo are given in the following table:

<i>Eastern Pomo</i>	unergatives	unaccusatives	transitives	exp. pred
underlying	ERG	ACC	ERG ACC	DAT ACC
surface	nom	ACC	nom ACC	ACC ACC

¹²Other alleged examples of such a language mentioned in McLendon (1978) and Bittner & Hale (1994) are Acehnese, Dakota, Wichita and Bats. I have been able to neither verify nor to disconfirm this information.

The K-feature strength of the case-morphemes that the pronouns in Eastern Pomo select are the following:

K-feature on	ERG	ACC	oblique Cases	Tense
Strength	early	late	late	late

Three-Way Languages The final class of the typology is what Bittner & Hale (1994) calls a three-way language. The illustrating example which I use here is Antekerrepenhe. As we see in (9), Antekerrepenhe draws a distinction between transitive and intransitive clauses. With the intransitive in (9-c) the subject surfaces in the nominative Case. In transitives however neither subject nor object surface with nominative Case, but rather with ergative and accusative as shown in (9-a) and (9-b).

- (9) Antekerrepenhe, Bittner & Hale (1994)
- a. **arengke-le** aye-nhe ke-ke
dog-ERG me-ACC bite-PST
'The dog bit me.'
 - b. apwerte-le athe **arengke-nhe** we-ke
stones-INS I_{NOM} dog-ACC pelt-PST
'I pelted the dog with stones.'
 - c. **arengke** nterre-ke
dog_{NOM} run-PST
'The dog ran.'

This distribution is summarized in the following table.

<i>Antekerrepenhe</i>	unergatives	unaccusatives	transitives
underlying	ERG	ACC	ERG ACC
surface	nom	nom	ERG ACC

While the nominative Case in the intransitives can be explained by postulating that the K-feature of Tense is *early* in this case, for the transitives I assume that all K-features are late and hence the underlying cases surface. The difference between the transitives and intransitives is then that the transitives select a *late* Tense morpheme, whereas the intransitives select an *early* one. The settings for the Antekerrepenhe transitives are given in the following table:¹³

¹³There is a reason that we do not have a clear example of a language which has the *late* K-features throughout. In such a language the distribution of surface case marking would be indistinguishable from that of an ergative active or an accusative active language, because in all three types of language the subjects of unergatives and transitives and the objects of unaccusatives and transitives exhibit the same case marking. Hence the pattern is the same, only which case we call nominative differs. Only in a split ergative language will we be able to really determine which Case is nominative.

K-feature on	ERG	ACC	oblique Cases	Tense
Strength	late	late	late	late

Summary of the Typology The case marking typology predicted and discussed so far is given in the table below. In the three columns underneath parameterization the strength settings for the K-features of the Tense, ergative and accusative morphemes are given. In the middle columns the surface form is given for an clause which has the underlying Case marking given in the second row of the same column and the parameter setting given in the corresponding left columns. In the final column, the name introduced above for languages which exhibit this type of case pattern is given.

Parametrization			Underlying Case and Surface Case					Class
Tense	ERG	ACC	ERG	ACC	ERG ACC	OBL ACC	ERG OBL	
early	early	early	nom	nom	nom ACC	OBL nom	nom OBL	acc.qui.
early	early	late	nom	nom	nom ACC	nom ACC	nom OBL	acc.
early	late	early	nom	nom	ERG nom	OBL nom	nom OBL	erg.qui.
early	late	late	nom	nom	nom ACC	nom ACC	nom OBL	= acc.
late	early	early	nom	nom	nom ACC	OBL nom	nom OBL	= acc.qui.
late	early	late	nom	ACC	nom ACC	OBL ACC	nom OBL	acc.act.
late	late	early	ERG	nom	ERG nom	OBL nom	ERG OBL	erg.act.
late	late	late	ERG	ACC	ERG ACC	OBL ACC	ERG OBL	three

We see in the table that two pairs of possible parameter settings are indistinguishable. The second and fourth line both yield plain accusative languages of the German-type, the first and sixth line both yield accusative quirky languages like Icelandic. Looking at other proposed systems of linguistic parameterization like Halle & Idsardi (1993), and McCarthy & Prince (1993) for the domain of stress-marking this amount of redundancy seems to be quite good, even though it is in principle unwanted.

3.5 The Strength of the Oblique Cases

A quite serious flaw of the analysis so far is that at least one type of Case marking system is missing from the typology given. These are the plain ergative systems like Warlpiri. The case distribution in such system is similar to that of Niuean, which was discussed above, but it shows no sensitivity to quirky case on the object. The underlying and surface cases are the following:

<i>Warlpiri</i>	unergatives	unaccusatives	transitives	perception vs.
underlying	ERG	ACC	ERG ACC	ERG OBL
surface	nom	nom	ERG nom	ERG nom

The only way to describe this system within the set of assumptions made the far is to ascribe an *early* K-feature to the oblique Case morphemes

that might occur underlyingly in the object position. This is given in the following table, OBL1 is the oblique Case that corresponds to the theta-role Psych-verbs assign to their object, OBL2 corresponds to any other oblique case:

K-feature on	ERG	ACC	OBL1	OBL2	Tense
Strength	late	early	early	late	early

There are other parameter settings where the strength of an oblique case would be visible. In general, however such oblique Case morphemes are hard to find for a variety of reasons: If the default setting for the strength of the K-feature for oblique Cases is late, it is plausible that a child learning a language with an *early* K-feature on an oblique case would be more likely to misanalyze this as a *late* K-feature. This misanalysis is more likely here than in other cases, because the data which would show the earliness of an oblique case morpheme is relatively rare for two reasons. First of all, the verbs that assign the corresponding thematic roles are not as frequent as ordinary agent-theme verbs. Secondly, if the arguments marked with oblique case appear usually below agents and themes in the clause structure. Hence, if either the ergative case-morpheme on agents or the accusative case-morpheme on themes is *early* the setting of the strength-parameter for an oblique case corresponding to a thematic role that occurs below both of them will be unobservable in normal transitive clauses which have the thematic roles agent and patient.

4 Two Further Remarks

4.1 SVO-order and Ergativity

In this section, I offer an account for Mahajan’s (1994) following generalization, which as far as I know is a universal:

- (10) Mahajan’s (1994) Generalization: All Ergative languages are verb-peripheral or have a free word-order.¹⁴

On my account ergative languages are characterized by the fact, that the weak K-feature on the ergative subject needs to be checked at LF. What Mahajan’s Generalization tells us then, is that this checking-movement is

¹⁴An exception already mentioned by Mahajan (1994) is Kashmiri. However, Kashmiri exhibits a verb-second clause structure similar to Yiddish and Icelandic as the following example show (cf. Hook & Manaster-Ramer (1985), Raina (1991)):

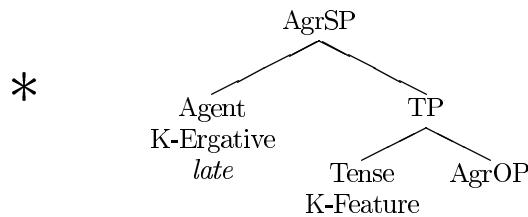
- (i) a. harian von ze ram chu shamas kitab divan (Raina 1991:184)
 Hari say that Ram is Sham book giving
 b. varI-varI chu ram bat khevan (Raina 1991:187)
 slowly is Ram rice eating

Hence, I assume that the subject always reconstructs into an A-position below tense. This would then accord to my account of Mahajan’s Generalization.

not possible from a subject position that is higher than the verb. This leads us to the more general claim that covert checking is only possible, if the feature that is targeted by the checking-movement c-commands feature that is moving at the point of Spell-out. This follows from the following natural claim within the formal system of Chomsky (1995a) which was suggested to me by Bobaljik (p.c.):

Generalized Pied-Piping: At LF only moving formal features that get checked by moving themselves are pied-piped.

This principle rules out the Spell-out configuration depicted below. The reason is that even though some features of the Tense nodes move covertly to higher head-positions in the clause, the above principle ensures that the K-feature of Tense stays in the surface position of Tense because the K-feature of Tense is checked as the target of a movement. But then covert checking of the *late* K-feature on the subject's ergative morpheme is not possible. Hence it follows that, the morpheme Tense must c-command the highest A-position that the Ergative Subject/Accusative Object occupied before Spell-Out.



4.2 Subjects of Infinitivals

Subjects of infinitivals in English seem to pose a problem for the theory presented above. It seems that the accusative case we see on subjects of infinitivals is a counterexample to the claim that accusative case is always paired with the thematic role *theme/patient*. The analysis would predict that *agent* subjects always surface in either ergative or nominative case. However, there is a way out which does not surrender the conclusions arrived at so far. Namely, I propose that in the English examples in (11) the case of the subjects of the infinitivals is indeed ergative case, which in English happens to be homophonous to accusative case. Then the distribution of overt case marking in (11) is explained by the assumption that infinite Tense does not have a K-feature. This implies that the *early* K-feature of the ergative subject remains unchecked at Spell-out, and hence ergative case surfaces.

- (11) ECM: We expected [her_{ERG} to come to the party.]
 for-Inf.: We hoped [for them_{ERG} to come to the party.]

5 Conclusion

Two main points emerged that lead to a new account of the distribution of overt case marking and its typology. Firstly, a system of feature strength that uses the strength values *early* and *late* in the spirit of Pesetsky (1989) can be stretched to account the data from a variety of languages, whereas the *strong/weak*-system of Chomsky (1995a) does not offer such an account. The derivational definition of *earliness* used in this paper is:

Earliness: At any point of the derivation do that (one of the) move(s) next, that checks the greatest number of *early* features.

Secondly, the typology of case-systems can be almost entirely reduced to the question which argument in a clause surfaces with nominative case. This leads to the view that nominative is a derived case that is introduced in the course of the syntactic derivation, whereas all other cases are assigned underlyingly. As the process that deletes nominative case we followed Mahajan (1994) in assuming incorporation of the case morpheme into the verbal complex—specifically Tense. Within a theory where movement has to be motivated by feature checking, this forces us to assume a K-feature on Tense and the Nominal Arguments of a verbs, which maybe checked off by movement of the Case-morpheme to K.

These two assumption taken together make a typological prediction. As we vary the settings of the strength value of the three relevant K-features—that on Tense, that on the ergative Case-morpheme and that on the accusative Case-morpheme—we predict an array of six different observable case marking systems. As summarized in the table on page 16 and discussed at length in section 3.4 the predicted typology is a good approximation to what is known about case-marking systems.

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