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Form and Function of the English Subject 1150-1400

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At least since Keenan (1976), the category of "subject" has been known to serve a variety of functions. Both Keenan and later Comrie (1981) construe the prototypical subject as the intersection of two categories, one defined in terms of clause-internal semantics, the "actor", and the other defined at a discourse level, termed "topic". Shibatani (1991), however, argues that a subject category will express topicality only when it does not compete with an explicit topic construction, where a "topic construction" is defined as a "cohesive device that relates an event to the preceding event."

Following much the same reasoning as Shibatani, Faarlund (1988) suggests a correlation between the type of grammar a language uses to express the subject category and the meanings it will encode. Particularly, he postulates that in languages where constituent order can be used pragmatically and grammatical relations are expressed through morphological case, grammatical roles will more closely parallel Fillmorean semantic cases than in those where the position of noun phrases, rather than their inflection, distinguishes subjects from objects. On the other hand, when grammatical roles are expressed chiefly through syntax they will tend to take on more pragmatic functions. In the first type of language, subjects tend to be restricted to Agents and roles which share Agents' central properties of causality and volition; in the second type, an Agent is still, as Shibatani (1991) has put it, an "archetypical" subject, but the category expands to include noun phrases sharing the topicality which Agents typically possess.

English, which has shifted historically from the first of these types to the second, provides an interesting test-case for this hypothesis; This study finds support for it in the semantic expansion of the English subject during and following the decline of the language's case system, and the concurrent loss of an independent, syntactically-defined, topic construction. The semantically omnivorous English subject has generalized so far from the prototypical agent as to include experiencers, as in *I like Streetcars*, and *I'm freezing*, instruments, as in *This slide-rule can solve any problem*, locatives such as in *this tent sleeps five*, and even occasionally (in active voice) patients as in *they suffered*. or *his sections on Latin America read glibly*.

Following Shibatani's reasoning, this is a natural consequence of the by now well-established fact that the English subject is a category used pragmatically to ground each clause in preceding discourse, that is, by pointing to an already activated referent from which the clause can "move on to provide its own new contribution", as Chafe (Forthcoming) has put it, or to use Givón's mechanistic metaphor, by providing a "label" to tell the hearer what "file" the new information should be appended to.

What we need to ask is to what extent this situation is due to the way the Modern English subject is expressed. Old English had a well-developed case system, and I will argue that it had a syntactically defined topic construction; but did the subject become a more pragmatic or discourse-based category because of the shift from case to word order? Obviously there is no absolute answer to this question, but if we can show that these shifts happened together, and roughly at the

same time, this is a good argument in favor of the hypothesis.

It turns out that crucial developments in both the form and content of the subject did happen concurrently, and during a fairly narrow timespan, between the mid-twelfth century and the end of the fourteenth. On the semantic front, we find a shift away from "impersonal" expressions: that is, many verbs selecting a single argument whose case is Experiencer, Benefactive, or some other role widely removed from the "archetypical" Agent, formerly treated them as objects, but about this time began promoting them to subject. On the formal side, English entered this period with a fairly complete noun case system, but had nothing left to show of it but the genitive's by the end of it; and as word order became fixed, a formerly independent and productive topic-construction disappeared.

I will look at the two sides of this story in turn, and then provide some additional evidence why they should be considered aspects of a single shift.

Diachronic Semantics

The Old English subject was originally quite restrictive in the case roles it contained, in much the way Shibatani predicts for a language with a competing topic construction. Most subjects were Agents, Themes, Causes, or similarly "active" participants. This began to change rapidly in the 250 years alluded to above, as impersonal expressions disappeared. The transition from impersonal to active verbs has been the subject of several studies, including a treatise by van der Gaaf early in this century, a chapter in Jespersen, and most recently an admirably complete descriptive work by Ogura (1986).

Ogura has pointed out that for many verbs, the transition was a slow one; *hyngrian* "to hunger" or "to be hungry" and *thyrstan*, "to thirst" or "to be thirsty" were occasionally used personally even in the earliest written records (as we can see in some examples from the OED), and so were the competing expressions "to be hungry" or "to be thirsty".

900: *thonne ge gefon hingrendum hlaf*

1000: *eadige synd ge the hingriath nu*

1300: *I wat thou has fasted lang and hungres*

However, there is evidence that the basic or unmarked way of using these predicates made a decisive switch during this period. When we compare parallel passages in a twelfth century West-Saxon translation of the gospels called the Hatton manuscript (Skeat 1970), and John Wycliffe's 1383 bible (Forshall and Madden 1879), we find that the former consistently renders these two predicates impersonally and the latter always has experiencer subjects.

Hatton: *sothlice his leorning-cnichtes hyngrede.*

Wycliffe: *and his disciplis hungriden.*

"his disciples were hungry" (Mt 12:1)

Hatton: *Me hingrede. & me sealden atan.*

Wycliffe: *For Y hungride, and ge gauen me to ete;*

"for I was hungry and you gave me food" (Mt 25:35)

Hatton: *Me therste & ge me drincan ne sealdan.*

Wycliffe: *Y thirstide, and ge gaven not me to drynke;*

"I was thirsty and you gave me no drink." (Mt 25:42)

In other cases a clear-cut shift is immediately apparent. Mustonoja (1960) reports that this period saw the first subject-selecting use of a number of verbs; *I dream* first appears as an alternative to the formerly impersonal *me dreameth* in 1303, and *I lack* first replaced *me lacks* in 1330.

A similar though more complicated change happened to the bivalent verb *lician*, or *lyken*, the ancestor of modern *to like* which however had a meaning something more akin to *to please*; that is, the alignment of semantic and grammatical roles reversed. The person or thing causing pleasure was originally the subject, and the being experiencing it was a dative object. This makes sense in terms of the semantically-driven Old-English grammatical relation system, since it places the argument with the agent-like feature of causality, that is, whatever causes someone's enjoyment, in the subject role. The new system is more in line with the modern, discourse-driven system because the experiencer participant, which is always human—and thus more likely to be the starting point of the predicate given people's tendency to talk about each other rather than things—has become the subject.

Again looking to the OED, we can see that this change began during the two-and-a-half centuries we have been discussing, but lasted considerably past them; interestingly, the older version, the one meaning something like "to please", persisted long past the collapse of distinctive case and was last recorded in 1616. In some cases during the transition, the experiencer argument occurs in a *to*-phrase, as in *the sandwich likes to me*. But, since the modern sense does first appear in the year 1200, it seems reasonable to link this development to the same semantic shift affecting monovalent verbs like *hunger* and *lack*.

Concurrent Structural Changes

The timespan of 1150 to 1400 saw a number of important changes in English, structural and otherwise. The bulk of Norman French borrowings were made at this time, as the nobility shifted from really speaking French to using French words in English, and the Norse 3PL pronoun *they* first made its way into midland and southern dialects then as well (Thomasson and Kaufmann 1988:308). More importantly, grammatical gender was dropped and full NP's ceased to be marked for any case besides the genitive. Also during this time, the indefinite article developed into pretty much its modern form.

No doubt because of the decline in inflection, the period also saw a rather sudden crystalization of Old English's relatively fluid syntax into basically the SVO clause structure we have today. In an important diachronic study of English word order, Fries (1940) found that OV clause orderings, which were slightly more

common than VO's in 1200, had shrunk to 10% of all clauses by 1400.

	1000	1200	1300	1400	1500
OV Clauses	52.5%	52.7%	40.0%	14.3%	1.87%
VO Clauses	47.5%	46.3%	60.0%	87.5%	98.13%

I have made a similar study of the relative order of subjects and main verbs, using sermons from the mid-twelfth century and the turn of the fourteenth and fifteenth centuries; that is, the end-points of the timeframe for the semantic shifts examined above. (The advantage in studying religious documents is that they are fairly easy to find for almost any date, and tend to be more stable in their content and style than other literature.) Though not as drastic as Fries' results, these also show a reduction in word-order variability.

	Mid 12th Ct. Texts			Texts Circa 1400		
	CC	CA	JB	MES1	MES8	WS
Post-Verbal	33%	23%	51%	5%	6%	10%
Pre-Verbal	67%	77%	49%	95%	94%	90%

Although these data establish a rough chronological parallel between the structural and semantic facts we set out to connect, we can't really claim to have explained the connection unless we can find some function which word-order formerly filled, which could be incorporated into the meaning of grammatical relations. In fact, the preverbal position of twelfth-century English does seem to have a special status in relating the clause in that particular position to preceding material, and it seems that the subject category, in taking over this position as its marker, may have absorbed some of its old functions.

Clause-Initial Constituents in Twelfth Century English

As the figures above make clear, the preverbal position of main clauses was already most commonly filled by the subject in twelfth century texts. Yet not every subject holds this position, nor does the subject always occupy it alone. An examination of several types of non-SVO main clauses reveals that the initial position serves a number of functions expressing types of continuity between clauses.

In correlative constructions, subjects are placed post-verbally, and the clause-initial position is filled by a small class of words which might be called "deictic adverbs". This often creates parallelism between an adverbial subordinate or relative clause and the modified main clause.

CA 15:26: *Gyf se biscop beo gameleas,... thonne losigeth feale sawlen...*
 "If the bishop is careless, (then) many souls are lost"

CC 2:4: *Tha tha heo ealle hæfdon thysne unræd betwox heom gefæstnod; tha become Godes grame ofer heo ealle.* "When (that) they all had fixed this miscounsel between them, (then) God's anger fell over them all."

CA 13:3: *thær thær seo seodefullnysse byth, thær byth eac clænnysse,* "Where there is chastity there is also purity."

Placed in this position, the word *tha* (which has a number of spatial and temporal deictic uses) can also indicate that an event builds on or responds to the previous one. It is usually translated as "thereupon" or "moreover" in this context.

CC 1:29: *...cwæth on his heorte, that he... eathe mihte beon his Scyppende gelic...* "... (he) said in his heart, that he might easily be like his creator..."

Tha gefestnode he thysne unræd wyth than werode the he bewyste, "Thereupon he fastened this miscounsel with the army he commanded"

CC 2:18: *tha nigon werod... betahton heora ræd to his willen. Tha getrymede se Ælmihtige God tha nigon engle werod,* "The nine armies trusted their counsel to his will, whereupon Almighty god strengthened the nine armies of angels."

Several types of phrasal constituents can also appear preverbally. Adverbs show up here often, and do not usually bounce the subject out of its habitual spot. Predicate adjectives can also be found here, and in these cases the subject does end up after the verb. An example is:

CA 12:17: *Unghesælig byth se gitsere, the thurh his gesælthe losath,* "Unhappy is the miser who perishes on account of his happiness."

Unfortunately my data have too few examples like this to try to discover their distribution or function.

Object noun phrases show up preverbally in main clauses fairly often. They often share this position with the subject; and they can be ordered either before or after it. Most commonly referential objects are placed here if they are either co-referential with the subject of the immediately preceding clause,

CC 1:23: *That teothe werod abreath & awende on yfel. God heo gesceop ealle gode, &...* "The tenth order revolted and turned to evil. God created them good, and..."

CC 2:19: *...God gesceop to mæren engle thone the nu is deofol. Ac God hine ne gesceop na to defle;* "...God created a radiant angel who now is a devil. But God didn't make him into a devil."

CC 3:2: *he wæs tha sume hwile anstandene. God tha hine gebrohte on neorxenewange,* "he was standing there a while, and then God brought him to Paradise (Eden)"

CC 13:16: *Se Hlaford sceal beon wordfæst, & wyten hwæt he clypige, hine man sceal lufigen for his lithnysse.* "(A) lord should be true to his word, and know what he says; one should love him for his kindness."

or somehow parallel to its object:

CA 12:9: *Ure Hælend on his jugoþe wæs gehyrsum his magen, & his Heofonlice Fæder he gehyrsumode oþ death.* "Our savior was obedient to his parents in his youth, and obeyed his heavenly father until death."

CC 1:7: *He awehth ealle dune mid anre hand, & ealla eorþen he beluþh on his hande,* "He raises up all the hills with one hand, and shuts up all (the) earth on his hand."

The three uses can be summed up as one general function, namely linking each clause with the material preceding it. Deictic adverbs put here seem to point the hearer's attention back to preceding clauses or events. Object noun phrases are apparently placed here either to alert the hearer (or reader) to their referential continuity with the preceding clause, or to the parallelism/continuity of the two clauses. This function seems to correspond more or less to Shibatani's notion of a "cohesive device", and I will call this use of the preverbal position the "topic" construction.

Since the experiencer or benefactive objects of impersonals were these verbs' only arguments, they tended to be the referential starting points of clauses containing these verbs, and were often placed initially.

Mk11.12: *and oþrum dæge tha hi ferdon fram Bethania hine hingrode.* "On the following day, when they came from Bethany, he was hungry."

PsGLI: *tha weligan wædlon & him hingrode...* "The wealthy man was impoverished and he was hungry."

Thus they tended to end up in the same syntactic positions that they would eventually assume as subjects, and for the same pragmatic reasons.

In the texts of around 1400 which I have examined, not only are non-SVO main clauses much scarcer than in earlier texts, but seem to be in different types as well. I have not found any objects placed before verbs. On the other hand, existential clauses of the *there be* + subject type are well attested, although they have only rough parallels in the twelfth century data. Fronted adverbs do occur, but infrequently. Interestingly, postverbal subjects do occur fairly often when the verb describes a speech-act;

MES8 38:30: *And here-to bereth wittenes Seynt Poul,...* "...

WS 110:9: *And thus comaundeth crist that men schullen...*

I do not have an explanation for this development.

Conclusions

Generally, by 1400, the preverbal position itself did not express the kind of interclausal continuity for non-subjects that it had 250 years earlier. Apparently the subject category, in taking over the form of the old topic construction, absorbed its function completely, so that the preverbal position per se no longer had the meaning it once did. There are several ways that this structural shift could have led to the semantic changes in verbs like *hyngrian* and *lician*.

The first possibility is structural reanalysis. Mustonoja (1960) attributes these object nouns' evolution into subjects, in part, to the simple fact that "preceding the verb, (they) occupied the position normally held by the subject." And hence, they came to be felt as subjects. Jespersen (1949), too, proposes this explanation. But there are reasons to believe that the development reflects a more fundamental change in the function of subjects. For example, we have noted that for a time one usage of the verb *like* maintained its experiencer as an object, and marked it with *to* (the following examples are again from the OED)

1340: *merci liketh to god...* "mercy pleases god/god likes mercy"

1374: *the victories cawse lykede to the goddess*, "The victorious cause pleased the goddess."

Here the original dative case has been replaced by a preposition, as happened regularly to other datives marking Recipients and Benefactives, and the "thing liked" keeps its subjecthood and ends up preverbally. Such cases make reanalysis alone an unsatisfactory explanation for the eventual change of valence which did occur. Faced with a change in fundamental structure (that is, turning the old object into a subject and vice versa) or a change in form (replacing the dative with *to*), we must ask why the language settled on the former.

The answer seems to be that in absorbing the form of the old grammatical topic, the English subject necessarily absorbed some of its function. There is no reason to doubt that Bybee's (1988) hypothesis that grammatical morphemes encode a meaning "containing vestiges of (their) former lexical meanings" might not also apply to regrammaticized syntactic constructions. At the same, the shift can be interpreted as showing that without an explicit topic construction, a language's subject will inevitably come to mark the continuity of referents rather than their deep case. Ultimately, these are not mutually exclusive hypotheses.

Textual Sources

- CC: Homily I, "The Creation", from Rubie and Warner (1971).
 CA: Homily XII, "The Twelve Abuses", *ibid*.
 JB: Sermon XXII, "De Sancto Iohanne Baptista", from Morris (1873).
 MES1: Sermon 1, from Ross (1940).
 MES8: Sermon 8, *ibid*.
 WS: John Wycliffe, "Speculum de Anticristo", from Winn (1929).

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Agentivity and the Georgian Ergative

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Case marking has been assumed to be either inherent, semantic, or structural, i.e., syntactic (Babby 1986, Chomsky 1986, Zaenen et al. 1985).¹ Inherent case is stated in the lexical entry of individual predicates; due to its unpredictable nature, it is relatively uninteresting. In contrast, structural case is predictable on the basis of syntactic function. Semantic case has, in general, not been explored; the basic idea is that case correlates with the meaning of an argument in relation to the predicate, e.g., the thematic role of an argument might determine its case. In general, those analyses which consider semantic case assume that it is assigned independently of the syntax, i.e., the argument is assigned the given case regardless of the grammatical function it ultimately bears. If arguments are projected into the syntax based on the meaning of the predicate, some structural case marking will have thematic correlates (Dowty 1991, Grimshaw 1990, Jackendoff 1990). However, I argue that the thematic information used to project arguments into the syntax is not detailed enough to account for case marking with both semantic and syntactic restrictions. In particular, I propose that the Georgian ergative applies to external arguments of Aorist series verbs, a syntactic restriction, which are either cause or volitional agents, a semantic restriction. In order to account for the distribution of the ergative, case marking must be able to refer simultaneously to the syntax and the finer-grained semantic structure (Jackendoff 1990).

1 The Georgian Verbal System

Georgian verbs divide into morphosyntactic classes on the basis of their syntax and semantics (Holisky 1981, Harris 1981). Class 1 verbs are transitives, as in (1a), Class 2 verbs are unaccusative intransitives, as in (1b), and Class 3 verbs are unergative intransitives, as in (1c).²

- (1) a. nino Cerils Cers.
Nino-NOM letter-DAT writes
'Nino is writing a letter.' (Cl. 1; Present)
- b. nino Citldeba.
Nino-NOM blushes
'Nino blushes.' (Cl. 2; Present)
- c. nino mγeris.
Nino-NOM sings
'Nino is singing.' (Cl. 3; Present)

Each class governs particular case marking patterns. Within a given class, the case marking patterns vary depending on the tense-mood-aspect of the verb. Tense-mood-aspect forms comprise three series: Present, Aorist,

and Perfect. The case marking patterns for these are summarized in (2). The pattern for the Present series was exemplified in (1); the Aorist series is discussed in §1.1. I am primarily concerned with the Aorist series in which external arguments are marked with the ergative. The subjects of Class 1 and 3 verbs are external arguments, as reflected by the semantics of the verbs. This contrasts with Class 2 verbs which are unaccusative and hence have only an internal argument.

(2)

	Arg.	'Present'	'Aorist'	'Perfect'
Class 1 (trans.)	EXT-INT	NOM-DAT	ERG-NOM	DAT-NOM
Class 2 (unacc.)	INT	NOM	NOM	NOM
Class 3 (unerg.)	EXT	NOM	ERG	DAT

1.1 Split-Ergativity

Georgian has a split-ergative system. The split-ergative pattern is triggered by the Aorist series. All external arguments are marked with the ergative in these tenses, i.e., the subjects of both transitives and unergatives are ergative.

- (3) a. *ninom Cerili daCera.* b. *ninom imγera.*
 Nino-ERG letter-NOM wrote Nino-ERG sang
 'Nino wrote a letter.'
 (Cl. 1; Aorist) (Cl. 3; Aorist)

The verb in (3a) is a transitive Class 1 verb. The subject *ninom* is in the ergative, while the object *Cerili* is in the nominative. This contrasts with the present tense form in (1a) in which the subject *nino* is in the nominative and the object *Cerils* is in the dative. The unergative verb in (3b) shows a similar pattern; in the Present, as in (1c), the subject is in the nominative.

The ergative case marking in the Aorist series is restricted to external arguments. That is, the internal argument of unaccusative verbs is marked with the nominative in the Aorist series, as in (4a), and not the ergative, as in (4b) (cf. (1b)).

- (4) a. *nino gaCitlda.* b. **ninom gaCitlda.*
 Nino-NOM blushed Nino-ERG blushed
 'Nino blushed.' (Cl. 2; Aorist) (Cl. 2; Aorist)

So, in the Aorist series, the internal argument of Class 2 unaccusative verbs patterns differently from the external argument of Class 1 and 3 verbs.

2 Agentivity Restrictions

In addition to the syntactic restriction that ergatives be external arguments, there is a semantic restriction on them. In §2.1, I discuss the association of the ergative with volitionality and then in §2.2 the role of cause.

2.1 Volitionality

2.1.1 Inanimates

The most striking restriction on the occurrence of ergative subjects is that Class 3 verbs do not allow inanimate ergative subjects. Inanimate subjects are possible with Class 3 verbs in the Present series which has nominative subjects, as in (5a) and (6a). However, inanimates cannot be subjects in the Aorist series where they are marked with the ergative case and a volitional reading is forced on them, as in (5b) and (6b).³

- (5) a. *čaidani imγeris.* b. **čaidanma imγera.*
 teakettle-NOM sings teakettle-ERG sang
 'The teakettle is singing.' (Holisky 1981:164)
 (Cl. 3; Present) (Cl. 3; Aorist)
- (6) a. *pexi qinulze srialebs.* b. **pexma qinulze (da)isriala.*
 foot-NOM ice.on slip foot-ERG ice.on slipped
 'The foot slips on the ice.' (Holisky 1981:163)
 (Cl. 3; Present) (Cl. 3; Aorist)

In (5a), the nominative subject *čaidani* is compatible with the Present series form of the verb *imγeris*. However, when this verb appears in the Aorist series and the subject is marked with the ergative, the resulting sentence is ungrammatical, as seen in (5b). (6) shows a similar effect with the verb *srialebs*.

The restriction seen in (5) and (6) is not the result of an incompatibility between the Class 3 unergative verbs and the Aorist series. These verbs can appear in the Aorist series if their subjects are animates, as seen in (7). The sentences in (7) are identical to those in (5b) and (6b) only the subject *vanom* is animate, not inanimate.

- (7) a. *vanom imγera.* b. *vanom qinulze isriala.*
 Vano-ERG sang Vano-ERG ice.on slipped
 'Vano sang.' 'Vano slid on the ice.'
 (Holisky 1981:164) (Holisky 1981:163)
 (Cl. 3; Aorist) (Cl. 3; Aorist)

The restriction against inanimate subjects cannot be a subcategorization restriction on the part of the verb since inanimate subjects are possible in the Present series, as was seen in (5a) and (6a). This suggests that the restriction is connected with the appearance of the ergative case. One possibility is that the ergative requires volitionality, a prototypical property of agents, on the part of the subject. Since inanimates cannot be volitional, they cannot occur in the ergative. I first discuss several phenomena which support this restriction and then show why it must be further refined.

2.1.2 Unaccusatives

By definition Class 2 verbs cannot have agentive subjects because they are unaccusatives. As such, we predict that they should never appear with ergative subjects. In fact, Class 2 verbs, as seen in §1.1, require nominative subjects in the Aorist series. Since their subjects are in the nominative, there is no volitionality restriction imposed on them. Unlike Class 3 verbs which did not allow inanimate subjects in the Aorist series, inanimate subjects are possible with Class 2 verbs in the Aorist series, as in (8).

- (8) a. *namcxvari gamocxva.*
pastry-NOM baked
'The pastry baked.' (Harris 1981:43) (Cl. 2; Aorist)
- b. "vepxisTqaosani" Pirvelad 1712 Cels gamokveqnda.
Vepxistqaosani-NOM first 1712 year published
'Vepxistqaosani was first published in 1712.' (Aronson 1989:123)
(Cl. 2; Aorist)

2.1.3 Frozen Forms

A few verbs are morphologically Class 3 unergatives, but their semantics patterns with that of Class 2 unaccusatives. The number of these verbs is quite small, and they are not productive. Harris (1981) makes the following observation concerning these verbs. Morphologically, it is predicted that their subjects occur in the ergative in the Aorist series. However, semantically, the nominative is predicted. Although Georgian case marking patterns are usually very fixed, this is one place in which confusion arises, and nominative subjects are found increasingly in the place of ergative ones.

- (9) a. *macivridan Cqalma iCveta.*
refridgerator.from water-ERG drip
'Water dripped from the reffridgerator.' (Harris 1981:246)
(Cl. 3; Aorist)
- b. *macivridan Cqali iCveta.*
refridgerator.from water-NOM drip
'Water dripped from the reffridgerator.' (Harris 1981:246)
(Cl. 3; Aorist)

In (9a) the Class 3 verb *iCveta* takes an ergative subject *Cqalma*, as predicted from the morphology. However, this form is being replaced by that in (9b) with a nominative subject *Cqali*. If the ergative requires volitionality, forms like those in (9a) are synchronically anomalous and result in confusion as to the appropriate case assignment, and thus in the appearance of forms like (9b) with the nominative case, which imposes no volitionality requirement.

2.1.4 Negation

When Present series verbs are negated, their nominative subjects can be interpreted as volitional or not with respect to the action, as in (10a) and (11a). However, when Aorist series verbs are negated, their ergative subjects are volitional, as in (10b) and (11b).

- (10) a. *nino im Cigns ar qidulobs.*
 Nino-NOM that book-DAT not buys
 'Nino isn't buying that book.' (on purpose/simple statement)
 (Cl. 1; Present)
- b. *ninom is Cigni ar iqida.*
 Nino-ERG that book-NOM not buy
 'Nino didn't buy that book.' (on purpose) (Cl. 1; Aorist)
- (11) a. *nino ar ceKvavs.*
 Nino-NOM not dance
 'Nino is not dancing.' (on purpose/simple statement)
 (Cl. 3; Present)
- b. *ninom ar iceKva.*
 Nino-ERG not dance
 'Nino didn't dance.' (on purpose) (Cl. 3; Aorist)

In (10a) the verb *qidulobs* is in the Present series and takes a nominative subject. When the verb is negated with *ar*,⁴ the reading can either be a simple statement of the fact that Nino is not buying a book or can indicate that Nino is purposely not buying a book. However, in (10b) the verb *iqida* is in the Aorist series and takes an ergative subject. The reading is one in which Nino is purposely not buying the book. (11) provides a similar example with the Class 3 verb *ceKvavs*.

In order to express the simple statement reading of (10a) and (11a) in the past tense, a different series, the Perfect, must be used, as in (12). In the Perfect series, the subject is in the dative, not the ergative (Table 2).

- (12) a. *ninos is Cigni ar uqidia.*
 Nino-DAT that book-NOM not buy
 'Nino didn't buy that book.' (simple statement) (Cl. 1; Perfect)
- b. *ninos ar uceKvia.*
 Nino-DAT not dance
 'Nino didn't dance.' (simple statement) (Cl. 3; Perfect)

In contrast to Class 1 and 3 verbs, under negation, the subjects of Aorist series Class 2 verbs do not have a volitional reading. For example, (13) with the nominative subject *nino* has no implication that Nino purposely got herself cold (cf. (10b) and (11b)).

- (13) *nino ar gacivda.*
 Nino-NOM not get.cold
 ‘Nino didn’t get cold.’ (simple statement) (Cl. 2; Aorist)

Thus, negated verbs with ergative subjects have a reading of volitionality on the part of the subject. This reading is not present in the Present and Perfect series or with Class 2 verbs which do not have ergative subjects.

2.1.5 Imperatives

Subjects of imperatives must, by definition, have control over the action (see Jackendoff 1994 for one way to capture this requirement). Georgian imperative forms belong to the Aorist series. As such, the subjects of imperatives are marked with the ergative. This is seen overtly in third person imperatives. In second person imperatives, it is seen indirectly, via the verb form and the nominative object marking. In (14a), the third person subject of the Class 1 imperative is in the ergative case. The verbal form of the imperative is identical to the optative, which is part of the Aorist series. In (15a), the second person subject of the imperative is pro-dropped. However, its ergative case can be deduced from the fact that the verb form *daCere* is identical to the aorist and from the nominative case marking on the object *Cerili*. (14b) and (15b) demonstrate imperatives of Class 3 verbs.

- (14) a. *ninom gaKvetili daamtavros!* b. *gogonam icuraos!*
 Nino-ERG lesson-NOM finish girl-ERG swim
 ‘(Let) Nino finish the lesson!’ ‘(Let) the girl swim!’
 (Cl. 1; Aorist) (Cl. 3; Aorist)
- (15) a. *Cerili daCere!* b. *čemtān iceKve!*
 letter-NOM write me.with dance
 ‘Write the letter!’ ‘Dance with me!’
 (Cl. 1; Aorist) (Cl. 3; Aorist)

In contrast, Class 2 verbs do not generally form imperatives, due largely to the nonvolitional semantics associated with unaccusatives. Interestingly, the one Class 2 verb which frequently forms imperatives is the irregular verb *svla* ‘go’.⁵ The imperative form of this verb is not based on an Aorist series form of the verb, but instead is unique to the imperative.

2.2 Non-volitional Ergatives

Despite the evidence cited above for the hypothesis that the ergative requires volitionality on the part of the subject, there is a serious flaw in such an analysis. Many Class 1 transitive verbs allow clearly non-volitional subjects in the ergative. That is, they can appear with inanimate ergative subjects, and inanimates are by definition not volitional. For example, in (16a) the subject of the Aorist series verb *moKla* is an inanimate *xem* ‘tree’. The tree is in no way anthropomorphized in this sentence; the tree is simply the cause of the

death of the sheep.⁶ The same effect is seen in (16b) where *mzem* 'sun' is the ergative subject of a transitive verb. The sentence just states that the sun caused the children to be warm; there is no implication that the sun purposely warmed the children. (16c) provides an additional example.

- (16) a. *xem cxvari moKla.*
 tree-ERG sheep-NOM killed
 'The tree killed a sheep (e.g., when it fell).' (Cl. 1; Aorist)
- b. *mzem bavšvebi gaatbo.*
 sun-ERG children-NOM warmed
 'The sun warmed the children.' (Cl. 1; Aorist)
- c. *tovlma sopeli gadaatetra.*
 snow-ERG village-NOM whitened
 'The snow made the village white.' (Cl. 1; Aorist)

3 Analysis

Ergative subjects must be either volitional (§2.1) or cause (§2.2).⁷ Following Dowty (1991), cause and volitionality are properties which define Proto-agents. That is, Proto-agents show volitional involvement in an event or state and cause an event or change of state in another participant.⁸ So, the ergative associated with agents. I assume that Dowty's Proto-agent properties are represented in the argument structure semantics that is used to project arguments into the syntax and to determine properties usually attributed to thematic roles (Jackendoff 1994).

As discussed above, the ergative subject of a Class 1 transitive verb can be either volitional or cause. However, the ergative subject of a Class 3 unergative verb must be volitional; the cause option is not available (§2.1.1).

(17)

	Volitional	Cause
Class 1 (trans.)	✓	✓
Class 3 (unerg.)	✓	*

For Class 1 transitive verbs, the restriction that ergative arguments be either volitional or cause applies straightforwardly. If the subject is inanimate, it must be cause, since inanimates cannot be volitional.⁹ Animate subjects can be either cause or volitional. In general, animate subjects are interpreted as both volitional and cause, when both are relevant roles for the predicate. Jackendoff (1994) suggests that arguments are interpreted as maximally agentive, i.e., when possible an argument will be both volitional and cause. Note that particular contexts may require a particular attribute on the part of the subject. For example, imperatives require volitionality (§2.1.5), a requirement which is compatible with the restriction on the ergative.

Next consider Class 3 unergatives. These verbs cannot appear with inanimate ergative subjects (§2.1.1), unlike their Class 1 counterparts (§2.2).

Why should this be? If the subject is animate, it can be volitional, and there is no problem. If it is inanimate, it must be cause. However, in order to have a cause argument, there must be an internal event for the ergative argument to cause, and such an event is absent in unergative verbs. As such, the cause role is unavailable, and the only option for the ergative subjects of these verbs is to be volitional, which means that only animate subjects are possible.

3.1 Mechanics

Traditionally, case assignment has been divided into structural/syntactic, semantic, and inherent (Babby 1986, Chomsky 1986, Zaenen et al. 1985). Inherent case cannot be predicted by either grammatical or semantic factors and so must be stipulated in the lexical entry for individual verbs, e.g., non-nominative subjects of Icelandic verbs are assigned inherent case (Andrews 1982, Zaenen et al. 1985); due to its idiosyncratic nature, inherent case will not be considered here. Syntactic case is determined solely by syntactic information, e.g., subjects in English are assigned nominative case, regardless of their thematic role, although if arguments are projected into the syntax based on the argument structure, some syntactic case may have thematic correlates. Semantic case is assigned to an argument based on its semantic role with respect to the predicate, regardless of its grammatical function, e.g., goals in Hindi are assigned dative case (Mohanan 1990). Semantic case is usually assumed to apply before the syntax, e.g., in the argument structure, so that in the syntax, semantic case and inherent case are indistinguishable, and inalterable. Under most theories of case marking and argument projection, semantic information is unavailable in the syntax. However, to account for the Georgian ergative, both grammatical and semantic factors must be considered. For the sake of exposition, I use Lexical-Functional Grammar (LFG) (Bresnan 1982), although the basic generalizations made here must be captured in any theory.

In LFG, the syntax is divided into c(onstituent)-structure¹⁰ and f(unctional)-structure. F-structure contains information about the grammatical functions of the arguments, their cases, etc. In addition to f-structure and c-structure, there is an argument-structure which contains the detailed semantic information about the predicate and its arguments which is necessary for linking the arguments with grammatical functions (Alsina 1993, Butt 1993). The case marking rules for the Georgian ergative make reference to both the f-structure, in the requirement that only subjects of Aorist series verbs be in the ergative, and the argument-structure, in the requirement that the argument be volitional or cause.

The semantic restriction on the ergative is not part of the meaning of the verb or the information necessary for projection as an external argument, since no such requirement holds when the subject is in the nominative. Instead, the restriction is part of the ergative case marking.¹¹ This can be accomplished via the lexical entry for the ergative ending, shown in (18).

$$(18) \quad -m(a): \quad (\uparrow\text{CASE}) =_c \text{ERG} \\ (\uparrow\text{PRED})_\alpha = (\text{VOL}_\alpha \vee \text{CAUSE}_\alpha)$$

(18) first states that any noun to which the ending is affixed must be in the ergative in the f-structure. This is written as a constraint equation, which means that ergative case must be assigned to the noun by a case assignment rule.¹² The second line states that the noun phrase to which the case marker affixes must be either volitional (VOL_α) or cause ($CAUSE_\alpha$) in argument-structure (indicated by an α). The notation $(\uparrow PRED)_\alpha$ accesses the argument-structure function of the relevant predicate, in this case, the information corresponding to the noun to which the ergative case marker is affixed.¹³

Next, we need a rule to assign the ergative, i.e., a way to account for the split-ergative pattern. Remember that the ergative appears on external argument subjects of Aorist series verbs;¹⁴ unaccusative subjects are not assigned ergative case. So, the subject must be of the appropriate type in the argument-structure to be linked as an external argument. For the sake of simplicity, I have represented this as in (19).

(19) AORIST: $((\uparrow \text{SUBJ CASE}) = \text{ERG}) \longleftrightarrow ((\uparrow \text{SUBJ PRED})_\alpha = \text{EXT}_\alpha)$

(19) states that the subject of an Aorist series verb is assigned ergative case if and only if the subject corresponds to an external argument in the argument-structure. The designation EXT_α corresponds to arguments whose argument-structure semantics results in their being external arguments.¹⁵ The syntactic nature of this requirement is reflected in the fact that the ergative never appears on the non-subject agents of passive constructions, which have semantic roles similar to those of external arguments.

With the constraints in (18) and (19), we can account for the distribution of the Georgian ergative. (19) accounts for the syntactic restriction on the ergative by assigning the ergative to all external arguments of Aorist series verbs. Since these arguments have the ergative case ending affixed to them, they must be either VOL_α or $CAUSE_\alpha$ in the argument-structure of the verb, as required by (18), which captures the semantic restriction on the ergative. If this semantic restriction is not met, the resulting clause is ungrammatical, and an Aorist form requiring an ergative subject cannot be used.

3.2 Other Languages

A similar restriction on ergative arguments holds in several unrelated languages with split-ergative systems, including Hindi/Urdu, West Greenlandic, Acehnese, and Tsova-Tush. Here I demonstrate how the fundamentals of the Georgian analysis applies to Urdu (Butt and King 1991) and Tsova-Tush (Holisky 1987), despite superficial differences in the split-ergative patterns of these languages.

In Urdu, the subjects of transitive verbs are marked with the ergative in the perfect; these ergative subjects can be either cause or volitional. In this way they resemble their Georgian counterparts. However, unlike in Georgian, subjects of intransitives usually appear in the nominative. Certain verbs allow either nominative or ergative subjects. Ergative marking on the subjects of these intransitives correlates with volitionality, as in (20a). The nominative occurs when the subject is not volitionally involved in the action, as in (20b).¹⁶

- (20) a. anjum-ne royaa. b. anjum royii.
 Anjum-ERG cry-PERF Anjum-NOM cry-PERF
 'Anjum cried.' (on purpose) 'Anjum cried.'
 (Urdu; from Butt and King 1991:33)

So, the Urdu ergative is similar to Georgian in that it marks volitionality on the part of intransitive subjects and either cause or volitionality on the part of transitive subjects. The difference is that Urdu allows subjects of unergatives to appear in the nominative. Since, as with Georgian, the nominative places no semantic restriction on the argument, non-volitional subjects are possible with perfect unergatives, as long as they appear in the nominative case.

The split-ergative system of Tsova-Tush is different from that of Urdu and Georgian in that it is not triggered by past perfectives. However, there is still a correlation between the ergative and volitionality. With transitive verbs, all subjects appear in the ergative. With intransitives, there is a split in case marking depending on the person of the subject. Third person subjects of intransitives are always nominative. However, first and second person subjects can be either nominative or ergative.¹⁷ Holisky (1987) argues that verbs whose argument is typically an actor are marked with the ergative, while those whose argument is typically an undergoer are marked with the nominative. However, this pattern can be overridden. So, an argument which is typically an actor can be marked with the nominative when it is used non-agentively. Correspondingly, an argument which is typically an undergoer can appear in the ergative when it acts agentively. An example is shown in (21).

- (21) a. (as) vuiž-n-as. b. (so) vož-en-sO.
 I-ERG fell-AOR-1SG-ERG I-NOM fell-AOR-1SG-NOM
 'I fell down, on purpose.' 'I fell down, by accident.'
 (Tsova-Tush; from Holisky 1987:105)

Thus, with Tsova-Tush intransitive verbs, the case marking of first and second person subjects depends on the agentivity (or lack thereof) of the subject, a phenomenon which is similar to the Urdu intransitives in which the ergative indicates volitionality on the part of the subject.

To conclude, the Georgian ergative applies only to external arguments which are volitional or cause, a phenomenon which occurs cross-linguistically in languages with split-ergative systems. External arguments which do not meet this semantic requirement cannot appear in the ergative. As such, Georgian provides evidence not only for the existence of semantic case, but also that case assignment can simultaneously have syntactic and semantic restrictions, which is only possible if syntactic case assignment has access to the type of semantic information found in the argument structure of predicates.

Notes

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¹'Government and Binding' theory usually makes no distinction between inherent and semantic case since in the syntax both are linked to theta-role assignment.

²There is a fourth class which comprises verbs whose experiencer is in the dative case. These never have external arguments.

³It is possible to derive Class 2 inceptive counterparts of these verbs. Since these forms are unaccusatives, their subject is in the nominative in the Aorist series (Table 2). Inanimate subjects are possible in the Aorist series with these forms.

⁴There is another negative marker in Georgian *ver* which denotes incapability on the part of the subject.

⁵Harris (1981:246, 305) points out that in certain dialects, these verbs, which are morphologically Class 2, take ergative subjects in the Aorist.

⁶Correspondingly, when these sentences are negated, there is no implication of volitionality, in contrast to the sentences in §2.1.4. As such, (i) is a syntactically and semantically well-formed sentence.

(i) xe daeca, magram (xem) aravin ar moKla.
tree-NOM fell but tree-ERG no one-NOM not kill

'The tree fell, but it didn't kill anyone.' (Cl. 1; Aorist)

⁷There remains the important issue of why volitionality and cause pattern together in this way. As discussed below, both are properties of Proto-agents. In addition, following Jackendoff (1990), the first argument of CS (cause), when present, is also the first argument of AFF (affect), and volitionality is encoded on the AFF tier.

⁸The other properties of Proto-agents are: sentience and/or perception; movement relative to the position of another participant; exists independently of the event named by the verb (Dowty 1991:572).

⁹I am not concerned with coercion which allows inanimates to be treated as animates under certain pragmatic conditions (see Pustejovsky 1992).

¹⁰Constituent-structure contains information about the phrase structure of a clause, i.e., the dominance and precedence relations among constituents. C-structure is irrelevant for the issues discussed here.

¹¹Another reason for having a general semantic requirement on the ergative is that this generalization holds productively of all ergatives. For example, derived causatives are always Class 1 verbs, and in the Aorist series their external argument appears in the ergative. Also, Class 3 verbs can be productively formed via derivational morphology; when these appear in the Aorist series, their subjects must be volitional and hence animate. In particular, no new verb can be derived of the type in §2.1.3.

¹²The assumption that case endings are constraint equations instead of assignment equations is not important for the discussion here. If case endings are constraint equations, then all case marked noun phrases must be assigned case independently; if they are assignment equations, then the noun phrase is licensed for case as is, unless some rule assigns a conflicting case to the noun phrase.

¹³The α subscripted on the parentheses can be thought of as a pointer to the argument-structure. It picks out the relevant argument (variable) in the argument-structure. Note that if argument-structure is similar to Jackendoff's (1990) lexical conceptual structure, then a given f-structure PRED may correspond to more than one position in the argument-structure, reflecting its semantic function on different tiers. However, these multiple positions must be coreferent.

¹⁴An external argument in LFG is one whose Lexical Mapping Theory value is always [-o(bject)] in the argument-structure, as opposed to the single argument of unaccusative verbs which is [-r(estricted)] (see also Alsina 1993). In LFG this difference is generally not reflected by the position of the subject in the c-structure.

¹⁵For example, using Jackendoff's (1990) lexical conceptual structure EXT α would designate the first argument on the AFF tier.

¹⁶This class of verbs is relatively small and includes *ciik^h* 'scream', *nahaa* 'bathe', *soc* 'think', etc. M. Butt (p.c.) suggests that Urdu unergatives generally allow ergative case subjects; however, the number of unergative verbs is very small in Urdu (e.g., N-V complex predicates are found instead).

¹⁷Some verbs only allow one case or the other, usually for semantic reasons.

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