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Turkic Languages

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Editorial note

The journal TURKIC LANGUAGES concludes its fourth year of issue with articles and reports covering a wide spectrum of Turcological problems.

This time, particular prominence is given to the southwestern area of the Turkic world. Geoffrey Haig continues his research on voice in Turkish, suggesting a unified account of the passive, according to which passive is a detransitivizer. Claus Schönig investigates Mongolian loanwords in Oghuz Turkic as indicators of specific linguistic and cultural areas in Southwest Asia. The article by Winfried Boeder and Christoph Schroeder deals with similarities and differences with respect to relational coding in Georgian and Turkish noun phrases. Lars Johanson addresses the question of traces of the old Turkic copula verb *er-*, mainly in Oghuz languages. One contribution focuses on the northeastern area: Alisa V. Esipova's article, describing the transformative use of certain participles in Shor, a Turkic language of South Siberia.

In volume 3 of TURKIC LANGUAGES it was reported that the famous Turcologist Karl Heinrich Menges had passed away in Vienna on the 20th of September 1999 at the age of 91. The first contribution published in our journal in commemoration of this great scholar is an obituary written by Gerhard Doerfer, a not less well-known scholar, who graduated under Menges' supervision at the Freie Universität Berlin in 1954.

Sharon Inkelas, Aylin Küntay, Ronald Sprouse and Orhan Orgun report on a remarkable lexical project carried out in the Linguistics Department at the University of California, Berkeley. The *Turkish Electronic Living Lexicon*, designed primarily for linguistic research and accessible over the Internet, is a searchable database containing orthographic representations and phonemic transcriptions.

Elisabetta Ragagnin, Mainz, gives us a first report on a new project aiming at the documentation and description of the language of the nomadic Dukha, a practically unknown and endangered variety of Tuvan spoken in northern Mongolia. The undertaking is one of a growing number of descriptive projects in modern-day Turcology motivated by the need to collect fresh linguistic data in intensive fieldwork.

Erika Taube publishes a contribution appraising the work of the Tuvan scholar Dorug-ool Aldyn-oolovič Moŋguš, known for his linguistic work on almost all aspects of Tuvan. The article consists of a translation of a biographical sketch published in the journal *Bašqï* and some additional personal remarks by Erika Taube herself.

In the review section, Éva Á. Csató evaluates A. Sumru Özsoy's new textbook on Turkish morphosyntax. Arienne M. Dwyer deals with Gunnar Jarring's monumental book on the place-names of the Lopnor and Tarim area, a work based on the rich materials from Sven Hedin's expeditions. The book is, as the reviewer points out, much more than a list of place-names, but rather something like a dictionary of early modern Central Tarim Turkic.

Lars Johanson

Nachruf für Karl Heinrich Menges

Gerhard Doerfer

This obituary commemorates the scholarly work of Karl Heinrich Menges (1908-1999).

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Es gibt nur drei Rassen in der Welt: Führer, Geführte und Eremiten. Führer – das sind die großen Verführer der Völker; Geführte – das sind jene Massen, die den Führern törichterweise vertrauen; Eremiten: die großen Einsamen, die sich vom saṃsāra des Führens und Geführtwerdens abseits halten.

Karl Heinrich Menges war ein Eremit. In seinem Leben hat er stets seine eigene Position bewahrt. Man mag mit seinen Ansichten konform gehen oder sie ablehnen – aber was er tat und schrieb war voller *Geist*. Es ist nicht unbekannt, daß ich, sein Schüler, in Bezug auf die altaische Frage anderer Meinung bin. Aber ich kann nur die Worte eines Kollegen unterstreichen: „Hätten doch alle Altaisten menges'sches Format, die Auseinandersetzung könnte ein intellektuelles Vergnügen sein!"

K. H. Menges wurde am 22. April 1908 zu Frankfurt am Main geboren. Und den Akzent der alten Reichsstadt hat er bis zu seinem Tod (20.09.1999) bewahrt. Geben wir ihm nun selbst das Wort: „Da ich Ende November 1936 im Zusammenhang mit politischen Massenverhaftungen, welche die Gestapo in Frankfurt am Main und Berlin vorgenommen hatte, ausführlich verhört wurde und dabei erkannte, daß meiner persönlichen Freiheit wie wissenschaftlichen Tätigkeit in Deutschland bald ein Ende bereitet werden könnte, begab ich mich ... in die Emigration, zuerst nach der ČSR, dann der Türkei, von wo ich 1940 an die Columbia University ... berufen wurde". Auch in der Emigration bewahrte er sich sein eigenes Urteil und geriet keineswegs zum blinden Anbeter von Modetrends (wie des „Strukturalismus"). Einen Ruf nach Deutschland, der aber nur auf ein Extraordinariat hinauslief und der allerdings seinem Format nich gerecht geworden wäre, lehnte er ab. So geriet er schließlich nach Wien, wo sein Gehalt als Universitätslektor zwar dürftig war (1978ff.), aber ihm geistige Unabhängigkeit sicherte. Bis zu seinem Tode hat er dort gelehrt, nie einer einzwängenden Regel unterworfen. Vivat Österreich!

Seine Vorlesungen waren ein geistiger Genuß. Die Weite und Tiefe seines Wissens werden jedem, der ihn gehört hat, unvergessen bleiben. An ihm wurde Goethes Wort wahr: „Alles worein der Mensch sich ernstlich einläßt, ist ein Unendliches".

Die Fülle seines Schaffens kann hier nur ganz partiell gestreift werden: Vgl. dazu: Steven E. Hegaard (1979) und György Hazai in Menges(1976): *Volkskundliche Texte aus Ost-Türkistan* 7-16. Gerade dieses Werk, zusammen mit (selber Titel) Berlin 1933, Berlin 1943 und dem *Glossar* von 1955 bilden ein unvergängliches opus magnum admirabile im Geiste eines W. Radloff, ebenso wie *Qaraqalpaq grammar* (1947); *The oriental elements in the vocabulary of the oldest Russian epos* (1951); *The Turkic languages and peoples* (1968 und 1995).

Seine Interessen waren weitgespannt und berührten auch Tungusica, Palaioasiatica, Dravidica und anderes mehr. Dennoch hat er nie den Urboden unseres Faches, den osmanischen, verlassen.

So ist denn nun dieser große Geist dahingegangen. Keiner, der ihn erlebt hat, wird ihn je vergessen.

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

Winfried Boeder & Christoph Schroeder

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.

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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'

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.

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[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 ex-presssed 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.

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

[4] Note, however, that certain referential-semantic properties of the noun phrase in ques-tion 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 Verhält-nisse 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.

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[6] See Gabelentz (1901[2] (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

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[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 Özünlü 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, occurence 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'urȝn-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-ø*   *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

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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) *ʒm-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-rčen-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-ø [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-ø   damouk'idebel-i   saxelmc'ipo-d*
      Abkhazia-GEN   declaration-NOM independent-ADV   state-ADV

      Sabč'o-ta   K'avšir-is   šemadgenloba-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-ø 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-ø   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 *wa-ter-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: *ʒrox-is civ-i kon-i* cow-GEN cold-NOM fat-NOM – 'cold cow-fat' instead of: *civ-i ʒrox-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-ø   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. "adverbal" modification strategies.

Turkish
Manisa şehr-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

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[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 nomi-nalizations,[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 preced-ing the head noun which shows an optional allomorphic reduction of its marker in some dialects:

(35) *c'ipl-is   xe-ϕ   >   c'ipl-i xe-ϕ*
      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 prede-terminer 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, corre-sponds 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 pro-ductive type of construction:

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[15] Kornfilt (1997: 225) cites *fetih* 'conquest' as one of the rare nominalizations allowing an objective genitive, as in *İstanbul'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 genitives, 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 Schaaik (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*] *radyo-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 müdürlüğ-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 çekmecesi*. 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-ø*
Ankara-GEN street-NOM

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

(49) *Tbilis-is̩   Ank'ara-s   kuča-ø*
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) *ǯar-is-k'ac-* army-GEN-man- 'warrior'; *col-is-ʒma-* 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 *biʒa-js švil-* uncle-GEN-child 'cousin' > *biʒa-s-švil-* > *biʒa-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: *ženščin 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 *ıhlamur* '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):

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[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'avis* 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) *čai-ø   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   cxovreb-idan*
      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 čai*, (55')
*leksik'on-it-urt Kartul-i tekst'-eb-i, (56') **Vaxt'ang-is-tvis sačukar-i*, (57') **Krist'e-*

s cxovreb-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 samušao-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) *saxareb-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   gadayeb-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-ø   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-ø   Sabč'o-ta imp'eria-ši mcxovreb-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) *čai-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   čai-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   čai-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) *čai-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   čai-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 čai 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 čai 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   čai-ø   šakr-it*
      I.drank.it tea-NOM   sugar-INSTR
      'I drank tea with sugar'

is perfect, a sentence like:

(72) *gelodeba*   *čai-ø*   *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, Šalamberiʒe (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

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[17] See 1.2.3. The doyen of the Georgian syntacticians, Leo K'vač'aʒe (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* ($\approx$ 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.

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[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)	*dependent-marked*: genitive-marked > bare stem	*unmarked*
Turkish	specifying genitive or partitive ablative	adjective (phrase) (including material ablative)	*unmarked*: bare stem	*head-marked*: 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 pariticipial "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:

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[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" -*sız*:

(78) *müsik*-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 ucnob*]-*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*]   *koč̣r*]-*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) [*učveulo 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*]   *ʒvl-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-ø*
      ['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'irvel msoplio om-**amdel**-i*   *cxovreba-ø* (LG)
      first   world   war-ADJR-NOM life-NOM
      'life before the First World War'

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[21] This suffix originated from forms like *gušin-del-* yesterday-ADJR- 'yesterday's' re-analysed as *guš-indel-*; see Šaniʒe 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'; Šaniʒe 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   sopl*-el-*i-a* (LG)
      this my-NOM   village-ADJR-NOM-is
      'he is from my village'

(90) *sopl*-**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 differenti-
ated. 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-ı*)
      [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   süt-lü   kahve*
   much milk-ADJR(COM) coffee
   'coffee with lots of milk'

but not:

(95) b. **[bu   süt-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   süt-le   karıştır-ıl-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.:

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[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-assignement 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*] *sopl*]-*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 nacnob-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'

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[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-ø   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   karşılığ-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 attrib-
         utes 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 re-
stricted 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 predi-
cate *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:

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[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 postpostional (*zurnal-i mozrdil-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 occuring 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) ≈ *Nino-sa-vit kal-i* (Nino-DAT-like woman-NOM) – 'a woman like Nino', and Turkish: *gökdelen-imsi bir şey* (skyscraper-ADJR a thing) ≈ *gökdelen gibi bir şey* (skyscraper like a thing) 'something like a skyscraper'.

Still, the position of postpositional phrases with Georgian *-vit* ≈ 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

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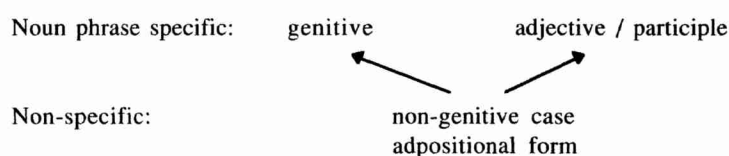
Second, position is related to *time stability*. The modifiers in the prehead positions 3 and 4 (bare stem, genitive, adjective) tend to have a time-stable meaning. Again, this converges with the "typicality"-based tendency: materials and functions ("destinations") tend to be time-stable and thus are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

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[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:

Noun phrase specific: genitive   adjective / participle

Non-specific: non-genitive case
                                         adpositional form

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 isomorphous. 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.

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[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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Shor participles of transition into another state

Alisa V. Esipova

The article examines attributively used Shor participles describing an acquired state (like *ripened* or *melted*). These participles are formed from verbs denoting their subject's gradual transition into a new state. Such verbs are intransitive; they express an involuntary dynamic terminative action of an inactive subject. Shor has a choice between quite a number of participial formants, but only two of them can appear in participles of this semantic type. The meaning of a concrete participial form is determined by a number of semantic and structural factors: the semantics of the verbal stem, the semantics of the participial formant, the presence of voice markers and analytical action modifiers of the *aktionsart* type. The article analyses the components constituting the semantics of such participles.

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Participles are verbal forms. They are built by joining participial affixes to a verb stem. In modern Shor, such affixes are *-r, -ġan, -čatqan, -čaŋ, -ġalaq* and *-ġadïg*. Participles can be formed from an analytical verb (containing auxiliary verbs) and from voice derivates of a verb. Participles can govern oblique cases of nouns, be modified by adverbs, and express temporal and modal meanings. Their characteristic feature is that they can function as attributes, unlike all the other verbal forms.

Frequency of occurrence of different participial forms (or even of the positive and the negative form of a participle) differs greatly in the Shor language. Participles formed from voice derivates can be interpreted in two ways. The same participial form can render different temporal and modal semantics. We want to show what factors determine the concrete meaning of each participial form, and what is the role of the verb semantics in it. We will describe only attributive functions of participles.

As it is known, a participial attribute expresses a dynamic or static characteristic of an entity by its head noun. Dynamic attributes characterize an entity by some action, static attributes describe a state of an entity which is the result of some action. The former can be expressed by the majority of Shor participial forms, while the latter almost exclusively consist of participles with the affix *-ġan*.

The participles under examination belong to the second group. Among such participles, we can point out the following subgroups, differing in the type of resultative state:

1) participles denoting changes in an object's appearance as the result of an action which leaves some material traces on it: *uģžal parģan qolï* 'his broken arm';
2) participles denoting absence of any outer traces on an object, as if it has not changed: *ayttïrģan qïs* 'a given away (lit. talked-away) girl, i.e. a girl whose parents have already given their consent to her marriage with someone, often without asking for her opinion', *pallarģa salap pergen üyček* 'a room given to children, meant for children';
3) participles denoting inner state of an object: *qoruq parģan qïs* 'a frightened girl';
4) participles denoting completion of an object's transition into a new state: *pïšqan čestek* 'ripened berry';
5) participles denoting coming into existence (creation, emergence, birth, origin) or disappearance of an object: *tigineŋ ištep alģan šanam* 'my ski made of fir-wood';
6) participles denoting location of an object: *mïnda čïlģan qalïq* 'people who gathered here';
7) participles denoting some relation with or attitude towards other objects: *kölengen qïs* 'a beloved girl', *Ay Sabaq šeni čajalģan qïs* 'a girl looking like Ay Sabak (a girl made to resemble Ay Sabak)'.

These participial meanings were first pointed out by P. A. Noženko (1972: 57). In our materials, not all the semantic types of participles are equally frequent. Therefore, we will describe the most frequent types first. We have already dealt with participles denoting changes in an object's appearance as a result of a participial action (Esipova 1981: 71-81). In the present article, we analyze participles denoting completion of an object's transition into a new state.

Such participles are formed from verbs with the meaning of "their subject's gradual transition into some state" (Avilova 1976: 168). These verbs are intransitive, and most of them are derived from nominal stems. They include (a) verbs of acquiring some colour quality: *aģar-* 'to grow white', *qarar-* 'to darken, to grow black', *köger-* 'to grow green or blue', *qïzar-* 'to become red, to redden'; (b) verbs of gradual acquisition of some quality as a characteristic feature of their subject (Avilova 1976: 168): *irik-* 'to rot', *qayïl-* 'to melt', *qara-* 'to get older', *köy-* 'to burn', *qur-* 'to dry', *musta-* 'to get frozen, icy', *öl-* 'to die', *öl pol-* 'to soak', *ös-* 'to grow', *poš pol-* 'to become empty', *pïš-* 'to ripen', *tatta-* 'to get rusty', *toŋ-* 'to get cold', *topay par-* 'to get blunt, not sharp'; *torsla-* 'to get calloused', *uš-* 'to fall', *üš-* 'to grow feeble, to go out'.

These verbs express a dynamic action with an non-agentive subject. This action is involuntary; it proceeds irrespective of its subject's will. Such actions have some critical point, a limit at which they are completely fulfilled and, consequently, exhausted. An action stops after the critical point has been reached. A potential limit of a verbal action

allows for the combining of such verbal stems with the affix *-ġan*. In these combinations, the participial affix denotes a completion of the verb's action, and not its time reference. These participial forms render some state of an object; this state is achieved as a result of their action. The resulting state is new for this object; it was not in this state before the action had been completed. Since such participles are formed from verbs denoting a *dynamic* action (even though their subject is non-agentive), they are also dynamic: they express a *transition* from one state into another one. For example, in the attributive group *köygen töŋneš* 'a burnt stump', the object *töŋneš* 'stump' has acquired a new state as a result of the process *köy* 'to burn': a stump was burning, burning and, finally, has burnt out.

In our materials, these participles are represented only by the forms *-ġan* and *-ġalaq*. The former signals the transition of an object into a new state; the latter stresses that this transition has not been achieved yet. For example, *Petya emdi kürdek sandige Tubun tağdïŋ tözündağï üyčekte čatča, sug kežire ezil-gelek qarlïg tasqïl čyltrapča* (AT, 14) 'Petja lives now in a hut at the foot of the steep humpback Tubun (a mountain); across the river, a bare mountain (devoid of vegetation), covered with snow which has not melted yet, is shining'.[1] *Kižiler poğda öskelek qalbanï čipčalar* (Čisp.) 'People eat *kalba* (a plant) which has not grown big yet.'

As we have already stated, the described participles are formed from intransitive verbs. Therefore, the noun they modify is the subject of their action (*ölgen kiži* 'a deceased person', cf. *kiži ölgen* 'a person deceased'). The following sentence can be an illustration of this: *Eski balïq aakelgende – čïzï-ġan balïq aakeltirzar dep, soyčaŋnar bolturlar.* 'When (fishermen) brought old fish, (tradesmen) beat (them), saying 'You brought spoiled fish!' (ŠF, 306)

Intransitivity of the main verb also presupposes that these participles rarely have voice markers (only 3% of the forms described, according to our data). They are possible only if the head noun is an inanimate object. The markers are *-l-* and *-n-* affixes with a reflexive-passive semantics. On the one hand, they indicate that an action is directed to the subject itself. On the other hand, they denote that this action is involuntary, it is instigated by some circumstances, it proceeds irrespective of the subject's will. For example:

Monitor musta-n par-ġan čerdi pary-čoq küžübe tegdirgen, tooŋ parġan čer teze perinmeen. (AT, 9)

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[1] Translations given without an indication of the source, and word for word translations are made by the author of the article. We use the system of *Philologiae turcicae fundamenta* (1959) for the transliteration of Shor, although we write *ġ* instead of *γ*. For the transliteration of Russian, we use the international scholarly system (Shaw 1967).

'The monitor was beating the ice-covered soil very strongly, but the frozen soil did not give in.' (ZG, 18).

Art-ïl par-ġan qarlardï ķörüp, tuyuqa erbektedi:.. .(AT, 10)
'And looking at lots of overhanging (piled up) snow, he said warningly:...' (ZG, 19)

Compare the semantics of attributive groups *musta-n par-ġan čer* and *art-ïl par-ġan qarlar.* 'Ice-covered soil' denotes that 'soil was covered with ice' and 'lots of piled up snow' denotes that 'lots of snow was piled up'. The soil was covered with ice because of the frost, and lots of snow was piled up (on trees, mountains, roofs) because of great snow-falls.

Most of the participles described are formed from analytical verbs. The choice of an auxiliary verb is determined by the semantics both of the main verbs and of the participial affix. Main verbs express changes in their subjects' state and their transition into another state. The transition process has its starting and finishing points. The participial affix *-ġan* denotes the completion of this process. Hence an auxiliary verb in the participle's composition either indicates its finishing point (*par-*, *per-*, *ïs-*) or signifies that the subject of this process remains in a new state achieved as a result of this transition (*qal-*, *sal-*, *tur-*). For example: *čizip par-ġan toġalaq* 'a rotten beam (log)', i.e. 'a beam which has gone rotten' (completion of the process of becoming rotten); *ös qal-ġan öleŋ* '"grown-up" grass, grass that has grown'; literally: 'grass that remained grown'.

Aside from some *aktionsart* meaning, all the above-mentioned auxiliary verbs denote the completion of an action, which is also characteristic of the participial affix *-ġan*. The latter "takes" this meaning off the auxiliary verb, which, therefore, renders only the *aktionsart* characteristics of the action modified: Its duration (*qal-*, *sal-*, *tur-*), direction (*par-*), phase (*per-*) or rapidness, unexpectedness and frequency (*ïs-*).

The latter verb appears only once in our material. Its occurrence is not accidental. In this example, the main and the auxiliary verbs express opposed characteristics of the action modified: the main verb shows its gradualness while *ïs-* ascribes instantaneousness to it:

Tozun ayïġarba ol poš polub-us-qan (< polïp+ïs-qan) ušqa qošta kelip, tubannïg kürüptü kördü, anaŋ-la pažin čaba tudundu. (AT, 41)
'When the dust cleared, he ran to the empty edge (literally: to the edge which became empty), looked into the foggy abyss, and grasped his head.' (ZG, 72)

In the attributive group *poš polub-us-qan ušqa* 'to the edge which became empty' the auxiliary verb *ïs-* indicates that the edge suddenly became empty, i.e. rapidly and unexpectedly.

The auxiliary verb *par-* (its lexical meaning is 'to go, to go away') is most frequent among the analysed participles. It usually expresses the spreading of an action along the surface, upwards or downwards. For example:

> *Tegen, tatap parġan, ġayka anda tese sug šurlaġï!* (AT, 17)
> 'Well, it is only a rusty female screw (literally: a screw which became rusty), and there is a water drop on it!' (ZG, 34)

The female screw was gradually getting rustier and, at last, got rusty, i.e. first, its surface was clean, and later, it became covered with rust.

> *Qïzar par-ġan čüzübe komsomolets Alyoša köründü.* (AT, 7)
> 'With a flushed face, the young Comsomol League member Aleša appeared.' (SG, 18)

In the attributive group *qïzar par-ġan čüzübe* 'with a flushed face', the verb *par-* denotes, as in the previous example, the spreading of the action along the surface: the whole face went red.

> *... tooŋ parg-ġan čer teze perinmeen* (AT, 9)
> '... but the frozen soil did not give in' (ZG, 18)

In the group *tooŋ par-ġan čer* 'the frozen soil', the verb *par-* indicates that the action was directed downwards from the surface: frost reached even lower layers of the soil. Examples to show that *par-* can express "upward directedness" will be given later.

In two-component participles, the verb *par-* can express completion of an action without its directedness. E.g.:

> *Po erten Čekmasovġa topay par-ġan qaylardï čidigede tartïbïzarġa kerek polġan.* (AT; 41)
> 'This morning, Čekmasov had to sharpen blunt hacks (hacks that got blunt).' (ZG, 72)

In the group *topay par-ġan qaylardï* 'blunt hacks (hacks that got blunt)', it is difficult to make out directedness of the action topay *par-* 'to get blunt'. In this group, *par-* renders completion of the action: hacks became blunt in the process of being used.

In combinations with the converb *-a* of a main verb, the auxiliary verb *per-* (its lexical meaning is 'to give') denotes completion either of each phase of an action or of its first stage (Dyrenkova 1941, 218). The first meaning of *per-* will be described later. Here, we give an example illustrating its second meaning (completion of the first stage of an action).

Emniŋ ištin anaŋ körüp čörgenin - pir eski irikte ber-gen qara sunduq čatča ... (ŠF, 320)
'When he was walking and scrutinizing the house inside (literally: the inner part of the house), he saw: an old black chest which had begun to rot was lying there.' (ŠF, 322)

The verb *per-* also expresses completion of the first phase of an action in Khakas, Tuvinian and Karagas (Juldašev 1965: 79-80; Rassadin 1978: 150). According to Rassadin, it is one of the characteristic features of the Sayano-Altay areal group of Turkic languages, whereas in other Turkic languages (Uzbek, Karakalpak, Turkmen, Tatar) the analytical construction *-a ber* denotes an action in progress (Rassadin 1978: 150).

The auxiliary verbs *qal-* 'to remain', 'to stay', *sal-* 'to put', 'to keep', and *tur-* 'to stand', 'to be' denote that the subject remains in a resulting state after the action has come to an end. For example:

Pir tudamaš piltirgi öleŋni pasoq qur qal-ġan iygi širbačaq čiġip aldim. (AT, 56)
'I have gathered one armful of last year's grass and two bundles of dried-up bushes.' (ZG, 88)

In the attributive group *qur qal-ġan ... širbačaq* 'dried-up bushes', the participle *qur qal-ġan* can be literally translated as 'remaining dried-up', i.e. the bushes have been drying up for some time; now they are already dry, and will remain in this state furthermore.

Tüüle čat sal-ġan nebe, öre qabildi, čiške lenta čilep künge čiltiraš erti. (G-Č, 26)
'Having curled itself into a ring, it sprang up into the air and sparkled in the sun like a narrow band.' (Č-G, 26)

In *tüüle čat sal-ġan nebe* (literally: 'a tied-up, remaining lying thing'), the verb *sal-* denotes that the thing (a grass-snake is meant) was in a curled (tied-up) position for some time.

Aġariš tur-ġan talaydaŋ šiġara salġin puluttar čiiġča. (G-Č, 18)
'Over the grown-white sea, the wind is gathering clouds.' (G-Č, 18)

In *aġariš tur-ġan talaydaŋ* 'over the grown-white sea', the verb *tur-* means that the sea has grown white (because of the foam) and remains white.

The analysed participles can contain several auxiliary verbs which add different semantic components to their meanings. For example:

Ol keletkiler payaġi-la sug čörüžün, sug šaalaġin, köbük ižilaġin - tag kestine čažinġan ozuba šiqqalaq aydiŋ kök kümüš suzuba pirge urulup, šimil par tur-a per-gen čerdi qošqapčatqan, qanče-le ünnerdi šimidarġa sanapčatqannar ošqaš. (G-Č)

'As if those shadows wanted to stop all the movements of the water, all the lapping of the waves, all the sighs of the foam, (as if they wanted) to muffle all the sounds accompanying the silent space bathed in silver-blue rays of the Moon which, having hidden itself behind the mountain, had not yet risen (literally: gone out).'

In the attributive group *šïmïl par tur-a per-gen čer* 'silent space (literally: the ground which became silent)', the main verb *šïm-* has the meaning 'to grow silent', i.e. a gradual process of transition into a new state (that of silence). The passive voice marker *-ïl-* denotes that the participial action belongs to the head noun *čer* 'soil, ground, land, space, place'. The auxiliary verb *par-* denotes directedness of the action away from the subject. We can understand that it was not the ground itself that became silent, but silence spread all over the contiguous space. Besides, the verb *par-* indicates that the process of transition into a new state has been completed, i.e. all the space, all the nature became silent. The auxiliary verb *tur-* indicates that this state is being maintained. And, finally, the verb *per-* shows that all the phases of the process of transition have been completed, and silence has falllen.

Several verbs expressing separate actions can come together to contribute to the participial semantics. For example:

Üstüneŋ urulčatqan tobïraqtï arïǧlabïza perip, Petya iygi kögere puǧlap par-ǧan, šïqčaŋ čerdi tutčatqan stolbalar körüp aldï. (AT, 22)
'Having taken away the soil which was falling down from the top, Petya saw two mouldy poles which were supporting the exit.'

In the group *kögere puǧlap par-ǧan stolbalar* 'mouldy poles, literally: poles that became mouldy', the verb *köger-* means 'to become green', *puǧla-* 'to tie', *par-* 'to go away'. Altogether, they create a picture of some green substance (*köger-*) that covered the poles (*puǧla-*). This substance formed a porous (loose) layer on the poles, as if it were coming off their outer surface (*par-*). In this combination, the verb *par-* denotes directedness of the action away from the entity denoted by the head noun.

Judging by the two last examples, multicomponent participial attributes give a picturesque description of the object modified. This effect can sometimes be achieved by a two-component participle. For example:

Qara Šebeldeydiŋ quur par-ǧan qursaǧï qurču šenge čeet partïr.
'Qara Shebeldey's dried-up belly became like a thimble.' (ŠF, 130)

In the attributive group *quur par-ǧan qursaǧï* 'dried-up belly', the verb *qur-* means 'to become dry', while *par-* expresses directedness of the action downwards from the former surface of the belly: the belly was sinking deeper and deeper while drying up. We can see

an image of a dried-up belly. This image is supported by the comparison with a thimble, which has a hollow too.

Participles of transition into a new state are mostly used in combination with a head noun alone, without other satellites. But they may sometimes have an adverbial modifier of manner, place and time. For example:

> *Erelen ösken er artïq.* (ŠF, 222)
> 'The best (man) is a man who grew up in need (literally: suffering).' (ŠF, 223)

The attributive group *erelen ösken er* 'a man who grew up suffering' includes the adverbial modifier of manner *erelen* 'suffering'.

> *... sooq salğïn ... sug qaštada ös par-ğan aralaqtar qağžïrağïn čazï ištinde aal čördü.*
> (G-Č, 32)
> '... the cold wind ... was carrying the rustle of the bushes which grew on the river bank all over the steppe.'

The attributive group *sug qaštada ös par-ğan aralaqtar* 'bushes which grew on the river bank' contains the adverbial modifier of place *sug qaštada*.

> *Emdegi ösken er čaqšïzï eski čaapsïp čörbezin.* (ŠF, 370)
> 'Let the best men who grew up recently not stick to the old (ways).'

In the participial attribute *emdegi ösken*, there is the adverbial modifier of time *emdegi* 'recently'.

Conclusion

The described participles are formed from verbs that express the meaning of their subjects' gradual transition into a new state. In such participles, auxiliary verbs denote either completion of this action or transition into and staying in a resultative state. In attributive groups formed by these participles, the head noun can only be the subject of the participial action. These participles can contain the reflexive and the passive voice markers, which seldom occur. These voice affixes indicate that the head noun is the subject of the participial action. Judging by our material, the head noun denotes an inanimate object in this case. Such participles are most often used without their satellites (except for their subject), but they can sometimes be modified by various adverbials.

A participle formed from a simple verb expresses completion of its action, i.e. completion of the transition into a new state. If such a participle includes an auxiliary verb, the meaning of completion moves to the background and the participle expresses other shades of meaning: a phase (*per-*), rapidness, frequency, or unexpectedness (*ïs-*), directed-

ness (*par-*) of its action. If a participle has several verbs, including auxiliary ones, in its composition, these verbs describe different sides or stages of its action, often creating a picturesque image of the object described.

A participial meaning is created by the semantic coordination of the meanings of the main verb, of the auxiliary verb, and of the participial affix. All the three components can express the completion of an action. The main verb possesses a binary grammatical semantics which is based on its limitedness: it may express both a starting and a finishing point of some process. This semantics presupposes that participles formed from such verbs can include two types of auxiliary verbs: (a) verbs denoting completion of a whole action (*par-*), of its first stage, or of all its stages (*per-*), and (b) verbs denoting completion of an action and a starting point of a new state (*qal-*, *sal-*, *tur-*). The affixes -*ġan* and -*ġalaq* denote completion / non-completion of an action and allow for a verbal form to assume an attributive position in the sentence.

All the semantic components of the main verb contribute to the participial semantics:

- *Dynamics* presupposes changes of different kinds in the subject's state. The character of these changes can be defined by auxiliary verbs: *par-* (directedness), *is-* (rapidness, frequency, unexpectedness).
- *Gradualness*, i.e. smoothness, prohibits including *is-* in a participle composition (since this verb has the opposite meaning), but *dynamics* allows that. This is the reason why this verb was met only once in our material.
- *Limitedness*, i.e. possession of some relevant limit to their action, allows that such verbs can combine with auxiliary verbs rendering completion of an action, and with participial formants of the same grammatical semantics (-*ġan* of completion and -*ġalaq* of non-completion).
- *Activeness* of the action presupposes a subject; therefore such participles are met in attributive groups, the head noun of which is the subject of the participial action.
- *Intransitivity* explains why voice markers are so rare in such participles and why the voice markers have a reflexive-passive meaning when they do occur: on the one hand, they show that the action is directed on its subject, on the other hand, they indicate that the action is involuntary; it proceeds without its subject's will and is influenced by some external circumstances.

In a participle, each component has, as a rule, only one meaning: the main verb has a lexical meaning, the auxiliary verb has an *aktionsart* meaning, the participial formant has a meaning of completion or non-completion of the action. Sometimes their meanings combine in the following way: the main verb renders a lexical meaning, the auxiliary verb has an *aktionsart* meaning and that of completion of the action, and the participial formant introduces the verbal form into an attributive position.

We can conclude that the meaning of the participle is formed by semantic coordination of its components' meanings: those of the main verb, of the auxiliary verb, of the voice and participial formants.

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Towards a unified account of passive in Turkish

Geoffrey Haig

In Turkish the passive forms of transitive verbs often display remarkably active semantics, e.g. *koyul-* 'set off' (passive from transitive *koy-* 'put'), *takıl-* 'follow' (passive of transitive *tak-* 'attach'), *atıl-* 'jump at' (passive of transitive *at-* 'throw'). Traditionally, these forms are treated as isolated oddities, best relegated to the lexicon. In more recent work (e.g. Sezer 1991) they are reinstated to the grammar, but they are considered to be categorically different from "normal" passives, and are hence assigned a distinct derivation.

In this paper I suggest an alternative account, according to which passive in Turkish is solely a valency reducing device, a detransitivizer. Although it shares this feature with the passive in more familiar languages, it differs from Standard Average European passives in that it is underspecified for a particular semantic feature. Therefore passive forms in Turkish permit a wide range of semantic interpretations along a particular semantic dimension. Within this framework both the apparently aberrant passives such as *atıl-* 'jump at' and the "normal" passives emerge as the natural consequence of a single morphosyntactic process, and the need to posit additional types of passive derivations disappears. Finally, I relate my findings to the most-discussed aspect of the Turkish passive, the constraint on applying causative to passive.

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1. Introduction

According to one authority, the Turkish passive from transitive verbs is "very much like that of English" (Underhill 1987: 333), hence requiring little further comment. The treatment of the passive in the other major grammars is likewise perfunctory (cf. Deny 1921: 375-377, Kissling 1960: 236-237, Lewis 1967: 149-151 and Kononov 1956: 197-201). But Turkish texts actually contain large numbers of passive forms which do not behave like the passive verb forms of English, or for that matter, of Standard Average European. Along with textbook examples of passive sentences, an example of which is given in (1), we also encounter clauses of the type exemplified in (2)-(4):

(1) *Mektup biz-e   gönder-il-di.*
    letter   1PL-DAT   send-PASS-PST(3S)
    'The letter was sent to us.'

(2) *Yol-a   koy-ul-du-k.*
    road-DAT put-PASS-PST-1PL
    '(We) set off on the road (lit. ... were placed on ...).'

(3) *Kadın   kız-ı-na   sa-rıl-dı*
    woman   girl-POSS3S-DAT   wrap-PASS-PST(3S)
    'The woman embraced her daughter (lit. ... was wrapped around ...).'

(4) *Nehir, o   yer-den   deniz-e dök-ül-ür.*
    river   that place-ABL sea-DAT pour-PASS-AOR(3S)
    'The river flows into the sea at that point (lit. ... is poured into ...).'

The verbs in (2)-(4) are all, formally at least, passives formed from transitive stems. Yet in none of these examples is there any implication that an entity external to the grammatical subject is involved in the event. Indeed, in examples (2) and (3), the grammatical subjects themselves are clearly the active controllers of the events denoted. Such usage is by no means a marginal phenomenon, restricted to a few idiomatic expressions, but occurs regularly with at least 20 different transitive verb stems (see section 3 for further examples). Nor is this a recent development, or one restricted to Republican Turkish: Johanson (1974) points out that most of the passive forms in Old Turkic texts do not actually imply any external agency. In other words, we are dealing with a well-established and characteristic feature of Turkish.

There have been three ways of dealing with expressions such as 2-4 in the literature: First, they are simply ignored in the treatment of passive as a verbal category, as in most of the standard grammars mentioned above. Second, they are described as "semantic shifts" (*anlam kayması*) (Ülken 1981), or "metaphorical extensions" (Erdal 1996: 78) of a basic passive meaning. The final approach, from Sezer (1991), is to assign apparently aberrant passives to different derivations, distinct from the "true passives" of the type illustrated in (1). Common to all these approaches is the tacit assumption that the function of the Turkish passive is roughly equivalent to that of the English. Therefore, if a formally passive-marked verb does not behave like an English passive, it must be in some sense deviant, i.e. either a lexical oddity, or belong to quite a different category. What is all too readily forgotten is that the term "passive" is simply a traditional label for a particular Turkish morpheme; whether it is an accurate description of that morpheme's function is another matter. As I hope to demonstrate, although the Turkish passive is functionally very similar to the English, it differs from it in one crucial respect.

The paper is organized as follows: In section 2, I will define the concept of passive used in this paper, and introduce the terminology. In section 3, passive in Turkish is presented and my analysis is outlined. In section 4 other proposals are dis-

cussed, particularly those of Sezer (1991). Section 5 deals with a widely-discussed issue in connection with the Turkish passive, namely the constraint on the combination of passive and causative. In section 6, the major conclusions are briefly recapitulated.

2. Passive as a valency-changing device

Before discussing the concept of passive, some terminological conventions have to be established. First, I make a distinction between transitive and intransitive verb stems, a fairly uncontroversial distinction in Turkish. I define transitive verbs as those which are capable of governing an accusative-marked object. Intransitive verbs are not. The second distinction, following Dixon (1994), is one between basic verb stems, i.e. the morphologically least marked form of the verb, and derived stems, i.e. stem plus some valency-changing morphology (passive, causative, etc.).

I will adopt widespread practice in using the following symbols for the core arguments of verbs:[1]

> S = single core argument of a basic intransitive verb
> A = grammatical subject of a basic transitive verb
> O = direct object of a basic transitive verb

The term "subject" will be used in this paper solely in the sense of "grammatical subject", not "logical subject" (for which I use S or A, depending on the transitivity of the verb). For our purposes it is sufficient to define subject as the NP in nominative case which determines person agreement on the predicate.

Turning now to the function of the passive, it can only be properly appreciated when it is considered within the broader context of voice mechanisms as a whole. The clearest statement I am aware of comes from Shibatani (1988: 3), which I quote in full:

> "Voice is to be understood as a mechanism that selects a grammatically prominent syntactic constituent – subject – from the underlying semantic functions (case or thematic roles) of a clause. A majority of languages provide a basic voice strategy. In accusative languages [e.g. Turkish, G. H.], the basic strategy is to select an agent as a subject, and the active voice refers to the form resulting from this choice of agent as subject. The active voice in accusative languages constitutes the unmarked voice. A large number of accusative languages provide a marked voice, which denies the agent the subject role. In many, but by no means all, languages a patient assumes the subject role in this marked voice. This marked voice, which contrasts with the basic, active voice in terms of the treatment of the agent is the passive voice."

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[1] The abbreviations used here are those of Dixon (1994). The same concepts are well known in typological literature, although other scholars favour different labels (e.g. S, A and P in Comrie 1989, or Z, X and Y in Lazard 1995).

Thus the crucial, and defining feature of passive is that it is a marked verbal voice, contrasting with the unmarked active. Passive is, in effect, a signal of the "disruption of the basic relation(s) of a verb to its core nominal(s)" (Klaiman 1991: 6).

Passive involves two distinct but related processes, which I term S / A-suppression and O-advancement respectively. The two processes are displayed schematically in (5):

(5)   *Active (unmarked)*   *Passive (marked)*
     S/A-suppression: S/A = grammatical subject   S/A = Ø
     O-advancement: O = direct object   O = S′

(S′='subject of a derived intransitive verb', cf. Dixon 1994)

In the generative tradition, O-advancement has been considered the primary consequence of passivization. Following Shibatani (1988), however, I consider S/A-suppression to be primary, and O-advancement to be a secondary consequence. The justification for this assumption is as follows: First, there are languages in which passive verb forms still assign accusative case, i.e. O-advancement to subject does not occur (e.g. Ute (Givón 1988), Finnish, if the O is a personal pronoun (Nau 1995: 147-149), and some Turkic languages (cf. Hess (1996: 104-110) for examples from Ottoman, Uzbek and Chagatay). The second argument for the primacy of S/A-suppression is that in many languages intransitive verbs also passivize. If we assume O-advancement to be primary, then we are forced to account for the passive of intransitives by some other means, because with intransitives, O-advancement is ruled out from the start. The simpler solution is therefore to assume that S/A-suppression is the unifying feature of the passive derivation, while O-advancement is the unmarked option accompanying the passivization of transitives.

Before proceeding to the Turkish material, there is one further point that requires clarification. In many languages, though not all, an A may be expressed in the passive clause in some peripheral syntactic role, for example as a *by*-phrase in English: *The money was stolen by the accountant*. Turkish too has agented passives, but they are a clearly alien structure, used only rarely in spontaneous speech and subject to several constraints (cf. Sezer 1991: 57). I will be ignoring agented passives in this paper, as I am solely concerned with the syntax of core arguments.

3. Passive in Turkish

In Turkish, passive is effected by means of suffixes attached to the verb stem. The passive morpheme has two phonetically conditioned allomorphs: *-(I)n-* after vowels

and *-l*, and *-Il-*[2] elsewhere. For example: *bekle-* 'wait', *bekle-n-* 'wait-PASS'; *al-* 'take, buy, receive', *al-ın-* 'take-PASS'; *ver-* 'give', *ver-il-* 'give-PASS'. The *n*-variant is identical with the medium, and in some cases, it is difficult to distinguish a medium form from a passive. To avoid complications, all the examples discussed in this paper will be with the *l*-variant, but the results are in principle applicable to all passive verb forms.

As was mentioned above, passive may apply to any transitive verb stem and—with some restrictions—to any intransitive stem.[3] Although most grammarians seem to find the passive derivation from intransitives "the most remarkable feature of the Turkish passive" (Lewis 1967: 150), under my analysis, passives from intransitives are in principle no different from passives of transitives, except that O-advancement cannot, for obvious reasons, take place. In the interests of brevity I will not be discussing passives from intransitives any further here; henceforth, it will be sufficient to refer to "A-suppression" rather than "S/A-suppression".

In (6), a simple active clause is contrasted with its passive counterpart:

(6)	*Active*			*Passive*	
A	O	Vtrans		S′	Vpass
Mehmet	*süt-ü*	*iç-ti.*		*Süt*	*iç-il-di.*
Mehmet	milk-ACC	drink-PST(3S)		milk	drink-PASS-PST(3S)
'Mehmet drank the milk.'				'The milk was drunk.'	

Whereas the passive clause in (6) is appropriately rendered by an English passive, many clauses with passive verb forms cannot readily be translated with an English passive. The following examples are typical:[4]

Passive clause	Basic transitive stem from which the passive is derived	English translation
(7) *araba* **dökülüyor**	*dök-* 'pour'	'the car *is falling apart*'

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[2] The capital "*I*" indicates that the vowel of this suffix is subject to a four-way alternation, rendered orthographically by <u, ü, ı, i>, and determined by the rules of vowel harmony.

[3] The restrictions on passivizing intransitives have been discussed extensively in connection with the "unaccusative hypothesis" (see discussion in Blake 1990: 29-40). Unaccusatives such as *düş-* 'fall' or *öl-* 'die' can passivize in Turkish, but there is some controversy regarding the conditions under which this is possible—see Özkaragöz (1986), Kornfilt (1991: 88-91), Sezer (1991: 63-67) and Haig (1998: 29) for discussion.

[4] The examples (7)-(14) are based on authentic utterances gathered from a large variety of sources, both spoken and written. I have shortened them as much as possible while still maintaining what I think is the vital aspect of the verb's meaning, and checked the resulting clauses with three native speakers. The dative arguments in these and similar clauses are discussed in Haig (1997).

(8)	*gemi, fırtınaya* **tu-** **tulmuş**	*tut-* 'catch, hold'	'the ship *was caught* in the storm'
(9)	*onun bitmeyen* *şikayetlerinden* **sıkıldım**	*sık-* 'squeeze'	'I *am sick and tired* of his constant complaints'
(10)	*paniğe* **kapıldım**	*kap-* 'sieze'	'I *panicked* / *was seized* by panic'
(11)	**üzülme** *o çocuğa*	*üz-* 'sadden'	'*don't feel sorry* for that child'
(12)	*konferansa* **katıldık**	*kat-* 'add'	'We *attended* the conference.'
(13)	**ayrıl** *o heriften*	*ayır-* 'separate, allocate'	'*leave* that guy!'
(14)	*Ahmet, adamın* *üstüne* **atıldı**	*at-* 'throw'	'Ahmet *sprang* at the man.'

Examples (7)-(14) have been given in a particular order, namely in order of increasing control over the event on the part of the subject. For example, in (7) and (8), the subjects are inanimate entities undergoing a change of state, over which they exercise no control. They differ from the passives such as (6) in that there is no identifiable external agent which is effecting that change of state (whether *fırtına* 'storm' in (8) should be considered an agent depends on whether one assumes that agency presupposes volition). The subjects in (9) and (10), on the other hand, are humans experiencing a change of internal emotional state: annoyance or panic. To what extent they are controlling these events is a question best left to psychologists and philosophers; we will simply assume that they have—potentially at least—more control than the subjects in (7) and (8). The remaining examples all have human subjects involved in events which they instigate and control to varying degrees, from the minimally controllable 'feeling pity' in (11) down to the clearly agentive activities such as attending a conference (12), or jumping at someone (14). To the latter we could also add (2) and (3) above. Note that these passive verb forms are perfectly compatible with the imperative mood, as for example in (13).

I will refer to the extent that the grammatical subject exercises control over the event denoted by the verb as S'-control. The notion of control I have in mind is not a binary feature, but a cline subsuming several factors such as volition and animacy (arguments for the scalar nature of control are presented in e.g. Van Valin (1990), Chvany (1993: 248) and Manning (1995); a more detailed discussion of control, applicable to Turkish, is Haig (1998: 174-176)). The examples given so far should have made it clear that passive verb forms permit a wide range of values on the scale of S'-control. I maintain, however, that the differences in S'-control are not categoric but gradual, allowing any number of intermediate shades, an argument I return to in Section 4. For the sake of convenience, I will refer to examples with maximally controlling subjects such as (12)-(14) as S'-control passives.

Variation along the scale of S'-control is not only a feature distinguishing the passive forms of different verbs. It is also manifest in the range of interpretations of one and the same verb form. Consider *kat-ıl-* 'add-PASS' in (12). Along with the S'-control reading 'join, participate' given in (12), it may also have the more typically

passive meaning 'be added to'. At first glance, these two events may not appear to have much in common, and we might be tempted to dismiss the 'join, participate' reading as merely an idiosyncratic semantic extension. But in fact, both readings express the same basic event, i.e. the physical processes and the spatial relationships of the participants are identical: one entity attaches to, or becomes part of, another. The difference is that the passive reading 'be added to' implies external agency and no control, while the S'-control reading 'participate' implies no external agency and, correspondingly, control on the part of the subject. Consider also the passive form *çek-il-* of the transitive verb *çek-* 'draw'. A sentence such as *Ayşe çek-il-di* 'Ayşe draw / pull-PASS-PST' could refer to an intentional action on the part of the subject: 'Ayşe deliberately drew back', or to an involuntary reflex: 'Ayşe drew back involuntarily (through shock, fear, pain, etc.)', or it could refer to some external agency who pulls Ayşe back: 'Ayşe was pulled back (by someone)',—as well as to any number of fine intermediary nuances between these three points. It can also be used with an inanimate subject, for example to describe how the sea recedes (draws back) at low tide. The point about these examples is that the basic event expressed by the passive verb, e.g. the type of motion the subject undergoes, is identical; what changes is the extent to which the grammatical subject can be considered to control the event.

A similar range of interpretations is offered by many passive forms of transitive verbs. In the following table some illustrative examples are given of the different readings open to transitive verb forms, illustrated as different values along a scale of S'-control:

(15) Scale of S'-control

lack of S'-control   increasing S'-control

$\longleftarrow$———————————————————————————————$\longrightarrow$

(possible implication of external agency)   (no implication of external agency)

Examples:

(a) *bur-ul-* twist-PASS	'be twisted, wrung'	~	'writhe (with pain, etc.)'
(b) *dik-il-* erect-PASS	'be erected / placed in an upright position'	~	'rear up, appear'
(c) *eğ-il-* bend-PASS	'be bent'	~	'lean (out / over)'
(d) *ger-il* stretch-PASS	'be stretched'	~	'stretch (intrans.)'
(e) *göm-ül-* bury-PASS	'be buried'	~	'bury oneself, sink into (e.g. an armchair)'
(f) *kat-ıl-* add+PASS	'be added'	~	'join/participate'

(g) *kır-ıl-*   'be broken'   ~   'be deeply disappointed'
    break-PASS   ~ 'break (intrans.)'

(h) *sıyr-ıl-*   'be scraped'   ~   'worm oneself (e.g. out of
    scrape-PASS   another person's grasp)'

(i) *sok-ul-*   'be inserted'   ~   'push through to, approach'
    insert-PASS

(j) *süz-ül-*   'be filtered'   ~   'soar (e.g. of an eagle)'
    strain/filter-PASS

(k) *tak-ıl-*   'be attached' ~ 'get hung up on /caught on' ~ 'cling to, pursue'
    attach-PASS

(l) *vur-ul-*   'be struck (by a bullet)' ~   'be fascinated, infatuated
    strike-PASS   by someone'

This type of frequently recurring semantic variation obviously requires some explanation. My proposal is along the following lines: The syntactic consequences of passive in Turkish are that the A of the original basic transitive verb is suppressed, i.e. is denied core argument status, leaving the original O as the sole core argument of the resulting intransitive clause. The O becomes by default the grammatical subject (S′). However, passivization sets no predetermined semantic restrictions on the nature of the grammatical subject's involvement in the event; more specifically, passivization does not require the S′ to be an undergoer. Because the passive is essentially indifferent to the parameter of control on the part of the S′, all possible values on that parameter are found. On this view, "normal" passives and S′-control passives are not categorically different but simply the two endpoints of the scale of S′-control, the two maximum semantic and idiomatic exploitations of the inherent vagueness of the passive morpheme.

It must be noted, however, that there are clear preferences in the interpretation of passive verb forms: The default reading is one with minimal S′-control where the S′ is a non-controlling undergoer, and the event is instigated and controlled by some external entity (i.e. roughly equivalent to the English passive). In other words, the unmarked reading of a passive form will be towards the left of the scale given in (15). Certainly all passive verb forms I am aware of are amenable to such a reading, whereas only a subset also offer S′-control readings. Just which passives will have S′-control readings is in part dependent on the lexical semantics of the stem itself, and in part on other factors yet to be elucidated. Ülken (1981) has pointed out that many S′-control passives are marked stylistic variants, used primarily in colloquial speech. In this sense then the S′-control passives are indeed secondary to the standard passive reading. But the number of deviations from the standard passive meaning, together with their highly predictable nature, nevertheless cry out for an explanation.

Consider how the explanation offered here would apply to a verb form such as *sarıl-*, the passive of the transitive stem *sar-* 'wrap'. *Sarıl-* regularly has the meaning 'embrace', as in (3), repeated here as (16):

(16) *Kadın,   kız-ı-na   sar-ıl-dı.*
    woman   girl-POSS3S-DAT wrap-PASS-PAST(3s)
    'The woman embraced her daughter.'

Sarıl- can of course have a more typically passive meaning, as in (17):

(17) *İp   makara-ya   sar-ıl-dı.*
    thread bobbin-DAT   wrap-PASS-PAST(3s)
    'The thread was wrapped around the bobbin.'

Although at first sight the verbs in the two sentences appear to have very different meanings, in fact they both express the same basic event, namely that of 'one object wrapping around another'. The difference is that (17) implies no control on the part of the subject and some external agency, while (16) implies control on the part of the subject and a corresponding lack of external agency. Semantic variation along these lines is precisely what would be predicted if we assume, as I do, that the passive morpheme sets no predetermined limits on the degree of control exercised by the subject.

Naturally, some passive verbs have acquired rather specialized meanings. A good example is given in (18):

(18) *boğ-ul-*   'be strangled' ~ 'drown'
    strangle/choke-PASS

Although one could certainly make a case for considering *boğul-* 'drown' to be a separate verb in its own right, the semantic relationship between the transitive stem and the two meanings of the passive quite clearly parallels the other cases: Drowning may be considered to be merely one instantiation of a more general meaning 'being strangled / suffocated without any external agency'. In fact, the meaning of *boğul-* given in the Turkish-Turkish dictionary (Türk Dil Kurumu 1988) is 'die through lack of air' (*havasızlıktan ölmek*).

In sum, I propose that the Turkish passive is a pure valency-reducing device, more precisely, A-suppression. The O does advance to the grammatical subject role, i.e. to S′, but the semantics of the S′ are left undetermined; hence it is possible to accommodate a broad spectrum of semantic interpretations of passive verb forms. There is a default reading, namely that the S′ is a non-controller, giving rise to the classic passive reading; but undergoer-semantics of the S′ is not a necessary condition for the Turkish passive, and other interpretations are quite possible. In the case of verbs such as *katıl-* 'be added > participate', or *ayrıl-* 'be separated > leave', the S′-control meaning has become dominant. This is clearly a dynamic process, and Ülken (1981: 65) has noted that many of the S′-control passives described here have a colloquial flavour ("argo niteliği var"). But it is nevertheless a regular process, evident in a large number of stems, and deserves therefore to be treated in the grammar, not the lexicon or studies of stylistic variants.

4. Other approaches

Those scholars who do recognize the existence of S'-control passives generally go to some lengths to discount them as passives. Thus the different readings available to passive verb forms are assigned to different categories, distinct from the true "passive". Underhill for example postulates two different types of passive: one which "serves simply to derive intransitive verbs from transitive ones" (Underhill 1987: 336), and the "normal" passive derivation. Erdal (1996) and, following him, Hess (1996: 202) also insist on a strict distinction between the "true passive" use of the passive morpheme and its "intransitivizing" function:

> "A clear distinction needs to be made between the mere intransitive verb (whatever its form) and the true passive (including sentences in which the agent can be - and indeed has to be - supplied from the context)." (Erdal 1996: 79)

According to Erdal (1996: 82), for a form to be considered passive, "the noun phrase serving as the verb's subject ... should be the patient of the action ...". A similar semantic characterization of passive is offered in Erdal (1991: 651): "A verb is passive if the subject is represented as taking no initiative in the occurrence of the event." Thus for Erdal, lack of control on the part of the S' is the criterial property of passive. On this view, then, the S'-control passives are not passives at all, but simply intransitive verbs. But the semantic criteria are difficult to apply in practice: Consider examples such as (7) or (8), where the grammatical subjects are presumably "patients", yet there is no implication of external agency. Are they passives, or simply intransitives, or somewhere in between?

A further drawback of this approach is that it glosses over the fact that all verb forms carrying the passive morpheme share one formal feature, regardless of their semantics: The passive morpheme may not be followed by the causative morpheme (see section 5 for discussion of this constraint and its occasional violations). Consider the verb *ayr-ıl-* separate-PASS 'leave', formally, the passive form of the transitive verb *ayır-* 'separate'. According to Underhill (1987: 336), it is simply an intransitive verb, i.e. distinct from a real passive. Now, if we wish to express a causative proposition based on this verb, i.e. 'cause / allow to leave', it is not possible to simply add causative morphology to the verb:

(19)   *ayrıl-t-* leave+CAUS 'cause/allow to leave'

In order to express 'cause to leave', we must resort to a periphrastic construction with the verb *zorla-* 'oblige, force', or something similar. Consider now the verb *bayıl-* 'faint', which like *ayrıl-* is intransitive, and also has a second syllable phonetically identical with the passive suffix.[5] But despite these similarities, there is a

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[5]   In fact *bayıl-* is quite possibly historically derived from a transitive stem **bay-* via the addition of passive. In modern standard Turkish, however, no transitive stem *bay-*

demonstrable formal difference between the verbs *ayrıl-* and *bayıl-*: the former does not accept causative morphology (cf. (19) above), the latter does: *bay-ıl-t-* 'cause to faint'. Thus in this respect *ayrıl-* patterns like any other passive verb, regardless of its apparently "non-passive" semantics, while *bayıl-* behaves like a basic intransitive. Characterizing *ayrıl-* as an "intransitive" misses the important difference.

Sezer (1991: 55-61) goes further than the scholars discussed above in that he postulates three different passive derivations to account for different types of passives formed from transitive verbs (and a fourth (!) type for passives from intransitives, which will not concern us here). First, there is a "true passive" derivation, illustrated by examples such as (6). Second, there is what he terms the "unaccusative passive derivation". These differ from the "true passive" in that the non-expressed A is a "cause" rather than an "agent", whereby the distinction appears to be based on the feature [±human]. A sentence such as (20) is thus ambiguous with regard to the distinction between true and unaccusative passive:

(20) *Kapı*   *aç-ıl-dı*
     door   open-PASS-PST(3S)

    a. true passive: 'The door was opened (by someone).'
    b. derived unaccusative: 'The door was opened (e.g. by the wind).'

Sezer suggests a formal criterion for distinguishing between "true passives" and derived unaccusatives: With a true passive, the suppressed A can be expressed in the clause via the quasi-postposition *tarafından* 'from-the-side-of', e.g. *hizmetçi tarafından açıldı* 'from-the-side-of the servant was-opened', i.e. opened by the servant. With a "cause" (a non-human agent), e.g. *rüzgar* 'wind', *tarafından* is, according to Sezer "ungrammatical" (Sezer 1991: 58); instead the ablative case is used: *rüzgar-dan* 'by the wind'.

The three native speakers I consulted on the difference between ablative and *tarafından* did not give a unanimous opinion; in fact two of them felt that *tarafından* was acceptable with *rüzgar*, so the difference does not seem to be all that strict. The more fundamental question regarding the proposed distinction between "true passive" and "derived unaccusative" is whether it is necessary to postulate two distinct verbal derivations in order to account for the semantic feature [±human] on the agent— surely the difference in the *by*-phrase can be handled elsewhere in the grammar?

Both the "unaccusative passive derivation" and the "true passive derivation" are derived via the same process, namely "suppression of the external argument" (roughly equivalent to my S or A). Up to this point I agree with Sezer, as I consider

exists. There is, however, an adjective *baygın* 'fainted, unconscious'. This word appears to be formed with the deverbal derivational suffix *-GIn*, a suffix which creates resultative adjectives from verb stems, e.g. *yorgun* 'tired' from transitive *yor-* 'tire'. The existence of the adjective does therefore suggest that at some stage a stem **bay-* was in use, but as I have been unable to find clear evidence of **bay-* elsewhere in Turkic, this remains speculative.

passive to be S / A-suppression. However, Sezer goes on to postulate a third type of passive derivation which he calls "derived unergatives". Derived unergatives differ from both true passives and derived unaccusatives in that they involve the suppression of the *internal* argument (my O). Sezer provides the following example of a derived unergative (1991: 60):

(21) *Ayşe   çek-il-di.*
       Ayşe   draw-PASS-PST(3S)
       'Ayşe withdrew.'

The derived unergative is, according to Sezer, comparable to a reflexive, which also involves the suppression of the O. Hence (21) can be translated as 'Ayşe drew herself back'.

Sezer's claim that "derived unergatives" involve O-suppression would mean that the passive morpheme is used for two quite distinct valency-changing purposes, namely A-suppression in one instance ("derived unaccusatives") and O-suppression in another ("derived unergatives"). This would be a rather surprising fact, particularly as O-suppression, or O-backgrounding, is already the domain of the medium[6] in Turkish. The only evidence in favour of assuming an additional category of derived unergatives appears to be that some passive verb forms are translatable with English reflexives, not a particularly strong argument.

My main objection to the proposed distinction between derived unaccusatives and derived unergatives is that it imposes an either / or division on a scalar dimension. According to Sezer, a derived intransitive is the result of either A-suppression, or O-suppression; there is no room within this scheme for intermediary shades. But Sezer himself states earlier in his book (1991:19) that the only means of distinguishing unaccusatives from unergatives in Turkish is via the agentivity of the subject, i.e. a semantic criterion, which I claim is scalar in nature. I have already shown how one and the same verb form may be subject to several different interpretations (recall

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[6]   I use the term "medium" for the suffix *-(I)n* rather than the traditional "reflexive". I do not discuss the medium in this paper, partly due to limitations of space, but also because the medium requires very different treatment from the passive. First, the medium, unlike the passive, is not a fully productive suffix — in fact it only applies to relatively few stems. Second, it does not have a fully predictable effect on the verb valency: it is usually valency-reducing, but some mediums from transitive verbs actually remain transitive (e.g. *tak-ın-* 'put on (glasses, facial expression, etc.') from the transitive stem *tak-* 'attach'; *giy-in-* 'get dressed, put on clothes' from transitive *giy-* 'put on'; *ed-in-* 'acquire', from transitive *et-* 'do'). Finally, although it often has a reflexive sense, i.e. expresses an event in which A and O are coreferent, it very often does not. Göksel (1995:84) attempts to characterize the medium as reflexive, mentioning in a footnote just two "idiosyncratic" examples of non-reflexive uses of *-(I)n*. In fact the number is much higher (see e.g. Banguoğlu 1986:283-284 for examples). The medium then, as an unproductive suffix with unpredictable semantic and syntactic consequences, requires very different treatment from the passive.

çek-il- 'draw / pull-PASS' in section 3). Or consider the various meanings of *tak-ıl* attach-PASS. Along with the meaning 'be attached / fitted, e.g. a light bulb (by some external agency)', it can also mean 'hang out (somewhere)', or it can mean 'get stuck / caught on something', or it can mean 'cling to, follow, pursue'. This range of variation is typical; it is not amenable to the kind of tidy categorization suggested by labels such as "unergative" and "unaccusative".

To sum up, the previous proposals can all be characterized as attempts to set up distinct categories to which the different meanings of passive verb forms can be assigned. Some scholars propose a two-way distinction between passives and intransitives, Sezer proposes a three way distinction between "true" passive, derived unergative, and derived unaccusatives. None of the operational criteria put forward for these categorizations is particularly convincing. My proposals on the other hand are both simpler and cover the data more adequately: The passive is simply a detransitivizer, more specifically, A-suppression. That is the single feature common to all examples of passive verb forms. The semantics of the derived subject, on the other hand, are left undetermined, hence the wide (but not unlimited) range of meanings available to passive verb forms. Postulating categorically distinct "passive derivations" to account for the range of meanings inevitably involves drawing arbitrary boundaries, and on my view is simply unnecessary.

In this connection it is worth noting that another voice category, causative, is also indifferent to the parameter of control on the part of the subject. A causative such as *kaç-ır-* go, escape-CAUS can mean either 'kidnap' i.e. 'cause someone to leave by force', or 'miss (a train, an opportunity, etc.)', i.e. let something "escape" through inattention, stupidity, etc. To my knowledge, no one has yet suggested setting up separate "causative derivations" to account for these two different readings; but that would be the logical extension of the approach put forward by Sezer. Rather, most scholars simply accept that the causative morpheme is indifferent to this particular semantic parameter (see esp. Johanson 1974 in this connection); I believe the same is true of the passive morpheme.

5. Constraints on combining passive with other voice categories: Semantics, syntax or morphology?

It is well known that Turkish does not allow the combination "verb stem+ PASS+CAUS" (in that order). This constraint has attracted a fair bit of attention, one of the earliest contributions being Lees (1973). Lees suggested that such a combination would be simply superfluous. For example, from the verb *kır-* 'break (trans.)' we get *kır-ıl-* break+PASS=be broken'. A fictive **kır-ıl-t-* break+PASS+ CAUS 'cause to become broken' would, according to Lees (1973: 508), be so close in meaning to the basic stem that the two would "compete semantically". Dede (1986) argues along similar lines.[7]

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[7] A detailed recent discussion of this constraint may be found in Erdal (1996). A more technical discussion is Baker (1988: 413-419).

This line of argument is frankly bizarre: natural languages are full of forms that "compete semantically". Quite apart from countless lexical synonyms, consider agented passives, which occur in many languages although they surely "compete semantically" with the active form. A more specific counter-example to the semantic arguments is provided by the S'-control passives such as *ayrıl-* 'leave', discussed in section 3. Here the semantic argument for a constraint on causativization no longer holds: 'cause to leave' is a perfectly reasonable proposition, and it is not encoded by any other simple verb form. Yet, as I demonstrated in (19) above, the constraint on adding causative to passive is still evident.

A different explanation, this time a syntactic one, comes from Sezer (1991: 82). He notes that the crucial feature of passive morphology is that it suppresses an argument, thereby rendering the resulting verb intransitive. The crucial feature of causative morphology on the other hand is that it renders any verb stem transitive. Sezer suggests that causative cannot be added to passive because "transitivity, once suppressed, may not be regained." In support of this, he claims that not only passives are immune to causative, but that "reflexive middles may not have causatives" either, quoting the following example (1991: 83):

(22) *Kız-ı   hamam-da yıka-n-dır-dı-m.
       girl-ACC   bath-LOC wash-MED-CAUS-PST-1S
       Intended meaning: 'I made / let the girl wash in the bath.'

But the ungrammaticality of (22) cannot be due to a strict ban on the combination medium + causative because many other mediums, even though they are intransitive, can and do take causative (see Erdal 1996: 80 and Hess 1996: 213) for examples).[8] Thus we may safely discount the existence of a general constraint on "regaining lost transitivity"; the constraint we are dealing with applies quite specifically to the combination of the passive and the causative morphemes.

So far, neither the semantic nor the syntactic arguments have been particularly promising. What tends to be forgotten in the discussion is that causative and passive in Turkish are expressed via bound morphemes, i.e. are parts of words. Now it is well known that there are strong constraints on the form that words may take in a language, particularly the order of the different morphemes (cf. Johanson 1992: 71 on Turkish). The actual order of suffixes found may not have very much to do with syntax or semantics; it may in fact be simply a language-specific convention governing the permissible forms of words.[9] For example, different languages sanction different orders of comparable morphemes: in Turkish, possessive morphology precedes

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[8] *Yıka-n-* in (22) can just as easily be interpreted as a passive (medium and passive forms are indistinguishable after vowel-final stems). Thus (22) is probably ungrammatical simply because it violates the restriction on adding causative to passive.

[9] This is not to deny that across languages certain orders are found to be preferred over others, and those preferences may often be traced back to functional or iconic principles, i.e. are not simply arbitrary; see Bybee (1985).

case morphology: *ev-i-ni* house+POSS3s+ACC 'his / her house (acc.)'. But in Finnish, or in Arabic, the order is the reverse, i.e. CASE-POSS, as in Arabic *bayt-a-hu* house+ACC+POSS3s(masc). It would, I contend, be a fairly futile endeavour to attempt to unearth the reasons for this in semantic terms.

Returning to the constraint on the combination of passive and causative, I suggest it may simply be the result of a *morphological* constraint governing the canonical form of words. In fact, all the Turkish voice morphemes are subject to certain constraints on their combinability. In modern standard Turkish, the order of voice morphemes within the word generally adheres to the following pattern:

(23)   Canonical order of voice morphemes:
       stem+(MED ~ RECIPROC)[10]+CAUS+PASS

One way of looking at (23) is to see it as a ranking of the voice morphemes in terms of "propensity to occur outside (i.e. after) other voice morphemes". Thus the passive is the highest ranking in this respect, as it regularly occurs after all other voice morphemes, but is virtually never followed by them; the causative is the next highest, because it is only regularly followed by the passive, while medium and reciprocal almost never follow other voice suffixes. The order given in (23) does in fact admit a number of exceptions, which I will discuss below, so seeing it in terms of a tendency to occupy certain positions rather than a rigid ordering is perhaps a more faithful reflection of the facts.

Looked at from this angle, the order *PASS-CAUS turns out to be merely one among several semantically conceivable combinations which the canonical order does not sanction.[11] A comparable non-sanctioned order is *CAUS-RECIPROC: from the verb *gül-* 'laugh', we can derive the transitive *gül-dür-* 'to cause to laugh' by adding the causative suffix. Now although it is quite plausible that two or more people make each other laugh, it is nevertheless not possible to attach a reciprocal suffix to *güldür-* creating a verb *gül-dür-üş- 'to make one another laugh'. Looking for semantic or syntactic reasons for these constraints misses the point. The simpler explanation is that the order of suffixes involved violates a language-specific morphological constraint. That this particular constraint is language-specific becomes even more obvious when we turn to a closely related language, the Azeri dialect spoken in Iran (data from Dehghani 1998 and Dehghani, personal communication): in this dialect, not only is the order PASS-CAUS prohibited, as in Turkish, but also the order

[10]   The relative order of MEDIUM and RECIPROC is not entirely clear, hence the brackets. Given the paucity of examples containing both morphemes, plus the difficulty of unequivocal analysis in many cases, (e.g. some denominals in *-lAn* and *-lAş*) it would not be prudent to make a firm statement on their relative orderings.

[11]   Hess (1996: 198-236) has undertaken a detailed study of possible combinations of voice morphemes in Ottoman Turkish. His results largely confirm the order given in (23), although there was apparently somewhat more freedom in Old Ottoman than in modern Turkish in this respect.

CAUS-PASS, although the latter is perfectly acceptable in Turkish. And in the course of time, the canonical order of suffixes may change: Various combinations of voice suffixes which are ruled out in modern Turkish were actually possible in Old Turkic—including PASS-CAUS (Erdal 1996: 81). Thus constraints on the ordering of morphemes are highly language-specific, and to some extent at least, arbitrary.

Nevertheless, at least part of the canonical order given in (23), namely the fact that passive and causative occur outside reciprocal and medium, can be related to more general factors: Bybee (1985) has shown that the more productive and predictable morphemes tend to occur further away from the stem than the less productive and predictable ones. Now, in the case of the voice morphemes, the causative and passive are the most productive in that they can apply to any stem.[12] Both the reciprocal and the medium, on the other hand, occur with only a limited number of stems. Similarly, the causative and the passive have highly predictable effects on their stems: the causative invariably creates a transitive verb via A-addition, the passive invariably creates an intransitive verb via A-suppression. Again, neither the reciprocal nor the medium have predictable effects in terms of transitivity (cf. fn. 6 on the medium).

Finally, we should note that the canonical order given in (23) is occasionally violated. Erdal (1996: 78) discusses the non-sanctioned combination PASS-CAUS, found for example in the word *yay-ıl-t-* spread(trans.)-PASS-CAUS, lit. 'to cause/allow to spread', used in the meaning 'to let someone do as he wishes' (translation from Erdal). The attested deviations from the canonical order can be explained as the result of reanalysis: Adherence to the canonical order presupposes that the morphemes concerned are perceived—albeit subconsciously—by the speakers as such. If, however, a particular combination of, say, transitive stem + PASS acquires a meaning not readily related to its transitive base, and if that meaning becomes dominant, it is quite possible that the form will eventually be reanalyzed as a basic intransitive stem. Once reanalysis has taken place, the cycle of morphemic augmentation can start afresh, and causatives, reciprocals etc. will readily affix to the new stem. But as long as the final segment is perceived as a passive morpheme, the addition of further voice morphology is blocked. In this manner, then, some passive verbs do indeed become simply intransitive verbs. However, it should be noted that passive-marked verbs remain subject to the morphological constraints on passive verb forms for a long time, even when they are used in non-passive senses (e.g. as S'-control passives), and should be considered passives for as long as they are subject to these constraints.

A verb form consisting of "transitive stem + passive morpheme" is much more likely to be reanalysed as a basic intransitive verb if the original transitive stem goes

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[12]   Cf. Ergin (1958: 186) for the causative. There are some marginal restrictions on passives from intransitives, which were discussed in fn. 3, as well as the odd case of the transitive stem *anla-* 'understand', which has an irregular passive *anla-ş-ıl-*. But even if it should turn out that passive and causative are not fully productive, they are undeniably more so than either reciprocal or medium.

out of usage or undergoes a change of meaning, because once the basic verb disappears, speakers are less likely to recognize the surviving derived form as being derived. An example is the modern intransitive verb *ayıl-*. Its meaning is 'come to one's senses, recover from stupor'. From it we can create a causative *ay-ıl-t-* 'to bring someone around'. Now there still exists a verb *ay-*, only used rarely today, which is also intransitive and has roughly the same meaning as *ayıl-*. But there is no *transitive* stem which could readily be perceived as derivationally related to *ayıl-*, and hence the final syllable is not felt to be a passive morpheme. However, the Redhouse Turkish-English dictionary (1988) lists an archaic meaning of *ay-*, namely transitive 'bring (someone) to', also noted in the dictionary of pre-thirteenth century Turkic (Clauson 1972: 46). According to Clauson (1972: 56), the modern *ayıl-* was originally the passive of this transitive verb. As the transitive meaning of *ay-* was lost, *ayıl-* became a lexical isolate, no longer readily relatable to a basic stem, and was in turn reanalyzed as a basic intransitive stem itself, hence offering no further resistance to causative morphology. This process is rendered schematically in (24):

(24)   basic verb   derived verb

        ay- (trans.) – – – – – – – – – – – *ayıl-* (intrans.)

time axis   goes out   of use   reanalysis as   basic verb form

        ayıl- (intrans.) – – – – – – – – – – – *ayıl-t-* (trans.)

"– – –" indicates a productive derivational process

The reanalysis I am suggesting is a constant and gradual process, encompassing several stages. Consider the verb *ayr-ıl-* 'separate-PASS', discussed above. In (19) I demonstrated that it does not permit the addition of causative morphology, which suggests that it is still perceived as a derived verb form. Yet it does permit the addition of reciprocal morphology, as in *ayr-ıl-ış-* 'separate-PASS-RECIPROC', listed in the Turkish-Turkish dictionary (Türk Dil Kurumu 1988) with the meaning *birbirinden ayrılmak* 'leave one another'. The combination PASS-RECIPROC violates the canonical order, which means that *ayrıl-* 'separate-PASS' is on its way to reanalysis as a basic intransitive verb. But it has not completed the entire cycle yet, for it still resists causative morphology. It seems, then, that different stages in the process of

reanalysis from derived intransitive to basic intransitive can be distinguished according to which voice morpheme is tolerated after passive.[13]

Passives may then develop into basic intransitive stems via reanalysis, but the process is long and gradual. Note that it is precisely because the passive morpheme is essentially vague with regard to S'-control that passive verb forms begin to develop lives of their own, eventually becoming conceptually detached from the original transitive stem from which they are derived. The essential vagueness of the passive morpheme, for which I have argued, provides the initial impetus for reanalysis.

6. Conclusions

1. Passive in Turkish is essentially a detransitivizer. The sole syntactic consequence of passivization is S / A-suppression, accompanied by O-advancement where this is possible. The Turkish passive could more accurately be termed anti-causative.

2. O-advancement does not imply that the derived subject (S') is necessarily an undergoer in the resulting proposition, although this is certainly the default reading. Rather, the passive is indifferent with regard to the parameter of S'-control (see also Johanson 1974).

3. From the preceding point it follows that passive verb forms are open to a number of different interpretations. For example, sar-ıl- wrap+PASS can mean 'be wrapped', or it can mean 'embrace' (lit. be wrapped around someone). At-ıl- throw+PASS can mean 'be thrown', or it can mean 'jump, spring'.

4. A number of scholars have set up different classes of passive to account for these differences in meaning. I have argued against such an account, proposing instead that the differences found are best considered as different values along the scale of S'-control, which the passive derivation leaves undetermined.

5. The constraint on applying passive to causative is neither semantically nor syntactically motivated, but stems from a language-specific morphological constraint governing the possible combinations of morphemes in words.

6. Via reanalysis, erstwhile passive verb forms may develop into simple intransitive verbs. The formal criterion for recognizing such verbs is that they are no longer subject to the morphological constraint which prevents voice morphology from following passive morphology. This is neither a semantic or a syntactic criterion but a morphological one.

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[13] Lees (1973: 509-510) mentions several other examples, taken from older dictionaries, of non-canonical orders with the reciprocal suffix. For example sar-ıl-ış- wrap +PASS+RECIPROC 'to embrace one another', still listed in the more recent Turkish-Turkish dictionary (Türk Dil Kurumu 1988), and öl-dür-üş- die+CAUS+RECIPROC 'to kill one another', no longer listed in the more recent dictionary. However, the informants I consulted were reluctant to accept sar-ıl-ış-, and rejected öl-dür-üş- outright.

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Traces of a Turkic copula verb

Lars Johanson

Johanson, Lars 2000. Traces of a Turkic copula verb. *Turkic Languages* 4, 235-238.

The article discusses possible traces, mainly in Oghuz Turkic languages, of the old copula verb *er-* 'to be', namely in third person plural copulas *-ler*, first person copulas *-(y)Im* and *-(y)Iz*, converbs of the type **-A +er-gen*, archaic present tense forms with an *-y-* element (< *er-*) and denominal suffixes going back to combinations of *er-* + *-DIK.*

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The verb *er-* 'to be' is an old Turkic copula verb that has vanished in most modern languages, often ceding its place to the verb *tur-* 'to be' < 'stand'. Several relics of *er-* are well known, e.g. *e(r)di / idi* 'was' (past), *erse / ise* 'if ... is' (conditional), *iken* 'while' (temporal), *e(r)ken / imiš* 'obviously is / was' (indirective). The copula verb *er-* has, however, left far more traces. The following brief comments mainly concern some traces in Oghuz Turkic and adjacent varieties.

The third person present tense form *erür* 'is' is found in the East Old Turkic Tunyuquq inscription: *Ben°ŋ boð°n°m anda erür* 'My people is there'.[1] The same form is frequent in subsequent Turkic written languages such as Ancient Uyghur, Karakhanid, Khwarezmian Turkic and Chaghatay. Rather early, however, there is a tendency to use *turur*, present tense of *tur-* 'to stand', as the third person copula. Modern Khalaj, spoken in Central Iran, is unique in having maintained *er* 'is' < *erür* (Doerfer 1989).

Certain West Oghuz varieties exhibit traces of *er-* in third person plural copula forms ending in *-ler* regardless of the quality of the preceding vowel, e.g. *yapar-ler* 'they do'. Some forms found in Ottoman and Azerbaijanian transcription texts, Balkan dialects of Ottoman, Khorasan Turkic, etc., may let us suppose earlier forms with a front element preceding the plural suffix, e.g. **yap-ar i-ler*, with *i-* developed from **erür* (Johanson 1981). Brendemoen (1997) shows that the third person plural copula has also remained a front suffix in the dialects of Trabzon. A modern form such as *gel-miš-ler* 'they have come' would thus go back to a pattern similar to Khalaj *kelmiš el-ler* (Johanson 1981: 16). Note that the plural copula suffix also

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[1] Since the intraterminal in *-Vr / -yUr* is not yet defocalized at this stage, there is no reason to render *erür* as 'will be'; Tekin 1968: 286. For defocalization of intraterminal viewpoint (aspect) operators, see Johanson 2000: 99-101.

differs from the normal plural suffix -*lEr* by being incapable of carrying high pitch. Compare the relationship between the unaccentable *idi* ~ -*(y)dI* 'was' and the accentable simple past marker -*DI* in Turkish.

Forms of *er*- may also have played a role in copula elements of the first and second persons. The modern Turkish first person non-past copula forms -*(y)Im* 'I am' and -*(y)Iz* 'we are' exhibit a postvocalic element -*y*-, e.g. *burada-yım* 'I am here'. These forms are traditionally explained as developed from the personal pronouns **ben* and **biz*.[2] The -*y*- element is often claimed to be a so-called 'connective consonant', a highly dubious assumption. Also in this case, it seems more appropriate to suppose earlier forms with a front element preceding the personal element, e.g. **iy-im*, ** i-sin*, with *i(y)*- developed from **erür*. In some of the dialects of Trabzon and Rize, which in general have maintained rather archaic structures, free copula elements exactly of this shape are found: *iyim* 'I am', *isin* 'you are', *iyik* 'we are', etc., e.g. *çocuG iyim* 'I am a child'. The suffixed forms display -*y*-, e.g. -*ysin*, 'you are' (Brendemoen 1997, Günay 1978: 182). Compare standard Turkish *idin* 'you were' ~ -*(y)dIn* etc. The older forms *isin* etc. seem to have developed further in other Turkish varieties, e.g. **-(y)sIn* > -*sIn*.

As Brendemoen (1997) shows, Trabzon dialects exhibit the form *idur* > -*ydur* 'is' in the third person, obviously a combination of a form of *er*- with *turur*. It may have been common in older stages of Oghuz Turkic. For example, Salar, whose speakers left the main bulk of Oghuz at the end of the 14th century and settled in Western China, still displays *i-dər* 'is'.

Many Turkic languages possess complex intraterminal participles of the type -*A* + *tur-ɣan*, expressing habituality etc. (cf. coalesced forms such as Uzbek -*digan*, Noghay -*taɣan*). An older construction, which has similar iterative and habitual meanings but employs *er*- instead of *tur*-, is still present in some languages, e.g. Kumyk *baraɣan*, Khakas *pariɣan* 'going'. Some languages only exhibit lexicalized forms, deverbal intensive adjectives, e.g. Turkish *čališ-qan* 'diligent' (< **čališ-aɣan*), Uzbek *bil-aɣån* 'experienced'. We may reckon with an old participial distinction *bar-ɣan* 'gone' (non-intraterminal) vs. *bar-a-ɣan* 'going' (intraterminal), the latter form going back to **bar-a er-gen*, i.e. intraterminal converb -*A* + *er-gen* (cf. Johanson 1996, 1998b: 117).

The similar roles of *tur*- and *er*- bring us to the formation of present tenses. Most Turkic languages, e.g. the Kipchak ones, use the auxiliary *tur*- according to the pattern intraterminal converb -*A* + *turur*, e.g. *yaz-a turur* 'is writing' (< 'stands writing'). It is probable that *erür* once played a similar role as an auxiliary. At least, the occurrence of present tense forms without *turur* is very old in some languages. In

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2   According to Korkmaz 1965, -*(y)Im* and -*(y)Iz* go back to Old Anatolian Turkish -*vAn* and -*vUz*. On analogy in the development of Ottoman personal suffixes, see Hazai 1973: 408-424.

some dialects of the eastern Black Sea coast, Brendemoen (in print) has found present tense forms, *bilüyim* 'I know', *bilüysin* 'you know', *bilüy* 'knows', *bilüyuk* 'we know', etc., which may be analyzed as combinations of an intraterminal converb (with a final vowel) and a following -*y*- element. The latter may go back to the copula verb *i-* (< *er-*). This type may represent an old kind of present tense formation that has been replaced by *turur* and *yorïr* periphrases in modern languages. Cf. Adamović 1985: 146; for the Azerbaijanian type -*eyr* ~ -*eyir*, see Johanson 1989 and 1997: 94.

Certain Turkic languages possess deverbal suffixes of the type -*DIK*, e.g. Turkish *bil-dik-ler-i* 'that / what they know'. However, some also exhibit denominal suffixes that are seemingly of the same shape, e.g. Turkmen *aγa-m-dïγï* 'his being my brother', *gel-en-diy-i* 'his having come'. The deverbal and denominal suffixes cannot possibly be historically identical forms. The denominal ones obviously go back to combinations of the copula verb *er-* 'be' + -*DIK*, e.g. **i-dig-i* etc. (cf. Johanson 1998a: 60). Compare the Ottoman form *i-düg-i*, which is no longer used in modern Turkish (except in the stereotype *ne idügü* 'what it is').

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Mongolian loanwords in Oghuz as indicators of linguistic and cultural areas in Southwest Asia

Claus Schönig

The topic of this article is Mongolian loanwords in Oghuz Turkic, mainly in Western Oghuz. The older and recent distributions of these loanwords correspond directly with some main political borderlines existing since the 13th century in Anatolia and fit into the framework of Common Turkic. Thus, the greatest amount can still be found in the former Mongolian centre in Azerbayjan and in the neighbouring regions of Inner Northeastern Anatolia, whereas Northwestern Anatolia on the periphery of Mongol power and influence exhibits a relatively low number of Mongolian loans. Furthermore, this article pays attention to the development of the set of Mongolian loanwords in Ottoman and to the role of Mongolian loanwords in *Öztürkçe*.

Historical introduction

In the first half of the 13th century the Mongols led by Chinggis Khan conquered great parts of Asia and Eastern Europe and thus imposed their rule on most of the Turkic peoples. In 1234 / 1235 the Mongols invaded Grusinia. In 1243 / 1244 they defeated the Anatolian Seljuks—also known as Seljuks of Rum or Seljuks of Konya—and made them their vassals.

Like most of the Turks in the Near East and Iran in the 13th century, the Anatolian Seljuks belonged to tribes which we may call—according to Doerfer 1990—the Seljuk Oghuz group. The forerunners of the Seljuk Oghuz had left the Central Asian realm of the Oghuz Yabghu to escape the pressure exerted by the Kipchak and Kimek in 985 (see Golden 1992: 218). They were led by *Säljük*, whose name became the designation for their ruling clan and later for the whole confederation. The Oghuz tribes that remained in Central Asia fell under Kipchak rule. They became the ancestors of the modern Turkmen and probably the Salars. The Seljuk Oghuz are the ancestors of the modern Western Oghuz consisting of the Rumelian and Anatolian Turks (with the literary languages Turkish and Gagauz), the Azeri (according to Doerfer: Central Oghuz), the Southern Oghuz, and the so-called "Turkmen" groups in Syria, Lebanon and Iraq. Even the Khorasan Turks seem to have been an old subgroup of the Seljuk Oghuz confederation (see also Doerfer & Hesche 1993 and Clark 1998).

Already at the beginning of their rule over parts of Anatolia and the Near East, the Mongols made two decisions that became important for the further cultural and

linguistic development of the Western Oghuz. Firstly, they decided to make use of local officials to administrate the conquered lands. Because all these people were exponents of Persian culture, the already lasting strong influence of Persian on the Oghuz and their language was maintained and reinforced. Secondly, the Mongol governor Argun (not to be confused with the Ilkhan Argun, 1282–1291) made Tebriz his capital. For the next hundred years this town and surrounding Azerbayjan remained the centre of Mongol power in the Near East.

In the 1250s *Hülägü*, a descendant of Chinggis Khan's youngest son *Tolui* and brother of the ruling Great Khan *Möngke*, was sent out to complete the Mongol conquest of the Near East. Even though his army was stopped by the Egyptian Mamluks in Syria, he was able to found the state of the so-called Ilkhans (see TMEN II 207-209, No. 657). Their state included Iran, parts of Afghanistan and Turkmenistan, Iraq, and the parts of Syria east of the Euphrates River. Furthermore, the Great Khan added to the realm of his brother the Caucasus range together with its northern foothills and Anatolia—both formerly controlled by the descendants of Chinggis Khan's eldest son *Joči*, the Khans of the Golden Horde. The latter decision became the reason for a series of wars between the two cousin states.

As a result of these developments, the Ilkhanid Mongols ruled over or at least influenced a great part of the Seljuk Oghuz tribes. A smaller part remained under Mamluk rule in Syria and Lebanon. When civil war broke out between the descendants of Tolui and those of the other three sons of Chinggis Khan, the Ilkhans of course took the side of their closer relatives in China. Thus they had to fight not only against the Khans of the Golden Horde, who were trying to re-conquer the Caucasian provinces. In Khorasan the Ilkhans had to open a second front against the Khans of the Ulus Chagatay. As a consequence, the Ilkhanid state became more or less isolated from Eastern Europe and Central Asia. Its Seljuk Oghuz population was cut off from closer contacts with the Turkic peoples living in the neighbouring enemy states. Thus the language of the Seljuk Oghuz became isolated from most of the other Turks, whereas the language of the ancestors of Turkmen still remained in contact with Kipchak and Southeastern Turkic. This situation becomes clear from many basic grammatical and lexical features which are differently developed in Seljuk Oghuz and Turkmen (see Schönig 1997); for Salar see Dwyer 1998. And as I shall try to demonstrate, the effects of this separation can also be shown by comparing the Mongolian loan elements in the two main branches of modern Oghuz.

As for Anatolia, we may generally assume a steady decrease of Mongol influence from Tebriz to the Marmara-Aegean region. Whereas the Van area and Southeast Anatolia together with northern Iraq had become provinces under direct Ilkhanid rule, the Seljuk sultanate of Konya and the kingdom of Lower Armenia were vassals of the rulers in Tebriz. Northwest Anatolia still was the realm of the Byzantine emperors of Constantinople, whereas the eastern Black Sea coast belonged to the Byzantine state of Trapezunt. In both territories Mongolian linguistic influence presumably was minimal or non-existent.

Another important factor for the spread of Mongolian influence was the already existing lines of communication in Anatolia. A southern route led via Diyarbakır, Urfa, Gaziantep and Adana to the Mediterranean coast and Lower Armenia and then to Konya (and farther to the west). A northern route connected Tebriz via Erzurum and Erzincan with Sivas. From there Kayseri, Cappadocia, and Konya could be reached easily (see Spuler 1985). Even as vassals of the Mongols, the Seljuks maintained their capital Konya as the political and cultural centre of the 13th century Anatolian Oghuz. In Konya we find pieces of the oldest Anatolian Turkic literature. Another branch of the northern route led from Sivas across Paphlagonia to the Middle Black Sea coast, while a third branch reached Northern Central Anatolia and its crossways in the Ankara region. From there routes led to the Western Mediterranean coast and to the Marmara-Aegean region.

At the beginning of the 14th century the Sultanate of Konya dissolved into a number of so-called *beylikler* ("princedoms"), some of which had already existed before as vassals of the Seljuks of Konya.[1] The beylik of Osman was still a small state in Bithynia at the margin of the Mongolian sphere of influence. The most important one was the beylik of Karaman in southern Central Anatolia; its territory reached the Mediterranean Sea around Anamur and included Aksaray, Niğde and the old Seljuk capital Konya. The beylik of Germiyan left its traces e.g. in Kütahya, Denizli, Afyon and Uşak; it was to become one of the most prominent Anatolian Oghuz literary centres in the 14th century. In the Marmara-Aegean region we find besides Menteşe (in Pamphylia and Lycia), Saruhan (in towns such as Manisa, Menemen, and Turgutlu), and Karası (in Mysia, the region of Balıkesir) the beylik of Aydın. This state was founded around 1310 and controlled the İzmir region for a while. Rulers of Aydın such Umur Bey I or Isa Bey were patrons of some of the first Anatolian Oghuz poets. The same holds true for some rulers of the Candaroğulları in Kastamonu (and later on in Sinop, too).

During the dissolution of the Seljuk state of Konya, the Ilkhans began to lose control of the western and middle parts of Anatolia. Eastern Anatolia still remained under their influence, but some twenty years later the Ilkhanid state itself started to fall apart. In 1356 Jani Beg Khan of the Golden Horde conquered Tebriz and put an end to what remained of the old enemy state. In Anatolia the dynasty of Eretna in Sivas became independent. Their state included towns such as Kayseri, Sivas, Tokat, Amasya and Niğde. In 1381 it was overtaken by Kadı Burhanettin, who himself belonged to the early Anatolian Turkic poets. In Southeast Anatolia the state of Dulgadır was founded in the region of Maraş, Malatya and Elâzığ, while the state of the Ramazanoğulları soon controlled Adana, Tarsus and other parts of the Çukurova. In East Anatolia, Azerbayjan, Iran and Iraq two powerful Oghuz confederations came into existence: the Kara-Koyunlu and the Ak-Koyunlu.

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[1]   In general see Uzunçarşılı 1969.

Of the *beylikler* that of the Ottomans was most successful. First it expanded mainly in the Marmara-Aegean region and in Europe (Rumeli). At the beginning of the 15th century Timur Lenk invaded Anatolia and defeated the Ottomans. For a while Anatolia and, to an even greater extent, Azerbayjan had more or less intensive contacts with the Timurid centres in Western Turkestan. There under strong Persian influence the Chagatay Turkic literature flourished, gaining some influence on Western and Southern Oghuz dialects and the developing Anatolian Turkic and, later, Ottoman literature.

The Ottomans managed to re-establish their state quite soon. At the end of the 15th century they had annexed or subdued the Western and Middle Anatolian *beylikler* (e.g. Aydın and Germiyan in the 1420s, Karaman in the 1450s, Candaroğulları in Kastamonu after 1460) and reached the borders of Eastern Anatolia. In 1468 the Ak-Koyunlu crushed the Kara-Koyunlu. Then, in 1473, the Ak-Koyunlu were themselves beaten by the Ottomans and vanished from history at the end of the century. Then the Ottomans forced out Mamluk influence from Southeast Anatolia and reached the borders of Syria, Iraq and Azerbayjan. Whereas the Ottomans were successful in conquering the Arabic countries of the Near East, their expansion into Azerbayjan was stopped by the Safavids at the beginning of the 16th century. Their first ruler, Shah Isma'il, is known by the pseudonym *Xaṭā 'ī* as one of the prominent early Western Oghuz poets of Azerbayjan, see Caferoğlu 1965: 644–645. The Ottoman-Safavid confrontation led to the inner Seljuk Oghuz division into Ottoman Oghuz and Iran Oghuz.

Already in the first half of the 15th century the Ottoman court had become the main cultural centre of the Anatolian Turks. Consequently, the Anatolian Turkic literary language became more adapted to the linguistic standards of its sponsors and consumers in Northwest Anatolia and Rumeli. In the 15th century the already strong Persian influence on the Ottoman literary language was increased again to make the language "more elegant" with respect to the norms of Islamic literature, especially poetry. This development reached its peak in the 18th century, but brought on the counter movement for a *Türkī-i basīṭ* ("simple Turkish") as early as the 16th century, see Björkman (1965: 438). In the 19th century, European influence—in the beginning mainly from France—superseded the role of Persian.

General remarks on Mongolian loanwords in Western Oghuz

The aforementioned spheres of political and cultural power had an immense influence on all kinds of linguistic developments within Oghuz Turkic. They also influenced the distribution of Mongolian linguistic material which had found its way into this branch of Turkic. We find lexical copies ("loanwords")[2] from Mongolian in different semantic fields, e.g. as terms of military equipment and organisation, of horse terminology and equipment, of social organisation and administration, in names of

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[2]   For the theory of code copying see Johanson 1992.

birds, mainly birds of prey, terms of falconry, designations for magic objects and so on.[3] Among the Mongolian copies are quite a number of re-borrowings such as *ulus* 'people, nation', *balta* 'axe', *belge* 'sign, mark', and *jegeren* → Turkish *ceylan* 'gazelle', which also appear in other branches of Turkic.[4]

It is not always easy to determine the path by which a Mongolian element came into an Oghuz language or dialect. If Mongolian forms and their copies in Oghuz are more or less identical in shape, one may assume that they were directly copied from Mongolian. A great part of copies in Oghuz can also be found in Chagatay. According to my materials, there are around six times more Mongolian copies with Chagatay cognates than without. Because of the prestige of Chagatay in Anatolia during the Timurid period, many loanwords of Mongolian origin were in fact copied from this Central Asian Turkic language. Sometimes such copies can be identified by their representation of Mongolian *j*- as *y*- as in *jasag* 'law of Chinggis Khan' → *yasaq* 'law, rule'. Another typical Chagatay element is the deverbal suffix *-(A)vUl* ← Mongolian *-'Ul*, see TMEN I 457-458, No. 322.

Some Mongolian words were copied via Persian. Sometimes such forms can be identified by their lack of vowel harmony, although the Mongolian originals match the rules of Turkic vowel harmony, e.g. Standard Turkish *ceylan* (some dialects *jeyran* ← Persian, other dialects *jeren* ← Mongolian) 'gazelle' ← Persian *jeyrān* ← Mongolian (*jeren* <) *jegeren* ← Ancient Turkic *yegeren*; other examples are, e.g., Turkish *kâkül* ← Persian *kākūl* ← Mongolian *kekül* ~ *kökül* 'fringe' and Turkish *meral* (today only used as a female name) ← Mongolian *maral* 'a kind of deer'. Mongolian has a neutral *i* which appears together with back vowels, e.g. in *narin* 'fine', and thus violates the rules of Turkic vowel harmony. If they appear in such a non-harmonic form in Oghuz, they may have been taken from Persian, which also has copied this Mongolian word. But from my point of view the possibility cannot be excluded that cases with neutral *i* and back vowels were taken directly from Mongolian. Oghuz had intensive contacts with Persian already before the Mongol invasion (see, e.g., Kāšġarī). After a while at least some Oghuz languages began to make lexical copies without vowel harmony. Because we do not know when the individual Oghuz languages and dialects began to accept such non-harmonic copies, we cannot exclude in every case that the word in question was copied directly from Mongolian.

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[3] One main source for the study of Mongolian loanwords in (Western) Oghuz is, of course, Doerfer's TMEN and other works published on Oghuz in the last ten years. Of importance are also the work of Caferoğlu on Azeri (e.g. 1954) and two articles by Tuna (1972 and 1976) on Mongolian loanwords in Ottoman and Turkish, even if the works of latter two should always be used with care.

[4] The Mongolian forms are given in a very simple transcription and should not be taken as exact phonetic representations. Both the transcription and given meanings of Mongolian words rely on Lessing (1960). Examples from Standard Turkish or dialectal material listed in DS or dialect grammars are given in Turkish orthography.

A further possible way via which Mongolian copies may have entered individual Oghuz units is by inner Oghuz borrowing.

As to Mongolian elements in Modern Turkish, one must be aware of the activities of Turkish language reformers, see also Sertkaya 1992. There are quite a number of Mongolian copies which—because of their appearance in Ottoman sources or Rumelian and Anatolian dialects—were accepted as *Öztürkçe* and thus at least proposed to substitute copies from the Arabo-Persian or European lexicon, e.g. *ülke* (← *ölke*) for *memleket* 'territory', *şölen* (← **šölen* ~ *šilen*) for *ziyafet* 'banquet', *sayın* (← *sayin*) for *muhterem* 'esteemed', *yasa* (← *jasag*) for *kanun* 'law', and *ongun* (← *onggun* 'spirit inhabiting a material object') for *arma* 'coat of arms; state emblem'. Probably *kurultay* (←*quriltay*; for *kongre*) 'assembly' was a model for the derivation of Turko-Mongolian hybrids such as *Yargıtay* 'Supreme Court of Appeal', *Kamutay* 'National Assembly', *Sayıştay* 'Exchequer and Audit Department', *danıştay* 'council of state', and *çalıştay* 'workshop'. Thus even Mongolian suffixes became productive in *Öztürkçe* word derivation.

The distribution of Mongolian loanwords in Modern Oghuz

Some copies appear in all Oghuz subgroups and are common to most other Turkic languages., e.g. copies of *aqa* 'elder brother', *boro'an* 'snowstorm', *je(ge)ren* 'gazelle', and *qara'ul* 'watch, guard'. In the limited Gagauz materials some of these forms are not attested, e.g. copies of *ölkä* 'territory', *qaburga* 'rib', *sag(a)daq* → *sadaq* 'quiver', *ganjuga* 'a strap on the saddle', *singqor* 'a kind of falcon', and *dalda* 'hidden, concealed'. But this does not automatically mean that they do not exist in this language. Here more lexicographical work is needed. The form of Mongolian *qara'ul* 'watch, guard' → *qaraqol* in Turkish and Gagauz instead of *qaravul* as in other Oghuz as well as non-Oghuz Turkic languages reveals the close relation between these Western Oghuz literary languages.

In some cases the copies in Standard Turkish clearly appear in Western or Western-Middle Anatolian shapes (e.g. *dulda* instead of *dalda* 'protection; shadow' ← *dalda* 'hidden; protection'). Some copies in Turkish are not attestable in Azeri or Turkmen, e.g. *čilbur* 'leather cord attached to a halter or bridle; tether', see below. Some copies or forms of copies only appear in Turkmen and Azeri (and sometimes in Southern Oghuz), e.g. copies of *na'ur* 'lake', *noqta* 'halter' and *singqor* 'a kind of falcon' → *šunqar* (with initial *š-*, whereas Turkish together with Anatolian dialects and Ottoman and older Anatolian sources have *s-*, except *Kadı Burhanettin Divanı*). Such distributions may have developed in the framework of the Ottoman Oghuz : Iran Oghuz division.

As a consequence of the long-lasting isolation of Turkmen from Western Oghuz this Eastern (according to Doerfer: Northern) Oghuz language exhibits copies which cannot be found in modern Western Oghuz but are quite common in modern non-Oghuz Turkic languages, e.g. *čeber* 'clean, pure; immaculate; neat' and *otaga* 'peacock feathers worn on official hats' (attested in Ottoman; see TS V, 3022). Other interesting cases are *salqin* '(cool) wind' and *serigün* ~ *seregün* 'cool, fresh (day)'.

Copies of *salqin* became re-interpreted as 'cool, fresh (day, air)' and exist today in Chuvash, Kipchak, Southeastern Turkic, Northeast Turkic and in Turkmen (*salqïn*). Modern Western Oghuz does not exhibit such forms, Ottoman possibly does. Copies of *serigün* ~ *seregün* exist in all Oghuz languages (e.g. Turkish *serin*), in Khalaj, Northeast Turkic (including Yellow Uighur and Fu-yü), and Kirghiz. They are not attested in Chuvash, Kipchak (except Kirghiz-Kipchak) and Southeastern Turkic, but appear in Middle Kipchak sources. This distribution goes back to the internal conditions of the Chinggisid empire during the Ilkhanid period. The Turkic languages of the Toluid Yüan state, i.e. Northeast Turkic and Kirghiz-Kipchak, have kept copies of both words with different meanings. In the realm of the Toluid Ilkhans, Western Oghuz and Khalaj have lost copies of *salqin* (if they existed) and exclusively use forms of *serigün* ~ *seregün*. The Turkic languages spoken in the areas of the two non-Toluid states (Golden Horde and Ulus Chagatay)—i.e. the Southeastern Turkic and Kipchak of non-Kirghiz type together with Chuvash—have lost copies of *serigün* ~ *seregün* almost completely and solely use forms of *salqin* today. Of the languages of the non-Toluid realms, only Turkmen exhibits copies of *serigün* ~ *seregün*. They may have survived there by chance or been adopted in later centuries when contacts between Western Oghuz and Turkmen became possible again.

As one would expect, Khorasan Turkic is the link between Western Oghuz and Turkmen. Thus it exhibits—like Turkmen—copies of *mergen* 'good marksman, sniper' which seem not to exist in Western Oghuz.

A characteristic set of copies in Western (and sometimes Southern) Oghuz is attested in Anatolian dialects, but not in Standard Turkish, e.g. *erke* 'privilege; self-willed, capricious', *dömüg* 'useful, satisfactory', *ǰida* 'spear, javelin', *ǰerge* 'sort, rank, order, stage', and *eremek* 'manly; sterile, barren'. These copies represent older stages of the Western Oghuz lexicon and were given up later on when Ottoman was undergoing internal changes. Some of them are even important enough for Steuerwald 1972 to mention them as dialectal forms in his dictionary of Standard Turkish, e.g. copies of *alaša* 'a kind of horse', *ǰar(čï)* 'announcement, advertisement (messenger)', *kešig* 'turn (one's place, time, or opportunity in a schedule or alternating order)', *qošun* 'troop, army', and *togta-* 'to stop, rest etc.', see also below.

Some loanwords appear in Azeri, Iraq Turkmen and Inner (North-)Eastern Anatolian dialects (and often in Turkmen), but not in Western and Middle Anatolian dialects and Standard Turkish, e.g. copies of *axta* 'gelding', *qay(i)či* 'scissors', *ǰilu'a* 'reins', *küreng* '(dark) brown, maroon (esp. of fur); deep violet', *qošun* < *qosigun* 'troop, army', *büdüre-* 'to stumble', *qadagan* 'important affair; strict order', *yeke* 'big, high, great', *tebši* (instead of the Turkic form *tepsi*) 'large oblong plate; trough', and *daruga* 'governor'. The sparsely documented Southern Oghuz group belongs here, too. It is closest to Azeri and has copies of, e.g., *dalda* 'hidden, concealed' with *a* in the first syllable, of *nöker* 'follower', *köreken* 'son-in-law', *yeke* 'big; high; great' and *noqta* 'halter'. These copies point back to the period when the eastern part of Anatolia had not yet come under Ottoman rule and was politically more closely connected to Azerbayjan and other parts of Iran, i.e. before the end of

the 15th century. Such early copies sometimes had become so fully integrated into the lexicon of the dialects concerned that they survived despite later Ottoman and Persian influences.

Azeri has the greatest number of Mongolian copies. It has a set of copies in common with Turkish, some of which are deviant in form (Azeri *garovul* : Turkish *karakol* ← Mon. *qara'ul* 'watch, guard') or in meaning (Azeri 'coat of chain mail' : Turkish 'quiver' ← Mon. *sag(a)daq* 'quiver'). Additionally we find loanwords in Azeri not attested in other Oghuz (or even any other modern Turkic) languages and dialects, e.g. copies of *suna* 'gadfly, horsefly', *lap* 'sure, positive, definite', *gantarga* 'band or strap used for holding something to prevent it from bending or falling'.

The internal situation in Anatolia and Rumeli

Let us now take a look at the Mongolian loanwords in Anatolian dialects which are not attested in the modern literary language of Turkey or are used in forms or meanings different from the standard language. The greatest number of copies appears in Inner Northeast Anatolia, in regions like Kars, Van, Erzurum, diminishing in Erzincan, Gümüşhane and Sivas; see above. This area is closest to the Mongol capital Tebriz in Azerbayjan and to the easternmost part of the old northern route, see above. There follows the region along the middle part of the northern route, i.e. Amasya, Tokat, Ankara and Çorum. We find almost the same amount of copies deviant from Standard Turkish in the old Seljuk heartland and later Karaman area and in the realm of former Eretna in Southern and Eastern parts of Central Anatolia, i.e. the regions of Konya, Kayseri, Nevşehir and Niğde. Still a great amount are attested in the Çukurova (regions of Adana and İçel) and the Middle Aegean area—the former lands of Aydınoğulları and their neighbours in the İzmir and Aydın regions.

Northwest Anatolia, mainly the Marmara region and Rumeli, exhibits only a few special copies different from those of the modern standard language. The same holds true for the Eastern Black Sea coast (the former Trapezunt), but not the Middle Black Sea coast with Samsun, Giresun and Ordu. Because of influences from the neighbouring Byzantine culture and the long distance between Northwest Anatolia and the Ilkhanid centre in Azerbayjan, Mongolian influence on Oghuz (e.g. Ottoman Oghuz) was weaker here than in any other region of Anatolia. When the Ottomans expanded in Anatolia from the 14th century on, they gained influence on the neighbouring Oghuz dialects (some of them perhaps attested in pieces of older Anatolian Oghuz literature) and assimilated them. As a consequence, in the period during or directly following the phase of Mongol influence, i.e. the 14th century, in non-Ottoman Western Anatolian and Rumelian dialects, Mongolian loanwords could easily vanish before they became integrated into the lexicon, if they had no counterpart in Ottoman proper. When the formerly Byzantine area of Constantinople was Turkicized (through immigration or a change of the language and culture of the non-Oghuz inhabitants), the possibility of direct Mongolian influence was gone. Thus only loanwords which had survived up to this time could become part of the dialectal lexicon of the regions concerned. The same holds true for the Byzantine realm of former Trapezunt. A spe-

cial regional copy such as of *olĵa* 'booty' in Trabzon seems to be unique in Western Oghuz and may have been transmitted from the neighbouring Caucasus area or perhaps only survived there later on (or is only attested there).

For Southeast Anatolia the lexical and grammatical Oghuz sources exhibit only a small number of copies. A higher amount is attested only in Maraş and Malatya. But as we shall see, the distribution of Mongolian copies in Kurdish and Iraq Turkmen helps to bridge this gap. The relatively low amount of attested copies in Southeast Anatolian Oghuz may be due to the special demographic and political situation under which investigations took place in this region.

Mongolian copies in Anatolian and Rumelian Oghuz are not distributed homogenously but follow several areal patterns. Some copies seem to exist almost exclusively in Western Anatolia or in Rumeli, e.g. copies of *öpčin* 'armour' (regions of Balıkesir and İzmir, DD 1113 and DS IX 3343a), *soyurga(-l)* '(to grant a) favour', (İzmir, Manisa, TMEN I 354) and *qabturga* 'a square-shaped bag' (Kırklareli, DS VIII 2636b). Others are attested in the extreme West as well as in Eastern Anatolia and Azerbayjan, e.g. copies of *erke* 'privilege; self-willed, capricious' (İzmir, Azerbayjan, see DS V 1773b and Džangidze 1965, 106). Copies of *ĵeren* 'gazelle' different from modern Turkish *ceylan* or copies of *sinĵi* are well attested in Inner Middle and Eastern Anatolia but do not appear in the Aegean and Marmara region nor on the Western Mediterranean coast. Another group of copies appears only in Southern Central and Eastern Anatolia, but not in the Northwest. Some copies from this group reach the Mediterranean coast and are also attested on the Middle Black Sea coast, e.g. copies of *küriyen* 'barricade of wagons' (e.g. in the regions of Ordu, Maraş, Kayseri, Adana and İçel, DS VIII 3044b), *ĵida* 'spear, javelin' (Kars, Gaziantep, Hatay, Kayseri, Adana, Denizli, Antalya (DS III 960a and Azerbayjan). Other loanwords appear in Inner Eastern Anatolia and along the old northern route, e.g. copies of Chagatay *yasavul* ← Mongolian *ĵasa'ul* 'referee' (Sivas, Erzincan, Ankara, Amasya, Van, Çanakkale, DD 1488 and DS XI 4192a; also in Azeri and Turkmen) and *alaša* 'a kind of horse' (Kırklareli, İzmir, Ankara, Amasya, Gümüşhane, Artvin, Kars, DS I 199; also in Azeri and Turkmen dialects). Copies of *šiltaq* 'pretext; reason' appear mainly in the Inner Eastern half of Anatolia (Çorum, Giresun, Maraş, Sivas, Yozgat, Kırşehir, Kayseri, Tokat, Erzurum, Kars, Malatya, Van, Amasya, and Artvin, but also in Çanakkale, DS X 3768b, X 3767b and XII 4724b; they are also attested in Azeri and Turkmen).

Many copies appear only in Inner Northeast Anatolia; these forms often have cognates in Azeri and sometimes in Turkmen, see above. The Anatolian centre of this area is the Kars region, even if some copies of this group cannot be attested there, e.g. copies of *daruga* (Gümüşhane, DS IV 1370a and IV 1374a; also in Azeri, Khorasan Turkic and Turkmen), *tepši* 'large oblong plate; trough' with *š* instead of *s* (Artvin, DS X 3887b), and copies of the form *šile* with illabial vowel and a meaning like 'a *pilav*-like rice or *bulgur* meal' ← mon. *šölen ~ šilen* (Erzurum, Bitlis, Van, DS X 3777b; also in Azeri). Of the recently Turkish part of Anatolia only the Kars region seems to have copies of *ĵilu'a* 'reins' (→ *cılav*, DS III 907a), *qošun* 'troop,

army' (DS VI 2108a and VIII 2935a) and *küreng* '(dark) brown, maroon (esp. of. fur) (→ *güren ~ giren*, DS VIII 3044b); deep violet' which also appear in Azeri.

The few data of Southeast Anatolian Oghuz are mostly insignificant, because in many cases only quite widespread copies are attested there. In this regard, the Kurdish and Zâzâkî data from this region as well as the dialect of the Iraq Turkmen, the southern neighbours of the Southeast Anatolian Oghuz, are helpful. Kurdish has— besides others—copies of *jilu'a* (→ *jelew*, Izoli 1992: 78), *qošun* (→ *qušūn ~ qošun*, TMEN I 406ff.), *qadagan* (→ *qedexe* 'prohibition', Izoli 1992: 336a) 'important affair; strict order', *jerge* 'sort, rank, order, stage' (→ *jerge* 'halka; daire; cemaat, meclis', Izoli 1992: 79a) and *qayči* (→ *qe(y)či*, Izoli 1992: 342a) 'scissors' which are typical for Inner Northeast Anatolia and of *lab* 'sure, positive, definite, authentic' (→ *lap* 'much, very', Izoli 1992: 252a) which also exists in Azeri; Zâzâkî has, e.g., copies of *jerge* (*jergï* 'group (of people)', Malmisanij 1992: 57a) and *lab* (→ *law* 'oh boy!', Malmisanij 1992: 198a). Iraq Turkmen exhibits copies of *qadagan* (*kadağa* 'prohibition', DS VIII 2588a), *ölkä* 'territory' (with preserved low vowel in the first syllable as in Azeri), and *yeke* 'big, high, great' (Shahbaz 1979: 344)—all of them being typical features of Inner Northeast Anatolian Oghuz and Azeri. Thus we can see that the Southeast Anatolian region belongs to the same area as Inner Northeast Anatolia and Azerbayjan. This situation goes back to the political coherence of these areas from the middle of the 13th century (the beginning of the Ilkhanid period) to the end of the 15th century (the breakdown of the Ak-Koyunlu rule). The existence of copies of Mongolian *bora* → *bor* 'grey' in Southeast Anatolian Oghuz, Kurdish, Zâzâkî and Iraq Turkmen perhaps indicates an internally closer connection of these vernaculars on an areal sublevel.

The situation in Ottoman

Quite a few Mongolian loanwords in Ottoman are no longer in use in modern Oghuz, e.g. copies of *asara-* 'to take care, raise', *kejim* 'armour for horses' (re-borrowing), *kebte'ül* 'night watch', and *jada* 'rain magic (stone)'. Some of them may still live on somewhere in Oghuz languages and dialects, but do not appear in the sources I consulted. The forms like *javunggar* and *baranggar* in *Fatih Sultan Mehmet Yarlığı* (see Arat 1939) from the 15th century are to be considered as Chagatay and do not belong to the Ottoman lexicon.

Some Mongolian copies in Ottoman today seem to exist only in Turkmen, e.g. *maqta-* 'to praise' and *yada-* 'to be unable to'. Others have also (or exclusively) survived in Anatolian Rumeli and often additionally still exist in modern Azeri, Turkmen or the Oghuz vernaculars of Iraq and Iran, e.g. copies of *köreken* 'son-in-law', *olja* 'booty of war', *axta* 'gelding', *jilav* 'reins', *qošun* 'troop, army', *savga* 'a kind of gift', *šiltag* 'cause, pretext', *qadagan* 'important affair; strict order', *jida* 'spear, javelin', *jerge* 'sort, rank, order, stage', *alaša* 'a kind of horse' and many others. Survivors in Standard Turkish are, e.g., copies of *dalu* 'shoulder blade', *sag(a)daq* → *sadaq* 'quiver', *narin* 'fine', *čilbur* 'leather cord attached to a halter or bridle; tether', *quma* 'concubine', *dogulga* 'helmet', *singqor* 'a kind of falcon', *bora'an*

'snowstorm', and *qara'ul* 'watch, guard'; some copies were revived during the language reform, see above.

The oldest works in Anatolian Oghuz such as *Yunus Emre Divanı* (13th/14th century) exhibit only a few loanwords.[5] This is not astonishing, as in this period Mongolian influence on Anatolian Oghuz had just started.

The sources from the 14th century exhibit a lot more loanwords. Most frequently we find (according to TS), e.g., copies of *nöker* 'follower', *ǰasa-* 'to put in order', *asara-* 'to take care, raise', *ǰida* 'spear, javelin' and *sag(a)daq* → *sadaq* 'quiver'. The greatest amount of copies appears in *Dede Korkut Kitabı*. Lexemes still surviving today in the Eastern Anatolian-Azeri area are, e.g., copies of *ǰilu'a* 'reins', *qošun* 'troop, army', *büdüre-* 'to stumble' and *nöker* in the meaning 'servant'. In addition, we find copies existing in other regions of Anatolia or in Standard Turkish, e.g. of *ǰasa-* 'to put in order', *čilbur* 'tether' and *balčak* 'hilt of a sword, knob'.

Furthermore a lot of copies can be found in *Süheyl ü Nevbahar* of Hoca Mes'ud, who lived in Aydın, in *Hurşid ü Ferahşad* of Şeyhoğlu from Germiyan and in *Kadı Burhanettin Divanı*. The latter source exhibits forms which more recently are unknown in Anatolia, e.g. copies of *noqta* 'halter'. This underscores the special position of this work in early Anatolian Oghuz literature. The *Garibname* of Âşıkpaşa from Kırşehir is of some interest because it has a contaminated copy of *qapčigur* ← *gubčigur* 'impost, tax', which still can be found in the neighbouring modern Ankara and Çankırı regions. The work of *Nesimi* exhibits—aside from the Central and Eastern Anatolian copy of *şiltaq* 'cause, pretext'—no other copies specific to the Eastern Anatolian-Azeri area to which the language of the author belongs. An interesting case is *Yusuf ve Zeliha* by Şeyyad Hamza. Traditionally he is taken as a poet of the 13th century, but as Adamović (1966) has shown, there are good reasons to date him to the 15th century. In this case he could not have been a direct pupil of Ahmed Faqīh from Konya. But perhaps it is at least true that Şeyyad Hamza lived in Akşehir in the Konya region. It is of interest that in *Yusuf ve Zeliha* we find a verb (and not a noun) *dümük-* 'to be interested in a thing' (DS IV 1630a) which today is still attested in Kayseri and Konya. Perhaps this verb was already in these time a special feature of this region.

The sources from the 15th century still exhibit a great amount of copies, even if they are fewer here than in the texts from the 14th century. Most frequent are copies of *čilbur* 'tether', *ǰasa-* 'to put in order', *beserek* 'half-breed, crossbreed', *nöker* 'follower', *qara'ul* 'watch, guard', *ǰebe* 'armour' and *šilen* 'banquet', some of which have survived in modern Standard Turkish. According to the data in TS, the greatest amount of copies are found in the Arabic-Turkish dictionary *Terceman* of Pir Mehmet from Ankara. The second place is held by *Tarih-i Âl-i Selçuk tercümesi*, translated from Persian and dedicated to Murad II. From the 16th century, three

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works still exhibit a great number of copies (as many as the highest-ranking works of the 14th century): the *Şehname Tercümesi* of Şerifi from Diyarbakır (dedicated to the Mamluk sultan Qānṣauh al-Ġaurī) and the Persian-Turkish dictionaries *Lûgat-i Ni'metullah* of a Naqšbandī Sheykh from Sofia and *Şamil-ül-Lûga* of Hasan from Afyon. The works following in rank are also Persian-Turkish dictionaries: the *Et-Tuhfet-üs-Seniyye* of Deşişi Mehmet from Amasya and the *Câmi-ül-Fürs* of Mustafa from İnegöl. The copies that dominate in the 16th century sources have mostly survived in modern Turkish and Azeri. Up until that century we find a lot more copies from Mongolian than in the following centuries. One reason for this is the development of Ottoman into its highly Persianized classical and post-classical forms. The Mongolian loanwords which had already entered Ottoman via Persian were probably not that much affected by these tendencies. The other factor which made some copies obsolete is rooted in social, military and technical changes. These copies fell out of use together with the things or concepts they designated or were replaced by other expressions for reasons of taste and style.

In the sources from the end of the 16th century and from the 17th century there is a dramatic decrease in the number of Mongolian copies. This corresponds to some parallel development within the inherited Turkic lexicon. Thus some old words such as *keleji* 'talking, speech' (attested e.g. in Kāšġarī's dictionary, p. 223, as Oghuz) began to vanish, too. In the 17th century most Mongolian copies can be found in Evliya Çelebî's *Seyahatname* (in the running text as well as in citations from vernaculars of different regions),[6] but in comparison with the works of the 14th to the 16th century it has only an average position. There follows the Arabic- and Persian-Turkish dictionary *Genc-i Leâl* of Gencî Pir Ahmet. The third position is taken by *Karacaoğlan*. He originated from Southern Anatolia and travelled around the regions of Adana, Gaziantep, Maraş, Urfa and Aleppo. His language contains a copy of *qonalga* 'place to spend the night' which still exists in different forms in the dialects of Southern Anatolia.

The sources of the 18th and early 19th century show a further decrease in the number of Mongolian copies. Only two dictionaries exhibit a great number of copies (comparable in this respect with the sources from the 14th and 15th centuries): the *Bürhan-ı Katı' Tercümesi*, the translation of the Persian monolingual dictionary of Hüseyn ibn Halef from Tebriz, and the *Kamus Tercümesi*, the translation of the renowned Arabic dictionary of Firuzâbâdî, both works by Mütercim Ahmet Asım from Gaziantep. The *Bürhan-ı Katı' Tercümesi* has in the text of the articles (i.e. not as lemmata) many copies still known in Turkish and Azeri, beside forms which are no longer in use in Modern Western Oghuz. The copy of *nöker* appears as a lemma and is explained as "*quma*" ('second wife' (!)) for "*ba'zı diyarda*" ('some regions'); in the same meaning copies of *nöker* are still used in modern Southeast Anatolia (e.g. in Urfa, Gaziantep, Maraş and Adana, also in Aydın, see DS IX 3255b), where the

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[6] Besides TS, see Dankoff 1991.

translator was from. We also find *ceyran* ← *ǰegeren* 'gazelle' as in Northeast Anatolian Oghuz and Azeri. As we can see the *Bürhan-ı Katı' Tercümesi* contains some hints to the Eastern Anatolian roots of its translator. The *Kamus Tercümesi* does not show the same amount of typical copies; the main copy to mention is that of *šiltag* 'cause, pretext' in *šiltaq eyle-* 'to mention', which belongs to the Eastern Anatolian-Azeri set.

In the sources from the latter 19th century and the beginning of the 20th century the number of Mongolian copies decreases further. During the language reform in the Turkish Republic, some Mongolian copies in Ottoman or in dialects were erroneously taken for originally Turkic words and became incorporated in the *Öztürkçe* vocabulary, see also above.

As we can see, the distribution of Mongolian loanwords in Oghuz closely corresponds to the political and cultural developments of this subgroup of Turkic. My collection of Mongolian materials in Western Oghuz, which I hope to publish soon in a monograph, can only be considered as a first step towards a detailed study of Mongolian linguistic influence on (Seljuk) Oghuz in the 13th and 14th century and the fate of its results. But I hope that I have been able to demonstrate that the study of these foreign elements can be useful to understand better the linguistic and cultural developments and connections of the Turkic and of the non-Turkic populations of Anatolia, the Near East and Iran.

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Turkish Electronic Living Lexicon (TELL)

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This paper introduces the Turkish Electronic Living Lexicon (TELL), a searchable lexical database of Turkish. The current version of TELL provides phonologically accurate transcriptions of the Turkish words that an actual native speaker recognized out of a larger master list of words culled from dictionaries and other print sources. TELL is accessible over the Internet via a search engine that permits users to search for potentially complex phonological patterns and to download and save their results. Designed primarily for academic research into Turkish, TELL also has obvious applications for students and teachers of Turkish.

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1. Introduction

This paper introduces the Turkish Electronic Living Lexicon (TELL), an ongoing project at the University of California at Berkeley which aims to establish a searchable lexical database of Turkish.[1] TELL is primarily designed for academic

research into the phonological structure of Turkish but also has obvious applications for students and teachers of Turkish. TELL differs in content from standard print dictionaries of Turkish in providing phonologically accurate transcriptions of those Turkish words known to an actual native speaker. TELL is accessible over the Internet via a search engine that permits users to search for potentially complex phonological patterns and to download and save their results.

2. Motivation for TELL

The original motivation for TELL was to provide an accurate database for conducting phonological research into Turkish, which has long been an influential language in the development of phonological theory. Unfortunately, reliance on inadequate data has led a number of researchers into making dubious claims about Turkish. Unless a researcher has direct access to native speakers, which is not always the case, the researcher is forced to rely for hypothesis formation and testing on examples previously cited in the literature—potentially perpetuating errors—or on print dictionaries.

2.1. Inadequacies of print dictionaries as basis for phonological research

Many high-caliber dictionaries of Turkish exist. However, they are not only time-consuming to use but also inadequate for phonological research, for a number of reasons enumerated below.

2.1.1. Dictionaries are conservative

Dictionaries tend to be conservative, containing many words found in older literature but not known or used by the typical speaker. This problem is particularly acute for Turkish, due to the legacy of the highly artificial Ottoman literary language with its deliberate loans from Arabic and Persian. Many of these loans were restricted to elite literary style and probably never used in the everyday spoken language. They are, however, included in modern dictionaries. The native speaker represented in the

TELL project, an educated man in his 60's, knew approximately half of the items in the 2nd and 3rd editions of the Oxford Turkish English dictionary. Words that speakers do not know are irrelevant to the computation of phonological generalizations about the synchronic form of the language. Yet the linguist perusing a dictionary cannot know which items to disregard on this basis.

2.1.2. Orthography is not sufficient

Dictionaries present words in orthography. Turkish orthography is close to phonemic, but does obscure the following four crucial phonological properties:

(1) Lateral and velar palatalization
Vowel length
Vowel epenthesis into initial clusters
Stress

The lateral /l/ and the velar plosives /k/ and /g/ all have palatal counterparts with which they contrast phonemically in the neighborhood of back vowels (all three are predictably palatal in the neighborhood of front vowels). Turkish orthography provides a means of indicating palatality: a circumflex on a vowel can indicate that the preceding consonant is palatal. However, the circumflex can also be used to indicate vowel length, making it ambiguous. This is illustrated by the following examples. ("Ox57" refers to the 2nd edition of the Oxford Turkish-English dictionary, published in 1957; "Ox92" refers to the 3rd edition, published in 1992. Here and elsewhere, pronunciations, presented in IPA, are those of the native speaker represented in version 1.0 of TELL.)

(2)	orthography	pronunciation	gloss	source
circumflex indicates velar palatalization:	*gâvur*	gʲɑvur	'infidel'	Ox57,Ox92
circumflex indicates vowel length:	*gâsıb*	gɑːsɯp	'usurper'	Ox57
circumflex indicates velar palatalization *and* vowel length:	*kâfi*	kʲɑːfi	'sufficient'	Ox57,Ox92

Not all forms in which a palatal consonant precedes a back vowel are spelled with a circumflex, however:

(3)		orthography	IPA	gloss	source
Contrastively palatal		*Hollanda*	holʲlʲɑndɑ	'Holland'	Ox92
consonant preceding back vowel, but no circumflex:		*meşgale*	meʃgʲɑle	˸business'	Ox57, Ox92

In any case, the circumflex is falling out of use in contemporary written Turkish, so that even the words written with a circumflex in (2) are increasingly being rendered without one. In many cases, circumflexes present in the 2nd edition of the Oxford dictionary (e.g. *gâsıb* 'infidel') are omitted in the 3rd edition (e.g. *gasıp*).

Even in conservatively spelled sources, there is no orthographic means at all of marking palatality on a consonant which is *not* followed by a vowel, as in these forms:

(4)		orthography	IPA	gloss	source
Contrastively palatal		*vokal*	vokɑlʲ	'vocal'	Ox92
consonant following but not preceding back vowel; no circumflex		*makbul*	mɑkbulʲ	'acceptable'	Ox57, Ox92

Some dictionaries, e.g. Ox57 and the Redhouse Turkish-English dictionary, indicate contrastive palatality on a word-final lateral or velar by listing the form that the accusative suffix takes for that word.

Also not represented well in the orthography is vowel length. As indicated above, the circumflex is used sporadically in the orthography to represent length. However, it is underutilized even in conservative spelling, as exemplified by the following words:[2]

(5)		orthography	IPA	gloss	source
Circumflex absent		*kaza*	kɑzɑː	'accident'	Ox57, Ox92
but vowel is long		*tesir*	teːsir	'impression, influence'	Ox57, Ox92

Some dictionaries, e.g. Redhouse and Ox57, use nonorthographic symbols such as dashes in pronunciation guides to indicate vowel length. However, others (e.g. Moran's 1985 *Büyük Türkçe-İngilizce Sözlük*) simply fail to represent it at all. This is a

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[2] The Ox57 dictionary represents some words with long vowels for which the TELL speaker (and other native speakers consulted) have short vowels. This "overrepresentation" of length presumably reflects conservative pronunciations or dialect variation.

great loss to the phonologist, since Turkish has a great many words (nearly 10%, according to recent TELL estimates) with phonemically long vowels.

A third area of pronunciation in which dictionary representations systematically differ from speakers' productions is in the rendition of words spelled with apparently tautosyllabic consonant clusters. Most speakers systematically break these up with epenthetic vowels, whose quality is of considerable interest to the phonologist. Yet dictionaries give the phonologist no indication that there is a vowel in these positions:

(6)	standard orthography	IPA	gloss	source
	protesto	pɯrotesto	'protest'	Ox57
	tren	tiren	'train'	Ox57, Ox92
	streptokok	sitreptokok	'streptococcus'	Ox92
	ansambl	ansɑmbɯl	'ensemble'	Ox92

Finally, the orthography of Turkish does not mark stress. There are relatively few minimal pairs in Turkish which differ only in the position of stress. However, there are a number of items which follow neither of the regular stress placement rules (final stress, for ordinary words, and a more complex pattern of nonfinal stress, for place names and foreign names used in Turkish (see Sezer 1981, Inkelas 1999)).

(7)	*Words with exceptional stress*		
	masa	['mɑsɑ]	'table'
	Bermuda	[ber'mudɑ]	'Bermuda'
	tarhana	[tɑr'hɑnɑ]	'dried curds'

These exceptional words play an important role in the stress system as a whole. Some dictionaries (e.g. Ox57, Redhouse) use nonorthographic symbols such as accent marks in pronunciation guides to indicate the position of stress, but others (e.g. Ox92, Moran) leave it out altogether.

2.1.3. Morphophonemics inadequately represented in many dictionaries

Another crucial aspect of the phonology of a Turkish word is the morphophonemic alternation pattern that it shows under suffixation. These fall into several types:

(8)	*Morphophonemic properties of roots*
	Harmony pattern taken by suffixes
	Vowel length alternations
	Consonant length alternations
	Consonant voicing

According to the rules of Vowel Harmony, harmonic suffixes appear with back vowels when the stem they attach to has a back vowel in its last syllable, and front vowels otherwise. High suffix vowels also agree in roundness with the closest stem vowel. Occasionally, however, stems violate this pattern by triggering disharmony on suffixes. This happens only with back vowel stems:[3]

(9) *Disharmony on suffixes (orthographic forms only)*

nominative	accusative	gloss	source
saat	*saat-i*	'hour'	Ox57, Ox92
dikkat	*dikkat-i*	'attention'	Ox57, Ox92
istimlak	*istimlak-i*	'expropriation'	Ox92
garb (garp)	*garb-i*	'the West; Europe'	Ox92 (Ox57)

The Redhouse and both editions of the Oxford dictionary list the form that the accusative suffix (homophonous with the 3rd person possessive) takes for such words, as an indication that suffixes generally take front vowel harmony. Moran (1985) does not do this.

Some phonologically contrastive information within roots is neutralized in the citation form in which lexemes are typically listed in dictionaries. For example, since long vowels shorten in closed syllables, a word ending in an underlyingly long vowel followed by a consonant will shorten that vowel in citation form. Only the Redhouse dictionary marks such vowels as long.

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[3] While Clements & Sezer (1982:242) claim that some front-vowel roots might take back vowel suffixes, e.g. *fevk-ı* 'top-accusative' and *utarid-ı* 'Mercury-accusative', this phenomenon does not seem to stand up to additional scrutiny. We found, in a small study conducted with native speakers in Istanbul, that even the few speakers who exhibit back-disharmony in suffixed forms of these roots exhibit it *only* in accusative or possessed forms. For all other suffixes tested, e.g. the plural or non-accusative case endings, these same speakers exhibit front harmony in suffixes, i.e. *fevk-ler* (**fevk-lar*) 'top-pl' and *utarit-ten* (**utarid-dan*) 'Mercury-abl'. It is thus not a general morphophonemic property of these roots that they condition disharmonic suffixes (cf. the uniformly front-vowel conditioning roots such as *saat* 'hour', in (9) and (16)). The conclusion is that the accusative and possessed forms of *utarit* and *fevk* are simply suppletive.

(10) *Vowel length obscured in citation (nominative, for nouns) form*

nominative (orthography)	nominative (IPA)	accusative (IPA)	gloss
zaman	zɑmɑn	zɑmɑːn-ɯ	'time'
nüfus	nyfus	nyfuːs-u	'people, souls'
mecnun	medʒnun	medʒnuːn-u	'madly in love'

For some reason, a parallel neutralization in the length of word-final consonants *is* marked systematically in dictionary pronunciation guides; the fact that the final consonant of *had* 'boundary' is actually a geminate is revealed by listing its accusative form (*haddi*) in the Oxford and Moran dictionaries.

2.1.4. Etymological information often not given

Since Lees 1961 the theoretical literature has seen many claims that the lexicon of Turkish is stratified, with different sectors of the vocabulary (typically native vs. nonnative) obeying different generalizations. This claim has been made as recently as Itô & Mester 1995. Unfortunately, however, most dictionaries do not provide the essential etymological information with which to test such claims.

2.1.5. Time-consuming to search

Even the most phonologically accurate print dictionary of a language as well-documented as Turkish poses the problem for the phonologist of providing so much information that a manual perusal of the whole dictionary to see how many forms of a particular phonological type occur is prohibitively time-consuming. The 2nd edition of the Oxford dictionary has over 16,000 entries; the 3rd edition, over 20,000. It is no surprise that studies of Turkish are not routinely accompanied by the kinds of dictionary counts seen for languages with much smaller dictionaries—or for languages like English or Spanish for which electronic dictionaries are readily accessible.

3. Desiderata for a lexical database

Given the difficulties enumerated above in using even the best print dictionary of Turkish to conduct phonological research, the first author proposed in 1995 to build an electronic dictionary of Turkish that included not only the contents of two excellent print dictionaries but also phonologically accurate transcriptions of the pronunciations of those forms by several native speakers. The primary desiderata for the database were as follows:

(1) The database should include a comprehensive—or at least a representative—list of words in actual use by speakers.

(2) The database should provide each word with a minimal morphological parse, to assist the nonnative speaker in isolating the root.

(3) The database should list the language of origin of the root in each word.

(4) The database should provide a phonological transcription of the word as pronounced by a native speaker.

(5) The database should provide morphophonemic information about each word, so that information about the underlying form can be recovered.

(6) The database should be searchable over the Internet, so that it can be used at no cost by linguists worldwide.

The next section describes TELL, the Turkish Electronic Living Lexicon, designed to meet these goals.

4. Structure of TELL

TELL was begun in 1996. The first version, TELL 1.0, was made public in 1998. TELL continues to be expanded and refined, and a second version is expected in a year or so. This paper describes version 1.0; novel components of version 2.0 are briefly sketched in a later section. TELL consists of four parts:

(1) Master list of dictionary headwords.

(2) Morphological roots of the headwords.

(3) Etymological information for the headwords.

(4) Phonological transcriptions of native speaker pronunciations of the headwords, in isolation and in combination with various suffixes.

These will be described in turn.

4.1. Master lexeme list

The master list of lexemes represented in TELL is a combination of three print sources: the 2nd and 3rd editions of the Oxford Turkish-English dictionaries, and place names from a PTT (Posta Telgraf Telefon) area code directory for Turkey and from a tour guide for Istanbul. Place name sources are not typically well-represented in dictionaries, yet are important to the phonologist primarily because of the distinctive stress pattern that they exhibit (see e.g. Sezer 1981). The PTT directory was comprehensive, but contained many place names not known to the native speaker from whom the words in the master list were to be elicited. The names from an Istanbul tour guide were included to increase the number of place names known to the native speakers whose knowledge is represented in TELL.

The two Oxford dictionaries were selected for four reasons. (1) Their lexical coverage is broad, with the 2nd edition containing more Arabic and Ottoman items and the 3rd edition more European loans. (2) Unlike many other dictionaries, they provide stress and some etymological information (2nd edition) and part of speech and semantic class (3rd edition). (3) They provide English translations, extremely useful to the linguist who wishes to provide glosses for items extracted from TELL. (4) Both dictionaries have good print quality, making optical character recognition possible. (Competing dictionaries, e.g. the venerable Redhouse Turkish-English dictionary, had poor print quality as well as a fatal (for Optical Character Recognition purposes) mixture of Latin and Arabic characters.

With the kind permission of Oxford University Press, TELL was allowed to scan and perform optical character recognition of both dictionaries. The resulting texts were marked up using Standard Generalized Markup Language (SGML) language. SGML tags identify the elements in and logical structure of a text. For TELL's purposes, the following items were deemed relevant and tagged: Headword, pronunciation information (e.g. stress), part of speech, semantic class, gloss. An example entry from the 2nd edition, both before and after SGML markup, is shown below. <L> tags surround each lexeme; glosses are tagged with <G>. The headword, *ab*, is tagged as <HW>, while the subheadword, *~u hava* (interpreted as *abu hava*), is tagged as <X>:

(11) Entry in dictionary: *ab*   Water; rain; river. *~u hava*, climate.
SGML markup of entry: <ENTRY RN="99960" SRC="OX57">
                                          <HW><L>ab</L> <G> (<STR>-</STR>) Water;
                                          rain; river,</G></HW> <X> <L>~u hava</L>,
                                          <G>climate.</G> </X> </ENTRY>

The number of headwords in the data is as follows:

(12)
2nd edition of the Oxford Turkish English dictionary	headwords:	17,000
3rd edition of the Oxford Turkish English dictionary	headwords:	19,911
Place names from Istanbul tour guide	headwords:	175
PTT area code directory of Turkish cities	headwords:	4,728
Total headwords:		41,834
Total phonologically unique headwords (MASTER):		30,096

Once all the entries from the text sources were pooled and duplicates removed, the result was a list containing just over 30,000 lexemes. This list, termed MASTER, is the basis for the TELL database.

In order to make the data maximally accessible, the data are represented in an ASCII code which uses no platform-specific special characters. The table below indicates the correspondences:

(13)

orthography	TELL ASCII code	orthography	TELL ASCII code
a	a	l	l
â	a@	m	m
b	b	n	n
ç	c@	o	o
c	c	ö	o@
d	d	p	p
e	e	r	r
f	f	s	s
g	g	ş	s@
ğ	g@	t	t
h	h	u	u
ı	i@	ü	u@
i	i	û	u@@
î	i@@	v	v
j	j	y	y
k	k	z	z

Once MASTER was complete, the database was fleshed out in three orthogonal directions: morphological, etymological, and phonological.

4.2. Morphological root extraction

Many if not most of the words in MASTER are morphologically complex. There are two reasons for this. First, many entries in the Oxford dictionaries consist of a number of words all derived from the same root, with the alphabetically first derivative arbitrarily functioning as the headword. For example, the 2nd edition's entry for *gelincik* 'weasel' contains the subheadwords *gelinlik* 'quality of a bride' and *gelin havası* 'fine weather' (among others). All (including headword *gelincik* 'weasel, poppy') are derived from the root *gelin* 'bride'—yet it is the alphabetically first *gelincik*, not the other derivatives, which made it into MASTER. Second, many (if not most) place names in Turkish, of which TELL contains several thousand, are themselves morphologically complex, having literal meanings such as 'big black spring' (*Büyükkarapınar*) or 'with (an) oil lamp' (*Kandilli*).

For the phonologist using TELL, it is imperative to know whether a given word is a compound (as *Büyükkarapınar*) or contains suffixes (as *gelincik*), as many phonological phenomena are crucially conditioned by the morphological structure of

the phonological string in question. Vowel harmony, for example, applies between stem and suffixes but does *not* apply between the two members of a compound. The phonologist searching for disharmonic vowel sequences in Turkish needs to know the morphological relationship between each pair of adjacent syllables; the phonologist examining root structure constraints in Turkish needs to be able to isolate the root in each word.

In 1996 Prof. Kemal Oflazer was kind enough to run the then-current list of TELL words through the state-of-the-art morphological analyzer for Turkish he had developed at Bilkent University. Some 17,523 lexemes (nearly 60%) were recognized by the parser. The resulting roots exist in a list called ROOTS, which is linked to the MASTER list. Like the lexemes in MASTER, the roots in ROOTS are represented in standard orthography.

4.3. Etymologies from various dictionaries and articles

With the aim of equipping as many TELL entries as possible with etymological information, TELL researchers methodically went through a 5,000-word etymological dictionary of Turkish (Eyüboğlu 1988) as well as numerous articles on the etymological origins of Turkish words (Özön 1962, 1973; Püsküllüoğlu 1997; Stachowski 1975; Tzitzilis 1987). The languages claimed in these works to be the source of the lexemes in TELL were entered into a database called ETYMA, linked to MASTER. This methodology produced etymological identifications for 11,445 of the MASTER lexemes.

While the etymological dictionary was scoured in its entirety, this was not done with the articles, which were substantially more time-consuming to work through. Instead, TELL researchers concentrated their efforts on lexemes beginning with the following letters: [a, b, ç, c, e, f, i, ı, j, m, o, ö, p, t, u, ü, v]. The spread was intended to provide a reasonably representative sample of native vs. borrowed items.

Since the majority of sources consulted focused on loans in Turkish, the set of etymologically identified items is heavily tilted toward borrowings. Nonetheless, it provides a more comprehensive etymological picture of Turkish than any of the comprehensive print dictionaries.

4.4. Pronunciations from one native speaker in various morphological contexts so that morphophonemic properties are revealed

The most novel feature of TELL, and the feature most important to the phonologist using the database, is the inclusion of pronunciation information for each orthographically represented lexeme. During the summers of 1996, 1997 and 1998, elicitation from a native speaker was conducted in Istanbul. The first speaker selected for

the TELL project was a 63-year old college-educated male who had lived in Istanbul his entire life.

The speaker was presented with a randomized list of all of the lexemes in MASTER, minus those suffixes, acronyms and abbreviations that it was possible to weed out in advance. The speaker was asked to pronounce only those items which he knew and used. (TELL was not interested in "reading pronunciations" of unfamiliar words.) Moreover, the speaker was asked to pronounce each lexical item not only in its isolation form but also in several different morphological contexts. This was done in order to reveal any morphophonemic alternations in the root.

Nominals were elicited in the nominative (= dictionary citation) form, as well as in the accusative, "professional", 1st person singular possessive and 1st person singular predicative. Verbs were elicited in the long infinitive (= dictionary citation) form, as well as in the aorist and in the causative.[4]

(14) *Examples of elicitation: nominals*

citation form (orthographic)	gloss	transcribed pronunciations (IPA)				
nominals:		nom.	acc.	prof.	1sg poss.	1sg pred.
yol	'way'	jol	joˈlu	jolˈdʒu	joˈlum	ˈjolum
araba	'car'	ɑrɑbɑ	ɑrɑbɑˈjɯ	ɑrɑbɑˈdʒɯ	ɑrɑˈbɑm	ɑrɑˈbɑjɯm

Examples of elicitation: verbs

citation form (orthographic)	gloss	transcribed pronunciations (IPA)			
verbs:		citation	long infinitive	aorist	causative
etmek	'do'	etˈmek	etˈmek	eˈder	etˈtir
aktarma	'transfer'	ɑktɑrˈmɑ	ɑktɑrˈmɑk	ɑktɑˈrɯr	ɑktɑrˈtɯr

---

[4]   The 2nd edition of the Oxford dictionary sometimes cites verbs in the long infinitive (e.g. *çakışmak* 'fit into one another'), and sometimes in the short infinitive (e.g. *ağlama* 'murmuring of water'). In the latter case, the speaker pronounced both the short infinitive (= dictionary citation) as well as the long infinitive, aorist and causative.

The speaker represented in version 1.0 of TELL sometimes produced causative stems in the imperative, as *et-tir* 'do-causative', but more often in the aorist, as *aktar-t-ır* 'transfer-causative-aorist'. To stems whose dictionary citation form already contained a causative suffix, the speaker supplied a second causative, as *hızlandırmak* 'to accelerate' → *hızlan-dır-t-ır* 'accelerate-causative-causative-aorist'. These were invariably produced in the aorist.

The five morphological contexts for nouns and three (or four) for verbs were selected on the basis of a pilot study using native speakers in Berkeley. The vowel-initial allomorphs of the accusative, 1st singular possessive, 1st singular predicative and aorist suffixes reveal underlying properties of stem-final consonants which may otherwise be neutralized in the citation form of the stem. This is true, for example, of the root *ecdat* 'ancestors', whose accusative form reveals underlying vowel length and final consonant voicing. For verbs, the aorist context was employed to uncover the underlying properties of root-final consonants. The root *et-* 'do', for example, displays final consonant voicing before the aorist suffix:

(15) citation   accusative / aorist
      ecdat [edʒdɑt]   *ecdadı* [edʒdɑːdɯ] 'ancestors(-acc)'
      etmek [etmek]   *eder* [eder]   'do(-inf/-aorist)'

The 1st singular possessive was included to provide more information on roots triggering disharmony on suffixes. Such roots, e.g. *saat* 'hour', have back vowels in their final syllable yet trigger front harmony in suffixes, e.g. the accusative (*saat-i*) (Clements & Sezer 1982). In the literature it is assumed that these roots trigger front harmony in *all* harmonic suffixes, not just the accusative (and/or homophonous 3rd possessive), which is most commonly cited. This is certainly true for *saat*, as the following suffixed forms exemplify:

(16) *Behavior of* saat *'hour', standard for all speakers*
      citation   *saat*   sɑ.ɑt
      accusative / 3sg. possessive *saati*   sɑ.ɑ.ti
      1sg. possessive   *saatim*   sɑ.ɑ.tim
      plural   *saatler* sɑ.ɑt.ler
      professional   *saatçi*   sɑ.ɑt.tʃi
      abstract noun   *saatlik* sɑ.ɑt.lik

However, pilot studies conducted by TELL show that other, less frequently used roots cause disharmony *only* on the accusative / 3sg possessive suffixes:

(17) *Behavior of some speakers in pilot study conducted by TELL*
      Citation   *iştirak*   iʃtirɑk
      Accusative   *iştiraki*   iʃtirɑːkɯ
      1sg.possessive   *iştirakim* iʃtirɑːkɯm

Since this phenomenon had not been previously reported in the literature, the opportunity was taken to see how pervasive (if at all) it is.

The 1st singular predicative was included because of its distinctive pre-stressing pattern. The "professional" suffix was included because it is uniformly consonant-initial. For verbs, the causative was included because it (along with the aorist) shows considerable allomorphy and is interesting in its own right.

The native speaker consultant was familiar with 17,593 of the 30,096 items in MASTER. Of these, 1934 are verbs and 15,591 are nominals. Taking into account the various morphological forms that were elicited, the speaker pronounced some 85,000 forms. The pronunciations were recorded on analog audiotape on an inexpensive Walkman-style tape recorder and transcribed by a native speaker. The transcriptions, which were phonemic, were rendered in ASCII phonemic transcription system capable of expressing all phonologically contrastive features of Turkish. The transcription system is presented below:[5]

(18) *ASCII transliteration of phonemic transcriptions*

TELL ASCII code	IPA	TELL ASCII code	IPA
a	ɑ	l	l
b	b	l@	lʲ
c	dʒ	m	m
c@	tʃ	n	n
d	d	o	o
e	e	o@	ø
f	f	p	p
g	g	r	r
g@	gʲ	s	s
h	h	s@	ʃ
i@	ɯ	t	t
i	i	u	u
j	ʒ	u@	y

---

[5] Velar and lateral palatality are transcribed only when phonetically unexpected. Velars are predictably palatal in Turkish when tautosyllabic with a front vowel (e.g. *kek* 'fruitcake' [kʲekʲ]); laterals are predictably palatal when adjacent to a front vowel (*lig* 'league' [lʲigʲ], *fil* 'elephant' [filʲ], *bela* 'trouble' [belʲɑː]). TELL does not transcribe this redundant palatality, reserving the palatal symbol for phonetically unconditioned palatality (e.g. *gavur* 'infidel' [gʲɑvur], transcribed in TELL as "g@avur"). Lateral palatality is also predictable word-initially when /ɑ/ follows, e.g. *lale* 'tulip' [lʲɑːlʲe]. However, since this palatalization is phonetically unusual, and since speakers consulted in pilot studies for the TELL project had exceptions to the generalization (e.g. *lala* [lɑlɑ] 'servant', TELL marks palatality on word-initial laterals (thus transcribing *lale* as "l@a@le").

TELL ASCII code	IPA	TELL ASCII code	IPA
k	k	v	v
k@	kʲ	y	j
		z	z

Stress was also transcribed for all forms elicited from the native speaker. The TELL convention for marking stress is to use a single quote following the stressed vowel. Thus final-stressed *kitap* 'book' is transcribed as "kita'p", and initial-stressed *masa* 'table' as "ma'sa". Vowel length is transcribed with a colon following the vowel; thus *kaza* 'accident' [kɑzɑː] is transcribed in TELL as "kaza:'".

The approximately 85,000 transcriptions exist in a database termed ELICIT, which is linked to MASTER.

5. User interface of TELL

The table below summarizes the structure of TELL:
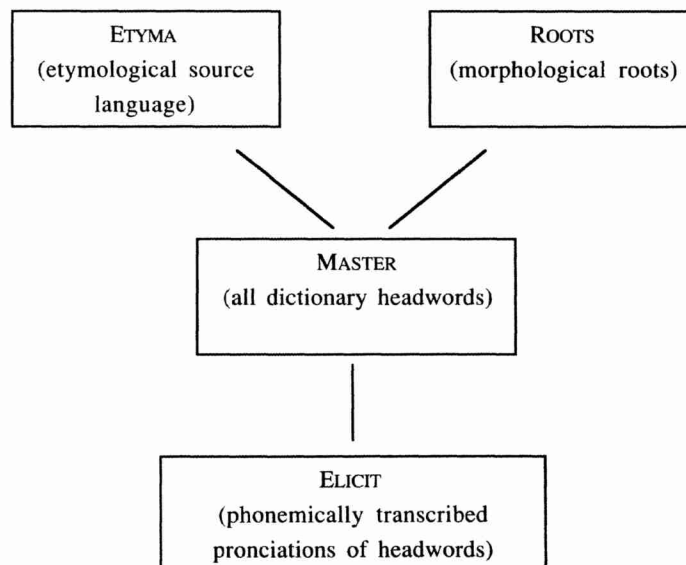
The four datatypes exist as four Microsoft Access™ tables, linked by a common index. This structure permits the user to search, for example, for all words that simultaneously meet a given orthographic description, have a certain pronunciation,

derive from a particular source language, and for which a root meeting a given description has been extracted. However, Microsoft Access™ is insufficient to perform the more sophisticated searches that a phonologist might require. In particular it does not support regular expressions, crucial to the definition of natural classes (e.g. front vs. back vowels, or voiced vs. voiceless consonants, or heavy vs. light syllables). Therefore, a special search engine was designed for TELL that would permit users to access TELL over the Internet and search its contents in multiple ways. Written in Perl, the engine lives on a Unix server and operates on a version of the TELL data stored in Berkeley Database format. The search engine is accessed via the TELL web site and has a web interface permitting the user to configure each individual search.[6]

5.1. Search parameters in TELL

The search engine provides the user with a number of options in defining a search:

(19)   *Search parameters of the TELL search engine*
Data to search
    Text sources:
        Dictionary headwords only
        Place names only
        Both dictionary headwords and place names
    Etymological restrictions:
        search all words, or restrict search to native words, to nonnative words, or
        to words originating from a particular language
    Morphological restrictions:
        search all words, or only those for which roots have been extracted
Representations to search:
    orthographic (dictionary/place name entries), or phonemic (elicited)
Fields to search:
    accusative, 1sg.possessive, professional, 1sg.predicate, infinitive, aorist, or
    causative (phonemic representations only), plus citation (both orthographic
    and phonemic representations)
Expression to search for:
    any regular expression

More than one field can be searched simultaneously; in such cases, specifications are conjunctive. For example, the following search

---

(20) Field 1: | k> | | citation |

Field 2: | ei> | | accusative |

will return all nominals whose pronunciations end in [k] (the ">" means "word boundary") in the nominative (=citation) and end in the sequence [ei] in the accusative.[7] These would include stems like *bebek* 'baby', whose final velar drops out in before a vowel-initial suffix, as in the accusative *bebeği* [bebei].

Another possible search might combine orthographic and phonemic descriptions. The Lexeme field contains the orthographic representation of the citation form. Thus, the following search

(21) Field 1: | >pr | | lexeme |

Field 2: | >pi@r | | citation |

will return all words which are spelled with an initial "pr" cluster which, in pronunciation, is broken up by an epenthetic high back vowel.

Since the TELL search engine supports regular expressions, the user can transcend these pedestrian searches and seek broader patterns in the data. For example, the regular expressions in the following search:

(22) Field 1: | [kg]> | | citation |

return all words ending in a velar consonant ([k] or [g]); the following search

(23) Field 1: | [kg]@[i@|(u[^@])|(e)|o[^@] | | citation |

returns all forms with palatal velars which precede back vowels.

Because regular expressions can be onerous to compute and type, TELL has a "metacharacter" utility that allows users to use predefined characters to stand for a fixed set of regular expressions.[8] These are currently built in to the search engine:

---

[7] Perl's built-in word-boundary metacharacter '\b' does not produce the correct results, as it erroneously matches the boundary between regular letters and the diacritic symbol '@', which is normally nonalphabetic. As a result, we defined '>' to treat '@' as alphabetic.

[8] These are separate from Perl's built-in metacharacters and in some cases supplant them, e.g. '>' replaces '\b' as the word-boundary metacharacter.

metacharacter	regular expression	phonological characterization
C	(?:[bcdfghjklmnprstvyz]@?)	# CONSONANTS
S	(?:[hlmnry]@?)	# SONORANT CONSONANTS
O	(?:[bcdfgjkpstvz]@?)	# OBSTRUENTS
G	(?:[bcd]|g@?)	# VOICED STOPS AND AFFRICATES
K	(?:c@|[ptk]@?)	# VOICELESS STOPS AND AFFRICATES
V	(?:[aeoui]@?)	# VOWELS
I	(?:[ui]@?)	# HIGH VOWELS
R	(?:[ou]@?)	# ROUND VOWELS
E	(?:[ie]|[ou]@)	# FRONT VOWELS
A	(?:[uao]|i@)	# BACK VOWELS
B	(?:[pvbfm])	# LABIAL CONSONANTS
T	(?:[cdghjklnrstyz]@?)	# NON-LABIAL CONSONANTS
U	(?:u[^@]|u@@)	# for orthographic lexeme field in MASTER
>	(?:^|\t|$)	# word boundary

Thus, the search conducted in (23) can be triggered by the following:

(24)   Field 1: | [kg]@A | | citation |

which is much simpler to type and far less prone to error. Advanced users can define new metacharacters as needed to further simplify their search expressions.

Vowel length and stress can be searched for by invoking the colon and single quote that mark these features in the TELL transcription. Thus

(25)   Field 1: | >C*V'.*V: | | citation |

returns all forms with initial stress and a noninitial long vowel.

5.2. Display and saving of search results

TELL automatically displays search results in the form of a table. The example in (26) illustrates the results of a search for all citation forms containing a sequence matching the regular expression "eC*BC*u@", meaning all forms containing the vowel [e], then some string of consonants including at least one labial, then the vowel [ü]. Displayed, at user request, are the citation, lexeme, etymology and accusative fields:[9]

---

[9]   "Ar" = Arabic, "Fr" = French, "Yun" = Greek

(26)	citation	lexeme	etymology	accusative
	ecis@bu @cu@s @	ecis@ bu @cu@s @		ecis@bu @cu@s @u@
	c @es@mibu @lbu @l	c @es@mibu @lbu @l		c @es@mibu @lbu @lu@
	tribu @n	tribu @n		tribu @nu @
	entipu@ften	entipu@ften		entipu@fteni
	ilmu@haber	ilmu@haber	Ar	ilmu@haberi
	manipu @lato@r	manipu @lator	Fr	manipu @lato@ru@
	difu@:ze	difu@ze		difu@:zeyi
	simu @ltane	simu @ltane		simu @ltaneyi
	okaliptu@s	okaliptu@s	Yun	okaliptu@su@
	tifu@s	tifu@s	Yun	tifu@su@
	dinibu@tu@n	dinibu@tu@n		dinibu@tu@nu @

Advanced users also have (by permission of TELL) the option of viewing a tab-separated text file containing the search results; from the latter, it is easy to download results to the user's home computer. Advanced users also have the option of saving search results on the TELL server. The advantage of this is that the saved results of prior searches can then be searched again.

Because of space limitations on the TELL server at the time of this writing, non-advanced users are limited to seeing the first 100 items in any set of search results, although it is hoped that this limit will be raised in the future. The user is told how many matches were found, even when not all can be displayed.

The user has a variety of options in determining how search results are displayed. Any of the fields in which search expressions can be typed—root, lexeme, citation, accusative, etc.—are available as display options as well. Thus, if the user is searching for all words ending with a velar in the citation form, the logical default would be to display the citation forms in the search results. However, it is equally possible to display only the accusative forms of words meeting the description of the search expression—or, for that matter, to display those words in all of their forms. The user also has the option of displaying the morphological root and etymological source language (if available) of all words found by the search expression (see example (26)).

5.3. Results of TELL

Though most of the TELL research team's efforts have thus far gone into building the database and search engine, a number of findings have already been made. For example, TELL has permitted testing of the following two claims made in the literature about Turkish:

Schein & Steriade (1986: 714): Turkish lacks monomorphemic geminates. *TELL*: Turkish has over six hundred roots containing geminate consonants.

v. d. Hulst and v. d. Weijer (1991: 13): vowel length in Turkish is marginal. *TELL*: almost 3,000 words, or 16% of the elicited forms in TELL, contain phonemically long vowels. (Only a small fraction of these long vowels correspond, in orthography, to a short vowel-soft *g* sequence, as in *dağ (* [dɑ:] 'mountain').

In a joint paper by members of the TELL team, Inkelas, Hansson, Küntay & Orgun (1998) used TELL to test the empirical validity of the claim made by Lees (1966) and defended by Foster (1969) that Turkish subscribes to a constraint of Labial Attraction. Labial Attraction supposedly rounds high back vowels when separated from an /ɑ/ in the preceding syllable by some number of consonants that includes at least one labial. Labial Attraction is in competition with vowel harmony, which predicts an /ɯ/ in that same position. Inkelas et al. concluded, using TELL data, that Labial Attraction is not a statistically valid generalization over Turkish. This confirmed the conclusions of Zimmer (1969) and Clements & Sezer (1982) that Labial Attraction is too exception-ridden to be a true rule of Turkish. This study also used TELL's etymological feature to challenge the narrower claim of Ní Chiosáin & Padgett (1993), Itô, Mester & Padgett (1993), and Itô & Mester (1995) that Labial Attraction holds only within the native vocabulary of Turkish. A search of TELL revealed that Labial Attraction is actually stronger within *nonnative* items, presumably due to the fact that most the languages from which Turkish has borrowed most heavily contain the vowels /a/ and /u/ but not the vowel /ɯ/.

Work on the empirically elusive phenomenon of emphatic reduplication has been furthered by the TELL database. Yu (1998) and Wedel (2000) used TELL to increase substantially the size of the corpus of emphatic reduplicated adjectives (e.g. *ter-temiz*, 'very clean'), on the basis of which they formulated new generalizations about this word-formation process.

Inkelas (2000) uses TELL to examine intervocalic velar deletion. TELL shows that there are a number of exceptions to this well-known and highly productive process (e.g. *demagog* [demɑgog] 'demagogue', *demagog-u* [demɑgogu] 'demagog-acc', rather than the expected **demagoğu* [demɑgo.u]). Furthermore, the exception rate varies by morphological category, with the predicative suffix more likely to preserve a preceding intervocalic velar than the possessive.

6. Future of TELL

TELL is presently in its second phase of funding, and has goals that go far beyond the goals of the first phase. While the work of the first phase will be continued—

adding more speakers, finishing the root extraction and etymological research, providing English translations and part of speech information for existing lexemes—Phase 2 of the TELL project has the following new aims:

(1) Link TELL to text corpus
(2) Link TELL transcriptions to audio files

By linking the TELL database to an electronic text corpus of Turkish, TELL will be enhanced in the following ways. First, text frequency of each lexeme in the database can be estimated. Text frequency has recently been shown to be useful in estimating morphological productivity (Baayen 1993) and psychological salience of phonological patterns (Frisch & Zawaydeh forthcoming). Second, the syntactic and semantic contexts in which items appear can be evaluated and concordances can be provided. This will be of use not only to the syntactician and semanticist but also to the language learner.

In Turkish, of course, due to the highly suffixing nature of its morphology, root frequency may be of equal or greater interest than word frequency. The linguist interested in the distribution of disharmonic roots is interested in how many times a speaker is likely to be exposed to words containing the disharmonic root *anne*, rather than how many times a speaker is likely to be exposed to any particular derived or inflected form of that root. TELL will thus tabulate both word *and* root frequency for Turkish.

The second main goal of the second phase of the project is to provide audio files for each transcription in the TELL database. This will be done not for the speaker currently represented in TELL, whose audio recordings are not of sufficiently high quality, but rather for the second and third speakers whose data is currently being processed and will soon be added to the database. These speakers were recorded on digital tape in soundproofed rooms. Users of TELL will be able to listen to (or download) high-quality recordings of the words that their searches return. This utility will serve phonologists who wish to check TELL transcriptions, phoneticians who wish to study particular sounds of Turkish, and language learners who wish to hear the words they are learning pronounced by a native speaker.

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The Turkic Dukha of northern Mongolia

Elisabetta Ragagnin

The report informs about a new project on the Turkic language of the Dukha, a variety of Tuvan spoken in northern Mongolia.

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A new project to provide an analysis of the Turkic language of the Dukha of northern Mongolia has started at the University of Mainz. The ethnonym Dukha is a phonetic variant of Tuva / Tuba, and the language spoken by the Dukha is a variety of Tuvan. Our goal is to present as complete a description of this language as possible. I myself began collecting oral material on the language in the fall of 1999 and continued · my linguistic investigations *in loco* in the summer of 2000. Additional field research is planned for 2001.

The Dukha are a nomadic group inhabiting the northernmost part of Mongolia's Khövsgöl region. They nomadize in the forested area, or taiga, northwest of the Khövsgöl Lake, within the Cagaan Nuur district. This area borders the Republic of Tuva in the west and the Republic of Buryatia in the northeast. The Dukha are divided into two groups: the fourteen households of the eastern taiga in the north and the sixteen households of the western taiga in the south. Both groups live in the neighborhood of the Darkhats, who are said to be of Turkic, probably Tuvan origin, though they have been linguistically assimilated to Mongolian.

The western group of Dukha originated from the Tozhu region of Tuva. During the Manchu period, when Tuva was part of Outer Mongolia, this group nomadized across a large area. After the establishment of the border, they had to limit their routes to the Mongolian territory. The eastern group immigrated in the 1940s from Kungurtug of the Tere-Khöl area of the Republic Tuva to avoid the Russian army draft and collectivization. Some Dukha families are found in the urban center of Cagaan Nuur. Especially in the 1960s, when life in the taiga was very hard due to the collectivization of the cattle, they abandoned their nomadic lifestyle and settled here. Many Dukha from the eastern taiga came to work in the fishery, which was established at that time. When the fishery closed down in 1990, they returned to the taiga.

Although their self-designation is Dukha, the groups in question have been given various names such as Tagna Uriyangkhay, Taigin Irged and Soyod-Uriyangkhay to

distinguish them from the Tuvans of the Bayan Ölgii and Khovd provinces of Mongolia. Presently they are better known under the rather derogative Mongolian nickname *Caatan* 'reindeer people'.

Most of the scholarly material on the Dukha deals with ethnographical and anthropological questions. The Dukha are the only reindeer breeders of Mongolia, and are also partly involved in fishing. They have maintained old features, e.g. shamanist practices. Today they are under strong pressure from economic and ecological forces. Recent years have seen some initiatives to help this unique and endangered group to survive.

My own research focuses on the language, about which practically nothing has been published before. Due to their isolation from the main Tuvan population, the leveling effect of standard Tuvan and influence from Russian has been avoided. On the other hand, in addition to the older Mongolian impact on Tuvan, the language of the Dukha has been subject to new and strong Mongolian influence. The lexicon has preserved many unique words of material culture, reindeer breeding, hunting, botany, etc.

Today the Dukha are all bilingual. Tuvan is only used as the in-group language, while Mongolian serves as the language for all spheres of communication outside the Dukha community. Younger people below the age of 20 tend to use Mongolian for the everyday taiga life as well, even if they master their mother tongue perfectly. The language of the Dukha is no doubt an endangered variety, which should be documented and described as soon as possible.

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Jubiläum eines Gelehrten
– zum 70. Geburtstag von D. A. Moŋguš

Erika Taube

The following article in honor of the well-known Tuvan scholar D. A. Moŋguš includes a translation of a presentation written by B. I. Tatarincev and some personal remarks by Erika Taube.

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Ich möchte diese Würdigung mit der Übersetzung eines Artikels von B. I. Tatarincev einleiten:

Im Dezember 1998 feierte die gesellschaftliche Öffentlichkeit Tuwas ein bemerkenswertes Datum: den 70. Geburtstag des großen Gelehrten und Sprachwissenschaftlers, des Verdienten Wissenschaftlers der Tuwinischen ASSR, des Kandidaten der philologischen Wissenschaften Dorug-ool Aldyn-oolovič Moŋguš.

D. A. Moŋguš wurde am 12. Dezember 1928 in dem Weiler Aryg-Bažy (heute das Dorf Chandagajty des Kožuun Övür) geboren. Er ging einen langen und ergebnisreichen schöpferischen Weg, nachdem ihm am Anfang desselben eine gediegene wissenschaftliche Vorbereitung zuteil geworden war. Der angehende Wissenschaftler besuchte 1957 die Moskauer Staatliche Universität, wo er in seiner Studentenzeit ein lebhaftes Interesse an den Studien zur tuwinischen Sprache zeigte, und schloß später im Jahre 1962 eine Aspirantur am Sektor für Türksprachen des Instituts für Sprachwissenschaft der Akademie der Wissenschaften der UdSSR ab. Im selben Jahre nahm er die Arbeit am Tuwinischen Wissenschaftlichen Forschungsinstitut für Sprache, Literatur und Geschichte (Tuvinskij naučno-issledovatel'skij institut jazyka, literatury i istorii – TNIIJaLI) auf, an dem er nun schon 36 Jahre ohne Unterbrechung tätig ist.

Seine erste wissenschaftliche Veröffentlichung – ein Artikel über eine der Präsensformen der tuwinischen Sprache – erschien 1958, und ein vor kurzem zusam-

mengestelltes Verzeichnis der Werke D. A. Monguš weist etwa 90 Titel aus. Diese charakterisieren ihren Autor als einen Forscher mit einem weiten Interessenkreis. Er begann mit der Untersuchung der tuwinischen Morphologie – Studien, die vor allem in die Erarbeitung der wissenschaftlichen Monographie *Formy prošedšego vremeni v tuvinskom jazyke* ("Formen der Vergangenheit in der tuwinischen Sprache") einflossen, erschienen 1963. Ein Jahr später verteidigte D. A. Monguš erfolgreich seine Dissertation zu eben diesem Thema.

In der folgenden Zeit entstand in Koautorschaft mit Š. Č. Sat eine bedeutende Arbeit über die funktionelle und strukturelle Entwicklung der tuwinischen Sprache. D. A. Monguš war auch der Autor einer Reihe von Publikationen zur Geschichte der Schaffung eines tuwinischen nationalen Schrifttums, zu Problemen der tuwinischen Orthographie und Wegen zu deren Vervollkommnung, zu der seine Arbeiten wesentlich mit beigetragen haben. Der Gelehrte trat mit Artikeln zur Phonetik und Dialektologie der tuwinischen Sprache in Erscheinung, berührte Fragen ihrer Kontakte mit den Sprachen der benachbarten türkischen und mongolischen Völker, aber auch mit Bilanz ziehenden Arbeiten zu Problemen des Tuwinischen.

Die grundlegende Ausrichtung der Tätigkeit D. A. Monguš sind jedoch einerseits die Untersuchung des grammatischen Baus der tuwinischen Sprache und andererseits die Lexikographie (Erarbeitung von Wörterbüchern). Auf dem ersten Gebiet wurde von ihm eine Reihe von Artikeln vorbereitet, die regelmäßig in den Sammelbänden mit wissenschaftlichen Arbeiten des Instituts für Philologie der Sibirischen Abteilung der Russischen Akademie der Wissenschaften erschienen, im wesentlichen zur Syntax, das heißt zu jenem Bereich der tuwinischen Sprachwissenschaft, der zu den am wenigsten untersuchten gehört. *Sintaksis tuvinskogo jazyka* („Die Syntax der tuwinischen Sprache") ist eine Arbeit, die noch nicht abgeschlossen ist.

Auf dem Gebiet der zweiten, der lexikographischen Ausrichtung trat D. A. Monguš als Autor hervor, meist an der Spitze eines Kollektivs, aber auch als Redakteur einer Reihe lexikographischer Arbeiten, insbesondere allgemeiner und spezieller tuwinisch-russischer und russisch-tuwinischer Wörterbücher. Zu ihnen gehören so bekannte Ausgaben wie *Tuvinsko-russkij slovar'* (Moskau 1968) und das große *Russko-tuvinskij slovar'* (Moskau 1980).

Die Lexikographie wird von Fachleuten zu Recht als eine der kompliziertesten und arbeitsaufwendigsten Tätigkeiten eingeschätzt. D. A. Monguš ist auf diesem Gebiet weiterhin aktiv: zur Zeit redigiert er das erste *Tolkovyj slovar' tuvinskogo jazyka* („Erklärendes Wörterbuch der tuwinischen Sprache"), wobei er nicht selten wesentliche Ergänzungen und Änderungen zu den einzelnen Stichwortartikeln einbringt.

Die wissenschaftlich-redaktionelle und editorische Tätigkeit des Gelehrten verdient es, gesondert besprochen zu werden: unter der Redaktion D. A. Monguš er-

schienen und erscheinen Monographien, Sammelbände wissenschaftlicher Aufsätze, Lehrmaterialien, Wörterbücher, aber auch Werke der tuwinischen Folklore, so zum Beispiel zwei Bände der bekannten Reihe *Pamjatniki fol'klora narodov Sibiri i Dal'nego Vostoka* ("Denkmäler der Folklore der Völker Sibiriens und des Fernen Ostens"), nämlich *Tuvinskie narodnye skazki* ("Tuwinische Volksmärchen") und *Tuvinskij geroičeskij ėpos* ("Das tuwinische Heldenepos"), die 1994 und 1997 in Novosibirsk herauskamen.

Über Jahrzehnte hinweg verbindet D. A. Monguš seine eigene wissenschaftliche Arbeit erfolgreich mit wissenschaftlich-organisatorischer Tätigkeit. Im TNIIJaLI arbeitete er kontinuierlich als Leiter des Sektors Sprache und Schrifttum, als wissenschaftlicher Sekretär und Vertreter des wissenschaftlichen Direktors des Instituts (in letztgenanntem Amt 12 Jahre lang). Die Geisteswissenschaften in Tuwa sind in ihrer Entwicklung auf vielfältige Weise seiner Kompetenz als Leiter wissenschaftlicher Forschungsarbeit verpflichtet.

Viele Forscher der jüngeren Generationen verdanken D. A. Monguš ihr Hineinwachsen in schöpferisches Arbeiten, auch wenn er nicht ihr offizieller wissenschaftlicher Betreuer war. Ein Stimulus bei ihrem Fortschreiten auf dem Weg in die Wissenschaft sind D. A. Mongušs Gutachten zu Manuskripten zahlreicher Arbeiten ganz unterschiedlichen Charakters: zu wissenschaftlichen Artikeln, Dissertationen, Monographien, Lehrbüchern, Wörterbüchern, denn oft wurden diese Gutachten von ausführlichen schriftlich abgefaßten Bemerkungen und Vorschlägen, Anregungen begleitet, die unstrittig zu einer wesentlichen Verbesserung der Qualität dieser Arbeiten beigetragen haben.

Alles in allem kann der Anteil D. A. Mongušs bei der Aufgabe, junge Menschen auf die nicht leichte Arbeit des Wissenschaftlers vorzubereiten, kaum überschätzt werden, umso mehr, als er sich nicht nur auf die Arbeit an Manuskripten fremder, nicht ganz fertiger Werke erstreckt. Denn hier macht sich auch der unmittelbare Einfluß seiner Persönlichkeit auf gerade am Anfang ihrer Laufbahn stehende Wissenschaftler bemerkbar, der Einfluß seines Fleißes und nicht minder der seiner Bescheidenheit, seiner Hingabe an seine Arbeit, des wahrhaft ritterlichen Dienstes an ihr. Eine beträchtliche Wirkung auf die jungen Wissenschaftler ging außerdem natürlich von den Werken D. A. Mongušs selbst aus.

Dieser Überblick wäre nicht vollständig, spräche man nicht noch von einer weiteren Seite des Wirkens des Jubilars. Sein Lebenslauf als Berufstätiger begann nach Abschluß der Universität zunächst als Methodiker am Institut für Lehrerqualifizierung des Tuwinischen Gebiets (*Tuvinskij oblastnyj institut usoveršenstvovanija učitelej*) und anschließend als Leiter des dortigen Muttersprachlichen Kabinetts. Später setzte D. A. Monguš auch in dieser Richtung seine Arbeit fort, indem er Autor oder Mitautor von einigen Schullehrbüchern war wie auch von methodischen

Hilfsmitteln für den Unterricht. Dadurch leistete er auch einen konkreten und gewichtigen Beitrag zum Anliegen der Volksbildung Tuwas.

Die Bedeutung der Spur, die D. A. Moŋguš bis jetzt in Wissenschaft und Aufklärung hinterließ, ist unumstritten. Dabei freut es uns sehr, daß er bis heute auf vielen Arbeitsgebieten aktiv tätig ist.

Gute Gesundheit dem Jubilar, Glück und weiterhin erfolgreiches Schaffen!

B. I. Tatarincev. In der Zeitschrift *Bašky* (Der Lehrer) [Kyzyl], 1999, Heft 1, 67-68, übersetzt von E. Taube.

Dieser Würdigung seien ein paar Worte der Übersetzerin für Dorug-ool Aldyn-oolovič Moŋguš nach seinem 70. Geburtstag hinzugefügt:

Üblicherweise trägt ein Buch nur eine Widmung des Autors für einunddenselben Beschenkten. Aber manchmal sind die Zeiten so, daß das Übliche nicht das Normale ist. So kam es, daß ich ein Buch mit zwei Widmungen besitze, geschrieben mit einem zeitlichen Abstand von neun Jahren. Es handelt sich um das *Orus-tyva slovar'* / *Russko-tuvinskij slovar' (32 000 slov)*, das 1980 unter der Redaktion von D. A. Moŋguš in Moskau erschien und an dem außer ihm M. D. Biče-ool, A. K. Delger-ool, A. Č. Kunaa, K. B. Mart-ool, M. X. Sarykaj, J. Š. Chertek und Z. B. Čadamba mitgearbeitet haben. Seit Jahren ist es mir ein wichtiger Begleiter bei meiner Arbeit, der mir unzählige Male weitergeholfen hat und den ich nicht mehr missen möchte.

Die erste jener beiden Widmungen in meinem Exemplar des *Orus-tyva slovar'* stammt schon vom März 1984 und lautet: „Gluboko uvažaemoj kollege Ėrike Taube s poželanijami dal'nejšix bol'šix tvorčeskix uspexov [Der hoch verehrten Kollegin E. T. mit Wünschen für weitere große schöpferische Erfolge] – D. Moŋguš 3.03.1984. g. Kyzyl." Aber erst am 2. August 1993 gelangte dieses Wörterbuch in meine Hände – nach einer Reise per Post von Kyzyl nach Kyzyl via Moskau, wo ihm der amtliche Vermerk beigefügt worden war, Bücher dürften nicht ins Ausland verschickt werden (dies widerfuhr übrigens auch allen Bücherpäckchen außer einem, die das TNIIJaLI mir im Herbst 1993 nachgeschickt hatte). Eingeladen von Zoja Kyrgysovna Kyrgys, Direktorin des Internationalen wissenschaftlichen Chöömej-Zentrums (*Ulustar arazynyŋ "Chöömej" attyg ėrtem tövü*), hatte ich am frühen Morgen jenes zweiten Augusttags 1993 zum ersten Mal den Boden Tuwas betreten und besuchte am Nachmittag das Tuwinische Forschungsinstitut für Sprache, Literatur und Geschichte (*Tuvinskij naučno-issledovatel'skij institut jazyka, literatury i istorii – TNIIJaLI*) in Kyzyl. Während ich mit meinen Kolleginnen und Kollegen zusammen im Sektor für Folklore saß, ging plötzlich die Tür auf und ein braungesichtiger, etwas älterer und –

wie aus dem Verhalten der anderen leicht zu erkennen – hochgeschätzter Herr trat ein, ein braunes Buch in der Hand. Es war Dorug-ool Aldyn-oolovič Moŋguš, der gekommen war, mich zu begrüßen und mir nun endlich das mir längst zugedachte Wörterbuch persönlich zu übergeben. Und nachdem er mir von der oben erwähnten Odyssee des Wörterbuchs erzählt hatte, setzte er unter jene erste Widmung als zweite: „Ol-la sösterimni kataptadym [Ich wiederhole jetzt diese meine Worte]. D. Monguš, 2.08.1993."

Nach dieser ersten Begegnung habe ich Dorug-ool Aldyn-oolovič während meines Aufenthalts in Tuwa noch mehrmals getroffen und ihn als einen sehr warmherzigen, hilfsbereiten und überaus bescheidenen Menschen kennengelernt, der meine ganze Zuneigung hat. Den Gelehrten kannte und schätzte ich ja schon auf Grund des mir zugänglichen Teils seiner wissenschaftlichen Arbeiten, von denen – wie auch im Falle anderer Publikationen aus Tuwa – seit Jahren manches dank meiner Kolleginnen und Kollegen im damaligen Leningrad und in Moskau in meine Hände gelangt war. Ich meinerseits schickte meine Veröffentlichungen über die Tuwiner von Cengel in der Westmongolei regelmäßig an das Tuwinische Forschungsinstitut.

Es war Dorug-ool Aldyn-oolovič Moŋgušs Artikel *O jazyke tuvincev Severo-zapadnoj Mongolii* („Über die Sprache der Tuwiner der Nordwest-Mongolei"),[1] dem ich erste direkte ermutigende Gewißheit darüber verdankte, daß meine Arbeiten in Tuwa angenommen wurden. Dorug-ool Aldyn-oolovič kennt die deutsche Sprache sehr gut und liest nicht nur selbst die deutschsprachige wissenschaftliche Literatur, sondern dient auch – wie ich mehrfach feststellen konnte – als ihr Vermittler für Kollegen, die des Deutschen weniger oder nicht kundig sind. So zeigte er mir zum Beispiel auch seine Übersetzungen von einigen meiner Artikel. Wie schwer allerdings das Arbeiten oft gewesen ist unter den Bedingungen des Mangels an Literatur von außerhalb der ehemaligen Sowjetunion – von der Unmöglichkeit der Teilnahme an wissenschaftlichen Tagungen im Ausland ganz zu schweigen – dafür spricht das Folgende: Dorug-ool Aldyn-oolovič erzählte mir einmal, er habe sich vor vielen Jahren Otto Mänchen-Helfens Buch *Reise ins asiatische Tuwa*[2] mit der Hand abgeschrieben, da es in Tuwa lange kein Exemplar davon gab, und etwas später zeigte

[1] In: *Voprosy tuvinskoj filologii*, hrsg. von D. S. Kuular, B. I. Tatarincev und Ja. S. Chertek unter der verantwortlichen Redaktion von D. A. Monguš, Kyzyl 1983, 127-145.

[2] Berlin: Verlag Der Bücherkreis 1931. 172 S., mit 28 Photobildern; englische Ausgabe: *Journey to Tuva. Translated and annotated by Alan Leighton*. Los Angeles: Ethnographics Press, University of Southern California 1992 [= Ethnographics Press Monograph Series No. 5]. XXIV, 292 S. (mit 2 ausführlichen Vorworten, 2 Appendices, Literaturverzeichnis, Index, Ausschlagkarte und zusätzlichen Abbildungen).

er mir die Abschrift, die natürlich der Abbildungen entbehrte. Heute besitzt er ein Exemplar, das ich antiquarisch erwerben und ihm durch eine meiner Studentinnen schicken konnte.

1993 hatte ich eine Kopie der Liedtexte aus meinem altaituwinischen Material – noch in Arbeitsfassung – in Kyzyl gelassen zur Nutzung für meine Kollegen. Die Musikwissenschaftlerin Zoja Kyrgysovna Kyrgys erwog eine Publikation in Tuwa durch das Internationale Chöömej-Forschungszentrum in Kyzyl, unter Mitarbeit von D. A. Monguš. Dieser Gedanke wurde in Kyzyl sehr rasch zu einem konkreten Vorhaben. Als mich ein diesbezüglicher Brief erreichte, setzte ich mit Hilfe des Computers die lateinische Transkription in eine kyrillische – nicht standardisierte – um. Doch noch ehe meine Postsendung in Kyzyl eintraf, hatte Dorug-ool Aldyn-oolovič bereits alles mit der Schreibmaschine umgeschrieben. Er übersetzte außerdem meine Anmerkungen – noch unvollständig, da das Manuskript sich noch in statu nascendi befand – ins Tuwinische. Vor allem aber ergänzte er die einzelnen Liedtexte durch Worterklärungen, die lexikalische Unterschiede zwischen dem Dialekt von Cengel im westmongolischen Altai und der tuwinischen Standardsprache veranschaulichen. Ich bin Dorug-ool Aldyn-oolovič von Herzen dankbar für seine Mühe, denn es ist für diese Ausgabe ein großer Gewinn, daß damit ein feiner Kenner seiner tuwinischen Muttersprache deutlich markiert, welche Wörter für seine Landsleute in der Republik Tyva offensichtlich einer Erklärung bedürfen und inwieweit andererseits der im Gebiet von Cengel gesprochene Dialekt in Tuwa verständlich ist. – Es ist dies nur ein Beispiel für seine selbstverständliche und selbstlose Hilfsbereitschaft, die er nicht nur mir angedeihen ließ und läßt. In sehr kurzer Zeit erschien dann das kleine Büchlein *Baryyn Moolda Sengel tyvalarynyn yrlary* („Lieder der Tuwiner von Cengel in der Westmongolei").[3]

Nicht zuletzt möchte ich natürlich D. A. Mongušs Beitrag zur Bewahrung und Publikation tuwinischer Volksdichtung würdigen, der nicht nur in verantwortlicher redaktioneller Arbeit an mehreren Ausgaben der Reihe *Tyva tooldar* („Tuwinische Märchen") besteht, sondern auch darin, daß er selbst Märchen und andere Proben von Volksdichtung von bekannten Erzählern aufgezeichnet hat. In *Tuvinskie narodnye*

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[3]   Èrika Taube čyyp turguskan. Z. È. Kyrgys redaktorlaan. (È. Taube čyggan, turguskan bolgaš tajylbyrlaryn beletkéén. D. A. Monguš yrlarynyn tajylbyrlaryn nemec dyldan očuldurgan, tus černin sösterinin tajylbyrlaryn bergen, ažyldy parlalgaga beletkéén.) Kyzyl 1995. – Siehe dazu E. Taube: Zu zwei Ausgaben altaituwinischer Lieder. In: Demir, Nurettin, und Erika Taube (Hrsg.) 1998. *Turkologie heute – Tradition und Perspektive. Materialien der 3. Deutschen Turkologen-Konferenz, Leipzig, 4.-7. Oktober 1994.* (Veröffentlichungen der Societas Uralo-Altaica 48.) Wiesbaden: Harrassowitz in Komm. 285-295.

skazki (1994: 13) zeigt ihn ein Foto aus dem Jahre 1972 bei dieser Arbeit.

Zum Abschiedsfest am Abend vor meiner Abreise kam auch Dorug-ool Aldyn-oolovič Moŋguš mit seiner Frau Regina Raffailevna Begzi. Sie hatte zu jenen jungen Leuten gehört, die – bald nach dem Krieg – voller Enthusiasmus und jugendlichem Idealismus nach Abschluß ihres Studiums an Universitäten und Fachhochschulen aus Moskau, Leningrad und anderen Städten in verschiedenste außereuropäische Gebiete der damaligen Sowjetunion wie eben Tuwa kamen, um daran mitzuwirken, den zum Teil kleinen dort heimischen Völkern möglichst rasch den Anschluß an die moderne europäische Zivilisation und Zugang zu den Werten der Weltkultur zu ermöglichen. Regina Raffailevnas Wunsch war es, als Lehrerin in Tuwa zu arbeiten. „Zu Fuß wirst du aus Sibirien nach Hause zurückkommen", hatte man ihr gesagt, die sie erwartenden Entbehrungen ausmalend, und hatte sie doch nicht abbringen können von ihrem Entschluß. „Und sehen Sie", fügte sie lächelnd hinzu, „ich bin immer noch hier". Regina Raffailevna arbeitete und arbeitet nicht nur als Lehrerin, zum Beispiel für Deutsch, sie hat neben anderem auch Lehrbücher für den Tuwinisch-Unterricht an den russischsprachigen Schulen der Republik Tyva geschrieben und ist in manchem auch Mitarbeiterin ihres Mannes, der sich um die Lehre von Sprache und Literatur an den allgemeinbildenden Schulen große Verdienste erworben hat und dessen Heimat nun schon seit langem auch die ihre ist.

Dorug-ool Aldyn-oolovič Moŋguš, der vielseitige, nicht nur wissenschaftlich wirkende Gelehrte, konnte leider unserer Einladung zur 3. Deutschen Turkologenkonferenz im Oktober 1994 in Leipzig nicht nachkommen, obwohl er nicht zuletzt wegen seiner Kenntnis des Deutschen in besonderem Maße prädestiniert gewesen wäre, an dieser Tagung teilzunehmen. Es wäre eine große Freude nicht nur für uns Leipziger gewesen, einen der bedeutendsten tuwinischen Gelehrten und hervorragenden Sprachwissenschaftler am Ort tuwinischer Studien und Lehre willkommen zu heißen. Mögen ihn nun von hier aus nachträglich ein herzlicher Gruß und alle nur denkbaren guten Wünsche für Gesundheit, Wohlergehen und Kraft für weiteres gedeihliches Wirken auf seinem wissenschaftlichen Forschungsfeld erreichen, denen sich – dessen bin ich gewiß – alle deutschen Turkologen gern anschließen.

> Эргим хүндүлүг Алдын-оол оглу Доруг-оол,
> кадыыңар быжыг,
> назыңар узун,
> ажыл-шорудулгазыңар чаагай салдарлыг,
> амыдыралыңар чырыткылыг аас-кежиктиг болзун!

Reviews

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This book by A. Sumru Özsoy bears both a Turkish and an English title, *Türkçe / Turkish*, suggesting that texts, explanations of grammatical phenomena and glosses are given in both languages. The laconic title itself does not, alas, give any clue concerning the content and aim of this publication. At least a subtitle would have been needed in order to set us on the right track. As explained by the author in the *Foreword*, the book aims at providing the reader with an analysis of the complex syntactic structures in Turkish.

Özsoy's book is the only textbook on Turkish morphosyntax written for students at the intermediate and advanced level. Its potential readership also includes general linguists interested in the structure of Turkish. Linguists with a basic knowledge of Turkish can find useful information on Turkish syntax. The book is divided into 15 lessons, each of which consists of a dialogue presenting the morphosyntactic structures that are explained in the given lesson. A great number of varied exercises help the students to use the newly learned structures. The lessons end with short readings of different genres. Two appendices, a list of the glosses occurring in the book and an index of morphosyntactic forms complete the volume.

The most innovative part of this highly useful book is the presentation of complex clause structures. Diathetic forms, such as passive, causative, reflexive, reciprocal are presented with detailed descriptions of the clause structures in which they are used. One of the main difficulties in learning embedded nominal clauses is to understand the differences between clauses based on infinitives, participles or other verbal nouns, such as the ones formed with the suffix *-(y)Iş*. Özsoy gives well-structured, comprehensive descriptions of the structures and their meanings used in direct and indirect speech as embedded statements, embedded questions, sentential subjects, and sentential predicates. Many well-designed exercises teach the relevant clausal structures together with semantically defined classes of predicates, which differ in their preference of taking, for instance, object clause complements based on infinitives or participles. Relative clauses and gerundial clauses are explained in great detail.

In addition to the structural description, some lessons are based on functional notions. Özsoy applies a functional approach, for instance, when presenting forms and

structures with modal meanings, such as permission, ability, probability, obligation, wish, etc. She gives a clear description of the meanings of the affirmative and negated forms of *-(y)Abil-*. Structures denoting reason, purpose, contrast and inference are described in Lesson XI. In Lesson VIII, Özsoy formulates rules accounting for the use of different types of relative clauses, such as headed and headless structures, relative clauses based on subject participles and object participles. Special attention is paid to the use of *ki* as complementizer and conjunction, and as a means to express surprise and emphasis. Much of the grammatical information presented in this book is hardly available in any other form. Özsoy's own research on Turkish syntax and many years' experience presenting it in an interesting and easily understandable way constitute the unique value of the volume. Turcologists will also find it useful to consult this book in order to find Turkish equivalents for English linguistic terms. In the near future, a set of cassettes and a booklet containing keys to the exercises will complete the book. The volume can be ordered via e-mail from the publisher bupress@buvak.org.tr.

Arienne M. Dwyer. Review of Gunnar Jarring. *Central Asian Place-names – Lop nor and Tarim area – An attempt at classification and explanation based on Sven Hedin's diaries and published works.* Stockholm: The Sven Hedin Foundation, 1997. 524 pages. Hardcover. ISBN 91-85344 37 0.

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For those long captivated by the early Western exploration of Eastern Turkestan, the place perhaps most shrouded in myth has been Lopnor. This region, once a marshy, wooded area on the eastern edge of the arid Tarim basin, was popularized by Sven Hedin with his account of the area's eponymous "wandering lake". Less than fifty years ago, there were still swamps and large stands of virgin forest there, and a fishing folk driven out of their homeland by natural and man-made climatic changes. The Lopliks spoke one of the most interesting of the seven-odd dialects of modern Uyghur; their isolation allowed large amounts of medieval Eastern Turkic to be preserved in the dialect, while other features point to sustained contact with Kïrghïz and Mongol nomads. Since the Lopnor dialect has been extinct for thirty-odd years, new materials on this dialect are particularly valuable.

The current work is based on published and unpublished materials of Sven Hedin's extended trips to the Tarim Basin (1896, 1899-1902, 1927-1935), including unpublished diaries with meticulously-recorded toponyms. Between Kashgar and Khotan alone, Hedin (with the help of his secretary Mirza Iskender) noted over five

hundred place names. Most materials were collected at the end of the 19th century, but Hedin apparently worked on them until his death in 1952 (ii). Ambassador Jarring is to be commended for the considerable time and effort it must have taken to comb through the materials, organize, regularize, translate and analyze them.

This volume is much more than a list of place-names, as Ambassador Jarring's characteristically modest title would seem to imply. It actually approaches a sort of early modern Central Tarim Turkic language dictionary, including many lexemes noted by Hedin (mostly nouns and verbs) not occurring in toponyms. As Hedin notes, since Tarim toponyms are generally composed of a substantive preceded by an attribute, e.g. *Qaračumaq* 'Black Cap,' a sizeable portion of the lexicon can be studied by collecting toponyms.

The work is organized lexicon-style to facilitate such study: each lexeme is listed separately as a head-word and glossed in English. Source reference codes (e.g. HCI:3) precede Hedin's own transcription (e.g. *Kara-tschumak*); when the lexeme occurs in toponyms, a list of these follows. Helpfully, compound toponyms are redundantly listed under all relevant simplex headwords, hence *Qaračumaq* is listed both under *qara* and *čumaq*. Jarring has added cross-references to entries of other relevant Uyghur dialect and comparative Turkic dictionaries as well as his own extremely useful annotations and clarifications.

Hedin's transcriptions, based on speakers in many locales over the span of nearly forty years, show significant variation; those variants due to speaker differences (as opposed to error) can be found in modern Uyghur dialects today, such as *e ~ ɛ, ö ~ u, u ~ ü, r ~ j*. Jarring's foreword introduces phonetic and morphological features of Hedin's system and the language he recorded. The compiler offers us completely regularized headword forms, with Hedin's variant transcriptions (e.g. *ökte ~ ökti, ökte, öktti* 'pool') immediately following. Variant pronunciations (e.g. *beš ~ biš* 'five') are noted and cross-referenced. The volume is thus of interest not only to etymologists and cultural historians, but also to phonologists. And lest the relative-clause fetishists in Turkology claim there is nothing here for them, we should note the inclusion of phrasal and sentence-level toponyms, such as *Qara öčke ölturgän* [*agil*] 'Where the Black Goat was Killed,' *Sarïq buqa öldi* '[Where] the Yellow Bull Died,' and *Tarïšï sïndï köl* 'The Lake where the Oar was Broken.'

These "full sentence place-names," as Jarring calls them, actually fall into a class of "microtoponyms", used only in that specific locale and for a limited time, and known only to those living there. While strictly speaking these are so fleeting and limited they may better be considered ad hoc descriptions rather than toponyms, they furnish important syntactic information, and shed light on the psychology of place-naming. Names encompassing whole lakes, deserts, or the entire lengths of rivers were quite foreign to the Loplïks. Nonetheless, some of the local terms have gained a wide currency elsewhere and now designate entire systems: the *Tarim Basin* (Standard Uyghur *tarïm oymanlïšï*), the *Tarim River* (*tarïm darïyasi*). As Hedin points out, *tarïm* simply denotes 'river' (vi). Lopnor place names, reports Hedin, were as fluid as the landscape itself, and as a river-basin changed shape, so did its

name: "The names become, as it were, like the lakes themselves—overgrown with reeds; new basins come into existence and acquire new names" (id.).