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Author(s): Paul J. Hopper and Sandra A. Thompson

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TRANSITIVITY IN GRAMMAR AND DISCOURSE

PAUL J. HOPPER

*State University of New York,
Binghamton*

SANDRA A. THOMPSON

*University of California,
Los Angeles*

Transitivity involves a number of components, only one of which is the presence of an object of the verb. These components are all concerned with the effectiveness with which an action takes place, e.g., the punctuality and telicity of the verb, the conscious activity of the agent, and the referentiality and degree of affectedness of the object. These components co-vary with one another in language after language, which suggests that Transitivity is a central property of language use. The grammatical and semantic prominence of Transitivity is shown to derive from its characteristic discourse function: high Transitivity is correlated with foregrounding, and low Transitivity with backgrounding.*

THE TRANSITIVITY HYPOTHESIS

1. A mass of evidence suggests the significance of the notion of Transitivity in the grammars of the world's languages. In this paper, we wish to show (1) that Transitivity is a crucial relationship in language, having a number of universally predictable consequences in grammar, and (2) that the defining properties of Transitivity are discourse-determined. We begin here by presenting a broad theory of Transitivity. In §2 we discuss its morphosyntactic and semantic manifestations; and in §3 we outline an explanation of the grammatical facts within the framework of discourse structure.

Transitivity is traditionally understood as a global property of an entire clause, such that an activity is 'carried-over' or 'transferred' from an agent to a patient. Transitivity in the traditional view thus necessarily involves at least two participants (a view which we shall later qualify), and an action which is typically EFFECTIVE in some way. This intuitive understanding is the one which we shall attempt to characterize explicitly and in universal terms. As a first step, we propose to isolate the component parts of the Transitivity notion, and to study the ways in which they are typically encoded by languages. We have identified the following parameters of Transitivity, each of which suggests a scale according to which clauses can be ranked.

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	HIGH	LOW
(1) A. PARTICIPANTS	2 or more participants, A and O. ¹	1 participant
B. KINESIS	action	non-action
C. ASPECT	telic	atelic
D. PUNCTUALITY	punctual	non-punctual
E. VOLITIONALITY	volitional	non-volitional
F. AFFIRMATION	affirmative	negative
G. MODE	realis	irrealis
H. AGENCY	A high in potency	A low in potency
I. AFFECTEDNESS OF O	O totally affected	O not affected
J. INDIVIDUATION OF O	O highly individuated	O non-individuated

It is easy to show that each component of Transitivity involves a different facet of the effectiveness or intensity with which the action is transferred from one participant to another:

(A) PARTICIPANTS: No transfer at all can take place unless at least two participants are involved.

(B) KINESIS: Actions can be transferred from one participant to another; states cannot. Thus something happens to Sally in *I hugged Sally*, but not in *I like Sally*.

(C) ASPECT: An action viewed from its endpoint, i.e. a telic action, is more effectively transferred to a patient than one not provided with such an endpoint. In the telic sentence *I ate it up*, the activity is viewed as completed, and the transferral is carried out in its entirety; but in the atelic *I am eating it*, the transferral is only partially carried out.

(D) PUNCTUALITY: Actions carried out with no obvious transitional phase between inception and completion have a more marked effect on their patients than actions which are inherently on-going; contrast *kick* (punctual) with *carry* (non-punctual).

(E) VOLITIONALITY: The effect on the patient is typically more apparent when the A is presented as acting purposefully; contrast *I wrote your name* (volitional) with *I forgot your name* (non-volitional).

(F) AFFIRMATION: This is the affirmative/negative parameter.

(G) MODE: This refers to the distinction between 'realis' and 'irrealis' encoding of events. An action which either did not occur, or which is presented as occurring in a non-real (contingent) world, is obviously less effective than one whose occurrence is actually asserted as corresponding directly with a real event.

(H) AGENCY: It is obvious that participants high in Agency can effect a transfer of an action in a way that those low in Agency cannot. Thus the normal interpretation of *George startled me* is that of a perceptible event with perceptible consequences; but that of *The picture startled me* could be completely a matter of an internal state.

Finally, we come to the two components which refer to the O: (I) AFFECTEDNESS OF O and (J) INDIVIDUATION OF O. The degree to which an action is transferred to

¹ We follow Dixon 1979 in using 'A' (for Agent) and 'O' (for Object) to refer to the two participants in a two-participant clause. We make no claims about the grammatical relations that the NP arguments referring to these participants might bear to the verb. The term 'patient' refers to an O which is in fact the 'receiver' of the action in a cardinal transitive relationship.

a patient is a function of how completely that patient is AFFECTED; it is done more effectively in, say, *I drank up the milk* than in *I drank some of the milk*. The component of INDIVIDUATION, however, refers both to the distinctness of the patient from the A (cf. §2.9 below on reflexives) and to its distinctness from its own background. Thus the referents of nouns with the properties on the left below are more highly individuated than those with their counterparts on the right (cf. Timberlake 1975, 1977):

INDIVIDUATED	NON-INDIVIDUATED
(2) proper	common
human, animate	inanimate
concrete	abstract
singular	plural
count	mass
referential, definite	non-referential

An action can be more effectively transferred to a patient which is individuated than to one which is not; thus a definite O is often viewed as more completely affected than an indefinite one. In *Fritz drank the beer*, there is a possible or even probable implication that he finished the (available) beer; but in *Fritz drank some beer*, this implication is achieved only with difficulty (e.g. if so little beer was left that drinking ANY of it was tantamount to finishing it). Similarly with animate and inanimate patients: in *I bumped into Charles*, there is likely to be a focus of attention on the effect of the event on Charles, or perhaps on both participants; but in *I bumped into the table*, it is less probable that something happened to the table, and more likely that the effect on the A is being highlighted.

Transitivity, then, viewed in the most conventional and traditional way possible—as a matter of carrying-over or transferring an action from one participant to another—can be broken down into its component parts, each focusing on a different facet of this carrying-over in a different part of the clause. Taken together, they allow clauses to be characterized as MORE OR LESS Transitive: the more features a clause has in the ‘high’ column in 1A–J, the more Transitive it is—the closer it is to CARDINAL Transitivity. Again, this notion is in general consonant with our pre-theoretical understanding of Transitivity. Compare these examples:

- (3) a. *Jerry likes beer.*
 b. *Jerry knocked Sam down.*

Here 3b is much higher in Transitivity than 3a because it displays the following properties:

- (4) Kinesis: action.
 Aspect: telic.
 Punctuality: punctual.
 Affectedness of O: total.
 Individuation of O: high; referential, animate, and proper.

Again, consider:

- (5) *There were no stars in the sky.*

This would, of course, be much lower in Transitivity than either 3a or 3b, since it has no features in the ‘high’ column except realis.

Regarding Transitivity as a continuum has, however, one potentially less comfortable consequence: a sentence with two participants may rate lower than one with a single participant. Thus, for the features by which they differ, the one-participant clause 6 has more high-Transitivity features than the two-participant clause 7:

(6) *Susan left.*

Kinesis: action.

Aspect: telic.

Punctuality: punctual.

Volitionality: volitional.

(7) *Jerry likes beer.*

Participants: two.

This consequence, however, seems to us absolutely correct. The absence of O will, of course, reduce the degree of Transitivity of the clause. Thus it is well known that, in ergative languages (by definition), the subject of the intransitive clause is marked differently from the subject of the transitive clause, and identically with the O of the transitive clause. We interpret this distribution as a signal of the REDUCED TRANSITIVITY of the clause which lacks an O. As Comrie 1975 has pointed out, the mirror image of this situation is found in Finnish, where O is in a non-objective case just when no overt subject is present. Nevertheless, it remains true that many two-participant sentences are very low in Transitivity. That is, although the presence of a true patient participant is a crucial component of Transitivity, that of a second participant which is not much of a patient (i.e. which does not receive any action) is not. Thus, although English codes clauses like 7 as transitive, such clauses with less than ideal patients are coded in many other languages with various of the trappings found in intransitive clauses. Many languages, when expressing a message like that of 7, code the patient in the same way as a single participant with an intransitive verb; the experiencer then appears in an oblique case. Spanish is such a language:

(8) *Me gusta la cerveza.*

me-DAT pleases the beer

'I like beer.'

As we shall see in some detail below, antipassive and O-incorporation constructions serve exactly the same purpose: they code clauses which are very low in Transitivity as 'intransitive'—even ones which may, strictly speaking, have two participants. That is, morphosyntactic markings tend to be sensitive to Transitivity as a whole, rather than to the actual presence or absence of a second participant.

In the grammars of all the languages we have examined, we find that these component features of Transitivity CO-VARY extensively and systematically. It is this co-variation which compels us to the view that Transitivity is a central relationship in the grammars of human languages: whenever an obligatory pairing of two Transitivity features occurs in the morphosyntax or semantics of a clause, THE PAIRED FEATURES ARE ALWAYS ON THE SAME SIDE OF THE HIGH-LOW TRANSITIVITY SCALE. This observation leads us to a claim about a universal property of grammars, which we formulate as the TRANSITIVITY HYPOTHESIS:

- (9) If two clauses (a) and (b) in a language differ in that (a) is higher in Transitivity according to any of the features 1A–J, then, if a concomitant grammatical or semantic difference appears elsewhere in the clause, that difference will also show (a) to be higher in Transitivity.

The converse of this hypothesis, that there is a similar correlation among low-Transitivity features, is implicit. Of course, the Transitivity Hypothesis refers only to OBLIGATORY morphosyntactic markings or semantic interpretations; i.e., it states that the co-variation takes place whenever two values of the Transitivity components are necessarily present. The hypothesis in its present form does not predict WHEN these values will surface in structure or meaning—but only that, if they DO surface, they will agree in being either both high or both low in value. By way of example, let us suppose that a language has an opposition, marked in its morphology, between telic and atelic verbs. Let us assume also that the O in the presence of a telic verb is obligatorily signaled in morphology as possessing one of the Transitivity features relevant for O's, e.g. Individuation. The Transitivity Hypothesis now predicts that if the verb is telic (i.e. is on the high side of the Transitivity scale for Aspect), then the O will also be signaled as being on the high side of the other scale relevant for O's in this language, viz. Individuation. Schematically:

- (10) (a) A V O
 [telic] [x]
 (b) A V O
 [atelic] [y]

In this language, given that features [x] and [y] both have to do with Individuation (e.g. with referentiality), and given that O MUST receive a mark for this feature, then the Transitivity Hypothesis predicts that [x] will signal that the O is [+referential], and [y] will signal that the O is [–referential]. The hypothesis does NOT predict that O is necessarily marked (or even interpreted) with the feature [x] or [y] in any given language—but only that, IF it is marked, then this mark will reflect the high or low side of the relevant Transitivity component, respectively. The Transitivity Hypothesis also predicts that the opposite type of correlation will not be found, where a high-Transitivity feature systematically co-varies with a low-Transitivity feature in the same clause. Thus, referring to 10, the hypothesis predicts that no language will be found in which the O of a telic verb must be marked as, say, non-referential, or in which the O of an atelic verb is necessarily referential.

Note that the Transitivity Hypothesis is stated in such a way that the Transitivity features can be manifested either morphosyntactically or semantically. Below, we give examples of correlations between certain morphosyntactic signals and other morphosyntactic signals, but also examples of correlations between morphosyntactic signals and semantic interpretations.

The Transitivity Hypothesis is supported by linguistic data from a wide variety of languages. In fact, no languages whose grammar we examined failed to supply evidence for it. In the following, we present a selection of some of our more striking examples.

MORPHOSYNTAX

2.1. Here we present morphosyntactic reflexes of Transitivity, as well as data in support of the Transitivity Hypothesis. We begin by discussing O-marking, with

special reference to the common situation where O is marked only when it is highly individuated—typically, when it is animate and/or definite.

2.11. Under INDIVIDUATION are subsumed several different but related features. Thus Spanish shows an extreme restriction in requiring that O's marked with *a* must be not merely animate, but also either human or human-like—and furthermore that they be referential, as opposed to merely definite. That is, whether the NP is definite or indefinite, a specific and extant referent must be available. The non-human vs. human distinction is illustrated here:

- (11) a. *Busco mi sombrero.*
I seek my hat
'I'm looking for my hat.'
b. *Busco A mi amigo.*
I seek my friend
'I'm looking for my friend.'

(Wald 1979 similarly shows that humanness is the key feature in predicting the occurrence of the Swahili O-marker.)

The requirement of referentiality for Spanish is illustrated in the following:

- (12) a. *Celia quiere mirar un bailarín.*
wants to watch a ballet dancer
b. *Celia quiere mirar A un bailarín.*
wants to watch a ballet dancer
'Celia wants to watch a ballet dancer.'

Here 12a has the non-referential, and 12b the referential reading.

Special markers on O may be used when it is definite (as opposed to referential)—e.g. in Hindi, where the suffix *-koo* on O serves to identify animate definite O's as opposed to either inanimate or indefinite:

- (13) a. *Machuee-nee machlii pakRii.*
fisherman-ERG fish caught
'The fisherman caught a fish.'
b. *Machuee-nee machlii-koo pakRaa.*
fisherman-ERG fish caught
'The fisherman caught the fish.'

A third type of O-marking, of the same general category, is the very widespread type in which all definite O's are marked, regardless of referentiality or animacy. In Modern Hebrew, an indefinite O is not marked as the object, but is unmarked, like the subject. A definite O, however, is marked with the 'object-marker' *et*, as well as with the definite article (Berman 1978:123):

- (14) a. *David natan matana lərina.*
gave present to Rina
'David gave a present to Rina.'
b. *David natan ET ha-matana lərina.*
gave OBJ DEF-present to Rina
'David gave the present to Rina.'

Finally, the degree of Individuation plays a crucial role in the definition of 'object' itself in many Bantu languages. Morolong & Hyman (1977:202) argue that

in Sesotho, and perhaps in Eastern Bantu as a whole, the notion 'object' is a relative one, being assigned to that non-subject NP

- (15) a. whose semantic case is highest on the hierarchy BEN > DAT > ACC > INS ...
 b. whose referent is highest on the personal hierarchy 1st > 2nd > 3rd-human > 3rd-animal > 3rd-inanimate ...
 c. whose referent is more determined (given, old, definite, specific).

2.12. A number of languages, then, single out definite, referential, or animate O's. Within the framework of the Transitivity Hypothesis, we will show that these specially marked O's co-vary with other features indicating a higher degree of TRANSITIVITY in their clause than those which are less individuated—in particular, those which are indefinite or non-referential.

In a number of languages, when the O is indefinite or non-referential, independent reasons exist for assigning the verb to the morphosyntactic class of 'intransitive verbs' (as suggested in Mardirussian 1975 and Dik 1978:169). Sometimes the evidence for this is very striking. The O may be actually incorporated into the verb stem, perhaps even with phonological bonding; e.g., in Chukchee (Comrie 1973: 243–4), the incorporated O (but not the unincorporated one) occurs pre-verbally, participates in word-bounded vowel harmony rules with the verb, and is typically non-referential. This complex verb then takes an intransitive suffix:

- (16) a. *Tumg-e na-ntawat-ən kupre-n.*
 friends-ERG set-TRANS net-ABS
 'The friends set the net.'
 b. *Tumg-ət KOPRA-ntawat-GPAT.*
 friends-NOM net-set-INTR
 'The friends set nets.'

Chukchee, then, is a perfect example supporting the Transitivity Hypothesis. Ex. 16a shows four morphosyntactic signals of high Transitivity:

- (17) a. Ergative case-marking on A.
 b. Absolutive case-marking on O.
 c. Independence of V and O as separate words.
 d. TRANSITIVE marking on V.

These are correlated with a HIGH value for semantic Transitivity feature 1J, in that O is highly individuated. But 16b shows these morphosyntactic signals of LOW Transitivity:

- (18) a. Nominative case-marking on A.
 b. Incorporation of O into V.
 c. INTRANSITIVE marking on V.

These are correlated with a LOW value for semantic Transitivity feature 1J.

Other languages show morphological indications that a verb with indefinite O is to be considered intransitive. In Tongan verbs which can occur in the ergative construction, when a non-referential O is incorporated into the verb, the case-marking of the A switches from ergative to absolutive—the case it would have with an ordinary intransitive verb (J. Tanny, p.c.):

- (19) a. *Na'e kai 'e Sione 'a e ika.*
 PAST eat ERG John ABS DEF fish
 'John ate the fish.'

- b. *Na'e kai ika 'a Sione.*
 PAST eat fish ABS John
 'John ate fish.'

In other languages, slight differences in word order show that verb and indefinite O tend to coalesce; the two constituents are closer to forming a single unit than when the O is definite. This situation holds to a greater or lesser extent in a number of Uralic and Altaic languages, as has been pointed out by Bese, Dezső & Gulya (1970:116). In Hungarian, it is necessary to distinguish between referential ('individual') and non-referential O's on the basis of word order. Non-referential O's are placed immediately before the verb:

- (20) a. *Péter újságot olvas.*
 paper reads
 'Peter is reading a newspaper.'
 b. *Péter olvas egy újságot.*
 reads a paper
 'Peter is reading a [specific] newspaper.'

In 20a, the newspaper is irrelevant to the context, and only the action of newspaper-reading is being asserted; in 20b, the newspaper as an entity plays some role in the discourse. Furthermore, when the O is both referential and definite, it is indexed in the verb by the objective conjugation:

- (21) *Péter olvassa az újságot.*
 reads (OBJ) the paper
 'Peter is reading the newspaper.'

The Hungarian objective conjugation is not usually referred to as a 'transitive' conjugation, yet this seems a reasonable designation. The form of the verb chosen when the O is indefinite or non-referential is identical to that chosen when there is no O at all ('subjective' conjugation; Károly 1972:87):

- (22) a. *A szél fúj.*
 the wind blows
 'The wind is blowing.'
 b. *A szél fújja a levelet.*
 the wind blows (OBJ) the leaf
 'The wind is blowing the leaf.'

In the OV type of clause, rather typically, the O is in some sense semantically cognate with the V; hence OV clauses are ungrammatical unless there is some degree of predictability of the O from the semantic nature of the V (Károly, 97):

- (23) **Ceruzát néz.*
 pencil sees
 *'He sees pencil.'

Quite analogous facts of O-incorporation exist in the Oceanic languages Woleaian (Sohn 1975), Mokilese (Harrison 1976), and Fijian (Arms 1974); in the Austro-Asiatic language Temiar (West Malaysia, Benjamin 1976:172); and in such North American languages as Paiute and Nahuatl (Sapir 1911).

We have seen that definite O's have privileges of occurrence which differ from

those of indefinites. It often happens that a certain morpheme (e.g. of tense-aspect), having a particular position relative to the verb, is able to ignore an indefinite O; two examples of this are found in Amwi, an Austro-Asiatic language of Northern Bangladesh, and the Micronesian language Kusaiean (now called Kosraean). In Amwi (Weidert 1975:187), the usual word order is VSO. But when O is indefinite, the subject follows the VO complex:

- (24) a. *ʔə bo ηə haj ci.*
 TENSE eat I OBJ rice
 ‘I eat the rice.’
 b. *ʔə bo ci ηə.*
 TENSE eat rice I
 ‘I eat rice.’

Here the O-marker *haj* precedes definite O's, and indefinite O's have no preposition.

In Kusaiean (Sugita 1973:399), suppletive verb stems, perhaps phonologically relatable, are used for indefinite and definite O's:

- (25) a. *nga ɔl-læ nuknuk ε.*
 I wash-COMP clothes the
 ‘I finished washing the clothes.’
 b. *nga owo nuknuk læ.*
 I wash clothes COMP
 ‘I finished washing clothes.’

The morpheme glossed as ‘completive’ is placed AFTER an indefinite O; clearly, V and O are regarded as a morphological unit.

We have indicated that languages which morphologically distinguish between transitive and intransitive clauses, AND between definite and indefinite O's, have a tendency to associate indefinite (i.e. characteristically unmarked) O's with intransitive clauses. An extreme restatement of this—which is, as we have seen, valid for some languages—is that an indefinite O is not really an O at all, but is a subordinate part of a compound of which the verb stem is the head (i.e., it is incorporated into the verb).

Thus non-referential or indefinite O's show striking correlations with the verb morphology, case-markings, and word-order characteristic of ‘intransitive’ clauses in a number of languages. These correlations suggest that the special markings on definite O's, found in many languages, are better interpreted functionally as signals of the high Transitivity of the clause as a whole—rather than as devices for distinguishing O's from A's, as has been suggested by Comrie 1977a, ms. We will return to this point below in describing the discourse function of definite O's.

2.2. It follows from the previous discussion that the arguments known to grammar as INDIRECT OBJECTS should in fact be Transitive O's rather than what might be called ‘accusative’ O's, since they tend to be definite and animate.² This is in fact true of a number of Bantu languages (though by no means all); e.g., in

² Givón (1979:54) shows that, in one pair of English texts, out of 115 indirect O's, 112 (or 97%) are definite; he claims that they are ‘overwhelmingly animate.’ He offers no frequencies for the latter point, but ours support his point strongly: out of 33 indirect O's in one English text, 100% were not only animate, but human. Again, of these, all were definite.

Sesotho, 'when two nouns follow the verb, one of which is human, the other of which is non-human, the human noun MUST, independent of its semantic case, directly follow the verb' (Morolong & Hyman, 203).

In some Bantu languages, the NP which directly follows the verb is also the one with which the verb shows concord, and which is shown by other tests to be the true O of the clause:

- (26) a. *Ke-phehétsé ngoaná lijó.*
 1st-cook child food
 'I cooked food for the child.'
 b. *Ke-bítselítse baná mokéte.*
 1st-call children feast
 'I called the children for a feast.'

In 26a, *ngoaná* 'child' is benefactive; in 26b, *baná* 'children' is accusative. Yet the animacy/definiteness criterion takes precedence over the semantic case; and when a human O is in competition with an inanimate O, the human O wins out. Maricopa (Lynn Gordon, p.c.) and Amharic (Givón 1976) behave analogously; in fact, with respect to agreement (according to Givón 1976, 1979 and Faltz 1978), this principle appears to be universal.

Similarly, Hawkinson & Hyman 1974 have pointed out that, with respect to four syntactic processes in Shona (another Bantu language), the 'dative' NP takes precedence over the patient NP. These processes are all related to topicality: Passivization, Pronominalization, Dative Shift, and Topic Shift.

English shows entirely comparable behavior in so-called 'dative movement' clauses. Consider pairs of clauses like:

- (27) a. *Clara wrote a letter to Santa Claus.*
 b. *Clara wrote Santa Claus a letter.*

The version in which the human NP appears in the 'object' position, adjacent to the verb, implies referentiality, or at least prior existence (Green 1974).

It is also relevant to note that, as pointed out by Comrie (MS) and Givón 1976, a dative morpheme is often re-analysed as a marker of definite and/or animate O's. Thus both the Spanish *a* and Hindi *koo* (see above) are, etymologically, dative markers. In both Ge'ez and Neo-Aramaic, the Semitic dative *-l-* has spread to become a marker of the definite accusative (Givón 1976).

In Indonesian, dative O's are placed optionally in the post-verbal 'object' position under conditions similar to those in English. The verb is modified with the suffix *-kan* when the dative/benefactive NP directly follows it:

- (28) a. *Hasan menjual kambing itu kepada saya.*
 sell goat the to me
 'Hasan sold the goat to me.'
 b. *Hasan menjual-KAN saya kambing.*
 sell me goat
 'Hasan sold me a goat.'

Our hypothesis predicts that clauses containing indirect O's will indicate high Transitivity in some other respect. Indonesian *-kan* is interesting in this regard because it has characteristics of a marker of increased Transitivity in the verb.

Thus the distinction between 29a–b is semantically that, in 29b, the door is more affected, the action is more completely carried out, or is done with more force:

- (29) a. *Tutup pintu*
 b. *TutupKAN pintu* } ‘Close the door.’

The suffix *-kan* also serves to make causatives out of intransitive verbs and adjectives: *jalan* ‘to go’, *jalankan* ‘make go’; *murah* ‘cheap’, *murahkan* ‘to cheapen’. Furthermore, in verb pairs like *sewa* ‘to rent from’ vs. *sewakan* ‘to rent out to’, or *pinjam* ‘to borrow’ vs. *pinjamkan* ‘to lend’, the *-kan* form is the one which takes an active, initiating A rather than a passive, receiving one. There is thus independent evidence that *-kan* makes a predicate more transitive.

Another respect in which clauses with indirect O’s are more Transitive is that they tend to have animate A’s: on one count, out of 33 English indirect O clauses, 32 (or 97%) had animate A’s.

2.3. This last point leads us to the next general area concerning the nature of O’s in Transitive clauses, that of TOTALITY. We will introduce it with a comparison between Indonesian *-kan* and a rival suffix *-i* with a number of distributional and semantic similarities. Let us look at a minimal pair (cf. Tjokronegoro 1968:18):

- (30) a. *Dia memanasi-i air*
 b. *Dia memanasi-KAN air* } ‘He heated the water.’

The distinction between the two is that 30b is more intense. The verb root in each sentence is *panas* ‘heat, hot’. With *-i*, it is implied that the action of heating is gentler and more controlled; e.g., 30a is appropriate for heating a test tube with a Bunsen burner. With *-kan*, however, the suggestion is of a more drastic heating, such as boiling water in a kitchen. The suffix *-kan* further suggests that the water is placed over the heat, while *-i* suggests rather that the heat is brought to the water, or is kindled while the water is over it. Historically, these suffixes may both be derived from prepositions, *-kan* being a former DIRECTIONAL (cf. *akan* ‘toward, to’, note also the proclitic *ke-* ‘to [a place]’), and *-i* being originally a LOCATIVE (‘at’). This historical note casts much light on the typology of this situation. For the moment, let us observe that the more Transitive suffix—i.e. the one used to make causatives, and to transitivize dative verbs—is correlated with a sense of TOTAL, as opposed to PARTIAL, effect on O. This sense that the O is more completely and radically affected by the action of a fully Transitive verb is, universally, of crucial importance, since it can spill over into the semantics of Aspect in the clause. A high degree of Transitivity may signal a total effect of the action of the verb on O, and hence the COMPLETION of the action. Simultaneously, it can imply that the O is physically changed in some way, e.g. moved or altered:

- (31) a. *Kami mendekat-KAN gunung-nya.*
 we near mountain-DEF
 ‘We brought the mountain close.’
 b. *Kami mendekat-i gunung-nya.*
 ‘We approached the mountain.’

Interestingly, the French equivalents of these two sentences similarly show a transitive clause when the O is affected, and an intransitive (reflexive and oblique) construction when motion is not attributed to the O:

- (32) a. *Nous avons rapproché la montagne.*
 we have drawn near the mountain
 'We brought the mountain close.'
 b. *Nous nous sommes rapprochés de la montagne.*
 we REFL be drawn near OBL the mountain
 'We approached the mountain.'

It is not at all unusual to find that morphosyntactic processes involving Transitivity move fluidly among simultaneous meanings or implications of this kind—and that, often enough, one or the other becomes grammaticized (semanticized) into the prime meaning.

2.31. One way for Transitivity to be signaled in O is by a distinction between an ACCUSATIVE and a PARTITIVE case. In Finnish, this distinction serves to encode the ASPECT of the clause (Fromm & Sadeniemi 1956:120–21). As predicted by the Transitivity Hypothesis, the accusative—the case of the totally affected O—gives the clause a perfective or telic value, while the partitive gives it an imperfective or atelic one:

- (33) a. *Liikemies kirjoitti kirjeen valiokunnalle.*
 businessman wrote letter (ACC) committee-to
 'The businessman wrote a letter to the committee.'
 b. *Liikemies kirjoitti kirjettä valiokunnalle.*
 businessman wrote letter (PART) committee-to
 'The businessman was writing a letter to the committee.'

This aspectual use of the accusative/partitive distinction has received much discussion among grammarians of Finnish. One striking formulation is that of L. Postis (cited by Fromm & Sadeniemi, 123), whose description of the partitive recalls the standard linguistic definition of the term 'atelic': 'The object is in the partitive when the action of the predicate does not reach, or is not thought of as reaching, any determinate point or phase.'

Attention has often been called to well-known pairs of sentences in English—e.g.,

- (34) a. *We sprayed paint ON THE WALL.*
 b. *We sprayed THE WALL with paint.*

Here 34b implies that the O *wall* is completely affected; 34a suggests that only part of it is affected. Hungarian shows an identical contrast, but there the morphosyntax of the two sentences reveals much more clearly than in English the difference in Transitivity of the total vs. partial O (Moravcsik 1978a,b):

- (35) a. *János festék-et fújta A FAL-RA.*
 paint-OBJ sprayed the wall-on
 'Janos sprayed paint on the wall.'
 b. *János befújta A FAL-AT festék-kel.*
 sprayed the wall-ACC paint-with
 'Janos sprayed the wall with paint.'

Note that in 35b, with the total O, the verb is in the objective conjugation—the paradigm for transitive clauses. Moreover, the verb has the ‘perfectivizing’ prefix *be-*, which signals completion of the activity (see Hetzron 1966 for further discussion). Finally, the O is placed directly after the verb, in the position for ‘true’ O’s. But the partial O in 35a is placed before the verb, in the position for indefinite, quasi-incorporated O’s; and the verb has no perfectivizing prefix. Most importantly, of course, the verb is in the subjective (intransitive) conjugation.

It is interesting in this connection to note a suggestion of Fillmore 1977 regarding pairs like 34a–b, as well as pairs like:

- (36) a. *I hit Harry with the stick.*
 b. *I hit the stick against Harry.*

The NP which is the true (as opposed to the oblique) O, he notes, is determined on the basis of a ‘saliency hierarchy’; this includes humanness, change of location or state, definiteness, and totality. In other words, given two patient NP’s in a clause, precisely the one which is higher in Individuation or Affectedness will be selected as the O of the verb, while the less individuated or affected one is relegated to oblique status.

To take just one more example, in the Micronesian language Trukese (Sugita, 397), the distinction between total and partial Affectedness of O is signaled in the verb alone. Again the intransitive stem of the verb signals partitive O, and the transitive stem indicates total O:

- (37) a. *wúpwe wún ewe kkónik.*
 I will drink the water
 ‘I will drink some of the water.’
 b. *wúpwe wúnúmi ewe kkónik.*
 I will drink the water
 ‘I will drink up the water.’

In general, then, partitive O’s are universally associated with intransitive verbs, or at least with some signal of REDUCED Transitivity. It follows that practically any signal of lower Transitivity can be used to suggest partitiveness. Thus it is quite common, in ergative languages, for the antipassive construction to carry a partitive meaning; this function is found in all the major groups of ergative languages, including the Australian, Polynesian, Eskimo, and Caucasian groups. In Tongan, verbs permitted to occur in ergative clauses take total O’s when the clause is ergative and partial O’s when the clause is antipassive (cf. Clark 1973:600):

- (38) a. *Na’e kai-i ’a e ika ’e he tamasi’i.*
 PAST eat-TRANS ABS DEF fish ERG the boy
 ‘The boy ate the fish.’
 b. *Na’e kai ’a e tamasi’i ’i he ika.*
 PAST eat ABS DEF boy OBL the fish
 ‘The boy ate some of the fish.’

We see that 38b is a canonical antipassive construction: the transitive marker is missing from the verb, the A is marked with the absolutive case-marker, and the O with an oblique case-marker; and it is 38b which signals a partitive meaning for the O. We shall see below that the ergative/antipassive contrast is one of higher vs. lower Transitivity in a number of other respects as well.

2.32. Closely related to the parameter of total vs. partial Affectedness is that of degree of INTENSITY. Recall once again that Indonesian *-kan* contrasts with *-i* in, among other things, the amount of intensity with which the O is affected by the verb; furthermore, it is the same morpheme which marks causatives. This correlation is predicted by the Transitivity Hypothesis, since causatives are highly Transitive constructions: they must involve at least two participants, one of which is an initiator, and the other of which is totally affected and highly individuated. Another language that shows this correlation is Arabic, where gemination of the second consonant of the root creates causatives, which are highly Transitive, as well as intensives (Masica 1976:96):

- (39) a. *birik* 'kneel,' *birrik* 'force to kneel'
 b. *kasar* 'break', *kassar* 'smash'
 c. *jamad* 'freeze' (intr.), *jammad* 'freeze' (trans.)

Similarly, in Chichewa, a Bantu language of Malawi, the causative morpheme is interpreted as a signal of intensity (Lee Trithart, p.c., and Anon. 1969):

- (40) a. *Mw-ana'yū w-a-dy-a.*
 child this he-TENSE-eat-INDIC
 'The child has eaten.'
 b. *M-ai a-ku-dy-ETS-a mw-ana.*
 woman she-TENSE-eat-cause-INDIC child
 'The woman is feeding the child.'
 c. *Mw-ana'yū w-a-dy-ETS-a.*
 child-this he-TENSE-eat-cause-INDIC
 'The child has eaten too much.'
 d. *Gwir-a-ni chi-ngwe!*
 hold-IMPER-2pl. string
 'Hold the string!'
 e. *Gwir-ITS-a-ni chi-ngwe!*
 hold-cause-IMPER-2pl. string
 'Hold the string firmly!'

2.4. The morphosyntax of a clause may also signal, in various ways, differences in DEGREE OF DIRECTED PHYSICAL ACTIVITY in the event to which the verb refers. The same property is sometimes referred to as a KINETIC quality; and the intervention of the conscious will which is usually a part of the meaning of this type of verb—the deliberateness or spontaneity of the A—is called the VOLITIONAL element.

In Estonian, for example, O's may be in one of three grammatical cases: the NOMINATIVE, used when no overt A is present; the GENITIVE, which covers most of the usual functions of an accusative; and the PARTITIVE. The partitive, as its name suggests, is used for partial O's, but also signals imperfectivity (Oinas 1966:224):

- (41) a. *Me peame kohe bensini võtma.*
 we AUX at once petrol(PART) take
 'We'll have to get some petrol right away.'
 b. *Mu sõber pakkis oma asju.*
 my friend pack his things(PART)
 'My friend was packing his things.'

However, as also in Finnish, the partitive includes among its uses the marking of the O of a negative verb (about which more will be said later) and the O of a 'verbum sentiendi':

- (42) a. *Ma armastan Kadrioru parki väga.*
 I like K(GEN) park(PART) much
 'I like the park of Kadriorg very much.'
- b. *Ma nägin oma sõpra kohvikus.*
 I saw my friend(PART) coffee-house-in
 'I saw my friend in the coffee-house.'
- c. *Ta kuulis nende kõnet.*
 he heard their talk(PART)
 'He heard their talk.'

In these examples, the verbs share an absence of VOLUNTARY PARTICIPATION by the A. Related to this is the fact that though a verb normally takes a partitive O, it may, when provided with a 'terminal' such as *ära* 'away', take a genitive O; it is then interpreted as involving a more active participation of the A (Oinas, 225):

- (43) a. *Ta tundis seda naist.*
 he knew this woman(PART)
 'He knew this woman.'
- b. *Ta tundis selle naise ära.*
 he knew this woman(GEN) away
 'He recognized this woman.'

Further evidence for a link between Transitivity and Volitionality comes from Cupeño (Hill 1969), in which volitional and non-volitional verbs are marked respectively with the suffixes *-ine* and *-yaxe*. These suffixes have cognates in other Uto-Aztecan languages which are transitive or causative vs. intransitive or passive, respectively.

Morphosyntactic correlates of higher vs. lower Agency may be displayed even in clauses with only one NP argument. Thus, in a number of languages (as discussed extensively by Comrie 1978, Moravcsik 1978a, and Dixon 1979), clauses with one argument label it with the marking appropriate for A's or for O's, depending on the degree of control it exercises over the activity. Thus in Eastern Pomo, a Hokan language of northern California (as pointed out by McLendon 1978:3), we find contrasts like the following, where *ha'* is the agentive and *wi'* the O-form of the 1st person pronoun:

- (44) a. *Wi' če'xélka* 'I'm slipping.'
 b. *Ha' če'xélka* 'I'm sliding.'
- (45) a. *Wi' ba'téčki* 'I got bumped accidentally.'
 b. *Ha' ba'téčki* 'I got bumped on purpose.'

Lakhota functions similarly (see Boas & Deloria 1941, Van Valin 1977). Thus we see that, even among what grammarians have traditionally called 'intransitive' clauses, it is quite reasonable to designate some as more Transitive than others. This distinction rests on precisely the same foundation as that for clauses with two arguments, with the correlations going in the predicted direction: when the marking

of the single NP is higher in Transitivity, i.e. is more like an A, so is the interpretation accorded the verb. It is important to recall here the particular view of Transitivity which is defended in the present paper: it is a relationship which obtains THROUGHOUT A CLAUSE. It is not restricted to one constituent or pair of constituents. Consequently, the presence of an overt O is only one feature of a Transitive clause; it co-exists with other defining properties (such as Agency, Kinesis etc.). And just as a clause may have an overt second participant, and still be aligned with the intransitive clause, so also it may lack a second participant, and yet have Transitive features. Because Transitivity is not dichotomous, but is a continuum, it follows that clauses lacking an overt O must be locatable somewhere on this continuum; but it does not necessarily follow that such clauses are situated at the extreme intransitive end.

2.5. PUNCTUALITY, as characteristic of actions as opposed to states, is another Transitivity feature which has morphosyntactic consequences in the predicted direction.

Spanish provides an example. Certain verbs show a contrast of a clause with no O vs. one with a 'minimal' O—namely *se*, the reflexive morpheme. The clause with *se* can be seen as more Transitive than the one without, since *se* is a morphological signal for O, but one which is non-distinct from the subject. Although it is not always true that the *se* vs. the non-*se* forms of the verb signal more vs. less Punctuality, there are certain pairs for which this is the case. Two examples from García 1975 (where a careful and detailed discussion of the semantics of *se* can be found) are:

- (46) a. *Juan durmió (toda la noche).*
 slept all the night
 'John slept (all night).'
 b. *Juan SE durmió (*toda la noche).*
 slept all the night
 'John went to sleep (*all night).'
- (47) a. *La paja ardió (toda la noche).*
 the straw burned all the night
 'The straw burned (all night).'
- b. *La paja SE ardió (*toda la noche).*
 the straw burned all the night
 'The straw caught fire (*all night).'

The *se* forms in 46b and 47b contrast with their non-*se* analogs in communicating punctual actions as opposed to non-punctual states. As pointed out by García (269), not only does the *se* sentence differ from the non-*se* version in being interpreted as a punctual event rather than a state, but it shows a preference to occur in texts in the "delimited" Preterit, more appropriate for the description of an action—as opposed to the non-*se* sentence, which prefers the Imperfect.

The perfectivizing prefixes of Hungarian, in particular *meg-*, can be shown to be signals of several of the Transitivity components which we have just discussed. Here we can contrast objective conjugation verbs with and without *meg-* (Hetzron 1966, p.c.):

- (48) a. *A gazda MEG-verte az inasokat.*
 the boss PERF-beat(OBJ) the apprentices(ACC)
 'The boss beat the apprentices.'
- b. *A gazda verte az inasokat.*
 the boss beat(OBJ) the apprentices(ACC)
 'The boss would beat the apprentices.'

With the prefix *meg-* (Hetzron's 'effective aspect'), 48a means that the boss did beat all the apprentices on one occasion; the action is thus perfective and punctual, and the object is totally affected. But 48b, without *meg-* (Hetzron's 'descriptive aspect'), means that the boss was not above beating the apprentices, that he did it from time to time, but that not all the apprentices were necessarily involved; the action is claimed, then, to be imperfective and iterative, and the O is not totally affected.

Some verbs take an O in the accusative when *meg-* is present, but in an oblique case when there is no preverb (Károly, 98):

- (49) a. *MEG-segit valaki-T.*
 PERF-helps somebody-ACC
- b. *Segit valaki-NEK.*
 helps somebody-DAT
 'He helps somebody.'

The O of a verb with *meg-* or other perfectivizing preverb must be referential (Bese, Dezső & Gulya, 118–21):

- (50) a. *A fiu el-olvasta a könyvet.*
 the boy PERF-read the book
 'The boy has read the book.'
- b. **A fiu könyvet el-olvasott.*
 the boy book PERF-read
 '*The boy has read book.'

Finally, as is already implicit in 48, the partitive (or partially affected) O may not appear with a perfective verb:

- (51) a. *A fiu eszik kenyeret.*
 the boy ate bread
 'The boy ate some bread.'
- b. **A fiu MEG-eszik kenyeret.*
 the boy PERF-ate bread
 'The boy ate up some bread.'

Returning to the Punctuality component, we note also that, in Samoan (Cook 1978, Chung 1973), the contrast between more punctual and less punctual actions is encoded in the ergative/antipassive contrast:

- (52) a. *Sā manatu le tama i le teine.*
 TENSE think the boy OBL the girl
 'The boy thought about the girl.'
- b. *Sā manatu-a le teine e le tama.*
 TENSE think-TRANS the girl ERG the boy
 'The boy remembered the girl.'

In 52a the A, *le tama* 'the boy', is in the absolutive form, with no case-marker, while the O, *le teine* 'the girl', is marked as an oblique by the particle *i*. The action is understood as durative. In 52b, the A has the ergative preposition *e*, and the O is marked by its position adjacent to the verb, which carries the transitive suffix *-a*. The action here contrasts sharply with that in 52a, in being interpreted as punctual.

2.6. The Samoan example above shows a rather typical situation in ergative languages: the canonical ERGATIVE clause signals one, several, or all of the high-Transitivity features, while the ANTIPASSIVE clause signals one or more of the low-Transitivity features. Characteristically, we find any of the following correspondences:

ERGATIVE	ANTIPASSIVE
(53) Verb codes two participants	Verb codes only one participant
Perfective Aspect	Imperfective Aspect
Total involvement of O	Partitive O
Definite O	Indefinite O
Kinetic/volitional V	Stative/involuntary V
Active participation of A	Passive participation of A

The term 'antipassive' is here used in an extended sense—encompassing not merely the 'canonical' antipassive construction, in which A is the absolutive case and O is oblique, but also any construction in which A appears in some case other than the ergative, and O in some case other than that with which it is normally marked in the ergative clause.

2.61. Beginning with the TOTALITY distinction, it often happens that the antipassive construction imposes a sense of partial Affectedness on the O. In §2.31, we gave one example of this use of the antipassive in Tongan. Compare the distinction in Kabardian (NW Caucasian) between the ergative clause 54a and the corresponding antipassive clause 54b ('nominative' in the terminology of Catford 1976:45):

- (54) a. *he-m q^w'ipshe-r je-dza'qe.*
 dog-ERG bone-NOM bite
 b. *he-r q^w'ipshe-m je-w-dzaq'e.*
 dog-NOM bone-ERG bite
 'The dog is biting the bone.'

Here 'the ergative construction implies that the dog bites the bone right through to the marrow, whereas the nominative construction implies that the dog is merely gnawing at the bone' (explanation attributed to Jakovlev).

Anderson 1976 cites similar examples from a West Circassian dialect, Bzhedukh, which behaves quite analogously:

- (55) a. *č'aaλa-m č'əg°-ər ya-ž°a.*
 boy-ERG field-ABS 3sg(-3sg)-plows
 'The boy is plowing the field.'
 b. *č'aaλa-r č'əg°-əm ya-ž°a.*
 boy-ABS field-OBL 3sg(-3sg)-plows
 'The boy is trying to plow the field'; or
 'The boy is doing some plowing in the field.'

Anderson notes (22): 'There are numerous such pairs, and they differ systematically in the following way: the "accusative" [i.e. antipassive] form in each case indicates that the action is carried out less completely, less successfully, less conclusively, etc., or that the object is less completely, less directly, less permanently, etc., affected by the action.'

Similar phenomena are well known in the ergative languages of Polynesia; see Chung 1977, 1978, Anderson 1977, and Hopper 1979b for discussions of the diachronic relationships between ergativity and perfectivity.

2.62. The notional O of the verb in some ergative languages is REFERENTIAL in the ergative construction, but not in the antipassive construction. The following example is from Avar (NE Caucasian):

- (56) a. *Hez-nuχ-habuleb bugo.*
 they(ERG)-road(NOM)-making are
 b. *Hel-nuχ habulel rugo.*
 they(NOM)-road(NOM) making are
 'They are making a road.'

According to A. A. Bokarëv (cf. Catford, 46), the ergative 56a requires prior identification of the road, while the antipassive 56b merely names the activity of road-making without reference to a specific road, and attributes this activity to a subject.

We recall that this non-referential O construction, in numerous languages, is associated with an intransitive form of the verb; and in fact precisely such an identification is pointed out by Catford when he writes: 'In ergative languages the looser nominative, (semi-)transitive construction is aligned rather with the simple objectless intransitive.'

In Eskimo, the ergative/antipassive contrast similarly signals an opposition between 'given' O vs. 'new' O (Kalmár, MS):

- (57) a. *Inu-up qimmiq-∅ taku-v-a-a.*
 person-ERG dog-ABS see-INDIC-TRANS-3/3
 'The/A person saw the dog.'
 b. *Inuk-∅ qimmiq-MIK taku-v-UQ-∅.*
 person-ABS dog-OBL see-INDIC-INTR-3
 'The/A person saw a dog.'

In the antipassive 57b, the A takes the absolutive case, the O takes an oblique case-marker, and the verb is marked with the morpheme *-uq-* which signals that there is only one argument, namely the A, to be agreed with—exactly as in the one-argument clause:

- (58) *Inuk-∅ taku-v-uq-∅.*
 person-ABS see-INDIC-INTR-3
 'The/A person saw.'

2.63. In languages where the ergative/antipassive distinction follows the kind of functional lines which we have been discussing here, it is often the case that the DEGREE OF PLANNED INVOLVEMENT OF THE A is a factor in the selection of a particular construction. We have pointed out that, in some languages (e.g. Estonian), a less active verb—e.g. a verb of perception—takes an O in a case identifying it as less

completely or less directly affected. In Samoan, the class of less active verbs, such as the 'verba sentiendi', elicits the non-ergative clause-type. Thus, with a verb like 'hit,' the O is unmarked and the A is in the ergative, with the preposition *e*. But with 'see', A is unmarked and O is oblique, with the preposition *i*:

(59) a. *Na fasi e le tama le teine.*

TENSE hit ERG the boy the girl

'The boy hit the girl.'

b. *Na va'ai le tama i le teine.*

TENSE see the boy OBL the girl

'The boy saw the girl.'

Similarly, in Adyghe (NW Caucasian) the selection of the ergative as opposed to the antipassive construction (in Catford's terms, nominative) is conditioned by the degree of completeness, thoroughness, and Volitionality of the action. Thus the verb meaning 'kill' is typically ergative, while 'stab' is typically nominative, since killing is a more drastic and final act than stabbing. With 'see' (ergative) vs. 'look at' (nominative), the completeness and totality of the action provide the deciding criterion: 'seeing' means taking in the whole of something, while 'looking at' suggests partial and indirect effect. The distinction between 'read' (nominative) and 'write' (ergative) involves the degree of deliberate intervention required by the A, reading being a more passive and less kinetic activity than writing. In all these, of course, the ergative construction is to be viewed as the more Transitive one. Catford gives the following example of a minimal pair involving the two constructions:

(60) a. *Jexedzak^we-r š'ale-m jewišijaš.*

teacher-NOM youth-ERG admonished

b. *Jexedzak^we-m š'ale-r jiwišijaš.*

teacher-ERG youth-NOM admonished

'The teacher admonished the youth.'

Citing T. F. Turčaninov, Catford (45) gives the following commentary. In the nominative 60a, 'the action of admonishing only touched upon the youth, not producing any radical essential changes in him as an object'; but in the ergative 60b, 'the admonishment produced an essential and radical change in the object.'

Although individual verbs and clauses in these languages elicit the ergative and antipassive constructions for different reasons, the global impression is consistent: the ergative has the hallmarks of high Transitivity, the antipassive those of low Transitivity. In the ergative, the action is more intense; the involvement of the A is more deliberate; the O is specified, and more completely affected.

2.7. We now consider the question of ASPECT in its relation to Transitivity. Up to this point we have used the terminology 'telic/atelic' and 'perfective/imperfective' interchangeably. To a large extent, the choice of terms is dictated by the amount of descriptive material available on this question in a given language, since the terms 'perfective/imperfective' in particular are often used in a rather imprecise way. Strictly speaking, we believe that these terms should be used in discourse contexts of the type discussed in §4 below. Whereas telicity can be determined generally by a simple inspection of the predicate, perfectivity is a property that emerges only in discourse. It is, however, rather exceptional to find explicit information about

Aspect (in this sense) in descriptive grammars, and it is risky to infer a distinction between the two types of Aspect when none is explicitly discussed. We shall therefore use the terminology 'perfective/imperfective,' which is broader and therefore safer, and will reserve discussion of discourse-based Aspect for §4.

Further, it is necessary to distinguish Aspect, in the sense of telicity/perfectivity, from 'Aktionsart' or lexical aspect. The latter comprises those manners of viewing an action which are predictable from the lexical meaning of the verb, such as punctual and durative—in other words, the inherent type of action of the verb. Aktionsart partially intersects with Aspect, in that there is a strong correlation between, e.g., punctual actions and perfective predicates. In essence, however, the two are separate phenomena.

In this section, we show that Aspect is systematically correlated with the degree of Transitivity of the verb: if the Aspect is perfective, the interpretation—other things being equal—has properties allowing the clause to be classified as more transitive; but if the Aspect is imperfective, the clause can be shown on independent grounds to be less transitive. A striking example of this correlation is the interpretation of the opposition between accusative and partitive O's in Finnish, exemplified in 33a–b, which we repeat here:

- (61) a. *Liikemies kirjoitti kirjeen valiokunnalle.*
 businessman wrote letter(ACC) committee-to
 'The businessman wrote a letter to the committee.'
 b. *Liikemies kirjoitti kirjettä valiokunnalle.*
 businessman wrote letter(PART) committee-to
 'The businessman was writing a letter to the committee.'

Here the more transitive O in 61a, marked by the accusative, is interpreted as perfective; the less transitive O in 61b, in the partitive case, is interpreted as imperfective.

2.71. In a considerable number of languages, an ERGATIVE construction is limited to PERFECTIVE or preterit environments, while a non-ergative type is used in imperfective or non-preterit environments. Such a distribution can be found, e.g., in Hindi and Georgian.

Hindi possesses a complex system of aspectual links to modality, formed by combining verbal stems with various auxiliaries. At base, however, the system is organized around an opposition between perfective and imperfective forms, of which the perfective is ergative. The following examples illustrate the situation and add further details:

- (62) a. *Māā roogii laRkee-kee liyee khaanaa pakaatii hai.*
 mother sick boy-OBL for food cooking PRES
 'The mother cooks food for the sick boy.'
 b. *Aurat saheeliyōō-kee saath kuēē-kee paas booltii hai.*
 woman friends-OBL with well-OBL at speaking PRES
 'The woman talks with her friends near the well.'

These are both in the present/imperfective: the A's are in the same case, and the verb agrees in gender with both the transitive and the intransitive A—*pakaatii* (fem.), *booltii* (fem.) (The present tense is represented by the auxiliary *hai* 'is'.)

Compare the following:

- (63) a. *Gariib aadmii mandir-kee saamnee phuul beectaa thaa.*
 poor man temple-OBL before flower selling(MASC) PAST(MASC)
 'The poor man used to sell flowers in front of the temple.'
- b. *Aurtēē tiirth-sthaan-koo jaatii thīi.*
 women holy-place-to going(FEM) PAST(FEM.PL)
 'The women used to go to a holy place.'

Here the verbs are again imperfective, but past tense, and the meanings are habitual. Agreement is with the A, regardless of whether the verb has an O. But in 64, the Aspect is perfective:

- (64) a. *Kisaan-nee bail-kii oor chaRii phēēkii.*
 farmer-ERG ox-OBL at stick(FEM) threw(FEM)
 'The farmer threw a stick at the bullock.'
- b. *Billii kuēē-mēē girii.*
 cat(FEM) well-in fell(FEM)
 'The cat fell into the well.'

Hindi thus shows a morphosyntactic alignment of three indicators of Transitivity: a special marker on the A, the presence of an O, and perfective aspect. In the imperfective aspect, the ergative marker is missing.

In Georgian, for certain classes of verbs, the case-marking is non-ergative in the present, but ergative in the aorist (Harris 1976):

- (65) a. *Glexi tesavs marcvebs.*
 farmer(NOM) he sows it(PRES) seeds(DAT)
 'The farmer is sowing seeds.'
- b. *Glexma datesa marcvebi.*
 farmer(ERG) he sowed it(AOR) seeds(NOM)
 'The farmer sowed seeds.'

Dixon 1979 and Comrie 1978 cite a number of other languages in which this correlation can be observed, including Burushaski, Tibetan, Yucatec, and Chol (Mayan). Thus in Samoan (Milner 1973:635), the ergative 66b signals perfective aspect, while the antipassive 66a signals imperfective:

- (66) a. *Na va'ai le tama i le i'a.*
 TENSE look at the boy OBL the fish
 'The boy was looking at the fish.'
- b. *Na va'ai-a e le tama le i'a.*
 TENSE look at-TRANS ERG the boy the fish
 'The boy spotted the fish.'

2.72. In Kalkatungu (W. Queensland, Blake 1976) there is likewise a correlation between CASE-markings and ASPECT:

- (67) a. *Kupaṅuru-ṭu caa kalpin lai-ṅa.*
 old man-ERG here young man hit-PAST
 'The old man hit the young man.'

- b. *Kupaṅuru caa kalpin-ku lai-miṅa.*
 old man here young man-DAT hit-IMPF

'The old man is hitting the young man.'

According to Blake (286), 'an intransitive-type construction is favored if reference is to an action that is being directed towards a goal, as opposed to one that has been successfully completed.'

Aspect also is involved in the selection of ergative vs. antipassive in another language of Queensland, Yukulta (Keen 1972). In this language, the distribution of case-marking and verb suffixes is as follows:

	AGENT	OBJECT	VERB
(68) a.	Ergative	Absolutive	Transitive suffixes
b.	Absolutive	Dative	Intransitive suffixes

Here (a) is used for past fact or future intention; (b) is used elsewhere, e.g. in negatives or irrealis forms—AND when A is 3rd person, and O is 1st or 2nd person; or when A is 2nd person, and O is 1st person plural.

This distinction is of great interest: it not only shows the preference for less Transitive constructions in negative/irrealis (i.e. in non-accomplished non-complete environments), but also reflects the so-called Agency Hierarchy (Silverstein 1976). The Transitivity of the clause is reduced when there is an anomalous A–O relationship, viz. when the O is higher than the A in the hierarchy:

- (69) 1st P > 2nd P > 3rd P > Pr. Name > Human > Animate > Inanim.³

In Pitta-Pitta (again of Queensland), the link between tense-aspect and Transitivity is so strong that the absolutive suffix has apparently become specialized as a non-preterit tense-marker. The glosses in the following examples deserve special attention (cf. Blake 1976):

- (70) a. *Kaṅa kaṅa-ka.*
 man go-PAST
 'The man went.'
- b. *Kaṅa-lu matjumpa-na piṅi-ka.*
 man-ERG kangaroo-ACC kill-PAST
 'The man killed a kangaroo.'
- c. *Kaṅa-ṅu kaṅa.*
 man-FUT go
 'The man will go.'
- d. *Kaṅa-ṅu matjumpa-ku piṅi.*
 man-FUT kangaroo-ACC kill
 'The man will kill a kangaroo.'

In Pitta-Pitta, then, the ergative construction must evidently distinguish between ergative (-*lu*) and accusative (-*na*) in the transitive, and nominative (∅) in the

³ The fact that the Transitivity of a clause is reduced in the case of an anomalous A–O relationship is not a contradiction of our earlier claim that a clause is more highly Transitive if its A is more highly agentive or its O more highly individuated. These statements are in fact mutually supporting, since it is the reduction of the 'Agency' of the A which accounts for the anomaly in the A–O relationship, not the fact that the O is high on the hierarchy. See Comrie 1977b, Kondo 1977, Lyon 1967, and Ransom 1977 for a discussion of anomalous A–O constructions.

intransitive, while the antipassive has 'absolutive' (-*ŋu*) and a second form of the accusative (-*ku*, evidently oblique). However, 'absolutive' -*ŋu* seems no longer to be felt as an absolutive marker; it is interpreted and used as a tense-aspect morpheme. This striking example of re-analysis of the absolutive in the antipassive, as a marker of imperfective tense-aspect, is entirely parallel to a change in the Kartvelian language Mingrelian (Renée Zwolanik, p.c.), where the ergative suffix on the noun, restricted to the aorist, has become generalized to intransitive clauses, and functions as an aorist marker.

2.73. Mandarin has a pattern known as the *ba* construction, which has the effect of fronting the O:

- (71) a. *Wǒ mài-le wǒde chēzi.*
 I sell-PERF my car
 b. *Wǒ Bǎ wǒde chēzi mài-le.*
 I my car sell-PERF
 'I sold my car.'

Thompson 1973 analysed several different approaches to the problem of the *ba* construction, and showed that the explanatory principle involved the notion of TRANSITIVITY, there characterized as an A 'doing something to' a patient. Thus 71a can answer a question like 'What did you do this afternoon?'; but 71b answers a question like 'What did you do to your car?' The *ba* construction is, then, a highly Transitive clause-type: it must show an A behaving actively, volitionally, and totally upon a definite or referential O. But it has long been a problem in Chinese grammar to characterize the types of VP's with which the *ba* construction could occur. Thus the forms in 72 are unacceptable, but those in 73 are all possible:

- (72) a. **Wǒ bǎ tā dǎ.*
 I he hit
 'I hit him.'
 b. **Wǒ bǎ tā dǎ-zhe.*
 I he hit-DUR
 c. **Wǒ bǎ tā dǎ-yi-dǎ.*
 I he hit-one-hit
 'I hit away at him.'
 d. **Wǒ bǎ tā yǒu.*
 I it have
 'I have it.'
- (73) a. *Wǒ bǎ tā dǎ-le.*
 I he hit-PERF
 'I hit him.'
 b. *Wǒ bǎ tā dǎ de tóu dōu hūn-le.*
 I he hit EXTENT head all dizzy-PERF
 'I hit him until he was all dizzy.'
 c. *Wǒ bǎ tā cǎ-diào.*
 I it erase-PERF
 'I erased it.'

- d. *Wǒ bǎ tā FÀNG ZÀI YǐZI-SHANG.*
 I it put at chair-on
 'I put it on the chair.'
- e. *Wǒ yào bǎ tā HǎOHÀO-DE KÀNDÀI.*
 I want he well treat
 'I want to treat him well.'

There is no apparent way to characterize the difference between these environments in structural terms; but when viewed in terms of Transitivity, it immediately becomes clear that the highly Transitive *ba* clause must also be perfective: it requires a perfectivizing expression, either a perfective particle or a phrase or clause specifying the conceptual boundary of the action.

2.74. As another illustration of the correlation between properties of O's and Aspect, we note that Palauan has a perfective/imperfective distinction in verb forms, and that only PERFECTIVE verbs AGREE with the O (Josephs 1975:254):

- (74) a. *A ngalek a milenga a ngikeļ.*
 child eat(IMPF) fish
 'The child was eating the fish.'
- b. *A ngalek a kill-ii a ngikeļ.*
 child eat(PERF)-AGREE fish
 'The child ate up the fish.'

Mulder 1978 cites the related language Fijian, and Comrie 1977a the Uralic language Mordvin, as manifesting exactly the same correlation.

A slightly different but clearly related correlation between O-properties and Aspect obtains in Chamorro. There we find suppletive verb forms for certain verbs, according to the referentiality of the O; but the suppletion occurs only when the action referred to is in the past (J. Tanny, p.c.):

- (75) a. *Si Juan ha KANNOP i guihan.*
 ART he ate the fish
 'John ate the fish.'
- b. *Si Juan CHUMOCHO guihan.*
 ART he ate fish
 'John ate fish.'
- (76) a. *Si Juan ha KAKANNOP i guihan.*
 ART he eats the fish
 'John eats the fish.'
- b. *Si Juan ha KAKANNOP guihan.*
 ART he eats fish
 'John eats fish.'

2.75. Another striking example, supporting our hypothesis with respect to O-properties and Aspect, comes from Turkish. Here the accusative case-marking, shown above to occur only with DEFINITE O NP's, is used with PERFECTIVE O nominalized clauses. But the zero case, used with subjects and indefinite O NP's, is found with imperfective O nominalized clauses (M. Noonan, p.c.):

- (77) a. *Ekmek al-mağ-ı unuttu.*
 bread take-NOMZ-ACC forgot(3sg)
 'He forgot to get bread.'

- b. *Çalış-mak-Ø istiyor.*
 work-NOMZ-Ø want(3sg)
 'He wants to work.'

2.76. English has perfectivizing verb particles which are constrained to occur with REFERENTIAL O's. Consider these examples (suggested by E. Prince):

- (78) a. *I ate UP the sandwich.*
 b. *?I ate UP a sandwich.*
 c. *I ate UP a sandwich that somebody left behind.*

2.77. A rather different way of showing the relationship between Aspect and degree of Transitivity in the rest of the clause can be found in Yidin^y of North Queensland. That language has a DETRANSITIVIZING suffix *-:đi-n*, which has five functions, according to Dixon 1977. It is no accident that, while three of these functions deal with low Transitivity of the A and the O, the fourth is related to Volitionality, and the fifth renders the verb interpretable as a continuous action, 'so that it cannot be viewed as a whole, from the vantage point of the present' (276). Thus *-:đi-n* is used:

- (79) a. In an ANTIPASSIVE clause, where A is marked as absolutive instead of ergative, and O is oblique.
 b. In a reflexive construction in which ONLY ONE NP appears.
 c. If the A refers to something INANIMATE, which could then not exercise voluntary control over the action.
 d. If the action is ACCIDENTAL rather than purposeful.
 e. If the action is CONTINUOUS.

It appears that a detransitivizing marker which signals lower Transitivity with respect to the NP arguments in a clause also signals lower Transitivity with respect to the more verb-connected semantic properties of Volitionality, purposiveness, and perfectivity. Austin (MS) shows that precisely these five functions characterize the marker *ɬarri* in another Australian language, Diyari.

Finally, on the other side of this coin, Tongan has a 'transitive' marker *-'i*, used with totally affected O's and as a marker of perfective aspect (Foley 1976:187-8, Milner 1973):

- (80) a. *Na'e taipe 'e he tangata 'a e topi.*
 PAST type ERG DEF man ABS DEF letter
 'The man is typing the letter.'
 b. *Na'e tanu-'i 'e he tangata 'a e ika.*
 PAST bury-TRANS ERG DEF man ABS DEF fish
 'The man buried the fish.'

2.8. We will discuss rather briefly the correlation of NEGATION and IRREALIS to the degree of Transitivity of the clause.

In a number of languages, the O of a negated clause appears in a form which shows that the action of the verb is deflected and less direct. This is especially true if the O is indefinite, when it must often be accompanied by an indicator that it is non-referential; thus, in English, the O of a negated clause with a non-referential O has *any*, rather than *some* or zero, as its article. In French, indefinite O's in the partitive must drop the definite article which is normally present:

- (81) a. *Nous avons du pain.*
 we have PART-the bread
 'We have (some) bread.'
- b. *Nous n'avons plus de pain.*
 we NEG-have more PART bread
 'We have no more bread.'

In Finnish and Estonian, where the partitive O contrasts with the 'total' O as imperfective to perfective, the partitive is used for the O of a negated clause. Here, as in a number of other languages (including many ergative ones), the O of a clause which is imperfective, negated, inactive, or irrealis is somehow less of an O than in the perfective, affirmative (etc.) clause; and it is marked as such in the morpho-syntax. See Schmid 1979 for further discussion of relationships between negativity and Aspect.

The somewhat vague linguistic parameter known as 'realis/irrealis' is a cover term for the opposition between indicative and such non-assertive forms as subjunctive, optative, hypothetical, imaginary, conditional etc. As a reduced assertion of the finite reality of the state or event referred to by the clause, irrealis forms could be expected to occur in less Transitive environments. In Spanish, for example, a relative clause which determines a non-referential O must be in the subjunctive:

- (82) a. *Busco A un empleado que habla inglés.*
 I seek ACC a assistant who speak(INDIC) English
- b. *Busco un empleado que hable inglés.*
 I seek a assistant who speak(SUBJUNC) English
 'I'm looking for an assistant who speaks English.'

In 82a, the preposition *a* and the indicative verb *habla* signal that the O is referential ('... His name is Pablo'); but in 82b, the absence of *a* and the subjunctive verb *hable* show O to be non-referential ('... Where can I find one?').

In Yukulta, irrealis non-past clauses elicit the antipassive rather than the ergative construction, in the classical manner. The A is in the absolutive, the O in an oblique case, and the verb has an intransitive suffix (Keen, 189):

- (83) *Kurita -pa -ka -∅.*
 see (DESID/VTR) -you(OBL) -I(ABS) -PRES. INTR
 'I'd like to see you.'

In fact, according to Blake (1977:16), 'In a number of Australian languages the ergative construction is not used if the verb is in the future tense, imperative mood, imperfect, potential or irrealis aspect.'

2.9. REFLEXIVES in many languages have properties which can be explained by appealing to their intermediate status between one-argument and two-argument clauses: compared with one-argument clauses, they may be more Transitive, as suggested by the Spanish data described in §2.5; compared with two-argument clauses, they typically display features associated with lower Transitivity, as the following data suggest.

In Chimwi:ni of Somalia (Abasheikh 1976), as in many other Bantu languages, an object prefix (OP) appears before the verb root if the O is definite. But a reflexive clause contains no OP, even though the reflexive O is semantically as definite as the

A is. It is thus less Transitive than its counterpart with two distinct arguments (SP = subject prefix):

- (84) a. *Mw-a:na Ø-m-lumile nu:ru.*
 child SP-OP-bit N.
 'The child bit Nuru.'
 b. *Mw-a:na Ø-lumile ru:hu-y-e.*
 child SP-bit himself
 'The child bit himself.'

In French, many inherently transitive verbs can be rendered intransitive by the addition of the reflexive morpheme:

- (85) *ouvrir* 'open' (trans.), *s'ouvrir* 'open' (intr.)
terminer 'end' (trans.), *se terminer* 'end' (intr.)
vider 'empty' (trans.), *se vider* 'empty' (intr.)
perdre 'lose' (trans.), *se perdre* 'be lost, lose one's way'

And in Russian:

- (86) *načínát'* 'begin' (trans.), *načínát'sja* 'begin' (intr.)
končát' 'end' (trans.), *končát'sja* 'end' (intr.)

Similarly, in Bahasa Indonesia (Kähler 1965), the verbal prefix *ber-* functions to mark the following low-Transitivity constructions:

- (87) a. the intransitive member of transitive/intransitive pairs:
MENG-gantung 'to hang something up', *BER-gantung* 'to be hanging'
 b. nominalization (see §7, below):
BER-judi itu berbahaya.
 gambling the dangerous
 'Gambling is dangerous.'
BER-angkat-nya Presiden belum ditetapkan.
 leave-DEF not yet been decided
 'The President's departure has not yet been fixed.'
 c. on-going events or states:
BER-buah 'to bear fruit'
BER-guru 'to be a teacher'
BER-baring 'to be lying (somewhere)'
MEN-jual kuda 'to sell (some) horses', *BER-jual kuda* 'to deal in horses'
 d. reciprocals and reflexives:
Orang muda itu BER-tukar cincin.
 people young the exchange ring
 'The young folks were exchanging rings.'
Kedua sahabat itu BER-jabat tangan.
 two friends the clasped hands
 'The two friends clasped hands.'
Bapa-ku BER-cukur.
 father-my shave
 'My father was shaving.'

FURTHER IMPLICATIONS

3.1. A pervasive structural-semantic feature like that presented above might be expected to play a role in language change. In fact, there appear to be examples in which diachronic processes may be understood more clearly in terms of Transitivity. For example, Russian has two grammatical cases for O, the accusative and the genitive. Timberlake 1975, 1977 discusses their distribution, and shows that the accusative is replacing the genitive in a set of semantic contexts which he characterizes as INDIVIDUATING. This concept—which we mentioned in §1, and to which we shall return in §4, below—is a superordinate property defined by sets of binary hierarchies including singular/plural, animate/inanimate, definite/indefinite etc. For example, an animate O is more conducive to the selection of the accusative than an inanimate O; a singular O is more likely to be (and is more acceptable) in the accusative than a plural O.

Whatever the earlier meaning of the accusative/genitive distinction in Russian O-marking, it is evidently now distributed along the lines of high (accusative) vs. low (genitive) Transitivity. The highly individuated O is characteristic of more Transitive environments, and is marked with the accusative. But this marker of high Transitivity is in the process of spreading DOWN the scale or 'cline' of Transitivity, into decreasingly Transitive contexts. Such processes perhaps suggest the development of explanatory principles in other documented or presumed types of change; one thinks especially of the 'drift' toward ergativity in a number of Polynesian languages (Hohepa 1969, Chung 1977).

3.2. We have presented data showing morphosyntactic affinities among the various components of Transitivity, and hope to have shown that Transitivity is a crucial notion for understanding a very wide range of correlations which recur in the grammars of languages. That is, our hypothesis claims that various properties of clauses will correlate positively, and our examination of languages has turned up a wealth of support for this claim. We find, for example, dozens of languages in which perfectivity correlates morphosyntactically with the definiteness of the direct O, but no languages in which imperfectivity correlates with definiteness, or perfectivity with indefiniteness. Such languages, of course, are among those predicted by our hypothesis not to occur.

At this point we may return to our original claim—that it is Transitivity, the effective carrying over of an activity from an A to a patient, which is at the heart of the co-variance of these components. The evidence that Transitivity is indeed what these correlations involve can be seen in the fact that the morphosyntactic signals which languages use to mark what we are calling high and low Transitivity are so often the same signals used to mark VALENCE, i.e. the distinction between canonical 'transitive' vs. 'intransitive' clauses. Recall, for example, the way in which non-referential O's are often found in clauses coded with the morphosyntax associated with 'intransitive' verbs—or the contrast between ergative and antipassive clauses, where features of higher and lower Transitivity are again signaled by the morphosyntax associated with the valence of the verb.

It is tempting to try to find a superordinate semantic notion which will include all the Transitivity components. If there is one, it has so far not been discovered;

terms such as 'activity', 'intensity', and others which we have considered all fail to capture the essence of the relationship among these components. Yet it is crucial to posit some unifying principle, since otherwise there is a danger of circularity in our argument. This circularity would not necessarily be vicious, but the hypothesis is more convincing and stronger if the Transitivity components can be shown to follow from an underlying unitary principle.

However, even if a common semantic denominator can be found which embraces all the components, it will not provide a satisfactory answer to the obvious next question: what is so important about Transitivity, and why does it figure so prominently in the grammars of language after language? In the next section, we offer a unitary pragmatic principle to answer this question—namely that of the consistent, universal discourse functions which are common to the Transitivity components.

DISCOURSE

4.1. In the preceding parts of this paper, we have shown that languages universally possess morphosyntactic structures which reflect the degree of Transitivity of a clause. The pervasiveness of these devices and their similarity across languages seem to demand an explanation in a higher-level, functional framework. In other words, we assume that a linguistic universal originates in a general pragmatic function, and that the universal is not explained until this function has been isolated and related to the universal. Without the connection to a communicative function, the separate components of the Transitivity relationship have only an arbitrary relationship to each other; we lack a reason why these semantic-grammatical components, rather than others, should be selected.

Users of a language are constantly required to design their utterances in accord with their own communicative goals and with their perception of their listeners' needs. Yet, in any speaking situation, some parts of what is said are more relevant than others. That part of a discourse which does not immediately and crucially contribute to the speaker's goal, but which merely assists, amplifies, or comments on it, is referred to as BACKGROUND. By contrast, the material which supplies the main points of the discourse is known as FOREGROUND. Linguistic features associated with the distinction between foreground and background are referred to as GROUNDING.⁴ As Polanyi-Bowditch puts it (1976:61):

'Narrative ... is composed of two kinds of structures: temporal structure, which charts the progress of the narrative through time by presenting a series of events which are understood to occur sequentially; and durative/descriptive structure, which provides a spatial, characterological, and durational context for which the temporal structure marks time and changes of state.'

⁴ For discussion of this distinction between foregrounding and backgrounding, see Grimes 1975, Ch. 3,4,6; Hopper 1977, 1979a,b; Labov 1972; Labov & Waletzky 1967; Polanyi-Bowditch 1976; Sheffler 1978; and Wald 1973. We are aware, of course, that the distinction between foregrounded and backgrounded portions of a text is not the only one that can be made in analysing its structure. However, we suggest that this distinction is perhaps the most basic one that can be drawn, and that it is the one which underlies the Transitivity generalizations discussed above.

Thus, in the following example of oral narrative recorded by Labov & Waletzky, the foregrounded parts are the actual sequential events (here italicized); the background consists of scene-setting statements and evaluative commentary:

'(Were you ever in a situation where you were in serious danger of being killed?) My brother put a knife in my head. (How'd that happen?) Like kids, you get into a fight and I twisted his arm up behind him.

'This was just a few days after my father had died, and we were sitting shive. And the reason the fight started ... *He sort of ran out in the yard*—this was way out on Coney Island—and *he started to talk about it*. And my mother had just sat down to have a cup of coffee. And *I told him to cut it out*.

'Course kids, you know—he don't hafta listen to me. So that's when *I grabbed him by the arm, and twisted it up behind him*. When I let go his arm, there was a knife on the table, *he just picked it up and he let me have it*. And *I started to bleed like a pig*.

'And naturally, first thing was—*run to the doctor*. And the doctor just says, "Just about this much more," he says, "and you'd a been dead."

This example illustrates very nicely the two most important defining characteristics of foregrounded clauses. First, the foregrounded portions together comprise the backbone or skeleton of the text, forming its basic structure; the backgrounded clauses put flesh on the skeleton, but are extraneous to its structural coherence. Dorfman (1969:5) says:

'In any given narrative, some incidents are more important than others; it would be difficult to imagine an artistic narrative in which every happening carried equal weight in the development of the story. For this reason, the incidents, as structural units, may be divided into two main classes: CENTRAL OR CORE INCIDENTS, whose function is to serve as the central focus or core of a larger episode, and MARGINAL INCIDENTS, which cluster around the core, supporting it and filling out the episode.'

Second, the foregrounded clauses (as emphasized by the linguists named in fn. 4) are ordered in a temporal sequence; a change in the order of any two of them signals a change in the order of real-world events. Backgrounded clauses, however, are not ordered with respect to each other, and may even be movable with respect to the foregrounded portions.

Numerous languages (cf. Hopper 1977, 1979a, Scollon 1975, Flik 1978, Howard 1978) have morphological and syntactic devices which reflect grounding. These devices range from discourse particles, placed at crucial points to warn the listener that the current or following clause is foregrounded, to the elaboration of verbal paradigms (tense-aspect) specialized for this distinction. Thus, in Swahili, the usual narrative past tense is indicated by the prefix *li-* on the verb: *a-li-soma* 'he-PAST-read' etc. But when a number of verbs denoting events in sequence occur together, only the first one receives an explicit tense prefix. The others are marked with a consecutive 'tense' prefix *ka-*:

- (88) *Tu-LI-po-sema vile, wa-KA-jua kama wevi, mara ile*
we-li-when-say thus they-ka-know as thieves at once that
wa-KA-ondoka wa-KA-kimbia.
they-ka-leave they-ka-run away

'When we said this, they knew that they had been recognized, and they at once got off (the train) and ran away' (Harries 1965:131).

This *ka-* prefix is restricted to narrating single consecutive events; in other words, it functions to track the story line, the foregrounded parts of a narrative. But this

story line can be interrupted by other events which are not central to the narrative, but which modify or comment on the chief events. These interrupting events may be CONTINGENT (i.e. conditional) or SIMULTANEOUS. In either case they are backgrounded, and signaled with the prefix *ki-* on the verb. *Ki-* warns the listener that the event so marked is to be noted, but shunted aside from the main story line. In the following passage, *wa-ki-rejea* 'they were returning' marks a simultaneous event—one needed to understand the discourse, but not 'part of' the narrative line (Harries, 137):

- (89) *Hata wa-LI-kuwa wa-KI-rejea kuja zao kambini, wa-KA-shuka*
 until they-li-were they-ki-return come their to camp they-ka-descend
kilima-ni magharibi, mara wa-KA-kuta kondoo, bwana
 hill-LOC west suddenly they-ka-come upon sheep master
wangu KA-m-piga kondoo mkubwa sana na pembe zake nzito
 my ka-him-shoot sheep big very and horns its heavy
sana.
 very

'When they were making their way back to camp, they came down a hill on the western side, and at once came upon some wild sheep, and my master shot an enormous sheep, and its horns were very heavy'.

The grammaticization of grounding can thus, typologically, take on a variety of different forms. The recurrence of one or another grammatical device in this function suggests that, at a higher level of explanation, some psychological limitation in processing discourse may be involved; language users apparently need to attach overt morphosyntactic signals to those parts of the discourse which are to be stored for immediate sequential processing, as opposed to those parts which are to be stored for future reference or concomitant access. However, we will not pursue this line of investigation.

4.2. Before continuing, it is necessary to touch upon the question of GENRES in the study of grounding phenomena. Most of the work in this area has been concerned with narrative, and our own studies are no exception. Narrative is a cultural universal, and hence readily accessible in a variety of languages. Furthermore, the length of the discourse specimens greatly facilitates statistical counts, and guarantees that a number of examples of given construction-types will be available in a text. The choice of narrative as the basis of discourse studies is a convenience; but before wider linguistic conclusions are drawn, it must be shown that the phenomena exemplified in narrative are also present in other genres. Universal though narrative is, it may be subordinate to other genres such as conversation. Concerning grounding in conversation, little is known. A study of colloquial Chinese Indonesian discourse (Rafferty 1978) indicates that the same devices used in narrative foregrounding are used to highlight the main points of a conversation; in certain verbs, the prefixes *di-* and *ng-* are distributed according to grounding, with *di-* in foreground and *ng-* in background. In conversation, a verb with *di-* elicits special attention; the audience is expected to focus on it and believe it. A verb with *ng-* is supportive and explanatory, and conveys less important new information (Rafferty, 77):

- (90) a. *Ojoq di-angat gae opo lo.*
 don't *di*-appoint make what surprise
 'Don't appoint me, why (would you do it)?'
- b. *Dadèq-no sèkretares, gaq tau ng-etèk?*
 become-OBJ secretary not know *ng*-type
 '(How can I) become a secretary not knowing how to type?'

These prefixes resemble the prefixes *di-* and *meng-* which function in foregrounding and backgrounding respectively in Malay narrative (Hopper 1977; Rafferty, 156–64), with some differences. It is reasonable to assume that the grammaticization of devices to indicate grounding in narrative begins in the more pervasive conversational genre, and is extended to other genres in a natural way; i.e., the same devices used to highlight the main points of a conversation are also appropriate in foregrounded parts of a narrative. For 'procedural discourse', such an extension is also quite natural; and of course it is useful in distinguishing actions and states preparatory to the individual instructions from the sequential set of instructions themselves. The following recipe is a typical example of the genre (Rombauer & Becker 1964:675–6; italics mark foregrounding):

'This is a fine recipe for decorative icing. It will keep without hardening for a long time if closely covered with waxed paper. *Stir* until the sugar is dissolved, then *boil* without stirring *1 cup sugar, 1/2 cup water*. Meanwhile, *whip* until stiff but not dry *2 egg whites, 1/8 teaspoon salt*. Sift and *add very slowly*, whipping constantly, *3 tablespoons sugar*. When the sirup begins to fall in heavy drops from a spoon, *add a small quantity of it to the eggs and sugar; continue beating*. Repeat this process, adding the sirup to the eggs in 4 or 5 parts. If these additions are properly timed, the last of the sirup will have reached the thread stage. *Beat the icing constantly*. Have a pan ready, partly filled with water. *Place it over heat*. The bowl in which the icing is being made should fit closely into this pan, so that the bowl will be over—but not in—the water. When the water in the pan begins to boil, *add to the icing 1/4 teaspoon icing powder ... Continue to beat the icing* until it sticks to the sides and the bottom of the bowl and holds a point. *Remove from heat*. *Place as much as is required for the decoration*, usually about 1/3, in a small bowl. *Cover it closely with waxed paper*. To the remainder, *add 1 teaspoon or more hot water* to thin it to the right consistency to be spread. *Beat it well and spread it on the cake.*'

4.3. To return to the strategies used by different languages to indicate foregrounding and backgrounding, we note that a very common device is a two-fold set of verb paradigms denoting 'completed action' vs. 'non-completed action'. In English, the *-ing* forms of the verb always indicate incomplete actions; their use in nominalizations and in subordination shows that they are invariably backgrounded. However, there is no single marker of foregrounding, and an English sentence out of its context cannot always be assigned unambiguously to a foregrounded or backgrounded clause-type. Thus the sentence *John lived in Paris for ten years* can be presented either as a backdrop for John's activities, or as an event in a series—i.e. either as the basis for further elaboration, e.g. *He studied at the Sorbonne and met lots of interesting people*; or as a pivotal event in a series, e.g. *After that he went to sea in the Merchant Marine, then he returned to the States and founded an export company*. If, as we have suggested, the foregrounded/backgrounded distinction is a universal—having its origins in central communicative and perhaps psychological functions—then we should expect this distinction to manifest itself somehow in English. We contend that, in languages like English, the audience infers

grounding not from a single morphosyntactic feature, but from a CLUSTER OF PROPERTIES, no single one of which is exclusively characteristic of foregrounding. We further claim that this cluster of properties is precisely that which characterizes high Transitivity, as this notion is described in the present paper. In languages like English, foregrounding is not marked absolutely, but is instead indicated and interpreted on a probabilistic basis; and the likelihood that a clause will receive a foregrounded interpretation is proportional to the height of that clause on the scale of Transitivity. From the performer's viewpoint, the decision to foreground a clause will be reflected in the decision to encode more (rather than fewer) Transitivity features in the clause.

This hypothesis is borne out by numerical correlations between grounding and degree of Transitivity. Three narrative texts were investigated (given in the Appendix, below), in which foregrounded and backgrounded clauses were scored individually for the number of Transitivity features which they contained (from the list of features 1A–J). The results were quite striking: out of a total of 10 points, foregrounded clauses averaged 8.0 points, and backgrounded clauses 4.1. A similar distribution was found when each feature was computed separately for its occurrence in foregrounded and backgrounded clauses. In each case, the incidence of the feature was much greater in foregrounding than in backgrounding—showing that the distinction was maintained, not merely in the average for all features, but consistently for each individual feature. In giving details, we shall also comment on the semantic-pragmatic relationship between the feature concerned and the foregrounded/backgrounded distinction.

(A) PARTICIPANTS. The tendency for backgrounding to be associated with one NP argument, and foregrounding with more than one argument, may at first be surprising. It does seem, however, that those parts of a discourse which provide scenic and other subordinate detail tend to be expressed through verbal forms which denote states—and in which, therefore, there is no 'passing' of an action from one participant to another. This is especially true when the background is a natural phenomenon, and the subject NP is therefore inanimate—e.g. sky, weather, scenery. Furthermore, even when a background clause contains a verb potentially having two participants, the FORM of the verb is often one which does not permit expression of an A. In a sentence like *She left the room, slamming the door behind her*, the backgrounded clause contains the verb (*slamming*) and an O (*the door*), but no A. The same is true of many sentential complements of the type exemplified in *They decided to buy one of the etchings*: though *decide* has both an A and a (sentential) O, *buy* has no A, and A cannot be grammatically supplied. Cases such as these contrast sharply with cases of 'zero anaphora', in which missing arguments may be supplied with no change in grammaticality, e.g. in *He poured a drink, Ø/he handed it to the hostess, and Ø/he proposed a toast*: Here the coordinated verbs have only superficially been deprived of their subjects, and—crucially—NO CHANGE IN CONSTRUCTION IS NEEDED TO RESTORE THE A's.

A final point about participial clauses, like *slamming the door behind her*, concerns the possible objection to the designation as backgrounded. Slamming the door is, after all, a kinetic event, and is in sequence with *She left the room*. Are we justified in automatically assigning the *-ing* participle to background? We contend that we are,

and that material in *-ing* clauses is always PRESENTED AS background. Usually, indeed, a careful analysis will show that such material is not part of the narration, but is in some sense a COMMENT on the narration, which adds a detail of character, motive, or attitude (e.g., as here, impatience). If it does appear to be part of the narration, an event in an *-ing* clause is invariably presented as incidental; and occasionally, in highly planned, literary narration, one finds an author exploiting this norm with great stylistic effect, by introducing significant events in a grammatical form associated with subsidiary events. Such subtleties are a complicating factor in discourse studies, but one which becomes problematic only if texts of a highly-polished 'belles-lettres' sort are chosen.

The text figures for number of participants per clause were striking: in the extract from *The Brendan voyage*, we counted 46 backgrounded clauses and 22 foregrounded. Of the backgrounded clauses, 9 (20%) had two participants, and 37 (80%) had one participant. In the foregrounded clauses, 18 (82%) had two participants, and 4 (18%) had one participant. Figures from our other texts were essentially comparable, as shown in Table 1.

	FOREGROUND		BACKGROUND	
	1 participant	2 participants	1 participant	2 participants
<i>Brendan voyage</i>	18%	82%	80%	20%
<i>Newsweek passage</i>	43%	57%	92%	8%
<i>European discovery</i>	13%	87%	79%	21%
AVERAGE	24%	76%	82%	18%

TABLE 1.

English nominalizations provide another indication of the very close relationship between grounding and number of participants. Nominalized clauses are by their nature backgrounded, since they serve as NP's in the larger sentences of which they are a part. We looked at nominalizations like *beer preparation*, *the addition of liquid resin*, and *the diligence of paleolithic hunters* in Tannahill 1973; and we found that, out of 100 such clauses, only 5 had two arguments (e.g. *their loathing for the pig*), and only 12 of the 100 had an argument that was referential (e.g. *Rome's avidity for the LUXURIES OF CHINA*). Further, of the 5 nominalizations with two arguments, all contained verbs expressing non-voluntary states, as in *their LOATHING for the pig* or *the country's urgent NEED for basic food supplies*—in which the A is highly non-agentive. In other words, nominalizations are extremely low in Transitivity: their verbs are always irrealis, since by themselves they never make assertions, and they tend overwhelmingly to have only one participant—which is, furthermore, typically non-referential.

(B) KINESIS. Foregrounded clauses typically narrate events, i.e. changes of place or condition. It follows that the verb in a foregrounded clause is normally one which signals such a change on the part of the participants. In foregrounded clauses in our corpus, 45 out of 51 (or 88%) of the verbs were classifiable as kinetic; in backgrounded clauses, the proportion was only 49% (41 out of 83).

(C) ASPECT. The Transitivity feature of Aspect refers to the telicity of the predicate's action. A predicate which specifies an endpoint or conceptual boundary is said to be telic, while one which does not is atelic. Telic predicates have an

unquestionable affinity for foregrounded clauses, and this is easily understood. Foregrounded clauses typically recount sequences of events which mimic the chronological order of those events, as they are supposed to have occurred. Each event in foregrounding is thus viewed in its entirety; from the viewpoint of the discourse, it is bounded at its beginning by the termination of the preceding event, and at its end by the initiation of the next event. The discourse thus imposes a perfective interpretation on foregrounded events. The boundaries provided by the progression of the discourse have a natural correspondence, at the level of sentence grammar, in the various strategies for bounding an action—including aspectual morphology, and time adverbs which set an explicit limit on an action. In backgrounding, however, events and situations are not bounded by the discourse: they are presented as on-going, or repeated, or simultaneous with foregrounded events. Foregrounded clauses are therefore overwhelmingly telic in Aspect—45 out of 51 (or 88%) of foregrounded predicates in our sample—while backgrounded clauses are only rarely telic (22 out of 83, or 27%).

(D) PUNCTUALITY. This feature refers to the suddenness of an action, or the absence of a clear transitional phase between onset and completion. Punctual verbs contrast with durative verbs, in which internal complexity is possible under normal interpretation, and with iterative verbs—which are also internally complex, in that there is repetition of identical punctual actions. Punctual verbs are more likely to denote events of the discourse, and to occur in foregrounding; and to the extent that Punctuality was identifiable in the verbs of our sample, this expected distribution was realized. Of 36 punctual verbs, 28 (or 78%) occurred in foregrounded clauses, and 8 (or 22%) in backgrounded clauses. Thus in foregrounding the proportion of punctual verbs to all verbs was 28/51 (or 55%), while in backgrounding this proportion was 8/81 (or 10%).

(E) VOLITIONALITY, and (H) AGENCY. These two factors concern the degree of planned involvement of an A in the activity of the verb. Although a volitional verb requires an agentive subject—one that is human, or at least animate—such subjects do not necessarily require volitional verbs; the two points can thus legitimately be separated, but can also be dealt with together. The prominence of the properties of Agency and Volitionality in foregrounding derives from the fact that story lines are typically advanced by people who perform actions, and especially by people who deliberately initiate events. Furthermore, foregrounded clauses tend to have A's on the left rather than the right side of the Agency Hierarchy (cf. §2.72, above). This hierarchy is arranged in order of likelihood of being an A (although there are culture-specific and genre-specific variations among its left-hand elements). In addition, however, it also arranges entities in the order of their INTRINSIC TOPICALITY, i.e. the degree to which they are likely to be definite and referential (Givón 1979: 56 *et passim*). These properties of definiteness and referentiality which adhere to the left-hand side of the hierarchy follow naturally from the fact that foregrounded clauses typically continue talking about the same participant within one episode, rather than introducing a new participant. Topicality and Agency also appear to be connected with a further property which will be discussed in more detail below, namely INDIVIDUATION—the degree to which the entity referred to by the NP is discrete, bounded, and separated from its environment.

In our sample texts, the distribution for volitional verbs over foregrounding and backgrounding received the expected skewing: of the foregrounded clauses, 76% (39 out of 51) had a volitional verb, but in backgrounded clauses only 36% (30 out of 83) had a volitional verb.

Because Agency can be shown to be a continuous property, we did not draw an arbitrary line between agentive vs. non-agentive subjects (e.g. between the human/non-human locations on the hierarchy), but calculated an INDEX OF AGENCY for foregrounded and backgrounded clauses. This was based on the four most relevant features for the passages under scrutiny: 3rd pers. Human Pronoun > Proper Name > Human N > Inanimate N. Clauses were assigned scores of 1 to 4, the highest A (3rd pers. Human Pronoun) receiving 4, and the lowest (Inanimate N) receiving 1. This total figure was then divided by the number of clauses with expressed A's in foreground and background respectively. The indices of Agency were markedly skewed with regard to grounding, with foregrounding consistently having the higher figure: 3.33 vs. 1.98.

(F) MODE and (G) AFFIRMATION. The fact that negative clauses are rare in foregrounding follows from the fact that events which are narrated are asserted; negation is a digression into a possible but non-real world. Mode covers the distinction of 'indicative' (i.e. finite realis) verb forms vs. the other 'moods' of traditional grammar, e.g. subjunctive and optative. The correlation between indicative and foregrounding in our samples was absolute, and it is hard to see how it could be otherwise. Of the foregrounded clauses in our texts, 100% were affirmative, and 100% were finite/realis. In backgrounded clauses, 76 out of 83 were affirmative (92%), and 55 out of 83 (66%) were finite/realis.

(I) AFFECTEDNESS and (J) INDIVIDUATION concern properties of O's. We have seen that many languages require a morphological marking or a semantic interpretation of O's as either totally or partially affected, depending on the global transitivity of the clause. Since total Affectedness of O follows from the semantic perfectivity of the verb, the correlation between this feature and foregrounding is readily understandable. The completion of the action of a clause naturally involves the whole O. When the action is viewed not as completed, but as under way, the O is less likely to be completely affected; instead, the action of the verb encroaches upon the O and affects only part of it. Our sample texts revealed 20 out of 51 foregrounded clauses (39%) to contain totally affected O's; but only 10 out of the 83 backgrounded clauses (12%) had them.

The notion of Individuation—the extent to which O is particularized and viewed as a concrete entity distinct from its background—is more complex and, we suspect, of considerably greater scope and linguistic significance than is implicit in the more limited use we have made of it here. We saw in §2 that, of the Individuation properties discussed by Timberlake, the definiteness and referentiality of O's played the most important role in correlating with other features of high Transitivity. In testing the relevance of Individuation to discourse, we scored O's in foregrounded and backgrounded discourse according to whether they were referential and definite. An O was given 2 points for being both definite and referential, 1 for being either, and 0 for being neither. The average score can be referred to as the index of Individuation of O's. In our sample, the number of O's in foregrounded

clauses was 32; their index of Individuation was 1.5. In backgrounded clauses, the number of O's was 33; their index of Individuation was 1.2.

We have seen in §2 that, in many languages, O's which are indefinite are associated with 'intransitive' structures; this suggests that such an O is not really an object, but is rather in the nature of an adverbial accompaniment to the verb. The special syntactic status of definite O's in universal grammar—their tendency to be morphologically or syntactically marked in some way—is derived from their greater Individuation with respect to indefinite O's, and the discourse function of highly individuated O's.

The term 'definite' which we shall use here is in fact not accurate enough, since in many languages what is crucial in O-marking is not 'definiteness' but 'referentiality'—the property of having a specific referent, regardless of any assumption of prior familiarity. Thus in Tagalog, to be discussed below, the 'O-focus' construction selects not only O's which are 'definite', but also, in the words of Bloomfield (1917:154), 'elements which we should look upon as somewhat indefinite'. In fact, from the discussion and examples in Bloomfield (155), it is clearly referentiality which is criterial rather than definiteness.

Very often, then, grammatical phenomena associated with definiteness of O are extendable to indefinite O's, provided they are referential. We shall attempt below to explain why this quality of definiteness/referentiality in the O stands out from other Individuation properties. Even when other features of Individuation, such as animacy, are grammaticized, it is frequently IN CONJUNCTION WITH definiteness (as in many South Asian languages), and not in place of it. Tagalog, as we shall show, presents a good example of a language in which the definite O has a clear and salient discourse function, as well as a profound effect on structure at the syntactic and morphological levels. It therefore offers us an insight into the reasons for the widespread grammaticization of the feature of definiteness in O's cross-linguistically.

Summarizing the above discussion, Table 2 lists the percentage of features of high Transitivity found in both foregrounded and backgrounded clauses.

	FOREGROUND	BACKGROUND
(A) Participants	76%	18%
(B) Kinesis	88%	49%
(C) Aspect	88%	27%
(D) Punctuality	55%	10%
(E) Volitionality	76%	36%
(F) Affirmation	100%	92%
(G) Mode	100%	66%
(H) Agency	—	—
(I) O-Affectedness	39%	12%
(J) O-Individuation	—	—
Average for all features	78%	39%

TABLE 2.

4.4 The definite O in Tagalog discourse is illustrated below by data taken from the largely narrative texts of Bloomfield. It is well known that in Tagalog, as in Philippine languages generally, the multiparticipant sentence shows a propensity toward a 'passive' construction (usually known to modern linguists as O-focus or

O-topic; but cf. §4.5 below). If the O of a verb is definite (or more accurately, referential), it must normally be encoded as the topic of the clause; the O is then preceded by the topic particle *ang*, and an affix on the verb indicates the function of the topic—i.e. (direct) O, location (locative/dative), and other non-A roles (benefactive, instrumental etc.); these are known collectively as GOAL. Other functions indicated by the verb are Mode (realis/irrealis) and Aspect (perfective/imperfective). A further characteristic of Tagalog is the use of nominalized verb forms, especially in complementation and other subordinate clauses.

In terms of the theory being presented here, the Tagalog ‘passive’, i.e. goal-topic construction, represents a more Transitive clause-type than the corresponding ‘active’ (i.e. agent-topic) clause. For example, in the following clauses (given as examples in Bloomfield, 174; cf. Schachter & Otnes 1972), the more Transitive clause, with definite O, contrasts with the less Transitive clause, with indefinite O and agent-topic:

- (91) a. *Pinutol nya ang kahoy.*
 he cut AGT TOP wood
 ‘He cut the wood.’
 b. *Pumutol sya nang kahoy.*
 he cut AGT/TOP GOAL wood
 ‘He cut some wood.’

(Here the infixes *-in-* and *-um-* index the goal and agent, respectively, as topics.)

What is especially significant about this situation is that, in running text, the definite O construction (passive, goal-topic) is strongly correlated with foregrounding. In foregrounding, it is rare to find any other kind of focus in multi-participant clauses; in backgrounding, whenever the verb is realis and perfective, the goal-topic construction is avoided. In the following passage (Bloomfield, 64), the verbs in foregrounded clauses are in italic small capitals.⁵

Kanya TINAWAG ny Andres ang unngo'. Hindi gaya nang dati, na sa isa ng tawag
 then called AGT TOP monkey not like previously when at one LK call
lamang niy Andres ay lumalapit agad-agad ang unngo', ngayon makasa-m-pu ng
 only AGT PCL came immediately TOP monkey now ten-times LK
tawag na ay wala pa sya. Siy Andres ay NAGALIT, NAGTINDIG, at HINANAP nya sa
 calling already was-not he ART PCL got-angry stood-up and sought AGT in
manga sulok-sulok nang bahay ang unngo'.
 PLUR corners of-the house TOP monkey

Ito y NAKITA nya sa isa ng sulok at nakakapit na mabutesa isa ng halige.
 him PCL found he in a LK corner and was-holding LK tightly to a LK post
TINAWAG nya at kanya ng pinaalis sa sulok, datapuwat ang unngo'
 called AGT so-that POSS LK trying-to-remove from-the corner but TOP monkey
y ayaw umalis doon, kahit na ano ang gawin sa kanya. Dahil dito ay
 PCL refuse come away no-matter that what TOP doing of him because this PCL

⁵ We are grateful to Michael Forman for assistance with the Tagalog–English glosses. The variety of Tagalog elicited by Bloomfield is not identical in every respect to present-day standard Tagalog, and for this reason we have retained Bloomfield’s orthography with the exception of his /ŋ/, which we write as *ng*; in addition, accents are omitted. The abbreviations LK and PCL stand for ‘linking morpheme’ and ‘thematizing particle’ respectively.

TINAWAG *nya ang pare', upang ito y doon tinahan sa sulok ang alila nya ng*
 called AGT TOP priest so-that PCL there be-looked-at in corner TOP pet his LK
unggo'.
 monkey

Pagkalapit *nang pare' ang unngo y KUMINIG sa takot. Nagkaroon nang*
 having-come-near of-the priest TOP monkey PCL trembled with fear had ART
hinala ang pare' na ang unngu ng iyon ay isa ng dimonyo. Kanya ang ginawa
 suspicion TOP priest that TOP monkey LK this PCL a LK demon so TOP did
nya y NAGKURUS sya at pagkabendisyon nya nang kaunti ng tubig ay NIWISIKAN
 AGT PCL crossed AGT and bless AGT ART a-little LK water PCL sprinkle
ny ang unngo'.
 AGT TOP monkey

TRANSLATION [adapted from Bloomfield]: 'Then Andres called the monkey. Unlike previous occasions when, at one call by Andres, the monkey used to come immediately, now he called ten times and he did not appear. Andres got angry, stood up, and searched in all corners of the house for the monkey.

'He found him in a corner, holding tightly to a post. He called him, trying to get him out of the corner, but the monkey refused to come away from there, no matter what he did. Because of this he called the priest so that he could look at his pet monkey in the corner.

'The priest having approached, the monkey trembled with fear. The priest suspected that this monkey was an evil spirit. So what he did was to make the sign of the cross and, having blessed some water, sprinkled the monkey with it.'

The correlation of foregrounding with the maximally Transitive sentence-type is complete: all foregrounded clauses are realis and perfective; and if they have an O, it is definite (and is therefore the topic of the clause). Conversely, in backgrounding the verbs have fewer Transitive features: they may be irrealis (e.g. *tinahan* 'be looked at'), or imperfective (e.g. *lumalapit* 'came', *pinaalis* 'trying to remove'), or non-finite gerund forms (e.g. *pagkabendisyon* 'bless'). The rarity of non-referential O's in foregrounded discourse appears to have led to a situation in which GOAL-TOPIC IS A SIGNAL OF FOREGROUNDING.

Tagalog, then, represents an extreme case of a language where the statistical correlation between definite O's and foregrounding has resulted in a specialization of the 'passive' to denote foregrounding. This situation started out as a natural result of the tendency for O's to be known entities in foregrounding—i.e. for new O's to be introduced in backgrounding through a 'stage-setting' construction, and from that point on to be referred to as definite. Eventually the correlation between definite O and foregrounding becomes so strong that the 'passive' or goal-topic construction, once specialized for encoding definite O's, begins to take over as a signal of discourse foregrounding, even being extended to use with indefinite O's, and to the point where it may not be used in backgrounding if the verb is realis/perfective.

4.5. Before leaving the question of Individuation of O's, we return to the issue of accounting for definite O marking. Since truly functional EXPLANATIONS of morpho-syntax have only rarely been attempted, especially by post-Saussurean linguists, it will be relevant to contrast our explanation of the marking of definite O's with the functional explanation proposed by Comrie (1977a, MS) for the same phenomenon. Comrie's explanation runs as follows: The agent/subject of a sentence is typically animate and definite. O's, however, are typically indefinite and inanimate, as has

been shown by statistical counts in actual texts. Under normal circumstances, then, O's will be distinct from subjects by virtue of their feature constituency. However, when an O goes against this expectation, and has the features animate and/or definite, then it is in competition with a subject and **MUST BE MARKED AS AN O**.

One objection to this explanation is that many languages quite readily tolerate confusability at the sentence level between subject and O (see Moravcsik 1978c); consequently, it is unlikely that this factor alone would result in such a widespread grammatical phenomenon. In general, we feel that the **DISTINGUISHING** function of morphological and syntactic phenomena has been over-emphasized in linguistics; at least as important is the **INDEXING** function, which indicates that a certain NP is 'an O', and which only incidentally serves to contrast that O with another NP which is a subject or has some other NP role.

Aside from Comrie's reliance on confusability, however, it seems that his explanation and ours are not essentially incompatible; the two accounts differ in what they take to be the 'normal' function for O's. Comrie, on the basis of undifferentiated text counts in Givón 1979, takes the 'normal' O to be indefinite; but we, on the basis of counts of foregrounded vs. backgrounded material, take the 'normal' O to be definite.

In comparing these two views, it is useful to recall that what Givón's figures show is not that O's are typically indefinite and inanimate, but that general text counts reveal essentially an **EQUAL NUMBER** of definite and indefinite O's. The relationship claimed by Givón to hold between indefiniteness and objecthood is that, if there is an indefinite NP in the sentence, it is more likely to be the O than the subject. So the appropriate generalization is not that indefinite O's outnumber definite ones in texts, but that O's tend to be indefinite as compared to subjects; it is in this sense that Comrie takes the 'normal' O to be the indefinite one. However, it is also true that the relevance of Givón's statistics concerning the frequency of indefinite vs. definite O's may be questionable, since these statistics did not consider the crucially important distinction between foregrounding and backgrounding. Our own statistics suggest that, in foregrounding, there is a marked tendency for O's to be individuated, i.e. to have properties associated with referentiality/definiteness and animacy. Independently, we have shown that foregrounded clauses are more Transitive than backgrounded clauses, in possessing such Transitive features as perfectivity and Volitionality. It follows from this that definite/animate O's may be **MORE**, not **LESS**, natural O's than indefinite/inanimate ones; and indeed, it seems to us that the tendency to mark just definite/animate O's reflects the purer object-ness of such O's, and simultaneously marks the higher Transitivity of the clause as a whole.⁶

⁶ It is interesting to note that Comrie's proposal and ours make opposite predictions with respect to the marking of **SUBJECTS**; and here empirical facts exist to support both positions. Comrie's claim implies that some languages will mark subject NP's just when they are inanimate/indefinite, since this is the atypical situation for subjects; according to Comrie (p.c.), a number of Australian and Indo-Aryan languages indeed have special markings for subjects low in animacy. Our hypothesis predicts that some languages will mark subject NP's just when they are truly A's, in a way exactly parallel to that in which O NP's are marked just when they are truly O's. This prediction is also borne out in a number of languages; cf. exx. 44-45 above, in which subjects which are also A's receive a special marker as opposed to subjects which are not true A's. It is interesting to note that many IE languages show a tendency to mark subject when

Support for our suggestion that O case-marking is functionally motivated by the Transitivity of the clause as a whole, rather than by the need to distinguish subject from O, is given by Slobin 1979. He shows that, in adult Russian, the accusative case-marker is used with direct O's of many types of verbs—but, in the case of at least one Russian child,

'the accusative was at first limited to a particular subset of events. The suffix emerged when the child was 23 months old, and was only applied to the objects of verbs involving direct, physical action on things—such as "give", "carry", "put", and "throw" ... but he would not use this suffix when saying things like "I read the book" and "I saw the book".'

Slobin goes on to suggest that the notions which languages grammaticize are closely related to children's cognition of 'prototypical' events and event characteristics; in this case, the facts suggest that there may be a correlation between O case-marking in languages and the cognitive perception of 'prototypical' transitive events.

4.6. We have shown that the properties associated with high Transitivity, which correlate in the grammars of every language we have looked at, also turn out to predominate in the foregrounded portions of discourse. In our discussion of Tagalog narrative, we have argued that one of these properties, the definiteness of the O, in fact serves to SIGNAL foregrounding in that language. We now briefly discuss the relationship, as we see it, between Transitivity and what have been called PASSIVES in the literature. The term has been used to cover two radically different types of constructions; we are not concerned here with whether the term 'passive' should be used for both, but with the structural and functional distinctions between them, which can be illuminated in terms of Transitivity.

The first type is the 'O-focus' construction found in the Philippine languages, as illustrated in our discussion of Tagalog just above. O-focus sentences in these languages seem similar to what have been termed 'passives' in other languages, in that an NP other than the A is being singled out and 'promoted' to a special status. However, they are distinct from 'passives' in one important respect: they tend to occur with A's whereas passives of the English type do not. Thus, in a text count for Cebuano, Dryer 1976 found 67 occurrences of direct O's and 57 occurrences of 'passive'-A NP's (i.e. expressed A's in O-focus sentences); this ratio contrasts sharply with the 25:1 ratio found in English between direct O's and passive-A NP's (Svartvik 1966).⁷

it is animate, but not when it is inanimate. Thus, in Latin, masculine and feminine nouns—the only genders possible for nouns denoting animate beings—distinguish nominative and accusative in all declensional classes in which they occur; but neuter nouns, which may not refer to animate entities, consistently have identical forms for nominative and accusative, again regardless of declensional class. Now of course this fact could be interpreted as a special marking on O's just when they are animate; but it is striking that the Latin nominative/accusative case-marking of 2nd declension neuter nouns is identical in form to the accusative of masculine nouns (and so generally in the older IE languages):

	2nd DECLENSION MASC.	2nd DECLENSION NEUTER
Nominative	<i>servuS</i> 'slave'	<i>scutuM</i> 'shield'
Accusative	<i>servuM</i>	<i>scutuM</i>

⁷ See Mulder & Schwartz 1979 for further discussion on how these constructions differ from passives of the type found in English.

Now, this fact correlates with the fact that O-focus constructions are highly Transitive in our terms: the A tends to be present, the O must be definite and referential, and the verbs tend to refer to punctual actions. As predicted, then, such clauses tend to occur in the foregrounded portions of connected discourse: in Bloomfield's Tagalog texts discussed above, we saw that there was a very strong tendency for O-focus constructions to occur in foregrounded passages.

More uncontroversial passives, of the type found in English, either occur with A's only rarely (as demonstrated for English by Dryer, by Svartvik, and by Givón 1979:57-64), or are constrained not to occur with A's at all, as in many American Indian languages (for discussion, see Langacker & Munro 1975, Givón 1979:57-64, 191-3). Here again, just as in the case of datives being marked as accusatives (see §2.2), Givón reminds us that this is a case of the same restriction operating as a pragmatic constraint on frequency in some languages, and as a grammatical constraint in others. Thus, no A's may occur in Wappo passives:

- (92) *keš-i ʔol-kheʔ.*
 deer-NOM catch-PASS
 'The deer has been caught.'

Or in Ute:

- (93) *mamáci ʔuníkya-ta-ḡa.*
 woman(OBJ) see-PASS-PAST
 'The woman was seen.'

In Persian (N. Tutton, p.c.), the passive may be accompanied by an instrument but not by an (animate) A. Such passives, in our terms, are low in Transitivity: they typically have, or must have, only one argument, and this argument generally exercises no control over the event denoted by the verb. Thus, as Givón 1979 points out, they cannot easily co-occur with manipulative verbs:

- (94) *I told John to find Sam.*
 **I told Sam to be found.*

In fact, Svartvik found that extensive text counts reveal that, among passive sentences in English, 81% have INANIMATE subjects, as compared to 27% inanimate subjects for active sentences. In addition, it is well known that passive morphology often signals other detransitivizing functions, such as unspecified-A and reflexive constructions.⁸ Further, as Svartvik shows, a greater percentage of passives than actives in English have verbs in the perfect or past perfect, which are low-Transitivity tenses (26%:19%), and are found with modals, again a low-Transitivity property (30% more).

Our discourse hypothesis predicts that such passives, in languages like English, will tend to occur in the backgrounded portions of texts. Although we have not made an extensive count, this prediction was borne out in the three texts used for this study: out of 81 backgrounded clauses, 10 (or 12%) were passives, but out of 51 foregrounded clauses, only 2 (or 4%) were passives.

Having distinguished O-focus constructions, which are quite Transitive, from passives, which are quite non-Transitive, we may go on to mention briefly the dia-

⁸ See Langacker 1976 for a discussion of these very low-Transitivity constructions as sharing the property of having 'non-distinct arguments'.

chronic fates of these two types of constructions. It is the O-focus constructions, with their two arguments (and not single-argument passives) which can be re-analysed as ergative constructions—which are themselves, as abundantly demonstrated in §2, highly Transitive constructions. Thus Chung 1977, 1978, who demonstrates that the present-day ergative constructions in the Polynesian languages can be diachronically related to constructions that are the analogs of the modern Tagalog O-focus constructions, also states (1977:13–14) that the ‘passive’ constructions from which the ergative ones have derived were possibly more frequent than the ‘active’ in Proto-Polynesian: ‘the passive occurs more often than the active in several attested Polynesian languages; and evidence from more distantly related Austronesian languages (e.g. Malagasy, Bahasa Indonesia, Philippine languages) suggests that this may be characteristic of the Austronesian language family as a whole.’ Anderson 1977, in elaborating on Chung’s remarks, suggests that ‘the passive is in some languages of the family the PREDOMINANT sentence structure’ (327, emphasis supplied). We suggest that it is precisely the foregrounding function of these ‘passive’ constructions, which we expect for highly Transitive clauses, that accounts for their higher frequency and their prominence as candidates for re-analysis (cf. Hopper 1979b).

Canonical passives, however, are not good candidates for re-analysis as ergative constructions, primarily because they are essentially one-argument clauses. As is well known, there is a diachronic connection between such passives and perfects, since both express a participant in the state of having been affected by an event’s occurrence.⁹ As discussed in some detail in Givón (1979:58–9), such passives are also much less frequent than actives; thus, in English, passives average between 4% for less-educated styles to 18% for more-educated styles.

SUMMARY AND CONCLUSIONS

5. We have made and supported the claim that Transitivity is a global property of clauses, that it is a continuum along which various points cluster and tend strongly to co-occur, and that the foci of high Transitivity and low Transitivity correlate with the independent discourse notions of foregrounding and backgrounding respectively. The fact that semantic characteristics of high Transitivity such as perfective Aspect, individuated O, and agentive subject tend strongly to be grammaticized in the morphosyntax of natural languages points to the importance of the foregrounding/backgrounding distinction, and suggests that this distinction is valuable in explaining certain universals or near-universals of morphosyntax.

Throughout this paper, we have stressed that, although the implicational interrelationships among the elements of the Transitivity continuum have a certain validity at the sentence level, the explanation for the salience of THESE PARTICULAR FEATURES is to be found in discourse, specifically in the distinction between foregrounded and backgrounded discourse. SEMANTIC AND GRAMMATICAL PROPERTIES WHICH ARE IRRELEVANT TO FOREGROUNDING ARE ALSO IRRELEVANT TO TRANSITIVITY. At the same time, we wish to call attention to the essentially PRAGMATIC nature of

⁹ See Comrie 1976, 1978, and Langacker & Munro for discussion and documentation; but note that Langacker & Munro use the term ‘perfective’ where the term ‘perfect’ would more generally be understood (e.g. Comrie 1976; Munro, p.c.)

the grounding distinction. While we claim that the discourse distinction between foregrounding and backgrounding provides the key to understanding the grammatical and semantic facts we have been discussing, we also explicitly recognize that grounding itself reflects a deeper set of principles—relating to decisions which speakers make, on the basis of their assessment of their hearers' situation, about how to present what they have to say.

In general, then, we suggest that phrasocentric ('sentence-level' or sentence-internal) accounts of morphosyntax can have only a provisional and incomplete validity, and that a fully coherent theory of language must begin at (and not merely include) the level of discourse MOTIVATION for individual sentences.

APPENDIX

(Foregrounded portions are italicized.)

TEXT 1 (*Newsweek*, Jan. 23, 1978, pp. 40–41.)

The son of an electrical engineer, Stigwood was always an independent spirit. *He converted to Catholicism as a teenager, briefly considered becoming a priest, and left school short of a degree at seventeen.* After hitching a boat to England, *he landed a job at a theatrical agency* and subsequently, *he opened his own small talent agency.* It was not long before *he created a stir—and a star.* A TV actor he represented, John Leyton, had been turned down as a singer by several record companies. *Stigwood decided to record Leyton himself.* Then *he took the record to EMI and explained that it was about to get plugged on the actor's national TV show and couldn't help but make a splash.* *EMI went along* and, sure enough, *the record became a No. 1 hit.* *Stigwood emerged as England's first independent record producer.*

He went on to promote such groups as the Bee Gees and Cream, and in 1968 *he branched out into the theater*, buying London rights to shows including 'Hair' and 'Oh! Calcutta!' But he rarely strayed far from his musical roots. His biggest coup was securing London rights to produce the 'Jesus Christ Superstar' album on stage, on film and in concert; the concerts alone have generated \$40 million to date.

TEXT 2 (Samuel E. Morison, *The European discovery of America*, New York: Oxford University Press, 1974; pp. 53–5.)

The fleet was ready for sea on 2 August 1492. *Every man and boy confessed his sins, received absolution, and received communion* at the Church of St. George in Palos. *The Captain General* (as we should call Columbus at this juncture) *went on board Santa Maria* in the small hours of Friday the third, and at break of day *made signal to get under way.* Before the sun rose, all three vessels were floating down the Rio Tinto on the morning ebb, with sails hanging limp from their yards, the men pulling on long ash sweeps to maintain steerageway. As they swung into Saltés and passed La Rábida close aboard, they could hear the friars chanting the ancient hymn 'Iam lucis orto sidere' with its haunting refrain, 'Et nunc et in perpetuum, "Evermore and evermore"'. . .

On the first leg of the voyage, *Pinta's rudder jumped its gudgeons*, so *Columbus decided to send her into Las Palmas* for repairs while Santa Maria and Niña went to Gomera, westernmost of the conquered Canary Islands. There *he sent men ashore* to fill water casks, buy breadstuffs and cheese, and salt down native beef. *He then sailed to Las Palmas* to superintend Pinta's repairs and *with her returned to Gomera.* By 2 September all three ships were anchored off San Sebastián, the port of Gomera. *Columbus there met Doña Beatriz de Peraza y Bobadilla*, widow of the former captain of the island, a beautiful lady still under thirty. He is said by a shipmate to have fallen deeply in love with her; nonetheless, he did not tarry. *Additional ship's stores were quickly hoisted on board and struck below*, and on 6 September 1492 *the fleet weighed anchor* for the last time in the Old World. It had still another island to pass, lofty Ferro, or Hierro. Owing to calms and variables, Ferro and the 12,000-foot peak of Tenerife were in sight until the ninth, but by nightfall that day every trace of land had sunk below the eastern horizon, and the three vessels were alone on a uncharted ocean. *The Captain General himself gave out the course: 'West; nothing to the north, nothing to the south.'*

TEXT 3 (Tim Severin, *The Brendan voyage*, New York: McGraw-Hill, 1978; pp. 197-8.)

Then *I had it. Leather!* Under the cabin floor lay a spare oxhide and several slightly smaller sheets of spare leather. They were intended as patches if Brendan sprang a leak or was gashed. Now they could be used to plug a far more dangerous hole in our defenses. At the same moment I remembered, absolutely vividly, an encyclopedia illustration of the Roman army Testudo, the 'tortoise' under which the Roman legionnaires advanced against a town rampart, holding leather shields overlapping above their heads to ward off missiles thrown by the defenders. Why hadn't I thought of it before?

I began emptying out the contents of the cabin, peeled back the floor sheet with a sticky ripping sound, and *prized up the leather sheets* where they had lain on the deck boards. 'Get a fistful of thongs,' *I told George*. 'I want to lace the hides together.' *He crawled forward*.

I shoved the leather sheets out of the cabin door. They were stiff and unwieldy in the cold. So much the better, I thought, they will be like armor plate.

Quickly *I pointed out to Trondur* what needed to be done. Immediately *he grasped the principle, nodded his understanding, and gave a quick grin of approval*.

Then he was off, knife in hand, scrambling up onto Brendan's unprotected stern where the waves washed over the camber of the stern deck. It was a very treacherous spot, but it was the only place where the job could be done properly. With one hand *Trondur held onto his perch*, and with the other *he worked on the leather sheets* we passed up to him. Every now and then, the roar of an oncoming breaker warned him to drop his work and hold on with both hands while Brendan bucked and shuddered and the wave crest swirled over the stern. Meanwhile, Arthur at the helm kept Brendan as steady as he could, and George, balancing on the port gunwale, pinned down each sheet of leather to prevent it being swept away by the gale. Trondur's job was to cut a line of holes along the edge of the oxhide in the right place for the leather thongs to lash down and join together the tortoise. With the full power of his trained sculptor's hand, *Trondur drove his knife point again and again through the quarter-inch-thick leather, twisted and sawed, and carved out neat hole after neat hole* like a machine. It was an impressive display of strength. *Then George fed the leather thongs through the holes, tied down the corner of the main hide, and laced on the overlapping plates*.

In less than fifteen minutes the job was done. A leather apron covered the larger part of Brendan's open stern, leaving just enough room for the helmsman to stand upright, his torso projecting up through the tortoise. Leather cheek plates guarded the flanks.

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