

Three-component analytical verbal constructions of the converb type in Altay Turkic

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An analysis of Altay Turkic two-component analytical constructions (ACs) allows tracing back grammaticalization processes of biverbal analytical constructions (BVCs) according to the degree of their involvement into the process of transformation from syntactical level units into morphological ones. Such phenomena are the result of long and complicated processes which in the Turkic languages, particularly in Altay Turkic, are most clearly seen on the example of new temporal forms. These temporal forms that appear to be most grammaticalized and undergo formal changes to the fullest extent, gradually transforming from a two-component AC into a new synthesized affixal marker. It is important to study these processes not only for the sake of the featured transformation techniques, but also for an understanding of the formation and restructuring of temporal fields.

We've analyzed Altay Turkic BVCs, specified their structural and semantic types, determined the degree of their involvement in the fields of temporality, aspectuality and modality and defined a list and semantics of the constructions which can't yet be included into these grammatical fields.

The process of formation of a new temporal form on the basis of a BVC can be seen in the Altay Turkic language on the example of the present tense form *V-p + d'at* (converbial form *-p* + auxiliary verb *d'at* 'to lie'). This marker's involvement in the present tense field causes rearrangement of the relations between other present tense markers in Altay Turkic. As a result, the form *-at*, which is a present tense marker (GOJ 1940), is narrowing its usage area and appears only in written texts while the form *adyr* is only used with two motion verbs (*kel-* 'to come', *bar-* 'to leave'). Furthermore, present in the present tense field, the traditional opposition between the present of the moment and the general is fading away.

It is more difficult to determine and describe constructions expressing various modal meanings due to poor exploration of the category of modality in Turcology. There is a long list of multi-component ACs with modal semantics in the Altay Turkic language that are waiting for their description and analysis. Tuvan multi-component constructions have been studied by Ljudmila Šamina (Šamina 1994, 1995, 1998).

Multi-component ACs can be classified on the same structural basis as BVCs. Three main structural classes of verbal ACs are distinguished according to the grammatical form of the verb (or verbs) preceding the last component of the morphological construction – a converb, an infinitive or a participle; the last component is formally free, i.e. it can have any finite or infinite form. Within each structural class, functional types and sometimes subtypes of the forms are defined (Čeremisina 1995: 4).

Our analysis has shown that three-component ACs consisting of two verbs in converb

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forms preceding a finite auxiliary verb (AV) are the most frequently used multi-component ACs in Altay Turkic.

In Altay Turkic, this class of constructions is presented by five combinations; the most commonly used AC is the first one, consisting of a converb *-a* as the first component, a converb *-p* as the second component and various AVs as the finite component:

1. **V-a + V-p + Vaux:** *d'ar-a čaa-p iy-gen* '(he) split'.
2. **V-p + V-p + Vaux:** *d'ügür-ip kel-ip d'at-qan* '(he) runs'.
3. **V-p + V-a + Vaux:** *toqdod-ip tur-a ber-di* '(he) stopped'
4. **V-p + V-bay¹ + Vaux:** *kel-ip bar-bay tur-di* '(he) stopped coming'
5. **V-a + V-a + Vaux:** *čig-a qon-o ber-gen* '(he) left'

There is a limited set of AVs presented by a closed list in any Turkic language defined (Čeremisina 1995: 5). There are 25 AVs in Altay Turkic. According to the choice of an AV and the semantics of a lexical verb in them, we distinguish two big groups of ACs opposed to each other by non-perfectivity//perfectivity of the referred action. The first group includes AVs with the semantics of process (imperfectivity, non-telicity, non-transformative actionality): *bol-* 'to be'; *d'ür-* 'to walk'; *d'at-* 'to lie'; *tur-* 'to stand' and *otur-* 'to sit'. Constructions with these AVs have a seme of a non-perfective, continuous action. The second group comprises 19 AVs expressing factual semantics (telicity, transformative actionality): *ber-* 'to give, have given'; *iy-* 'to send, have sent'; *qal-* 'to stay, have stayed'; *al-* 'to take, have taken'; *qoy-*, *sal-* 'to put, have put'; *soq-* 'to hit, have hit'; *qon-* 'to stay overnight, have stayed overnight'; *čiq-* 'to come out, have come out'; *kel-* 'to come, have come' etc.

In the most frequent three-component ACs, consisting of a converb *-a* as their first component and a converb *-p* as their second component (V-a + V-p + Vaux), verbs of the second group, i.e. AVs with the factual semantics, can only be used as their last component (1). Both lexical and auxiliary verbs can function as their second components. In two-component constructions, the AV *ber-* 'to give', as a rule, is used with the converb form *-p*, while in three-component constructions the converb form *-a* mainly appears in the first position: *d'ar-a soğ-up ber-dim* '(I) split for somebody'. In the other structural types, any AV can be used as a finite component in three-component ACs, while an AV with the semantics of process and *bol-* 'to be' from the first group can be used as their second "middle" component.

- (1) *Toj bol-bos-to speckiyim-der de*
 very be-NEG:PrP-LOC uniform-PL PTCL
kereginde šijira-p telefon soğ-up
 POSTP ring-Cv1 phone hit-Cv1
anañ-minañ d'ed-e qon-up
 there-ABL here-ABL reach-Cv2 AUX:stay.overnight-Cv1
kel-er. (BU,S,3)
 AUX:come-PrP
 'Sometimes even comes (suddenly) a phone call from everywhere about the uniforms.'

1 *-bay* stands for all negative converbs.

In example (1), the second auxiliary verb *qon-* ‘to stay overnight’ modifies the grammatical semantics of the whole AC denoting quickness and unexpectedness of the action. The semantic components of the AC *d’ed-e qon-up kel-* are as follows: ‘here’ (*d’et-*), ‘quickly’ (*qon-*), ‘come’ (*kel-*). The examples (2)–(6) also show ACs expressing quickness and unexpectedness of the action.

- (2) *Emdi emdi le rel’s-terj čig-a*
 now now PTCL rail-ABL come.out-Cv2
qon-o ber-gendiy. (AA,D,211)
 AUX:stay.overnight-Cv1 AUX:give-PP4
 ‘It seems, (it) (now, in a moment) will go off the rails.’
- (3) *Qaymıra-p tur-ğan ulus-tiñ orto-zı-nañ*
 boil-Cv1 AUX: stand-PP1 people-GEN among-POSS.3.ABL
qačan la čig-a qon-up
 when PTCL come.out-Cv2 AUX:stay.overnight-Cv1
kel-be-gey. (AA,D,222)
 AUX:come-NEG-Cv.OPT
 ‘From among the crowds of people he will (suddenly) come out.’
- (4) *Onoñ kör-zö-ñ lö ol sege*
 then look-COND-2Sg PTCL he you-DAT
udura d’ügür-e baz-ip kele-der. (AA,D,222)
 towards run-Cv2 walk-Cv1 AUX:come-Pr4
 ‘If you look then, he will walk (quickly) towards you.’
- (5) *Aqır aila la temir čeden-nej*
 wait then PTCL iron fence-ABL
čig-a qal-ıp kel-er. (AA,D,223)
 come.out-Cv2 jump-Cv1 AUX:come-PrP
 ‘Wait, then (he) will (suddenly) jump out of an iron fence.’
- (6) *Erkemen le Lazar’ d’ed-e qon-up*
 Erkemen CONJ Lazar reach-Cv2 AUX:stay.overnight-Cv2
kel-di-ler. (AA,D,248)
 AUX:come-PAST1-3PL
 ‘Erkemen and Lazar came (suddenly, quickly).’

In (6), the auxiliary verb *qon-* ‘to stay overnight’ denotes a sudden, unexpected action. Notional components are: ‘here’ (*d’et-*), ‘suddenly and quickly’ (*qon-*), ‘come’ (*kel-*).

Unlike BVCs where both notional and auxiliary verbs can have a negation marker, in three-component constructions the negation marker can only be found on the second “middle” auxiliary verb, see (7).

- (7) *Qudai kiži-ge le öskö dö tindu-lar-ğa*
 God man-DAT CONJ other PTCL creature-PL-DAT
andiy qorqıštu kile-p tur-ğan
 so very feel.compassion-Cv1 AUX:stand-PP1

<i>bol-zo</i>	<i>bu</i>	<i>qan-du</i>	<i>d'uu-ni</i>	<i>qanayip</i>
be-COND	this	blood-POSSV	war-ACC	how
<i>toqtod-ip</i>	<i>qoy-boy</i>	<i>tur-ğan.</i>		(BU,S,226)
stop-Cv1	AUX-NEG.Cv	AUX:stand-PP1		

'If God feels so (much) compassion for men and other animals, how (why) he can't stop this bloody war.'

In this construction, the combination *V-p + V-bay + Vaux* expresses the modal meaning of impossibility of the action. Notional components are: 'to stop' (*toqtot-*), 'negation' (*-boy*), 'impossibility' (*koy- + tur + ğan*).

In (8), the semantics brought by the AV *qal-* into the meaning of the whole AC can be defined as "fixation of the moment of a continuous condition". The literal meaning is: (she) stayed without understanding and the speaker meanwhile left.

- (8) *Aba onıñ surağ-ın d'etire oñdo-p*
 Aba he-GEN question-POSS3ACC POSTP understand-Cv1
bol-boy qal-dı. (BU,S,237)
 be-NEG.Cv AUX:stay-PAST
 'Aba didn't completely understand his question.' (an unfinished action).

In (10), the AC *V-p + al + d'at-* denotes the action done for one's own benefit. The semantics of the whole AC is recurrence of continuous actions – this meaning is revealed by the finite AV *d'at-* 'to lie' also in (9) and (11).

- (9) *Bis aziyda čilap süre le tuštaž-ip*
 we before as regularly PTCL meet-Cv1
bol-boy d'ad-ı-bis. (AA,D,218)
 be-NEG.Cv AUX:lie-Pr2-1PL
 'We don't meet regularly as (we did) before (we have no opportunity to meet regularly)'
- (10) *Kommunis-ter-deñ znos d'uu-p al↓*
 Communist-PL-ABL fee collect-Cv1 AUX:take-Cv1
d'at. (SM,AK,134)
 AUX:lie-Pr1
 '(he) collects fee (for himself) from the communists.'
- (11) *Bis nayip ed-er tud-ar ulus-tiñ üün-in*
 we thus do-PrP build-PrP people-GEN intention-POSS3ACC
boy-is-tiñ kerekte-bez-is-le öcür-ip öltür-ip
 oneself- POSS.1PL.GEN need-NEG.PrP-1PL-INSTR blow.out-Cv1 kill-Cv1
sal d'ad-ıs. (SM,AK,140)
 AUX:put AUX: lie-Pr1-1PL
 'Thus we kill the wishes of the people who want to do something by our indifference (regularly).'

In (12), the semantic components expressed by *čig-ip sal-a ber-di* are as follows: 'swiftness' (*čiq-*), 'result' (*sal-*), 'alienation' (*ber-*).

- (12) *Baktırbas Baraevič ežik-ti türgen ač-ıp*
 Baktyrbas Baraevich door-ACC swiftly open-Cv1
 čig-ıp sal-a ber-di. (SM,AK,148)
 come.out-Cv1 AUX:put-Cv2 AUX:give-PAST1
 ‘Baktyrbas Baraevich, opening the door swiftly, left’.

Conclusion

In Altay Turkic, completely synthesized analytical constructions are included into the fields of temporality, modality and aspectuality as their new members. But the status of a rich periphery of multi-component analytical forms adjoining these fields is not yet determined. Three-component constructions consisting of two converb forms and a finite auxiliary verb are the most frequently used multi-component ACs. By now, we have revealed five combinations with this structure. The converb of a lexical verb can be used with both the verbs of process semantics and with factual auxiliary verbs. In three-component ACs consisting of the converb form *-a* of the first component and the form *-p* of the second component, an AV with a factual semantics can only be used as their third member; as for the second component, both lexical and auxiliary verbs can appear in this position. In all other combinations any AV can be used as the third component in the ACs under discussion; AVs with factual semantics and the AV *bol-* ‘to be’ can be used as their second “middle” component.

Unlike BVCs where both the lexical and the auxiliary verb can have a negation marker, in three-component constructions the negation marker can only be found on the second, “middle”, or on the third component. As part of the second component, the negation marker conveys a unique aspectual and modal meaning of finiteness of a phase or impossibility of an action, and as part of the third component it refers to the whole predicate.

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Sources of examples

- AA,D – A. Adarov. *D'aan telekejge d'ol*. Gorno-Altajsk, 1979.
 AA,UBT – A. Adarov. *Uča bergen turnalar*. Gorno-Altajsk, 1980.
 BU,S – B. Ukachin. *Süüş le Öštöžü*. Gorno-Altajsk, 1981.
 SM,AK – S. Manitov. *Aš kilgada*. Gorno-Altajsk, 1985.

Abbreviations

1Sg	–	personal affix, 1 st person Singular;
2Sg	–	personal affix, 2 nd person Singular;
3Sg	–	personal affix, 3 rd person Singular;
1Pl	–	personal affix, 1 st person Plural;
2Pl	–	personal affix, 2 nd person Plural;
3Pl	–	personal affix, 3 rd person Plural;
ACC	–	Accusative case;
ABL	–	Ablative case;
AUX	–	auxiliary verb;
COND	–	conditional mood;
CONJ	–	conjunction;
Cv1	–	converb <i>-p</i> ;
Cv2	–	converb <i>-a</i> ;
DAT	–	Dative case;
GEN	–	Genitive case;
INSTR	–	Instrumental case;
LOC	–	Local case;
NEG	–	negation;
PAST1	–	Past tense form <i>-di</i> ;
Pl	–	Plural;
POSS	–	possessive;
PP1	–	participle form <i>-gan</i> ;
PP4	–	participle form of probability <i>-gandyi/-bagandyi</i> ;
Pr1	–	Present tense form <i>-p d'at-</i> ;
Pr2	–	Present tense form <i>-i/-u</i> ;
Pr3	–	Present tense form <i>-at</i> ;
Pr4	–	Present tense form <i>-adi</i> ;
PrP	–	participle form <i>-ar</i> ;
PTCL	–	particle;
V	–	verb stem;
↓	–	dropping of the converb marker in an analytical construction.

Does Turkish child-directed speech predict the acquisition order of wh-questions?

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1. Introduction

Studies done on mothers' input to their children have accumulated findings indicating probable effects of child-directed speech on children's language acquisition recently. The input frequency account that this study is based on wh-question words.

1.1. Background

The very early studies about children's acquisition of questions have provided a cognition-based rationale. They claim that "why" and "when" are acquired later than "what" and "where" because of their cognitive constraints. According to Ervin-Tripp (1970) and Tyack & Ingram (1977), "why" and "when" are related to more abstract schemes when compared to "what" and "where". That's why, children acquire "what" and "where" earlier than "why" and "when". However, in the follow-up studies, it is found that as well as cognitive complexity account, there are other explanations, which have been regarded within the scope of linguistic complexity. To this account, the reason why "what" and "where" are acquired earlier is based on the syntactic view. Bloom et al. (1982) investigated the sequence of question acquisition in first language development. Firstly, they categorized wh-words into three groups as wh-pronominals (what and where), wh-sententials (when, how and why) and wh-adjectivals (which and whose). They said that wh-pronominals are the first question words to acquire as they mostly encode identity questions in children's early language growth. Then, children use wh-sententials. Different from easiness of referring function of wh-pronominals, wh-sententials require answers with a reason, manner or time, so they are secondly learned in the order of question acquisition. Lastly, wh-adjectivals are acquired as they entail more specific responses (Bloom et al. 1982). In addition to this categorization of wh-words in acquisition, based on a study with seven children from 1;10 to 3;00, Bloom et al. (1982) propose a syntactic complexity sequence in explaining the trajectory of wh-word acquisition. According to this account, "what", "where" and "who" are firstly acquired through the copula. Secondly, they are used with semantically general verbs (proverbs). Following that, wh-sententials – when, how and why – are used with descriptive verbs. Lastly, wh-adjectivals are learned by children. In short, Bloom et al. (1982) presented an acquisition order combining linguistic and cognitive accounts in question acquisition.

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The developmental order offered by Bloom et al. (1982) has been challenged by the findings of the studies based on the frequency account in caregiver speech. Clancy (1989) in Korean and Forner (1979) in German and Serbo-Croatian found that syntactically simple wh-words and early acquired pro-verbs were also the patterns which were the most frequent in child-directed and adult speech (in Rowland et al. 2003). In addition to this, recent studies showing a frequency correlation between children's language productions and caregiver speech regarding different parts of speech such as nouns, verbs and morphology (Türkay, 2005, Naigles & Hoff-Ginsberg 1998) may have led to a probable relation between mothers' and children's speech in terms of wh-words. Rowland et al. (2003) found out that frequency of wh-words in caregiver speech is a more significant predictor than complexity in revealing the children's acquisition order of questions.

When broadening the issue of wh-question acquisition, another significant point has been considered in recent studies: the type of the verb used with wh-words. According to Rowland et al. (2003), wh-complexity was also determined through the verb used with that wh-word. They claimed that the verbs frequently used with wh-words are mainly semantically general verbs in caregiver speech, so children firstly acquire wh-words with these verbs.

In summary, main studies given above investigate the order of acquisition of wh-words, taking into account the syntactic complexity and verb semantic generality in line with input frequency effects. In the light of these discussions, the present study had two overall objectives: to investigate the frequency of wh-words in the speech of mothers whose children were grouped as in the early and late periods and to show the developmental uses of these wh-words across time and secondly, to see what kind of syntactic structures wh-words are mostly used with and what verbs they are mainly used with in the mothers' speech.

1.2. Operational Definitions

A revision on the related studies about question acquisition also highlighted some disagreements on key terms of this study: complexity and semantically general verbs. Complexity account, in its broader definition, can be used in various senses such as mothers' utterance length and child's conceptual level etc. (Rowland et al. 2003). However, in this study, the term "complexity" was only used at the syntactic level of wh-question formation. Next, another vague term in directly relevant studies is about the definition of semantically general verbs. Theakston et al. (2004) also shed light on this issue and in their study, they speculated on Ninio's (1999) and Pinker's lists of semantically general verbs and followed the lists offered by them (in Rowland et al. 2003). However, it is clear that there is no consensus in the field about which verbs can be regarded as semantically general. We also considered Theakston et al. (2004)'s, Ninio's and Pinker's lists of these verbs but in order not to ignore the language-specific characteristics of Turkish, we revised related resources about which verbs to regard as a semantically general verb. In addition to Aksan (1998), we took into account Uçar's lists of Turkish semantically general verbs (Uçar 2008) and we checked the frequency entry of these verbs from the TDK dictionary as well. Finally, it was decided to take into account the verbs which were

1.5. Research Questions

This study was framed according to the research questions given below:

- a) What is the trajectory in Turkish mothers' speech directed to their children in terms of the distribution of wh-questions, namely, wh-pronominals, wh-sententials and wh-adjectivals?
- b) What is the syntactic trajectory of wh-questions in Turkish mothers' speech directed to their children?

2. Methodology

2.1. Data

Data of this study were based on a longitudinal database by Türkay (2005). Parallel to the aim of the research, only mothers' speech to their children was taken into analysis. The participants were four girls aged 1;04–2;03 and their mothers. The children were video-recorded in their routine interactions with their mothers. Each video-recorded session was nearly 45 minutes. The data transferred into written transcripts, following CHILDES, Clan conventions. 48 sessions from the database were considered for this study. These sessions were categorized into four time periods as: 1;04–1;06, 1;07–1;09, 1;10–2;00, 2;01–2;03.

2.2. Coding and Analysis

The mothers' speech was analysed in terms of wh-questions. All spontaneous wh-questions directed to the children were extracted from the mothers' speech across all transcripts. Wh-questions in frozen utterances such as songs or rhymes were not taken into consideration. The analysis was conducted on tokens since we wished to know the frequency count of the number of times a child is exposed to wh-word question structures. As Turkish is a case-inflected language, all case inflected forms of wh-words were counted as tokens.

The first level of analysis was conducted to show the overall trajectory of each group of wh-questions, namely, wh-pronominals, wh-sententials and wh-adjectivals, throughout the longitudinal data. Following the criteria in Bloom et al. (1982) and Rowland et al. (2003), wh-words *-what* 'ne', *who* 'kim', *where* 'nerede, hani'- were included in the wh-pronominals. Wh-sententials included *-when* 'ne zaman', *how* 'nasıl' and *why* 'neden, niçin' and finally, wh-words in the adjectival group were *which* 'hangi', *whose* 'kimin', *what colour* 'ne renk', *how many* 'kaç tane', *how much* 'ne kadar' etc. Not ignoring language-specific aspects of Turkish, wh-words were categorized accordingly. For that purpose, we followed Göksel & Kerslake's definitions of wh-phrases (2005).

The second level of analysis was conducted for syntactic purpose, borrowing the exact coding scheme by Rowland et al. (2003) and regarding the language-unique characteristics of Turkish. Each wh-question uttered by the mothers was given a code for whether the

wh-word was used as a predicate (1), was used with a semantically general verb (2), was used with a descriptive verb (3), was used in an elliptic position (4), was used with an existential verb *there is/are* 'var/yok' (5) and was used with an adjective or a noun (6).

3. Findings

The findings of this study were presented in two main parts. Firstly, the distribution of wh-words in the mothers' speech as a lexical item was given across early and late periods. In this analysis, wh-questions were considered as a lexical item (Figure 1). No syntactic or semantic criteria were taken into consideration. Secondly, the overall trajectory of three wh-word groups were shown in relation to their syntactic complexity. Each wh-question-group was analysed individually in Figures 2, 3 and 4.

Figure 1. Overall trajectory of wh-words across time in the mothers' speech

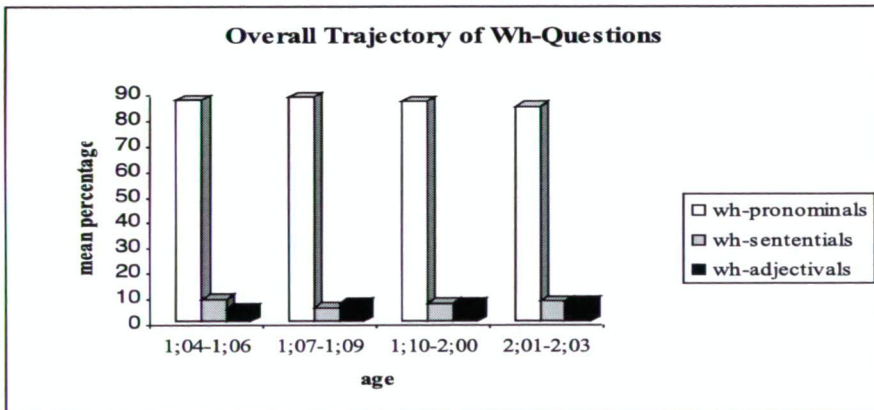


Figure 1 shows the overall trajectory of wh-question phrases in the Turkish mothers' speech through longitudinal data. It is clear that wh-pronominals are the dominant category over wh-sententials and wh-adjectivals across time. Starting from the first period (1;04-1;06), a very slight and continuous decrease is seen in wh-pronominals. On the other hand, the trajectory that wh-sententials go through is somewhat different from that of wh-pronominals. Wh-sententials exhibit a decrease from the first period into two but then, in the following periods, they increase gradually. Lastly, wh-adjectivals show a consistent rise throughout the periods (from 4,6 % to 7,9 %). At that point, it is important to recall the findings of a study by Türkay et al. (2010) about Turkish children's acquisition of wh-phrases in the early period. They conducted their study on the same database that this actual research was based on. In their study, they observed that the Turkish children acquire wh-pronominals earlier than wh-sententials and wh-ajectivals. Therefore, we can conclude that there is a parallelism between Turkish mothers and their children in terms of the trajectory that wh-phrases followed.

Figure 2. Syntactic trajectory of wh-pronominals

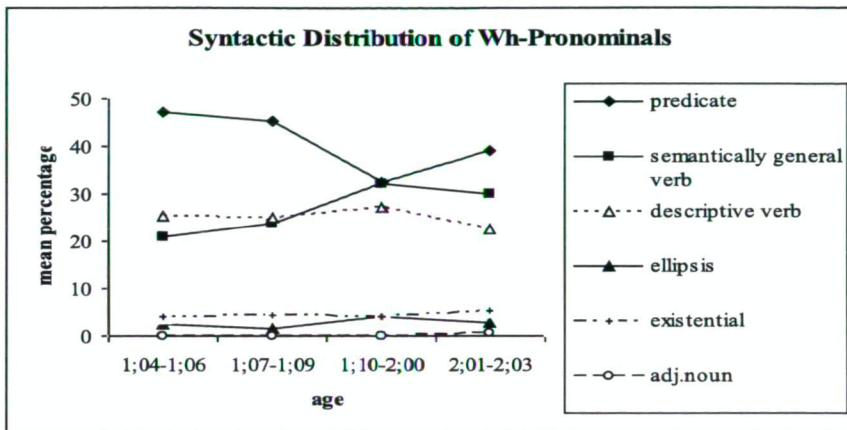


Figure 2 illustrates the distribution of wh-pronominals in terms of their syntactic positions in the mothers' speech. As clear in Figure 2, the Turkish mothers use wh-pronominals mostly in predicative function in their talk to their children aged 1;04–1;09. However, after the age of 1;07–1;09, a sudden decrease is seen on the predicative use of wh-pronominals; whereas, a regular rise is seen on the use of semantically general verbs with wh-pronominals, except a slight decrease between the period of 1;10–2;00 and 2;01–2;03. In the last period, again a dominance of wh-pronominals in the predicative function is observed. In addition, Figure 2 exhibits that the Turkish mothers use wh-pronominals with descriptive verbs nearly at the same proportion with semantically general verbs (25 %) in their talk to their children aged 1;04–1;06. However, the use of semantically general verbs with descriptive verbs does not show any drastic ups and downs. It is always between 20 % and 25 % throughout the study.

The use of wh-pronominals with existential verbs and with an adjective or a noun and in elliptical position does not point out significant changes across time in the study.

Some examples are given below to exemplify the different uses in the exact transcriptions. In example (4), the mother uses wh-phrase *where* 'nerede' in the predicative function.

- (4) (Child 3's mother (age: 01;04))
 *MOT: *Bunlara bakalım mı?*
 'Let's look at these?'
 %sit: MOT has a photo frame on which there are different animals.
 *MOT: *Burda ahtapot nerde?*
 'Where is the octopus here?'
 *MOT: *Bu?*
 'This?'

In example (5), the mother whose child was 1;05 years old uses *what* 'ne' with a descriptive verb *play* 'oynamak'.

- (5) (Child 1's mother (age 1;05))
 *MOT: *Ne oynasak biz senle ne oynasak?*
 'What will I play with you?'
 %act: CHI takes a toy among her toys and shows it to her mum.
 *MOT: *Ne o?*
 'What's this?'

Figure 3. Syntactic trajectory of wh-sententials

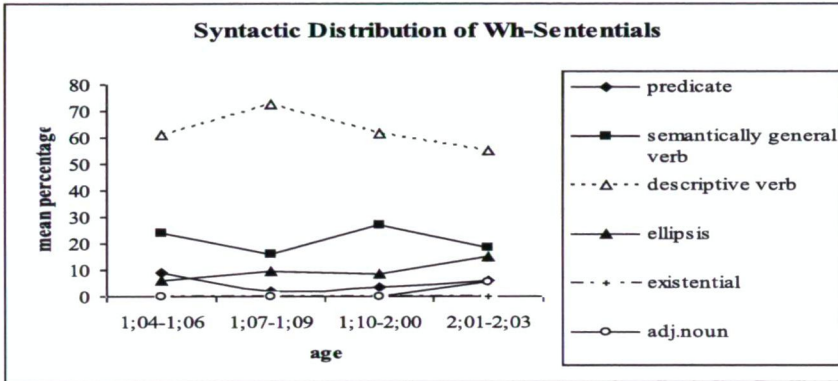


Figure 3 reveals the syntactic trajectory that wh-sententials follow across age periods. A superiority of descriptive verb use with wh-sententials is clearly seen though there is a decreasing tendency after 1;07-1;10 age period. Secondly, wh-sententials are used with semantically general verbs. Predicative use of wh-sententials is always very low. At the highest point, they occupy only 10 % of overall use. The use of existential verbs and adjective/noun with wh-sententials and the elliptical use of wh-sententials are very limited.

Example (6) exemplifies the use of wh-sententials with a descriptive verb.

- (6) (Child 2's mother (age: 01:06))
 *MOT: *Sen ne zaman uyandın aşkım?*
 'When did you wake up, my dear ?'
 *MOT: *Duymadık biz sohbet ediyorduk.*
 'We did not hear, we were chatting.'

Figure 4. Syntactic trajectory of wh-adjectivals

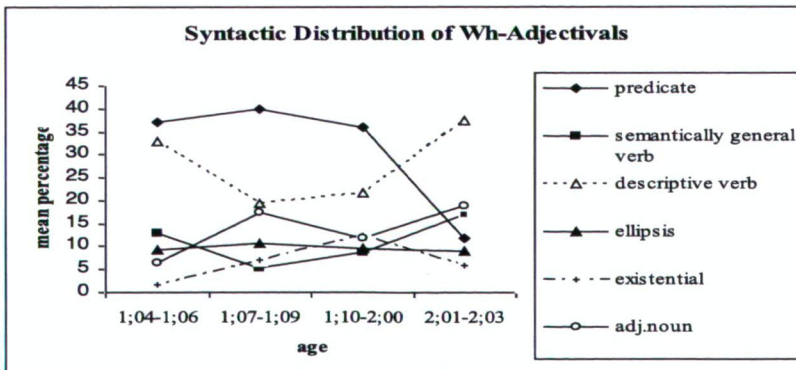


Figure 4 shows the distribution of syntactic categories in wh-adjectivals. The percentage of wh-adjectivals use with descriptive verbs and the percentage of wh-adjectivals use in the predicative function are quite close to each other (33 % vs. 37 % respectively) at the age period of 1;04–1;06. However, after that time period, a drastic decrease is observed in the use of descriptive verbs. This decreasing tendency changes into an increasing trajectory after the age period of 1;07–1;09. Especially, the rise from the age period of 1;10–2;00 to 2;01–2;03 is remarkable. Similarly but in the reverse order, a sudden decrease is seen in the wh-adjectivals use in the predicative function. Unlike wh-sententials and wh-pronominals, the use of wh-adjectivals with an adjective or a noun shows an increase. Example (7) illustrates Child 3's mother in the study while she is using a wh-adjectival with an adjective. As seen in Example (7), wh-adjectivals, namely *hangisi* 'which', *kimin* 'whose', *kaç tane* 'how many' etc. require describing something more definitely. Therefore, the increase in the wh-adjectivals use with an adjective or a noun is an expected trajectory.

- (7) (Child 3's mother (age: 1;11))
- *MOT: *Hangisi farklı?*
'Which one is different?'
- *MOT: *Bundan hangisi aynı?*
'Which one is same?'
- *MOT: *İki tane.*
'Two of them.'
- *MOT: *Bak bununla bu kalem aynı.*
'Look, this one and the pencil are same.'
- *CHI: *Koyalım.*
'Let's put it.'

Example (8) shows the use of wh-adjectivals with existential verbs. The use of existential verbs is also very rare in the use of wh-pronominals and wh-sententials. But it, at some age periods, reaches at 10 % with wh-adjectivals.

- (8) (Child 2's mother (age: 1;11))
- *MOT: *Kaç liran var?*
'How much money have you got?'
- *MOT: *İki liran var.*
'You have two liras.'
- *MOT: *Peki iki liranla ne alacaksınız?*
'Well, what will you buy with two liras?'
- *CHI: *Para.*
'Money.'

3.1. Discussion

The overall aim of this research was to observe the trend that Turkish mothers go through when using wh-words in their talk to their children aged 1;04–2;03. The main result highlighted in this study is Turkish mothers' general trajectory in the use of wh-questions.

According to Bloom et al. (1982) and Rowland et al. (2003), children firstly learn wh-words (wh-pronominals) with the copula, then they acquire these wh-words with semantically general verbs and then wh-adjectivals. The role of child-directed speech on this pattern that English children follow in their early language development has been studied in limited number of studies (Rowland et al. 2003). They concluded that wh-frequency in caregiver speech may not be regarded as the most significant factor on children's wh-question growth but it was found to be a more powerful predictor of children's wh-question acquisition.

While talking to their very young children (aged 01;04–02;03), Turkish mothers use wh-pronominals significantly more than wh-sententials and adjectivals. This overall frame is completely identical to Turkish children's wh-question acquisition. Mainly conducting their research on the same data that this study was based on, Türkay et al. (2010) observed the same global developmental composition in Turkish children's early wh-question word productions. We can say that there is an asynchrony between Turkish mothers' and children' use of wh-phrases.

The secondary pattern we explored was the syntactic trajectory that wh-phrases were used with. Regarding this aspect, we tried to see in what syntactic positions wh-words occurred and to compare/contrast this point between mothers' and children's language productions. At that point, referring to the findings from Türkay et al. (2010), we should revisit the Turkish children's wh-acquisition in terms of the syntactic patterns. Türkay et al. (2010) found that Turkish children use wh-question words mainly in the predicative function, then, with semantically general verbs, and then with descriptive verbs. Turkish mothers, on the other hand, prefer using wh-pronominals in the predicative function more than other uses. The dominance of predicative use of wh-adjectivals over other uses can especially be seen at the age period of 1;04–2;00.

4. Conclusion

The role of mothers' input on children's early language development was ignored in the past but in recent years, there is a growing interest on the possible links between children's language productions and caregiver speech in many languages. Sofu & Türkay (2006) investigated the input frequency effects of child-directed speech in terms of noun/verb dominance and Türkay & Kern (2008) analysed these effects from a crosslinguistic perspective with a comparative study between French and Turkish. Researchers did different analyses between children's language use and mothers' talk such as frequency, the length of maternal utterances and contextual effects. The primary purpose of the study was only to identify the general trends in Turkish mothers' child-directed speech regarding wh-question word-use and to detect any similarities and differences between children's language growth and mothers' talk to their children. We may conclude that – though not statistically – Turkish child-directed speech, to some extent, predicts the acquisition order of wh-questions in Turkish children's early language development.

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