

Development of interactional discourse markers: Insights from Turkish children's and adults' oral narratives

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Abstract

Discourse markers (DMs) are linguistic elements that index different relations and coherence between units of talk (Schiffrin, Deborah, 1987. *Discourse Markers*. Cambridge University Press, Cambridge). Most research on the development of these forms has focused on conversations rather than narratives and furthermore has not directly compared children's use of DMs to adult usage. This study examines the development of three DMs (*şey* 'uuhh', *yani* 'I mean', *işte* 'y'know') that mark interactional levels of discourse in oral Turkish narratives in 60 Turkish children (3-, 5- and 9-year-olds) and 20 Turkish-speaking adults. The results show that the frequency and functions of DMs change with age. Children learn *şey*, which mainly marks exchange level structures, earliest. However, *yani* and *işte* have multi-functions such as marking both information states and participation frameworks and are consequently learned later. Children also use DMs with different functions than adults. Overall, the results show that learning to use interactional DMs in narratives is complex and goes beyond age 9, especially for multi-functional DMs that index an interplay of discourse coherence at different levels.

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1. Introduction

During everyday communication, speakers use “linguistic, paralinguistic, or nonverbal elements that signal relations between units of talk . . .” (Schiffrin, 1987:40). These elements are

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called discourse markers (DMs). Verbal DMs are elements such as *oh*, *well*, *but*, *okay*, *now*, etc. that organize discourse into coherent units and structure social interaction among the participants at different levels.

According to Schiffrin (1987), discourse includes several different planes of coherence and structure. The ideational structure involves relationships such as topic relations and cohesive relations between ideas and propositions in the discourse. The action structure refers to the relations between speech acts. The exchange structure indicates the mechanics of turn-taking between participants. The information state involves the ever-changing organization and management of knowledge and meta-knowledge of participants in interaction throughout the discourse. Finally, the participation framework refers to the means by which speakers and hearers relate to each other (e.g. the relative stance of participants), as well as to the utterances in the discourse. DMs with ideational functions index mainly coherence between the ideas conveyed in the discourse such as cause–result or temporal sequence. On the other hand, DMs that function at the action, exchange, participation framework and informational state levels are interactional in nature.

1.1. How do children learn to mark different levels of discourse in their talk?

Most research on DMs has focused on the dynamics of everyday conversation and analyzed how adults use DMs in these contexts (Fraser, 1999; Louwse and Hite Mitchell, 2003; Schiffrin, 1987; Wierzbicka, 2002). The few studies conducted on how children learn to mark different levels of discourse have shown that the functions of DMs used can change over time in development. These studies have focused mostly on conversational contexts rather than narratives.

Pak et al. (1996) examined the development of DMs such as *and*, *okay*, *because*, *so*, and *yah* in children's speech between the ages of 1 and 9. They found that children initially used DMs to organize interactional exchanges, and that uses of DMs that are less interactive, such as textual and ideational uses, appeared only later. Furthermore, children initially used markers in highly constrained contexts and later extended them to other contexts.

In another study, Kyratzis and Ervin-Tripp (1999) investigated whether and how children mark different levels of discourse through the use of DMs. They analyzed the make-believe plays and narratives of 4- and 7-year-old children and found developmental shifts in the discourse functions and levels encoded by DMs such as *because*, *so*, *but*, *well*, *okay* and *now*. Younger children used only action level DMs in plays and used very few markers in their narratives. In example (1), taken from Kyratzis and Ervin-Tripp (1999), *because* marks the child's request at the action level.

(1) Can I have that daddo? *Because* I like him. (4-year-old)

Older children, on the other hand, used both action level and participation framework markers during negotiations in plays as well as ideational, participation, and global boundary markers in narratives. Example (2), taken from Kyratzis and Ervin-Tripp (1999), shows the use of the discourse marker *because* by an older child at the ideational level, marking the causal relationship between two events.

(2) I sprained my ankle 'cause I was hitting my father's shoe. (7-year-old)

The authors state that between the ages of 4 and 7, there is a general developmental trend in the use of DMs from marking action to ideational and participation framework levels of talk. They also note a development from local to global marking of discourse units.

Other studies have investigated how children learn to use interjections as discourse markers. [Montes \(1999\)](#) examined the functions of some frequently used Spanish interjections such as *ah*, *oh* and *eh* in a longitudinal database of conversations between one child and her mother. She found that DMs were used, by the age of 1;7 to bring an element in the environment into the focus of attention ('contextual use'), as in example (3), and by the age of 2;4 to highlight something in the ongoing discourse ('textual use'), as in example (4). Both examples are from [Montes \(1999\)](#).

- (3) Child: *Oh* mira el pelito!
 "Oh look at the little hair!"
 Child: *Oh!*
 "Oh!"
 Mother: *Oh* mira el pelito!
 "Oh look at the little hair!"
- (4) Child: Esos son para tí.
 "Those are for you."
 Mother: No, son para tí.
 "No, they're for you."
 Mother: Esos los ganaste tú.
 "You won those."
 Child: *Ah.*
 "Ah."

Finally, [Meng and Schrabback \(1999\)](#) contrasted adults' and 3-year-old children's use of German interjections such as *hm* and *na* in adult-child interactions and showed that although children had already acquired the basic use of interjections, their understanding of the interjections' multi-functionality was limited. Namely, children employed fewer form types than the adults and made less use of interjections. When they did use interjections, this was mostly to regulate verbal interactions.

The previous literature therefore shows that learning to use DMs is not simple and their development involves a complex interplay of knowledge between different levels of discourse. These studies, taken all together, have revealed developmental trends from marking exchange or action levels to ideational levels, and shifts from marking contextual and local levels to textual and global levels, respectively, in children's discourse.

However, this previous research has so far focused mostly on how children use DMs without making direct comparisons with adults. Furthermore, there has been relatively more emphasis on the development of these markers in conversations than narratives. It is possible that DMs can be used for different organizational functions in the context of narratives compared to conversations. In fact, [Norrick \(2001\)](#) has found that *well* and *but* served similar functions in storytelling despite their unique and different functions in conversations. Furthermore, [Kyratzis and Ervin-Tripp \(1999\)](#) have also shown different preferences for DMs depending on the genre of discourse. Finally, in most of these studies spontaneous data were analyzed, thus the content of talk across ages was rarely kept constant (see [Kyratzis and Ervin-Tripp, 1999](#), for an exception).

Thus, in the present study we address these issues by investigating how Turkish children (aged 3, 5, and 9) use DMs in elicited oral narratives about the same stimuli and compare their

usage with that of adults in the same narrative task. In conducting our analysis in Turkish, we also contribute to the development of these forms by providing data from an under-researched language. Although narratives of Turkish preschool children have been studied (Aksu-Koç, 1994; Küntay and Şenay, 2003; Küntay, 2004), research on their use of DMs in narratives has been scarce. Özyürek (1996) has studied the functions of DMs such as *sonra* ('and then'), *de* (a specific Turkish DM for marking contrasts), *ama* ('but') and *bunun üzerine* ('so') specifically in Turkish children's (aged 5, 9, and 13) narratives about other people's conversations. She found that as children report others' conversations, they first use temporal markers such as *sonra* ('and then') and later use the special Turkish DM *de* to mark changes in conversational turns. Finally, around 13 years of age, they index their evaluation and stance in relation to the quoted utterances (i.e. levels of participation framework) by using *ama* ('but') and *bunun üzerine* ('so') in their narratives.

In the present study, the Turkish DMs we focus on are three interactional markers, namely *şey*, *yani* and *işte*. *Şey* corresponds approximately to 'uhhh', *yani* to 'I mean' and *işte* to 'y'know'.¹ We chose these three markers because they index different types of functions in relation to the organization of discourse at different interactional levels (i.e. exchange, information state and participation frameworks). Furthermore, a previous analysis of the use of these three DMs in adult conversations by Özbek (2000) provides a basis for our investigation of the use of these forms in narratives as well as across ages. No research on the development of these markers in Turkish has been conducted before.

1.2. Previous research on adult use of *şey*, *yani*, *işte* in Turkish

Özbek (2000) has analyzed how Turkish adults use DMs such as, *şey*, *yani* and *işte* in spontaneous conversations and has given functional accounts of the use of each DM. Firstly, for the use of *şey* she has shown that its primary function is to signal that the speaker needs a pause to plan and organize his/her next message. In example (5), this use of *şey* can be observed. Here, as the speaker recounts the sequence of events in the story, she fills a pause with *şey* and thereby indexes to the listener that she is planning the rest of her message.

- (5) Yeşil adam yukardan geliyor ve *şey*. . . dönerek çevresinde yokuştan inmeye başlıyor/ (Adult)²
 "Green man came from above and *uhhh*. . . started to go down the slope while spinning around himself."

In addition to its planning function, Özbek (2000) found that *şey* also occurs turn-initially in conversation and is used as a topic-introducing marker, displaying the speaker's intention of beginning a new discourse unit with novel content (see section 3.1.1, for examples of similar uses in our data). In both uses, *şey* can be considered to function at the exchange structure level of discourse.

¹ We have decided that the best functional equivalent of *şey* is *uhh* in English. Although *uhh* is a non-lexical DM and *şey* is a lexical one, the planning/hesitation marker function of *şey* is somewhat similar to *uhh*'s pause-filling function. Secondly, Schiffrin's (1987) analysis of *I mean* makes it a good candidate for the functional equivalent of *yani* in English, since both primarily mark the expansion of information. Finally, *y'know* refers to shared knowledge (Schiffrin, 1987) and can be used as *işte*'s functional equivalent. However, these English equivalences should be taken into consideration cautiously since they are only approximate translations.

² All examples are from our own database unless otherwise indicated.

Overall, *şey* as a planning marker signals that the speaker's turn continues despite his/her hesitation. As a topic-introducing marker, its function is to illustrate that the speaker's turn has started. Apart from its uses as a DM, *şey* (literally 'thing') also functions as a nominal filler or "dummy" for a new referent, thus allowing the new information to occur in the post-verbal position in the sentence (Schroeder, 2002), as in example (6).

- (6) İki tane şey vardı/ Kız domates/ (5-year-old)
 "There were two things. Girl tomatoes."

The other DM, *yani*, primarily functions to mark the speaker's elaboration or expansion of previous utterances, either to support his/her own view and understanding of the event or to help the listener's comprehension, in conversations (Özbek, 2000), oral and written discourse (İlgin and Büyükkantarçioğlu, 1994) and oral narratives (Yemenici, 2002). Thus, the main function of *yani* is on the participation framework level as a marker of speaker orientation. It signals the speaker's modification and elaboration of his/her own prior ideas. In example (7), *yani* indicates that the speaker elaborates further on the manner of a character's actions in the story.

- (7) Sonra o düz bir şekilde suya dalıyor/ Yani takla atmıyor/ (Adult)
 "Then he/she/it dives straight in the water. *I mean* (he/she/it) doesn't summersault."

In this example, *yani* is used before the utterance 'he does not summersault'. This utterance has to do with the fact that, in the movie that was shown to our participants, one of the characters dives into the water while it summersaults, but the other character does not (see section 2.2). At this point in the narrative, the speaker has already talked about the action of the first character. The main subject of the first utterance in example (7) is the second character in the movie. By using *yani*, the speaker is referring to the listener's previous knowledge of the fact that the first character in the movie somersaulted as it was diving.

Özbek (2000) also found that *yani* further functions as an emphatic marker, to indicate self-repair (see section 3.1.2, for examples of these uses in our data), to mark boundaries within topics, and to signal the speaker's introduction of a new point to the discourse.

The final DM, *işte*, is mainly an information state marker which primarily indexes shared knowledge between the discourse participants (Özbek, 2000). In example (8), the speaker refers to a previously-mentioned discourse item (i.e. 'tomato man') and the anaphoric reference (i.e. 'that') coupled with the use of *işte* marks that the knowledge about the referent is shared between the speaker and the addressee.

- (8) İşte o domates adamla yeşil adam birlikte geliyorlar/ (Adult)
 "Y'know, that tomato man and green man come together."

The less frequent functions of *işte* indicated by Özbek (2000) are topic boundary marking by indicating the end of discourse units (see section 3.1.3, for examples of these uses in our data), topic resumption (i.e. continuation of a topic after some digression), and emphasis of the speaker's point (also see section 3.1.3, for examples).

There have been no other studies that investigate the uses of these markers either in narratives or with children. Thus, the specific questions we investigate in the present study are: (1) When do

children use DMs, specifically *şey*, *yani*, and *işte*, and how do they use them to mark different levels of discourse in narratives? (2) Do the functions of *şey*, *yani*, and *işte* change developmentally (between ages 3, 5, 9 and adulthood) in narratives? (3) Does the use of DMs by adults and children differ in narratives compared to conversations?

2. Method

2.1. Participants

Eighty native speakers of Turkish participated in the study. There were 20 adults (university students), twenty 3-year-olds (mean age: 3;8, range: 3;2–4;1), twenty 5-year-olds (mean age: 5;7, range: 5;6–5;11), and twenty 9-year-olds (mean age: 9;4, range: 8;9–10;1). The adult participants ranged in age from 18 to 23 and were all students at Koç University, a private university in Istanbul where the medium of instruction is English. The 3- and 5-year-olds attended various private preschools in Istanbul and all had families of upper-middle or high socioeconomic background. The 9-year-olds attended various private and public after-school study centers around Istanbul and belonged either to middle or upper-middle class families.

2.2. Materials and procedure

Data were collected by elicitation, using a set of 10 video clips depicting motion events involving various simultaneous manners and paths (Özyürek et al., 2001). Each video clip was between 6 and 15 s in duration, and all of them involved a round red smiling character and a triangular-shaped green frowning character, moving in a simple landscape. All clips had three salient components: an entry event, an intermediate event, and a closing event. As an example, one of the clips goes as follows. The initial landscape on the screen is a large hill ending in a flat plane with a tree at the end; the red character is located at the top of the hill. The green character enters the scene from the right and bumps into the red character [entry event], then the red character rolls down the hill [intermediate event], and finally stops at the flat plane next to the tree [closing event]. Fig. 1 gives a sequence of stills from a sample clip.

The data collected were part of a larger study that was a cross-linguistic developmental investigation. Participants were tested individually in a quiet space at their university (adults), preschool (3- and 5-year-olds), or after-school study center (9-year-olds). All interactions were videotaped for later coding and analysis. Participants were told that they would see a series of clips on a computer screen depicting adventures of the so-called Tomato Man and Green Man, and that, after each one, they should recount the clip to an adult listener, who had not seen it. All data was collected in Istanbul, Turkey.

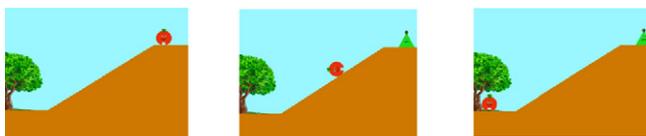


Fig. 1. Selected stills from a sample video clip.

2.3. Coding and data analysis

All speech was transcribed and then separated into intonation units (units are marked by ‘/’ in the text). Each discourse marker we focused on (i.e. *şey*, *yani*, and *işte*) was coded in terms of the discourse levels it marked, as specified by Schiffrin (1987) (i.e. exchange level, information state and participation framework). Further functions of each DM use were also specified in the text such as marking speaker’s planning/hesitation, shared knowledge, repair, emphasis, etc. In order to establish reliability of the identification of each DM’s function, 20% of the data was independently processed by a second coder. For each DM, the second coder identified its function. The rate of agreement between the first and second coder for DM function was 92%.

3. Results

We report our results in two main categories. First, we report a qualitative analysis of the functions of DMs found in our database. Here, we investigate the pragmatic uses of *şey*, *yani*, and *işte* in the narrative context and compare these to the conversational functions outlined by Özbek (2000). Second, we give a frequency-based account of the use of each DM and their functions across ages.

3.1. Functional analysis

3.1.1. *Şey*

Şey was used with various functions in our data and mainly to mark exchange structures. First of all, consistent with Özbek’s (2000) adult findings, we found that one of the functions of *şey* was to index the speaker’s planning at certain points in the discourse by filling a pause in the flow of speech. In these cases, *şey* was frequently preceded and followed by a short pause which signaled that the speaker was mentally organizing his/her message and functioned as a planning/hesitation marker. In example (9), it can be seen that the speaker takes deliberate mental effort in planning her speech to call the character *domates kız* (‘Tomato Girl’) rather than the more frequently used *domates adam* (‘Tomato Man’) in these narrations.

- (9) Sonra . . . *şey*. . . domates kız ordan yuvarlana yuvarlana çıkmadı/ (5-year-old)
 “Then. . . *uhh*. . . tomato girl didn’t go up while rolling there.”

A further example of this use of *şey* is presented in (10). Here, the adult participant describes the scene of the clip as sunny and since he has to rely on his memory for this description (the clip was no longer visible during narrations in our task), he pauses to recall the exact detail of the settings and fills this period of hesitation and planning by using *şey*.

- (10) Hava güneşli galiba/ *Şey*. . . denizde güneşin yansımaları var/ (Adult)
 “It looks like it’s sunny. *Uhh*. . . there are reflections of the sun on the sea.”

The use of *şey* in examples (9) and (10) indexed the speaker’s planning and thus functioned at the level of exchange structure by marking the sustainment of his/her turn during talk in spite of hesitation.

Şey also marked planning at the beginning of narratives in our data, especially by children. In these cases, *şey* was used at the beginning of a new narrative, that is, narration of a new clip in our

task. Its use signaled that the speaker was about to begin his/her narrative but was still organizing the content of his/her talk.

- (11) *Şey*... domates adam tepenin aşağısında duruyordu/ (5-year-old)
 “Uhh... tomato man was staying at the bottom of the hill.”
- (12) *Şey*... yeşil adam geldi/ Düştü denize böyle/ (3-year-old)
 “Uhh... green man came. (He/she/it) fell to the sea like this.”

Although this use of *şey* indexes a similar function as in examples (9) and (10), we place it into a separate category because it specifically occurs at the beginning of a new narrative and sentence. This use is similar to the function of *şey* identified in Özbek (2000) as a turn initiation or topic introduction marker.

Lastly, *şey* functioned as nominal ‘filler’ for a specific word that the speaker was unable to recall. The equivalent of *şey* in English would be *thing* in this context. This function of *şey* was not considered to be a discourse marker, as in Özbek (2000). Below are two examples to this use:

- (13) *Şey-e* çarpıyor/ Ağac-a çarpıyor/ (9-year-old)
 “(He/she/it) hits the thing. (He/she/it) hits the tree.”
- (14) Ondan sonra yandaki *şey-e* doğru gidiyo/ Çıkıyo/Birlikte ekranın dışına çıkıyorlar/ (9-year-old)
 “Then (he/she/it) goes towards the thing on the side. (He/she/it) ascends. (They) go out of the screen together.”

As examples (13) and (14) show, *şey* in this usage is a syntactic constituent of the clause and has grammatical functions, and thus does not function as a DM.

3.1.2. *Yani*

The second DM, *yani*, served multiple functions both at the level of organizing participation frameworks and information states. As in Özbek (2000), its main function was found to mark the speaker’s expansion of or elaboration on previous utterances with the aim of supporting the speaker’s view, stance, or understanding of the event. In this sense, *yani* was used to organize knowledge at the participation framework level.

In (15), the child describes the action of one of the characters (rolling down) in the first utterance and then marks a more complete account of the event through the use of *yani* in the next utterance. Similarly, in (16), the speaker first describes the location of the character in the clip and in the second utterance gives more detail about his actions in that location.

- (15) Bi kıyı vardı/ Ordan aşağıya yuvarlandı/ *Yani* yeşil adam devirdi kıyıdan/ (3-year-old)
 “There was a ledge. (He/she/it) rolled down there. *I mean* the green man bumped (him/her/it) from the ledge.”
- (16) Yeşil adam denizde/ *Yani* böyle yüzüyor gibi suyun üstünde/ (Adult)
 “Green man is in the sea. *I mean* (he/she/it) is on the water as if (he/she/it) was swimming.”

A further use of *yani* was found to mark self-repairs in discourse, a function also identified by Özbek (2000). This use can be considered to be an information state marker since it

indicates to the listener that the noun following *yani* is the repaired word, as can be seen in examples below:

- (17) Koş . . . *yani* hızla geliyor/ (Adult)
“Run. . . *I mean* (he/she/it) comes in a fast way.”
- (18) Domates adam da ihhh . . . *yani* o yeşil adam bööle yokuşta bööle kaydı dönerek/ (5-year-old)
“As for tomato man, uhhh. . . *I mean* that green man slid on the slope while rolling like this.”
- (19) Ve ilk başta iki. . . *yani* o domatesle yeşil. . . şey geliyorlar/ (9-year-old)
“And in the beginning, two. . . *I mean* that tomato and green. . . thing come.”

Although this use appears to be similar to the planning function of *şey* (as in examples 9 and 10 above), the difference between the two uses is that when *yani* is used to mark self-repairs, it is almost always followed by novel information. In contrast, *şey* mainly fills pauses and is not followed by an expansion of the presented knowledge in previous utterances.

Another function of *yani* mentioned by Özbek (2000) is that of an emphatic marker that highlights or focuses the speaker’s utterance. However, this function occurred rarely in our sample, probably due to the narrative nature of our data.

- (20) Çok komik *yani!* (5-year-old)
“*I mean* it’s very funny.”

In (20), the speaker makes a remark to the experimenter, saying that he finds a particular event funny in the movie clip and uses *yani* to emphasize this point, consistent with the use of this DM at the level of participation framework. Since *yani* was used very rarely as an emphatic marker in our data, we did not include these particular uses in our quantitative analyses.

Finally, we did not find any functional uses of *yani* that corresponded to what Özbek (2000) identified either as a boundary marker or as introducing new topics.

3.1.3. *İşte*

The DM *işte* was found to function mainly as an information state marker and mostly marked shared and assumed knowledge between the speaker and the addressee, as can be seen in examples below:

- (21) Yine eğik bir düzlem var *işte*³/ (Adult)
“Again, there’s a slanted plane *y’know*.”
- (22) Şimdi böyle ihh. . . ekranın büyük bir kısmı yine okyanus mu?/ Su parçası mı?/ Dere mi?/ Çay mı?/ Göl mü?/ *İşte* ondan/ Su *yani!* (9-year-old)
“Now, a big part of the screen is again an ocean? A body of water? A creek? A brook? A lake? Something like that *y’know*. *I mean* (it’s) water.”
- (23) *İşte* domates adam denizde/ (9-year-old)
“Tomato man’s in the sea *y’know*.”

³ *İşte* can also be translated as *as you know* when it indexes shared knowledge between the speaker and listener.

In these examples, the speakers refer to a discourse item that they have previously mentioned and they use *işte* to mark this state of knowledge. In example (22), the child describes that there is a body of water in the movie clip, however not being sure of exactly *what* it is, he uses all the water terms he can think of. At the end of his utterance, he uses *işte* to mark that the body of water in the clip might be any one of the terms he just mentioned. Finally, he clarifies his description with the use of *yani* and explains that it is just water. Example (23) is the narrative-initial utterance, however, it is one of the last cartoons that the child has to narrate and Tomato Man has frequently been in the sea in the previous cartoons. Thus, in this example, the child refers to a frequent event as assumed knowledge.

Secondly, *işte* functioned to mark discourse boundaries and specifically signaled the endpoint of a topic or a discourse unit. In examples below, *işte* occurs at the end of the narration. It is used as a global boundary marker which indicates that the child has finished his narrative.

(24) *İşte/ Bu kadar/ (9-year-old)*
“Y’know, that’s it.”

(25) *İşte o zaman da oyun bitti/ (3-year-old)*
“Y’know, and then the game ended.”

Finally, *işte* was used as an emphatic marker to stress the speaker’s point. In (26), the speaker mentions the manner (i.e. rolling) of the action performed by a character in the movie twice and uses *işte* to emphasize this specific action. Likewise, the speaker in (27) uses *işte* twice and also couples this DM with another, *ay* ‘oh’, to emphasize the actions of the characters in the movie

(26) *Sonra da domates adam geliyo/ Yuvarlanarak tepeden aşağı yuvarlanarak*
işte denize iniyo (9-year-old)
“And then tomato man comes. While rolling down the hill, while rolling
y’know, (he/she/it) goes down to the sea.”

(27) *Ay işte/ Denizde yüzüyorlar işte/ (9-year-old)*
“Oh y’know, they swim in the sea y’know.”

These three uses of *işte* were consistent with the functions reported by Özbek (2000), as a means of marking ideas at the information state level. Özbek (2000) also found that *işte* marked

Table 1
Different types and functions of DMs at different discourse levels found in our data

Type of discourse marker	Level of discourse	Function of discourse marker
	Exchange structure	
şey		Planning/hesitation marker
şey		Narrative initiation marker
	Participation framework	
yani		Elaboration marker
	Information state	
yani		Repair marker
işte		Shared knowledge marker
işte		Global boundary marker
işte		Emphatic marker

the speaker's resumption of a topic after some digression in the discourse. This use, however, did not occur in our narrative data.

Table 1 summarizes the functions that each DM has in organizing knowledge at different levels of discourse in our database.

3.2. Quantitative and developmental analysis

3.2.1. General

Out of the 20 subjects in each age group, 12 adults, fourteen 9-year-olds, fourteen 5-year-olds and twelve 3-year-olds used one of the DMs at least once in their narratives.

To investigate the relation between age and different types of DM use, proportions of narratives (out of 10) where at least one particular DM was used were calculated for each participant (see Fig. 2). This was done separately for each DM and the statistical tests were conducted on these proportions.

Proportions differed significantly across the four age groups for *yani* (Kruskall–Wallis, $P < 0.02$, d.f. = 3, $\chi^2 = 10.2$) and *işte* (Kruskall–Wallis, $P < 0.005$, d.f. = 3, $\chi^2 = 13.1$), but not for *şey* (Kruskall–Wallis, $P > 0.8$, d.f. = 3, $\chi^2 = 0.6$). Further analyses revealed that adults produced narratives with *yani* more frequently than 3-year-olds (Mann–Whitney, $P < 0.02$), 5-year-olds (Mann–Whitney, $P < 0.04$), and 9-year-olds (Mann–Whitney, $P < 0.02$). On the other hand, 9-year-olds used more narratives with *işte* in comparison to 3-year-olds (Mann–Whitney, $P < 0.01$) and 5-year-olds (Mann–Whitney, $P < 0.02$). All other relations between groups proved non-significant.

Fig. 2 also shows, although not tested statistically, that different age groups had different DM preferences. Three- and five-year-olds mostly produced narratives with *şey* whereas 9-year-olds' mostly with *şey* and *işte*. Finally, most adults' narratives included *şey* and *yani*. Furthermore, *şey* was preferred mostly by 5-year-olds, *işte* by 9-year-olds and *yani* by adults.

Further analysis of the use of each DM across ages is presented below.

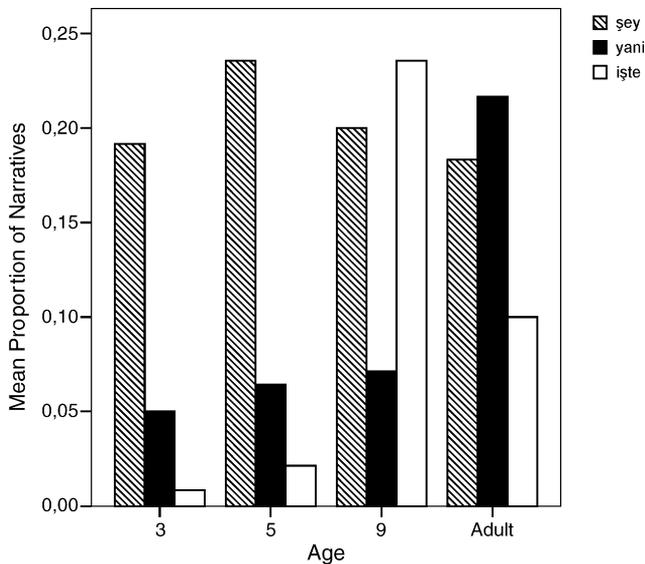


Fig. 2. Proportions of narratives that contain each type of DM in each age group.

Table 2
Functions and percentages of *Şey* produced by different age groups

Age	Function of DM			Total number of DMs
	Planning/hesitation marker (%)	Narrative initiation marker (%)	Filler ^a (%)	
Adults (<i>N</i> = 9)	43	0	57	30
9-year-olds (<i>N</i> = 9)	51	11	37	35
5-year-olds (<i>N</i> = 11)	37	18	45	51
3-year-olds (<i>N</i> = 10)	56	26	19	27

N: number of participants who used *şey* at least once in their narratives.

^a Does not function as a DM.

Table 3
Functions and percentages of *Yani* produced by different age groups

Age	Function of DM		Total number of DMs
	Elaboration marker (%)	Self-repair marker (%)	
Adults (<i>N</i> = 10)	71	29	35
9-year-olds (<i>N</i> = 4)	91	9	11
5-year-olds (<i>N</i> = 7)	25	75	8
3-year-olds (<i>N</i> = 4)	100	0	6

N: number of participants who used *yani* at least once in their narratives.

3.2.2. *Şey*

Şey was used by 9 adults, nine 9-year-olds, eleven 5-year-olds and ten 3-year-olds at least once in their narratives. Even though the proportions of narratives with the use of *şey* did not differ across the age groups (see section 3.2.1, for statistical analyses), its functions changed over time.⁴ Adults used *şey* only as a planning/hesitation marker. Although children in all age groups also used *şey* mainly with this function, they also used it to mark the beginning of a narrative (i.e. narrative initiation). This latter function of *şey* was employed only by children and not by adults. Finally, the non-DM function of *şey* (i.e. filler) was also used more frequently by adults and older children (5- and 9-year-olds) than 3-year-olds. Table 2 shows the distribution of different functions of *şey* at the exchange structure level for each age group.

3.2.3. *Yani*

Yani was used by 10 adults, four 9-year-olds, seven 5-year-olds and four 3-year-olds at least once in their narratives. The proportions of narratives with *yani* increased with age. Adults used more narratives with this marker than children (see section 3.2.1, for statistical analyses).

The age groups also differed in the functions they attributed to *yani*. Adults and 9-year-olds used it mainly to elaborate on the ideas expressed previously and used it much less frequently as a repair marker. Five-year-olds, however, used it primarily as a self-repair marker and secondly as an elaboration marker. In contrast to all other age groups who used *yani* multi-functionally, 3-year-olds used it only as an elaboration marker. The distribution of *yani*'s functions for each age group is shown in Table 3.

⁴ No statistical tests were conducted for the separate functions of each DM due to the small number of uses for some of the functions in different age groups. Here, we report general trends based on percentages.

Table 4
Functions and percentages of *İşte* produced by different age groups

Age	Function of DM			Total number of DMs
	Emphatic marker (%)	Shared knowledge marker (%)	Global boundary marker (%)	
Adults ($N = 4$)	43	57	0	14
9-year-olds ($N = 9$)	54	21	26	43
5-year-olds ($N = 2$)	50	50	0	2
3-year-olds ($N = 1$)	0	50	50	2

N : number of participants who used *işte* at least once in their narratives.

3.2.4. *İşte*

İşte was used by four adults, nine 9-year-olds, two 5-year-olds and only one 3-year-old at least once in their narratives. Only a few of the younger children (3- and 5-year-olds) used it. The statistical results (reported in section 3.2.1.) showed that 9-year-olds had a higher proportion of narratives with *işte* than 3- and 5-year-olds. Even though not statistically significant, 9-year-olds also had a trend to use more narratives with *işte* compared to adults.

The primary function of *işte* also changed in different ages. Adults used this marker mainly to mark shared knowledge and secondly as an emphatic marker, whereas 9-year-olds used it mainly as an emphatic marker and less frequently as a shared knowledge or global boundary marker. Note that *işte* was never used as a global boundary marker by adults. These results show that although 9-year-olds had a tendency to use *işte* more in their narratives than adults, they still did not use this DM in adult-like ways in terms of its function. It is hard to generalize for the functions of *işte* for 3- and 5-year-olds due to the scarcity of their use. Table 4 shows the distribution of *işte*'s functions for each age group.

4. Conclusion and discussion

This study examined the use and pragmatic functions of three interactional DMs (*şey*, *yani*, *işte*) in Turkish-speaking adults' and children's (3-, 5- and 9-year-olds) elicited oral narratives with similar content. Previous research has focused mainly on how children use DMs in conversations rather than narratives, and direct comparisons between child and adult DM use have been rare. Furthermore, previous research, mostly based on spontaneous discourse, has not been able to control for the content of the discourse topics across different age groups (with the exception of Kyratzis and Ervin-Tripp, 1999).

Our results showed that the frequency and function of use of DMs changed with age, similar to findings from conversational data (e.g. Pak et al., 1996; Montes, 1999). We found that 3- and 5-year-olds used narratives with *yani* and *işte* less frequently than adults and 9-year-olds; whereas the frequency of narratives that contained *şey* was similar across ages, indicating that some DMs are harder to acquire than others. This result also indicates a trend in development from an initial use of DMs to mark exchange level structures (i.e. related to turn taking) with *şey* to marking information states and participation frameworks at later stages with *yani* and *işte*.

One reason for the late acquisition of *yani* and *işte* might be due to the multi-functional nature of these markers both at the information state and participatory framework levels, whereas *şey* functions to organize discourse only at the exchange structure level. Children might have a harder time deciphering the specific uses of multi-functional forms, especially if they involve

assessments of the knowledge states of the self or listeners. Previous research has shown that children develop the ability to take the listener's perspective and adjust a linguistic form accordingly in the flow of narrative and conversation only after the preschool years (e.g. Kail and Hickmann, 1992; Pan and Snow, 1999). Our findings also indicate that the use of interactional DMs in narratives might follow a similar developmental pattern.

However, despite the complex nature of these DMs, some of the 3- and 5-year-olds in our study used them, which shows that children as young as 3 are capable of making inferences about the information states of their discourse partners and are able to adjust their own discourse accordingly through the use of DMs. Yet, the adult-like use of these DMs still needs to develop over time.

Unlike *yani* and *işte*, *şey* was used at similar rates across age groups. The planning function of *şey*, which functions to fill pauses, occurred in all age groups, indicating that even young children have knowledge of the undesirability of pauses in discourse flow and that they can signal that they are in the course of continuing their turn or initiating their narratives.

The comparison of our results with those of Kyratzis and Ervin-Tripp (1999) yields some differences. Turkish-speaking children appear to acquire the uses of DMs in narratives earlier than their English-speaking peers. Specifically, some of the 3-year-olds in our sample used an exchange structure marker (*şey*) competently and some 3- and 5-year-olds could also use a more complex participation framework marker (*yani*) in their narratives. The narratives of English-speaking 4-year-olds in the Kyratzis and Ervin-Tripp study, however, completely lacked DMs which emerged only in the narratives of 7-year-olds (Kyratzis and Ervin-Tripp, 1999). This cross-linguistic difference could be a result of semantic and pragmatic differences between the DMs examined in the two studies. The DMs in our study (i.e. the functional equivalents of *uhh*, *I mean* and *y'know*) are mainly interactional, whereas those studied by Kyratzis and Ervin-Tripp (i.e. *because*, *so*, *but*, *well*, *okay* and *now*) are ideational. The ideational functions served by *because*, *so*, and *but* in the context of narratives may be harder to acquire than the functions of markers such as *uhh*, and *I mean* that mark discourse at the interactional levels such as exchange structure, information state, and participation frameworks.

Even though our results indicate that DMs that mark interactional levels are learned early and start to be used around 3 (also see Pak et al., 1996, for reports that such uses are attested around 4 years), the development of their uses goes even past the age of 9 into adulthood. This is true especially for DMs that mark participation framework structures, and is evidenced by the slow developmental pattern of the use of *yani* in our data. This finding is also in line with previous research which has found a developmental trend from 5 to 13 years of age in the use of DMs that mark participation frameworks in Turkish children's narratives about other people's conversations (Özyürek, 1996).

Another major finding of our study is that DMs had different functions for adults and children. For instance, *şey* was used with the same frequency by adults and children of all ages, but had the extra function of narrative-initiation in children's discourse. *Yani*'s core function for adults was to mark the elaboration of ideas, whereas for 5-year-olds, its core function was to mark self-repairs. Likewise, *işte* was used primarily as a shared knowledge marker for adults. For 9-year-olds, however, its main function was that of an emphatic marker. Nine-year-olds also used *işte* as a boundary marker to index the end of their narratives; a function never employed by adults for this DM. These functional differences in DM use indicate that children are in the process of learning these DMs and are not yet as competent as adults.

Finally, our results overlap with Özbek's findings in that the uses of DMs in narratives were similar for the most part to their uses in conversations. However, we also detected some

differences. When we examined the DM use of adults and children together, we found that the core function of *şey* was to mark planning/hesitation, that of *yani* was to index elaboration of previous utterances and that of *işte* was to mark emphasis and shared knowledge. These results are in agreement with Özbek's (2000) analysis of the conversational functions of *şey* and *yani*. An additional function of *şey* that we found in narratives was to signal the beginning of the narrative, similar to its topic-introducing function in conversations (Özbek, 2000). *İşte*, on the other hand, mainly served as an emphatic marker in narratives, whereas its core function was found to mark shared knowledge in conversations (Özbek, 2000). These differences in functions of DMs in conversations versus narratives are in line with Norrick's (2001) and Kryzatis and Ervin-Tripp's (1999) findings that the functions of DMs differ in accordance with the discursive context. However, we have to note that the different functions we found may be due to children's use of DMs rather than the narrative context. For example, *şey* was found to mark the beginning of narratives only in children, especially around 3 years of age. And, *işte* was used as an emphatic marker mainly by 9-year-old children rather than adults.

In sum, we have shown that children's use of interactional DMs to organize the information state and participatory frameworks in narratives starts as early as age 3 and that it gradually increases over time with development. In contrast, markers that function at the exchange structure level are learned earlier than the other types of interactional DMs in narratives. The developmental progression of these forms seems to be sensitive to the multi-functional uses of DMs at the interactional levels. Furthermore, even when children do use a particular marker as frequently as their adult counterparts, their functional use still differs substantially from the adults. This is true even for 9-year-olds, indicating that these children are still in the process of delineating the specific and intricate uses of *yani* and *işte*. The finding that the functions of DMs change over time is also in line with other studies which have reported changes in function with different types of DMs during development (Pak et al., 1996; Montes, 1999). Our study shows that this type of development extends to older ages.

It is important to note that our data consists of elicited narratives and we acknowledge that slightly different uses of DMs might emerge in everyday narratives. Further research is necessary to investigate the development of these forms in Turkish in different genres of narratives or conversations and in adults as well as children to see whether similar or different patterns emerge. It is also important to investigate whether and how children and adults from different socio-economic backgrounds use these markers in their discourse (Burger and Miller, 1999; Schiro, 2003). Future research is also needed for the uses of other DMs that were common in our data and had interactional functions such as *böyle* 'like this', *şimdi* 'now' and *sonra* 'then'. Further study of the developmental trajectory of DM acquisition in different groups of children and in comparison to other types of DMs in different genres of talk will enhance our understanding of when and how children arrive at adult proficiency in their use of markers that situate their utterances at different levels of discourse.

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References

- Aksu-Koç, Ayhan A., 1994. Development of linguistic forms: Turkish. In: Berman, R.A., Slobin, D.I. (Eds.), *Relating Events in Narrative: a Crosslinguistic Developmental Study*. Lawrence Erlbaum Associates, Hillsdale, NJ, pp. 329–388.
- Burger, Lisa K., Miller, Peggy J., 1999. Early talk about the past revisited: affect in working-class and middle-class children's co-narrations. *Journal of Child Language* 26, 133–162.
- Fraser, Bruce, 1999. What are discourse markers? *Journal of Pragmatics* 31, 931–952.
- İlgin, Leyla, Büyükkantarcioglu, Nalan, 1994. Türkçe'de "yani" sözcüğünün kullanımı üzerine bir inceleme [A study on the use of the word "yani" in Turkish]. In: *Proceedings of the 8th Turkish Linguistics Conference*. Istanbul University Press, Istanbul, pp. 24–37.
- Kail, Michele, Hickmann, Maya, 1992. French children's ability to introduce referents in narratives as function of mutual knowledge. *First Language* 12, 73–94.
- Küntay, Aylin, Şenay, İbrahim, 2003. Narratives beget narratives: rounds of stories in Turkish preschool conversations. *Journal of Pragmatics* 35, 559–587.
- Küntay, Aylin, 2004. Lists as alternative discourse structures to narratives in preschool children's conversations. *Discourse Processes* 38, 95–118.
- Kyratzis, Amy, Ervin-Tripp, Susan, 1999. The development of discourse markers in peer interaction. *Journal of Pragmatics* 31, 1321–1338.
- Louwerse, Max M., Hite Mitchell, Heather, 2003. Toward a taxonomy of a set of discourse markers in dialog: a theoretical and computational linguistic account. *Discourse Processes* 35, 199–239.
- Meng, Katharina, Schrabback, Susanne, 1999. Interjections in adult-child discourse: the cases of German *HM* and *NA*. *Journal of Pragmatics* 31, 1263–1287.
- Montes, Rosa Graciela, 1999. The development of discourse markers in Spanish: interjections. *Journal of Pragmatics* 31, 1289–1319.
- Norrick, Neal R., 2001. Discourse markers in oral narrative. *Journal of Pragmatics* 33, 849–878.
- Özbek, Nurdan, 2000. *Yani, işte, şey, ya*: interactional markers of Turkish. In: Göksel, A., Kerslake, C. (Eds.), *Proceedings of the 9th International Conference on Turkish Linguistics*, Harrosowitz, Wiesbaden, pp. 393–401.
- Özyürek, Aslı, 1996. How children talk about a conversation. *Journal of Child Language* 23, 693–714.
- Özyürek, Aslı, Kita, Sotaro, Allen, Shanley, 2001. *Tomato man movies: Stimulus kit designed to elicit manner, path and causal constructions in motion events with regard to speech and gestures*. Max Planck Institute for Psycholinguistics, Language and Cognition Group, Nijmegen, The Netherlands.
- Pak, Maria, Sprott, Richard, Escelera, Elena, 1996. Little words, big deal: the development of discourse and syntax in child language. In: Slobin, D.I. (Ed.), *Social Interaction, Social Context and Language: Essays in Honor of Susan Ervin-Tripp*. Lawrence Erlbaum Associates, Mahwah, NJ, pp. 287–305.
- Pan, Barbara A., Snow, Catherine E., 1999. The development of conversational and discourse skills. In: Barrett, M. (Ed.), *The Development of Language*. Psychology Press, Hove, UK, pp. 229–247.
- Schiffrin, Deborah, 1987. *Discourse Markers*. Cambridge University Press, Cambridge.
- Schiro, Martha, 2003. Genre and evaluation in narrative development. *Journal of Child Language* 30, 165–195.
- Schroeder, Christoph, 2002. On the Structure of Spoken Turkish (online). http://www.elise.uni-essen.de/elise/elise_02_01/05schroeder_02_1.pdf.
- Wierzbicka, Anna, 2002. Australian cultural scripts—*bloody* revisited. *Journal of Pragmatics* 34, 1167–1209.
- Yemenici, Alev, 2002. Categories and functions of repetition in Turkish oral narratives. *Boğaziçi University Journal of Education* 19, 13–35.