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# GEORGIAN AND THE UNACCUSATIVE HYPOTHESIS

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It has been observed that many languages exhibit a semantic, syntactic, or morphological correlation between the direct objects of transitive verbs and the surface subjects of certain inactive intransitives. The Unaccusative Hypothesis (UH) proposes, within the framework of Relational Grammar, that final subjects of this type are initial direct objects. This paper shows that several morphological and syntactic processes in Georgian refer to just these nominals, thus supporting the UH. It further shows that, although the semantic relations of nominals to verbs is not irrelevant, those morphological and syntactic processes which refer to initial direct objects cannot be stated simply on the basis of semantics.\*

A wide variety of morphological and syntactic data in diverse languages indicate a correlation between, on the one hand, direct objects of transitive verbs and subjects of certain kinds of intransitive verbs, and, on the other hand, between subjects of transitive verbs and subjects of certain intransitives. These semantic correlations and oppositions have figured in work by Fillmore (e.g. 1968, esp. p. 54), Chafe (1970a, esp. Chap. 9, and 1970b) and others.<sup>1</sup> For example, it has been observed that *the cake* in *Mother baked the cake* and in *The cake baked* has the same semantic relation to *bake*. In contrast, *mother* has the same semantic relation in the first sentence as in *Mother baked*.

Perlmutter and Postal have suggested, in recent work, that nominals like *the cake* not only stand in the same semantic relation to the verbs here, but also bear the same initial grammatical relation, namely direct object. This idea has become known as the Unaccusative Hypothesis (UH; Perlmutter 1978, Perlmutter & Postal, ms).

The purpose of this paper is to examine evidence from Georgian that is relevant to the UH. It is shown here that direct objects of transitives, together with subjects of certain intransitives, constitute a natural category to which the rules of Georgian grammar must refer. In addition, it is established that the relevant rules of Georgian cannot be stated on the basis of simple semantic relations, but must refer to the syntactic notions 'subject' and 'direct object'.

1. THE UNACCUSATIVE HYPOTHESIS. Sapir 1917 proposed a typology of case-marking types, partially represented as Table 1 (with the addition of more recent nomenclature).

Although Sapir (p. 85) made a point of distinguishing the active from the ergative type, these types continue to be conflated in many works. For example,

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<sup>1</sup> Klimov has also written on these notions (e.g. 1976, 1977); however, his analysis is entirely different from that presented here.

	OBJECT: TRANSITIVE	SUBJECT: INTRANSITIVE INACTIVE	ACTIVE	SUBJECT: TRANSITIVE
Ergative	A		A	B
Active	A	A	B	B
Accusative	A		B	B

TABLE 1.

Dixon (1979:82) characterizes the active type as an irregular variant of the ergative, or as a 'grammatically untidy' ergative.

Though Sapir did not go into detail about the active type, we may infer something about its nature from Dakota, the language he cited as its archetype. It has often been said that Dakota and other Siouan languages distinguish between stative and dynamic verbs. In Lakhota, a Dakota dialect (Van Valin 1977), sentences like 1–3 suggest that *wa* marks 1st person singular in dynamic verbs, while *ma* marks the same person and number in statives:

- (1) *wakte'* 'I kill it.'
- (2) *thawa'šoše* 'I spit.'
- (3) *mahā'ske* 'I am tall.'

However, compare this example:

- (4) *mahi'xpaye* 'I fall down.'

This shows that *ma* is used not only by statives, but also by intransitive dynamic verbs that are non-agentive, involuntary, or non-controllable. Recent treatments of the syntax of Dakota and other Siouan languages have observed that the *wa/ma* dichotomy is not dynamic/stative, but controllable/non-controllable (Matthews 1965:63; Van Valin, 10). Since the languages cited by Sapir distinguish controllable, voluntary, or agentive verbs, on the one hand, from non-controllable, involuntary, or non-agentive, on the other, we may assume that this is the dichotomy he intended; it is this distinction, not a dynamic/stative one, that is referred to here as 'active'. The question remains, of course, whether some additional type may distinguish case-marking on the basis of stativity.

The existence of rules of the active type, as shown in Table 1, poses important problems for linguistic theory. From the distribution set out there, it is clear that, in some languages, the subjects of certain (inactive) intransitive verbs are identified with direct objects, rather than with other subjects. In order to account for phenomena of this type, Perlmutter and Postal have proposed a theory of language which identifies the sole argument of an inactive intransitive verb as its direct object. This theory would recognize at least the inventories of initial arguments shown in Table 2.

Subject and direct objective	(Transitive)
Subject	(Active Intransitive)
Direct object	(Inactive Intransitive)

TABLE 2.

Many languages offer clear evidence that the initial intransitive direct object has the syntactic properties of a surface subject. To account for these facts,

it is proposed that a rule, Unaccusative, promotes direct objects to subjecthood in clauses that lack a subject (cf. Perlmutter 1978 and Perlmutter & Postal, MS, for discussion and a formal statement of the rule). This nominal, the surface subject of sentences like 4, is referred to hereafter as the UNACCUSATIVE NOMINAL.

The UH may be viewed as the claim that intransitive verbs have two types of surface subjects—those that are underlyingly subjects, and those that are underlyingly direct objects. Two types of evidence may be adduced in support of this claim.<sup>2</sup> Most frequently cited is the existence in many languages of rules which refer just to subjects of inactive intransitives (i.e. unaccusative nominals) and to direct objects. In Laz (Kartvelian), and perhaps in Eastern Pomo (Hokan; McLendon 1975, 1978), case-marking refers to direct objects and unaccusative nominals. In Choctaw (Muskogean; Davies, MS), Dakota (Siouan; Van Valin), Hidatsa (Siouan; Matthews), and Onondaga (Iroquoian; Chafe 1970b), verb agreement refers to direct objects and unaccusative nominals.<sup>3</sup> In Mohawk (Iroquoian; Postal, p.c.), noun incorporation refers to just these relations. In Italian, auxiliary selection and Partitive Ascension distinguish surface subjects of inactive intransitives from those of active intransitives (Perlmutter 1981). Rules which, in Georgian, refer to direct objects of transitives and to unaccusative nominals are presented below in §§2.1–2.4.

Another type of argument for the UH would be the existence of rules which refer just to subjects of transitives and of active intransitives, which specifically EXCLUDE direct objects of transitives and unaccusative nominals. One rule of this type is discussed in §2.5 below.

**2. EVIDENCE FOR THE UH.** The examples below illustrate major clause types in Georgian. In each, the clause-initial nominal can be recognized as subject by the fact that it triggers Subject Agreement, here marked as *-a* (3sg.):<sup>4</sup>

<sup>2</sup> To establish that the claims of the UH are correct, it is necessary to show, for a given language, (i) that it has two classes of intransitive clauses; (ii) that the sole argument in one type has all and only subject properties; (iii) that the sole argument in the second type has both subject and direct-object properties; (iv) that the subject properties in the second type are those of surface subjects; and (v) that the direct-object properties in the second type are those of underlying direct objects. Evidence to support each of these points for Georgian is included in Harris 1981b; the present paper draws together data relating to points (i) and (iii), which have generally been taken to be the central issues in the UH.

<sup>3</sup> In descriptions of these languages, marking in the verb is often called 'case-marking'. Here I have distinguished agreement (in the verb) from case (in the nominal) because, in Georgian, they function quite differently: agreement is a rule of the accusative type, throughout the language.

<sup>4</sup> In the gloss of a verb, arabic numerals refer to the person of the subject (S), direct object (DO), and indirect object (IO), some of which are only implicit in the verb form. The roman numeral at the end of every verb gloss represents the Series of that form. 'Series I', 'Series II', and 'Series III' are traditional designations of three sets of tense-mood-aspect categories, grouped into Series according to morphological and syntactic criteria (cf. below). Number is not included in the glosses, but in §2.4, where it is at issue, it is indicated by italic small capitals. For substantives, clearly segmentable elements are set off by hyphens, in both the Georgian word and its gloss. Elements of a gloss separated by periods correspond to a single morpheme that is not synchronically segmentable. The case referred to here as 'active' is elsewhere called 'ergative'. In the conventional transcription used here, the dot beneath consonants marks glottalization.

- (5) a. TRANSITIVE  
*vano-m gamozarda zma.*  
 Vano-ACT 3S/3DO/grow/II brother.NOM  
 'Vano raised his brother.'
- b. ACTIVE INTRANSITIVE  
*bavšv-ma itira.*  
 child-ACT 3S/cry/II  
 'The child cried.'
- c. INACTIVE INTRANSITIVE  
*rezo gamoizarda.*  
 Rezo.NOM 3S/grow/II  
 'Rezo grew up.'

These three nominals are also identified as subjects by the rules of case-marking in Series I and III forms, by rules of number agreement, and by other phenomena which can independently be shown to refer to surface subjects.<sup>5</sup> In contrast, five other rules of Georgian identify the subject in 5c with direct objects, contrasting it with the subjects in 5a–b. These five phenomena are discussed in turn below.

**2.1. CASE-MARKING.** It is well known that Georgian has a complex system of case-marking, where different subsystems are used with different tense/aspect categories. With Series I and III forms, the following system of case-marking is used: In surface grammatical relations, all subjects are marked with *-i* (∅ after a vowel), and all objects with *-s(a)* (Harris 1981b:130–31).

The case-marking that is relevant to the UH is found only with Series II forms, which include aorist, optative, and imperative. It is this system which is discussed below, and examples cited are in Series II. Exx. 5a–c illustrate the case-marking system which characterizes Series II: In surface grammatical relations, the subject of a transitive verb and the subject of an active intransitive verb are marked with the suffix *-ma* (*-m* after vowels), while the direct object and the subject of an inactive intransitive are marked with *-i* (∅ after a vowel). The distribution of cases in Series II is summarized in Table 3.

	SUBJECT	DIRECT OBJECT
Transitive	active ( <i>-ma</i> )	nominative ( <i>-i</i> )
Active Intransitive	active ( <i>-ma</i> )	—
Inactive Intransitive	nominative ( <i>-i</i> )	—

TABLE 3.

In Table 3, the label 'transitive' refers to verbs which have a final subject and direct object; 'intransitive' refers to all other verbs. The labels 'active' and

<sup>5</sup> In view of the different case-marking systems and agreement systems operative in Georgian, one cannot assume an isomorphism between morphology and syntactic structure. I have argued at length elsewhere (Harris 1981b:2–3, 23–46) that syntactic structure can be arrived at in Georgian only by using a variety of morphological and syntactic diagnostics, including cases, *Tav*-Reflexivization, *Tavis*-Reflexivization, Person Agreement, Unemphatic Pronoun Drop, Object Camouflage, Object Raising etc.

'inactive' are somewhat impressionistic, but they refer to clear-cut classes established on the basis of morphological criteria (Harris 1981b:259–61). The division between active intransitives and inactive intransitives is a strict one, in the sense that a particular FINITE VERB FORM is in a particular morphological class, and its subject must be marked as stated in Table 3. However, a given verb ROOT may have forms in more than one verb class, and may therefore have subjects marked variously. For example, compare 6 with 5b:

- (6) *bavšv-i aṭirda.*  
 child-NOM 3S/cry/INCHO/II  
 'The child burst out crying.'

The agentive verb form in 5b co-occurs only with active-case subjects, while the non-agentive form in 6 necessarily has nominative-case subjects.

The class of transitives includes verbs such as *dačera* 'he wrote it', *misca* 'he gave it to him', and *miiyo* 'he received it'. It includes the verbs that have optional direct objects, e.g. *itamaša burti* 'he played ball' (vs. *itamaša* 'he played', active intransitive). The class of active intransitives includes the verbs expressing motion in one place (*iḱanḱala* 'he shakes'), production of noise (*iqvira* 'he yelled'), motion from one place to another (*icurava* 'he swam'), and other activities (*imusava* 'he worked'; cf. Holisky 1980). The class of inactive intransitives (unaccusative constructions) includes verbs like *iqo* 'he was', *darča* 'he stayed', *daixrčo* 'he drowned', *gatqda* 'it broke', and *gaišra* 'it dried'.

Traditional grammars have referred to this case system as ergative, treating the class of active intransitives as an irregularity (Čikobava 1950, Šaniže 1973, Tschenkéli 1958, Vogt 1971); Boeder 1979 recapitulates the traditional analysis in this respect. However, Holisky 1980 and Nozaze 1974 have shown that the large class of active intransitives is actually highly regular—morphologically, syntactically, and semantically. It is important to recognize that the generalizations embodied in Table 3 are true for all productive verbal categories in the language (this is established for more complex constructions in Harris 1981b).<sup>6</sup>

Case-marking in Series II is a rule of the active type, as defined in Table 1. Since it clearly distinguishes direct objects and subjects of inactive intransitives, on the one hand, from subjects of transitives and of active intransitives, on the other, it supports the claims of the UH.

**2.2. SUPPLETION.** In Georgian, several verbs are suppletive for the number of their direct objects: one verb root is used for singular direct objects, and another for plurals. Šaniže (1973:504) observes that the verb 'kill' is such a verb: *mokvla* is used for 'kill' with a singular direct object, *daxoca* with a plural. He cites these examples (glosses and translations added):

- (7) a. *mgel-i movḱali.*  
 wolf-NOM 1S/3DO/kill/II  
 'I killed the wolf.'

<sup>6</sup> Georgian has several non-productive verbal categories which are not regularly marked. Some of these are discussed in Holisky 1980, and others in Harris 1981b. As in other languages, many of the irregular verbs and categories are the most frequently used. The regular patterns of the language emerge only if we restrict ourselves to the categories which can be shown to be productive.

- b. *mgl-eb-i davxoce.*  
 wolf-PL-NOM 1S/3DO/kill/II  
 'I killed the wolves.'

This suppletion is thus governed by the number of the direct object.

In the corresponding unaccusative constructions, the same suppletion is governed by the unaccusative nominal:

- (8) a. *mgel-i mokvda.*<sup>7</sup>  
 wolf-NOM 3S/kill/II  
 'The wolf died.'
- b. *mgl-eb-i daixoca.*  
 wolf-PL-NOM 3S/kill/II  
 'The wolves died.'

If the nominative-nominal of the unaccusative structure is its initial direct object, suppletion in 8 can be accounted for by the same rule which is independently required for 7. However, if *mgeli/mglebi* in 8 is not analysed as an initial direct object, two statements of suppletion must be included in the grammar to account for 7–8: one for direct objects of transitives, another for subjects of intransitives. Thus an analysis in which the nominative-nominal of 8 is not its initial direct object misses a linguistically significant generalization that is captured by the unaccusative analysis.

**2.3. PREVERB ALTERNATION.** Schmidt 1957 observes that one of the functions of the preverb *da-* in Georgian is to indicate plurality of the 'goal'. Preverbs are not plural agreement markers in the ordinary sense; they indicate perfectivity, direction, orientation etc. (Šanize 1973:305; Tschenkéli 1958, I, Chaps. 9–11). Schmidt cites a large number of verbs which regularly use *ga-* or some other preverb with singular 'goals', and *da-* with plural 'goals'. He shows that, for transitive verbs of this type, the use of *da-* is conditioned by a plural direct object; but for intransitive forms derived from the same verb root, the same preverb is triggered by a plural subject. The forms below, which illustrate Schmidt's observation, are from Tschenkéli (1973:416–17), with added glosses:

	TRANSITIVE	INACTIVE INTRANSITIVE
(9) Singular	<i>gamovzrdi (mas)</i> 'I will raise him'	<i>(me) gamovizrdebi</i> 'I will grow up'
Plural	<i>davzrdi (mat)</i> 'I will raise them'	<i>(čven) davizrdebit</i> 'we will grow up'

An adequate grammar of Georgian must include a rule that accounts for the occurrence of *da-* with plural direct objects. The same rule will account for the use of *da-* with plural subjects of inactive intransitives if (a) final subjects of inactive intransitives are initial direct objects, as proposed here; and (b) the *da-* rule is stated on initial termhood. If, instead, the nominative-nominal of the inactive intransitive were not its initial direct object, two syntactic rules would be required to account for the distribution of *da-*, thus missing a significant generalization.

<sup>7</sup> On the phonological relations, see Topuria 1940.

**2.4. EN-AGREEMENT.** Until now the discussion has focused only on Modern Georgian. Old Georgian is attested from the 5th century, and presents a picture substantially like that of Modern Georgian with respect to the phenomena discussed above (Harris 1981a, Šaniže 1976). However, Old Georgian has an additional rule which refers to direct objects of transitives, to unaccusative nominals, and to other direct objects which are made final subjects. This rule, *En-Agreement*, adds the suffix *-en* (reduced to *-n* in most environments) to verb forms having plural direct objects—including those (like unaccusative nominals) which are final subjects. The occurrence of this morpheme as triggered by the direct object of a surface transitive is illustrated in ex. 10; the same marker conditioned by unaccusative nominals is shown in 11–12; and 13 shows *-n* in the auxiliary of an analytic passive. The plural suffix *-en/-n* and the trigger nominal are in small capitals (for a more complete analysis, cf. Harris 1980):<sup>8</sup>

- (10) *daikal da gviqiden čUEN γmrt-isa.*  
 2S/kill/II and 2S/1DO/redeem/II us.PL.NOM God-GEN  
 'Thou wast slain, and hast redeemed us to God.' (Rev. 5:9)
- (11) *vitarca čur-ni igi mekece-ta-ni šeimusrnian.*  
 like vessel-PL.NOM DET potter-PL.GEN-PL.NOM 3S/shatter/II  
 'As the vessels of potters, they shatter.' (Rev. 2:27)
- (12) *šišvel iqvnes.*  
 naked 3S/be/II  
 'They were naked.' (Gen. 3:7)
- (13) *vidre MTA-ni dabadebul iqvnes*  
 until mountains-PL.NOM created 3S/be/II  
 'before the mountains were created' (Psalms 89:2)

Crucially, *-en/-n* is not triggered by plural subjects of transitive or active intransitive verbs, as illustrated by 14 and 15 respectively:

- (14) *da gmes kac-ta saxel-i γmrt-isa-y.*  
 and 3S/3DO/blaspheme/II man-PL.ACT name-NOM God-GEN-NOM  
 'And men blasphemed the name of God.' (Rev. 16:21)
- (15) *romlisa tana isizves qovel-ta mepe-ta*  
 which with 3S/fornicate/II all-PL.ACT king-PL.ACT  
*kueqan-isa-ta*  
 earth-GEN-PL.ACT  
 'with whom all the kings of the earth have committed fornication'  
 (Rev. 17:2)

While the plural subjects in 11–13 trigger *-en/-n*, those in 14–15 do not.

These examples show that *En-Agreement* in Old Georgian refers to direct objects, unaccusative nominals, and other initial direct objects that become subjects; it does not include other subjects. Although essentially this same condition on the distribution of the nominative case applies in both Old and

<sup>8</sup> Case-markers in Old Georgian differ from those in Modern Georgian in that the case and plural are fused into a single morpheme: *-ni* in the nominative and *-ta* in the active case (cf. exx. 13–14).



Modern Georgian, the *En*-Agreement rule cannot refer to the case itself, for several reasons. First, pronominal plurals may trigger *En*-Agreement—even when they are dropped, as in 11. Second, although 1st and 2nd person plurals trigger *En*-Agreement, as in 10, these pronouns bear no morphological indication that they are nominatives; i.e., *čuen* is the nominative, dative, and active case of ‘we’. If *En*-Agreement were sensitive to the presence of the (Old Georgian) nominative plural marker, *-ni*, the verb form in 10 would not have *-n*. Third, a few active intransitives such as ‘go’, and ‘stand up’ are irregular, in that they take a subject in the nominative case; they nevertheless do not take the *-en/-n* plural marker (e.g. *igini aγdges* ‘they moved into a standing position’, not *\*aγdgnes*). If the distribution of *-en/-n* were based upon the distribution of the nominative case, rather than the grammatical relations, these verbs would be doubly irregular. Finally, in Old Georgian the ancient absolutive or ‘markerless’ case may substitute for the nominative in all its functions in Series II (Imnaišvili 1957:637–61). Plural nominals that meet the input conditions on *En*-Agreement trigger the rule regardless of whether they are in the absolutive, as in 16, or in the nominative, as in the preceding examples:

- (16) *romel-ta esxnen COL*  
 which-PL.DAT 3S/3IO/have/II wife.ABS  
 ‘those who have wives’ (I Corin. 7:29)

For these four reasons, the rule of *En*-Agreement cannot refer to the nominative case itself, but must refer to grammatical relations. It therefore constitutes a distinct rule of grammar that must refer explicitly to the relations ‘direct object’ and ‘subject of inactive intransitive’.

I have discussed four rules which refer to direct objects and unaccusative nominals: the rule which assigns the nominative case in Series II, the rule of suppletion for number, the rule which assigns the preverb *da-*, and the *En*-Agreement rule. None of these includes in its reference the subjects of transitives or of active intransitives; none includes indirect objects. These four processes support the UH because they treat direct objects and subjects of inactive intransitives as a unified natural class.

**2.5. INVERSION.** A second type of support for the UH would be the existence of rules which refer to subjects of transitives and of active intransitives, SPECIFICALLY EXCLUDING the subjects of inactive intransitives (cf. Table 2). One such rule is that which states the distribution of the Georgian active case-marker, *-ma* (§2.1); another is described in this sub-section. The fact that certain rules refer exclusively to subjects of transitive and active intransitive verbs means that these constitute a natural grammatical category, as claimed by the UH.

In Georgian, the evidential mood is correlated with a set of verb forms traditionally known as Series III. The evidential occurs in a variety of uses—expressing an action which was not witnessed by the speaker; the result of an action, rather than the action itself; a presumption on the part of the speaker that the action took place; or the negative of a simple past action (Peikrišvili 1974). The evidential occurs felicitously with *turme* ‘evidently, apparently’. A

syntactic peculiarity of clauses containing certain of these verb forms is that they undergo a rule known as Inversion. This is the process which makes subjects into indirect objects, as in 17b and 18b:

- (17) a. *glex-ma datesa simind-i.*  
 peasant-ACT 3S/3DO/sow/II corn-NOM  
 'The peasant sowed corn.'
- b. *turme glex-s dautesavs simind-i.*  
 apparently peasant-DAT 3S/3IO/sow/II corn-NOM  
 'Apparently the peasant has sown corn.'
- (18) a. *merab-ma imušava.*  
 Merab-ACT 3S/work/II  
 'Merab worked.'
- b. *merab-s turme umušavnia.*  
 Merab-DAT apparently 3IO/work/III  
 'Apparently Merab worked.'

Here 17a and 18a are in Series II, while the corresponding (b) sentences are in Series III.

In the inversion construction, if an underlying direct object is present, as in 17, it is promoted to subject.<sup>9</sup> Ex. 18b, however, has no overt surface subject; the verb shows 3sg. subject agreement in all Series III forms. The initial subjecthood of *glexs* and *merabs* in 17b and 18b is attested by the fact that these nominals trigger reflexivization and number agreement—processes otherwise limited to subjects in Georgian. That they are final indirect objects is shown by the fact that they bear the indirect-object case (dative) and trigger indirect-object agreement, marked for the 3rd person by *u-*.<sup>10</sup>

The relevance of Series III to the UH lies in the fact that all and only the subjects of transitives and active intransitives undergo Inversion (cf. 17b and 19b, respectively). Exx. 19a–c illustrate the fact that the subjects of inactive intransitives regularly fail to undergo Inversion in Series III:

- (19) a. *rezo gamoizarda.*  
 Rezo.NOM 3S/grow/II  
 'Rezo grew up.'
- b. \**turme rezo-s gamozrdila / gamouzrdila.*  
 apparently Rezo-DAT 3S/grow/III 3IO/grow/III  
 ('Apparently Rezo has grown up.')
- c. *turme rezo gamozrdila.*  
 apparently Rezo.NOM 3IO/grow/III  
 'Apparently Rezo has grown up.'

<sup>9</sup> There are reasons to analyse this promotion of the initial direct object as caused by Unaccusative. On this and certain universal aspects of Inversion, see Harris 1981c.

<sup>10</sup> The indirect-object agreement shows up most clearly in a paradigm:

*damitesavs simindi* 'Apparently I sowed corn.'  
*dagitesavs simindi* 'Apparently you sowed corn.'  
*dautesavs simindi* 'Apparently he sowed corn.'

Additional support for the indirect-objecthood of the inversion nominal comes from the behavior of the clause under Object Camouflage. Details of these and other data supporting this analysis of Inversion are given elsewhere (Harris 1981b:120–33).

In 19b, *rezo* has undergone Inversion in the evidential, just as *glex-* and *merab-* have in 17b and 18b; in 19c, Inversion has not applied. The sentences above are representative of productive transitives (17), active intransitives (18), and inactive intransitives (19), respectively. The evidential mood is expressed through Series III forms for all verbs. The examples show that the subjects of transitives and of active intransitives obligatorily undergo Inversion, while the subjects of inactive intransitives cannot undergo this rule. Thus these examples illustrate the fact that the rule of Inversion refers to subjects of transitives and active intransitives, and not to unaccusative nominals and other direct objects.<sup>11</sup> Although unaccusative nominals become subjects, they do not undergo Inversion in Series III as other subjects do.

In this section, I have discussed four rules which refer just to direct objects of transitives and to unaccusative nominals, as well as a rule which refers to subjects OTHER THAN unaccusative nominals. I conclude that direct objects of transitives and unaccusative nominals together constitute a natural grammatical category, to which syntactic rules may refer. Because unaccusative nominals have the syntactic properties of INITIAL direct objects and of FINAL subjects (Harris 1981b), they are best accounted for by a rule, Unaccusative, which promotes direct objects to subjecthood. In the following section, I will establish that the rules discussed in this section cannot be accounted for in terms of semantic categories alone.

**3. SEMANTIC CONSIDERATIONS.** The UH involves the claim that the initial syntactic relations SUBJECT and DIRECT OBJECT are based on semantic notions. Initial subjects in Georgian include agents, experiencers, possessors, and cognizers. Initial direct objects include patients, stimuli, and possessed nominals. The question then arises: Can case-marking, as well as other processes which refer to direct objects and unaccusative nominals, be stated in semantic terms? If semantic conditions on these rules were possible, it would be unnecessary to analyse the unaccusative nominal as an initial direct object.<sup>12</sup> It is the purpose of this section to show that a simple semantic condition will not do for Georgian. In §§3.1–3.3 I will discuss three semantic notions which have been suggested as possible correlates of rules like the active ones in Georgian: stativity, animacy, and agency. In §3.4, I will state briefly how the proposal of the UH differs from these.

**3.1. STATIVITY.** In §1, we observed that it is often said of Siouan languages that one set of markers indicates objects and subjects of stative verbs, while another set indicates subjects of active verbs. Nevertheless, the 'stative' group includes such actions as 'fall', 'drown', and 'spread'. It is important to note that examples like these are not exceptions or irregularities, but function systematically and regularly. If the label 'stative' is applied to these verbs, it

<sup>11</sup> The existence of this rule in Georgian, as well as certain rules in Italian (Perlmutter 1981), shows that rules of the active type DO exist in syntax (cf. Dixon, 108).

<sup>12</sup> Plank (1979:4 and fn. 2) states that active case-marking is not comparable to ergative or accusative, since only the active is a purely semantic marking, not grammaticalized. A similar approach is implied in several other recent works (e.g. Dixon, 80).

becomes simply a name of the class; it is no longer an accurate description of some of the members of that class, e.g. 'fall'.

In Georgian, like Siouan, the verbs which take nominative-case subjects (Case A of Table 1) include regular statives, e.g. *aris* 'it is', *uqvars* 'he loves him', *mciva* 'I am cold', and *dacerilia* 'it is written'.<sup>13</sup> This class also includes many dynamic (non-stative) verbs, e.g. *daiçera* 'it got written, was written', *gaišla* 'it spread out', *daixrço* 'he drowned', *gaizarda* 'he/it grew up,' and *gaixsna* 'it opened'. Independent tests for stativity in Georgian, which confirm these statements, are given in Holisky 1978. I conclude that stativity is not the factor, either in Siouan or in Georgian, which governs the active-type rules.

**3.2. ANIMACY.** Klimov 1976, 1977 claims that active-type rules are correlated with the grammaticalization of animacy. From exx. 20a–b and 21a, one might indeed suppose that animate subjects are marked with the active case in Georgian, while inanimate subjects are marked with the nominative:

- (20) a. \**çaidan-ma imçera.*  
teakettle-ACT 3S/sing/II  
'The teakettle sang.'
- b. *vano-m imçera.*  
Vano-ACT 3S/sing/II  
'Vano sang.'
- (21) a. *çaidan-i amçerda.*  
teakettle-NOM 3S/sing/INCHO/II  
'The teakettle began to sing.'
- b. *vano amçerda.*  
Vano.NOM 3S/sing/INCHO/II  
'Vano began to sing.'

In 20, where the subjects are in the active-case form, the inanimate is an impossible subject. However, the nominative-case subjects of the inchoatives in 21 may be either animate or inanimate. Indeed, nominals marked with the nominative case in any construction may be animate or inanimate, without restriction: thus 5c, 6, and 8 are examples of animate subjects in the nominative case; and 5a, 7, and 10 are examples of animate direct objects in the nominative case. Nor is it in any sense unusual or 'marked' for animates to be in the nominative case; some inactive intransitives even require animate subjects (in the nominative case):

- (22) a. *gela içva taxtze:*  
Gela.NOM 3S/lie/II couch-on  
'Gela lay on the couch.'
- b. \**çign-i içva taxtze.*  
book-NOM 3S/lie/II couch-on  
'The book lay on the couch.'

Because animate nominals may be regularly marked with the active or with

<sup>13</sup> Holisky (1980:179 ff.) observes that a few verbs which belong morphologically to the class of active intransitives ('medials') are semantically stative, and shows that in this respect they are irregular.

the nominative, it is impossible to base the distribution of cases on these notions. However, 20–21 show that animacy is not entirely irrelevant to case-marking.

**3.3. AGENCY.** In her study of active intransitive ('medial') verbs in Georgian, Holisky (1980:189–98) observes that subjects of typical verbs of this class are agents. The subjects of transitive verbs are also typically agents. Since it is just the subjects of active intransitives and of transitives that are marked with the active case, one might be tempted to extend Holisky's findings by claiming that Georgian agents are marked with the active case, while patients are marked with the nominative.

In discussing whether or not agency determines case-marking, one runs headlong into the problem of a definition or diagnostic for an AGENT and a PATIENT. Yet, if 'agent' and 'patient' are purely semantic notions, then the agent and patient in a specific real-world situation are the nominals with specific reference, regardless of how the situation is described in a language.<sup>14</sup> For example, if the real situation is that Bill killed John, then Bill must be the semantic agent, whether we say 23a, b, or c:

- (23) a. Bill killed John.
- b. John was killed by Bill.
- c. Bill's killing of John.

Thus, even without a workable definition of agent, we can agree that if *Bill* is the agent in 23a, then it must also be in 23b–c, since its relation to the event expressed is the same.

In the remainder of this section, I will cite five instances where an agent is marked with the active case in one syntactic construction, and with some other marker in another description of the same real-world event (or where a nominal in some other semantic relation is marked in two different ways). In each instance, the structure of the argument is the same: If 'agent' (or 'patient') is a semantic notion, then it must be applicable to the same nominal in a particular event, regardless of what syntactic construction is used to describe that event. If  $N_i$  is the agent in (a), then  $N_i$  must also be the agent in (b), which describes the same real-world event. If the distribution of *-ma* is stated on the basis of agency, the rule will correctly mark the agents in the (a) examples, but will INCORRECTLY predict that the agents in the (b) examples are likewise marked with *-ma*.

Thus, in 24a, the agent is in the active case, but the same nominal is marked by the postposition *mier* in 24b:

- (24) a. *bič-ma datv-i moqla.*  
           boy-ACT bear-NOM 3S/3DO/kill/II  
           'The boy killed the bear.'
- b. *datv-i iqo moqluli bičis mier.*  
           bear-NOM 3S/be/II killed boy by  
           'The bear was killed by the boy.'

<sup>14</sup> Although this seems to be the sense in which the notions 'agent' and 'patient' are usually used in linguistics, it is NOT the sense in which they are used in Chafe 1970a,b.

If 'boy' is the agent in 24a, then it must also be in 24b, where it does not bear the *-ma* case.

With a very few verbs in Georgian, the patient may be either in the nominative, as in 25a, or the dative, as in 25b:

- (25) a. *ǰariskac-ma daszlia mter-i.*  
 soldier-ACT 3S/3DO/overcome/II enemy-NOM  
 'The soldier defeated the enemy.'  
 b. *ǰariskac-ma szlia mter-s.*  
 soldier-ACT 3S/3IO/overcome/II enemy-DAT

Though the verb forms here differ slightly, both are in Series II, where the active type of case-marking occurs (cf. §1 above). If 'enemy' is the semantic patient in 25a, it can only be the patient in 25b; yet it is not in the nominative case in the latter example.

In 26a and 27a, the agents are marked with the active case. In the corresponding causatives, the same nominals are marked with the nominative (26b) or dative case (27b):

- (26) a. *vano-m dačera čeril-i.*  
 Vano-ACT 3S/3DO/write/II letter-NOM  
 'Vano wrote the letter.'  
 b. *vano-s davacerine čeril-i.*  
 Vano-DAT 1S/3DO/3IO/CAUS/write/II letter-NOM  
 'I got Vano to write the letter.'  
 (27) a. *vano-m itamaša.*  
 Vano-ACT 3S/play/II  
 'Vano played.'  
 b. *vano vatamaše.*  
 Vano.NOM 1S/3DO/CAUS/play/II  
 'I got Vano to play.'

Here 26a–b may be used as true descriptions of a single real-world event, though of course the truth conditions on the two are not the same. For a situation where both 26a and 26b are true, if 'agent' is a semantic notion, then *vano* must be the agent of 'write' in both (cf. Cruse 1973). Yet *vano* is in the active case in 26a and not in 26b. Similar reasoning applies to 27.

In 28a, 'my friend' is in the active case; in 28b, the same nominal is in the dative:

- (28) a. *čemma megobar-ma gasačeb-i dačarga.*  
 my friend-ACT key-NOM 3S/3DO/lose/II  
 'My friend lost his key.'  
 b. *čems megobar-s gasačeb-i dačarga.*  
 my friend-DAT key-NOM 3S/3IO/lose/II

The two sentences can be used to describe the same situation; ex. 28a does not imply that the act was intentional. Many linguists would agree that 'my friend' is the experiencer in 28, but I am unaware of any objective way to show

this.<sup>15</sup> Whatever the semantic relation of this nominal is, it is the same in both sentences, though the grammatical relations are different.

Finally, Old Georgian has pairs like 29a–b, where the unincorporated patient bears the nominative case, while the incorporated patient has no case-marking:

- (29) a. *romel-man-igi qo*                      *çqaloba-y mis tana ...*  
           which-ACT-DET 3S/3DO/do/II mercy-NOM him with  
           ‘He who showed mercy on him ...’ (Luke 10:37)
- b. ... *da çqaloba-go*                      *mat zeda*  
           and mercy-3S/3DO/do/II them on  
           ‘and he showed mercy on them’ (Mark 6:34)

The overt marker of the nominative case, *-y*, occurs in 29a, but not in 29b,<sup>16</sup> even though *çqaloba* must be the semantic patient in both examples.

I have cited five constructions in Georgian where the semantic relations of the nominals in a clause do NOT form a basis for predicting the case-marking assigned to these nominals. In 24b, 26b, and 27b, semantic agents are marked with *mier*, the dative case, and the nominative case, respectively. In 25b and 29b, the semantic patients are marked with the dative case and with no case at all, respectively. In 28, a nominal is marked with the ‘agent’ (active) case, or with the dative. In each pair, the semantic relation of the nominal is constant, though the case is different. Because of such examples, it would be inaccurate to state that Georgian agents are marked with the active case, and patients with the nominative.

**3.4. THE SEMANTIC BASIS OF RULES OF ACTIVE ORIENTATION.** It has been shown that case-marking in Georgian cannot be predicted straightforwardly on the basis of semantic notions. Rules of this type ARE related to semantics, but not in such a simplistic way. The relationship between the semantics and the case-marking is mediated by the syntax, as shown below.

The complex relation between semantics and active case-marking can be stated as follows:

- (A) Semantics strictly determines INITIAL grammatical relations.

In Georgian, initial subjects include agents, cognizers, experiencers, and possessors. Initial direct objects include patients, stimuli (of affective verbs), and possessed.

- (B) Syntactic rules may operate on initial (and derived) grammatical relations.

In Georgian, the syntactic rules that change grammatical relations include Passivization, Inversion, Unaccusative, Causative Clause Union, Inceptive Clause Union, and Object Raising. The semantic relations in a clause are unaffected by syntactic rules.

<sup>15</sup> The inversion construction in 28b occurs commonly with affective predicates in Georgian. This construction is often confused with a true active-type rule (cf. Merlan, ms).

<sup>16</sup> In Old Georgian, nominative *-i* was not, as in Modern Georgian, deleted after a vowel, but rather became a glide.

(C) Rules are stated on INITIAL and FINAL grammatical relations, not on semantic relations.

Case-marking rules are good examples. Thus, in a clause containing a Series II verb-form,

(30) The active case (*-ma*) is assigned to those nominals which are initial and final subjects.

This rule insures that agents, which are initial subjects, will be marked with *-ma* if they are final subjects (as in 24a, 26a, 27a, and 29a). Experiencers, which are also initial subjects, will likewise bear the active case if they are final subjects (as in 28a). Those agents and experiencers that are not final subjects (as in 24b, 26b, 27b, and 28b), are not in the active case. The claim that these nominals are final subjects in the (a) sentences, and not in the (b) sentences, is based on consideration of many other morphological and syntactic phenomena, including Person Agreement, Number Agreement, Reflexivization, and Retired Term Marking (the analysis of each syntactic construction considered above is fully justified in Harris 1981b).

Again, in a clause containing a Series II verb-form,

(31) The nominative case (*-i*) is assigned to those nominals that are direct objects at some level of derivation, and are final subjects or direct objects.

The semantic patients in 24a, 25a, 26, 28a, and 29a are initial and final direct objects, and so are correctly marked with the nominative case by Rule 31. In 24b and 28b, they appear as final subjects, and are marked by the same rule.

It is equally important that regular rules should mark the semantic agents in 24b, 26b, 27b, and 29b; the semantic experiencer in 28b; and the patients in 25b and 29b. The construction illustrated in 25b is highly idiosyncratic; but the patient is marked regularly for its final grammatical relation, viz. indirect object (Harris 1981b; Appendix to Chap. 12). All the other constructions are fully productive, and the marking of each of the nominals is assigned by a regular process (Harris 1981b, Chaps. 11, 5, and 8, respectively; and 1981a).

I have outlined the manner in which an analysis which considers both syntactic and semantic relations can account for the active type of case-marking in Georgian. This analysis differs from a purely semantic description in that rules may refer to derived syntactic relations as well as to those (initial grammatical relations) which are based directly on semantics. Thus syntactic rules mediate the relationship of semantics to the surface syntax and morphology. In Georgian, not only the case-marking rules described in this section, but also the other rules described in §§2.2–2.5, must refer to syntactic relations in the way outlined here.

**4. CONCLUSION.** It is impossible in a short article to give a complete account of case-marking in Georgian, since that must involve consideration of every syntactic construction, and complete justifications of each analysis. Related phenomena and more complex constructions, as well as the broader implications of the UH in Georgian, are discussed elsewhere (Harris 1981b:235–59). However, I think the data presented here suffice to show (a) that the subjects



of sentences like 5c are underlyingly syntactic direct objects; and (b) that phenomena of the active type cannot be stated on a simple semantic basis. The Georgian facts make it necessary to adopt some form of the Unaccusative Hypothesis in universal grammar.

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