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Connectivity in
Grammar and Discourse

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Connectivity in Grammar and Discourse
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Aspectotemporal connectivity in Turkic

Text construction, text subdivision, discourse types and taxis

Lars Johanson

The paper deals with connectivity phenomena relevant for construing and
subdividing Turkic texts, particularly the ways in which aspect, actionality
and tense interact to connect utterances. The issues addressed include
aspectotemporal discourse types as textual cooccurrence patterns, the
contribution of aspectotemporal items to the expression of taxis, and
serialization by means of non-modifying converbial junctors in periodic chain
sentences, where long series of predications represent events of equal thematic
ranks. While periodic chain sentences were typical of the narrative styles of
older non-Europeanized Turkic varieties, their modern use is strongly limited.
The dominant modern written registers construct texts according to patterns
in which subordination strongly covaries with modification. This linguistic
Europeanization has led to considerable atrophy of Turkic converbial syntax.

1. Introduction

The present paper is devoted to connectivity phenomena of relevance for text con-
struction and subdivision in Turkic languages, in particular the interaction of aspect,
actionality and tense. After a short account of the nature of this interaction, specific
aspectotemporal discourse types in the form of textual cooccurrence patterns will be
discussed. The paper will also address the question of how the interaction of aspect,
actionality and tense may contribute to the expression of taxis relations. Finally, com-
ments on the combinatory properties necessary for construing and subdividing text
portions, in particular the role of serialization by means of converbial junctors in peri-
odic chain sentences will be presented. While the issues addressed are relevant for
Turkic languages in general, the examples will be chosen from Turkish.

2.   Aspect-actionality-tense

The following discussion of the possibilities to connect utterances by means of aspectotemporal interaction in Turkic languages is based on a model that distinguishes the functional layers tense, aspect and actionality (Johanson 1971, 1994a, 2000, 2001a, 2001b). Aspect is seen as operating on actionality, whereas tense operates on aspect + actionality.

Aspect is expressed by viewpoint markers which are grammatical devices conveying different perspectives of linguistically represented events relative to the event's limit. Events are conceived of as having an initial limit, the *terminus initialis*, a final limit, the *terminus finalis*, and a more or less salient interval between them, the *cursus*. Turkic languages express intraterminality and postterminality, two perspectives grammaticalized as viewpoint operators in the verbal morphology.

The intraterminal perspective, +INTRA, envisages, at a given vantage point, an event within its limits, *intra terminos*, i.e. after its beginning and before its end. Intraterminals are marked imperfectives offering an introspective manner of presentation that allows to view an event from inside, and not in its totality. Combination with past tense yields +PAST (+INTRA), 'intraterminal-in-past', e.g. Turkish *geliyordu* 'was coming'.

The postterminal perspective, +POST, envisages, at a given vantage point, an event after the transgression of its decisive limit, *post terminum*, i.e. after its beginning or its end. Postterminality is typical of resultatives and perfects. Though the event is totally or partly absent from the view, it is still relevant at the vantage point, possibly through observable results or traces. Combination with past tense yields +PAST (+POST), 'postterminal-in-past', e.g. Turkish *gelmişti* 'had come'.

Intraterminals and postterminals possess unmarked opposition partners that negate the respective concept, or are indifferent towards it: non-intraterminals (-INTRA), non-postterminals (-POST). The adterminal perspective, as represented by Russian and Polish perfectives, envisages an event at the very attainment of its crucial limit, *ad terminum*. Turkic languages, which lack adterminals, +AD, and non-adterminals, -AD, use non-intraterminal and non-postterminal items to cover adterminal situations, e.g. Turkish *geldi* 'came'.

3.   Aspect-sensitive actional categories

A classificatory framework for the analysis of the interplay of aspectual and aspect-sensitive actional categories has been suggested in Johanson 1971: 194–233 and 2000: 145–169. The main distinctions are as follows:

Table 1.

Actional structure	The actional content is conceptualized
Transformative	as implying transformation
Finitransformative	as implying final transformation
Initiotransformative	as implying initial transformation
Nontransformative	without transformation

Nontransformatives do not imply any limit that must be attained in order for the action to count as accomplished, e.g. *yürü-* 'to move'. Transformatives do imply such a crucial limit. With finitransformatives, this limit is the final one, e.g. *gel-* 'to come'. With initiotransformatives, it is the initial one, e.g. *otur-*, which denote two evolutional phases: a transformational 'to sit down' and a resulting posttransformational 'to sit'. The lexical meaning of initiotransformatives comprises both an initial transformation and a resulting state. The first phase stands for a telic and dynamic action, the second one for an atelic and static action. The verb thus corresponds to both a finitransformative and a nontransformative verb in English, e.g. *to sit down* and *to sit*. It can thus occur in constructions such as '(has) V-ed and is still V-ing'. This type can be exemplified with an English verb such as *to hide*.

4.   Temporally localized perspectives

A given aspectual perspective is presented as valid at some vantage point. This may be the primary point of view, the moment of speaking, e.g. English *I am writing, I have written*. An anteriority relation, +PAST, may establish a secondary point of view, situated prior to the primary point of view, at which a corresponding perspective is opened. What +PAST markers localize on the time-axis is not a narrated event as such, but the aspectual perspective on it. This principle is essential for the contribution of tense-aspect to connectivity. In a narrative 'text world', the deictic centre represents the 'topic time' to which the plot has advanced. We are led from one point to another, each one constituting a potential vantage point for an aspectual perspective.

5.   Aspectotemporal discourse types

The contribution of tense-aspect markers to connectivity is heavily dependent on the cooccurrence situation in various discourse types. In Johanson (1971: 76–87) it was claimed that the semantic analysis of aspectual oppositions require an account of aspectotemporal discourse types, the cooccurrence patterns in which the relevant

items may occur and compete. Discourse types with limited inventories do not allow for the realization of all relevant values of a given system.

Modern Turkish texts offer a broad choice of aspectotemporal discourse types. The historical narrative uses +PAST items at the basic discourse level. The vantage point can move variably along the time-axis. The *-di*-based historical narrative is the most differentiated discourse type with numerous items providing optimal contrasts. The *-miş*-based historical narrative is a discourse type used in traditional story-telling.

For the synchronous report, present tense markers such as *-iyor* describe events simultaneous to the speech event. Each event is viewed in its course and is subsequently out of view. No event is viewed in its totality. Relative anteriority is signalled by +PAST markers, e.g. items such as *-di*. There is also a minimal discourse type consisting of a present tense in *-mektedir* and a postterminal item *-miştir*.

There are also discourse types whose basic level is not simultaneous with the speech event, although the predications are not marked for +PAST. In non-deictic *-iyor*-based and *-ir*-based narratives with variable vantage points, a kind of praesens historicum may be expressed. These discourse types have a modest inventory of items. They do not employ the simple past in *-di*, but a retrospective view may be represented by the postterminal item *-miş(tir)*.

Evidential (indirective) discourse types are characterized by a reduced inventory of aspectotemporal items. The indirective copula particle *imiş* is temporally indifferent, i.e. ambiguous between past and present time reference, e.g. *Ali geliyor* 'Ali comes / is coming', *Ali geliyordu* 'Ali was coming' vs. *Ali geliyormuş* 'It appears that Ali comes / is coming / was coming'.

6.   Aspect in dependent clauses

Aspectual values are also marked in dependent clauses, i.e. constituent clauses, relative clauses, converb clauses and secondary predications. Different items compete with each other and give rise to different oppositions. There are thus intraterminal converb markers such as Turkish *-(y)erek*. Most converbs carry other semantic values than aspectual values. Turkic converbs have been studied from an aspectual point of view in Johanson (1990, 1995, etc.). The connective role of aspect in converb clauses will be dealt with below.

7.   Contributions to taxis

Another kind of connectivity concerns taxis, commonly defined as information about the temporal localization of narrated events relative to other events with respect to simultaneity and non-simultaneity (Jakobson 1975). Taxis relations are represented by

pairs of clauses: constructions consisting of two independent clauses or containing one dependent clause (Nedjalkov & Otaina 1987, Malčukov 2000). Descriptions of taxis relations may be based on models of temporal information as dealt with in formal semantics or logic-based temporal models from artificial intelligence. For a set of primitive time elements related by order relations see, for example, Ma & Knight 1994.

How may actionality-aspect-tense items contribute to the expression of taxis? They can often be interpreted as localizing one event relative to another event, to express simultaneity and non-simultaneity in ways that are deceptively similar to the expression of taxis relations. Intraterminality may be interpreted as simultaneity, and postterminality as anteriority. However, signalling temporal localization of events is not the primary task of viewpoint markers. They present the narrated events as envisaged aspectually, specifying how they come into view at a given vantage point. One reported event may localize the aspectual viewpoint of another reported event, i.e. serve as the vantage point for it, e.g. *Gülerek girdi* 'He entered laughing', where *girdi* 'entered' sets the vantage point for *gülerek* 'laughing'.

8.   Simultaneity

Two events may be simultaneous in the sense that both occupy the same temporal interval. Such cases can be expressed by aspectually equal independent clauses, e.g. *Ali piyano çaldı, Ahmet dinledi* 'Ali played the piano, [and] Ahmet listened' or constructions with dependent converb clauses, e.g. *Ali piyano çalarken Ahmet uyudu* 'While Ali played the piyano, Ahmet slept'. The two events may be envisaged intraterminally or postterminally, e.g. *Ali piyano çalıyor, Ahmet dinliyordu* 'Ali was playing the piyano, [and] Ahmet was listening'; *Ali piyano çalmış, Ahmet dinlemişti* 'Ali had played the piano, [and] Ahmet had listened'.

Two events may be partially simultaneous in the sense of temporal inclusion: One event is localized within the temporal interval occupied by another event. Both events may be expressed by independent clauses, e.g. *Ahmet girdi. Ali piyano çalıyordu* 'Ahmed entered. Ali was playing the piyano'. One of the events may be expressed by a dependent clause, *Ali piyano çalarken Ahmet girdi* 'While Ali was playing the piano, Ahmet entered' or *Ahmet girince Ali piyano çalıyordu* 'When Ahmet entered, Ali was playing the piano'. The including event is typically expressed by intraterminals, whereas non-intraterminals would suggest successive events. But not even constructions with explicit intraterminals express taxis relations accurately. The temporal relation suggested does not create a connection between the two events, but between the interval occupied by the including event and an included point of time serving as a vantage point. What is localized is just the aspectual viewpoint. The temporal location of the event represented by *girdi* or *girince* serves as the vantage point for an introspective view of the including event. The construction states that the including event was in

progress at this point, but it does not tell us when it had started or whether it was continued after that point.

9. Anteriority

One reported event may precede another event or follow it, immediately or some time after its completion. Both events may be expressed by independent clauses, e.g. *Ahmet girdi. Ali gitmişti* 'Ahmet entered. Ali had left'. One of the events may be expressed by a dependent clause, e.g. *Ali gittikten sonra Ahmet girdi* 'After Ali had left, Ahmet entered'.

Chains of aspectotemporally equal clauses may, according to the iconic principle of linear successivity (Johanson 1971: 246–248), be interpreted in terms of successive events. They are, however, far from stable indicators of taxis relations, since they can also be used for non-successive events, e.g. *Ali çaldı, Ahmet dinledi* 'Ali played, [and] Ahmet listened'.

Postterminals may often seem to suggest anteriority. 'Postterminals-in-past' localize a postterminal perspective at a past vantage point, e.g. *Ahmet girince, Ali gitmişti* 'When Ahmet entered, Ali had left', where *girince* 'when entering' sets the vantage point for *gitmişti* 'had left'. They may often be interpreted in terms of two anteriority relations ('past-in-past'), suitable for 'flashbacks' in narratives. However, this interpretation is only valid for finitransformatives. With other actional types, the event may well continue after the vantage point. For example, with initiotransformatives, whose crucial limit is the initial one, postterminals just signal that the initial limit is transgressed. The event itself may still be in progress, e.g. *Ahmet girdi. Ali uyumuştu* 'Ahmet entered. Ali had fallen asleep/was sleeping'. Compare English *had hidden*, which may also be interpreted as 'was still hiding'.

Postterminals are thus not stable indicators of taxis relations. The temporal relation suggested does not create a connection between the two events, but rather between the interval occupied by the postterminal view of the event and a viewpoint. Postterminals refer in an indirect way to an event that has already, entirely or partly, disappeared from the range of vision, but is still relevant. They do not tell us when the postterminally viewed event started or whether it continues after the vantage point.

Comrie's definition of the aspectual 'perfect' type as a relation between a state and a previous situation (1976: 52) has been criticized. The description of something as being prior to some point on the time-axis seems to concern a temporal relation according to Comrie's own criterion, "tense is grammaticalised expression of location in time" (1985: 9). This apparent contradiction disappears if the postterminal perspective of the event, not the event itself, is situated anterior to the vantage point (Johanson 2000: 104).

10. Taxis in Modern Uyghur

The contribution of aspectotemporal items to connectivity in the terms of taxis is similar in other Turkic languages. Rentzsch (2005), analyzing a passage of a literary Uyghur text with respect to taxis relations, shows that the interpretation of the order of events is totally dependent on cotextual and contextual information. The aspectual values of the occurring items contribute to the decoding only as far as they do not contradict the interpretations determined by cotext and context. Certain aspectoactional orderings tend to suggest particular taxis interpretations, which are, however, not compulsory. The author concludes that aspectual operators signal perspectives, and that the taxis interpretations are just facultative secondary readings of successive aspectoactional complexes occurring in the text.

11. Text construction and text division

It is important to try to determine the combinatory properties by means of which aspectotemporal items may contribute to connectivity in the broad sense of text construction. The constructional casting moulds are relatively similar across the Turkic languages.

The independent sentence with its 'canonical' structure and optimal marking for aspect, tense, mood and person is the central item of text construction. It can be compared to a tree that is firmly rooted in the discourse base. Independent sentences are mostly of equal narrative rank and combine with each other—juxtaposed or connected by junctors—with relatively few restrictions.

Independent sentences can expand internally through subordination, other predications functioning as their dependent clauses marked by subjunctors. Dependent clauses may express certain aspectual notions, but they are typically unmarked for tense, mood and person. Unable to strike root in the discourse base, they remain branches or twigs on the trunk of the independent sentence tree (cf. Johanson 1994b). They are essential for the construction of texts, but information from the root of the sentence is necessary for their interpretation. They normally do not express contents of the same narrative rank as their superordinate clauses.

Converbial clauses mostly modify their matrix clauses semantically, e.g. *-(y)ince* in *Ali gelince Ahmet gitti* 'When Ali came, Ahmet left', or *Ali düşerek yaralandı* 'Ali hurt himself by falling' where the dependent clause functions as an adverbial modifier. Certain converbs, however, are suitable for non-modifying uses. Converb markers such as Turkish *-(y)ip* are normally non-modifying, suggesting equal narrative values in the sense of 'to do and [then] to do', e.g. *Ali düşüp yaralandı* 'Ali fell and hurt himself' rather than 'Ali, having fallen, hurt himself'. They can thus represent chains of events in narrative texts, suggesting equal thematic values and sequential relations. Non-

modifying converbs are subject to interpretations of linear successivity and may thus have a serializing and propulsive ('plot-advancing') force.

Non-modification is not signalled in an unequivocal way. Certain converb clauses vacillate beteen modifying and non-modifying readings depending on contextual determination. Even converbs that clearly tend towards modification, e.g. *-(y)ince*, may allow non-modifying reinterpretations: *Ali düşünce yaralandı* 'When Ali fell, he hurt himself' or 'Ali fell and hurt himself', *Ali düşerek yaralandı* 'By falling Ali hurt himself' or 'Ali fell and hurt himself'. In narrative texts, forms that are primarily modifying are sometimes used to represent events of equal rank and must be interpreted accordingly.

12. Periodic chain sentences

Non-modifying converbs may play important connective roles for construing and subdividing larger text portions. They form the basis of the techniques of periodic chain sentences, long series of predications representing events of equal thematic rank. The last member of a periodic chain sentence, the independent basis, optimally rooted with respect to tense, mood and personal reference, offers information essential for the interpretation of the preceding members. The need for temporal-modal and illocutional independence of each member is relatively limited in narrative discourse types. In many types of older Turkic chain sentences the members can even have different subjects (first actants) without any overt marking of subject switches.

These narrative patterns are widely spread in the world of Turkic texts, though the precise functions of the converb markers may vary to a certain extent. The patterns in question are found in popular narrative prose as well as in highly elaborated older literary texts.

Converb markers of the Turkish type *-(y)ip* suggest sequences of events according to the principle of linear successivity. Their function can be compared to the finite non-intraterminal and non-postterminal *-di*, which can cover adterminal situations and have a propulsive effect.

13. An example of a periodic chain sentence

Sequences of events of equal rank may be subdivided by means of non-modifying items that signal major and minor incisions in the flow of events.

Ottoman prose often displays highly complex ramifications in the sense of divisions and subdivisions, arrangements of branches and twigs. In the following long periodic chain sentence, quoted from Evliya Çelebi's 'Book of Travels', the non-intraterminal and non-postterminal converbs in *-nja* and *-dikda*, which normally get modifying readings ('when doing'), serve as non-modifying items marking major incisions, i.e. dividing the chain into major sections (cf. Johanson 1994b).

1.	*Emma: ne idügi ma'lu:mïmïz olmayup*	[minor incision]
2.	*Paša-yï müdebbirden ol maha:lle adam varïnja*	[major incision]
3.	*bizim yaymajïlardan ikiyüz adamï Xa:n askeri ema:n vermeyüp*	[minor incision]
4.	*kïlïjdan gečirüp*	[minor incision]
5.	*jümlesi ja:m-ï šeha:deti nu:š ve yam-ï dünya:yï fera:mu:š édüp*	[minor incision]
6.	*kellelerin Xa:na götürürken bu xaber-i mu:hiš pašaya gelinje*	[major incision]
7.	*'Bire bin-e!' deyüp*	[minor incision]
8.	*tarfetü'l-cayn ičre bunlara kari:b vardïkda*	[major incision]
9.	*jümle bašlarï bïrakdïrup*	[minor incision]
10.	*atlarïmïza tekli:f-i ma:-la:-yuta:klar édüp*	[minor incision]
11.	*Mah:mu:di: begi Ibra:hi:m Beg ileride bulunup*	[minor incision]
12.	*xa:nlïlar da Bitlis derelerine girme sadedinde iken Ibra:hi:m Beg anlarï čevirüp*	[minor incision]
13.	*čoyïnuŋ atlarï kalup*	[minor incision]
14.	*'Bitlis deresine ja:n atam' derken anlarï da kayd bend édüp*	[minor incision]
15.	*četa:čet bir xaylisi tüfengleširken Paša daxi yetišüp*	[minor incision]
16.	*altïyüz Xa:n askerinden anjak iki yüz ellisi piya:de sengista:na düšüp*	[minor incision]
17.	*xala:s oldïlar*	[chain basis]

Example 1

In this text, representing a specific historical discourse type, converbs that are normally modifying may be interpreted as non-modifying items subdividing the periodic chain sentence. The predications are ordered successively as narratively equal information units. Though the converbial subjunctors are postpositive, they indicate relations to the subsequent predications right down to the final basic predication. We may thus analyze the sentence as if it would convey the following successive events:

1. But we did not know what was happening
2. By order of the prudent Pasha a man went to that place

   [Then this happened:]
3. The Khan's soldiers mercilessly killed two hundred of our pillagers
4. They put them to the sword
5. All of them emptied the cup of martyrdom and forgot the pleasures and sorrows of this world
6. While they took their heads to the Khan, this horrible news reached the Pasha

   [Then this happened:]
7. He said: 'Mount!'

8. In the twinkling of an eye we got close to them

[Then this happened:]

9. We made them drop all the heads

10. We pressed our horses to the utmost

11. Ibrahim Beg, the emir of Mahmudi, was right in the front

12. Just as the men of the Khan were about to enter the Bitlis river-beds, Ibrahim Beg made them turn around

13. The horses of most of them were left behind

14. Just as they wanted to enter the Bitlis river-bed, he caught and bound them

15. While quite a few of them were firing their muskets, the Pasha arrived

16. Of the Khan's six hundred soldiers only 200 escaped on foot into the rocky hills

17. They saved themselves

Example 1. Translation

In the rough analysis given here, I have taken the liberty of rendering each single predication as an independent sentence, ignoring the normal patterns of modification. Compare the stylistically elegant translation in Dankoff (1990: 204–205):

"We had no idea of what was happening. By the time the prudent Pasha had sent a man there to investigate, the Khan's soldiers had mercilessly put to the sword two hundred of the pillagers, making them quaff the wine of martyrdom and forget the tribulations of this world, and were taking their heads to the Khan. When this horrible news reached the Pasha, he cried 'Mount!' and in the twinkling of an eye we nearly caught up with them and made them drop the heads. As we pressed our horses from behind, Ibrahim Beg, emir of Mahmudi, appeared in front and made them turn around just as they were about to enter the Bitlis river-beds. Many of them abandoned their horses in order to plunge into the river and save their lives, but they were caught and bound. Quite a few stood fast and began firing their muskets. Just then the Pasha came up. Of the Khan's six hundred soldiers only two hundred managed to escape into the rocky hills, minus their horses."

14. Connective techniques of chain sentences

Chains of the connective kind dealt with here are typical of the narrative styles of older non-Europeanized Turkic varieties. In these chains, converbs offered ideal devices for serialization and subdivision. On the other hand, texts written in European languages exhibit other connective devices for the construction of narrative texts. Series of independent sentences play an important role. Rightbranching subordination makes it possible to combine propulsive predications by means of *conjunctio relativa* techniques (cf. Johanson 1975), i.e. to form chains with a progressive direction of reference, e.g. 'X occurred, whereupon Y occurred, whereupon Z occurred', etc. This

technique is impossible within the leftbranching Turkic subordination system, but the patterns just demonstrated have a similar effect.

Since the text structures demonstrated here defy a discursive analysis of the kind applied to Europeanized varieties, they are very often thought not to be rule-governed at all. The great Ottoman writer Evliya Çelebi has been criticized for his allegedly chaotic style, sometimes characterized as a 'verbal jungle'. However, his prose texts exhibit clear regularities which should in fact also be describable. A discourse-oriented study of narrative techniques must take this clause combining strategy more seriously and try to determine its intricate rules. The aspect-based connective conventions of non-Europeanized Turkic prose styles are still largely undescribed.

The use of these sentence types is strongly limited in modern Turkic texts. In written Ottoman, the typical Turkic periodic chain sentences disappeared in the 19th century under the influence of French prose styles. In most other Turkic languages, this sentence type vanished under Russian influence. Its decline is thus an effect of linguistic Europeanization. The dominant registers of modern written varieties use the subordination systems to construct texts according to European patterns in which subordination strongly covaries with modification. This development has led to considerable atrophy of Turkic converbial syntax.

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