Introduction

1 Posing the problems

To many general linguists, Georgian has long seemed an inscrutable language. The main difficulty has been that the apparent subject of a given clause is not always in the same case, as it is in most languages. The sentences in (1) illustrate the problem of the case differential.

(1) (a) *glexi tesaVs siminds.*
    Peasant-NOM he-sows-it-I-I corn-DAT
    ‘The peasant is sowing corn.’

(b) *glexma datesa simindi.*
    Peasant-ERG he-sowed-it-II-I corn-NOM
    ‘The peasant sowed corn.’

(c) *glexs dautesaVs simindi.*
    Peasant-DAT he-sowed-it-III-I corn-NOM
    ‘The peasant has sown corn.’

The traditional names are used for cases; the names themselves are not intended as a claim about the real structure of the language. The nominative case is marked by -i (Ø after a vowel), the ergative by -ma (-m after a vowel), and the dative by -s. The three case marking Patterns possible for a given clause are stated in (2).

(2) Subject Direct Object Indirect Object
    Pattern A ERGATIVE NOMINATIVE DATIVE
    B NOMINATIVE DATIVE DATIVE
    C DATIVE NOMINATIVE tvis-nominal

A second obvious problem in case marking is that the case marking Pattern does not vary for all verbs in the same way. The distribution of Patterns A, B, and C is stated in (3).

 wp
2 Introduction

Moreover, in Georgian Pattern A, with ergative subjects, is by no means limited to transitive verbs. In order to predict the case of a subject in Georgian, one must know the Series and Class of the governing verb form. The three Series are groups of tense-aspect-mood categories; these are listed in the appendix to ch. 2. In this work, the Class of the verb is defined morphologically; the precise criteria used are given in ch. 16, Appendix A. It is shown below that the Classes correlate with specific syntactic and semantic properties.

Looking at (1) again in light of (2–3), and knowing that the governing verb is a Class I verb, we can see that in (1a), which is in a Series I tense, the subject must be in the nominative and the object in the dative. In (1b), which is in a Series II tense, the subject is in the ergative, the object in the nominative. And in (1c), we see the Series III variant: subject in the dative and object in the nominative.

I have been using the labels ‘subject’ and ‘direct object’ in the way they are usually used in the description of more familiar languages. In fact, it is not at all obvious that these notions are even appropriate ones for Georgian. This is the primary problem that this monograph addresses: Are the notions ‘subject’, ‘direct object’, and ‘indirect object’ relevant to Georgian?

The difficulty in approaching the notion ‘subject’ in Georgian is that there is no agreement among the three most obvious criteria for defining this concept – case, verb agreement, and some intuitive idea of subject. In general, in order to make a claim about which nominals are subjects, linguists have had to choose between these criteria on an arbitrary basis. Shanidze (1973: 195–7) and Tschenkéli (1958: 497) select the intuitive idea, and would call glexi ‘peasant’ the subject in all of the sentences in (1). Vogt (1971: 81) chooses instead Person Agreement; this means that glexi is subject in (1a–b), and simindi ‘corn’ in (1c). Chikobava (1968) and Aronson (1970) define the subject as that nominal which always triggers Number Agreement in the verb.¹ Marr and Brière (1931: 244), writing mainly of Old Georgian, say that the ‘nominative indicates the grammatical object – in fact the real subject’ in (1b–c). Pätsch (1952/53)
I. Posing the problems

considers ‘subject’ an Indo-European notion and therefore confusing in Georgian. Sommerfelt (1937) suggests that ‘subject’ is an inappropriate notion for a language like Georgian.

Each of the above-mentioned analyses of ‘subject’ in Georgian is unsatisfactory because the choice of the criterion used is not clearly motivated. It is not clear, for example, why Chikobava considers Number Agreement to be the most important criterion, while Vogt considers Person Agreement to be. ²

No analysis of the notion ‘subject’ in Georgian can be adequate if it is based upon a single criterion. Recent work on language universals has shown that the following syntactic characteristics are typical of subjects: they trigger reflexivization, they trigger coreferential deletion, they trigger verb agreement, they undergo Unemphatic Pronoun Drop, etc. (cf. Anderson 1976; Keenan 1974, 1976; Postal & Perlmutter 1974). But no one of these criteria is sufficient to establish the notion ‘subject’ for any language. In this monograph, I use, among others, the following syntactic rules to argue for the notion ‘subject’:

(a) Tav-Reflexivization (full-pronoun reflexivization)
(b) Tavis-Reflexivization (possessive reflexivization)
(c) Person Agreement
(d) Number Agreement
(e) Unemphatic Pronoun Drop
(f) Coreferential Version Object Deletion.

Additional phenomena will also be used to argue for the existence of a subject in Georgian, as well as for a direct object and indirect object.

Nor could an analysis of the notion ‘subject’ in Georgian be adequate if it failed to recognize distinct levels of derivation. A large portion of this work is devoted to an analysis of the major rules that change grammatical relations in Georgian. Because Georgian has rules like Passivization, Object Raising, Causative Clause Union, and Inversion, the notion ‘subject’ cannot be adequately characterized by reference to a single level of derivation. ³

This leads us to the second major problem addressed by the present work: What is the nature of the rules that change grammatical relations in Georgian? This question is addressed from several points of view. From the language-internal viewpoint, individual rules provide additional criteria for identifying the grammatical relations ‘subject’,
4 Introduction

‘direct object’, and ‘indirect object’. Further, analyses of these rules lead to a consideration of rule interaction in Georgian. From the point of view of language universals, it is hoped that a detailed study of individual rules in Georgian will contribute to a better understanding of the ways in which particular rules vary and ways in which they are the same, across language.

The third major problem considered here is how to account for case marking, given the complexities represented in (2–3). Even after the subject, direct object, and indirect object are identified on various derivational levels, it is not obvious how nominals get marked with particular cases.

Finally, the discussion of these questions raises another problem: What is the nature of the verb Classes, which play an important role in determining case marking? In this work, the membership of the verb Classes is determined on the basis of morphological criteria (see ch. 16, Appendix A). The syntactic and semantic nature of the Classes is investigated in the final chapter.

2 The approach taken: theoretical framework

This study is an exploration of the adequacy of relational grammar for describing the syntax of a language. The version of relational grammar used here has been modified to make the work more accessible to those interested primarily in Georgian. Only those parts of relational grammar are discussed here that are most important to this research on Georgian; other concepts are introduced in the text as they become relevant. The theory of relational grammar is discussed in detail in Johnson (1974, 1977, to appear), Perlmutter (1978, 1979, to appear a, b, c, d), Perlmutter & Postal (1974, 1977, to appear a, b, c), Postal (1977), and other works cited below.

2.1 Some principles of relational grammar

The central claim of relational grammar is that the processes of human languages are best described by rules operating, not on strings of ordered elements, on cases, or on constituent structure trees, but on grammatical relations. It is held that grammatical relations are the most appropriate basis for stating generalizations, both for universal rule-types and principles, and for language-particular data. For example, the rule of Passivization is best described universally as a rule that
promotes direct objects to subjecthood, not as a rule that moves the second NP from the left all the way to the left, etc. (cf. Perlmutter & Postal 1977).

A fundamental principle of this theory is that the structure of a clause is the set of grammatical relations obtaining between the elements of a clause. The predicate bears the predicate relation to its clause. Three types of nominal-clause relations will figure in this work. (i) Terms or term nominals bear a subject relation, a direct object relation, or an indirect object relation. Subjects and direct objects together constitute the nuclear terms. (ii) The second type of nominal-clause relations are oblique relations; among these, only the benefactive relation, instrumental relation, superessive relation, locative relation, and comitative relation will be referred to here. (iii) The third type is retirement relations – chomeurs and emeritus terms. Nominals bearing one of these relations are terms that become non-terms through the application of some syntactic rule, as specified by the Chomeur Law (below) or some other condition (cf. ch. 7, §3 and ch. 11, §1). The notion ‘non-term’ includes nominals bearing oblique relations and those bearing retirement relations. Predicates and nominals are said here to be dependents of the clauses to which they bear grammatical relations. The nominals bearing grammatical relations to a clause are said here to be governed by the verb of that clause. The predicate relation, term relations, and oblique relations are undefined primitives of the theory; chomeur relations and emeritus relations are defined by the theory.

Only the central nominal-clause relations are investigated in this work. The overlay relations, such as question and topic, are not treated here. The internal structure of nominals must also be ignored here; only the relations of whole nominals to their clauses are investigated. A number of other elements, such as adverbs, are completely ignored in order to study in depth the relations named above.

The following hierarchy among nominal-clause grammatical relations is posited:

(4) subject
direct object
indirect object
non-terms

This hierarchy plays a role in a variety of processes of natural language (cf. Keenan & Comrie 1977 and other recent works).
6 Introduction

Rules that change grammatical relations are of three types: (i) Revaluations include advancements and demotions. An advancement is the promotion of a nominal dependent of a clause up the hierarchy (4). A familiar example of this is Passivization, the advancement of a direct object to subjechthood (Perlmutter & Postal 1974, 1977, and ch. 7). A demotion lowers a nominal dependent of a clause on the hierarchy (4). One demotion is discussed here; Inversion is the rule that demotes subjects to indirect-objecthood (cf. Harris (to appear a), Perlmutter (to appear b), and ch. 8). (ii) Ascensions raise a nominal out of an embedded clause, making that nominal a dependent of the higher clause. A familiar example of this is Non-Subject Raising (Tough-Movement), the ascension of an object from a sentential subject to subjechthood of the higher clause (cf. ch. 4). (iii) Clause Union makes all dependents of an embedded clause dependents of the matrix clause. Clause Union is discussed here in relation to organic causatives (ch. 5) and inceptsives (ch. 16, §2.2.3 and n. 14).

Since the structure of a clause is the set of grammatical relations holding between the elements of a clause, and since syntactic rules may act on nominals to change grammatical relations, the theory recognizes distinctions in derivational levels, or strata. It is found in this work that, for Georgian, reference to initial and final levels is adequate for the formulation of most rules. Intermediate levels, however, are also recognized. (The schematic representation of levels of derivation is discussed in the introductory Note on Presentation.) An important principle of relational grammar is that a particular grammatical relation is not simply a bundle of properties; rather, the syntactic rules of a particular language predict precisely which properties are associated with initial and which with final termhood (cf. Johnson 1977). For example, we will find that in Georgian the derived subject of a passive can trigger Subject Person Agreement, a property of final subjects, and cannot trigger Taa-Reflexivization, a property restricted to initial subjects.

The theory of relational grammar defined in the works cited above puts a number of constraints on each of the types of rules that exist and thus the types of human language that can exist. Three of these are central and are stated informally here. Others are introduced in relation to a specific rule as they become relevant. Some are not relevant to this work and are not discussed here (cf. works cited above, especially Perlmutter and Postal (to appear c), for a more detailed discussion of constraints).
2. Theoretical framework

The Oblique Law requires that if a nominal bears an oblique relation, at any level, it bears that relation initially. This rules out the possibility of any term or non-term nominal changing to an oblique relation, while permitting the possibility of an oblique being promoted to a term relation.

The Stratal Uniqueness Law, informally stated, requires that at each stage of derivation no more than one nominal bear a given term relation in a clause. That is, at any stage of derivation, a clause may have no more than one subject, one direct object, and one indirect object (cf. ch. 5, §4.2 and ch. 6, §6 for additional discussion).

The Chomeur Law, or Chomeur Condition, informally stated requires that if a nominal assumes the term relation borne by nominal, nominal becomes a chomeur. For example, in English the advancement of the direct object under Passivization puts the initial subject in *en chambre*. Here the subject chomeur, unlike a subject in English, cannot trigger Reflexivization, cannot trigger Verb Agreement, cannot trigger Equi, cannot undergo Subject-to-Subject Raising, etc.

2.2 Why relational grammar?

Georgian is a language with ‘free’ word order; that is, the order of words in a sentence does not directly indicate grammatical relations. For this reason, formulating the rules of Georgian syntax on the basis of word order would not be as straightforward as for a language like English. The simplest way to do so would be to formulate rules on the basis of the most unmarked order, then have ‘scrambling’ rules apply in recognition of the artificiality of that order. Similarly, it would be possible to formulate rules on the basis of cases. But each rule of syntax would essentially have to incorporate the case marking differential represented in (2–3). Grammatical relations, on the other hand, provide the basis for a simple formulation of the rules of Georgian syntax and for the capturing of linguistically significant generalizations about the syntax and semantics of the language.

A second reason for working within the theory of relational grammar is that a major concern of this work is universal grammar, in the sense that it is an investigation of the appropriateness of certain proposed universals in a language with a typologically unusual structure. A number of universals have been proposed concerning rules like Passivization (cf. Keenan 1975, Perlmutter and Postal 1977, etc.) and causative formation (cf. Aissen 1974a, b; Comrie 1975; Perlmutter & Postal 1974;
8 Introduction

and Shibatani 1976). Testing these proposals on Georgian data is one purpose of this work. Since various languages have various word orders, universals of rules of this type are most simply stated on the basis of grammatical relations, not on the basis of movement of constituents. Relational grammar thus provides the best framework for a comparative investigation of this sort.

Finally, it is well known in linguistics that a theory of language may highlight certain problems, and that a theory itself may point to solutions. In this instance, relational grammar provides the keys to the central problem of Georgian linguistics – the case differential sketched above. In particular, the two rules of Inversion and Unaccusative, defined within this theory, lead to the realization that case marking in Georgian is not as complex as it appears to be (cf. §3.3 below and chs.8, 9, 16). Relational grammar also highlights problems in Georgian that had not previously been addressed. For example, because relational grammar identifies a class of retired terms, we can confront the problem of how this class behaves and how it is marked (cf. §3.2.2 below and ch. 10). Thus, the theoretical framework in part shapes the investigation.

3 Results of the investigation

3.1 The notions ‘subject’, ‘direct object’, and ‘indirect object’

It is established in chs. 1 and 2 that, although the dependents of a clause may be marked with different cases when the governing verb is in Series I and II (as illustrated in (1a–b)), one nominal has in both Series a particular set of syntactic characteristics, which are associated with ‘subject’. Another nominal has in both Series a set of characteristics which can be associated with ‘direct object’, and a third has ones associated with ‘indirect object’. In ch. 1, various syntactic phenomena are introduced and associated with particular grammatical relations in Series I. In ch. 2, it is shown that the same nominal is involved in the same phenomena in Series II, even though its case marking is not the same as in Series I.

Chapters 2–8 and 10 establish the simplicity of a grammar in which syntactic rules refer to grammatical relations. Each of the chapters 4–8 and 10 introduces one or more rules that change grammatical relations. In each instance it is shown that a nominal that bears a particular grammatical relation undergoes the rule, regardless of its other syntactic or morphological characteristics. Thus, while these rules may be simply
3. Results of the investigation

stated on the basis of grammatical relations, in Georgian it would be impossible to capture the linguistically relevant generalizations on the basis of case.

3.2 The nature of the rules that change grammatical relations

3.2.1 Inversion. In ch. 8 it is shown that Georgian has a rule of Inversion, which demotes the subject to indirect-objecthood. Phenomena of this type have been discussed under the names ‘Flip’, ‘Psych Shift’, or ‘Subject–Object Inversion’ for other languages; but the evidence supporting a syntactic rule of this type has generally been sparse (cf. Davison 1969; Harris 1973; G. Lakoff 1970; R. Lakoff 1968; N. McCawley 1976; Postal 1970, 1971; Rosenbaum 1967; Sridhar 1976a, b; and Ziv 1976). In Georgian, on the other hand, the evidence is very strong. In Georgian the rule is not restricted, as in many languages, to a class of so-called ‘affective’ verbs. It applies also if triggered by a particular mood (the evidential) of the governing verb. The construction in this environment provides a kind of evidence rather different from that found in other languages.

3.2.2 Retired Term Marking. At least six different rules in Georgian – Object Raising, Causative Clause Union, Passivization, Inversion, Masdar Formation, and Infinitive Formation – create retired terms (cf. above §2.1). In ch. 11 it is shown that the rules that mark retired terms can be stated in a completely general way on the basis of grammatical relations, without reference to the rule that creates the particular retired term.

3.2.3 Rules that refer to both initial and final termhood. Chapters 14–16 establish that the rules of Tae–Reflexivization, Number Agreement, and two of the rules that assign cases are stated on initial and final termhood; that is, they are so-called ‘global rules’. (Tav–Reflexivization is stated more simply in ch. 1 and refined in ch. 14 on the basis of facts considered in intervening chapters.)

3.2.4 Rule interaction. It is found to be unnecessary to impose conventional extrinsic ordering on syntactic rules. In general, rule interaction can be handled simply by stating rules on initial termhood, on final termhood, with reference to termhood at more than one level (cf. §3.2.3), or without restriction (cf. Epilogue, §4).
10 Introduction

3.3 Accounting for the case marking differential
In ch. 8 it is shown that a syntactic rule, Inversion, applies just where Pattern C is found in (3). Thus, Pattern C is shown to be derived from Pattern B by a regular synchronic rule. In ch. 9 it is established that no such rule relates Pattern A to Pattern B, and that these two case Patterns must be assigned by different sets of rules. Finally, ch. 16 shows that the rules of case marking for Series II can be most simply stated if they take into account both the initial and final grammatical relations established in this work.

3.4 The nature of the Georgian verb classes
In early chapters verb Classes are treated as arbitrary groupings of verbs, morphologically defined. It is established that verbs of Classes 1 and 3 have two important syntactic characteristics:

(a) They govern Pattern A in Series II.
(b) They govern Inversion in Series III.

In ch. 16 it is shown that these two characteristics are related to a single semantic–syntactic trait that distinguishes these verbs from those of Classes 2 and 4. The fact that the semantic–syntactic nature of each verb can be predicted on the basis of universals means that Class membership is not arbitrary, as has been thought; it is therefore not necessary to have a lexical listing of Class membership.

3.5 Georgian data from the point of view of universals
Because of its structure, Georgian provides evidence that differs in an interesting way from that given by other languages. For example, it has been claimed that Causative Clause Union creates simplex clauses (Aissen 1974a, b; Comrie 1975, 1976e; Postal & Perlmutter 1974; etc.). In Georgian the evidence for this is particularly strong. First, each term, not just the subject, triggers Person Agreement. Second, the nominals in the causative are assigned cases according to (2–3) above. This is evidence that the rule that forms causatives is not a rule that assigns particular cases to the initial terms of the embedded clause, but that it actually makes them dependents of the matrix clause (cf. ch. 5).

Discussion of the nature of nominalizations has generally been based on selection restrictions, productivity, and nominal-like structure (cf. Chomsky 1970; Comrie 1976d; G. Lakoff 1970; Lees 1963; and McCawley 1970). Georgian provides a different kind of evidence