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Relational coding in Georgian and Turkish noun phrases: syntax, derivational morphology, and “linking” by means of participles

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The description of relational coding in the noun phrase tends to be compartmentalized according to its different forms: case marking, adpositional marking, adjectival derivation and lexical means. The following paper tries to bring these forms together in a unified treatment in which languages differ from each other by imposing different typological constraints on possible forms of relational coding, and by grammaticalizing their choice or giving preference to more specific or unmarked forms. Turkish and Georgian are shown to have a largely isomorphous noun phrase structure, with very specific similarities in details such as the exploitation of derivational and participial strategies, and yet differing in aspects that derive from more general typological contrasts between the languages, e.g. head marking vs. dependent marking and availability vs. non-availability of an additional, posthead attributive slot.

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1. Introduction

1.1. The problem

This paper deals with the distribution and variation of relational coding in the noun phrases of Georgian and Turkish.¹ These two languages are spoken in areas which are geographically adjacent, but they are not genetically related to each other.

¹ We have had the privilege to discuss the ideas that led us to the present article at various places: Groningen, Oxford, Bremen, Bamberg, Leiden and Tbilisi, etc. Thanks go to our informants Lamara Gvaramaze and Rezo K'ik'naze (for Georgian) and Işıl Uluçam, Berrin Uyar, and Yüksel Tekin (for Turkish). Our research on relational coding was supported by grants from the Deutsche Forschungsgemeinschaft for our research project “Attributive Verbalkonstruktionen”, which we were able to carry out in

Disregarding basic types like “agent”, “experiencer”, “instrument”, etc., the number of possible relations between constituents in a clause and in a noun phrase is in principle infinite. The *coding* of these relations, however, is a different matter: It may be semantically highly specific, but may also be of a more formal type, thus expressing a syntactic relation that tends to neutralize “case” relations, leaving the semantics of the relation unspecified. In particular, core syntactic relations like “subject” and “object” tend to be coded by semantically unspecific means like nominative and accusative case markings on the clause level and by a genitive in the noun phrase. Outside core grammatical relations, the specificity of relational coding in clause and in noun phrases is a matter of degree. *The sugar is stored in the glass* is more specific about the relation between the sugar and the glass than *the sugar is in the glass*. Similarly, on the noun phrase level, *a glass containing sugar* is semantically more specific than *a glass with sugar (in it)* or the compound *a sugar glass*, in which neither syntactic nor semantic relations are overtly expressed.

Even between closely related languages, there can be fairly great differences as to what kind of relations can be coded by what kind of devices. For example: in *a photographer of children*, English uses a preposition to express the relation between the photographer and the object of his or her action. In German, on the other hand, this relation can be expressed by means of a compound: *Kinderphotograph*. Similarly, a construction like ‘the smell of meat cooking’ has an attributive participle (i.e. relative clause) construction as its equivalent in the Western Turkic language Karachay-Balkar:

- (1) Karachay-Balkar (Comrie 1997: 22; 1998: 57)
 [et biš-gän] iyis
 meat cook-PRT smell
 ‘the smell of meat cooking’

In this construction, *iyis* ‘smell’ is the head of an attributive participle forming a participial clause with *et* ‘meat’ as its subject. In Turkish, which is a South West Turkic language, the equivalent would have ‘meat’ as the head of a genitive attribute, which in turn triggers possessive marking on its head noun:

- (2) Turkish
 piş-en et-in koku-su
 cook-PRT meat-GEN smell-POSS
 ‘the smell of meat cooking’

the framework of the “DFG-Forschungsschwerpunkt Typologie und Universalienforschung” from 1996 to 1999.

Similarly, if we contrast the two non-related languages that are of primary interest here, the semantics of the Georgian genitive reaches into a domain covered by derivation in Turkish:²

(3) Turkish

altı yaş-ın-da-ki kız girdi
 six year-POSS-LOC-ADJR girl came.in
 'the six-year-old girl came in'

(4) Georgian

šemovida ekvs-i c'l-is gogona
 came.in six-"Gen" year-GEN girl
 (same translation as (3))

(5) Georgian

šemovida ekvs-c'l-ian-i gogona
 came.in six-year-POSS.ADJR-NOM girl(Nom)
 'a girl of the age-group of the six year olds came in'

The semantics of Turkish derivation in (3) covers a domain that Georgian differentiates into specifying genitive in (4) and derived adjective in (5).

Notwithstanding the differences noted here, there are striking parallels between Turkish and Georgian with regard to the coding of relations within the noun phrase.

On the clause level, relational coding is usually treated in a unified manner according to categories of its different forms. On the level of noun phrases, however, the description of these forms tends to be scattered over chapters on syntax, derivational morphology, and the lexicon. The aim of this paper is to show that a comparative and typological investigation into relational coding in the noun phrase must look at phenomena from all these different parts together to assign specific positions to it on a (probably) universal continuum of linguistic means.

After a general overview of relational coding in the noun phrase (1.2.), a brief methodological discussion (1.3.), and a rough description of the relevant typological features of the two languages (1.4.), we will explore these parallels in more detail. Following the presentation of the data in (2.), the results of the comparison will be discussed in terms of rules and / or continua (3.). In a concluding section, we will venture a typological interpretation.

² Note that the morphosyntax of phrases derived by means of *-ki*, as in example (3), parallel that of participle phrases. In terms of their position, both phrase types belong to the position 2, as identified in 1.4.1. below. See Schroeder (2000) for an in-depth investigation.

1.2. Categories of form

In the examples given so far, quite a variety in relational coding is exemplified: participle formation, as in (1), compounding, as in German *Kinderphotograph*, prepositional genitives, as in *photographer of children*, genitive case marking, as in (2) and (4), and derivation, as in (3) and (5). It is our aim to provide a framework of comparison between Georgian and Turkish which allows us to include other languages in the comparison. Thus, in the following outline of *possible* variation in the coding of relations inside the noun phrase, examples from other languages will be used as well—although we do not want to claim that our tableau accounts for *all* cross-linguistic variation.

1.2.1. Overview

Generally speaking, semantic relations between the head of a noun phrase and its co-constituents may be coded by *position* as well as *formal* devices. Thus in a given language, mere order may indicate semantic and syntactic relations between constituents without any further means being necessary. In contrast with *or* in combination with position, formal means may be used to code a relation which may in turn be *lexical* and / or *grammatical*. That is, the coding of relations between nominal constituents may involve the use of a lexical item, for example a (relational) noun or a verb. In the languages investigated in this article, the use of infinite verb forms, specifically the use of *participles*, is a fairly common device for relational coding in noun phrases. Again, grammatical means can be subdivided into *syntactic* and *morphological* means. By “syntactic means” we refer specifically to the use of *function words*. They may simply be *linking elements* which do not contribute to the semantic specification of a relation between constituents. The *ezafe* in Modern Persian and in the Northwest Iranian languages is a case in point, as is the “linking article” (“Verbindungsartikel”) in Albanian. Another widespread type of function words used to code relations within noun phrases—and in clauses, for that matter—is *adpositions*. They differ from “pure” linking elements by not only linking but also specifying the semantic relation in question—“spatial”, “temporal” and “beneficiary”, to name a few relations commonly expressed by adpositions (but see 1.2.2. below). *Morphological means* may again be subclassified into strategies of *word formation* and *inflectional* devices. One type of word formation is composition, and we are interested in the subtype which involves the coalescence of a determining constituent with the head to form a *compound*. The other type is *derivation*. What is most important for our purpose is the fact that derivation may transform constituents into modifiers which comply with the restrictions on noun phrase formation in the given language. *Inflectional means* may be used to code the simple fact that the constituents of the noun phrase are related to each other in a specific syntactic configuration, and no more—and this is what *agreement* does. But they may also express a more specific type of relation-

ship by means of *case-marking*. For example, adnominal possession is often expressed by a genitive.³

1.2.2. Combinations and transitions

The classification of relational coding given above is formal. As such, it does not exclude possible combinations of different devices.

Two devices which encode the simple fact that constituents relate to each other—the *linking* device and the *agreement* device—very often are the basic forms to which either all attributes or certain specific types must adhere. For example in Kurdish, every attributive constituent must be linked to its head by means of the *ezafe*, whatever type of constituent it might be: an adjective, an attributive participle, a nominal attribute or an attributive prepositional phrase.⁴ Thus attribution by linking alone is unspecific, and *additional* devices—the casus obliquus of nominal attributes and prepositions—are used to specify the relation between the nominal attribute and its head semantically. On the other hand, in a language like Old Georgian, all attributes except genitives immediately precede their head noun, and must agree in case with their head. This has certain repercussions for the formation of attributes in Georgian.

1.2.3. Transformational relations

Looking for restrictions on relational coding in a particular language, it is sometimes advisable to refer to a deeper level of representation and to take into account transformational relations between surface structures. For example, prepositional phrases such as *the man in the corner*, *the man with a red beard*, etc. are a common type of postmodification in English, but most of them are related to “more explicit” structures with *to be* and *to have* (... *who is in the corner*, ... *who has a red beard*; see Greenbaum & Quirk 1990: 375-376). A reluctance to allow prepositional phrases as postmodifiers where such a transformational relation does *not* exist distinguishes English from languages like Russian or German (*der Mann in der Verwaltung* ~ ? *the man in the administration*).⁵ So transformational relations can be helpful in setting up more clear-cut constraints on relational coding.

³ But see the typological overviews on the types of expression of adnominal possession in Koptjevskaja-Tamm (forthcoming a, b).

⁴ Note, however, that certain referential-semantic properties of the noun phrase in question may block the expression of the *ezafe*, cf. Schroeder (1998b: 58-59).

⁵ As a *stylistic* phenomenon, this tendency is discussed in manuals of English for Germans; see Aronstein (1924: 34; 106-108): contrast between German: *die Verhältnisse meiner Mutter und ihrer Gesellschaft* vs. *the relations existing between my mother and her acquaintances*, and: *eine Tüte von grauem Löschpapier mit Zucker* vs. *a bag of grey blotting-paper containing sugar*, and *der Eindruck von gestern abend* vs. *the impression made on my mind yesterday evening*.

Notice that according to one traditional approach, both *the man is in the corner* and *the man in the corner* are the result of a “deletion”: “The verb is omitted when its meaning is readily deducible from the context and its omission does not lead to ambiguity: *Mary is (dressed) in red*. In *The children are in class* the verb is omitted, as a specific range of activities is associated with the location referred to in the prepositional phrase” (Perez 1973: 143). In addition, “There is a tendency to drop the participle in adnominal structures (e.g. *The woman in blue*) and retain it in predicative structures (*The woman is dressed in blue*)” (Perez 1973: 144). In other words, relational coding tends to be less specific the lower the hierarchical “rank” in which it occurs. This is a semantic counterpart of the “penthouse principle”, which says that more goes on on the higher levels of the syntactic hierarchy (see Boeder & Schroeder 1998).

1.3. Contrastive vs. typological approach

In investigating the relational coding of two languages, our approach is, basically, contrastive. Following König (1996), we understand the contrastive approach to language comparison as complementary, not an alternative, to language typology. While typology typically aims at the systematic comparison of large numbers of languages on the basis of a few parameters of variation, a contrastive approach allows an in-depth study of more, if not all, parameters of variation relevant in these languages. On the other hand, the contrastive approach draws our attention to structural interrelationships which in an in-depth study of only *one* language often go unnoticed because its structure is taken for granted the way it is.

Finally, a contrastive approach allows us to put stronger emphasis on a *synthetic* viewpoint in language description. From this perspective, “one starts from the functions, looks for their realization and thus arrives at the structures” (Lehmann 1989: 150). In typology, it is mostly the analytical viewpoint which prevails: “one starts from the structures, interprets these and thus arrives at the functions” (Lehmann 1989: 149).⁶ Since it starts from structure, the latter approach has the advantage of allowing the linguist to compare more languages in which he or she is not an expert. However, this method always runs the risk of misinterpreting the structural relations of the investigated features within the system of the languages under analysis.

Our investigation, then, has a synthetic starting-point in that we concentrate on functional domains and their relational coding devices in *relation to each other*. Furthermore, by comparing the system of relational coding in Georgian and in Turkish, we hope to uncover differences and similarities between these two languages which allow us to draw inferences about possible variation of relational coding in the noun phrase.

⁶ See Gabelentz (1901² (1969): 88-104), Mosel (1987: 42-66) and Lehmann (1989: 148-158) for an elaborate discussion of these two approaches.

1.4. Typological characteristics of Turkish and Georgian

To help the common reader understand our data, we will give some basic information on the relevant characteristics of Turkish and Georgian grammar.

1.4.1. Turkish

Turkish is a good example of a left-branching language where governing elements precede their governors: objects precede the verb, postpositional complements precede their postposition and adjective or genitive modifiers precede their head. Turkish hypotaxis is largely coded by non-finite verb forms: complement clauses are nominalizations; adverbial clauses are so-called “converb constructions” (“adverbial participles”, “gerunds”), and attributive clauses (relative clauses) are participles. Non-finite verb constructions are highly verbal in the sense that they may have modal suffixes, suffixes of diathesis, etc. Similarly, they keep their case-assigning and argument-binding properties.

There are two major types of attributive participles differing with regard to the syntactic function of the relativized noun phrase. Type 1 (with the suffix *-(y)En*), the “subject participle”, has the head noun as its subject:

- (6) [*dün gel-en adam*
yesterday come-PRT man
‘the man who came yesterday’

Type 2 (with the suffix *-DIK* or, for the future form, *-(y)EcEk*), called “object participle”, relativizes any non-subject noun phrase. The subject, if present, is genitive-marked, and the possessive suffix on the participle agrees with the genitive:⁷

- (7) [*adam-ın gel-diğ-i gün*
man-GEN come-PRT-POSS day
‘the day on which/when the man came’

In addition to these two “major” participial forms, other subject participle forms may be distinguished on the basis of tense / aspect morphology: aorist, resultative and future participles. Certain morphosyntactic properties show that they are more “adjective-like” than the “major” types (cf. Schroeder 1998a).

The order of constituents within the noun phrase is roughly the following:

- (8) (attribute 1) – (ALL) – (DEM) – (attribute 2) – (ALL) – (DEM) – (quantifier) –
(attribute 3a) – (attribute 3b) – (INDEF) – (attribute 4) – head noun

⁷ See Haig (1998) for a recent in-depth study of Turkish participial forms.

On the basis of their distribution (in particular on the basis of the coordination test, see Schroeder 1998a, 2000 and Özünü 1978), we may identify four positions for attributes. The first position is for genitive attributes and partitive ablative attributes. When combining with these types of attributes, the head bears a possessive suffix of the third person singular. Genitive attributes are the only attributes which may be extracted from their noun phrases (see Hayashi 1997, Schroeder 1999a: 188). As Hayashi (1997) shows, all types of sentence constituents may show up between a left-moved genitive attribute and the noun phrase it is a constituent of. As for rightward movement, a genitive attribute may be placed after the predicate, but *not* in any position between its noun phrase and the predicate.

The second position in the noun phrase is for clausal attributes, including a specific type of derivation (see (3) and footnote 2); the third is for adjectival attributes. “Major” participles, i.e. the subject participles and the object participles described above, always appear in the second position. The position of future and resultative participles is variable, while aorist participles appear in the third position. The latter position can be further divided into a position for “descriptive” adjectives (including aorist participles, non-derived and most derived adjectives), and a position for “relational” adjectives, which always follow descriptive adjectives. Relational adjectives include e.g. those denoting material. Nominal expressions denoting material can be ablative-marked or bare, with the bare counterpart having the tendency to occur after the indefinite article (“INDEF”) (see below 2.1.2.1. and 2.1.2.2.). The fourth position is for bare nominal components. No element may intervene between these constituents and their head. As with genitive and partitive ablative attributes, so also with bare nominals: the head bears a possessive suffix of the third person singular (see below, 2.1.2.1.).

The positions of the quantifier *bütün*, ‘all’, ‘whole’ (“ALL”), of adnominal pronouns (demonstrative, reflexive, possessive pronouns—“DEM”) in the Turkish noun phrase depends on the restrictivity of the attribute in position 2. If the constituent in question is a restrictive modifier, the pronouns and the quantifier precede it; if it is a non-restrictive modifier, they follow (see below, 2.2.2.). The “quantifier” position (i.e. numerals, including indefinite numerals like “some”) does not change.

1.4.2. Georgian

Georgian is a predominantly left-branching language. Although word order is “free” on the clause level, there is some indication (pauses, occurrence of clitic quotative particles, etc.) that there is a constituent boundary after non-initial verbs; in particular, rhematic constituents, postpositional phrases, heavy constituents, etc. tend to occur after the verb. Hypotaxis is through conjunctions and relative pronouns in clauses with a finite verb, or by nominalization: participles and verbal nouns (“masdars”).

The structure of the Georgian noun phrase is more rigid than the clause structure.⁸ As mentioned above, almost every attribute of an Old Georgian noun phrase, genitives included,⁹ agreed with its head noun in case and number:

- (9) *aka-ta k'ac-ta ena-j*
 here-PL(GEN) man-PL(GEN) language-NOM
 'the language of the people here'
- (10) *mel-n-i mcbier-n-i ganmrqunel-n-i*
 fox-PL-NOM sly-PL-NOM devastating-PL-NOM
- saq'ur3n-isa čem-isa-n-i*
 vineyard-GEN my-GEN-PL-NOM
 'the sly foxes, the devastators of my vineyard'

The only exceptions are "classifying" genitives immediately preceding their head noun, with which they form an inseparable formal and semantic unit:

- (11) *xut-ta ma-t krtil-isa p'ur-ta-gan*
 five-PL(GEN) the-PL(GEN) barley-GEN bread-PL(GEN)-from
 'from the five barley loaves'

In standard Modern Georgian, the unmarked position of attributes is to the left of their head noun, and adjectives, but not genitives, show "partial" agreement in case (12a-c), which is, however, absent from the "vulgar" paradigm of some dialects (12d):

- (12) a. *čem-i xut-i ker-is p'ur-i*
 my-NOM five-NOM barley-GEN bread-NOM
 'my five barley loaves'
- b. *čem-i xut-i ker-is p'ur-it*
 my-"INSTR" five-"INSTR" barley-GEN bread-INSTR
- c. *čem-s xut-∅ ker-is p'ur-s*
 my-DAT five-"DAT" barley-GEN bread-DAT
- d. *čemi xuti ker-i(s) p'ur-s*
 my five barley-GEN bread-DAT

⁸ See Boeder (1998) for some discussion.

⁹ For more details on "Suffixaufnahme", see Boeder (1995).

Participles behave like adjectives: where agreement occurs at all, they agree in case with their head nouns. There are active, perfect passive and future participles which select subject and object noun phrases and adverbials similar to their finite verb counterparts. Subjects and direct objects of participles and masdars (verbal nouns) are in the genitive (see (13)); indirect objects have the postposition *-tvis* 'for', which is generally used with demoted indirect objects (see (14)). However, continuing the tradition of Old Georgian in this respect, literary Georgian tends to replace the "subjective" genitive (as in (15a)) by the agent phrase otherwise used in finite verb passive constructions (as in (15b)):

- (13) *col-is mo-m-t'aceb-el-i mepe-ø*
 wife-GEN PREV-PRT.PREF-carry.off-PRT-NOM king-NOM
 'the king who had kidnapped his wife'
- (14) *3m-is-tvis ga-gzavn-il-i c'eril-i*
 brother-GEN-for PREV-send-PRT-NOM letter-NOM
 'a/the letter sent to the brother'
- (15) a. *mep-is ga-gzavn-il-i c'eril-i*
 king-GEN PREV-send-PRT-NOM letter-NOM
 b. *mep-is mier ga-gzavn-il-i c'eril-i*
 king-GEN by PREV-send-PRT-NOM letter-NOM
 'the letter sent by the king'.

Notice that subjective and objective genitives occupy the slot of the initial specifying genitive.

Direct objects can form compounds with participles if their head noun is a dative (beneficiary, experiencer, locative, etc.) in the corresponding finite verb clause:

- (16) a. *zarpuš-a-xd-il-i saarq'e-ø kvab-i*
 copper.lid-PREV-remove-PRT-NOM for.brandy-NOM pitcher-NOM
 'a brandy-pitcher from which the copper lid has been removed'
- b. *kvab-s zarpuš-i a-v-h-xad-e*
 pitcher-DAT copper.lid-NOM PREV-1SUBJ-3IO-remove-AOR
 'I removed the copper lid from the pitcher'

Participial phrases occur in initial position:

- (17) [*vard-is rt'o-ze še-rč'en-il-i*] *xmel-i tesl-i*
 rose-GEN branch-on PREV-leave-PRT-NOM dry-NOM seed-NOM
 'dry seeds that had remained on the branch of a / the rose bush'

but postposing also occurs. Compare (13) with:

- (18) *mepe-∅* [col-is mo-m-t'aceb-el-i]

Phrases with a verbal head noun are like participial phrases, but they allow both subjective and objective genitives. This local complexity can be reduced by postposing complements and adverbials:

- (19) *Apxazet-is* *gamocxadeba-∅* *damouk'idebel-i* *saxelmc'ipo-d*
 Abkhazia-GEN declaration-NOM independent-ADV state-ADV
- Sabč'o-ta* *K'avšir-is* *šmadgenloba-ši* (Saub)
 council-GEN.PL union-GEN composition-in
 'the declaration of Abkhazia as an independent state
 within the Soviet Union'

In finite clauses, postpositional phrases tend to occur after the verb. Similarly in noun phrases, postpositional phrases tend to occur after the head noun:

- (20) *mis-i* *damok'idebuleba-∅ am* *cneb-is-admi* (Saub)
 his-NOM relationship-NOM this concept-GEN-towards
 'his attitude towards this concept'

Notice that postposed genitives have a special "long" genitive form (*-isa* instead of *-is*):

- (21) *tesva-∅* *ker-isa* *da* *simind-isa* (dialect text)
 sowing-NOM barley-GEN and maize-GEN
 'the sowing of barley and maize'
- (22) *supiksur-i* *morpem-is*
 suffixal-GEN morpheme-GEN
- nulovan-i* *sapexur-i* *gaxmovneb-isa* (GM)
 zero.having-NOM step-NOM vocalization-GEN
 'the zero grade of vocalization in the suffix morpheme'.

Constituent order in the noun phrase largely resembles that of Turkish. The unmarked order of constituents is:

- (23) (attribute 1) – (attribute 2) – (ALL) – (DEM) – (quantifier) – (attribute 3a)
 (attribute 3b) – (attribute 4) – head noun – postmodifier

The first, genitive, attribute is a "specifying genitive" (genitive of possession, time, place, subject, object). Attribute 2 is the slot of participial phrases. The determiner slots (ALL, DEM, quantifier) may occur before attribute 2 if the participial clause is more or less adjectival. Attribute 3 is subdivided into slots for (a) "descriptive"

adjectives and (b) “relational adjectives” (e.g. “wooden”) and “classifying genitives” (genitives denoting material, e.g. “of wood”, designation, e.g. “for water” as in *water-jug*, origin, e.g. “of a fox” as in *fox-fur*). Normally, classifying genitives cannot be separated from their head nouns. However, functionally motivated reversals of attribute 3 and attribute 4 do occur.¹⁰ Notice that in addition to optionally postposed attributive adjectives and genitives and complements of verbal nouns, Georgian also has postmodifier relative clauses. (For Georgian postmodifiers see 2.1.3.1.)

1.4.3. Typological contrasts

As appears from the preceding characterization of the two languages, their noun phrase structure is largely isomorphous. However, two typologically relevant differences should be kept in mind: (1) Turkish is a head marking language (with a possessive marker on nominal heads), although genitive marking also occurs on phrase-initial specifier noun phrases in attribute 1 position. By contrast, Georgian has exclusively dependent marking noun phrases. (2) In contrast to Turkish, Georgian has additional posthead slots for different types of modifiers (genitives, adjectives, complements, relative clauses). These slots provide an additional possibility for positional variation.

The typological differences between the two languages are partly responsible for the dissimilarities that will emerge in the following sections.

2. The data

In a discussion of German-English contrasts, Rohdenburg (1990) has pointed out that English has a higher “verbal orientation” than German. German is characterized by a seemingly unlimited use of attributive adpositional phrases such as *die Katze auf der Matte* ‘the cat on the mat’, *Antworten aus neun Ländern* ‘answers [received] from nine countries’, *Dampfer nach allen Teilen der Welt* ‘ships [going] to all parts of the world’, *ein Film mit Michael Douglas* ‘(lit.) a film with Michael Douglas (i.e. as an actor)’, etc. is a characteristic feature of German. On the other hand English prefers participles in these examples:

(24) German
ein neuer Film mit Michael Douglas

English
a new film starring Michael Douglas

¹⁰ There are cases where speakers disambiguate an attributive relation by reversing the attribute 3 – attribute 4 order: *3rox-is civ-i kon-i* cow-GEN cold-NOM fat-NOM – ‘cold cow-fat’ instead of: *civ-i 3rox-is kon-i*, which is ambiguous: a) cold-NOM cow-GEN fat-NOM – ‘cold cow-fat’ or b) cold-GEN cow-GEN fat-NOM – ‘the fat of a cold cow’ (Ležava 1972: 93). This ambiguity results from the homonymy of *-i* in attributive adjective inflection (nominative, reduced form of the genitive, etc.).

That is, English resorts to a strategy in which the position and the valency of a participial postmodifier integrate the adjunct into the noun phrase. While this may be to some degree a matter of *style* rather than of strictly categorial *grammar* in English, it is largely a matter of grammar in Turkish, Georgian and other languages, like Hungarian. Most adverbial relations in noun phrases with non-verbal head nouns cannot be coded by adpositions or adverbial cases.¹¹ As for attributive noun phrases, Georgian allows only genitives and instrumentals, and Turkish allows only genitives and ablatives. Let us turn first to a closer examination of genitives and related constructions in Georgian and Turkish.

2.1. Case-marking and related constructions: nominal and adpositional attribution

In both languages, there are relations that are coded by simple juxtaposition of nominals, for instance the relation between measure and measured item:

- (25) Turkish
bir bardak su
 'a glass of water'
- Georgian
č'ika-∅ c'q'al-i
 glass-NOM water-NOM
 'a glass of water'
- (26) *rig šemtexveva-ši*
 row occurrence-in
 'in some cases'

Because of the many problems of partitive, identifying and other relations, we cannot go into the details of these and other, appositional, structures (including differential agreement in Georgian). Notice, however, that Turkish and Georgian differ with regard to some subgroups: an apposition like "the city of X" belongs here in Georgian, but Turkish uses a possessive determinative construction (cf. 2.1.2.1. for the details), which rather corresponds to the French / English type of construction:

- (27) Georgian
kalak-i Tbilis-i
 city-NOM Tbilisi-NOM
 'the city of Tbilisi'

¹¹ There may be different degrees of lexicalization or "stability" of the action expressed by the verbal noun which trigger the use of "adnominal" vs. "adverbial" modification strategies.

Turkish
Manisa şehir-i
 Manisa city-POSS
 'the city of Manisa'

2.1.1. Genitive and partitive ablative

In addition, both Turkish and Georgian have different types of adnominal relational marking, of which the genitive is the most frequent one.

The genitive is a typically adnominal case. In Turkish, the genitive is exclusively adnominal and predicative;¹² in Georgian, there are a few verbs (e.g. "to fear") that govern a genitive complement.

Semantically, possession, part-whole relationship, as well as relationship with relational nouns (including verbal nouns) are the central uses of the genitive in both languages. Apart from these parallels, however, there are obvious differences between Georgian and Turkish.

First, the Turkish genitive may also denote a partitive relationship:

(28) *arkadaş-lar-ın biri-si*
 friend-PL-GEN one-POSS
 'one of the friends'

Second, in Turkish, ablative-marked attributes also occur in the same position as (partitive) genitives, have the same phrasal properties, and are in non-complementary distribution. (29) has the same conceptual meaning as (28), and the distribution between genitive and ablative seems to be pragmatically motivated (see Schroeder 1999a: 137-155); compare (a) and (b) in:

(29) Turkish a. *arkadaş-lar-ımız-dan beş-i*
 friend-PL-POSS.1PL-ABL five-POSS
 'five of our friends'

b. *arkadaş-lar-ımız-ın beş-i*
 friend-PL-POSS.1PL-GEN five-POSS
 'five of our friends'

Note that the possessive suffix on the head of the partitive phrase is the same with the ablative attribute and the genitive attribute. This shows that in spite of variable case-marking on the modifiers, the *feature* triggering possessive agreement on the head noun is the same in both. Due to specific semantic and pragmatic factors, the

¹² There are several reasons for considering the Turkish genitive a case and not a derivation. One is that Turkish genitives behave like noun phrases in being referred to by possessive headmarking.

genitive modifier case-marking may be “blocked”, and this is where the ablative case-marking steps in. This type of ablative, then, is a subtype of the genitive (see also Schroeder 2000).

While Georgian has no partitive genitive, it has an exact counterpart of (29):

- (30) Georgian
Rezo-s megobr-eb-idan ert(ert)-i
 Rezo-GEN friend-PL-”ABL”¹³ one-NOM
 ‘one of Rezo’s friends’

However, Georgian has two additional possibilities that do not occur in Turkish.

First, the noun denoting the set may occur as a head—with differing positions of genitive and possessive pronoun, as predicted by (22):

- (31) a. *Rezo-s ert-i megobar-i*
 Rezo-GEN one-NOM friend-NOM
 ‘one of Rezo’s friends’
 b. **Rezo-s megobr-eb-is ert-i*
 Rezo-GEN friend-PL-GEN one-NOM
- (32) a. *ert-i čem-i megobar-i*
 one-NOM my-NOM friend-NOM
 ‘one of my friends’
 b. ? *čem-i ert-i megobar-i*

Second, high-style literary Georgian preserves an Old Georgian construction which comes close to the Turkish construction:

- (33) *ert-i čem megobar-ta-gan-i*
 one-NOM my friend-PL(GEN)-from-NOM
 ‘one of my friends’¹⁴

¹³ The proper analysis of *-idan* < Old Georgian *-it(a) + gana* INSTR + from need not concern us here. Its functional overlap with the Turkish form justifies the term “ablative” for Georgian. The similarity of Turkish *-dan* and Georgian *-idan* is accidental and historically irrelevant because the construction in (30) is an inheritance from Old Georgian, see (33).

¹⁴ The formality of this construction is underlined by the obligatory nature of the archaic oblique plural suffix *-ta*. Similarly, the postpositional phrase requires the archaic agreement of case (“Suffixaufnahme”, see Boeder 1995). Speaking of formality, the following parallel from French is probably not accidental: in the 17th century, *un de mes amis* = (33) was the courtly counterpart of bourgeois *un mien ami* = (32a) (Elias 1977: 147).

Also, while the Turkish genitive only rarely appears to code direct objects of nominalizations,¹⁵ the Georgian genitive covers both subject and direct object relations:

- (34) *mam-is siq'varul-i*
 father-GEN love-NOM

means both 'the father's love for somebody' and 'somebody's love for his father'.

Also, Georgian, but not Turkish, has a "classifying genitive" immediately preceding the head noun which shows an optional allomorphic reduction of its marker in some dialects:

- (35) *c'ipl-is xe-∅ > c'ipl-i xe-∅*
 beech-GEN tree-NOM
 'a beech-tree'

These classifying genitives are not referential and typically correspond to the first base of determinative compounds in English and German (*beech-tree*, German *Buche(n-baum)*). It is the classifying modifiers that we turn to now.

2.1.2. Classifying nominals in prehead position

Georgian can be said to have two types of genitive: a specifying genitive in predeterminer position, and a classifying, prehead genitive. The predeterminer genitive roughly corresponds to the Turkish genitive (except that the objective genitive does not occur in Turkish). The Georgian classifying genitive, on the other hand, corresponds to two construction types in Turkish: possessive determinative constructions (see 2.1.2.1.) and attributes of material in attribute 3 position (see 2.1.2.2.).

2.1.2.1. Possessive determinative constructions

Turkish has one type of stem-combining construction which, in its most simple form, consists of an attributive first nominal component in its bare form and a head noun. This construction may be called "possessive determinative construction", since the head of the construction bears the third person singular possessive suffix. In other words, this is an instance of head-marking (see 1.4.3.). The attributive nominal is always non-referential. Combinations like (36) and (37) belong to this highly productive type of construction:

¹⁵ Kornfilt (1997: 225) cites *fetih* 'conquest' as one of the rare nominalizations allowing an objective genitive, as in *Istanbul'un feth-i* (Istanbul-GEN conquest-POSS) 'the conquest of Istanbul'. Note, however, that the "verbal noun" *fetih* is not of Turkish origin, nor is *cenaze* 'funeral', which is another noun allowing an objective genitive, as in: *başbakan-ın cenaze-si* (president-GEN funeral-POSS) 'the president's funeral'.

- (36) *çocuk kitab-ı*
 child book-POSS
 ‘children’s book’

- (37) *masa çekmece-si*
 table draw-POSS
 ‘table drawer’

While proper names of people are excluded by the referentiality constraint, proper names are allowed in names of human institutions (hotels, shops, towns, nations etc.) and in geographical names. Thus, when a certain street is to be *named* after the city of Ankara, it may form a possessive determinative construction with ‘street’:

- (38) *Ankara sokağ-ı*
 Ankara street-POSS
 ‘Ankara Street’

Non-referentiality of an attributive nominal constituent is the *only* constraint on bare forms in this type of unit. In his detailed investigation of these constructions, van Schaaijk (1992, 2000), from which examples (39) to (47) are taken, shows that the nominal attribute may well have a clausal character, as in (39). Also, the bare form may be a plural noun, as in (40), and even instances of attributive adjectival bare forms, as in (41) and (42), and attributive genitives, as in (43), are found. The latter constructions are rare, and require further investigation, but they are not frozen forms as in German [*Drei-groschen*]-*oper*] (three-penny-opera):

- (39) [*bir bira iç-me*] *düşünce-si*
 a beer drink-N thought-POSS
 ‘the thought of drinking a beer’
 (‘“let’s drink a bear” thought’)
- (40) *kör-ler okul-u*
 blind-PL school-POSS
 ‘school for the blind’
- (41) [*üç çocuk*] *anne-si*
 three child mother-POSS
 ‘mother of three children’
- (42) [*önemli işler*] *dosya-sı*
 important matter-PL file-POSS
 ‘file of important matters’
- (43) [*Türkiye-nin ses-i*] *radio-su*
 Turkey-GEN voice-POSS radio-POSS
 ‘radio (named) “voice of Turkey”’

Very common are instances of same-type recursivity, i.e., instances in which a possessive determinative construction either contains more than one bare form, as in (44), or where the nominal attribute itself is a possessive determinative construction, as in (45):

- (44) [*Ford* [*aile* *araba-sı*]]
 Ford [family car-POSS]
 'Ford family car'

- (45) [[[*Türk* *dil-i*] *gramer-i*]]
 [[Turkish language-POSS] grammar-POSS]
 'grammar of the Turkish language'

Both types may also be applied several times, resulting in constructions like (46) and (47), respectively:

- (46) [*İstanbul* [*orman* [*bölge müdürlüğü-ü*]]]
 [Istanbul [forest [area directorate-POSS]]]
 'Istanbul regional directorate of forestry'

- (47) [[[[*İzmir* *Üniversite-si*] *Edebiyat Fakülte-si*]]
 [[[[İzmir university-POSS] literature faculty-POSS]

Türk Edebiyat-ı] *profesor-ü*]
 Turkish literature-POSS] professor-POSS]
 'professor for Turkish literature at the İzmir university's faculty of arts'

Turkish nouns only have one slot for a possessive suffix; thus a doubling of it on the head of the noun phrase, as might be expected in (44), (46) and (47), is excluded (cf. Kornfilt 1986).

In all these constructions, an insertion of the indefinite article or any other element between the first and the second part of the construction is clearly ungrammatical, cf. (37') **masa bir çekmeces-i*. This might suggest a compound status, but neither cross-referencing as in (38) and (43), nor a phrasal or a clausal character of the first element as in (39)-(43) is typical of the word-components. This, and the lack of vowel harmony, speak against an interpretation of possessive determinative constructions as morphological compounds, that is, compounds with word status.

It might be suggested that possessive determinative constructions have a specific relationship to genitive constructions. In fact, some of them could be viewed as reductions of genitive constructions, in which the non-referential genitive attribute is devoid of any case-marking, but in which the possessive head marking is preserved. Such an interpretation is not viable in examples like (39), where the clausal modifier cannot be marked by the genitive. It is also not viable in (44) to (47), because genitives do not allow this kind of recursivity. But examples (36') and (37') could at first sight be viewed as parallel to (36) and (37):

- (36') *çocuğ-un kitab-ı*
 child-GEN book-POSS
 'the book of the child'

- (37') *masa-nın çekmece-si*
 table-GEN draw-POSS
 'the drawer of the table'

However, the relation between the bare and the case-marked variants of attributes should not be considered as transformational. Semantically, the determinative constructions have their own properties. We note that the adjacency of the bare prehead form and the head leads to a greater vagueness and context-dependence in their semantic relationship (see 2.1.5.). This need not be paralleled by a construction with a genitive attribute. For example, the relationship between the constituents in a phrase like:

- (38') *Ankara-nın sokağ-ı*
 A.-GEN street-POSS
 'the street of / belonging to Ankara'

as opposed to (38), can only be interpreted as a part-whole relationship: 'the street which *belongs to* Ankara'. So, (38) cannot be derived from (38') without a change in meaning.

In Georgian, a "classifying genitive" corresponds to the bare prehead form of Turkish, and the genitive marker is the functional equivalent of the Turkish head noun marking:

- (48) *Ank'ara-s kuča-∅*
 Ankara-GEN street-NOM

An additional referential possessive genitive can be added as a specifying genitive in initial position:

- (49) *Tbilis-is Ank'ara-s kuča-∅*
 Tbilisi-GEN Ankara-GEN street-NOM
 'Ankara Street in / of Tbilisi'

This shows a positional difference between the two types of genitive. An additional property of the head-adjacent classifying genitive in Georgian is its allomorphy, mentioned above (see (35)).

Lexicalized constructions with classifying genitives are often classified as compounds in normative grammar (and orthography) and show three steps of a development leading from (a) a full genitive form through (b) a reduced genitive form to (c) the stem base of a true compound (cf. K'iziria 1981: 85): (a) *žar-is-k'ac-* army-GEN-man- 'warrior'; *col-is-žma-* wife-GEN-brother- 'brother-in-law'; (b) *ded-i-nacval-* <

ded-is nacval- mother-GEN substitute ‘stepmother’; *mam-i-da-* < *mam-is-da-* father-GEN-sister ‘aunt’; (c) *cxvir-saxoc-* < *cxvir-is-saxoc-* nose-GEN-wiper- ‘handkerchief’. Obviously, cases like *biza-js švil-* uncle-GEN-child ‘cousin’ > *biza-s-švil-* > *biza-švil-* result from a reinterpretation of syntagms as compounds.

A third characteristic is of a paradigmatic nature: literary Modern Georgian has a plural suffix *-eb-*, but it preserves a restricted use of the archaic oblique plural in *-ta*, and this latter form is restricted to classifying genitives (see Rudenko 1940: 43):

- (50) a. *kal-eb-is* *šroma-ø*
 woman-PL-GEN work-NOM
 ‘the work / labour of (the) women’ (Russian: *žensčín trud*)
- b. *kal-ta* *šroma-ø*
 woman-PL.OBL work-NOM
 ‘women’s labour’ (Russian: *ženskij trud*)

In fact, from a synchronic point of view, this archaic plural form should probably be interpreted as a derived adjective that is restricted to a “classifying” use.

2.1.2.2. Attributes of material

In Turkish, attributes of material can be ablative nouns or bare nouns. Attributive bare nouns denoting material, such as *gümüş* ‘silver’ in *gümüş yüzük* ‘silver ring’ or *tahta* ‘wood’ in *tahta köprü* ‘wooden bridge’, have the tendency to occur after the indefinite article (see (8) above). In Turkish linguistics, there is an ongoing discussion on the question whether forms like *gümüş* and *tahta* should be called “nouns” or “adjectives” when in attributive use (see Braun & Haig (2000) for a recent contribution). In addition, the fact that usually no constituent intervenes between the head and the bare material attribute has led to a classification of forms such as *gümüş yüzük* and *tahta köprü* as “juxtapositional compounds” (see König 1987, 1992). It is true that these material-denoting nominals are always close to the head of the noun phrase. But it has often been overlooked that the indefinite article may, in fact, intervene between attribute and head noun. *Gümüş bir yüzük* and *tahta bir köprü* are acceptable—even though, as said above, *bir gümüş yüzük* and *bir tahta köprü* are preferred. So separability indicates an independent status of the components of this structure, and as in the case of possessive determinative constructions, there is no basis for its interpretation as a compound.

In a sense, bare attributive nouns are similar to ablative attributes. Both denote material, and neither occurs in position 1, the position of genitives and the partitive (ablative) attributes. Yet they differ in several respects.

First, ablative-marked attributes occur in position 3, like adjective phrases, but unlike bare stems, which occur in position 4.

Second, these material ablatives do not trigger possessive-marking on the head, as do the attributes of position 1 and 4.

In contrast to the bare attributes of material, ablative-marked attributes of material may be further specified, and they occupy the “normal” attribute 3 position, which means that the indefinite article always follows them:

- (51) a. *bir tahta köprü / tahta bir köprü*
 one wood bridge / wood one bridge
- b. *meşe tahta-sın-dan bir köprü*
 oak wood-POSS-ABL one bridge
- c. **meşe tahtası bir köprü*

Tahta ‘wood’ could be further specified by ‘oak’, as in (51b), or by *ihlamur* ‘lime’ and the like. But any other type of specification, as, for example, adnominal demonstratives, requires the use of a *connecting participle* that relates the (complex) attribute to its head noun (see below 2.2.2.). Thus, ablative-marked attributes of material share the referentiality constraint of all adjective phrases, and are subject to a complexity constraint on adjectives (see 2.2.1.2.). So the material ablatives behave like attributive *adjective phrases* and not like attributive *noun phrases*. Consequently, the “ablative suffix” *-DAn*, with attributes of material, is a derivational suffix, not an (inflectional) case marker (see also Schroeder 2000).

Georgian has a genitive of material:¹⁶

- (52) *t'q'av-is k'ost'ium-i*
 hide-GEN dress-NOM

with a “classifying genitive” construction as in (35). Similar to the ablative in (51b), and similar to the possessive determinative constructions in Turkish, the genitive may in turn be modified by same-type recursivity (classifying genitive by genitive of the same type):

¹⁶ According to Č'anišvili (1981: 25; 137), these genitives are semantically and “distributionally” “adjectives”. It is true that they share the semantics of some adjectives, and it might be argued that they share the position of “classifying adjectives”. But genitives do not agree with their head noun; compare (52) with e.g. *šesat'q'vis-i k'ost'ium-i* corresponding-NOM dress-NOM or *mis-i k'ost'ium-i* his-NOM dress-NOM. Postmodifier genitives do agree, but this is quite a different matter: (i) In those variants of Georgian that show adjective agreement in this position at all, *all* genitives agree, not just genitives of material (*Vaxt'ang-is k'ost'ium-i* Vakhtang-GEN dress-NOM – *k'ost'ium-i Vaxt'ang-is-i* dress-NOM Vakhtang-GEN-NOM). (ii) *k'ost'ium-i t'q'av-is-i* dress-NOM leather-GEN-NOM, if it occurs at all, is stylistically highly marked (see below) and can hardly be used to determine the synchronic word-class of *t'q'av-is* in (52).

- (53) *tx-is t'q'av-is k'ost'ium-i*
 goat-GEN leather-GEN dress-NOM
 'a dress made of goat leather'

but a near-equivalent of the Turkish ablative is not possible:

- (52') **t'q'av-idan k'ost'ium-i*
 leather-from dress-NOM

In other words, the Georgian head-adjacent genitive covers the area of both the Turkish ablative of material and the Turkish bare component of possessive determinative constructions.

2.1.3. Postpositional modifier phrases

2.1.3.1. Postmodifiers in Georgian

In contrast to Turkish, Georgian has an additional posthead slot (see 1.4.3.). So there are some instances of non-genitive, non-adjectival postmodifier expressions that are simply ignored in traditional treatments of Georgian attributive constructions (see, however, Čanišvili 1981: 61). Consider some possible answers to: "What / who is this?"

- (54) *čaj-∅ šakr-it*
 tea-NOM sugar-INSTR
 'tea with sugar'
- (55) *Kartul-i t'ekst'-eb-i leksik'on-it-urt*
 Georgian-NOM text-PL-NOM glossary-INSTR-with
 'Georgian texts with a glossary'
- (56) *sačukar-i Vaxt'ang-is-tvis*
 gift-NOM Vakhtang-GEN-for
 'a gift for Vakhtang'
- (57) *scen-eb-i Krist'e-s cxovrebidan*
 scene-PL-NOM Christ-GEN life-from
 'scenes from the life of Christ'
- (58) *st'umar-i Sakartvelo-dan*
 guest-NOM Georgia-from
 'a guest from Georgia'

These attributive constructions differ from genitive and adjectival modifiers.

Firstly, they are restricted to a posthead position: (54') **šakrit čaj*, (55') **leksik'on-it-urt Kartul-i tekst'-eb-i*, (56') **Vaxt'ang-is-tvis sačukar-i*, (57') **Krist'e-*

s cxovreḇ-idan scen-eb-i, (58') **Šakartvelo-dan st'umar-i* are impossible. In this, they differ from modifiers of, for example, verbal nouns:

- (59) *gigzavnit čem-i bolo samušaŋ-s šesaxeb inpormacia-s* (ML)
 I.send.you my-GEN last work-GEN on information-DAT
 'I am sending you information concerning my last project'
- (60) *saxareḇ-is tema-ze gamopen-is moc'q'oba* (E. Mač'avariani Mamuli)
 gospel-GEN theme-on exposition-GEN arrangement
 'the arrangement of an exposition on the theme of the Gospel'
- (61) *xelnac'er-eb-idan mxat'vrul-i*
 manuscript-PL-from artistic-GEN
p'ir-eb-is gadaḡeb-is sakme (ib.)
 copy-GEN copying-GEN business
 'the business of taking photographs of the illuminated pages of the manuscript'

but also from prehead expressions with the postposition *-vit* 'like' (see 2.1.3.2. below):

- (62) *deda-sa-vit kal-i*
 mother-DAT-like woman-NOM
 'a motherly woman'

Notice that modifiers normally occurring in prehead position can be postposed, as in:

- (63) *ena-∅ Kartul-i* (instead of unmarked *Kartuli ena*)
 language-NOM Georgian-NOM
 'the Georgian language'

But this is a stylistically marked position with archaic and poetic connotations, or it is used with heavy constituents, as in:

- (64) *mcdeloba-∅ Sabč'o-ta imp'erīa-ši mcxovreḇ-i*
 attempt-NOM Soviet-PL empire-in living-GEN
q'vela nacionalob-is ert xalx-ad šerc'q'm-isa (ZK')
 all nationality-GEN one people-ADV melting-GEN
 'the attempt to melt all nationalities of the Soviet empire into one people'

Neither of these motivations is plausible for (54)-(58).

Second, these postmodifiers are easily understood as secondary predicates, as in:

- (65) *čaj-s šakr-it vsam*
 tea-DAT sugar-INSTR I.drink.it

which can mean both: 'I drink [tea with sugar]' and 'tea I drink with sugar'; cf.:

- (66) *šakr-it svam čaj-s tu rdz-it?*
 sugar-INSTR you.drink.it tea-DAT or milk-INSTR
 'do you drink tea with sugar or with milk?'

which is like:

- (67) *muk-i girčevnia čaj-ø tu bac-i?*
 dark-NOM you.prefer.it tea-NOM or light-NOM
 'do you prefer (your) tea black or light?'

Notice that secondary predicates are asked for by *rogor* 'how?', not by the inflected adjectival form *rogor-* 'what kind of?':

- (68) *čaj-ø rogor dalie, šakr-it tu rdz-it?*
 tea-NOM how you.drank.it, sugar-INSTR or milk-INSTR
 'how did you drink (your) tea, with sugar or with milk?'

- (69) *rogor-i čaj-ø dalie,*
 what.kind.of-NOM tea-NOM you.drank.it

šakr-ian-i tu rdz-ian-i?
 sugar-ADJR-NOM or milk-ADJR-NOM
 'what kind of tea did you drink, sugared tea or milk-tea?'

- (70) *rogor-i p'ur-i iq'ide? – kva-sa-vit p'ur-i* (Imnaišvili 1997: 85)
 'what kind of bread did you buy? – a stone-like bread'

If *rogori čaj dalie?* (as in (69)) asks for nouns with a modifier, (54) with *šakrit* as a postmodifier should be a possible answer. Yet informants hesitate to accept it as an answer and prefer an answer like: *šakriani* 'sugared' (as in (69)); the reason possibly is that *rogori čaj dalie?* asks for the kind of tea, but the modifier "with sugar" does not function very well as a "classifying" modifier of "tea". Rather it *adds* some quality (or entity: to drink tea with sugar is to consume both tea *and* sugar), and this is what makes it so similar to secondary predicates. Similarly, while

- (71) *davlie čaj-ø šakr-it*
 I.drank.it tea-NOM sugar-INSTR
 'I drank tea with sugar'

is perfect, a sentence like:

- (72) *gelodeba* *čai-∅* *šakr-it*
 it.is.waiting.for.you tea-NOM sugar-INSTR
 'tea with sugar is waiting for you'

is considered "Russian" by some informants. Indeed, Šalamberiže (1980: 23) characterizes

- (73) *sigaret'-i* *pilt'r-it*
 cigarette-NOM filter-INSTR
 'filter-tipped cigarette'

as a calque for the correct adjectival form with the possessive suffix *-ian-*:

- (74) *pilt'r-ian-i* *sigaret'-i*
 filter-ADJR-NOM cigarette-NOM

Traditional grammar tends to interpret these postmodifiers as reduced forms of postposed relative clauses.¹⁷ And indeed, (56)-(58) have relative clause counterparts ("the gift which is for Vakhtang", "the scenes which are from the life of Christ", "the guest who is from Georgia"), although if (54)-(55) have clausal equivalents of the same type it is less obvious.

But whatever the correct syntactic description of expressions like *čai šakrit* 'tea with sugar', they are similar to relative clauses both positionally and semantically. Georgian has postposed relative clauses and postposed attributes, and the fact that Turkish has neither suggests a correlation between the two types of attribute. Semantically, the Georgian postmodifiers are counterparts of relative clauses and express a non-classifying non-inherent (incidental) property resulting from an event: "tea to which sugar is / was added", "a gift that is / was meant for Vakhtang", "a guest who has come from Georgia". Postmodifiers like *čai šakrit* thus contrast with premodifiers as in *šakriani čai*, i.e. with adjectival derivation, which we will consider below (2.2.1).

2.1.3.2. Prehead postpositional phrases in Georgian and Turkish

As stated in the introduction to this chapter, most adverbial relations in noun phrases with non-verbal head nouns cannot be coded by adpositions, neither in Georgian nor in Turkish. However, both languages have one type of relational coding which is consistently expressed by means of prehead postpositional phrases, viz., the coding of relations of similarity. In Georgian, similarity may be expressed by postpositional

¹⁷ See 1.2.3. The doyen of the Georgian syntacticians, Leo K'vač'ašvili (personal communication) gives the same explanation for structures like (54)-(58), although the latest edition of his Georgian syntax (1996: 493-495) provides only examples of participial transformations from finite verbs.

phrases headed by the postposition *-vit* ‘like’, attributively as well as adverbially. In Turkish, postpositional phrases headed by the postposition *gibi* ‘like’ show a strikingly similar distribution. Compare the following example with (62):

- (75) *ayı gibi bir köpek* (Van Schaaik 1996: 243)
 bear like a dog
 ‘a dog (which is) like a bear’

Gibi is a rather unique postposition in several respects. First, phrases headed by *gibi* may be attributive, predicative and adverbial. Second, the form may take as complements certain participial phrases and even finite clauses (that is, clauses with a person marker from the predicative / verbal paradigm). Third, unlike all other postpositions but like adjectival modifiers, *gibi* may be combined with the possessive suffix of the third person singular and act as an anaphoric noun phrase.¹⁸

These three features are not shared by other postpositions—except by *kadar* ‘as much as’, which again codes relations of comparison but may not head attributive phrases.

2.1.4. Compounds

Before leaving case-marked attributes and attributive postpositional phrases, let us have a short look at compounds. As we saw above, some syntagms in both languages are similar to compounds: certain Turkish stem base N1 + N2 constructions are inseparable (see 2.1.2. and the Turkish examples given there), and Georgian classifying $G_{GEN} + N$ constructions tend to become compounds (see 2.1.2.1.).

In addition, there are many exocentric compounds that look like lexicalized attributive constructions: *bahuvrihis* like Turkish *ak-sakal* ‘white-beard’ – ‘wise man’, *mavi göz-lü* (blue eye-ADJR(COM)) ‘blue-eyed’ (person), *yalınayak* ‘bare-foot’ – ‘bare footed person’, and dvandva compounds of the type Turkish *anne-baba* (≈ Georgian *ded-mama*) ‘mother-father’ – ‘parents’, Georgian *av-dar-* ‘evil-weather’ – ‘bad weather, heavy rains’ and *xar-irem-* ‘bull-deer’ – ‘male deer’, *mama-k’ac-* ‘father/male man’ – ‘man’ are syntagms without attributive agreement. Also, Turkish has some forms which simply consist of juxtaposed nominals, e.g. *bilim kurgu* (science fiction) ‘science fiction’, cf. König (1987, 1992).

What all these formations have in common is their lexicalization or restricted productivity.

In sum, then, if we disregard diachronic cases of reanalysis (see 2.1.2.1), compounding is not a productive strategy of noun phrase relational coding in these languages.

¹⁸ See van Schaaik (1996: 235-288, 1998) and Schroeder (1999b: 139-40, 2000) for a lengthy discussion on *gibi*.

2.1.5. Summary

To sum up our comparison of nominal attributes in the two languages, the following can be said at this point: in both languages, the genitive is an exclusively or almost exclusively attributive case. Both languages have phrase-initial, “specifying” genitives which code possession in its broadest sense (including several forms of part-whole relations and subject-object arguments of relational nouns). The languages differ in three respects. Firstly, the Georgian genitive codes object *and* subject relations, whereas the Turkish genitive codes subject relations exclusively. Second, in Turkish, the ablative suffix may replace the genitive suffix in partitive constructions. Third, Georgian has a prehead, “classifying” genitive which is not normally separated from its head-noun and which tends to develop stem-like forms in some dialects. This genitive corresponds to Turkish “bare” (non-case-marked) prehead nominal constituents, which form a determinative syntagm with their head noun. On the other hand, it corresponds to ablative attributes which occur in the attribute 3 position and which denote “material” (expressed by “classifying genitives” in Georgian).

Compounding as a *distinct* strategy of relational coding is not freely productive in both languages.

Disregarding for the moment Georgian posthead constituents, we get a preliminary scale of nominal attribution ranging from unrestricted genitive noun phrases on the left margin to non-productive prehead constituents that tend to be reanalyzed as first components of compounds. In both languages, we find formal and semantic parallels at the extreme points: specifying genitives on the left, and bare prehead forms on the right side.

However, this convergence of morphological form is embedded in different linguistic structures specific to different language types: while the unmarked bare stem derives from its status in a head-marking language like Turkish, it is either an allomorphic variant of the genitive in a dependent-marking language like Georgian (see (35)) or becomes the first component of a compound (see final sections of 2.1.2.1.):¹⁹

	Attribute 1	Attribute 3	Attribute 4	Head
Georgian	specifying genitive	adjective (phrase)	<i>dependent-marked:</i> genitive-marked > bare stem	<i>unmarked</i>
Turkish	specifying genitive or partitive ablative	adjective (phrase) (including material ablative)	<i>unmarked:</i> bare stem	<i>head-marked:</i> possessive (referring to attribute 1 or 4)

¹⁹ “Attribute 1”, “attribute 3”, and “attribute 4” refer to the nominal attributes which are identified on the basis of positional distributions for Turkish (see (8)) and Georgian (see (23)), respectively. The participial “attribute 2” does not concern us in this section.

2.2. Adverbial relations

The semantic relationship between a Georgian prehead genitive attribute and its head or a Turkish determinative constituent and its head is highly context-bound and, in this sense, highly unspecific.²⁰ Thus Turkish *şeker bardağı* and Georgian *šakr-is č'urč'xel* (sugar-GEN vessel) 'sugar glass' exhibits the same ambiguities as the German *Zuckerglas*: in an unmarked context, it is *a glass with sugar*, or *a glass for sugar*, but it could also be thought of as *a glass made of sugar* or *a glass used to shovel the sugar* from one place to another. On the other hand, we have already hinted at the fact that the modification of a Turkish ablative attribute of material may *enforce* a lexical specification of the relationship between the attribute and the noun by means of a participle (see 2.1.2.2.), and a semantically more specific derivational form is preferred in cases like the Georgian *sa-šakr-e-* (PREF-sugar-ADJR) 'a glass or whatever vessel for sugar', with an adjectivalizing circumfix *sa-___-e*.

Thus, just as it is possible in English or in German to be more specific with regard to the semantic relation between modifier and head noun, this is possible in Turkish and Georgian, too—and sometimes it is even imperative. In this section, we will have a look at these more specific codings.

As we saw above, neither Georgian nor Turkish freely allows premodifier adpositional phrases (except with nominalizations). Nor do they allow the simple attribution of case-marked nominals—except for the noun-phrase-specific uses of the genitive and the ablative described in the preceding section. But which way do Turkish and Georgian go in order to integrate more specific adverbial relations into the noun phrase? There are, basically, two strategies. The first is the "derivational strategy": Turkish and Georgian derive complex adjectives. The second is the intensive use of connecting lexical elements, mainly participles, but to a certain extent also adjectives in Turkish. In this section we will give a concise overview of the two strategies and look at their interdependence.

2.2.1. Adjectival derivation

Both Georgian and Turkish are languages with a rich derivational morphology. There is a wide variety of productive means to derive adjectives from nouns.

2.2.1.1. The semantic basis

The distribution of the forms has a clear semantic base; that is, the respective morphemes not only derive adjectives from nouns, but at the same time specify the semantic relationship between attribute and head. For example in Turkish, the suffix *-lik* forms measure attributes from nouns:

²⁰ This is exactly the root of (semantic) parallels between the Georgian and Turkish constructions on the one hand, and morphological compounds in, for instance, German, which are similarly context-dependent (cf. Wildgen 1982), on the other.

- (76) [gün-de on altı saat-lık] bir iş
 day-LOC sixteen hour-ADJR a job
 'a job of sixteen hours a day'

The suffix *-lı* forms comitative attributes from nouns:

- (77) [on iki numara-lı] bina
 twelve number-ADJR building
 'the building with the number twelve' / 'building number twelve'

It has a negative counterpart, the "privative" *-siz*:

- (78) *müzik-siz* bir ev
 music-ADJR a house
 'a house without music'

And another *-lı* forms adjectives of origin from nouns:

- (79) *köy-lü* bir adam
 village-ADJR a man
 'a man from the village' / 'a peasant'

Similarly in Georgian, the relation of 'having' is expressed by a derivational suffix *-ian*:

- (80) [*ramdenime ucno*]-*ian-i* *gant'oleba* (Č'abašvili 1988: 96)
 [several unknown]-ADJR-NOM equation
 'an equation with several unknown quantities'

which has a close Turkish equivalent with the comitative suffix *-lı*:

- (80') *çok bil-in-me-yen-li* *denklem*
 many know-PASS-NEG-PRT-ADJR(COM) equation
 'an equation with several unknown quantities'
- (81) [[*okro-s*] *koçr*]-*ian-i* *važ-i*
 [[gold-GEN] hair]-ADJR-NOM boy-NOM
 'the boy with the golden hair'
- (82) [[*dedakalak-is*] *xed-eb*]-*ian-i* *albom-i* (Č'abašvili 1988: 96)
 [[metropolis-GEN] view-PL]-ADJR-NOM album-NOM
 'an album with views of the capital'
- (83) [*uçveulo sataur*]-*ian-i* *roman-i* (Č'abašvili 1988: 96)
 [unusual title]-ADJR-NOM novel-NOM
 'a novel with an unusual title'

- (84) [[[k'u-s] 3vl-is] čarčo]-ian-i
 [[tortoise-GEN] bone-GEN] frame]-ADJR-NOM

satvale (Č'abašvili 1988: 97)
 spectacle
 'glasses with a frame made of tortoise-shell'

- (85) ['xolo', 'k'i' k'avšir]-ian-i c'inadadeba-
 ['yet', 'but' conjunction]-ADJR-NOM sentence-NOM
 'a sentence with the conjunctions "yet" or "but"'

Furthermore, *-del-* / *-(i)ndel-* 'time when',²¹ *-amdel-* 'time till',²² *-el-* 'originating from (mostly referring to humans)', *-ur-* / *-ul-* 'originating from (mostly referring to non-humans)',²³ and *-eul-* 'coming, originating from, belonging to' are some of the derivational suffixes forming adjectives from nouns which at the same time specify the relationship between the attribute and the head.²⁴

- (86) *gušin-del-i* *amind-i*
 yesterday-ADJR weather-NOM
 'yesterday's weather'

- (87) *am-dila-ndel-ma* *ambav-ma*
 this(OBL)-morning-ADJR-ERG event-ERG
 'the events of this morning'

- (88) *p'irvelmsoplio om-amdel-i* *cxovreba- \emptyset* (LG)
 first world war-ADJR-NOM life-NOM
 'life before the First World War'

²¹ This suffix originated from forms like *gušin-del-* yesterday-ADJR- 'yesterday's' re-analysed as *guš-indel-*; see Šaniže 1973: § 165,5, where *-del* itself derived from *dγ(e)-el* day-ADJR.

²² *-amdel-* < *-ad-md(e)-el-* (ADV-till-ADJR). According to Mač'avariani (1952-53), *-amdel-* is a new development, comparable to Russian derivations like *do-* 'till', e.g. Russian *dorevolucionnyj* ~ Georgian *revoluciamdeli* 'before the revolution', *dovoennyj* ~ *omamdeli* 'before the war'.

²³ *-ur-* also occurs with humans if the basis is, for instance, adverbial: *ika-ur-* 'being / originating from there' (*ik(a)* 'there'); *bavšv-ur-* 'childish' (*bavšv-* 'child'; Šaniže 1973 § 165,2); notice: *Kartv-el-i k'rit'ik'os-i* Georgian-ADJR-NOM critic-NOM 'a Georgian critic' vs. *lit'erat'ur-ul-i k'rit'ik'os-i* literature-ADJR-NOM critic-ADJR-NOM 'a literary critic' – 'a critic dealing with literature'. *-el-*, then, seems to modify human referents, whereas *-ur-* is used for non-human "referent modification" and for "reference modification" (in the sense of Bolinger 1967).

²⁴ These and other adjective forms derived from case forms and adverbs are also mentioned by Čanišvili (1981: 138-141).

- (89) *eg čem-i sovl-el-i-a* (LG)
 this my-NOM village-ADJR-NOM-is
 'he is from my village'
- (90) *sovl-ur-i p'ur-i*
 village-ADJR-NOM bread-NOM
 'country-bread'
- (91) *mam-is-eul-i čibux-i* (Č'abašvili 1988: 99)
 father-GEN-ADJR-NOM pipe-NOM
 'a pipe that belonged to (my) father'
- (92) *[[[natesaobit-is]-brunv-is]-nišn-is]-eul-i*
 genitive-GEN-case-GEN-sign-GEN-ADJR-NOM

element'-i (Č'abašvili 1988: 99)
 element-NOM
 'an element that originates from the marker of the genitive case'

2.2.1.2. Restrictions

As may already have become clear from the examples, the derivational base of the adjectival suffixes both in Georgian *and* Turkish is not a noun stem but a phrase. However, the derivation is morphologically and semantically restricted. In Georgian, adjectivalizing suffixes, like postpositions, "govern" either the genitive (e.g. *-eul-* in (91)–(92)) or an oblique stem form (e.g. pronominal *am-* in (87) vs. *es* 'this.NOM'), or simply a (bare) stem form where rectus and oblique stem forms are not differentiated. Thus, the attributive, *or* 'two', is a bare stem in:

- (93) *[or ucnob]-ian-i gant'oleba-ø* (**or-i ucnob-ian-i gant'oleba-i*)
 [two unknown]-ADJR-NOM equation-NOM (*two-NOM / GEN / INSTR ...)
 'an equation with two unknown quantities'

But subordinated constituents have their syntactically expected form:

- (94) *[[ucnob-i kalak-is] xed-eb]-ian-i*
 [[unknown-GEN city-GEN] view-PL]-ADJ-NOM

albom-i (**[ucnob kalak-is]* ...)
 album-NOM
 'an album with views of an unknown city'

Second, the derivational base may not be referential in Turkish comitative and privative expressions. Thus we may have:

- (95) a. *bol sūt-lü kahve*
 much milk-ADJR(COM) coffee
 'coffee with lots of milk'

but not:

- (95) b. *[*bu sūt-lü*] *kahve*
 this milk-ADJR coffee
 (attempted reading:) 'coffee with this milk'

The nearest equivalent to the attempted reading 'coffee with this milk' could only be achieved through the use of a participle taking an argument in the instrumental case, e.g.:

- (95) c. *bu sūt-le karıştır-il-mış kahve*
 this milk-INSTR mix-PASS-PST coffee
 'coffee mixed with this milk'

On the other hand, deictic elements are not completely excluded from Georgian derivations.²⁵ For example, see the kind of "inbound anaphora" in (87) and:

- (96) **am** *kalak-is xed-eb-ian-i albom-i*
 this(OBL) city-GEN view-PL-ADJR-NOM album-NOM
 'an album with views of the city'

- (97) **aset** *učveulo sataur-ian-i roman-i*
 such unusual title-ADJR-NOM novel-NOM
 'a novel with such an unusual title'

and the "outbound anaphora" in:

- (98) **im** *sopl-el-i k'ac-i iq'o, sadac davibade*
 that(OBL) village-ADJR-NOM man-NOM he.was, where I.was.born
 'it was a man from the village where I was born'

With Turkish adjectives of origin formed by *-li*, as well as with adjectives of measurement formed with *-lik*, the situation is slightly more complex. On the one hand, the base of the derivation may be a deictic form or it may be a proper name, cf.:

²⁵ See Postal (1969) and Boeder (1972) for a general discussion of the phenomenon of "anaphoric islands".

- (99) *bura-lı adam*
 here-ADJR man
 'man from here'
- (100) *Ankara-lı çocuk*
 Ankara-ADJR child
 'child from Ankara'
- (101) *bu kadar-lık bir çalışma*
 this much-ADJR a job
 'a job of this much (amounting to this much)'

On the other hand deictic or anaphoric *noun phrases* are not allowed:

- (102) *[*bu şehir-li*] *bir adam*
 this town-ADJR a man
 attempted reading: 'a man from this town'
- (103) *[*bu beş saat-lık*] *bir çalışma*
 this five hour-ADJR a job
 (attempted reading:) 'a job of these five hours'

Again, the nearest equivalent to the attempted reading of (102) could only be achieved through the use of a participle taking an argument in the ablative case, e.g.:

- (102') [*bu şehir-den gel-en*] *adam*
 this town-ABL come-PRT man
 'man coming from this town'

Similarly, 'a job of these five hours' would require the use of a participle:

- (103') [*bu beş saat sür-en*] *bir çalışma*
 this five hour last-PRT a job
 'a job taking these five hours'

There is, however, a derivational suffix in Turkish with unrestricted referentiality of its base, the suffix *-ki*. In combination with noun phrases in the locative case it derives locative attributes and in combination with bare nouns it forms attributes of time. Given semantic appropriateness, *-ki* may, in principle, form an attribute from any noun phrase. In the following examples, it is a locative-marked, phrasal possessive determinative construction:

- (104) *görev-in-e devam ed-ip*
 post-POSS.3SG-DAT continue do-CONV

et-me-yeceğ-i şekl-in-de-ki soru
 do-NEG-PRT-POSS.3SG form-POSS-LOC-ADJR question
 'the question in the form of whether he would continue his post or not'

While the derivational base normally is a locative, simple temporal adverbs like *dün* 'yesterday' or *yarın* 'tomorrow' may also serve as a base:

- (105) *dün-kü / yarın-ki ders*
 yesterday-ADJR / tomorrow-ADJR lesson
 'the lesson yesterday / tomorrow'

Similarly, *-ki* derives attributes from temporal postpositional phrases. Cf. (106), where the phrase headed by the postposition *önce* 'before' is adverbial, vs. (107), in which it is an attributive phrase, headed by *-ki*. The case-assignment properties of the postpositions remain unchanged:

- (106) [*ondan önce*] *sinema-ya gittik*
 [that(ABL) before] cinema-DAT we.went
 'before that we went to the cinema'
- (107) [*ondan önce-ki*] *ilişki-m*
 that(ABL) before-ADJR relationship-POSS.1SG
 'my relationship before that'

Notice that phrasal derivations with *-ki* occur in the second position reserved for clausal attributes (see 1.4.1.), i.e. they behave like participial forms (Schroeder 2000). All other derivations belong to "position 3" according to several distributional criteria.²⁶

The constraints on Georgian derivations need not be discussed here in detail. They seem to be less constrained with regard to their hierarchical depth (see e.g. (80)-(85)) or with regard to anaphoric islandhood (see e.g. (89), (96)-(98)). What seems, however, to matter is non-hierarchical complexity, such as multiple attribution and the like. Compare:

- (108) *ert-i [[mamačem-is] sovl]-el-i k'ac-i*
 one-NOM my.father-GEN village-ADJR-NOM man-NOM
 'a man from my father's village'
- (108') ?? *ert-i [[čem-i nacb-is]*
 one-NOM my-NOM acquaintance-GEN

²⁶ Demonstratives may only precede position 3 attributes, they always follow position 2 attributes; position 3 attributes may be coordinated only with adjectives and not with participle phrases, see Schroeder (1998a).

sopl]-el-i *k'ac-i* *šemxda*
 village-ADJR-NOM man-NOM he.met.me'
 'a man from my acquaintance's village met me'

2.2.1.3. Differences between Turkish and Georgian

While Turkish and Georgian derivational strategies are functionally comparable, their extension is different. For instance, some Georgian examples with adjectival derivation require a non-derivational translation into Turkish, with participial connectors like “taking place” (82'), (85'), “being” (83'), “made” (84'):

(82') *başkent görünüm-ler-i-nin yer al-dığ-ı bir albüm*
 capital view-PL-POSS-GEN take.place-PRT-POSS a album
 'an album with views on the capital' ('an album in which views of the capital take place')

(83') *alışılmadık bir başlığ-ı ol-an roman*
 unusual a titel-POSS be-PRT novel
 'a novel with an unusual title' ('a novel whose title is unusual')

(84') *çerçeve-si kaplumbağa kabuğ-un-dan*
 frame-POSS tortoise shell-POSS-ABL

yap-ıl-mış bir gözlük
 make-PASS-PRT a glasses
 'glasses with a frame made of tortoise-shell'

(85') *“rağmen” veya “ama” bağlac-ı-nın*
 “yet” or “but” conjunction-POSS-GEN

yer al-dığ-ı bir tümce
 place.take-PRT-POSS a sentence
 'a sentence with the conjunctions 'yet' or 'but''

Similarly, the Georgian suffix *-eul-* ‘coming, originating from, belonging to’ (see above) has non-derivational counterparts in Turkish:

(91') a. *baba-m-ın pipo-su*
 father-POSS.1SG-GEN pipe-POSS
 'my father's pipe'

(91') b. *baba-m-a ait (ol-an)²⁷ pipo*
 father-POSS.1SG-DAT belonging.ADJ (be-PRT) pipe
 'the pipe that belonged / belongs to my father'

²⁷ The participle *olan* is optional.

- (92') *tamlama durum ek-in-den kaynaklan-an bir öge*
 genitive case affix-POSS-ABL originate-PRT a element
 'an element originating from the marker of the genitive case'

Also, both inbound and outbound anaphora are possible in Georgian derivational phrases, but disallowed in Turkish. Thus, the Turkish equivalent of (98) would again be a participle phrase:

- (98') *doğ-duğ-um köy-den gel-en adam*
 be-born-PRT-POSS.1SG village-ABL come-PRT man
 'a man (coming) from the village where I was born'

*[*doğ-duğ-um köy-lü] adam*
 be-born-PRT-POSS.1SG village-ADJR man

Georgian derivation, then, seems to be more extensive than Turkish derivation. Notice that this difference is not due to different degrees of complexity: Turkish *-ki* allows for the complexity of a participial phrase. But the distribution of strategies is different in both languages: Turkish uses the participial device to a larger extent than Georgian. In other words, in some constructions, Turkish extends the semantically more neutral participial strategy at the expense of its positionally adjacent strategy, derivation.

2.2.2. Connecting lexical elements

2.2.2.1. Empty participles

We have repeatedly pointed out that attribution by means of adjectival derivation is more or less limited by the complexity of the adjective phrase and has to be replaced by a construction in which a participle takes the respective attribute as an argument. In many cases, this lexical strategy of connecting attributes to their head can be a semantically highly specific way of expressing the relationship between an attribute and its head. But there are also semantically empty participles which are frequently used as "connectors", e.g. the participle of "to be". In this case, there is no semantic meaning attached to the participle; rather it is a default verb participle with the sole function of integrating case-marked attributes into the noun phrase which could otherwise not be used attributively.

In Turkish, the subject participle form of the verb *olmak* 'to be' links locative, ablative-, dative- and instrumental- / associative attributes to the head, as in the following examples, where the use of the simple case-marked form would be ungrammatical.

- (109) *[bu durum-da ol-an] kız-lar*
 this situation-LOC be-PRT girl-PL
 'girls in this situation'

- (110) [*insan-lar-a ol-an*] *yaklaşım*
 people-PL-DAT be-PRT approach
 ‘(the) approach to people’
- (111) [*kırsal kesim-ler-den ol-an*] *kadın-lar*
 rural area-PL-ABL be-PRT woman-PL
 ‘women from rural areas’
- (112) [*çocuk-lar-ım-la ol-an*] *ilişki-ler-im*
 child-PL-POSS.1SG-INSTR be-PRT relationship-PL-POSS.1SG
 ‘my relationships to my children’

Note that *olan* may also be used with attributes which otherwise belong to the third positional group, i.e. the group of the “more adjectival” attributes. In this case *olan* is used when they have a certain degree of complexity, as in (113), and / or when they are used non-restrictively, as in (114) and (115) (see also Schroeder 1998a: 311, 2000):

- (113) [*sanat-la meşgul ol-an*] *bir aile*
 art-INSTR busy be-PRT a family
 ‘a family which is busy with art’
 ? *sanatla meşgul bir aile*
- (114) [*mavi ol-an*] *bu çiçek*
 blue be-PRT this flower
 ‘this flower which is blue’
 **mavi bu çiçek*
- (115) *sahiplik duygu-su hiç gelişmemiş ol-an ben*
 ownership feeling-POSS at.all not.developed be-PRT I
 ‘I, whose instinct of ownership is not developed at all’
 ? *sahiplik duygusu hiç gelişmemiş ben*

Georgian has two equivalents of Turkish participial constructions: relative clauses and participles. The former are preferred, but participles like *mq'op*- ‘being’ and *arsebul*- ‘existing’ are also used with locative expressions:

- (116) *picarnag-ze mq'op-ma ert-ma k'ac-ma bič'-ze miutita* (Kafka 35)
 platform-on being-ERG one-ERG man-ERG boy-on he.pointed.to.him
 ‘one of the people on the platform drew his attention to the boy’
- (117) *movinaxule sopel Pak'a-ši arsebul-i*
 I.visited village Paka-in existing-NOM

mama-ta da deda-ta c'm. Nino-s monast'er-i (VG)
 father-PL.OBL and mother-PL.OBL St. Nino-GEN monastery-NOM
 'I visited the monastery and convent of St. Nino in the village of Paka.'

However, complex adjective phrases do not require "participial support". Compare (113) with:

- (118) *creml-ita da gamoutkmel-i mc'uxareb-it*
 tear-INSTR and unsaid-INSTR sorrow-INSTR
- savse-∅ gašešeb-ul-i tval-eb-i*
 full(adjective)-NOM stiffen-PRT-NOM eye-PL-NOM
 'frozen eyes full of tears and unsaid sorrow'

Non-restrictive attributes, on the other hand, must be postposed:

- (119) *me-c, sicx-isa-gan šec'uxeb-ul-ma,*
 I-too, heat-GEN-from trouble-PRT-ERG
- mšvild-isar-i vesrole*
 bow-arrow-NOM I.threw.them.to.it
 'I too, troubled by the heat, shot at it [i.e. the sun] with an arrow.'

2.2.2.2. Lexically specific participles

Apart from the use of the clearly "empty" participial form of the verb 'to be' as a connecting device, it is difficult—and maybe not even possible—to decide whether what we find is the more structural use of a participle as a "connector" or whether we are simply dealing with a participial clause with its specific meaning. As in the case of "reduced relative clauses" (see 1.2.2) we could think of participles as being non-specific if they can be predicted from their clausal context, e.g. in a Georgian expression like:

- (120) *Tbilis-ši čat'areb-ul*
 Tbilisi-in carry.out-PRT
- matemat'ik'-ur olimp'iad-eb-ši* (cf. Ležava 1972: 68)
 mathematics-ADJR olympic.game-PL-in
 'during the olympics of mathematics organized in Tbilisi'
- (121) *mok'le p'asux-i dasm-ul k'itxva-ze*
 short answer-NOM put-PRT.PASS question-on
 'a short answer to a question'

(121') Turkish

bir soru-nun karşılığı-ı ol-an kısa bir cevap
 a question-GEN opposite-POSS be-PRT short a answer
 (lit.: 'a short answer being the response to a question')

There are a number of Turkish verbs which are used with a literal, as well as with a non-literal, generalized or "bleached" meaning in the sense of Hopper & Traugott (1996). The following list is provisional, but it may give an impression of the type of construction:

- (i) *gelen* 'coming', from *gelmek* 'to come', is often used with ablative attributes where the ablative is a local case (122),
 - (ii) *bulunan*, from *bulunmak* 'to be found', is intensively used with locative attributes (123),
 - (iii) *giden*, from *gitmek* 'to go', is used with dative (i.e., allative) attributes (124), and
 - (iv) *yapılmış* 'made', the resultative passive participle from *yapmak* 'to make', is frequently used with ablative where this case codes material.
- (122) [*cahillik-ten gel-en*] *bir şey*
 silliness-ABL come-PRT a thing
 'a thing (coming) out of silliness'
- (123) [*piyasa-da bulun-an*] *para*
 market-LOC found-PRT money
 'the money (to be found) on the market'
- (124) [*Kuzey Irak'ta-ki Kürt-ler-e gid-en*] *yardım*
 north Iraq'-LOC-ADJR Kurd-PL-DAT go-PRT support
 'the support for the Kurds in Northern Iraq' / 'the support going to the Kurds'

Note, however, that the use of these verbs in their "bleached" meaning is not restricted to their non-finite use as participles. For example, *bulun-* 'to be found' is often used as the finite predicate of a sentence where it replaces the existential predicate *var* 'there is'. Thus, (123) can be transformed into a finite sentence without a change in the meaning of *bulun-*:

- (125) *piyasa-da para bulunu-yor*
 market-LOC money found-PRS
 'there is money on the market'

Also, the use in the "bleached" meaning does not obliterate the possibility of use with a literal meaning. Whether the "literal meaning" or the "generalized meaning" applies in the given construction probably depends on the clausal or even wider context of the construction. For example in (124), it is clear that a 'support' does not

literally ‘go’ to the Kurds. Thus here, the arguments involved suggest a generalization of meaning. On the other hand, in (123), we could imagine money to be literally ‘found’ on the marketplace – but the sentence is uttered by a broker talking about his experiences at the stock exchange.

In sum, then, we may say that while participles are clearly used as connecting devices, it is not possible to speak of a “grammaticalization” of any participle form in this device, apart from the use of the participial form of the verb ‘to be’.

2.2.2.3. Connecting adjectives

With the same function, we sometimes find semantically non-empty Turkish adjective “connectors”.²⁸ For example the adjectives *karşı* ‘against’, ‘opposite’ and *ait*, ‘belonging’, take dative arguments:

- (126) [*Türk musiki-sin-e karşı*] *bir heves*
 Turkish music-POSS-DAT against a interest
 ‘an interest for Turkish music’

- (127) [*o zaman-a ait*] *anım-lar*
 that time-DAT belonging.ADJ memory-PL
 ‘memories of that time’

Derived, though lexicalized, forms also belong to this group, e.g. *yönelik* ‘in direction of’ (lit.: *yön-e-lik* direction-DAT-ADJR) and *bağlı* ‘connected’ (lit.: *bağ-lı* connection-ADJR(COM), i.e. ‘with connection’). *Yönelik* as well as *bağlı* take dative arguments:

- (128) [*kadın-lar-a yönelik*] *bir dergi*
 woman-PL-DAT in.direction.to a journal
 ‘a journal for women’

- (129) [*Fransız ordu-sun-a bağlı*] *Mirage savaş uçak-lar-ı*
 French army-POSS-DAT connected Mirage war plane-PL-POSS
 ‘Mirage bombers which belong to the French army’

Another derived “connecting adjective” is *ilgili* ‘concerning’, (lit.: *ilgi-li* interest-ADJR(COM), i.e. ‘with interest’). *İlgili* takes instrumental arguments:

²⁸ Notice that there are clear distributional properties which allow us to speak of “adjective connectors with certain argument-binding properties” and not of postpositions. While postpositional phrases can only be adverbial (with the exception of phrases with *gibi* ‘like’, noted in 2.1.3.2 above), adjective phrases, on the other hand, can only be attributive and predicative—not, however, adverbial (see Schroeder 1999b: 138).

- (130) [*sinema gün-ler-i-yle ilgili*] *bir şey-ler*
 film day-PL-POSS-INSTR with.interest a thing-PL
 ‘some things concerning the film festival’

But note that complex adjective phrases of this type have the tendency to be combined with *olan*. What exactly a “complex” phrase is, has not yet been exactly determined. But, as mentioned above, there is a certain “weight” of the attributive phrase which requires its transformation into a participial phrase in position 2. In the following example, both variants are grammatically correct, but native speakers clearly prefer the variant with *olan*:

- (131) [*vefat ed-en bir kişi-nin kendi ülke-sin-e*
 die-PRT a person-GEN own land-POSS-DAT
nakled-il-me-si ile ilgili ol-an] *masraf-lar*
 transfer-PASS-N-POSS with with.interest be-PRT cost-PL
 ‘costs concerning the transfer of a corpse to the home country’

- (131') ?[*vefat eden bir kişinin kendi ülkesine nakledilmesi ile ilgili*] *masraflar*

The Georgian equivalents of these constructions would be either postmodifier postpositional (*zurnal-i mozdil-ta-tvis* journal-NOM adult-PL.OBL-for ‘a magazine for adults’) or adjectival (*kal-ta zurnal-i* woman-PL.OBL journal ‘a women’s magazine’, cf. (50); *sa-bavšv-o-ø zurnal-i* PREF-child-ADJR journal-NOM ‘children’s magazine’).

3. Discussion

So far, we have considered different forms of relational coding in Turkish and Georgian: inflectional vs. derivational vs. postpositional vs. lexical means, and initial vs. intermediate vs. prehead positions. At the same time, we hinted at some differences in meaning between these forms. In this section we will discuss some properties of specific forms and positions. Firstly, we will look at some contrasts to find out if there are inherent properties that characterize formal means: semantic oppositions like time-stability vs. change, classifying vs. characterizing, argumental vs. adverbial (in a broad sense); and pragmatic oppositions like referent anchoring vs. new information. Second, we will speculate on the different ways in which means of relational coding are used in Turkish and Georgian, to find out if there are implicational relations that govern coding variation.

3.1. Formal means of relational coding

As we said above (1.2.1.), the means of relational coding are formal and / or positional. Most formal means of relational coding combine paradigmatic and syntagmatic contrastivity. Different forms almost never form direct oppositions in the sense of occurring in the same slot. However, in most instances most slots are not filled,

and that is why the decoding of relations has to rely heavily on morphological contrasts, which may be considered one by one on a basis of semantic similarity, disregarding their positional differences.

Contrasts between different case categories are very rare. One example is the pragmatically conditioned opposition between partitive genitives and partitive ablatives in Turkish (see 2.1.1.).

As in many other languages, the neutralization of relations in a noun phrase is coded by a genitive. The genitive is an adnominal default relator neutralizing many relations that are otherwise differentiated in the same language or in different languages. For example, in the prehead slot, the Georgian classifying genitive corresponds to a bare (stem) form or to an “ablative” of material in Turkish (see 2.1.2.2.). Modern Georgian has neither bare stem nouns, nor ablatives with adjectival properties (ib.); so the neutralizing genitive “steps in”. Similarly, the genitive may extend its area if a language lacks or grammatically excludes a more specific device: ‘a problem of society’ is: *sazogado-ebriv-i p’roblema* (society-ADJR-NOM problem.NOM ‘societal problem’) with an adjective derived from *sazogadoeba-* ‘society’; but a suffix like *-ebriv-* does not exist in the related neighbouring language Mingrelian, and a genitive is used instead: *sazogadoeba-š p’roblema* (society-GEN problem.NOM).

The formal distinction between subject and object, which is fundamental on the clause level, is neutralized in the Georgian adnominal genitive. But in Turkish, the object of verbal nouns shares the coding of clausal objects, and the genitive is restricted to subjects.

With verbal nouns, the genitive seems to follow the usual accessibility hierarchy: languages that have objective genitives, have subjective genitives, languages that have genitives for indirect objects have a genitive coding of direct objects and subjects (Latin *obsequium regentis* obedience.NOM governor.GEN ‘obedience to the government’), the genitive with adverbial meanings (as in Latin *vias pecuniae* way.PL.NOM money.GEN ‘the road to getting money’) implies subjective and objective genitives, etc. The general rule that the more central relations tend to be coded by less role-specific means than peripheral, optional, adverbial relations, holds both on the clause level and on the level of noun-phrases.

One of the contrasts we looked at in this paper is the contrast between the genitive on the one hand and derivation, in particular adjectival derivation, on the other. Consider the contrast illustrated in (3)-(5): Turkish has the derivation strategy to express age where Georgian differentiates between derivation and genitive. While the genitive is the general, default form, the derivational suffix expresses something specific about age: age can be used to classify; an age-group is something stable, and as such more apt to be coded as a derived form (cf. *ocdaat-ian-i om-i* thirty-ADJR-NOM war-NOM ‘the Thirty Years’ War’), while genitives can, but must not, code changing relations, such as subject and object. Similarly, Georgian *sopl-is bič’-eb-i* (village-GEN lad-PL-NOM), Turkish *köy-ün erkek-ler-i* (village-GEN boy-PL-POSS) are men who happen to be / live in the village, but *sopl-el-i bič’-i* (village-ADJR-NOM lad-NOM) (see (89) and (108)) ‘a young villager’ or *Ankara-lı çocuk* (see

(100)) are people who are not just coming from a village or from Ankara; rather, their origin is their constant property. Or take again the example “problem of society” and “societal problem” (Georgian *sazogadoeb-is p’roblema* society-GEN problem vs. *sazogado-ebriv-i p’roblema* society-ADJR-NOM problem-NOM): the derivational adjective has a more general, scientific flavour, while the genitive would be used with a concrete situation (e.g. ‘... of *this* society’) (RK’); similarly, *samšoblo-s t’q’e-eb-i* parents.country-GEN forest-PL-NOM are the forests of the country where I come from, whereas *mšobl-iur-i t’q’e-eb-i* parent-ADJR-NOM forest-PL-NOM are the forests seen from a general point of view of what they mean to people, etc.

Contrary to derivation, participial forms (as described in 2.2.2.) do not classify or categorize as such. As adjectival verb forms, they share the typical aptitude of “nouny” words for classification and the typical aptitude of verbs for a characterization by events or temporary states. This does not preclude the possibility of classification: the “club” of states possessing the atomic bomb certainly form a class, but in Georgian they are called *at’omur-i bomb-is mkone kveq’n-eb-i* (RK’) (atomic-NOM bomb-GEN having(PRT).NOM land-PL-NOM), not: *at’omur-i bomb-ian-i kveq’n-eb-i* (RK’) (atomic-NOM bomb-ADJR-NOM land-PL-NOM), perhaps because they are specifically in control of, and not simply marked by, the bomb. In a sense, the participial forms can be used with any accidental situation: in (111), “women from rural areas” characterizes them by their origin, and the participial expression does not tell if they just came from there, or if they are “rural”; in (116), the person on the platform is not classified by being there, and the location of a monastery in (117) does not categorize it. In a sense, then, connecting participles are simply participles in general that may be used to express any event, state, characteristics, class etc., which in turn may refer to old information.²⁹ They may be restrictive or non-restrictive, and thus offer a strategy to express nonrestrictivity (see (114)-(115)). Derivations are used to form new, time-stable concepts; participial expressions are not.

Continuing with formal contrasts, we may compare genitives with posthead postpositional modifiers. *Vaxt’ang-is sačukar-i* (Vakhtang-GEN gift-NOM) can mean both ‘a gift by V.’ and ‘a gift for V.’ The semantics of the genitive is context-dependent. By contrast, a postpositional modifier specifies the relation: *sačukar-i Vaxt’ang-is-tvis damavic’q’da* (gift-NOM Vakhtang-GEN-for I.forgot.it), e.g. ‘I forgot to buy a gift for him’ vs. *Vaxt’ang-is sačukar-i damavic’q’da* (Vakhtang-GEN gift-NOM I.forgot.it) ‘I forgot to take the gift for V. / by V. with me’.

A common contrast is the one between derivational premodifier and case-marked postmodifier expressions (see 2.1.3.1). *k’oniak’-ian-i čai* (cognac-ADJR-NOM tea.NOM) is a tea that has cognac in it, *čai k’oniak’-it* (tea.Nom cognac-INSTR) can mean both that cognac has been poured into the tea or that it is drunk as an additional beverage. *Mosk’ov-el-i st’umar-i* (Moscow-ADJR-NOM guest-NOM) is a

²⁹ The participle clauses are often used like relative clauses to anchor referents in the universe of discourse, cf. Schroeder (1997: 352-353) for Turkish.

guest who is classified as an inhabitant of Moscow, *st'umar-i Mosk'ov-idan* (guest-NOM Moscow-from) may be an inhabitant of Tbilisi coming from Moscow. In this regard, posthead postpositional phrases are comparable to participial clauses: as such, they are not used to classify. The Russicism of (73) does not consist in the use of a postpositional phrase, but in its use as a postmodifier not apt to classify a type of cigarette. On the other hand, postpositional phrases are not connected by a participle and are thus excluded from the attribute 2 position (see 1.4.) both in Turkish and Georgian; instead, they occur in a position characteristic of relative clauses in Georgian. But why should they be excluded from the attribute 3a position? In fact, there is one exception: postpositional phrases with *-vit* 'like' and their Turkish equivalents do occur in this slot (see (62) and 2.1.3.2) that is normally filled by adjectives because they express a characterization. But the occurrence of a "be like"-construction in this slot is not accidental: in English, qualifying adjectives express noun-noun relations; these are either possessive (as in: *industrial area*; see 2.2.1.1) or "equative" (BE LIKE-relations: Leitzke 1989: 131; 176). The prehead position of "like"-phrases, then, has a semantic basis: they characterize like "time stable" adjectives. And indeed, similar meanings are expressed by derivation, e.g. Georgian: *Nino-s-nair-i kal-i* (Nino-GEN-ADJR-NOM woman-NOM) \approx *Nino-sa-vit kal-i* (Nino-DAT-like woman-NOM) – 'a woman like Nino', and Turkish: *gökdelen-imsi bir şey* (skyscraper-ADJR a thing) \approx *gökdelen gibi bir şey* (skyscraper like a thing) 'something like a skyscraper'.

Still, the position of postpositional phrases with Georgian *-vit* \approx Turkish *gibi* is exceptional. The general rule is positional: in general, prehead attributes cannot be postpositional or non-genitive case forms. Instead of turning such forms into participial or clausal constructions, derivational phrases of the *-ki* type or phrases headed by connecting adjectives, as in Turkish, Georgian usually takes resort to a different strategy; it puts them into a posthead slot established by postmodifier relative clauses which do not exist in Turkish.

Finally, the relation between participial coding and postpositional coding is a contrast of specificity: the relation coded by posthead postpositional modifiers is less specific, but most postpositional modifiers can be expanded into semantically more specific participial forms, and this is the basis of their traditional interpretation (see 1.2.3): the guest from Moscow is the guest coming /arrived / ... from Moscow or who has come from Moscow.

3.2. Relational coding inside and outside the noun phrase

How does relational coding inside the noun phrase compare to relational coding on the clause level? The formal contrasts are based on semantic types known from other contexts; for instance, the "time-stability" of attributive adjectives (primary or derived) is a feature (more or less) typical of adjectives in general, e.g. in predicative use, and the semantics of participles is the same in adnominal and "adverbial" use; the use of postpositional phrases for "peripheral" relations such as "addition", "point of departure" and the like is not different from their clausal adverbial use. The noun-

phrase-internal genitive, on the other hand, has almost no clause level counterpart to compare with, and in a sense, it has no “meaning” of its own anyway—aside from the unspecific “thing-to-thing” relation established by early structuralists (see e.g. de Groot 1956-57).

What all these forms, with the exception of postpositional phrases, have in common is that they are normally related to a noun: as attributes they are related to their head noun; as complements or secondary predicates they enter a predicative relation with subject or object noun phrases. In this sense, they are noun-phrase specific (see Boeder & Schroeder 1998 for some discussion).

If we look at the relations coded by these noun-phrase specific devices, it turns out that they are different from relational meanings coded on the clause level: for instance, possessivity as coded e.g. by possessive adjectival derivation (or by the genitive, for that matter) is not a typical “case-role” except in noun-related constructions, while relations that are distinct on the clause level (subject, object etc.) tend to be neutralized on the noun phrase level. Again, postpositional phrases are an exception, but their status is special, anyway (see 2.1.3).

In other words, in Turkish and Georgian, relational coding guarantees a maximum of formal distinctness between noun phrase constituents and clause-level constituents.

3.3. Positional contrasts

As we said above, positional differences are not overt most of the time; but there are contrasts that differ from those outlined above. The slots of Turkish and Georgian noun phrases presented in 1.4 are those more or less known from other languages.³⁰

As for the character of attribution, we may follow Teyssier’s lucid description of English adjectival attribution (Teyssier 1968) and say that the prehead slots (attributes 3 and 4) are classificatory (concept-building bare forms or genitives and classificatory adjectives), while posthead slots are non-classificatory, “appositive” and characterized by “inceptive predication” (ib. 247) and related to secondary predicates. The intermediate position between the prehead slots and the initial slots gives a “characterization”; this is particularly obvious where one form—postpositional phrases—occurs in two positions; the phrases with the postposition “like” in the

³⁰ Both the Georgian and the Turkish order follow the iconic principles outlined in Rijkhoff (1990, 1992, 1998). That is, in line with the “principle of domain integrity”, constituents of one domain, for instance adjectives, are not interrupted by constituents of another domain. The same principle also accounts for the peripheral position of genitives and relative or participle clauses, since it also states that constituents of matrix domains (i.e. adjectives and determiners) prefer not to be interrupted by embedded domains (i.e. genitives and participial phrases / relative clauses). This ordering in turn is reinforced by the “principle of increasing complexity”, which states that the less complex a constituent is, the nearer it may be placed to the head, viz. the complexity constraints on the different attribute slots as discussed in 2.2.1.2.

intermediate position “characterize” (2.1.3.2.), Georgian postmodifier postpositional phrases do not. The initial slots (genitive, determiners, participial phrases) have specific discourse-pragmatic properties : they “identify” by deixis or supply an “anchor” by relating the noun phrase to information given in the universe of discourse (e.g. in the form of a participial clause) or indicate topicality.³¹ Comparing formal and positional contrasts, we may say that the former code semantic type, while the latter code a referential type. Indeed, referentiality is related to position: nominals in the prehead position 3b and 4 are non-referential; those in 3a can be referential in Georgian (as witnessed by deictic elements, see (96)-(98) vs. (102)-(103)), and those in the initial positions (genitives and participial clauses) are unrestricted with regard to referentiality in both languages.

3.4. Position and other properties

There are some additional correlations between position and other properties. Firstly, position is partially related to *relational specificity*: bare forms and prehead genitives in slot 4 (and first constituents of compounds) do not code specific relations; derivation tends to be more specific, and participial forms are the most explicit means of relational coding. The non-specificity of slot 4 is compensated for by context-dependency on the one hand (see 2.1.2.1.) and by a typicality relation on the other. (The typical relation between “stone” and “house” is that the house is made of stone, while we need specific contexts to understand a stone-house as one in front of which there is a remarkable stone, and the like.) In addition, the tendency of slot 4 forms to be “bare” may have a functional basis. The more typical a relation of something is, the more semiotic unmarkedness is to be expected. For instance, locatives of places tend to be morphologically less marked than locatives of non-places. Similarly, many substances and functions are typically related to something else than what they consist of or are made of or are made for. So the unmarked bare form is the “ideal” form for functions such as “material” or “destination”. On the other hand, the less typical (non-argumental, peripheral) a relation is, the more explicit (semiotically marked) relational coding tends to be (adverbial case, postposition, participial form).

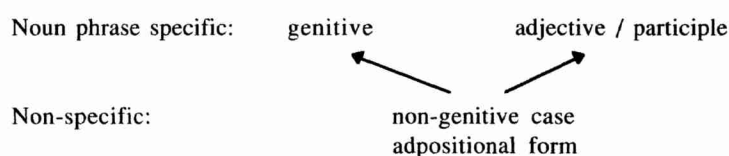
Second, position is related to *time stability*. The modifiers in the prehead positions 3 and 4 (bare stem, genitive, adjective) tend to have a time-stable meaning. Again, this converges with the “typicality”-based tendency: materials and functions (“destinations”) tend to be time-stable and thus are particularly apt to classify their head nouns.

³¹ See Schroeder (1999a: 187, 188, et passim) for a discourse-oriented approach, in which the separability of the Turkish genitive (see 1.4.1.), as well as distributional properties in contrast to the locative in existentials and the ablative in partitive phrases (see 2.1.1.), are regarded as indicators of the topical properties of the Turkish genitive.

Third, position is related to *complexity*. Prehead positions tend to be less complex (2.1.2.): bare forms in Turkish and classificatory genitives in Georgian allow no deictic complexity at all and no, or, as for Turkish, almost no attribute, although they allow cross-reference that distinguishes them from first components of compounds; and they allow no, or, as for Turkish, almost no complexity, except same-type recursivity (see 2.1.2.1.).

Intermediate positions allow a restricted complexity (see 2.2.1.). Initial positions are more or less unconstrained: participial clauses have (almost) all clausal privileges, and initial genitives have (almost) all privileges a noun phrase can have. One may envisage a tentative implicational scale of complexity: same-type recursivity < non-hierarchical modifier complexity < (non-) islandhood < unconstrained complexity. This scale allows us to characterize differences between languages: for every slot, Turkish allows the same degree of complexity as Georgian, but not vice versa: in some instances, Georgian allows a complexity more "to the right side" of the scale.

Finally, let us come back to the noun phrase specificity of relational coding and to the question of *postmodification*. As we saw above, relational coding in the Turkish and Georgian noun phrase is restricted to forms that are related to nouns: genitives, "like"-phrases, adjectives, and participles. Adjuncts and the like that do not fit into these forms are either coded by a neutralizing genitive or transformed into participial clauses or into derived adjectives; in other words they are adapted according to the general constraint:



However, this seems to be a constraint on premodifiers rather than on noun phrases. Languages with a postmodifier slot such as Georgian (with its postnominal relative clause) have modifiers that are not inherently related to nouns (noun phrase specific): Georgian has postmodifier non-genitive (adverbial) case forms and postmodifier postpositional phrases; Turkish has no postmodifier slot: it has neither postnominal relative clauses nor any other postmodifier.

The noun phrase-specificity constraint on premodifiers probably has a good functional basis: it ensures the proper processing of nominal groups by raising the expectation of a nominal head noun.

4. Results

To a large extent, the structure of Turkish and Georgian noun phrases is isomorphic. The order of slots, their characteristics, general constraints, and even small details (like the exceptional behavior of "like"-phrases) are almost the same. It remains to be explored how far this is to be "explained" by areal convergence.

However, there are a few differences:

1. Georgian has an additional postmodifier slot for relative clauses and postpositional phrases. Turkish equivalents of these modifiers have to be adapted to the form required by a premodifier constraint of both Turkish and Georgian: they must be noun-phrase specific. The Turkish counterparts of both relative clauses and noun phrase internal postpositional phrases appear as participial clauses.

2. As we saw above (in the final paragraph of 1.4.2.), the position of constituents is somewhat more flexible in Georgian than in Turkish: there are reversals of attribute 3 and attribute 4 that enhance structural transparency. This flexibility may correlate with coding differences: genitive and adjective agreement in Georgian vs. bare stem nouns and adjectives in Turkish.

The system of relational coding in both languages is characterized by two principles of variation:

1. There are more or less specific forms of relational coding, and one form of the latter type is the genitive, which is a default form. One and the same relation may be coded by more or less specific forms; the choice may be “stylistic”³² or it may be grammaticalized in a specific language. For instance, one language or style may use the unspecific default form more often than the other, or the choice of the genitive may be triggered by a grammatical rule. Similarly, the choice between participial, derivational and other forms is largely grammaticalized in Turkish and Georgian, and in languages like Hungarian, which shows very specific similarities to Turkish; cf. Laczkó (1995: 45-47; 90-94; 127-129), Kenesei et al. (1998: 97-98).

2. Non-relational properties such as referentiality and complexity also determine the form of relational coding and require a language-specific allotment to adjacent slots: determination by deictic elements is possible on the basis of Georgian adjectival derivation, but Turkish has to resort to adjacent position in this case (e.g. to participial coding). In other words, the boundaries between adjacent morphological categories are language-specific in the sense that a specific form may cover a larger functional area, reaching into an area covered by the adjacent category in a different language.

It remains to be investigated how useful these parameters of variation are and how they correlate with other features of the respective languages.

³² According to the Geneva School (Bally 1944), “relation [between nouns]” is naturally coded by “rection” (prepositions and transitive verbs), but it may also be coded by “accord” (adjectival attribution) which is typical of “inhérence”; in: *société coopérative de consommation* ‘consumer co-operative society’, the “faux adjectif” *co-opératif* ‘of consumers’ allows a stylistically motivated alternation of “accord” and “rection” in the relational coding of “co-operators” and “consumption” in the noun phrase.

Abbreviations

ABL	ablative	N	nominalizing suffix
ADJR	adjective-forming suffix	NEG	negative
ADV	adverbial (case)	NOM	nominative
AOR	aorist	OBL	oblique
COM	comitative	PASS	passive
DAT	dative	PL	plural
DEM	demonstrative	POSS	possessive
ERG	ergative	PREF	prefix
GEN	genitive	PREV	preverb
INDEF	indefinite article	PRS	present tense
INSTR	instrumental	PRT	participle suffix
IO	indirect object	SG	singular
LOC	locative	SUBJ	subject

Saub(ari) refers to the published transcript of a discussion, *Kafka* to the Georgian translation of "The Trial" by Franz Kafka; other abbreviations such as (GM), (ML) refer to different Georgian informants.

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