

ERGATIVITY
24.956 Spring 1999

Introduction:

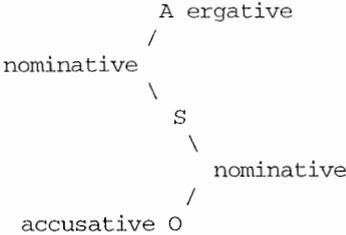
In order to have a common base from which to talk about ergative and accusative grammatical systems, it will be necessary to adopt a stable convention for referring to the semantic (or thematic) roles of the arguments of a verb. In what follows, we will employ the term *agent* to refer to the semantic role associated with *John* in such English sentences as *John cut the bread*, *John hit the ball* and their proper translations in other languages. The second argument, i.e., *the bread*, *the ball*, will be called the *patient*. This usage will be extended to all verbs which partake of the canonical transitive structure in the relevant language, whether or not the semantic labels *agent* and *patient* are strictly speaking appropriate. Thus, the term *agent* and *patient* will be applied, respectively, to *Mary* and *the deer* in sentences of the type represented by *Mary saw the deer*, lexically headed by a verb of perception. And the usage will be similarly extended to the full range of transitive verbs. Where a language uses its canonical transitive construction for sentences of this type, the *agent* and *patient* will be referred to as the *direct arguments* of the verb.

Canonical intransitive constructions have just one direct argument, represented by *Mary* and *John*, for example, in the sentences *Mary laughed*, and *John fell (out of the tree)*. No convenient semantic role label exists for the single direct argument of an intransitive verb. Hence, we will refer to it simply as such, the single (direct) argument of an intransitive, or more briefly as the *intransitive argument*. The term will refer just to the *direct* argument of the intransitive verb, not to obliques or adpositional phrases associated with it.

A. *Ergativity*: An ergative system distinguishes one of the arguments of a transitive verb, that associated typically with the semantic role of agent, in opposition to all other direct arguments of verbs. The distinguished argument is referred to as the *ergative*. The other direct argument categories, i.e., the patient of a transitive verb and the intransitive argument, are to a greater or lesser extent treated alike in ergative systems. These latter are called *absolutive* or *nominative* in the literature on ergativity; we will use the second term here. The precise nature of a given ergative system depends fundamentally on the extent to which nominatives are treated alike in the grammar. In Dixon (1979) a case-independent sets of abbreviations is used, and we will sometimes resort to that, since it is widely used in the literature—in his usage, the abbreviation S corresponds to the subject of an intransitive, O to the object of a transitive, and A (suggesting "agent") to the subject of a transitive. Some authors use P (patient) in place of O.

An accusative system also distinguishes one of the arguments of a transitive, opposing it to all other direct arguments. In an accusative system, however, the distinguished argument, called the *accusative*, is that which is associated with the patient role, rather than the agent. This category is opposed to the *nominative*, which embraces the

other direct argument types -- e.g., agent of a transitive and the single argument of an intransitive. A popular depiction of the ergative/accusative contrast is the following. using Dixon's system of abbreviations, and with the accusative pattern on the left, the ergative on the right:



In accusative languages, the *nominative* is regularly associated with the subject grammatical function, in so far as the direct arguments of a verb are concerned. And the *accusative* is associated with the *object* function. In contrast to this simple picture, the association of *ergative* and *nominative* with the two grammatical functions is a central issue in the study of ergative languages.

Q(1): Syntactic and morphological reflexes of ergativity.
 Grammatical Relations, Case, Agreement, Anaphora, Voice,
 Incorporation, Imperative.

B. *Syntactic Ergativity*: A "syntactically ergative" language is an ergative language in which the *nominative* arguments are regularly identified with the *subject* grammatical function. The Australian language Dyirbal is said to be syntactically ergative, because, to an extraordinary degree, the nominative argument exhibits the behavior normally attributed to the *subject*, as opposed to the ergative, which does not exhibit this behavior for the most part. While a syntactically ergative language shares with an accusative language the property that the nominative arguments are subjects, the two types differ in the association of these categories to semantic roles. In an accusative language, the agent is a nominative subject in an active transitive sentence; in a syntactically ergative language the agent is an ergative, and not a subject. The object function is associated with the accusative argument in an accusative language, while the status of the object function in an ergative language is a matter of debate (see below).

Q(2): The level (d-structure, s-structure) at which syntactic ergativity is present. At what levels are A, S, O (in the notation of Dixon, 1979) associated with the direct grammatical relations (Subject, Direct Object)?

C. *Morphological Ergativity*: A "morphologically ergative language" is ergative by the initial criterion, i.e., it distinguishes the actor argument of a transitive from the other direct arguments. It differs from a syntactically ergative language, however, in that it does not uniformly associate the *nominative* with the subject function. Instead, the nominative is usually split between the object function, in transitive verbs, and the subject function, in intransitives. The issue here is really the extent to which *nominatives* function as a distinguished and coherent group in the grammar. And this appears to be a matter of degree since some morphologically ergative languages define the nominative arguments as a significant class for many more grammatical processes than do others. West Greenlandic Inuit is at the upper end of the scale, with a highly significant nominative class, while the Australian language Warlpiri represents another extreme, with an ergativity which is strictly morphological and limited almost exclusively to the system of case marking.

Q(3): The correlates of morphological ergativity. Case, Transparency, Voice, Anaphora.

D. *Ergative Case Systems*: Overt case marking is a morphological realization of the distinguished status of the ergative among the direct arguments of a verb. In the simplest ergative system, the other direct arguments are in the (morphologically unmarked) nominative:

(1) Warlpiri (Central Australia):

(a) Ngarrka-ngku marlu pantu-rnu.
man-ERG kangaroo(NOM) spear-PST
'The man speared a kangaroo.'

(b) Marlu parnka-ja.
kangaroo(NOM) run-PST
'The kangaroo ran.'

(2) WG Inuit (West Greenland):

- (a) Anguti-p puisi aallaa-v-a-a.
man-ERG seal(NOM) shot-IND-TR-3sERG:3sNOM
'The man shot the seal.'
- (b) Puisi kivi-v-u-q.
seal(NOM) sink-IND-INTR-3sNOM
'The seal sank.'

This pattern contrasts with that of an accusative case marking system, in which the single argument of an intransitive verb aligns itself with the agent of a transitive verb, not with the patient. The latter is the distinguished argument and is marked accusative accordingly:

(3) Miskitu (Honduras, Nicaragua):

- (a) Waitna ba sula ba-ra sab-an.
man the(NOM) deer the-ACC shot-PST:3
'The man saw the deer.'
- (b) Sula ba plap-an.
deer the(NOM) run-PST
'The deer ran.'

(4) Lardil (North Qld., Australia):

- (a) Dangka karnjin-in la-tha-kun.
man(NOM) wallaby-ACC spear-INCR-INST
'The man speared the wallaby.'
- (b) Karnjin denja-kun.
wallaby(NOM) run-INST
'The wallaby ran.'

In addition to the canonical ergative case pattern illustrated in (1-2) above, a number of non-canonical systems occur. The variety of Aranda known as Antheckerpenhe can be used to exemplify a "three-way" system, in which the patient of a transitive verb is marked accusative, not nominative as in the canonical system. The single argument of an intransitive is marked nominative:

(5) Antekerrephe (Western Qld., Australia):

- (a) Artwe-le agherre-nhe we-ke.
man-ERG kangaroo-ACC shoot-PST
'The man shot the kangaroo.'
- (b) Agherre nterre-ke
kangaroo(NOM) run-PST
'The kangaroo ran.'

There also exist a number of so-called "split" systems languages properly included in the ergative type. In some languages, tense and aspect are factors in determining the case system employed in verbal sentences. The following examples are from Hindi, in which the past tense, and the perfect aspect as well, require use of the ergative system. The subject is marked ergative and the object is nominative (if non-specific), triggering agreement in the verb. In other tenses (e.g., the future illustrated here), the accusative case pattern is used, with the subject in the nominative (unmarked), triggering agreement in the verb, and with the object in the accusative (unmarked if non-specific), unassociated with verbal agreement:

(6) Hindi:

- (a) Raam-ne rooTii khaayii.
Ram-ERG bread(NOM) eat:PAST:FEMSG
'Ram ate bread.'
- (b) Raam rooTii khaaeegaa.
Ram bread(ACC) eat:FUT:MASC SG
'Ram will eat bread.'

The term "split ergativity" is also sometimes applied to systems in which pronouns conform morphologically to an accusative case pattern, while nominally headed arguments conform to the ergative system, as in the Australian language Wik-Mungkan, of the Cape York Peninsula, North Queensland:

(7) Wik-Mungkan (North Qld., Australia):

- (a) Ku'-ng nga-ny path-ny.
dog-ERG me-ACC bite-PST
'The dog bit me.'
- (b) Ngay ku' thath-ng.
(NOM) dog(NOM) see-PAST:1
'I saw the dog.'

- (c) Ku' uthm.
 dog(NOM) die
 'The dog died.'

A number of languages exhibit a hierarchy split, as in Tanoan languages, like Jemez, where the (passive-like) ergative pattern is regularly used if the agent is third person and the patient, or goal/beneficiary in dative constructions, is first or second person; otherwise, the language uses the accusative pattern. Case on nominal direct arguments is non-overt, except for the ergative (identical to the instrumental):

(8) Jemez (Jemez Pueblo, New Mexico):

- (a) Níin 'únwá a-mún.
 I you 1:2-see:PST
 'I saw you.'
- (b) Níin kyæ'nun ta-mún.
 I dog 1:3-see:PST
 'I saw the dog.'
- (c) Kyæ'nun-tæn (níin) u-mun-'we.
 dog-ERG (me) 1-see-INTR:PST
 'The dog saw me.'
- (d) Næ-tæn (níin) tumuví un-wáapæ-'ye.
 he-ERG (me) car 1:DAT-pull-INTR:PST
 'He pulled (my) car for me.'

Q(4): The relation between split Case marking and grammatical function. Multiple nominatives, e.g., pronominal A and nominal O. In an ergative language, is so-called nominative agent truly nominative, or masked ergative? Similarly for apparent accusative.

Q(5): What determines which direct argument is construed with agreement when only one head contains agreement morphology (cf., Hindi and Jemez; K'iche', Navajo, Chukchi, Basque, Karitiana)?

E. *Ergative Agreement Systems*: In many ergative languages, the person and number agreement morphology construed with the direct arguments of a verb conform to an

ergative system, distinguishing the agent from the other arguments, just as an ergative case system does. In some such languages, this is the principal overt morphological reflection of ergativity. The Mayan language K'iche' belongs to this category -- its ergative case system is overt only in the system of verbal person and number marking prefixes, case being non-overt on nominal arguments:

(9) K'iche' (Mayan, Guatemala; Mondloch 1981:65):

- (a) x-ee-ki-kamsa-j lee tz'i' lee achi-jaab'.
 CMPL-3pNOM-3pERG-kill-AV the dog the man-PL
 'The men killed the dogs.'
- (b) x-ee-kam lee tz'i'
 CMPL-3pNOM-die the dog
 'The dogs died.'

In Basque, the ergative case system is overtly represented in the inflection of nominal (or pronominal) arguments and (with minor exceptions) in the person/number inflectional morphology of auxiliaries and synthetic verb forms:

(10) Basque (Euskal Herria):

- (a) Zu-k gu ikusi g-aitu-zu.
 you-ERG us (NOM) seen 1pNOM-have:PL-2sERG
 'You have seen us.'
- (b) Gu etorri g-ara.
 we(NOM) come 1pNOM-be:PL
 'We have arrived.'

The ergative agreement pattern observed in (9-10) contrasts with the accusative pattern observed, for example, in Nahuatl. There it is the patient argument which is distinguished from the other direct arguments by virtue of agreement (nominal arguments are unmarked):

(11) Nahuatl (Uto-Aztecan, Mexico (Morelos)):

- (a) oo-ni-k-nooc.
 PERF-1sNOM-3sACC-call:PERF
 'I called him.'

- (b) oo-ni-kiis.
 PERF-1sNOM-exit:PERF
 'I went out.'
- (c) oo-kiis.
 PERF-(3sNOM-)exit:PERF.
 'He went out.'

Q(6): K'iche' (and Inuit) and Nahuatl exemplify a common contrast in ergative and accusative agreement systems. In the ergative pattern, ergative agreement is closer to the verb (stem, root) than is nominative agreement; in the nominative pattern, by contrast, the accusative is nearer the verb. Thus, in both systems, agreement corresponding to the marked case category is closer to the verb. What explains this pattern?

Some Australian languages realize an ergative case system on nominal arguments but an accusative agreement system in the verbal (or auxiliary) inflection. Warlpiri is such a language -- the ergative is construed with nominative agreement in the auxiliary, as is the nominative argument of an intransitive verb; the patient, bearing nominative (i.e., unmarked) case, is construed with accusative agreement morphology. The inflected auxiliary, overt in (12), appears in second position within the clause:

(12) Warlpiri:

- (a) Ngajulu-rlu ka-rna-ngku nyuntu nya-nyi.
 I-ERG PRES-1sNOM-2sACC you(NOM) see-NONPST
 'I see you.'
- (b) Nyuntu ka-npa mata-jarri-mi.
 you(NOM) PRES-2sNOM tired-INCHO-NPST
 'You are getting tired.'

It begs the question, certainly, to label the agreement morphology here as nominative (NOM) and accusative (ACC). The exact nature of these elements will be determined within an adequate theory of case and agreement systems of the Warlpiri type. For the moment, these labels represent a descriptive formulation only, reflecting the fact that Warlpiri agreement conforms, descriptively speaking, to the accusative pattern, according to which the patient is distinguished from the other direct arguments.

Split systems often display their split behavior in their agreement morphology. Hindi, for example, represents a split system not only in the case categories assigned to nominals but also in agreement, as can be seen in (6a,b) above. In those sentences the verb shows gender and number agreement with the nominative and, accordingly, with the patient in the ergative construction and the agent in the accusative construction.

F. *Control, Binding, and Obviation (Switch-Reference)*:

A fundamental issue in the study of ergativity is the structural position, in syntax, of the ergative and nominative arguments. The problem is typically formulated in terms of grammatical functions, and in particular, in terms of the functions subject and object. A number of grammatical constructions are employed in identifying these functions.

The *control* construction is said to identify the syntactic subject of a clause. The subject is the "controlled" argument in infinitival complement and adjunct clauses, typically appearing as the non-overt anaphoric element PRO, as in such English sentences as *she tried [PRO to defend us]* and *PRO opening his book, he began to read*. In this and other accusative languages, the controlled argument corresponds to the one which, in a finite clause, appears in the nominative case. By assumption, it follows that the nominative argument is the syntactic subject in an accusative language.

In a syntactically ergative language, it is expected that the controlled argument will correspond to the nominative argument in a tensed clause. This expectation is met in the Australian language Dyirbal. In a transitive dependent clause, the controlled argument is the patient, as in the first bracketed clause of (12a), and in an intransitive, it is the single direct argument of the intransitive verb, as in the second bracketed clause of (12a):

(12) Dyirbal (North Queensland, Australia; Dixon 1972:144, 154):

- | | | | | |
|-----|---|-------------|-----------|------------------------|
| (a) | Barrmba | ba-ngku-l | mangka-n, | |
| | quartz(NOM) | he-ERG-MASC | take-PST, | |
| | 'He picked up the quartz, | | | |
| | [PRO pro(ERG) | bayku-li | diban-da] | [PRO bula-bi-li]. |
| | | bash-PURP | stone-LOC | two-INCHO-PURP |
| | to split it in two on the stone.' | | | |
| (b) | Yara | ba-ngku-l | munda-n | [Ø jukumbi-ru bura-n]. |
| | man(NOM) | he-ERG-MASC | bring-PST | woman-ERG see-PST |
| | 'He brought the man and the woman saw him.' | | | |

In Dyirbal clausal sequences (like (12b), a "topic chain" in the sense of Dixon 1972), as well as in the purposive construction illustrated in (12a), both the controlled argument

and the controller, i.e., the antecedent, is generally in the nominative. In (12a), the antecedent is the nominative argument *barrmba* 'quartz'; in (12b) the antecedent is the nominative *yara* 'man', binding the non-overt pronominal *pro* in the final clause.

These Dyirbal structures evidently represent the same-subject relation in a subject obviation system -- i.e., the system better known by the term "switch-reference" (cf. Finer 1985). If this is so, these structures provide an additional illustration of the subject-like behavior of Dyirbal nominatives. The related arguments, antecedent and controlee, must both be subjects (a circumstance which follows from the binding principles identified by Finer, 1985), and in Dyirbal both the arguments are nominatives.

In some morphologically ergative languages, the controlled argument corresponds to the ergative of a transitive infinitival clause and to the nominative of an intransitive infinitival, as in the Warlpiri sentences of (13):

(13) Warlpiri:

- (a) Wawirri 0-rna pantu-rnu [PRO marna nga-rninja-kurra].
 kangaroo PERF-1s spear-PSA grass eat-INF-OBJCOMP
 'I speared the kangaroo (while it was) eating grass.'
- (a) Wawirri 0-rna pantu-rnu [PRO parnka-nja-kurra].
 kangaroo PERF-1s spear-PSA run-INF-OBJCOMP
 'I speared the kangaroo (while it was) running.'

The controlled argument, represented here as PRO, would appear as ergative and nominative in finite versions of (13a) and (13b), respectively. Thus, Warlpiri control constructions are in clear contrast to those of Dyirbal, where the controlled argument is uniformly nominative. If the controlled argument is the grammatical subject, as is generally assumed, then Warlpiri and Dyirbal differ in their association of that function to the case categories of transitive clauses -- the ergative is the subject in Warlpiri, the nominative in Dyirbal.

Warlpiri possesses a formal switch-reference system, functionally analogous to that suggested above for Dyirbal. Infinitival clauses which are marked proximate, or "same-subject", by means of the complementizer *-karra* require coreference between the subjects of the main and subordinate clauses. Here again, and in contrast to the corresponding situation in Dyirbal, the arguments identified by the principle are the ergative of a transitive and the nominative of an intransitive:

(14) Warlpiri:

- (a) Kurdu-ngku ka maliki paka-rni [PRO parnka-nja-karra-rlu].
 child-ERG PRES dog(NOM) hit-NPST run-INF-SUBJCOMP-ERG
 'The child is striking the dog while running.'
- (b) Kurdu ka ngarlarri-mi [PRO parnka-nja-karra].
 child(NOM) PRES laugh-NPST run-INF-SUBJCOMP
 'The child is laughing while running.'

As expected, in Warlpiri, the obviative or "different-subject" relation in the switch-reference system will identify the ergative of a transitive and the single argument of an intransitive as the relevant argument (i.e., as the subject) in a dependent clause bearing the obviative complementizer *-rlarni*. This argument is often, but not obligatorily inflected in the dative, rather than, respectively, ergative and nominative. In either situation, however, the obviative subject corresponds to the ergative argument of the transitive and the nominative of the intransitive. This is illustrated in (15), where the dative in the bracketed clauses (masking the ergative in (15a) and the nominative in (15b)) is necessarily disjoint in reference from the subject of the main clause:

(15) Warlpiri:

- (a) Kurdu ka nguna-mi [ngati-nyanu-ku kuyu purra-nja-rlarni]
 child PRES lie-NPST mother-RFL-DAT meat cook-INF-OBVCOMP
 'The child is sleeping while its mother is cooking meat.'
- (b) Kurdu ka nguna-mi [ngati-nyanu-ku wangka-nja-rlarni].
 child PRES lie-NPST mother-RFL-DAT speak-INF-OBVCOMP
 'The child is sleeping while its mother is talking.'

If the syntactically ergative language Dyrbal possesses constructions representing the obviative relation within the switch-reference system, it is expected that it would require disjoint reference between the nominatives of the main and dependent clauses, nominatives being subjects, by hypothesis. It seems reasonable to assume that the *-ngurra-* construction represents the obviative, though it is discussed in somewhat different terms in Dixon's detailed study of the language (Dixon 1972:77-79). The following sentences, taken from field notes, are consistent with this suggestion (and the subordinating morphology is accordingly labeled OBVCOMP, like its Warlpiri counterpart, which has closely similar internal make-up, consisting of a nominalizing element *-ngu* further extended by the locative *-rra*):

(16) Dyirbal (Hale 1960:notes):

- (b) Ngaja nyina-ngurra, nyurraji yana.
I(NOM) sit-OBVCOMP you:PL go:IMPT
'While I stay, you all go.'
- (c) Yala nyina nginda, ngaliji yanu-ngurra.
here sit:IMPT you(NOM) we:PL go-OBVCOMP
'You stay here, while we go.'

The usages documented in Dixon (1972) are consistent with our suggestion that *-ngurra* is obviative, though simple cases of the type represented by (16) do not appear in his work, so far as we can tell. His examples involve cases in which an ergative argument in the main clause is coreferential with a nominative in the subordinate clause -- the nominatives themselves, however, are disjoint in reference, as expected:

(17) Dyirbal (Dixon 1972:77):

- Bala yuku ba-ngku-l yara-ngku mada-n
that stick(NOM) that-ERG-MASC man-ERG throw-NONFUT
- [(bayi yara) waynji-ngurra].
that(MASC) man(NOM) ascend-OBVCOMP
'The man threw the stick and then (the man) went uphill.'

Q(7): The disparity between Case category and Control/Obviation;
the structural position of nominatives in morphological and
syntactically ergative languages.

We turn now to a brief discussion of binding and anaphora. The relevance of binding relations to ergativity derives principally from the fact that many languages possess anaphoric elements which, in accordance with Condition A of the Binding Theory (cf. Chomsky 1981, and elsewhere), are locally bound and which, in addition, have the characteristic that they are bound only by subjects. This is typical of anaphoric elements which are morphologically bound and appear as part of the verb or auxiliary inflectional morphology.

In Warlpiri, for example, the auxiliary complex includes bound elements marking person and number and construed with the subject and the object, where the latter is present -- this is the agreement system exemplified in (12) above. In that example, the agreement morphology is pronominal, and therefore free within the binding domain (here,

the clause). However, Warlpiri also possesses an anaphoric (reflexive/reciprocal) element *-nyanu*, appearing in the position occupied by object agreement within the auxiliary (i.e., second position), as exemplified in (18):

(18) Warlpiri:

- | | | | |
|-----|---|---------------|------------|
| (a) | Ngarrka-jarra-rlu | ka-pala-nyanu | nya-nyi. |
| | man-DUAL-ERG | PRES-3d-REFL | see-NPST |
| | ‘The two men see themselves/each other.’ | | |
| | | | |
| (b) | Ngarrka-jarra | ka-pala-nyanu | wangka-mi. |
| | man-DUAL(NOM) | PRES-3d-REFL | speak-NPST |
| | ‘The two men are talking to themselves/each other.’ | | |

The appearance of the anaphoric object morphology does not affect the basic transitivity of the sentence; the anaphor functions simply as a bound reflexive or reciprocal object. In (18a), the anaphor is bound by the ergative which, in this respect, behaves like a subject, as expected in Warlpiri. In (18b), the anaphor is bound by a nominative; the anaphor itself corresponds to a dative argument which, like datives in general, is an internal argument exhibiting the characteristics of an object -- the nominative in this construction exhibits all of the characteristics associated with the subject function in Warlpiri, i.e., it behaves like the single argument of an intransitive, as is generally the case for NOM-DAT verbs in Warlpiri (the verb of (18b) has the simple intransitive use as well). These examples show that Warlpiri anaphora, like switch-reference and agreement, identify both ergative and nominative arguments with the subject function, assuming bound anaphora to be a legitimate test of that.

Warlpiri anaphora, although it is realized by means morphologically bound elements, represents a rather common type in which an object, or other internal argument, being anaphoric, is bound by a c-commanding subject argument. An anaphor in Warlpiri, evidently, retains its status as an argument associated with a canonical argument position, albeit non-overt and overtly represented only by the agreement itself. This explains the fact that the agent in a reflexive transitive sentence appears in the ergative case, like the agent argument in a prototypical transitive sentence in the language. This also explains the fact that an anaphoric object in Warlpiri may control the subject of an infinitival clause bearing the objective complementizer *-kurra*, an element requiring the controller to be an object:

(19) Warlpiri:

- | | | | |
|---|---------------|----------|------------------------|
| Ngarrka-jarra-rlu | ka-pala-nyanu | nya-nyi | [PRO karri-nja-kurra]. |
| man-DUAL-ERG | PRES-3d-RFL | see-NPST | stand-INF-OBJCOMP |
| ‘The two men see themselves/each other standing.’ | | | |

Although the object of the main verb is represented overtly only in the bound person-marking morphology within the auxiliary, and not by a nominal expression in the corresponding argument position, it is fully present in the syntax, as is clear from its ability to function as the controller of the subject of the infinitival clause. This is consistent, of course, with the fact that the agent, i.e., the subject, is inflected for ergative case, rather than nominative.

In Warlpiri, the reflexive and reciprocal morphology is agreement, construed with an object argument position, like any object person marker, and functioning therefore as fully argumental in syntax, like object and reflexive-reciprocal clitics in Romance, for example. By contrast, the bound reflexive and reciprocal morphology of certain other Australian languages belongs properly to the voice system of the verb. The reflexive and reciprocal morphologies combine with canonical transitive verbs to derive syntactic intransitives -- this precludes overt direct syntactic expression of one of the arguments of the erstwhile transitive verb. For example, consider the following Jabugay sentences:

(20) Jabugay (North Queensland, Australia):

- (a) kuja-ngku pama-lu kujangu-ny kapa-a ngapa-lna.
 the-ERG man-ERG him-ACC chalk-INST paint-FUT
 'The man will paint him with white pipeclay.'
- (b) Kuji pama kapa-a ngapa-yi-na.
 the(NOM) man(NOM) chalk-INST paint-PASS-FUT
 'The man will paint himself with white pipeclay.'

The reflexive morphology here, the suffix *-yi*, is clearly verbal in nature, shifting the verb from the predominantly transitive I-conjugation of Jabugay to the predominantly intransitive 0-conjugation. Syntactically, the reflexive morphology shifts the construction from transitive to intransitive, as is typical of this type of reflexive. Since this is intransitive, only one direct argument may appear, and this appears in the the nominative case, as expected, given standard assumptions. However, since the dyadic *argument structure* of the verb is strictly speaking still present in the reflexive here, in the sense that the basic verb selects both an agent and a patient (referentially identical to be sure), certain important questions remain -- e.g., which of the two arguments is the one realized overtly, and why must it be in the nominative? The reflexive has the effect not only of detransitivizing the verb but also that of forcing an interpretation, in the dyadic use, according to which the two direct arguments are referentially identical -- one argument is bound by the other. This is in contrast to the corresponding transitive construction of (20a), where the pronominal object (the patient) is referentially free and, accordingly, cannot be bound by the subject (the agent).

The expression *k-iib'* 'themselves', appearing in 22a), consists of the anaphoric element *-iib'* 'self', a noun in the singular combined with an ergative prefix, here *k-* '3pERG', in accordance with the conventional K'iche' pattern for forming the possessive construction (the "subject", or possessor, in a nominal construction, like the subject of a transitive clause, is in the ergative). Syntactically, this nominal is simply an anaphor of the usual sort, and it must be bound within the relevant binding domain. In K'iche' the binding domain is the minimal clause. Significantly, the anaphor is bound by the ergative argument. The anaphor itself is a third singular form, strictly speaking, and is accordingly construed with the (phonologically non-overt) third singular nominative agreement morphology in the verbal prefix system.

In a great many languages, as in K'iche', the antecedent of an anaphor must be a subject. Assuming this to be the case in fact for K'iche' itself, the subject of a transitive sentence is the ergative argument. The same is true in Greenlandic Inuit. The following sentences illustrate pronominal and reflexive possessive constructions, in which the possessed nominal is inflected for the person of the possessor, in an ergative pattern like that of K'iche'. The pronominal possessive must be free, by Condition B of the Binding Theory, and the reflexive possessive, an anaphor, must be bound, as expected:

(23) Greenlandic:

- | | | | |
|-----|---------------------------------------|-----------------------------------|---|
| (a) | Juuna-p
Juuna-ERG | ataata-a
[father-3sERG](NOM) | nuannar-a-a.
like-IND:TR-3sERG:3sNOM |
| | 'Juuna likes his (another's) father.' | | |
| (b) | Juuna-p
Juuna-ERG | ataata-ni
[father-REFL](NOM) | nuannar-a-a.
like-IND:TR-3sERG:3sNOM |
| | 'Juuna likes his (his own) father.' | | |
| (c) | Juuna
Juuna(NOM) | ataata-mi-nik
father-REFL-INST | nuannari- <i>nnip-p-u-q</i> .
like-AP-IND-INTR-3sNOM |
| | 'Juuna likes his (his own) father.' | | |

In (23a,b), the possessive construction, itself in the nominative, contains suffixal morphology corresponding to the person and number of the possessor. In (23a), this morphology is pronominal, in the sense of Condition B, and must therefore be free in the relevant domain; in this instance, it cannot be bound by the ergative *Juuna-p*. By contrast, the possessor agreement in (23b) is anaphoric and, accordingly, must be bound. It is bound here by the ergative, indicating again that, for the purposes of anaphoric binding, the ergative is the subject. If the verb is detransitized, as in (23c), and put in the antipassive (see below), the subject appears in the nominative, and the object (the possessive

construction) is demoted to an oblique case (the instrumental, in this instance), in which case the anaphoric possessor is bound by the nominative.

Q(9): If an anaphor is contained in O, and O is in the subject position in a syntactically ergative language, how can the anaphor be bound by A, which is c-commanded by O? Compare (25b) below, where O binds an anaphor in the demoted subject of a passive.

G. Relation Changing Processes, Voice Systems:

Beside the canonical transitive *Mary wrote the letter*, English also has the passive form *the letter was written by Mary*, of course. Likewise, beside the transitive (24a) below, Greenlandic has the passive in (24b):

(24) Greenlandic:

- (a) Anna-p Jaaku qaaqqu-v-a-a.
Ann-ERG Jacob(NOM) invite-IND-TR-3sERG:3sNOM
'Ann invited Jacob.'
- (b) Jaaku (Anna-mit) qaaqqu-niqar-p-u-q.
Jacob (Ann-ABL) invite-PASS-IND-INTR-3sNOM
'Jacob was invited by Anna.'

Applied to canonical transitive clauses, the affects of the passive are twofold: (i) demotion of the subject (to an oblique, e.g., the ablative, as in Greenlandic; or deletion, optionally in Greenlandic); and (ii) promotion of the underlying object to the subject function. The first of these effects has sometimes been assumed to proceed via incorporation of the subject argument into the inflectional head of the sentence (INFL), forced by the putative inability of the passive verb to assign the agent role to the subject position (Baker *et al.* 1989); the overt oblique expression of the agent being an adjunct, not a "true argument" of the verb. The second effect results from the inability of the passive verb to assign structural case to the object (cf. Chomsky 1981). Whatever the analysis, the process makes crucial reference to the grammatical function *subject*, both in relation to the demotion process and in relation to the derived grammatical function of the underlying object. In Greenlandic transitive clauses, accordingly, it is the ergative argument which is demoted -- and, by hypothesis, the ergative is the underlying subject. The underlying object appears in the nominative and, by hypothesis, is the derived subject. The resulting

construction is intransitive and, consequently, only the nominative is associated with person and number agreement in the verbal inflection.

That the nominative is the derived subject in the Greenlandic passive is shown by the facts of control and anaphora:

(25) Greenlandic:

- (a) Jaaku [Anna-mit qaaqqu-niqar-ssa-llu-ni] niriup-p-u-q.
 Jacob(NOM) Anna-ABL invite-PASS-FUT-INF-PROX hope-IND-INTR-3sNOM
 `Jacob hopes [PRO to be invited by Ann].'
- (b) Jaaku ikinngum-mi-nit qaaqqu-niqar-p-u-q.
 Jacob(NOM) friend-REFL-ABL invite-PASS-IND-INTR-3sNOM.
 `Jacob was invited by his (his own) friend.'

In (25a) the dependent clause is inflected for the proximate relation within the switch-reference system of Greenlandic, according to which the subject of that clause must be bound by the matrix subject, as is the case here. And in (25b), the anaphoric possessor is bound by the subject.

In addition to the passive, Greenlandic, and a great many other ergative languages as well, make use of a detransitivizing process which has effects which are approximately the opposite of those of the passive: (i) the object is demoted (i.e., deleted or expressed only in an oblique case form, the instrumental in Greenlandic); and (ii) the ergative is put into the nominative, where it triggers nominative person and number agreement in the verb:

(26) Greenlandic:

- (a) Jaaku-p Anna taku-v-a-a.
 Jacob-ERG Ann(NOM) see-IND-TR-3sERG:3sNOM
 `Jacob saw Ann.'
- (b) Jaaku Anna-mik taku-si-v-u-q.
 Jacob(NOM) Ann-INST see-AP-IND-INTR-3sNOM
 `Jacob saw Ann.'

Sentence (26a) is the now familiar transitive construction of Greenlandic, with the usual ergative-nominative case array. The the corresponding detransitivized form in (26b) is the so-called antipassive (glossed AP). Its like is believed to be attested as a fully productive construction primarily in ergative languages.

The antipassive renders the agent (otherwise in the ergative case) accessible to syntactic processes which make crucial reference to the nominative case (or equivalent), a fact which is evident at every turn in ergative languages which have both the antipassive construction and nominative-oriented principles of grammar. Consider for example the following purposive and relative constructions in Dyirbal:

(27) Dyirbal (Hale 1960:notes):

- (a) Ngaja ngalubal yanu-ny, jikay-ku diku-Ingay-ku.
 I(NOM) there:DIST go-FUT ground-DAT dig-AP-PURP
 'I will go over there to dig (in) the ground.'
- (b) Ngaja pura-n nginuna jurrka-na-ngu.
 I(ERG) see-PST you:ACC spear-AP-REL
 'I saw you spear him.'

In (27a) the patient argument of the antipassive verb appears in the dative, rather than in the nominative as it does in the active form. Thus, Dyirbal agrees with Greenlandic, and many other ergative languages as well, in putting patient into an oblique case in the antipassive. The purposive in Dyirbal conforms to the principles of the subject obviation, or switch-reference, system -- requiring nominative (and by hypothesis, subject) coreference. By virtue of the antipassive in the dependent clause of (27a), the agent argument there can be bound by the main clause subject, permitting the formation of a legitimate purposive construction. In the Dyirbal relative clause construction, also used in clausal complementation to perception verbs, as in (27b), the deleted relative argument is necessarily a nominative -- though this is not a subject obviation construction, as the antecedent of the relative clause may be in any case. The use of the antipassive in the dependent clause of (27b) permits the agent to be relativized.

The "verbal reflexive" of the type represented, for example, by Jabugay (20b) belongs properly to the class of constructions under discussion here, since it is in effect a relation-changing process; it is appropriate to think of (20b) as being in the "reflexive voice", as it were, just as the Greenlandic sentences (24b) and (26b) are in the passive voice and the antipassive voice, respectively. And, in fact, the morphology involved in the verbal reflexive is, in many languages, involved in the passive as well. This is true of Jabugay, as exemplified by the impersonal passive form in (28b), in which the suffix *-yi* appears:

(28) Jabugay:

- (a) Pama-lu ngayang wangal tapa-ny.
 man-ERG my boomerang throw-PST
 'The man threw my boomerang.'

- (b) Ngayang wangkal tapa-yi-ny.
 my boomerang throw-PASS-PST
 'My boomerang was thrown.'

The passive verb form here is identical to the reflexive. This coincidence represents the Jabugay instantiation of a phenomenon which has come to be known as the Passive-Reflexive Ambiguity.

The reflexive-passive morphology of Jabugay is also involved in the formation of the antipassive, as illustrated in (29b), in contrast to (29a), where the active voice is used:

(29) Jabugay:

- (a) Kayarra-ngku maa tuku mila puka-ng.
 possum-ERG food leaf new eat-PRES
 'The possum eats young leaves.'
- (b) Palparu minyaa-la puka-yi-ng.
 crane fish-LOC eat-AP-PRES
 'The crane eats fish.'

Thus, in addition to the so-called passive-reflexive ambiguity, Jabugay shows a morphological coincidence of the reflexive with the antipassive. And, as usual, the antipassive involves shifting the patient, otherwise nominative, to an oblique case -- the locative, in the case of Jabugay.

While the antipassive of (29b) represents an autonomous use of the construction, it is more usual to find it in complex sentences, as in Dyirbal, where the construction has the effect of making the agent, which would otherwise be ergative, accessible to processes which make crucial reference to the nominative. The Jabugay temporal relative clauses in *-ya*, illustrated in (30) below, typically involves a binding relation between arguments of the main and relative clauses -- the bound argument in the latter is typically nominative. Where the relative clause is transitive, therefore, it is normally put into the antipassive if the bound argument corresponds to the agent. In (30b), the missing argument in the relative clause (bracketed) corresponds to the nominative of the antipassive -- i.e., to the agent, which would be associated with the ergative in the corresponding active form, of course, as in (30a):

(30) Jabugay:

- (a) Pama-lu julpin kuni-ny.
 man-ERG tree cut-PST
 'The man cut the tree.'

- (b) Kuji karra-ny nganya watarri-ny [kuni-yi-ya julpin-ta].
 he(NOM) come-PST me:ACC find-PST cut-AP-REL tree-LOC
 'He came and found me cutting the tree.'

The Dyrirbal antipassive illustrated in (27) above involves a morphology which is restricted to the antipassive function. But the reflexive morphology of Dyrirbal participates in the "ambiguity" illustrated for Jabugay -- that is to say, it functions not only in the reflexive but in the antipassive as well. The antipassive of (31b) below is based morphologically on the reflexive:

(31) Dyrirbal (Dixon 1972:90):

- (a) Bala-m wuju ba-ngku-l yara-ngku jangka-nyu.
 the-VEG fruit(NOM) the-ERG-MASC man-ERG eat-NFUT
 'The man is eating the fruit.'
- (b) Bayi yara jangka-ymarri-nyu ba-ku-m wuju-ku.
 the:MASC man(NOM) eat-AP-NFUT the-DAT-VEG fruit-DAT
 'The man is eating the fruit.'

The Tanoan languages of the Southwest are not normally included in the ergative type. However, the Tanoan language spoken at Jemez, New Mexico, possesses a detransitivized verb form (the "inverse") which appears in a construction (illustrated in (8) above) which has characteristics associated with the split ergativity of certain languages classed as morphologically ergative. In addition, Jemez has a use of the reflexive morphology which is comparable to the antipassive in that it involves suppression, or demotion, of the direct object:

(32) Jemez (Jemez Pueblo, New Mexico):

- (a) Níin p'æ ta-shúun.
 I water 1:3-drink:PST
 'I drank (the) water.'
- (b) Níin tu-l-shúun. (tujúun)
 I 1:REFL-CL-drink:PST
 'I drank.'

Q(10): The antipassive is a voice found predominantly in ergative languages. In some syntactically ergative languages, the passive and antipassive are mutually exclusive. Is this principled?

Q(11): The reflexive, the passive, the antipassive and the inverse take the same morphological form in diverse languages. What explains this?

II. *Theories of Ergativity:*

Proposals which have been made to explain syntactic ergativity may be put into roughly two groups, depending on the syntactic level (d-structure, s-structure) at which ergativity is defined.

(33) *Two Versions of the Ergativity Hypothesis:*

a) *D-Structure Ergativity*

(i) Marantz 1981; Levin 1983:

In the ergative construction, the agent role is assigned to the complement of V; the patient role is assigned to the external argument position (i.e., subject position, in the simplest case).

(ii) de Rijk 1966:

In Basque, S and O are external to VP; A is internal to VP. Ergative and accusative languages have the same phrase structure and grammatical functions but "switched" selectional restriction features (in the sense of *Aspects*).

b) *S-Structure Ergativity (two versions):*

(i) A traditional view: The agent role is assigned to the external argument position, and the patient role is assigned to the complement of V; the latter moves to the surface subject position (under the passive), demoting the agent to oblique (cf. Hale 1970).

(ii) The object-raising Hypothesis: The object raises to an external A-bar position; the agent appears in the ergative but is not demoted (cf. Bittner, 1988, for the raising hypothesis, and Bittner, 1994, for relevance of the A/A' distinction).

The distinction between the d-structure and s-structure theories of ergativity is relatively sharp in the context of particular conceptions of the Projection Principle and the Uniformity of Theta Assignment Hypothesis (the UTAH; Baker, 1988), according to which relevant features of the lexicon are constant across languages and constructions. Thus, for example, if we assume the propositions set forth in (34a), a certain limit is set in relation to possible theories of ergativity, as articulated in (34b):

(34) *A (Theory Internal) Constraint on Conceptions of Ergativity:*

- a)
 - (i) The D-Structure of a clause expresses the Argument Structure of its lexical head.
 - (ii) The Argument Structure "projected" by a lexical item is a syntactic configuration composed of unambiguous (hence binary) and asymmetrical sisterhood relations (head-complement, and specifier-head).
 - (iii) An argument of a head H may be external to the lexical projection of H. The relation External Argument is unambiguous, hence unique.
 - (iv) Semantic Roles are determined by relations expressed in Argument structure.
- b)
 - (i) If (i-iv) above are invariant across languages, then the D-Structure and S-Structure versions of the Ergativity Hypothesis are incompatible.
 - (ii) Assume that the external argument of a transitive is associated with the "Agent" role, and the internal argument is associated with the "Patient" role. If this is fixed for all languages, then the D-Structure Hypothesis cannot be right. But if the reverse is also possible, the the D-Structure Hypothesis could be right. What are the facts?

Under the D-Structure hypotheses, object incorporation would be expected to involve the head of the agent argument, rather than the head of the patient. Dyirbal, often cited as the paradigm syntactically ergative language, can be said to employ noun incorporation in the formation of nomic and agentive nominals. It is the patient, not the agent, which incorporates into the verb, supporting the S-Structure conception of the Ergativity Hypothesis -- assuming, as is usual, that it is the grammatical object which is involved in incorporation (Dixon 1972:83-85):

- (35) yara-balka-l but: balka-l-nga-y-munga 'habitual murderer'
 person-hit-CM alt: balka-l-munga (a reduced free variant of the above)
 `person hitter'

If these are derived by reduction from antipassives, then they conform to the D-Structure hypotheses and should be compared not with English *cattle buyer*, and the like, but with *man made*, *snake bit*, and so on.

III. Empirical Evidence Bearing on the Ergativity Hypothesis:

Hypotheses designed to explain the phenomena associated with ergativity are typically formulated with reference to specific relevant grammatical systems. In the following paragraphs, three hypotheses are compared in relation to the manner in which they explain the observed relation between the ergative construction and the grammatical systems of case, agreement, control, binding, and the relation changing processes (passive and antipassive).

(35) Case:

- a) *The D-Structure Theory*: The marked case in the ergative system follows from the same principles which account for the marked case in the accusative system.
- b) *The (Ergative =) Passive Theory*: Case marking follows from the principles needed independently for the passive.
- c) *The Object-Raising Theory*: The ergative pattern arises because the transitive agent stays *in situ*; whereas the intransitive subject and transitive object both move to the surface subject position.

(36) Agreement:

- a) *The D-Structure Theory*: The ergative agreement is simply object agreement.
- b) *The Passive Theory*: This predicts no ergative agreement, since the oblique in the passive normally does not trigger true agreement (this is consistent with the behavior in some languages, e.g., Hindi, and Tanoan).
- c) *The Object-Raising Theory*: Allows ergative agreement (found in Inuit, Mayan, Basque).

(37) *Control and Binding:*

- a) *D-S Theory:* Predicts the controlled argument will be the patient (Dyirbal purposives, topic-chains, and relative clauses; in subject obviation, or switch-reference, bound argument will be patient).
- b) *Passive Theory:* As in (a).
- c) *O-R Theory:* This predicts the controlled argument will be the agent in an transitive sentence (as in Inuit); the agent should be able to bind reflexives appearing in the VP (including reflexives contained in the patient, because of reconstruction from A'-positions); but the agent cannot itself contain any reflexive bound by any antecedent in the same clause.

(38) *Relation Changing Processes:*

- a) *D-S Theory:* The passive is the antipassive. Hence, the familiar passive-reflexive ambiguity is realized as an antipassive-reflexive ambiguity (Dyirbal normally cited as the paradigm example, Marantz 1981).
- b) *Passive Theory:* Predicts there can be no passive other than the ergative construction; it allows the antipassive, if the agent is promoted with simultaneous demotion of the patient. This is consistent with Dyirbal.
- c) *O-R Theory:* Both passive and antipassive should be possible (and both are possible in Inuit, Jabugay, K'iche' and other Mayan).

IV. *Dyirbal.*

(39) *The S/O Pivot: Clause Sequencing.*

- (a) Nguma banakanyu Ø miyandanyu.
father returned Ø laughed
'Father returned and laughed.' (D94:162)

- (b) Nguma banakanyu Ø yabu-ngku buran.
 father returned mother-ERG saw
 'Father returned and father saw him.' (D94:162)
- (c) Nguma yabu-ngku buran Ø banakanyu.
 father mother-ERG saw returned
 'Mother saw father and he returned.' (D94:162)
- (d) Nguma yabu-ngku buran Ø jaja-ngku ngamban.
 father mother-ERG saw child-ERG heard
 'Mother saw father and the child heard him.' (D94:163)
- (e) Nguma yabu-ngku buran Ø (yabu-ngku) ngamban.
 father mother-ERG saw (mother-ERG) heard
 'Mother saw father and (mother) heard him.' (D94:163)
- (f) Nguma banakanyu Ø bural-nga-nyu yabu-ku.
 father returned see-AP-PST mother-DAT
 'Father returned and saw mother.' (D94:164)
- (g) Nguma jaja-ngku ngamban Ø bural-nga-nyu yabu-ku.
 father child-ERG heard see-AP-PST mother-DAT
 'The child heard father and he (father) saw mother.' (D94:164)
- (h) Nguma bural-nga-nyu yabu-gu Ø jaja-ngku ngamban.
 father see-AP-PST mother-DAT child-ERG heard
 'Father saw mother and the child heard him.' (D94:165)

(40) *The S/O Pivot: Clause Sequencing, The Obviative:*

- (a) Ngaja nyina-ngurra, nyurraji yana.
 I(NOM) sit-OBVCOMP you:PL go:IMPT
 'While I stay, you all go.' (H60:notes)
- (b) Yala nyina nginda, ngaliji yanu-ngurra.
 here sit:IMPT you(NOM) we:PL go-OBVCOMP
 'You stay here, while we go.' (H60:notes)
- (c) Yabu nguma-ngku buran (nguma) banaka-ngurra.
 mother father-ERG saw (father) return-OBVCOMP
 'Father saw mother and then he immediately returned.' (D94:166)

- (d) Yabu nguma-ngku buran (nguma) jaja-ngku ngamba-ngurra.
 mother father-ERG saw (father) child-ERG hear-OBVCOMP
 'Father saw mother and then the child immediately heard him.' (D94:166)
- (e) Ngana nyurra-na buran (ngana) ngambal-nga-ngurra jaja-ku.
 we you.PL-ACC saw (we) hear-AP-OBVCOMP child-DAT
 'We saw you (plural) and we immediately heard the child.' (D94:167)

(41) *The S/O Pivot: "Complementation"*:

- (a) Ngaja bayi yara nganban [Ø wukal-nga-yku bakum jikarrin-ku
 I the man aksed give-AP-PURP the cigarette-DAT
 ba-ku-n yibi-ku].
 the-DAT-FEM woman-DAT
 'I asked the man [to give the cigarette to the woman].' (D92)
- (b) Bayi yara ba-ngku-n yibi-ngku yajjarran [Ø *pro* baga-li].
 the man the-ERG-FEM woman-ERG threatened [Ø *pro* spear-PURP]
 'The woman threatened the man [that she would spear him].' (D92)
- (c) Bayi yara ba-ngku-n yibi-ngku yajjarran [Ø ba-ngku
 the man the-ERG-FEM woman-ERG threatened [Ø the-ERG
 gubi-ngku baga-li].
 shaman-ERG spear-PURP]
 'The woman threatened the man [that the shaman would spear
 him].' (D92)
- (d) Ngaja balam ngarrinyji nguymi-nyu [Ø *pro* jangka-yku].
 I the.VEG orange like-PST [Ø *pro* eat-PURP]
 'I like to eat oranges.' (D92)
- (e) Ngaja nguymi-marri-nyu [Ø ngaba-yku].
 I like-REFL-PST [Ø bathe-PURP]
 'I like to bathe.' (D92)
- (f) Bayi yara walngkarra-nyu [Ø kunj-al-nga-yku ba-ku-n bana-ku].
 the man want-PST [Ø drink-AP-PURP the-DAT-FEM water-DAT]
 'The man wants to drink some water.' (D92)
- (g) Bayimbal ngayku-nku ngajirri-ny jurrka-na-yku.
 he(NOM) me-DAT be.ready-TNS spear-AP-PURP
 'He is about to spear me.' (H60:notes)

(42) *The S/O Pivot: T-Relatives, NP-Relatives.*

- (a) Ba-ngku-l ngayku-na bura-n barrkan-du nyina-ngu-rru.
the-ERG-MASC me-ACC see-PST wallaby-ERG sit-REL-ERG
'The wallaby, sitting, sees/saw me.' (H60:notes)
- (b) Jangka-yku ngaja wuju, ngamirr-bi-ngu-rru.
eat-PRUP I food hungry-INCH-REL-ERG
'I want to eat, being hungry.' (H60:notes)
- (c) Buni-ngku ngayku-na kanda-nyu, paji-ngu ngaja.
fire-ERG me-ACC burn-PST fall-REL I(NOM)
'The fire burned me when I fell.' (H60:notes)
- (d) Pa-ngku-lbal ngayku-na balka-n yanu-ngu.
he-ERG-MASC:R me-ACC hit-PST go-REL
'He hit me when I went/who went (there).' (H60:notes)
- (e) Ngaja bura-n nginu-na *pro* jurrka-na-ngu.
I see-PST you-ACC spear-AP-REL
'I saw you spear him/you who speared him.' (H60:notes)
- (f) Ngaja waynji-ngu-rru bala-n jukumbil bura-n.
I ascend-REL-ERG the.NOM-FEM woman see-PST
'I saw the woman as I was going uphill.' (D72:133)
- (g) Nguma banaka-ngu yabu-ngku bura-n.
father return-REL mother-ERG see-PST
'Mother saw father who was returning.' (D72:169)
- (h) Nguma yabu-ngku banaka-ngu-rru bura-n.
father mother-ERG return-REL-ERG see-PST
'Mother who was returning saw father.' (D72:170)
- (i) Yabu bural-nga-ngu nguma-gu banaka-nyu.
mother see-AP-REL father-DAT return-PST
'Mother who saw father was returning.' (D72:170)

(43) *Split Ergativity: Case Morphology* (Dixon 94:86; Ø = NOM):

A	-Ø	-ngku	-ngku	-ngku
S	-Ø	-Ø	-Ø	-Ø
O	-na	-Ø	-Ø	-Ø
	(1, 2 pronoun)	(3 pronoun)	(names)	(common N)

(44) *Split Ergativity: Case Masking and the S/O Pivot*:

- (a) Ngana banakanyu Ø miyandanyu.
 we returned laughed
 'We returned and laughed.' (D94:162)
- (b) Ngana banakanyu Ø nyurra buran.
 we returned you.PL saw
 'We returned and you saw us.' (D94:162)
- (c) Nyurra ngana-na buran Ø banakanyu.
 you.PL us-ACC saw returned.
 'You saw us and we returned.' (D94:162)
- (d) Nyurra ngana-na buran Ø jaja-ngku ngamban.
 you.PL us-ACC saw child-ERG heard
 'You saw us and the child heard us.' (D94:163)
- (e) Nyurra ngana-na buran Ø (nyurra) ngamban.
 you.PL us-ACC saw (you.PL) heard
 'You saw us and heard us.' (D94:164)
- (f) Ngana banakanyu Ø bural-nga-nyu nyurra-nku.
 we returned see-AP-PST you.PL-DAT
 'We returned and saw you.' (D94:164)
- (g) Ngana-na jaja-ngku ngamban Ø bural-nga-nyu nyurra-nku.
 us-ACC child-ERG heard see-AP-PST you.PL-DAT
 'The child heard us and we saw you.' (D94:164)
- (h) Ngaja bayi yara kikan ba-ku-n Ø jukumbil-gu wawul-nga-yku
 I the man told the-DAT-FEM woman-DAT fetch-AP-PURP
 Ø nginu-nku mundal-nga-yku Ø ba-ku mija-ku wamna-l-nga-yku.
 you-DAT bring-AP-PURP the-DAT house-DAT build-AP-PURP
 'I told the man to fetch thw woman to bring you to build the house.'

(45) *Split Ergativity: Case Masking in Relatives and Secondary Predicates:*

- (a) Ngaja waynji-ngu-rru bala-n jukumbil bura-n.
I ascend-REL-ERG the.NOM-FEM woman see-PST
'I saw the woman as I was going uphill.' (D72:133)
- (b) Jangka-yku ngaja wuju, ngamirr-bi-ngu-rru.
eat-PRUP I food hungry-INCH-REL-ERG
'I want to eat, being hungry.' (H60:notes)
- (c) Miti-ngku ngaja kuya jurrkanjanyu.
small-ERG I fish speared
'When small, I used to spear fish.'
- (d) Ngaja bura-n nginu-na *pro* jurrka-na-ngu.
I see-PST you-ACC spear-AP-REL
'I saw you spear him/you who speared him.' (H60:notes)

(46) *The Passive-Reflexive Ambiguity (Jabugay):*

- (a) Pama-lu ngayang wangal tapa-ny.
man-ERG my boomerang throw-PST
'The man threw my boomerang.'
- (b) Ngayang wangal tapa-yi-ny.
my boomerang throw-PASS-PST
'My boomerang was thrown.'
- (c) kuja-ngku pama-lu kujangu-ny kapa-a ngapa-lna.
the-ERG man-ERG him-ACC chalk-INST paint-FUT
'The man will paint him with white pipeclay.'
- (d) Kuji pama kapa-a ngapa-yi-na.
the(NOM) man(NOM) chalk-INST paint-REFL-FUT
'The man will paint himself with white pipeclay.'
- (e) Kayarra-ngku maa tuku mila puka-ng.
possum-ERG food leaf new eat-PRES
'The possum eats young leaves.'

- (f) Palparu minyaa-la puka-yi-ng.
 crane fish-LOC eat-AP-PRES
 'The crane eats fish.'
- (g) Nganya kulu-ngku paka-yi-ny.
 me.ACC spear-ERG pierce-INV-PST
 'The spear stuck me.'

(46) *The Passive-Reflexive Ambiguity (Lardil, an Accusative Language):*

- (a) Ngada yuurr-la-tha karnjin-in.
 I PERF-spear-ACT wallaby-ACC
 'I speared a wallaby.'
- (b) Ngada yuurr-la-yi.
 I PERF-spear-PASS
 'I speared myself.'
- (c) Karnjin yuurr-la-yi (tanga-n).
 wallaby PERF-spear-PASS (person-ACC)
 'The wallaby was speared (by someone).'

(46) *The Passive-Reflexive Ambiguity (Dyirbal):*

- (a) Bayi yara buyba-yirri-nyu.
 the man hide-REFL-PST
 'The man hides himself.'
 'The man hides (things).' (Marantz 84:212; D72:90)
- (b) Bayi yara jangka-ymarri-nyu (ba-gu-m wuju-ku).
 the man eat-REFL-PST (the-DAT-VEG fruit-DAT)
 'The man is eating (fruit).' (Marantz 84:213; D72:90)

References

- Baker, Mark (1988). *Incorporation: A Theory of Grammatical Function Changing*. Chicago: University of Chicago Press.
- Baker, Mark, Kyle Johnson, and Ian Roberts (1989), Passive arguments raised. *Linguistic Inquiry* 20:219-251.
- Bittner, Maria (1994). *Case, Scope, and Binding*. Dordrecht/Boston/London: Kluwer Academic Publishers.
- Bittner, Maria, and Ken Hale (1996). Ergativity: toward a theory of a heterogeneous class. *Linguistic Inquiry* 27:531-604.
- Chomsky, Noam (1981). *Lectures on Government and Binding*. Dordrecht: Foris.
- de Rijk, Rudolph (1966). Redefining the ergative. Unpublished MIT manuscript.
- Dixon, R. M. W. (1972). *The Dyirbal Language of North Queensland*. Cambridge: Cambridge University Press.
- Dixon, R. M. W. (1979). Ergativity. *Language* 55:59-138.
- Dixon, R. M. W. (1992). Complement clauses and complementation strategies. Unpublished ANU paper.
- Dixon, R. M. W. (1994). *Ergativity*. Cambridge Studies in Linguistics 69. Cambridge: Cambridge University Press.
- Heath, Jeffrey (1979). Is Dyirbal ergative? *Linguistics* 17:401-463.
- Levin, Beth (1983) *On the Nature of Ergativity*, unpublished Ph.D. dissertation, MIT.
- Marantz, Alec (1981). *A Theory of Grammatical Relations*, unpublished Ph.D. dissertation, MIT.
- Marantz, Alec (1984). *On the Nature of Grammatical Relations*. Cambridge, MA: MIT Press.