Doktori (PhD) értekezés

A Core/Periphery Approach to the Functional Spectrum of Discourse Markers in Multimodal Context

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BTK

Nyelvtudományok Doktori Iskola

2014

A CORE/PERIPHERY APPROACH TO THE FUNCTIONAL SPECTRUM OF DISCOURSE MARKERS IN MULTIMODAL CONTEXT – A Corpus-based Analysis of *mondjuk* (~*'say'*), *ugye* (~*'is that so?'*) and *amúgy* (~*'otherwise'*)

Értekezés a doktori (Ph.D.) fokozat megszerzése érdekében
a Nyelvtudományok tudományágban

Írta: Abuczki Ágnes okleveles angol nyelv és irodalom és pedagógia szakos bölcsész és tanár

Készült a Debreceni Egyetem Nyelvtudományok Doktori Iskolája
(Általános és Alkalmazott Nyelvészeti Doktori Programja) keretében

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Dr. ……

A doktori szigorlat időpontja: 20… . …… … .

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Én, Abuczki Ágnes teljes felelősségem tudatában kijelentem, hogy a benyújtott értekezés önálló munka, a szerzői jog nemzetközi normáinak tiszteletben tartásával készült, a benne található irodalmi hivatkozások egyértelműek és teljesek. Nem állok doktori fokozat visszavonására irányuló eljárás alatt, illetve 5 éven belül nem vontak vissza tőlem odaítélt doktori fokozatot. Jelen értekezést korábban más intézményben nem nyújtottam be és azt nem utasították el.

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Abstract (in English)

The dissertation studies the verbal and nonverbal properties of multifunctional discourse markers (henceforth DMs) as well as explains their roles in the management of interaction from a discourse-pragmatic perspective. DMs are multifunctional pragmatic elements (of heterogeneous word classes) expressing various metacommunicative and cognitive functions. Successful communication requires the ability to infer the intended meaning of ambiguous communicative signals such as multifunctional DMs. It is argued in this work that a multimodal approach is indispensable in communication modelling (involving dialog modelling) in order to disambiguate the actual meaning or function of polysemous communicative signals such as DMs.

The goal of the dissertation is twofold: firstly, to uncover the roles of DMs in fulfilling textual and interpersonal functions, expressing cognitive states, information states and interactional moves such as lexical search, uncertainty and topic shift; secondly, to identify verbal, sequential as well as machine-detectable nonverbal features that typically characterize and best distinguish these functions. Corpus collection and analysis is complemented with diachronic analysis so as to describe the historical development of certain lexical items into DMs as well as questionnaire work in order to map average language users' intuitions about the functions of DMs. The findings consequently contribute to the refinement of my proposed model that entirely and systematically describes the functional spectrum of DMs. The roles and functions verbal and nonverbal discourse markers play in indicating discourse structure and expressing pragmatic functions are examined in the Hungarian HuComTech multimodal corpus as well as in a collection of mediatised political discourses. The corpus queries performed in the software ELAN 4.5.1 (Brugman & Russel 2004: 2065–2068) and their statistical analyses in SPSS 19.0 address the sequential, suprasegmental and nonverbal properties of the tokens of three selected discourse markers: *mondjuk (~'say')*, *ugye (~'is that so?'*), and *amúgy (~'otherwise')*. The features in question regard their contextual environment (lexical co-occurrences, presence or absence of surrounding silence), position in the utterance, prosodic features (duration, fundamental frequency, pitch movement) nonverbal-visual markers (facial expression, gaze direction and the presence or absence

of accompanying hand movements) and stylistic properties (frequency of use in different discourse genres, in informal conversations and political interviews).

The findings suggest that the machine-detectable defining features distinguishing different functions are the position, duration of the DM, the simultaneous performance or cessation of manual gesticulation and the gaze direction of the speaker. These observations have led to the development of two decision trees which can distinguish between two salient functions of *mondjuk (~'say')* and *ugye (~'is that so?'*) each, and may later be implemented as an algorithm.

Abstract (in Hungarian)

Diskurzusjelölők funkcionális spektrumának vizsgálata multimodális korpuszban a mag-periféria modell elméleti keretében

Összefoglaló

A disszertáció a multifunkciós diskurzusjelölők (a továbbiakban DJ-k) funkcionális, szekvenciális és nonverbális sajátosságainak kutatásáról számol be, és diskurzus-pragmatikai szemszögből vizsgálja az interakciót szervező és irányító szerepüket. A DJ-k változatos szófaji osztályból származó, többfunkciós pragmatikai elemek, amelyek különféle metakommunikációs és kognitív funkciókat fejeznek ki. A sikeres kommunikáció fenntartása megköveteli azt a képességet, hogy ki tudjuk következtetni az olyan több jelentéssel bíró kommunikatív elemek szándékolt jelentését, mint a DJ-k. Értekezésemben amellett érvelek, hogy a társalgás modellezéséhez nélkülözhetetlen a multimodális megközelítés, melynek célja, hogy a többjelentésű kommunikációs jelek (például a DJ-k) aktuális jelentését egyértelműsítse.

Az értekezés két célja: először is a DJ-k kognitív állapotokat, informáltsági állapotot és interakciós mozgásokat (lexikális keresés, bizonytalanság, témaváltás) kifejező személyközi és szövegbeli funkcióinak fölfedése; másodszor, az ezekre a funkciókra leginkább jellemző, őket leginkább kiemelő verbális, szekvenciális és géppel deteálható nonverbális jegyek azonosítása. A korpuszgyűjtéshez és korpuszelemzéshez diakrón elemzés társul, amely bemutatja bizonyos lexikai elemek DJ-vé alakulásának történetét, valamint kérdőíves felmérés is társul hozzá, hogy az átlagos nyelvhasználók DJ-kről alkotott intuícióit feltérképezhessük. Az eredmények hozzájárulnak előzetesen feltételezett modellem finomításához, amely a DJ-k funkcionális spektrumának alapos és szisztematikus leírását kívánja nyújtani. Azokat a funkciókat, amelyeket a verbális és nonverbális diskurzusjelölők a társalgás szerkezetének és a pragmatikai funkcióknak a kijelölésével betöltenek, a magyar HuComTech multimodális korpuszban és a közvetített politikai interjúk korpuszában is megvizsgáljuk. A korpuszbeli lekérdezéseket az ELAN 4.5.1 szoftverrel hajtottuk végre; a kiválasztott DJ-k (*mondjuk*, *ugye*, *amúgy*) szekvenciális, szupraszegmentális és nonverbális jegyeire vonatkozó statisztikai elemzést az SPSS 19.0 rendszerben végeztük el. A DJ-k kontextusának olyan jegyeit kérdeztük le, mint együttes

megjelenések adott lexikai elemmel, a DJ-t környező szünet megléte vagy meg nem léte, a megnyilatkozásban elfoglalt hely, a DJ prozódiai jegyei (időtartam, alapfrekvencia, a dallam mozgása), nonverbális-vizuális markerek (arckifejezés, tekintetirány, a kísérő kézmozdulatok megléte vagy meg nem léte) és stilisztikai jegyek (megjelenési gyakoriság a dialógustípustól függően, azaz informális társalgásban vagy politikai interjúkban).

Az eredmények azt mutatják, hogy a különböző funkciók géppel detektálható meghatározó jegyei a DJ pozíciója, időtartama, a szimultán gesztikuláció vagy annak meg nem jelenése, és a beszélő tekintetének iránya. E megfigyelések két döntési fa kifejlesztéséhez vezettek, amelyek képesek megkülönböztetni a *mondjuk* és az *ugye* elemek két legjellemzőbb funkcióbeli használatát.

Acknowledgements

The research reported in the dissertation was supported, in part, by the TÁMOP-4.2.2/B-10/1-2010-0024 project, and in the framework of the 'National Excellence Program' (TÁMOP 4.2.4. A/2-11-1-2012-0001), by the the European Union and the State of Hungary, co-financed by the European Social Fund.

I would like to express my gratitude to Péter Furkó, my supervisor, for raising my interest in Pragmatics and Conversation Analysis during my undergraduate years, for the push to get started in the first place, and the encouragement, professional guidance and useful comments all throughout my PhD programme.

My grateful thanks are due to László Hunyadi and all the members of the HuComTech project for the great team work, inspiring research experiences and the continuous motivation to keep progress on schedule. The opportunity to work on the HuComTech corpus was essential for the completion of this dissertation. Many thanks are due to Olga Bársony, Tibor Nagy and Alexa Bódog who encouraged their students to participate in the recordings as speakers. I am indebted to Enikő Németh T. for her invaluable insights into communication models, annotation taxonomies and for her useful comments on my earlier research papers. I am also grateful for Enikő Tóth for her clear guidance with statistical analyses, and István Szekrényes for his professional technical help with acoustic analyses.

I wish to express my appreciation to my dissertation committee of András Kertész, Csilla Dér, Anita Schirm, Péter Pelyvás and Péter Csatár for the detailed evaluations of the initial version of the dissertation with their insightful comments on various theoretical approaches as well as constructive suggestions on the careful and consistent analysis of the questionnaires and the corpora.

I also say thanks to my friends, colleagues and mentors at the Department of English Linguistics and the Department of General and Applied Linguistics, University of Debrecen for their encouragement and interest in my work.

A very special thanks is due to my parents, grandparents, to Gábor, and all my family for their unconditional love, constant encouragement and patience with me in difficult times.

1 INTRODUCTION

1.1 Motivation

The relatively high number of the occurrences of seemingly meaningless “small words”, sometimes considered “fillers” (referred to as discourse markers in this dissertation), such as *mondjuk (~'say')*, *ugye (~'is that so?'*), and *amúgy (~'otherwise')* and their common simultaneous co-occurrence with gestures in spontaneous interaction show that they form an integral part of our speech production and communication. A typical feature of spoken language that is necessary to model for interactive voice response systems (henceforth IVR systems) is the frequent use of the above mentioned expressions that are used to structure discourse, to smoothly manage speaker and topic changes and express the attitudes of the speaker so that the listener can more easily infer the message. Although they rarely make a semantic contribution to discourse, they have multiple pragmatic functions, and disambiguating their meaning presents a challenge in dialog modelling. In spite of recent developments and innovations in language technology (speech generation and interactive voice response systems) in last few years, a dialog manager system without a model for handling these pragma-linguistic items may still run into problems at various levels: both in producing natural and proper utterances and in understanding users’ utterances. Natural language processing (NLP) applications require the functional disambiguation of lexical items, especially discourse markers as they are indispensable cues for discourse segmentation (Litman & Passonneau 1995), argument understanding (Cohen 1984) and anaphora resolution (Grosz & Sidner 1986). On the other hand, correctly producing DMs by IVR systems increases their naturalness as well. Since human communication is more than just coding and decoding, disambiguating the vagueness of the multiple functions of DMs involves making inferences about the communicative intention of the speaker from his/her observable behaviour including all modalities. In my dissertation it is argued that besides verbal context, visual markers such as hand movements or gaze direction as well as prosodic features such as intonation, duration and silences may also contribute to the automatic disambiguation of the meaning of DMs since all these verbal-acoustic, nonverbal-acoustic and nonverbal-visual

modalities are able to express various modes, emotions, syntactic and pragmatic properties in communication.

1.2 Research objectives and questions

1.2.1 Primary objectives

The primary focus of my dissertation is empirical rather than theoretical and attempts to describe and model the contextual, non-verbal-acoustic (prosodic) and nonverbal-visual features of the different realizations of the selected DMs. The identification of the most commonly co-occurring feature sets may contribute to the disambiguation of their functions. Concerning the underlying cognitive mechanisms behind the production and reception of DMs, I do not attempt to provide a model to explain the awareness or consciousness of speakers during uttering DMs or that of listeners when hearing DMs. Instead, my aim is to identify common patterns in their use in my corpus and describe the relationship between observed phenomena (DMs, speaker changes) and objective, physical machine-detectable and measurable features (e.g. duration of silences and certain lexical items, variations in pitch, intensity and gesticulation). The research aims and the questions to be addressed and answered in the dissertation centre on the following issues:

1.2.2 Theoretical questions in the study of DMs:

Chapter 2 aims at answering the following three sets of questions: (1) In what ways are the functions of DMs categorized by different authors and their discourse models? (2) How is the multifunctionality of DMs explained in different theories? (3) What processes account for the development of the new functions and the changes in the meaning of DMs and the selected lexical items (*mondjuk, ugye,* and *amúgy*) in particular?

1.2.3 Objectives of the questionnaires

Using questionnaires (described in 3.2), I hope to map average language users' intuitions about the use of selected DMs and contrast the results with the findings in literature (mainly dictionaries). My aim is to identify the intuitions of average language users about the use, optionality and functions of the selected DMs, and uncover what factors explain/account for the more optional/omittable nature of a DM (segment duration, performance or cessation of manual gesticulation, etc.).

Based on prior literature review, my metapragmatic awareness, linguistic competence, experiences and preliminary corpus queries, I started the research with a set of **initial assumptions** in mind that I wanted to test using my corpus material and the corresponding questionnaires:

The three lexical items under scrutiny significantly **differ** from each other in terms of:

- their **functional spectra**
- the degree of **multifunctionality** they display
- their degree of **optionality** and contribution to the discourse; that is, they add subtlety to the utterance with varying extent.

I also assume that discourse functions and coherence relations are usually expressed or implicitly conveyed by other means, modalities, or semiotic channels as well (e.g. intonation, temporal aspects, facial expression, hand movement); therefore I expect to find a relationship between the **duration** of an item and the degree of its perceived **optionality** (the shorter, the more optional/omittable).

Moreover, I presume that the responses of the informants will confirm the **validity of the core/periphery model** of DMs (Bell 1998); consequently, one or two functions of each DM will be found considerably more frequent than other functions in the views of the informant, **independently of the gender** of the informant.

1.2.4 Discourse-pragmatic analysis of DMs:

The major goal of Chapter 3 (Empirical research) is to map the functional spectra and identify the most salient functions of each of the DMs analysed in spontaneous conversation and mediatised political discourse through qualitative and quantitative analysis from a multimodal discourse-pragmatic perspective. My ultimate question is if it is possible to distinguish the different functional categories of DMs from each other based on physical, machine-detectable features, such as silence, gaze direction, manual gestures or facial expressions (by means of silence detector, eye tracking, hand tracking or emotion recognizer software). The corpus queries are aimed at identifying these cues and their thresholds (e.g. minimal duration of silence) or parameters (e.g. direction of gaze and type of facial expression).

In answering these questions, the dissertation is organized into four major chapters: (1) Introduction, (2) Theoretical Background, (3) Empirical Research and (4) Conclusions. The chapter on Empirical research comprises the central part of the dissertation since it reports the results of several case studies based on the HuComTech corpus (involving questionnaires and multimodal corpus queries about the functional spectra and the multimodal co-occurrence patterns of the selected DMs) in order to contribute to their disambiguation process with decision trees) and a case study on the strategic use of DMs in a collection of Hungarian mediatised political interviews.

1.3 Justification of the necessity of research on the DMs analysed

This dissertation does not describe all DMs occurring in the HuComTech corpus; instead, the relatively frequent multifunctional DMs are discussed. I have selected to analyse three Hungarian DMs which are commonly used in spoken interaction but are, nevertheless, less widely researched. Taking a semasiological approach, the point of departure in this research was a group of frequent multifunctional verbal discourse markers: *mondjuk (~'say')*, *ugye (~'is that so?'*), and *amúgy (~'otherwise')*.

The similarities of the three Hungarian DMs selected (*mondjuk, ugye, amúgy*) enable us to consider them as a specific group of discourse markers and analyse them in a single framework (Schiffrin 1987) since they all (1) operate in information management; (2) preface topic elaboration (they can be seen as markers of information management and thematic control); (3) have a relatively large scope; (4) are multifunctional; besides, (5) they are all markers of cognitive states (e.g. m*ondjuk*: recall, lexical search), (6) may occur in various positions in the utterance; therefore, other contextual factors (besides syntactic position) such as prosody and gestures must play a role in their positioning and disambiguation since (7) they are all uttered in different intonation patterns, and are accompanied by different forms of gesticulation.

At the same time, they are worthy of comparison along the following lines:

1. *amúgy* is mostly speaker-oriented, while *ugye* is both hearer-and speaker-oriented (and an attitude marker as well);
2. textual coordinates: they either refer backward or forward;

3. information management: *mondjuk* and *amúgy* usually preface new information units, while *ugye* usually prefaces given/known information units and marks shared background knowledge (common ground);

4. different degree of orality and frequency in the corpus (*mondjuk > ugye > amúgy*); It is important to note that high frequency of use is the *backbone* of various processes of grammaticalization and pragmaticalization (Ariel 1998:245). In other words, the more frequently an item is used, the more likely it is that its formal-functional properties are going to change, and once it has entered the process of grammaticalization, the faster it is going to go through the substages of that process." (Furkó 2007:67)

5. they belong to different word classes (*mondjuk*: verb, *amúgy*: indexical adverb (of manner), *ugye*: interrogative adverb (of manner)); and they are currently at different stages of their pragmaticalization process (*amúgy* has been the least, while *mondjuk* has been the most pragmaticalized out of the three items);

6. I hypothesize that they are characterized by different degrees of conceptual meaning: *amúgy* is the most conceptual, *mondjuk* is medium, *ugye* is the least conceptual.

Figure 1.1 and Table 1.1 sum up the similarities and differences of use of the three DMs selected applying Schiffrin's framework (1987) developed for the analysis of interaction and discourse markers:

DM	**PARTICIPATION COORDINATES**	**TEXTUAL COORDINATES**
mondjuk (~'let's say')	Speaker (hearer)	Prior
amúgy (~'otherwise')	Speaker (hearer)	Both prior and upcoming
ugye (~'is that so?')	Speaker and hearer	Upcoming (sometimes prior)

Table 1.1 *Description of the indexical functions of DMs (my own division and table, applying Schiffrin's framework (1987))*

As shown in Figure 1.1, the three items can be compared along the lines of frequency, scope, participation and textual coordinates and the degree of their conceptual (and procedural) meaning.

By way of illustration, using Schiffrin's framework of various planes of talk, the primary function of *mondjuk (~'say')* is to mark information state transitions. Also, it operates in participation framework, usually anchoring the speaker in his/her productive role. It is also used on the action structure plane of talk when it indicates actions such as contrast, reformulation or clarification.

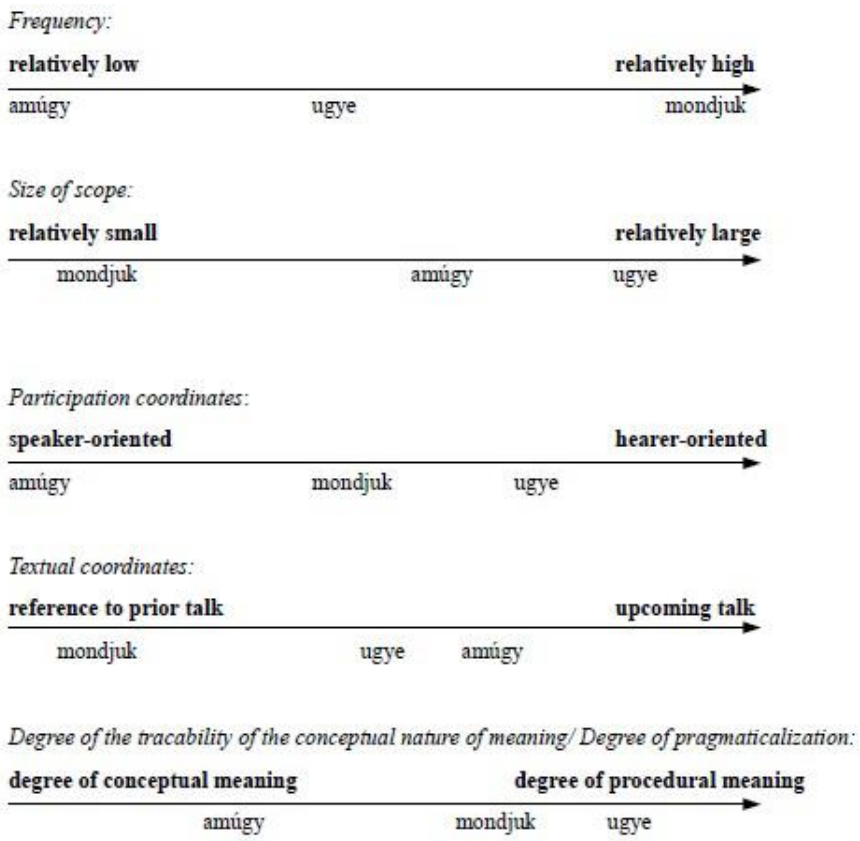

Figure 1.1 *An illustration of my assumptions prior to empirical data collection and interpretation*

My basic assumptions that I want to test by using questionnaires concerning the functional spectra of the three DMs are grounded in the core/periphery approach to DMs (Bell 1998):

- The three items differ in the size of their functional spectra.

- The smaller/narrower functional spectrum a DM has, the more conceptual meaning the DM has and the stronger its core meaning is.
    - The various functions of a conceptually strong DM, such as *amúgy (~'otherwise'),* are difficult to distinguish and disambiguate.
    - Conceptually stronger DMs are less frequently accompanied by manual gesticulation than conceptually weaker DMs.
- The larger/wider functional spectrum a DM has, the conceptually weaker it is and the less strong its core meaning is (it has procedural rather than conceptual meaning).
    - The various functions of a conceptually weaker DM, such as *mondjuk (~'say')* or *ugye (~'is that so?'*), are easier to distinguish and disambiguate than those of conceptually stronger DMs.
    - Conceptually weak DMs are more frequently accompanied by manual gesticulation than conceptually stronger DMs.

Before I turn to the description of the empirical part (chapter 3) of my research (including the questionnaire-based survey to test the above assumptions), I overview major theoretical approaches to multimodality (in 2.1) and the category of DMs (in 2.2).

1.4 Material and methodology

The dissertation attempts to answer the above listed research questions through the collection of **empirical** data and their **qualitative and quantitative analysis**. The data is taken from a variety of **corpora**, including the multimodal HuComTech Corpus[1], a collection of mediatised interviews and a written historical corpus including texts written since 1772.

The analysis of the **diachronic** development of the functions of these lexical items has been performed on various historic language resources: firstly, primary sources, such as the relevant parts of the Historical Corpus of Hungarian (Magyar Történeti Korpusz)

[1] The HuComTech corpus was built in the framework of the HuComTech project (full name: Az ember-gép kommunikáció technológiájának elméleti alapjai 'Theoretical foundations of human-computer interaction technologies') which was supported by the TÁMOP 4.2.-08/1/0008-0009 project. I am grateful for all the help and experiences I have gained while working in the project. At the same time, of course, shortcomings in this dissertation are all mine.

and secondly, secondary sources, such as etymologic dictionaries (Benkő 1967–1984), historical dictionaries (Ballagi 1872, Szarvas & Simonyi 1893), general contemporary dictionaries (Ittzés 2006, Pusztai & al. 2003) and monographs on historical linguistics (Benkő 1992). The Historical Corpus of Hungarian comprises 23 million words of literary works, scientific texts and newspaper articles written between 1772 and 2000 (Pajzs & al. 2004)[2].

The **synchronic** analyses of the selected Hungarian DMs have been carried out on three different genres of multimodal corpora (see Table 1.2) so that the uses of DMs can be contrasted in various genres: one involving spontaneous informal semi-guided conversations usually following a set of a few pre-defined topics; one with simulated job interviews; and one comprising different types of mediatised political discourse. Formal conversations follow rules and strong social norms and involve the use of symbolic gestures, high conscious control as well as displaced mimesis, while informal conversations are not so strict since they tend to involve a lot of overlapping turns, discrepancies between modalities and a variety of gestures. This distinction is important in order to define the level of spontaneity and discourse planning within interaction, and to mark the technological limits of any prediction, explanation or disambiguation in dialogue management. The third collection of conversations analysed involves a variety of media discourses (political interviews, panel discussions, breakfast talk shows and news reports) collected from http://mindroom.hu, an automatic media observer website.

[2] It is a limitation of my diachronic analysis that I only consulted texts written after 1772. Naturally, I only had access to the spoken language of earlier times in the form of dialogues captured in novels and dramas.

analysed lexical item	tokens uttered by the interviewee in the HuComTech corpus	tokens uttered by the interviewer in the HuComTech corpus	tokens taken from mediatised interviews	diachronic examples taken from the Historical Corpus of Hungarian	**TOTAL**
mondjuk (~'say')	208	177	135	30	*550*
ugye (~'is that so?')	103	82	98	30	*313*
amúgy (~'otherwise')	50	29	25	30	*134*
					997

Table 1.2 *Number of tokens analysed in the entire collection of corpora*

The **framework** for functional DM annotation scheme has been developed using a predominantly data-driven multi-step method since the taxonomy set up has been continuously modified following different approaches such as (1) literature-based, (2) questionnaire-based and (3) corpus-based approaches.

The **tools** used for the analysis of corpora include: (1) the ELAN 4.5.1 annotation software (Brugman & Russel 2004: 2065–2068) for segmenting, tagging and querying DMs, (2) the Praat software (Boersma & Weenink 2007) for acoustic analysis, (3) the Simple Concordance Program for concordance searches, (4) Microsoft Excel for entering the answers of informants in questionnaires, and (5) SPSS 19.0 for the statistical analysis of both questionnaire and query results.

My **methodology** combines quantitative and qualitative methods in the multimodal analysis of both audio and video contents of the recordings as well as descriptive and inferential statistical tests during the interpretation phase of the questionnaire and corpus query results.

2 THEORETICAL BACKGROUND

My work is grounded in functional approaches in both gesture studies and linguistics such as Conversation Analysis, Multimodal Discourse Analysis, Relevance Theory, Computational Pragmatics, Coherence Models of Discourse, Speech Act Theory and Grammaticalization Theories. The following sections provide an overview of the theoretical landscape my dissertation is rooted in.

2.1 Multimodality and conversation analysis

The aim of the present section is to provide a general overview of the approaches to the multimodal nature of human interaction and the use of multimodal corpora in communication research along with their annotation methods and schemes. First, an introduction is given to justify the necessity of multimodal approach not only in linguistics and communication studies but also in dialog modelling. Following the definitions of multimodal corpora, a few well-known multimodal corpora are presented and compared. The considerable differences in their platforms and schemes highlight the necessity of standardization in order to enhance the usability and interoperability of their resulting datasets. Finally, the limitations of multimodal corpus studies are briefly listed.

2.1.1 Approaches to the study of the speech-gesture interface

Face-to-face interaction is evidently more than just the exchange of speech since conversation participants produce and perceive communicative signals in other modalities as well, including facial expressions and the meaningful movements of the hands, head and gaze. The question is how to account for the relationship between speech and gesture from a discourse-pragmatic perspective. The present chapter has a threefold goal: (1) to critically overview a number of definitions and taxonomies of gestures as well as three major assumptions about the speech-gesture relationship (the communicative, or listener-oriented view; the non-communicative, or speaker-oriented

view; and the tradeoff hypothesis); (2) to provide some methodological guidelines on how to study gestures, that is, how to collect natural behavioural data; and (3) to briefly describe influential standardization efforts in multimodal corpus annotation to uniformly code speech and gesture in the framework of research projects, therefore, supporting the interoperability of language resources.

First, I overview the definitions of human communication, nonverbal communication and multimodal communication, highlighting the multimodal nature of human expression and perception, and then I provide a brief overview of the state of the art on the relation between speech and gesturing. I attempt to answer why we need a multimodal approach in studies of language use (including the study of DMs as well). I review the findings of a few multimodal studies that address the questions how modalities work together as well as to what extent verbal and nonverbal expressions (involving any kind of coherence markers) are synchronized.

According to a widely accepted definition, most human communication is comprised of coded conventional symbolic meaning and inferences about communicator intent and recipients' abilities to infer it (Noordzij & al. 2009). Earlier theories of communication, such as the model of telecommunication proposed by Weaver & Shannon (1963) tended to ignore the inferential nature of human communication and described it as a simple coding-decoding system. However, due to the ambiguity of communicative signals (Sperber & Wilson 1986/1995) and our flexibility in using various symbols to signal the same meaning, we require the ability of inferencing in order to resolve meaning during signal-meaning mapping which is highly pervasive in human communication (Noordzij & al. 2009). Grice's theory of non-natural meaning (1957) argues that humans first look at underlying communicative intention and then derive interpretation of form from intention; therefore, people have misunderstandings at the level of intentions, not at the level of communicative signals.

Naturally, the interpretation of an utterance[3] relies on more than just the literal meanings of verbal content, since interpersonal communication involves more than a mere exchange of speech. During face-to-face communication speakers express themselves by nonverbal means as well and exchange signals in various modalities, such

[3] The notion of utterance is defined in Németh T. 1996a

as facial expression, eye gaze and voice quality. In the multimodal framework of the notion of "composite utterances" (Kendon 2004, Enfield 2009) it has been proposed that the nonverbal behaviour of the speaker and the verbal content are orchestrated together, gesture completes the utterance's meaning, therefore, meaning is a composite notion. As Kendon (2004:8) puts it: "The gestural component and the spoken component interact with one another to create a precise and vivid understanding". Nonverbal signals often express something complementary to what is being expressed verbally; they add subtlety to or modify the meaning expressed verbally. For instance, our verbal utterances with emotional content are often supported and expressed by nonverbal means, such as intonation or affect displays. Most importantly, spontaneous speech is accompanied by hand movements, called gesticulation. Kendon (2004:7) calls these meaningful movements of the hands "visible actions as utterances". All these modalities play a role in the expression and processing of the socio-emotional and semantic aspects of interaction (cf. Ellsworth and Ludwig 1972). The question is how to define interaction, nonverbal communication, multimodal communication, and how to explain the relation between gesture and talk.

In what follows I will outline the most influential assumptions about the speech-gesticulation relationship in current literature on gesture. Regarding the rather underdefined term of nonverbal communication (henceforth: NVC), Brown (1986) considers any interaction that does not use words nonverbal communication. If we accepted Brown's definition, the question would arise how to account for prosody, intensity and voice quality. In fact, intentional communication without the involvement of language (that is, using wordless signals, e.g. a wink or waving) comprises a very small part of our daily interactions. The use of language is also indispensable to express complex and abstract grammatical information, such as conditionals. On the other hand, there are certain things, ideas and especially actions that are easier to transmit by using nonverbal means, e.g. teaching how to lace a pair of shoes is easier and faster by demonstrating and imitation than by giving and following verbal instructions. However, interactions of a multimodal nature are the most pervasive in our daily interpersonal communication. Multimodal communication (henceforth: MMC) refers to forms of communication that involve the simultaneous use of at least two semiotic channels: most importantly, the visual and auditory modalities as well as the more implicit channels of

smell, taste and the haptic modality. All these semiotic channels enable the exchange of communicative behavioural cues: the auditory modality transmits verbal cues (involving e.g. lexical items and dialogue acts), prosody (involving e.g. intonation and voice quality) and vocal expressions (involving e.g. laughter and moans); the visual channel transmits eye, head, arm and hand gestures, body language (involving posture and proxemics), eye contact (involving eye gaze and head gaze), and facial expressions (involving facial action units and expressions, such as a frown). The term multimodality refers to the study of the alignment of more than one perceptual modality. The general claim in multimodality research is that the different channels of communication complement each other.

The question is raised in many studies of MMC which modality provides more reliable information. Brown (1986: 498) argues that nonverbal aspects (voice quality and gesticulation) in interaction are typically less controlled consciously; therefore, they are a more reliable source of information than the verbal content of the utterance. In contrast, Krauss, Apple, Morency, Wenzel & Winton (1981) showed through the findings of their experiment that when their subjects were asked to judge the emotional quality of an interactional segment, verbal content (presented to them as transcripts) was found to be a more reliable source of information than the video-only or suprasegmentals-only versions of the communication exchanges when compared with judgements based on the baseline multimodal data. Furthermore, there is no doubt that for the transmission of very abstract pieces of information or grammatical information (e.g. for expressing conditional structure), verbal communication clearly outperforms nonverbal communication.

Concerning the influential taxonomies of gestures, Efron (1972), one of the pioneers in gesture studies distinguishes two basic types of gestures from the perspective of the interpretability of the meaning of gestures:

- gestures that convey meaning on their own, independently of speech (e.g. pointing gestures, iconic gestures depicting the size and shape of an object and kinetographic gestures pantomiming bodily actions
- gestures that do not convey meaning independently of speech.

In fact, Efron is one of the first researchers who analysed the speech-gesture relationship and several later classifications are based on the distinction put forward by him. Concerning the relationship and alignment between speech and gesture, two

opposing “schools” can be clearly distinguished in today’s gesture literature: (1) the communicative, and (2) the non-communicative view of the role of gestures.

On the one hand, Kendon (2004) and McNeill (1992) believe that gestures are communicative and give additional information for the listener, thereby facilitating the inferential process and enhancing smooth communication. Moreover, De Ruiter (2000) claims that gesture and speech are “mutually compensatory channels”, that is, if it is difficult to express a concept or an idea verbally, gestures express information through another channel; and vice versa, if there is difficulty in the nonverbal channel (e.g. due to large distance among speakers), speech compensates for this proxemic difficulty.

On the other hand, those who argue in favour of the non-communicative role of gestures (Krauss, Chen & Gottesmann 2000) believe that gestures do not serve communicative functions because they are hardly interpretable in isolation, therefore, they do not enhance the inferencing process of the listener. So, Kita & Goldin-Meadow (2009: 116–117) argue that speakers only use gestures for their own cognitive benefit, to facilitate their speech management and planning processes, e.g. during difficulties of lexical search. De Ruiter (2003: 338) counters their arguments and suggests that “the empirical studies that are cited to support the claim that gesturing is done for speaker-internal reasons are in fact supporting the notion that gesture is a communicative device which is compensating for problems in speech by providing information in another channel”. He goes on to explain that “in order for gestures to be communicative, gestures do not need to make sense to listeners in isolation, because listeners do have access to the accompanying speech ... as gestures and their accompanying speech form a tight semantic unit, sometimes redundant, but mostly complementing each other”(342). De Ruiter (2012: 233) proposes “a *tradeoff* relationship between speech and gesture in terms of their communicative load”. The tradeoff hypothesis assumes that when speakers need to take more effort to verbally encode intended meaning, they tend to use more gestures.

McNeill (1992: 30–32) also proposes that gestures must be regarded as part of language: speech and gesture are two modes of expression and they can be regarded as two aspects of the process of an utterance. Similarly, Kendon (2004) argues that a theory of utterance should not begin with a division between speech and gesture. In Kendon’s definition, a gesture is a form of human expression, an activity that is significant for the

understanding of a speaker's expression, and they often express something complementary to what is being expressed verbally (2004: 107). Gesture can be considered as a medium which can be employed in many different ways. Besides pointing to represent something (through some form of depiction or enactment) that is relevant to the referential content of what is being said, gestures are also used to mark up or display aspects of the logical structure of the discourse (Kendon 2004). Accordingly, interactants build communicative sequences move by move (a move is also of composite nature, consisting of multiple "signs"), and the interpretation (of signs) is driven by principles of rational cognition. At the same time, it must be kept in mind during analyses that gesture is a multifunctional 'device' as it is a medium which can be employed in many different ways. Therefore, after recognizing and identifying a gesture, people must be careful while disambiguating its meaning.

In the traditional classification of communicative gestures (Ekman & Rosenberg 1998, Kendon 2004), one can distinguish two basic functions which gestures are used for. Firstly, gestures often represent something (by some sort of depiction or enactment to exemplify objects or actions) that is relevant to the referential content of what is being said. For instance, descriptive gestures are very common in the HuComTech corpus, especially in informal conversations, and they are mostly used to describe the size and form of objects or events, as well as to show spatial relations. Secondly, speakers may display the logical structure of their discourse, especially by hand gestures. Moreover, in some cases, when head and hand movements are coupled with this parsing function, temporally synchronized head and hand movements are produced.

Besides these two above mentioned basic functions, Kendon (2004: 225) distinguishes four major functions of gestures:

- *pragmatic* function: as they contribute to or constitute the acts accomplished by utterances
- *modal* function: if they operate on a given unit of verbal discourse and show how it is to be interpreted
- *performative* function: gestures showing what sort of speech act a speaker is engaging in
- *parsing* function: gestures marking the structure of spoken discourse

Based on a qualitative analysis, it is assumed that within the gestures of the HuComTech corpus, those with parsing and pragmatic functions are the most common (Abuczki 2011).

Besides general functional taxonomies of gestures, de Ruiter (2000) provides a following taxonomy of hand gestures specifically from a cognitive perspective (focusing on representations underlying gesture processing), based on McNeill's distinction of the various types of manual gesticulation (1992). These taxonomies influenced the development of the video annotation scheme of the HuComTech corpus; therefore, I briefly sum up the properties of the five basic functions of manual gestures proposed by de Ruiter (2000: 285):

- *Emblems* are gestures whose form-meaning mapping is arbitrary (idiosyncratic) and lexicalized. Their meaning is language-dependent; they conform to standards of well-formedness (e.g. thumbs-up gesture, palm-front versus the palm-back V-sign).
- *Iconic gestures*: the shape of iconic gestures resembles the shape of their referent (it might display the shape or size of objects or show numbers) (spontaneous gestures, not bound by linguistic conventions), they are more or less transparent images of their referents; therefore, these gestures are redundant (co-expressive) with speech or complementary (add subtlety) to speech
- *Pantomimes*: sequences of gestures form a unit and display an activity
- *Deictic gestures*: pointing gestures, indicate location or direction, or point at an object
- *Discourse structuring gestures*: Movements of the hands that accompany speech and fulfil a pragmatic function (e.g. indicating important words in a narrative, displaying story structure or topic changes)[4].

The HuComTech project also adopts this distinction; as a result, the video annotation scheme of the HuComTech corpus also involves the indexing of emblems, iconic and deictic gestures. Pantomimes are very rare in the corpus; therefore, they are not annotated. Discourse structuring gestures are not explicitly tagged in the annotation,

[4] The last two types (deictic and discourse structuring gestures) are not pictorial gestures.

but topic changes and speaker changes are annotated, so the surrounding, overlapping gestures in their context can be studied. These types of gestures were also considered in my qualitative analysis of the interviews.

As far as the disambiguation of the meaning of the gestural component of communication is concerned, Enfield (2009) defines four *sources* of a gesture's meaning that are followed in my gestural analysis as well:

- (coterminous) speech
- (prior) stimulus or cause of an utterance
- response to an utterance
- purely formal characteristics of the gesture

Moreover, during the multimodal analysis of interactions, a gesture should not be analysed on its own as it occurs; rather, three '*contexts*' of the gestural component of an utterance must be taken into account:

- stimulus/cause: what has just happened
- speech + gesture/movement together: what else is happening now
- response/effect: what happens next (Enfield 2009).

Enfield (2009) lists two desiderata for a valid account of composite meaning in studying speech with gesture:

- provide a modality-independent account of gesture, e.g. co-speech hand gesture (manual-visual) conveys meaning somehow differently to speech (vocal-aural) → this has to be articulated without reference to modality
- capture the notion of 'holistic' meaning in hand gestures → a hand gesture has the meaning it has only because of the role it plays in the meaning of utterance as a whole → an interpreter's task begins with the recognition of a signer's communicative intention, e.g. informative intention.

Evidently, the nonverbal channels of our language use provide implicit information for the listener on how to draw relevant inferences about the speech situation, its participants and their utterances; therefore, gesticulation comprises an essential component of our pragmatic competence and performance as well. Grice's theory of conversational implicature proposed that listeners draw inferences guided by a set of

general principles, so-called maxims (Grice 1975). Moreover, dialogue is a collective act requiring “common ground” (Clark & Brennan 1991), which means that the receiver must acknowledge the sender’s utterances, for instance, by “backchanneling” (either verbally or by nodding) or on part of the sender, asking for backchannels, with the help of tag questions or curiously raising eyebrows, among other devices. The hypothesis of reflexive intention proposed by de Ruiter (2007) argues that communicators simulate their interlocutors’ processing, which means that speakers simulate inferences in the listeners, and listeners simulate inferences in the speakers.

Completing the above theories, Hunyadi (2011) proposes that gestures might also have some sort of grammar or prosody. Therefore, they must have some definable and identifiable constituents. According to Hunyadi (2011), all gestures have a beginning (preparation), a peak (stroke), and an ending (recovery). Similarly, Enfield talks about and defines so-called ‘gesture phrases’. In his framework, he calls an entire movement excursion a ‘gesture unit’ and the nucleus of the gesture phrase a ‘stroke’ (2009: 124–125).

In the interactional and gestural analysis of the recordings of the HuComTech corpus, I took into consideration all the above mentioned theories. Furthermore, I also want to test and validate them for Hungarian speakers as well some hypotheses about gestures put forward earlier in the literature. For instance, Kendon (1995) was one of the first gesture researchers to observe that some head movements (= the alternate manifestations of the eye gaze pattern) relate to the discourse structure of an utterance. Body movements function interactively, for example, the 'speech-preparatory' repositioning of the head before the start of talk simultaneously signals the assumption of a turn or the intention to continue, so it is also a crucial part of turn management. In the HuComTech corpus, the same pre-positioning of the head occurs most of the time. Regarding the gaze behaviour of the listeners, Goodwin (1981) was the first to discuss how speakers can assess recipiency for their talk by inspecting the gaze of others. Concerning hand gesturing, if the listener makes hand gestures, such as raising hands, then he/she may be requesting control of the floor – that is called the ”traffic signal” approach (Duncan 1972). During the analyses presented in the following chapters I test the above mentioned phenomena in the corpus for a better understanding of the alignment of speech and gesturing.

However, it is not only our expressions but also our perception that is of multimodal nature since we process not only what we hear but also what we see (facial expressions, lip movements, eyebrow movements, hand gestures, etc). Simultaneous auditory and visual perception is called multimodal perception (Massaro 1987). Inherently, there is both auditory and visual relation among speakers in which the modalities normally complement, sometimes contrast each other. Simultaneous auditory and visual perception is called multimodal perception, and the processing of stimuli coming from various modalities is largely an unconscious process (Massaro 1987). Since auditory and visual perception is both simultaneous and unconscious, the nonverbal components of interaction must also be taken into account when interpreting a communicative event. In conclusion, I support the view that the different channels of communication are complementary (especially when one channel is noisy) and none of them can be seen as unnecessary.

2.1.2 Methods in corpus-based studies of interaction: An overview of multimodal corpus annotation[5]

Corpus linguistics (henceforth: CL) studies natural language use, that is, performance, in contrast with theoretical linguistics where the focus is on the study of competence. It can be defined as a methodological research approach to studying language variation and use (Biber & Reppen 2012). Since CL uses a large and principled collection of natural texts as a basis for quantitative and qualitative as well as traditional and computational analyses, its research findings have a great degree of generalizability and validity. The goals of CL include providing explicit descriptions of language-in-use, finding sequential patterns in language, verifying models of language use and developing algorithms in various fields of language technology.

Methodological innovations in CL allow linguists to raise fundamentally different kinds of research questions, sometimes providing different perspectives on language variation and language use (Biber & Reppen 2012). For instance, as computing capacities began to increase in the 1970s, CL research interest shifted from the study of written to

[5] This section is a revised and extended version of a joint paper of the author, co-authored by Ghazaleh Baiat Esfandiari (Abuczki & Esfandiari 2013: 86-98).

spoken interaction. It was uncovered with the help of CL that spoken language greatly differs from written text since not all sentences are well-formed, sentence boundaries are often unclear, and that different principles and maxims guide spoken interaction. All these findings led to the necessity of novel units of segmentation in spoken corpora, such as turns or utterances. However, as Knight & al. (2006) argue, spoken corpora are limited as they only have the provision for presenting data in a single format; that is text, in the form of transcripts of interactions. Spoken corpora with transcripts alone are not sufficient for uncovering the nonverbal-visual aspects of interaction since "the reflexivity of gesture, movement and setting is difficult to express in a transcript" (Saferstein 2004: 213). As a result, CL research interest has recently shifted to the study of multimodal interaction and its capturing in corpora.

A *multi-modal* (or *multimodal*, henceforth: MM) *corpus* is defined as "an annotated collection of coordinated content on communication channels including speech, gaze, hand gesture and body language, and is generally based on recorded human behaviour" (Foster & Oberlander 2007: 307–308). The integration of textual, audio and video records of communicative events in MM corpora provides a platform for the exploration of a range of lexical, prosodic and gestural features of conversation, and for investigations of the ways in which these features interact in real, everyday speech (Knight 2009: 15).

Within various types of MM corpora, we can distinguish two basic types:

- video recordings supplemented with only transcriptions;
- video and audio recordings annotated at multiple levels (based on both audio and video separately).

All corpora presented in this chapter belong to the second category which is considered more valuable in communication studies.

Biber (2010: 178–194) and Biber & Reppen (2012) list the following requirements of corpora:

- representativity
- validity
- generalisability
- standardized format

I propose to complement this list in connection with MM corpora with the requirement that their annotation schemes should be domain and tool-independent, and their labels (within a single level at least) should be mutually exclusive. Moreover, besides its audio and video contents, a usable MM corpus must also have metadata description, annotation guidelines and user's guide in order to provide rigorous guidelines to its coders as well as to ensure its usability for researchers.

MM corpus research faces two major problems: (1) the time consuming nature of annotation process, therefore, relatively small sizes of annotated MM corpora are available; (2) the lack of existing annotation standards (tools, formats and schemes), especially for coding nonverbal behaviour. There are several annotation schemes available that code the nonverbal behaviour of speakers; however, most of them do not integrate talk and gesticulation in a coherent fashion. It would be crucial at least to recognize the transitions between intentional and non-intentional movements (e.g. the difference between a real gesture and an accidental movement).

Annotation tools, such as Anvil (Multimodal Annotation and Visualization Tool[6]) and ELAN (Brugman & Russel 2004: 2065–2068), offer a lot of benefits to their users since they enable the simultaneous streaming and annotation of both audio and (even multiple) video files in separate windows, and users can specifically design their own annotation scheme and attach multiple tags to one segment in both software programs. Moreover, Anvil allows multiple annotators to work on the same file, and therefore it is able to measure inter-annotator agreement.

With the help of MM corpora searches, the investigation of the temporal alignment (synchronized co-occurrence, overlap or consecutivity) of gesture and talk has become possible. Similarly to corpus-driven approaches that study *lexical bundles* (multi-word sequences) (Biber 2010: 170–172), some of the MM corpus researches are inspired by the notion of *semiotic bundles* (Arzarello & al. 2005) where modelling language production includes the manipulation of resources as well as gesture and talk. Some functional annotation schemes (Allwood & al. 2007) try to code the meaning relations between gestures and co-occurring speech in a systematic way, and label communicative events according to the alignment of speech and gesture. Gestures often co-occur with speech;

[6] ANVIL is freely available at: http://www.anvil-software.org/

however, their discursive functions are not always identical. The basic functions of the gestures and speech either '*overlap'* or are '*disjunct'*, and sometimes synchronous verbalisations and gestures may be more '*specific'* than the other sign at a given timestamp in the annotation (Evans & al. 2001: 316). Frequency evidence (of any sequential linguistic pattern and co-occurring nonverbal phenomena) found in corpora supports the application of statistical methods in language analysis and modelling. The huge amount of synchronized data enable the practical and fruitful use of such advanced statistical methods as factor analysis or multidimensional analysis in order to uncover the prototypical features that simultaneously occur in certain communicative acts. Therefore, these methods contribute to the solution of a challenging task in dialog modelling and dialog management, the automatic identification of dialog structure and communicative act types.

Gesture coding schemes

Although cross-cultural and personal differences occur in production and interpretation of nonverbal behaviours, owing to universal traits, evolutionary heritages and developmental features, there are essentially universal modes of conveying communicative information using the language of the body and face (Norenzayan and Heine 2005). At the same time, there are cross-cultural, gender-based and personal differences which are further complicated by their actual context dependency as well as asymmetries between interlocutors (Feldman-Barrett & al 2007, Ramsey & al 2005). Due to these complications, most gesture annotation schemes only describe the size, trajectory and direction of movements that gestures are comprised of. Some of them are restricted to the analysis of only one large component of human nonverbal expressions according to kinesic properties, such as the detailed analysis of face by the Facial Action Unit Coding System (FACS) (Ekman & al. 2002).

Besides FACS, another well-known and widely used standard for the coding of nonverbal behaviour is Behavior Markup Language (BML). It has been developed in the SAIBA project, and its greatest advantage is that it is tool- and domain-independent. BML is an XML-based language that can be embedded in a larger XML message or document simply by starting a <bml> block and filling it with behaviours that should be realized by

an animated agent. All BML behaviours need to belong to a behaviour block. A behaviour block is formed by placing one or more BML behaviour elements inside a top-level <bml> element.

> "This block coordinates speech, gesture, gaze, head and body movement by including a set of corresponding behaviour elements inside a single <bml> element. Other possible behaviour elements include torso, face, legs, lips and a wait behaviour. Every behaviour is divided into six animation phases. Each phase is bounded by a *sync-point* that carries the name of the motion transition it represents. The seven sync-points are: *start*, *ready*, *stroke-start*, *stroke*, *stroke-end*, *relax* and *end.*" (Vilhjalmsson & al. 2007: 101)

Figure 2.1 below depicts a representation of partitioning of the continuous flow of one modality (movement) of an action.

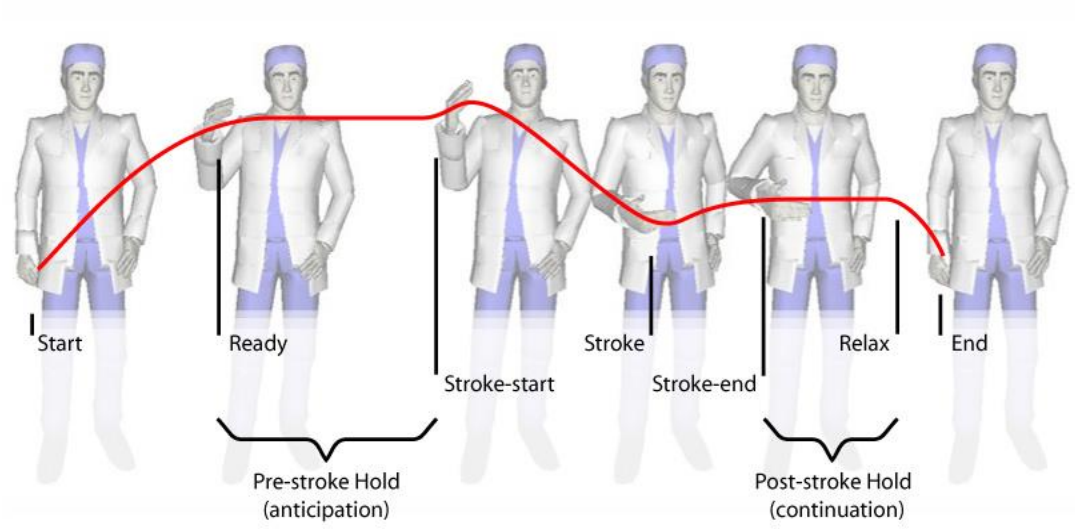

Figure 2.1 *Behavior Synch Points*

(source: http://wiki.mindmakers.org/projects:bml:main)

BML defines behaviour as a token of an action on a single modality. I would like to highlight the following key points of the system that are most relevant to the segmentation of communicative events:

- behaviours are partitioned by different synchronisation points
- the duration of a phase can be zero
- coordination structures arise via alignment of synchronisation points in EACH of available modalities
- sequencing is specified by temporal ordering constraints: before and after
- coordination is proactive and reactive as well (cf. Shaw 2001). For instance, catching a ball or shaking hands have different event-structure (Hodges 2007)

Accordingly, my analysis also considers the performance of gestures over time, that is, the synch points (in BML's terminology) in gesture production as well as its temporal development. During corpus queries, I also consider the temporal ordering and sequencing of communicative events; therefore, I use queries involving before and after constraints.

Another movement-based annotation scheme comes from McNeill (1992) who labels a variety of manual gestures as well besides the facial expressions and head movements.

All the schemes outlined above, however, do not integrate talk and nonverbal behaviour. We can also find examples of annotation schemes among multimodal corpora which try to code the meaning relations between gestures and co-occurring speech in a systematic way. For instance, Ekman & Friesen (1981) argue that there are two major types of conveying affective information: acts and still positions. Acts are intentional movements that provide information both about the nature of emotions and about their intensity, while still positions provide information about the intensity of emotion and sometimes about gross affective state (e.g. a pleasant versus an unpleasant experience). Ekman & Friesen's earlier taxonomy of gestures (1969) could still be successfully used in the annotation of multimodal interactions since it classifies five categories of nonverbal communicative behaviours which are useful in multimodal interaction modelling as well: emblems, illustrators, regulators, affect displays and adaptors. Emblems are culture specific, but due to their displaced nature they can easily be defined verbally (so to say, they have a lexicon). Emblems include displaced hand-movements, for instance, the thumbs-up sign. Illustrators are often involved in ostensive specification, context selection and specification in pointing and directing acts (by moving the gaze direction or fingers). Affect displays are basically facial expressions that tend to be seen as universal

since the categorical perception of faces displaying basic emotions are universal. On the other hand, the categorical perception of secondary emotions is parametrical between cultures. Similarly, regulators also tend to be considered universal. Regulators involve the movements of eyes and eyebrows, head nods and posture changes, usually performed without conscious control. Also, adaptors are casual and unintentional movements (e.g. touch motion types, head-scratching). They are rarely communicative but highly informative about the affective states. Moreover, Ekman & Friesen (1969, 1981) distinguish communicative and informative behaviours based on the communicative intentions of agents. This distinction is also useful as because it is a crucial point to recognise the transitions between *intentional* and *non-intentional movements* (e.g. the difference between a real gesture and an accidental movement). Enabling this distinction is a real challenge in the modelling of interaction because even following a detailed system of distinguishing criteria, subjectivity in interpretation can never be entirely excluded from annotation and analysis. Németh T. (2004) and Csibra (2010) provide clues to solving this challenge, claiming that intentional communicative gestures are *ostensive*, and humans (even infants) are sensitive to perceive them. Ostensive signals mark two things: (1) the sender of the signal has the intention to make explicit his informative intention as well as (2) who the sender addresses with his message and communivative intention. Eye contact plays a major role in signalling both these things. Therefore, the annotation of the direction of the gaze of the speakers is of crucial importance in my multimodal analysis of interaction.

The video annotation of the HuComTech corpus used in this dissertation (shown in Table 2.1) follows the MUMIN (A Nordic Network for MUltiModal INterfaces) scheme (Alwood & al 2007) in terms of distinguishing three different levels within video annotation: physical, functional and basic levels. The basic level contains the basic abstract rules of conversation, such as starting or ending speaking or gesturing. The physical level includes the description of different types of gestures, including the movement of the head, shoulders, hands, etc. The highest level is the functional level that includes interpreted facial expressions as emotions (similar to Ekman & Friesen's (1981) affect displays), iconic gestures (similar to Ekman & Friesen's illustrators) emblems (same category as in Ekman & Friesen 1981); therefore, it is the most subjective component of the annotation.

Level	Group	Event	Attribute
Basic	Communication	start, end	begin, end
Physical	Facial expression	natural, happy, surprise, sad, recall, tense	begin, end, intensity
	Gaze	blink, orientation (up, down, left, etc.)	begin, end, intensity
	Eyebrows	up, scowl	begin, end, side
	Head movement	nod, shake, turn, sideways, etc.	begin, end, orientation –
	Hand shape	open, half-open, fist, index-out, thumb-out, spread	begin, end, side
	Touch motion	tap, scratch	begin, end, touched part of body
	Posture	upright, lean, rotate, crossing arm, holding head, shoulder up	begin, end, orientation –
	Deictic	addressee, self, shape, object	begin, end, side
Functional	Emotions	natural, happy, surprise, sad, recall, tense	begin, end, intensity
	Emblems	attention, agree, disagree, refusal, doubt, numbers, etc.	begin, end

Table 2.1 *The video annotation scheme of the HuComTech corpus*

Concerning the terminology in my dissertation I consider any spontaneous body (hand, head, gaze) movement and facial expression as a gesture if it occurs during conversation and if it is communicative, i.e. it expresses the attitudes of the speaker, depicts aspects of the topic or the structure of the conversation or regulates the interaction (e.g. look at the listener and cessation of manual gesturing as signals of the turn-giving intention of the current speaker[7]). Here, the question arises how to distinguish communicative and non-communicative gestures. Ivaskó (2011) gives clues to

[7] cf. Abuczki 2011, Abuczki 2012a

recognizing ostension in the HuComTech corpus and argues that only those signals become salient and noticeable which are created in a way to differ from other stimuli in their environment. Their salient difference draws attention to the fact that they must carry relevant information that might be important for the addressee. In this sense, each speaker in the corpus has a certain default state and natural posture typical of him/her which is modified as a result of stimuli and/or the influences of other speakers. Perceivable diverging from this default state of the face and the body is considered a communicative gesture. Similarly to the concept of Relevance Theory (Sperber & Wilson 1986/1995), we devote effort to process only the predictably relevant pieces of information in interaction. In the case of physical stimuli, we sometimes make these efforts without any intentions. It must be noted here that yawning, false starts, humming or blushing, even though they are performed without communicative intention, can be considered communicative when they reflect the bored or confused states of the speaker. On the other hand, the movement of taking out one's phone when it rings is not communicative.

None of the annotated gestures (in the annotation of the HuComTech corpus) are accidental, unnecessary or redundant as each of them has semantic value and usually form a semantic unit with the accompanying speech segment. Even if it a gesture is only a by-product of the speech production of the speaker, it is for the benefit of the hearer to process the utterance easier; therefore, it is also communicative.

Examples of multimodal corpora

This section aims at briefly describing a couple of examples of MM corpora (SmartKom and AMI) to represent the variety of approaches and aims involved in structuring MM corpora.

SmartKom is one of the first corpora that combines the analysis of acoustic, visual and tactile modalities. The SmartKom corpus was built as part of the SmartKom project in Germany with the goal to develop an intelligent computer-user interface allowing for more natural interaction for users. It is a task-oriented corpus since that data were gathered and annotated having specific aims and has therefore a limited re-usability for other purposes (Schiel & al. 2002). The data were gathered using so called Wizard-of-Oz

experiments. In this experiment, participants were asked to work on a specific task while cooperating with the system. The subjects thought that they were really interacting with an existing system, but in reality the system was simulated by two humans from another room. 96 different users were recorded across 172 sessions of 4.5 minutes each. In each Wizard-of-Oz session, spontaneous speech, facial expressions and gestures of the subjects were recorded and later annotated. The language of communication was German in all recorded sessions (Steininger & al. 2002). This corpus is available for academic use only through the META-SHARE website[8]. META-SHARE is an international organization which builds a multi-layer infrastructure and aims at providing an open, distributed, secure, and interoperable infrastructure for the language technology domain.

The Augmented Multi-party Interaction (or AMI) Corpus is a large MM corpus, involving 100 hours of meetings. The corpus focuses on language use in a single setting, in a meeting room, so it is contextually specific, as it only features extracts from one specific discourse context (i.e. meeting discourse) (Carletta & al. 2005). While some of the meetings in this 100-hour long corpus were naturally occurring (35 hours), the majority (65 hours) was elicited using a scenario in which groups of three to four participants played different roles as employees working on a design project in a design team. The data was collected in three smart meeting rooms. In each room 4 cameras, 24 microphones and special tools to capture handwriting and slides were used (McCowan & al. 2005). The language of communication in all meetings was English, while most of the participants were non-native English speakers. Due to this fact, a higher degree of variability in speech patterns can be observed in this corpus compared to other corpora. The data has been annotated at a number of levels covering various verbal and nonverbal features. However, the annotated dimensions as well as the implicit metadata for the corpus are difficult to exploit by NLP tools due to their particular coding schemes.

2.1.3 Limitations of multimodal corpora

This section aims at outlining some more general limitations in multimodal corpus research. First, each corpus with its design and annotation scheme serves specific purposes. Therefore, it does not cover all elements and types of communicative events.

[8] META-SHARE website: http://www.meta-net.eu/meta-share

Most gesture annotation schemes only describe the size, trajectory and direction of movements that gestures are comprised of. For instance, the annotation of the nonverbal-visual components of interaction in both AMI and SmartKom is somewhat incomplete and inapplicable for an in-depth analysis of interpersonal communication since they both predominantly aim at capturing movements and fail to label the visual features with their meanings or functions in the particular discourse context. For instance, AMI annotates movements of the head and the hands of the participants and SmartKom annotates head gestures based on three morphological categories, head rotation, head incline forward/backward, head incline sideward.

Some of the gesture coding schemes are restricted to the analysis of only one large component of human nonverbal expressions according to kinesic properties, such as the detailed analysis of face by the Facial Action Coding System (FACS scheme) (Ekman & al. 2002). Another movement-based annotation scheme comes from McNeill (1992) who labels a variety of manual gestures as well besides the facial expressions and head movements, but it still fails to integrate talk and gesticulation in a truly multimodal framework. Second, the relatively small size of all corpora (tens or hundreds of hours of annotated interaction) makes the observation of all sorts of linguistic phenomena in a natural proportion impossible (Knight 2009: 99–100). Third, participants are typically seated, which highly restricts their movements and posture changes. Fourth, the number and positioning of cameras restrict the size of analyzable environment related to each speaker. Frequently, each of the speakers is recorded by different cameras, which makes it impossible to investigate such phenomenon as joint attention or eye contact. Synchronization of the cameras and their joint streaming in annotation software such as ELAN (Brugman & Russel 2004: 2065–2068) can be an acceptable solution in these cases. Last but not least, I must mention that annotation (for instance, pragmatic annotation) involves interpretation to some extent, so it is never completely free of intuitions. However, this problem can be handled if the annotation guidelines are consistently followed and if annotators regularly attend meetings where ambiguous cases can be discussed.

2.1.4 Standardization efforts

In the previous section an overview of various MM corpora was provided. These three MM corpora were different in their approaches and also annotation schemes. In each one of them, different nonverbal behaviours were selected and annotated using different labels defined in specific ways serving their own purpose of study. Therefore, in designing a MM corpus there are no conventionalized prescriptions that determine which behaviours to mark up, how to describe these behaviours, which labels to use in the annotation scheme and how to integrate everything in the corpus database to cover all multimodal elements of discourse. As a result, generalizing standards for codification of visual and spoken data should be considered as a priority in multimodal research (Knight 2009). Recently, many researchers and research teams have started to lay the foundations for designing a standardized scheme for annotating various features of spoken utterances, gaze movement, facial expressions, gestures, body posture and combination of any of these features. They have the aim to integrate these aspects to develop re-usable and international standards for investigating language and gesture-in-use in user-friendly environments. The outcome of such international interdisciplinary initiations and cooperations are for instance the META-SHARE, the HUMAINE[9] (Human-Machine Interaction Network on Emotion) and the SEMAINE[10] (The Sensitive Agent) projects. The HUMAINE project developed the XML-coded EARL (Emotion Annotation and Representation Language) scheme[11] to annotate the dimensions and intensity of emotions. However, it can only be used with the Anvil software. Its restricted usability highlights the necessity of tool- and domain-independent annotation schemes.

As a next good example for the standardization of nonverbal behaviour, BML (described in detail in 2.1.2) is a widely used method to unify the key interfaces in multimodal human behaviour generation processes. BML has been proposed as a standard XML interface between the level of behavioural planning and behaviour realization in the SAIBA framework for multimodal behaviour generation in virtual humans (Vilhjalmsson & al. 2007).

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9 HUMAINE: http://emotion-research.net/projects/humaine/aboutHUMAINE

10 SEMAINE: http://www.semaine-project.eu/

11 EARL-scheme: http://emotion-research.net/projects/humaine/earl

As a result of the confusion caused by the variety of discourse coding schemes available, an ISO standard has been developed to standardize annotation procedure and facilitate the inter-operability of annotated language resources. ISO standard 24617-2 for dialogue acts developed in recent years is an example of a widely accepted international standard (Bunt & al. 2012).

General-purpose functions **(dialog acts)**	**Information-seeking functions**: *propositional questions, check questions, set questions and choice questions*
	Information-providing functions: *inform, agreement, disagreement, answer, confirm and disconfirm*
	Commissive functions: *promise and offer*
	Directive functions: *instruct/command and request*
Dimension-specific functions	**Auto-feedback functions**: *positive and negative*
	Allo-feedback functions: *positive and negative*
	Time management functions: *stalling and pausing*
	Turn management functions: *turn accept, turn assign, turn grab, turn keep, turn release and turn take*
	Discourse structuring functions: *interaction structuring and opening*
	Own and partner communication management functions: *completion, correct misspeaking, signal speaking error, retraction and self correction*
	Social obligation management functions: *initial greeting, return greeting, initial self introduction, return self introduction, apology, accept apology, thanking, accept thanking, initial goodbye and return goodbye*

Table 2.2 *ISO standard for dialogue act annotation scheme*

The ISO standard (presented inTable 2.2) is an application-independent dialogue act annotation scheme that is both empirically and theoretically well founded. It covers typed, spoken, and multimodal dialogue, and it can be effectively used by both human annotators and automatic annotation methods. In designing this ISO standard for

dialogue act annotation, most concepts were applied from the DIT++ taxonomy of dialogue acts[12].

The taxonomy of functions proposed by Bunt & al. (2012) influenced the grounding of my annotation system for DM functions as well. My analytic taxonomy will also consider the illocutionary force of the utterances, although I coin this tier *communicative acts* rather than *dialogue acts* since I will consider *communicative* information coming from all modalities (not only from speech as suggested by the term dialog but from prosody and nonverbal-visual behaviour as well). My annotation scheme will also enable tagging the role of DMs in discourse structuring and information management. I will adapt the term *own speech management functions* to refer to reformulation, giving example and lexical search (all supporting own communication).

To conclude, although I am aware of the existing shortcomings of MM corpora, I believe there is no better alternative resource available for analyzing spontaneous language-in-use than a MM corpus, since current corpus linguistics provides us various methodologies to process and analyse interaction in its entire multimodal nature.

[12] DIT++ taxonomy is available at http://dit.uvt.nl/

2.2 Discourse markers

The following sections (2.2.1 - 2.2.5) on DM studies aim at answering the following two sets of questions: (1) In what ways are the functions of DMs categorized by different authors and their discourse models? (2) How is the multifunctionality of DMs explained in different theories?

Sections 2.2.5 and 2.2.6 attempts to explain what processes account for the development of the new functions and the changes in the meaning of DMs and the selected lexical items (*mondjuk, ugye,* and *amúgy*) in particular. In section 2.2.6 traces of their supposed pragmaticalization process are described based on historical language corpora and etymology dictionaries. In 2.2.6 and 2.2.7 I try to uncover in what order their present pragmatic meanings evolved, and what stage of the pragmaticalization process they are at currently.

My approach to DMs is ultimately described in section 2.2.7 as a *modified* version of the *core/periphery approach* proposed by Bell (1998: 518). My theoretical assumptions, grounded in the **core/periphery approach to DMs** (Bell 1998), concerning the functional spectra of DMs can be summarised as follows:

- The smaller/narrower functional spectrum a DM has, the more conceptual meaning the DM has and the stronger its core meaning is. The various functions of a conceptually strong DM, such as *amúgy (~'otherwise'),* are difficult to distinguish and disambiguate.
- The larger/wider functional spectrum a DM has, the conceptually weaker it is and the less strong its core meaning is (it has procedural rather than conceptual meaning).

2.2.1 Definitions and properties of discourse markers

Pragma-linguistic items with procedural meaning have been researched from a variety of approaches depending on the interest of individual researchers and research groups. Among various perspectives, functional ones (Thompson 1992) dominate the literature, ranging from conversation analysis to relevance theory. The heterogeneous

approach towards them is reflected in the various different names of this fuzzy category as well. They are referred to as *discourse markers* (Schiffrin 1987, Schiffrin 2006, Jucker & Ziv 1998), *pragmatic markers* (Aijmer & Simon-Vandenbergen 2006, Brinton 1996), *pragmatic connectives* (van Dijk 1979), *discourse particles* (Hansen 1998, Aijmer 2002) and *pragmatic particles* (Östman 1995).

Discourse markers (DMs) are commonly defined as "sequentially dependent elements which bracket units of talk" (Schiffrin 1987: 31), or metalinguistic items that provide information about the segmentation and operation of a discourse (Fraser 1999). In spite of this often quoted narrow definition and the fact that Fraser (1999, 2009) identifies them as a subclass of *pragmatic markers*, the term *discourse marker* seems to be the broadest and the most generally used now to cover all linguistic or even non-linguistic (Schiffrin 1987) items that indicate discourse structure or express the attitudes of the speaker towards the topic or the hearer. Schiffrin (1987) describes their role as "providing contextual coordinates for ongoing talk" that indicate for the hearer how an utterance is to be interpreted. However, she notes that DMs only 'display' discourse structure but it is not DMs that create them. Fraser (1990) adds that they even "signal a sequential relationship" between discourse units, which means that they give instructions to the hearer how to interpret the role and function of the DM and its host unit in the actual discourse context. In other words, they signal the functional organization of discourse, the kinds of relations a speaker perceives between different parts of the discourse. Fraser (1999) suggests that DMs link two sentences or clauses together. Redeker (2006) highlights that DMs are "markers of discourse transitions", that is, they tend to occur at boundaries. Furthermore, she (Redeker 2006) proposes that DMs connect not only adjacent clauses and sentences, but utterances and their contexts as well. Moreover, I argue that coherence relations expressed by DMs can even hold between utterances or topical units further apart from each other. Similarly, Lenk (1998) distinguishes between local DMs (marking utterance-level relations) and global DMs (marking topic relations). Global discourse markers (GDMs) may establish connections between different types of topic: they may refer back to a prior topic (retrospective GDM) or they might signal to the hearer that the speaker wants to insert something and they indicate what kind of contribution is likely to follow (prospective GDM). Following yet another terminology, Redeker (2006) talks about coherence-oriented marker uses,

referred to as *discourse operators*, the definition of which is similar to discourse *connectives* in Relevance Theory (Blakemore 1992).

Besides describing Anglo-Saxon DM terminologies, it is necessary to discuss the relevant terminology of Hungarian linguistics as well since mostly Hungarian DMs are investigated in this dissertation. Just like in the Anglo-Saxon literature, depending on the theoretical approaches taken, multiple terms and descriptions refer to more or less the same lexical items in the system of Hungarian grammar as well. Among the terms used, we can find *modal particles* (Kiefer 1988), *tinting particles* (Keszler 1995, Péteri 2001), *pragmatic connectives* (Németh T. 1996b), *discourse particles* (Gyuris 2008a) and discourse markers (Dér 2005, Dömötör 2008a, Dömötör 2008b, Schirm 2009a, Schirm 2011, Abuczki 2013b, Abuczki 2014). Therefore, the relationship among the classes of *DMs, particles* and *connectives* needs to be clarified[13].

The theories using the terms *discourse marker, pragmatic connective* and *tinting particle* all emphasize the functional properties of the items, while the models coining the terms *modal particle* and *discourse particle* focus on the formal, semantic features of the items. In spite of the great number of different terms used, it is a generally accepted view that the class of particles or DMs cannot be defined in terms of purely syntactic properties. Zwicky claims that *particles* can be defined in a negative way, particles do not represent a particular syntactic class; instead, they are composed of items that ar left begind and out of syntactic/part-of-speech classification (Zwicky 1985: 284). The category of *particles* in Hungarian was first delimited by Keszler (1995). The term *particle* in Hungarian grammar typically refers to short lexical elements that are syntactically independent and cannot be affixed or conjugated (Keszler 1995, Kugler 1998). Kugler (1998) distinguishes two classes of particles: (1) *propositional particles* that have an impact on the propositional content of the sentence, and (2) *modal-pragmatic particles* that express the speaker's attitude. Within modal--pragmatic particles Kugler distinguishes *tinting particles* and *particles that indicate the mood of the sentence* (e.g. ugye ~'is that so?'). Péteri argues that „given that Hungarian modal particles are difficult to delimit by way of formal grammatical criteria, one possible approach to their

[13] I am grateful for Dr. Schirm Anita for drawing my attention to the necessity of the clarification of the relationship of different terminologies.

delimitation is the study of the process of their development" (2001: 101). I find the use of the term *particle* problematic because although it is a predominantly grammatical category, the members of the category are not of the same part-of-speech. Therefore, I prefer using the term *discourse marker* because that category (as defined by Schiffrin 1987) is defined in a functional way (instead od using syntactic terms), and it is more inclusive than the grammatical category of *particles* since the class of DMs includes longer, multi-word expressions and nonverbal cues (such as interjections or discourse structuring gestures) as well which are also in the focus of my methodological framework for the systematic analysis of DMs.

Besides analysing the *DM-particle* interface, the relation of *DMs* and *connectives* is also worth mentioning. Similarly to *particles*, the class of *connectives* is also a grammatical category, a part of speech; that is why this term is also problematic to use in order to refer to DMs. As mentioned before, DMs constitute a functional, pragmatic category instead of a particular part of speech, and its members originate from various word classes such as *connectives, adverbs, particles, modifiers, demonstratives* and *verbs*. Schirm (2011:18) draws attention to the fact that within the class of DMs, DMs with *connective* origins are especially problematic as it is extremely difficult to distinguish the connective uses and pragmatic DM uses of the same lexical item since both DMs and connectives perform a connecting role. The difference between the two is that while *connectives* are used to mark the relationship between clauses and sentences (Rácz 1985), *DMs* make explicit the type of relationship between larges discourse units as well as the attitude of the speaker (or writer) towards either the discourse topic or the interlocutor. On the other hand, according to Norrick (2001), *pragmatic connectives* bracket larger units of speech, turns or units within turns, and indicate frame (e.g. turn), interactional meanings (e.g. turn closing) and modal meanings (e.g. disagreement). Combining these approaches, in the taxonomy of Cuenca (2006), *pragmatic connectives* form a subcategory of *DMs* and described as cohesive devices marking the relations between speech acts.

As can be read above, although there is general agreement among researchers dealing with DMs and DM-like elements about the primary function of DMs (i.e. primarily contribution to discourse structuring and secondarily attitude marking), they disagree about what (levels) of units of speech/what kind of discourse segments they connect

(clauses, utterances, speech acts, topical units, or all these four), and which elements should be involved and excluded from the group of discourse markers. In order to decide if a lexical item or expression is a DM or not, one needs to know the defining properties of a DM. In what follows I present the properties that I analyse, originally proposed by Brinton (1996: 33–35) and recategorized by Jucker and Ziv (1998: 3):

"Phonological and lexical features:

a) they are short and phonologically reduced;

b) they form a separate tone group (separated by pauses or commas);

c) they are marginal forms and hence difficult to place within a traditional word class.

Syntactic features:

d) they are restricted to sentence-initial position;

e) they occur outside the syntactic structure or they are only loosely attached to it;

f) they are optional.

Semantic feature:

g) they have little or no propositional meaning.

Functional feature:

h) they are multifunctional, operating on several linguistic levels simultaneously.

Sociolinguistic and stylistic features:

i) they are features of oral rather than written discourse and are associated with informality;

j) they appear with high frequency;

k) they are stylistically stigmatised;

l) they are gender specific and more typical of women's speech."

(Jucker and Ziv 1998: 3; Brinton 1996: 33–35, cf. Furkó 2007, Hölker 1988; Östman 1995)

To sum up the properties DMs display, Furkó (2007, 2011) reviewing the literature on discourse markers and pragmatic markers proposed the following list of defining

formal, functional and stylistic features as criteria for DM status and finally organized them into a network model (described in section 2.2.7): (1) non-propositionality, (2) optionality, (3) context-dependence, (4) multifunctionality, (5) sequentiality, (6) weak clause association, (7) variable scope, (8) procedural meaning – non-compositionality, (9) high frequency, (10) orality.

Most DM researchers emphasize optionality, syntactical separability (Brinton 1996:34) and multicategoricality as DMs' formal-syntactic traits. Jucker & Ziv (1998:3) claims that they tend to be used outside syntactic structure, independent of any units; therefore, removing a DM from its initial position leaves sentence structure intact. Fraser (1990) emphasizes their quasi-initiality, i.e. that they tend to occur utterance-initially. According to Furkó (2012:42), when DMs are placed sentence- or clause-finally, they typically encode their core meaning which is typical of their earlier state; that is, different meanings are activated in different positions. Joint synchronic and diachronic research can help to identify the core meanings of items.

Among their semantic-pragmatic characteristics, Furkó (2011, 2012) emphasizes their non-propositional and procedural meaning. It is a widely accepted view that some DMs do not have an effect on the truth conditions of the sentence; that is, the propositional meaning of the host unit is not affected by them. They are also considered to have a procedural, non-conceptual meaning (Fraser 1999: 944) and they function at textual or interpersonal levels (Furkó 2011: 42–43). The two types of meaning (conceptual and procedural) differ in the sense that conceptual linguistic items have referential meaning; that is, speakers create representations during their interpretation. On the other hand, items having procedural meaning do not have representations, rather, they operate on the representations of conceptual items (Rouchota 1998, quoted in Schirm 2011: 13). The following two examples (2.1 and 2.2) illustrate the differences between these two types of meaning:

example 2.1

Hogy a viszonyt rendezni kell, azt nem mi **mondjuk**, hanem Brüsszelben mondják – mi azt **mondjuk**, hogy a viszonyt rendezni akarjuk. Alapszerződést is szeretnénk kötni, valóban, március 20-áig, ha lehet. (*The idea that this relationship has to be consolidated is not what we **claim**, Brussels says so. What we **say** is that we want to*

settle out relations. We really wish to make a contract, until 20 March, if it is possible.) (Hungarian National Corpus, Hungarian news press)

example 2.2

szeretek a belvárosban élni %o **mondjuk** elég nagy a szmog. (*I like living in the city,* ***DM_mondjuk*** *the air is polluted*.) (hucomtech 017, informal)

The meaning of *mondjuk* in the first utterance (example 2.1) is conceptual, it can be analysed as a verb. On the other hand, *mondjuk* encodes procedural meaning in example 2.2, connecting two utterances. *Mondjuk* in example 2.1 is not a DM, it functions as a verb there, while in example 2.2 *mondjuk* is used as a DM, and by using it, the speaker makes explicit a constrastive relation between the connected segments. The simultaneously performed nonverbal expressions such as affect displays, raising eyebrows and averted gaze also express this function. The utterance would have a different or unclear implicature without *mondjuk*. Nevertheless, some of the DMs used in spoken language were considered fillers in traditional descriptive linguistics (Implom 1960). They were considered as meaningless, functionless, lacking the ability to add subtlety to content of the sentences (cf. Schirm 2011: 83–84, Dér 2010). However, as the above examples suggest, DM *mondjuk*, for instance, has connecting and contrasting functions, and omitting it would change the meaning of the utterances or would make its implicature ambiguous.

The prosodic independence of DMs is also commonly referred to in the DM literature. Prosodic independence means that they create separate intonational units and are marked by comma intonation (cf. Fraser 1990, Furkó 2011: 44). It is one of my aims to test this hypothesis in the material of HuComTech corpus.

It is also worth mentioning to emphasize the necessity of investigating DMs that Weydt (2006: 205–217) raised the question why speakers use discourse particles (*Abtönungspartikeln* in his terminology) and carried out an experiment to find a satisfactory answer. The informants in his experiment were asked to judge two almost identical dialogues. The difference between the two dialogues was that dialogue A contained rather a lot of discourse markers (*Abtönungspartikeln*); on the contrary, all DMs had been removed from dialogue B. The respondents' task was to score the

dialogues for the following features*: natural, rejecting, warm, wooden, smooth, authentic, difficult to make contact with,* and *friendly.* His results received clearly suggest that the use of DMs makes our utterances sound more authentic, natural, cooperative and friendly, as well as easier to follow and understand. Therefore, involving the production of DMs by interactive voice response systems would definitely increase the level of their naturalness.

2.2.2 Theoretical approaches to the study of discourse markers

Over the past few decades DMs have been researched from a variety of perspectives and theoretical frameworks - reflecting on various properties of DMs - such as Relevance Theory, Rhetorical Structure Theory, Construction Grammar, Coherence-based studies, Interactional Sociolinguistics, Conversation Analysis, Speech Act Theory, Grammaticalization theories, Natural Semantic Metalanguage, Computational Pragmatics, etc. Among the varieties, functional, cognitive and corpus-based approaches prevail in the literature of DMs.

In the framework of Conversation Analysis (Sacks 1992), DMs are usually described in relation to discourse structure, as they signal turn-closing, turn-taking, topic change or mark a response as dispreferred. DMs facilitate communication (the understanding of each other) since they provide contextual co-ordinates of talk (Schiffrin 1987), may express the cognitive orientation of the speaker, guide the hearer in interpretation of the discourse; therefore, they minimize discourse organizational problems.

From a cognitive perspective, Relevance Theory (Sperber & Wilson 1986/1995) draws attention to the role of DMs facilitating the hearer's task of decoding the message (Blakemore 1992, Jucker 1993). In this view, DMs contribute to "relevance understanding by reducing the processing effort needed by the hearer to reach the intended interpretation" (Aijmer and Simon-Vandenbergen 2009: 16). In the framework of *hearer-oriented models* (focusing on interpretation), the role of DMs is to provide instructions to the hearer on how to integrate the DMs' host utterances into a developing mental model of an optimally coherent discourse. Although Redeker (1991) calls these pragma-linguistic items *discourse operators*, she also defines them in a similar way, in a *hearer-oriented coherence model:* "word[s] or phrase[s] that [are] uttered with the primary function of

bringing the listener's attention a particular kind of linkage of the upcoming utterance with the immediate discourse context" (Redeker 1991: 1170). From a cognitive perspective, DMs play an important role with regard to the processes of pragmatic inferences, in other words, in guiding hearers in their efforts to find out what is not explicitly stated but is implied by a given utterance. Because of DMs' potential to restrain the number of possible interpretations, a piece of discourse without discourse markers is often more ambiguous than intended. In Schiffrin's view of multilayered interaction, DMs create contextual coordinates that indicate for the hearer how an utterance is to be interpreted (1987).

On the other hand, in the framework of *speaker-oriented models* of communication, DMs – which Östman calls pragmatic particles – implicitly convey the speaker's attitudes and emotions (Östman 1995). Similarly, in Schourup's view, these items are involved with a disclosure of covert thinking (1985); therefore, DMs act as windows to the mind to mirror cognitive mechanisms underlying linguistic expressions. However, Schourup ignores discourse-organizational functions that we find equally salient uses of DMs.

I will attempt to combine both speaker-oriented and hearer-oriented views in order to entirely map the functional spectra of the analysed DMs.

2.2.3 Models of discourse structure and discourse markers

Since linguistic interest in the Anglo-Saxon world has recently shifted to functional approaches to language; it is not surprising that most current research focuses on functions DMs (as a functional group) serve in discourse. The functions of DMs were studied in detail in a great number of languages from various perspectives, for instance, in French (Hansen 1998), Italian (Kendon 1995), Norwegian (Vaskó 2012) and Solf Swedish (Östman 1986). In what follows I will narrow down the description of the range of theoretical approaches to DMs and will only elaborate on a few influential models of discourse structure as well as major structural, computational linguistic, computational pragmatic and functional approaches to the study of DMs. In this section, I will briefly outline various models of discourse structure relevant to the study of DMs: (1) early but influential computational pragmatic models proposed by Cohen (1984), Reichman (1985), Grosz & Sidner (1986), Hovy (1995); and (2) the discourse-pragmatic models of Schiffrin

(1987, 2006), Redeker (1990, 1991), Fraser (1999), Brinton (1996, 2008), Erman (2001), and Anderson (2001); as well as a computational pragmatic model proposed by Petukhova & Bunt (2009).

Cohen (1984) justifies the necessity of the study of *clue words* (one of the synonyms of DM in computational linguistics, computational pragmatics and dialog modelling frameworks) in discourse processing from the perspective of the listener. His model suggests that *clue words* decrease the effort of inferencing in listeners since they mark "transmissions which would be incoherent in the absence of these clues" (251). His classification of *clue words* is drawn from the work of Quirk & al. (1972) distinguishing different types of connectives. His taxonomy involves six relations: (1) parallel (e.g. in addition), (2) inference (e.g. as a result), (3) detail (e.g. in particular), (4) summary (e.g. in sum), (5) reformulation (e.g. in other words), and (6) contrast (e.g. conversely).His interpretation rules reduce processing operations, help specify the type of relation between propositions; therefore, his model was later used in NLP systems in order to increase coherence in discourse.

Grosz & Sidner (1986: 175–204) distinguish *linguistic structure, intentional structure* and *attentional state* of discourse in their model. *Linguistic structure* is built of utterances linked by hierarchical relations. *Intentional structure* defines the purposes and intentions of speakers' underling utterances. Finally, *attentional state* is an abstraction of interlocutors' focus of attention. The distinction among these substituents is crucial to account for discourse markers. In their framework, what they call *cue phrases* (similar to DMs) indirectly indicate: "(1) that a change of attention is imminent; (2) whether the change returns to a previous focus space or creates a new one; (3) how the intention is related to other intentions; (4) what precedence relationships, if any, are relevant" (196). They attempt to explain the role of DMs in discourse processing using this model.

Reichman's model of discourse structure (1985) is composed of components he calls *context spaces. Context spaces* are hierarchically organized building blocks of discourse above sentence level. Context spaces serve various *conversational moves*, such as support, interruption, restatement, subargument concession, etc. Using DMs (called *cue words* in her model) is a common way of signalling *conversational moves*. Her computational implementation is also based on encoding *conversational moves,* partly identified by *cue words.* Reichman's model describes twelve types of conversation moves

(whose result is discourse itself) that serve the communicative goals of speakers, and lists a set of discourse markers that express these goals. Using her framework, the Hungarian DMs, *mondjuk* and *ugye* can be considered as signals of *support* conversation moves, while *amúgy* could be seen as to express an *interruption* move which marks a topic shift. Her model, similarly to that of Grosz & Sidner (1986), focus on the planning mechanisms of the speaker, and therefore, it is useful in discourse generation, rather than in interpretation by the listener.

The most influential models of discourse structure is provided by Schiffrin (1987) who argues that conversation consists of five planes:

1. Ideational structure: relationship between ideas and propositions, topic relations
2. Action structure: the way in which speech acts relate to preceding and following intended actions
3. Exchange structure: turns, adjacency pairs (henceforth: APs)
4. Information state: management of knowledge and meta-knowledge
5. Participation framework: speaker-hearer relationship.

Analytically, the distinction of different levels of conversation enables us to classify different functions of DMs according to the conversation level on which they operate.

Furkó (2007, 2012) reviews more recent taxonomies of coherence relations proposed by Schiffrin (1987, 2006), Redeker (1990, 1991), Fraser (1988, 1990, 1999), Erman (2001), and Andersen (2001). I will complement this overview with the inclusion of the frameworks of Hovy (1995) and Petukhova & Bunt (2009). I aim to compare their similarities in the domains presented in Table 2.3. The common denominator among the five taxonomies described in Table 2.3 is that they all distinguish at least three domains of discourse (called by different names under (1), (2), (3) and/or (4)), including ideational, subjective, interpersonal and textual functional categories.

The functions of DMs in different discourse spaces					
	Semantic space	***Pragmatic spaces***			
Furkó 2012	***(1) Ideational space***	***Interactional space***		***(4) Textual space***	***(5) Cognitive space***
		(2) Subjective space	***(3) Inter-personal space***		
Schiffrin 1987, 2006	ideational structure *and, but, or so*	action structure **well, *and, *but*	participation framework *well, I mean*	exchange structure **well, *and, *but*	information state *oh, you know*
Redeker 1990, 2006	ideational structure *then*	rhetorical structure *well, you know*		sequential structure *but, so*	
Fraser 1988, 1990, 1999	message relationship markers *but, despite, however*	discourse activity markers *admittedly, after all*		discourse topic markers *by the way, you see*	
Erman 2001		metalinguistic monitors, e.g. hedges, emphasizers, approximators)	social monitors, interactive markers, turn-takers	text-monitors e.g. repair markers, editing markers	
Andersen 2001		subjectivity (expressed by all DMs)	interactional capacity *you know*	textual capacity *so*	

Table 2.3 *Discourse functions* (source: Furkó 2012: 278–279)

All five of the compared functional taxonomies (in Table 2.3) identify two identical categories: interactional-subjective functions (2) as opposed to textual functions (4). On the one hand, DMs expressing interactional functions play a role in regulating discourse: in expressing the illocutionary force of the utterance, in apportioning the floor smoothly among interlocutors as well as in controlling the thematic organization of discourse. On the other hand, several DMs play a role in signalling textual functions including their role in the sequential structure and exchange structure of the conversation (e.g. by marking reformulation, connection, contrast or summary).

In addition, Schiffrin (1987) separates the *information state* plane of talk as well which is related to the cognitive processes of the speakers and the inferences about their shared knowledge. Similarly to Schiffrin (1987, 2006), Hovy (1995) also separates five domains of discourse: (1) semantic interpropositional relations (identical to ideational structure), (2) goal-oriented functions (based on interpersonal intentions and communicative purposes, just as Schiffrin's action structure), (3) interpersonal (corresponding to participation framework), (4) rhetorical functions (equivalent of Schiffrin's exchange structure), and (5) attentional domain (corresponding to Schiffrin's information state).

In computational pragmatics (which is mostly concerned with the identification of surface cues), DMs are seen as key indicators of discourse structure, and are useful devices for (a) segmenting discourse into meaningful units, and (b) identifying relations between these units (Bunt & Black 2010). Petukhova & Bunt (2009) and Bunt & al (2012) propose a multidimensional semantic model that grasps the interrelated functions of multifunctional DMs in a single framework. They argue that most *cue phrases*[14] simultaneously mark multiple things at a time, e.g. *and* marks sequential structure, addition and the turn-keeping intention of the speaker. They theoretically divide discourse space into four general-purpose functions (which are basically dialog acts) and seven dimension-specific functions. Among dimension-specific functions, they distinguish dialog structuring, the domains of task management, social obligations management, turn management, contact management, social obligations management, own speech management as well as distinct information states (information about the agent's and the dialog partners' processing states). In addition to other widespread functions, they also distinguish several types of *time management* and feedback functions (e.g. *allo-feedback* and *auto-feedback*). Therefore, the taxonomy proposed by Petukhova & Bunt (2009) offers a very detailed description of discourse-pragmatic functions which might provide a good springboard for my qualitative research.

[14] *Cue phrase* is a broad, inclusive term in their understanding, including all kinds of discourse structuring lexical items, such as connectives (e.g. *and, but*) as well.

2.2.4 Previous empirical work on the disambiguation of DMs

Computational studies of dialogue structure attempt to identify discourse functions of DMs based on low-level, machine extracted features such as position, part of speech (POS), pitch movements, intensity changes and temporal features. These features can be extracted either from sound files (e.g. min, max and mean F0 or intensity) or text files (e.g. POS or position). Successful methods usually mix lexical and prosodic approaches. My methodology attempts to complement these models by including the analysis of nonverbal-visual behavioural cues as well.

Before the development of automatic disambiguation applications, a number of studies addressed the issue of distinguishing the propositional and non-propositional variants of the same lexical item, based on the analysis of their different phonological realizations and their context. Hirschberg & Litman (1993) distinguished the *sentential* and *discourse* senses of certain lexical items[15], such as *now, well, okay, say,* and *so*. A lexical item used in sentential sense convey semantic message, while an item in discourse sense carries structural information. They have developed two theoretical models for disambiguation, a *prosodic* and a *textual* model. Their prosodic model is based on the recognition of phonologically independent *intonational phrases* and deaccented segments in utterance-initial position which are both classified as *cue phrases*[16]. This prosodic model is grounded in the observation that DMs typically constitute independent tone units, or are separated from other clauses by 'comma intonation. Their textual model works based on the detection of any punctuation (including commas, full stops and question marks) or a paragraph boundary in the manual transcriptions of the recordings. Their error rate ranges between 14 and 26%, which is not surprising considering the low number of the observed features.

Litman (1996) involves prosodic features and textual features (e.g., intensity and pitch values, POS labels, preceding punctuation symbol) in his model as well, but

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15 Hirschberg & Litman (1993) use the term *cue phrase* to refer to discourse structuring lexical items (including connectives) that link discourse segments and mark semantic relations (e.g. *and, but, now, well, okay,* or *say).*

16 The concept of *cue phrases* is similar to that of DMs in terms of their pragmatic meaning and contribution to discourse meaning.

combines them in a different combination into a decision tree. The higher success rate of this approach has motivated me to experiment with various multimodal features and organize them into a decision tree model.

Lenk (1997) also highlights that DMs often have different phonological patterns than their propositional counterparts. He provides *you know* and *anyway* as examples to illustrate his point. *You know* as a DM is typically less stressed than its counterpart with propositional meaning. In contrast, *anyway* as a DM carries more phonological stress than its counterpart used in conceptual meaning[17]. However, both DM are characterized by so-called comma intonation as opposed to their syntactically dependent propositional counterparts.

Lai (2008) distinguishes the different prosodic cues of the two different uses of *really*: *really* as used as a question as opposed to *really* used as a backchannel. Similarly, the lexical item *ugye (~'is that so?)* also has two major functions which can be distinguished on prosodic grounds: it either marks the interrogative mood of the sentence or it operates as a marker of evidential content in explanatory sequences.

Concerning the prosodic and disambiguation studies of Hungarian lexical items (especially DMs), Markó & Dér (2008) collected the acoustic (e.g. speaker normalized mean F0, duration) and sequential features (e.g. position in the turn and the clause) of the realizations of different uses (syntactic/sentential use and discourse-pragmatic use) of *homophones (így ~'like', meg ~'and', most ~'now', tehát ~'so', úgyhogy ~'so',* and *vagy ~'or')* in order to uncover how language users distinguish different uses of *homophones* during speech perception. Gyarmathy (2012) studied the prosodic parameters (e.g. the duration of the item and the preceding silence) of two uses of *izé: (1) as a replacement of another word* (that can be glossed as *~'thing', 'like', 'whatsit')* and (2) as a *filler* (a marker of disfluency and uncertainty of the speaker during speech planning) (that can be glossed as *~'er', 'well', 'um')*. Both studies were performed on the material of the Hungarian Spoken Language Database ('Beszélt Nyelvi Adatbázis' in Hungarian).

In my attempt to disambiguate the meaning/function of selected DMs, I will analyse similar acoustic and sequential features with the addition of visual markers, based on the material of the HuComTech corpus. Before turning to the description of my empirical

[17] cf. Ferrara (1997)

research, let me briefly overview the major theoretical approaches to the multifunctionality of DMs.

2.2.5 Theoretical approaches to the multifuncionality of DMs

Accounting for the variety of DM uses presents a great challenge. Lexical semantics handles the development of DMs in different meaning models (Lyons 1977, Cruse 2000: 109–114). In what follows I will briefly sum up a few leading DM researchers' views on the multifunctional nature of DMs. Three major approaches can be found in the DM literature to explain their variable meanings: (1) the *homonymy* (also-called *maximalist)* approach; (2) the *monosemy* (also-called *minimalist*) approach; (3) the *polysemy* approach.

The *homonymy* or *maximalist* view can be placed at one end of the theoretical spectrum which is the least popular and least accepted view of the three. The *homonymy* approach argues that if a given form has a number of seemingly different uses, these various senses represent separate individual lexical items without any relationship between their interpretations.

The *monosemy* or *minimalist* approach can be placed at the opposite end of the theoretical spectrum. Meaning minimalism attempts to identify an invariant, schematic *core* meaning of an item from which all uses of a given item can be derived. Variations in the function and use of a given DM arise from its interaction with the context in which it appears. (E.g. Fraser (2006) and Thanh (2006) take a monosemy-based approach.)

Proponents of the *polysemy* view assume that the various interpretations of a single form must be related in a way. Hansen (2006) argues as follows:

> "... items which in at least some contexts fulfil a discourse marking function can have more than one meaning on the semantic level, but that these meanings may be related in a motivated – if not necessarily fully predictable – way, such that we may describe as many as possible of the functionally distinct examples of a given homophone/homograph as instantiations of a single, polysemous, lexical item." (Hansen 2006: 29)

The difference among the different variants of the polysemy models lies in the fact how different frameworks account for the related nature of the interpretations. On the one hand, within the framework of Natural Semantic Metalanguage (Wierzbicka 1986), the different meanings and functions of DMs can be described by a set of definitions in terms of semantic components or features (Travis 2006). In other words, the various interpretations of a form are related due to common components of meaning. On the other hand, in the framework of the core/periphery approach, the relation among the senses can be attributed to the historically core function of the DM and its interaction with contextual factors.

Combining the *monosemy* and *polysemy* approach, Schiffrin 1987, Schiffrin 2006, Redeker 2006 and Frank-Job 2006 explain the multifuncionality of DMs with their [DMs'] ability to operate at different levels of discourse, among others, at textual/sequential level (regulating floor and thematic control) and interpersonal level (involvement in face management, face saving, pragmatic force modifying and the act of agreement). According to Schiffrin (1987, 2006), DMs usually serve two functions, primarily, they signal discourse structure on one of the five planes of talk. Besides, they may have a secondary function: "markers may work at more than one structural level of talk at once" (Schiffrin 1987: 320).

A modified version of the polysemy view that provides the theoretical background in my dissertation is the *core/periphery approach.* Taking this approach, Bell (1998: 515–541) counters the assumption that multifunctional markers (derived from the taxonomies of DM's of the kind found in Quirk & al. (1972)) are "polysemous". He acknowledges that "markers may be multifunctional" but insists that they have a core function or core pragmatic instruction, and considers those instantiations outside the core to be peripheral. Bell argues that:

> "the instruction may require a series of inferences derived from the discourse context to arrive at a specific interpretation ... the interpretation of a marker in any one instantiation results from an interaction between its core instruction, the semantic, syntactic and phonological properties of the individual marker, and the context in which the marker appears." (Bell 1998: 515–519)

Generally, studies grounded in the framework of the core/periphery approach rely on diachronic analysis in order to identify the core function of the DM and the circumstances that allowed the discourse-pragmatic function emerge. Similarly, I will also use diachronic material when outlining the historical development of *mondjuk* ('~'say'), *ugye* (~'right') and *amúgy* (~'otherwise') in my case studies (see section 2.2.6).

Grammaticalization theories (Traugott 1995) explain the multifunctionality and the semantic change of DMs based on diachronic research. In Traugott's view (1995), the origin and development of DMs[18] has led to explain the multifunctionality of DMs as a result of *grammaticalization* Hopper & Traugott (2003) defines *grammaticalization* as the systematic change whereby lexical items and constructions develop to serve grammatical functions. Traugott & Dasher (2002) draw the following cline of development towards DM category membership:

Truth conditional → non-truth conditional meaning

Content → content/procedural → procedural meaning

Non-subjective → subjective → intersubjective

Scope within proposition → scope over proposition → scope over discourse

Another term used to describe the semantic change of lexical elements with conceptual meaning from heterogeneous word classes into DMs in *pragmaticalization* (Erman & Kotsinas 1993, Aijmer 2002). *Pragmaticalization* involves gradual *semantic bleaching* (i.e. the loss of semantic meaning) and simultaneous *pragmatic enrichment* (i.e.gaining pragmatic functions). Among the various branches of pragmatics, historical pragmatics is concerned with the diachronic analysis of the evolution of lexical items with propositional meaning into DMs (items used *metacommunicatively*). Their results contribute to a better understanding as well as explanation of the changes in the functional spectra and the scope of DMs.

In my attempt to map the historical development of the propositional lexical items *mondjuk, ugye* and *amúgy* into DMs (see secion 2.2.6), I will also rely on diachronic data and will try to define their current state at the pragmaticalization process using Traugott & Dasher's (2002) model of development.

[18] Traugott (1995) uses the term *pragmatic markers* to refer to this relatively the same class of pragma.linguistic elements that I call DMs.

2.2.6 Earlier accounts and the historical development of the selected Hungarian discourse markers

As for previous studies on Hungarian DMs[19], both formal analyses (e.g. Péteri 2001, Gyuris 2008a, Gärtner & Gyuris 2012) and functional analyses have been carried out, including the synchronic (e.g. Kiefer 1988, Németh T. 1998, Vaskó 2012) and sometimes even diachronic description of individual DMs, consider, for example Dér (2005) on *mellesleg* (~*by the way*) and *más szóval* (~*in other words*), Dömötör (2008 a, 2008b) on *úgymond* (~'*so to speak'*) and *hogy úgy mondjam* (~'*so to speak'*), and Schirm (2011) on *hát (~'well')* and the rogative particles *–e* and *vajon*. Recently, prosodic studies of DMs (Dér & Markó 2007, Markó & Dér 2008) and fillers[20] (Gyarmathy 2012) have also been carried out, based on the audio material of the Hungarian Spoken Language Database ('Beszélt Nyelvi Adatbázis' in Hungarian).

As shown by the works of Dér (2005), Dömötör (2008a, 2008b) and Schirm (2009a, 2011), combining the synchronic and diachronic analysis of DMs shed light on the process how their pragmatic meaning have developed. Adopting their approach provides new insights into the evolution of DMs and discourse-pragmatic functions.

To my knowledge, none of the three DMs under scrutiny in this dissertation (*mondjuk ~'let's say', ugye ~'is that so?', amúgy ~'otherwise'*) have been described in a corpus-based case study up to now. In what follows I provide an overview of the meanings and functions of the selected linguistic items (as listed in dictionaries and historical linguistic works) so that I can later compare and contrast them in terms of their roles and functions observed in casual conversations and different types of media discourse. I have used various sources to map their meanings, several Hungarian monolingual dictionaries (Ittzés 2006, Pusztai & al. 2003, B. Lőrinczy 1979, Benkő 1967, Szarvas & Simonyi 1893, Ballagi 1867-1872) and historical linguistic volumes on the

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[19] DM-like lexical elements have been referred to by a host of different names in Hungarian as well, including *pragmatic connectives* (Németh T. 1996b), *tilting particles* (Péteri 2001), *metatextual operators* (Bańczerowski 2005), *connectors* (Csűry), *discourse particles* (Gyuris 2008a), *pragmatic markers* (Gärtner & Gyuris 2012, Vaskó 2012) and *discourse markers* (Dér 2005, Dömötör 2008a, 2008b, Schirm 2011).

[20] Fillers ('töltelékelemek') as a functional category can be seen as by-products or acoustic realizations of disfluencies in cognitive processes, such as speech planning, and may express the uncertainty or hesitation of the speaker.

development of Hungarian grammar (Benkő 1992) as well as the relevant material of the Hungarian Historical Corpus[21]. In what follows I overview the historical development of the various senses of these items based on monolingual dictionaries, historical linguistic studies and historical corpora.

2.2.6.1 The historical development of the meanings of *mondjuk (~'say')*

In addition to its conceptual, propositional use as inflected/conjugated (declarative and imperative) forms of the verb *mond* (~'say', 'call'), *mondjuk (~'let's say')* is nowadays much more frequently used in spoken interaction as a DM encoding procedural meaning. In Pusztai's monolingual dictionary (Pusztai & al. 2003: 940) only two senses are listed in the entry of this verbal particle: it can be glossed either as (1) 'let's suppose/assume/say', or (2) 'for example'. The former meaning (1) is probably closer to the original meaning of the IMP 1PL DEF form of the verb *mond*. It must be noted here that Pusztai & al. (2003) do not mention its present-day common use that I have identified in my corpus material; that is, to mark concession and contrast. In this sense *mondjuk* can be analysed as a connective.

Before the synchronic analysis of the DM *mondjuk (~'let's say')*, let us see a few historical examples (examples 2.3, 2.4 and 2.5) for its the conceptual, propositonal uses. As shown in the following example, Révai (1780/1815) uses *mondjuk* several times in his textbook on Hungarian orthography in its traditional sense of 'say', 'utter', 'pronounce' as a verb in indicative mood where the basic illocution of the sentence is declarative:

example 2.3

nem így **mondjuk** (say-DECL.1PL.DEF): avval, evvel; hanem így: azzal, ezzel … s Betüt magánosan gyengén **mondjuk-ki** (*we do not **say**: avval, evvel; but we **say** like this: azzal, ezzel … we **pronounce** letter s briefly and softly*) (Révai 1780/1815: 10)

[21] The user interface and search options of the Hungarian Historical Corpus ('Magyar Történeti Szövegtár') are available online at http://www.nytud.hu/hhc/. In my diachronic case studies (2.2.6), I have selected and analysed 30 tokens of *mondjuk, ugye* and *amúgy* each in detail.

In the following example also from the 18th century (example 2.4), *mondjuk* is used as a verb in imperative (subjunctive) mood.

example 2.4

ne békétlenkedjünk az ö Felsége kezei alatt, hanem azokat tsokolgatván ***mondjuk*** (say-IMP.1PL.DEF) azt, a' mit az Ur Jés43us mondott (*we shall not be unquiet/riotous under the (protective) hands of our Lord, we shall rather give kisses to those hands and* ***recite*** *the words of Lord Jesus Christ*) (Weszprémi 1776: 24)

The imperative clause *mondjuk ki őszintén* (~'let's say honestly') in the next example (2.5) from 1846 can be glossed as 'let's admit', a meaning that may be related to the currently common concessive relation marking function of the non-coneptual use of the DM *mondjuk*. The later loss of the word/connective *hogy* (~'that') or the question word *vajon* (~'if') following *mondjuk ki,* the head of the verb phrase might be a sign of decategoricalization and grammaticalization, as a result of which frozen clauses may later appear in a variety of syntactic positions, expressing metacommunicative functions.

example 2.5

S most nézzük önámítás nélkül megyei szerkezetünket, s ***mondjuk*** ki (say-IMP.1PL.DEF) őszintén, vajon ez institúció megfelel-e az önkormányzás eszméjének? (*And let us now take an honest look at our county and its structure, and* ***let us say/pronounce*** *(~'let's admit) truthfully, does this institution follow the idea of self-government?*) (Eötvös 1846/1978: 368)

A comment clause including *mondjuk* commonly used in the 19th century according to the material in the Hungarian Historical Corpus is the expression *hogy ugy mondjuk* (~'so to say'). In example 2.6, *hogy ugy mondjuk* (~'so to say', 'let me say') is inserted in the verb phrase before the adjunct/complement, although its insertion is not marked in terms of punctuation. Its functions include marking a quote or a novel word choice or distancing the speaker from what is being said.

example 2.6

A jelen földi nemzedék életében, vagyis Ádámtól mai napig, csak egy izlés terjedt el s lett **hogy ugy mondjuk** törvénynyé általánosan a mivelt népek közt: az, amelyet görög-rómainak nevezünk, s a melyet classicus vagy nemes mintákul használ a világ. (*In the lives of the present generations on Earth, from Adam up until our days, one only taste has spread to become, **so to say,** the only law amongst all educated peoples: it is called the Greek-Roman law and it is used as a classic or noble example all over the world.)* (Vajda 1859: 226)

My assumption is that some of the present-day functions of DM *úgymond* might have developed from the comment clause *hogy ugy mondjuk* (cf. Dömötör 2008 a,b). Comment clauses (e.g. *hogy ugy mondjuk*) undergo grammaticalization because their evolution exemplifies the features of development collected by Brinton (2008), such as semantic bleaching (loss of referential meaning); acquisition of pragmatic meanings and politeness features; increased subjectivity; and sometimes phonological reduction[22].

We can see from the above examples (2.3, 2.4, 2.5, 2.6) that up to 1840s only the propositional, conceptual meaning of *mondjuk* (say-IMP.1PL.DEF and say-DECL.1PL.DEF) was used, mostly meaning: ~'call' or ~'say' (e.g: *"mondjuk ki", "nem így mondjuk", "úgy mondjuk*"). Its DM-use with procedural meaning (giving example, approximation, expressing topic orientation or concession) seems to have gradually developed since the 1840s. One of its first recorded uses encoding non-conceptual meaning that can be found in the Hungarian Historical Corpus is the following:

example 2.7

S most megyek tovább: ha ugyan azon ember, peldáúl ***mondjuk*** A a másiknak B-nek még azonfölül at beszéli: hogy a' tiszteletes szombaton estve nem lesz honn, mert az udvarban vacsorál (*And now le tus move on: if the same person **for example/let's say** A is telling B in addition that the priest will not be in his home on Saturday eve, he will be dining in the court.)* (Eötvös 1845: 95)

[22] Brinton (2008: 73-110) examined the historical development and the present-day functions of four comment clauses with *say* in English: *(I) say, I daresay, (as) you say,* and *that is (to say).* The comparison of the evolution of the functions of Hungarian *mondjuk* and English *say* from a contrastive perspective is a possible avenue for future research.

In example 2.7, the meaning of *mondjuk* is not to be taken literally, it rather encodes procedural meaning and simultaneously expresses the functions of both giving example and topic specification.

In the following example (2.8) collected from the Hungarian Historical Corpus, *mondjuk* is again used non-conceptually, expressing either reformulation, more precise, peculiar wording or clarification:

example 2.8

Külön, más-más érdekekért küzdő csoportokra, ***mondjuk*** osztályokra bomlasztotta az emberi társadalmat.(*Human society was divided into separate groups,* ***as we say/let's say/so to say*** *classes, fighting for different interests.)* (Mezőfi 1889: 10)

This function might have evolved through shortening the expression *hogy úgy mondjuk* which is also used to introduce clarification or to emphasize the word choice following this expression.

Similarly to the previous instance (2.8), *mondjuk* might be glossed as 'so-called' in the next example (2.9) as well since it introduces a word that is thought to be unknown to most of the readers. *Mondjuk* here might be read as introducing reformulation or more precise wording. The writer might have used this word in order to maximize the relevance and the understanding of what is being written.

example 2.9

Változást, fejlődést - vagy mert Magyarországon csak az idegen szónak van becse - *hát* ***mondjuk***: evolutio-t mutat a világtörténelem. (*World history is reflecting change, development, or - because only foreign words are nowadays valued enough in Hungary- well,* ***let us say*** *evolution*.) (Palágyi 1900: 332)

The examples with *mondjuk* (2.3–2.9) illustrated its path of *pragmaticalization*: moving from its use as a verb towards more particle-like uses expressing procedural meaning and discourse functions such as supporting own ideas with giving examples, expressing topic specification and reformulation. Its cline of historical development may be described as follows:

verb with propositional and conceptual meaning (declarative and imperative *mondjuk*) → frequent use in matrix clause/embedded clause (*hogy ugy mondjuk*; *mondjuk ki, hogy*) → semantically bleached parenthetical expression (*mondjuk*) → discourse marker with non-conceptual and non-propositional meaning, including the potential to express subjectivity and politeness as well

Furkó (2007) takes a polysemy approach to explain the mutifunctionality and the historical evolution of DMs and argues that DMs start out by having context-independent, propositional meaning, which is gradually enriched by context-dependent, pragmatic, procedural meanings:

> What scholars working in the field of DM research would call *side-effects* (cf. Kroon 1995) or *secondary functions* (Schiffrin 1987) of DMs, are implicatures arising as a result of interaction between DMs' inherent meaning and the contexts in which they occur. These implicatures can, over time, become part of the given DM's inherent meaning, or, conversely, can replace the inherent meaning altogether. (Furkó 2007:34)

In this framework, the concession marking function of *mondjuk* might have started out as the implicature of the verbal expression *mondjuk ki/meg őszintén* (~'let's admit honestly') which has become the core procedural meaning of DM *mondjuk* in present-day spoken Hungarian.

2.2.6.2 The historical development of the meanings of *ugye (~'is that so?')* and earlier accounts of the status of tag questions

As far as the word class of *ugye (~'is that so?')* is concerned, it is classified into various part-of-speech categories in different dictionaries, such as adverb, adverbial, modifier[23], sentence word, question word and (rogative) particle. Based on the entry in Pusztai & al. (2003: 1391), (1) as an interrogative adverb (*kérdő határozószó*) it marks the expectation of cooperation and agreement as well as emphasizes this expectation; (2) as a modifier it either (2a) expresses our expectation to receive a positive answer or (2b) expresses politeness / makes a question sound more polite (e.g. "Ön ~ idegen?"); on the other hand, (3) it is used as a filler without any specific meaning (e.g. "Hát ~ megteszem, de ..."). Even the examples and contexts provided by Pusztai & al. (2003) do not help us distinguish the two overlapping senses of ugye, (1) "~ jó?" or "~ igazam volt?" as interrogative adverbs and (2) "ugye igaz?", "ugye úgy van?" or "Éhes vagy ~?" as modifiers. These examples sound completely synonymous and interchangeable to me. Besides these senses listed in Pusztai & al. (2003), in the course of my synchronic corpus analysis (described in section 3.3.3) I will point out the significance of *ugye (~'is that so?')* in marking evidentiality, a function that is completely missing from dictionary entries. Moreover, its role in connection with narrative story structure as well as lists identified in the empirical part of my study is also absent from reference books.

Concerning the etymology of the word *ugye* (Benkő 1967: 1027), it is a compound word formed by merging the modifier *úgy* and the question word *–e*[24]. The item *úgy* corresponds to an answer to the questions *how?* or *in what ways?* by deictically comparing an act or event with a preceding, sometimes implicit condition. Before the shortening of the question word –é to –e and its merging to *úgy*, *úgy é* and *úgy é ne* were commonly used question word-like elements in the eighteenth century, shown in example 2.10 below from 1773:

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[23] For a detailed definiton of the category of modifiers, see Kugler 2000.

[24] cf. the evolution of the question word/DM *-e* in Schirm (2011: 46-49)

example 2.10

…. Ha 'sidó Muhamedánus, Ariánus közt nevelkedtél vólna, ***úgy é*** hinnéd azt szinte úgy mint ők? … miért hiszed te is ezt [kereszténységet]? azért ***úgy é***, mert mások mondják. ***Úgy de*** több ember van e' Világon oljan, ki azt hamisságnak tartja, mint a' ki igazságnak esméri; azomba te veled beszélt **é** az Isten, vagy tett ***é*** elõtted tsudát? ***úgy é ne?***

(*If you were raised among Jews, Mohamedans, Arianists would you believe in the same as they do? … why do you also believe in this [Christianity]? it is because others say so. Aren't there more people on Earth who find it a lie than those who accept is as true, or did God talk to you or perform any miracles on you?* ***isn't that so?***)(Bessenyei 1773: 129)

As can be read above, the lexical item *úgy de* was also in use in the eighteenth century. Czuczor & Fogarasi[25] (1862:616) claim that this expression is used wither when one gives an excuse, an exception or when one expresses his concern or doubt about something (as the author does in example 2.10).

Regarding *úgy-e*, Czuczor & Fogarasi list the following meanings and functions of it as a question word: its use may express that the speaker (1) urges something or someone; (2) urges and forces someone to admit something or accept something as true (as úgy é expresses in example 2.10); or (3) reminds someone of the favourable or unfavourable consequences of a good or bad act or event (1862:616). As can also be read in the entry, *úgy-e* was typically spelt and pronounced with long *ú* in standard Hungarian at the time of compiling their dictionary (1862: 616). Interestingly, the authors claim about vowel length in *úgy* that while it is spelt and pronounced long in compounds, such as *úgy-e, úgymint* and *úgyde*, it is spelt and pronounced short in affixed/inflected form, such as *ugyan* (615). In spite of the claim of this entry, in some dialects of Hungarian, the phonological reduction of *é* might have occurred some time before the end of the eighteenth century[26]. Example 2.11 illustrates one of the early uses of *ugye* as an adverb in a text from 1786. It can be observed in the example (2.11) that the function of *ugye*

[25] I would like to thank Dr. Schirm Anita for recommending this resource.

[26] Although it would be interesting to uncover the approximate date or period of this transition, based on the materials I have consulted so far I could not identify when this phonological reduction might have occurred.

here is not only asking for confirmation, but at the same time, it calls attention to a fact, and reminds the hearer of something.

example 2.11

Emlékezz meg micsoda fortélyokkal élt szeretőd? Eleinte ***ugye*** keveset reméltetett veled? (*Remember what trickery your lover presented in the beginning. She made you hope little then,* ***didn't she****?)* (Verseghy 1786: 247)

Alternatively, Benkő (1967: 1027) claims that *ugye* (supposedly, in its variant forms) has been used as an adverb from as early as 1585 and lists two other senses of it: sentence word and filler. Benkő presumes that its first recorded use as a sentence word dates back to 1604 and can be glossed as *lám* or *bezzeg* in Hungarian, or translated to German as *fürwahr* or *wahrlich*. As a filler, it can be translated to German as *Füllwort*[27].

I presume that various uses and forms (*úgy e, úgy-e, úgy van-é, úgy van-e, nem úgy é, nem úgy-e, ugyé, ugye*) of this question word must have been in use simultaneously. Szarvas & Simonyi (1893) list "*Igyé?"*and "*úgy-é?"* among the variants of *ugye*, and also provide its counterpart in Latin, which is "*siccine?".* Exemplified by example 2.13, *ugyé* was also a frequent form in the 18th century and earlier:

example 2.12

Az agynak táplálása, melegitése sok vért kéván. De ***ugyé***, hogy az agyvelö4 valaha igen kitsin vala, és most egy nagy emberben igen nagyra nevekedet. ... ***Ugyé***, hogy az álom-is az ilyen spiritusnak elves43ztése miatt következik. 'S hát azt szabadé tagadni, a' mit nem látunk. *(Nurturing, warming our brain requires a lot of blood. But* ***is that so****, that the cerebrum was once tiny, and has grown big in tall man****?...Is that so*** *that dream follows from the loss of spirit, too. And, well, can we deny what we do not see?)* (Rácz 1789: 92)

Interestingly, the function of *ugyé* in example 2.12 is not marking a question or signalling the expectation of the speaker to receive a positive reply; but, rather, it

[27] German translations/equivalents are provided in Benkő (1967).

precedes different moves of an explanation; and, therefore, structures the explanation into smaller segments.

Example 2.13 further illustrates that *ugyé* in the 18th century was already used not only to mark questions but to mark confirmation, emphasis and reassurance as well:

example 2.13

SOÓS MIHÁLY (utánnok kiált) : Hallá az úr, hallá! Hát már az én fiamat béveszi-é vagy nem? PHOEBUS : Bé, bé, no!

SOÓS MIHÁLY : Hát melyik lesz elébb?

PHOEBUS : Aki utóljára olvasott verset.

SOÓS MIHÁLY (a fiának szomorúan): Ennye, megmondám, ***ugyé*** fiam! (Phoebusnak) Hallá, hallá, nagyobb az én fiam.

*(SOÓS MIHÁLY (calling the others): Hear me, my Lord! Does my son get admission, or **does he not**?*

PHOEBUS: So be it, so!

SOÓS MIHÁLY: And which one come next?

PHOEBUS: The one that has just read out a poem.

SOÓS MIHÁLY (sadly to his son): Oh Gods, I have told you, my son, haven't I? (to Phoebus): Hear me now, hear me, greater is my son). (Nagy 1796/1964: 79)

Besides *úgyé, úgy-van-é* also seems to have been a commonly used variant of this question word in the eighteenth and nineteenth century, presented in example 2.14 below where the speakers uses it to emphasize the validity of what he is saying.

example 2.14

MÓZES : … Ne nyomja lelkem semmiféle vád, Hiven megoszték bánatot, nyomort, Mindég én nemzetemmel. - Szóljatok! Nem ***úgy van-é?***

NÉP : De úgy van, szent igaz.

(MOSES: … I do not have any unconfessed sin on my conscience. I share all my grief and distress with my people. Tell me. ***Isn't that so?***

CROW : That is so, true word.) (Madách: 1863/1942: 806)

It is also worth mentioning that Ballagi (1867–1872) glosses "*ugye?"* and "*ugyebár?"* under the same entry as "*nemde?*" (~isn't it?), involving the concept of negation in its synonymous definition which is interesting since many languages (e.g. Germanic languages) encode questions expecting a positive reply in negated forms (e.g. German "*nicht wahr?*" or English "*isn't it?*" among other variant forms).

Based on the material in the Hungarian Historical Corpus (for instance, see examples 2.15 and 2.16), it can be hypothesized that the use of *ugyebár* as a question word was much more common in the 18th and 19th century than it is today.

example 2.15

Most tehát szabadon bé-mehetek, **ugyebár**? (*I'm allowed to enter now, **aren't I**?)* (Szerelemhegyi 1795: 55)

example 2.16

Rajta magyar, készen áll már Jellacsics, Hogy hátáról címerednek bőrt hasíts! Címeredet összetépted úgyis már, S kutyabőrre szükséged van, ***ugyebár***? Fékezzük meg a bitorlót álmiban. (*Up you stand, Hungarians, ready is Jellacsics, for you to cut leather from his back and embellish your armour! After all, you had destroyed you armour, and now what you are need is dog skin, **isn't it/is that so?**)* (Sárosi 1848/1954: 184)

In the twentieth century, the use of short *ugye* must have become widespread, and basically, *úgy van-e* remained its only, although less commonly used synonym or counterpart in standard Hungarian, exemplified in example 2.17:

example 2.17

… a legnagyobb életteljesség legtermészetesebb következménye éppen a játékosság. Mert nem ***úgy van-e*** például, hogy minél több élet van valamely teremtményben, annál több a fölösleges ereje s hogy annál játékosabb is?

(…playfulness is the most natural consequence of vitality. Because isn't that so, for example, that the more life there is in a creature, the more spare energy it has and the more playful it is?) (Füst 1948: 141)

Taking all the consulted dictionary entries and written sources[28] into consideration, the historical development of the uses of *ugye* can be summarised as follows:

simultaneous uses of various compound forms: *úgy van-é? / úgy van-e? / úgy-é? / úgy é? / úgy-e*? → merging and phonological reduction → *ugye*: interrogative adverb → question expecting positive reply and/or reassurance → *ugye* used as a DM: marker of evidentiality expecting the confirmation of the validity of the content of the host utterance of the DM

One might as well ask if *ugye* can be considered as a DM (as in this dissertation) at all. I argue that *ugye* has DM uses since it has relatively free position, it is multifunctional and it encodes procedural meaning (consider its role as a marker of evidentiality on the one hand or marker of new information on the other). Concerning its membership in the functional category of DMs, *ugye* displays the following features[29] of the category of DMs:

- non-conceptual meaning, non-propositionality
- procedural meaning, non-compositionality
- context-dependence
- multifunctionality (as it simultaneously marks explanation, evidential information on the one hand, and questions and preference for agreement on the other hand, depending on its position and the illocution of its host utterance)
- optionality (it was identified as an optional, omittable item by the majority of the informants in the questionnaires described in section 3.2)
- weak clause association

[28] Once again, I must emphasize that I only searched texts written since 1772, which is a limitation of this study.

[29] Membership criteria (collected by Furkó 2007) were checked on the relevant material of the HuComTech corpus (illustrated by the examples in 3.3.3.2)

- variable scope
- evidentiality ensures that it contributes to *argument- and narrative structure* as well as inferencing in general
- phonological reduction when used as an evidentiality marker, typically rising intonation when used as a tag question expecting positive reply
- relatively high frequency in speech.

Sociolinguistic studies on tag questions are mostly concerned with the questions if they are more frequently used in women's speech (cf. Dubois and Crouch 1975) rather than the distribution of its functions. However, most of these studies were not grounded in necessary amount of empirical data.

Concerning its position and context-dependence, a tag can be placed in various positions within a clause and utterance. *Turn-final position* is the most frequent position in English (Axelsson 2011:126) and it refers to a tag being placed when the speaker gives the floor to the listener. Culicover (1992) considers tags as illocutionary operators that turn a declarative sentence into a question. Similarly, Reese (2007) argues that an utterance including a tag (such as *ugye*) can be analyzed as a complex speech act consisting of an assertion (without the tag) turned into a question after the addition of a tag. The historical development of *ugye* also supports this view since it used to be annexed to assertions. *Turn-internal*, or *turn-embedded* tags are placed in the middle of the turn as short rhetorical questions, where the speaker is in the middle of an explanation, communicating evident content. At the same time, markers of explanation and evidentiality can also be placed at the end of a turn.

As evident from a variety of corpus-based studies, tag questions are used not only to ask questions but for several different reasons. As Holmes (1982:45) argues, tags are "multifunctional" but tend to have a "primary function", thus a single tag can express several functions simultaneously. To broaden my knowledge on the functions of tag question in general as well as to further ground my analytical framework for the in-depth study of the DM *ugye*, I overviewed a few taxonomies of the functions of tag questions proposed by Algeo (1990), Holmes (1995) and Roesle (2001) respectively:

Algeo (1990):

- Informational: Getting information (Algeo 1990:445)
- Giving emphasis
- Peremptory: Undermining the listener by pointing out something they clearly should know
- Aggressive: Undermining the listener by pointing out something they clearly could not know (Algeo 1990:447)

Holmes (1995:81):

- Softening: Being polite or softening harsh statements
- Challenging: Forcing a response from a "reluctant addressee"

Roesle (2001:33):

- Involving/Facilitative: Involving the listener
- Getting confirmation

In my analysis I will consider if the above listed functions are performed by the tag question use of *ugye* (~'right') in my Hungarian corpus material. Besides its use as a tag question, I aim at mapping its further roles as well (e.g. as a marker of evidentiality and expectation).

As far as the ***synchronic* state of *ugye*** is concerned, Schirm (2009) highlights that *ugye* retains its original meaning even today and marks that the speaker expects the confirmation of the validity of a statement or simply emphasize its validity

Gyuris (2008b) provides an in-depth *formal* description of *ugye* (referred to as a discourse particle). She argues that its position is relatively free and its presence is not essential for well-formedness. Moreover, it is described with examples that *ugye* can be used in both declaratives and polar interrogatives. As far as its interpretation in interrogatives is concerned, it is a widely accepted view that it produces a biased question and marks the polar interrogative sentence-type by morphological means (H. Molnár 1959, Kiefer 1988, Varga 2002, Keszler 2000). Gyuris (2008b) argues that in spite of general consensus, a sentence including *ugye* traditionally described as interrogative is

not to be considered an interrogative sentence as far as its form is concerned, but a declarative one, which acquires a question interpretation indirectly, through non-standard, non-assertive intonation with higher pitch. Concerning its interpretation in declaratives, Péteri (2002, cited in Gyuris 2008b) argues that it signals the content of the utterance as common ground among the speakers; accordingly, it is often used in reminders. The etymology of *ugye* described in this chapter might be accounted for the development of these functions.

2.2.6.3 The historical development of the meanings of *amúgy (~'otherwise')*

In this section I describe the etymology and the historical development of the last Hungarian item under scrutiny, the word *amúgy (~'otherwise', 'in a different way').* According to Benkő (1967: 145–146), *amúgy* originates from the words *am* and *úgy* which were merged at sentence level at least before the 16th century. Its originally independent *am* prefix is presumably an allophone of *ám*, resulting from a word split. Functions of *ám* and *am* used to include emphasis, calling attention and contrast, all of which can be traced among the meanings of *amúgy* even today. As for the origin of its allophone, *ám*, it is assumed to have come about after the merge of two sentence words that used to co-occur. In other words, the deictic pronoun, *a* and a pronoun beginning with *m*, expressing a distinguishing role used to follow each other. After the merge, certain expressions used to commonly co-occur with *amúgy* around the 17th -18th century, such as *így .... amúgy (~'this way ... that way'), úgy ... amúgy (~'that way ... in a different way'),* shown in examples 2.18 and 2.19 below.

example 2.18
azon ígéket némellyek ***úgy***, mások ***amúgy*** ejtik
(*certain verbs are pronounced **this way**, others are **in different ways_adverb***)
(Rájnis 1773/1781: 83)

example 2.19
A középső ugyan számba sem vette, de az elsőt és ezt az utolsót csak ***imígy-amúgy*** becsülte.

(*Although the middle one was not taken notice of, the first and this last one were also appreciated* ***only a little bit_adverb****) (Rettegi 1775/1970: 360)*

I searched the following fixed expressions below (presumably evolving in the 16th century) in my material. In the queries, the regular expression \w stands for a character or a word:

így \w amúgy

úgy \w amúgy

imígy \w amúgy

imígy amúgy

Although these used to be common expressions in earlier centuries, none of them gave a result in my synchronic corpus material. Instead, I found a few examples for *amúgy is* (~'that way, too', 'anyway', 'otherwise', 'still') and *amúgy se (~'neither that way'*, 'anyway'*),* which shows a shift in the patterns of use of the lexical item. Due to its pragmaticalization, the scope of *amúgy* has gradually increased to such an extent by now that it may even link large thematic units consisting of several utterances. Gradually developing a DM use after its use as an adverb and then a sentence adverb, it may also mean 'otherwise' today where it is much broader in scope (see example 2.20).

example 2.20

NÁNDOR. Ilyen szó nincs.

SACI. Az egyszer tutti.

MILÁN. Hogyne lenne. Keresse ki az értelmezőből. (Megáll.) Mégis... igen... tudom már, mit állítok. Azt állítom, hogy alázsoborgott. (Az írógéphez ugrik, elragadtatottan, szinte dalolva, fennhangon ismételgeti meglelt igéjét.) Alázsoborgott**,** zsoborgott alá, alázsoborgott

NÁNDOR. Alázsoborgott. Abszurdum.

LÍDIA. ***Amúgy*** nem hangzik rosszul. Olyan mint a "dorombol".

(NÁNDOR: 'Burr'? This cannot be true.

LÍDIA: ***Otherwise_DM****, it does not sound bad. It sounds like 'purr'.) (*Békés 1988: 83)

Concerning the definitions of the meanings of *amúgy (~'otherwise')* in dictionary entries, it is first of all listed to have several related meanings as an indexical adverb of manner in Pusztai & al. (2003: 40), including (1) 'in a different way' (~'in another way'), (2) 'in a typical way' (~'typical of somebody or an activity'), and (3) 'in an unusual way'. Besides these adverbial meanings, Ittzés (2006, volume II: 758) also lists its non-conceptual/DM use (third of all) that can be glossed as 'otherwise' and 'besides this'. Second of all, it is also defined to be used to emphasize an adverb of manner, e.g. *"amúgy nyersen" (~'amúgy_adverb/very bluntly').* The following adverbial sense listed in Ittzés (2006) seems to be related to the previous one: "typical of a place or typical of someone", illustrated by example 2.21 below:

example 2.21

amúgy doktorosan ő is tud mosolyogni ('*he can smile **amúgy**_adverb as a doctor*') (Bartalus: 1882, cited in Ittzés 2006: 759)

Although the two adverbial meanings listed above (to emphasize an adverb of manner; typical of a place or of someone) are listed secondly in the analysed dictionary entries, I have not found instances of these uses in my corpus, which suggests that these are rather archaic uses of the item.

Based on the diachronic descriptions and examples, it is proposed that the development of the lexical item *amúgy* can be described on the following path from a merged word, an adverb into a DM:

merge of two sentence words*, a* and *m* → *am/ ám (allophones)* → *am(a) + úgy* → *amúgy* adverb →*amúgy* sentence adverb → *amúgy* DM

As a conclusion of this section, it can be highlighted as a criticism that the role of *amúgy* in the thematic control of conversations is not mentioned in either dictionary although it is commonly used to introduce topic shifts, to mark comments, commentaries, personal opinions, side sequences, and even concession (cf. section 3.3.4 for details).

2.2.7 Conclusions: My approach to the study of DMs[30]

Most importantly, it must be emphasized again that the category of *discourse markers* is not a syntactic but a functional category, and discourse relations as well as discourse functions can be signalled by employing various syntactic categories (e.g. connectives, adverbs, verbs, etc.) as well as nonverbal means. I use the term DM in a broad sense to denote members of heterogeneous word classes as well as nonverbal signals that mark how discourse segments are linked and how they are to be understood or express the attitude of the speaker (towards the topic or the hearer).

Regarding the typical position of DMs, I am not in line with Fraser (1999: 938) who argues for their quasi-initiality. My assumption is that DMs occur in non-utterance-initial position approximately as often as in utterance-initial position. In the empirical part of my dissertation I will test this hypothesis regarding the position and sequentiality of DMs.

Concerning the functional taxonomy of DMs, I will combine Brinton's (1996, 2008) and Schiffrin's (1987) analytical frameworks with the distinction of various discourse domains. Similarly to Schiffrin (1987), I take an inclusive view and consider nonverbal conversation regulator devices (e.g. hand gestures, head nods, gaze) discourse markers as well since they are also able to display discourse structure, manage turn-taking (cf. Abuczki 2011, Abuczki 2012a), convey procedural meaning or mediate the attitudes of the speaker. However, Schiffrin's model fails to explain the historical changes in the meanings of linguistic items (i.e. how meanings evolve or disappear over time).

In order to be able to account for the diachronic pragmaticalization and the heterogeneity of the class of DMs, I adopt Furkó's view (2007) who defines the criteria of DM class membership in terms of displaying the following properties:

1. non-propositionality
2. optionality
3. context-dependence
4. multifunctionality
5. sequentiality

[30] cf. It is discussed in more detail in Abuczki (2012b), Abuczki (2013), Abuczki (2014), and Furkó & Abuczki (to appear).

6. weak clause association

7. variable scope

8. procedural meaning - non-compositionality

9. high frequency

10. orality

Furkó (2007) considers the category of DMs as a *graded* or *radial* category whose individual members display these (or some of these) properties to varying degrees depending on the current stage of their pragmaticalization process (2007: 49). Its members can be placed close to the core, while others are more peripheral; therefore, they form a fuzzy category. Furkó's (2007) network model is based on Pelyvás's (1995) adaptation of Lakoff's (1987) cognitive model. Lakoff (1987) considers linguistic categories *graded* and *fuzzy* around the edges, and suggests conceptualising individual members in network models. Pelyvás (1995) focuses on a particular word class and argues that English auxiliaries constitute a heterogeneous category (similarly to DMs) with more prototypical and borderline members.

My approach to DMs can be summarized as a *modified* version of the *core/periphery approach* proposed by Bell (1998: 518) who argues that the aim of DM research is to discover the core instruction of the given *class* of markers (e.g. cancellatives in Bell 1998); while the goal of my research is to discover the core instruction of *individual* markers. Consequently, the core meaning must be underspecified, involving features and properties that can be specified, activated and supplemented in different contexts. This *core/periphery approach* was successfully applied in several earlier lexical semantics theories such as in conceptual semantics (Jackendoff 1990), two-level semantics (Bierwisch 1983, 1996) or in lexical-constructional theory (Bibok 2010) where the meanings of lexemes are seen as underspecified which are completed with further contextual information from the given context. DMs can also be interpreted in the same way as lexemes, even the ones consisting of two elements but operating as a lexical single item (such as *you know*). Therefore, the task is to specify a set of properties of the individual discourse marker. Similarly to prototype theories, we can identify which functions of the DM are core and which ones are peripheral. Besides, I take a multimodal approach to the production, perception and analysis of language and interacion; therefore, contextual (verbal, nonverbal, visual) properties will all be taken into account.

3 EMPIRICAL RESEARCH

3.1 Methodology

The empirical research described in this chapter aims at (1) examining the multimodal properties of DMs used by Hungarian university students, (2) mapping the functional spectra of three selected pragma-linguistic items as used in my corpus material, and (3) determining the effect of the variable of gender on the frequency of DMs uttered and (4) the effect of gender on the interpretation of the functions of the items in my questionnaires. This chapter describes the multi-step method used for the collection and interpretation of complex multimodal data (corpus collection and questionnaire work). The phases and findings of research will be described in separate sections.

In order to perform a systematic analysis of the functions of DM in spoken interaction as well as the alignment of DM use and gesticulation, the collection of naturally occurring multimodal conversations is indispensable. Choosing a tradeoff between naturalness and control (in terms of the naturalness and the studio quality of the corpus material), I have decided to analyse interactions of the HuComTech corpus and a collection of mediatised political discourses, all recorded in studio settings. On the one hand, recording speakers in studio setting is an intrusive technique and may result in unnatural behaviour; on the other hand, it provides data of studio quality which is suitable for further acoustic and visual analyses using several software solutions. Due to the partly pre-defined list of topics of the conversations under analysis, the level of variance in content among recordings of the same genre (that is, informal semi-guided conversations, simulated job interviews and political interviews) is acceptable; therefore, they are comparable. Due to the similar scenario of the recordings, it is predictable to some extent what and how participants communicate[31]. An important goal of collecting similarly patterned human-human interactions is to provide guidelines for generating naturally structured and regulated human-computer interaction. Through careful and systematic data analysis I aim at uncovering the underlying organization and prototypical

[31] On the role of scenarios in interaction from a multimodal perspective cf. Csűry (2011).

patterns of nonverbal-acoustic, nonverbal-visual and verbal communicative cues in discourse (especially discourse topic) regulation.

Concerning the design, verification and quantification of empirical research, Stivers (2001) suggests that we must ensure in interaction research that the categories for quantification emerge from the careful analysis of the individual cases that are being quantified. Therefore, I started my research with literature review (described in Chapter 2) concerning the discourse domains where DMs operate and the taxonomy of functions they serve. Taking a combination of literature-based and data-driven approach, I first performed an in-depth qualitative analysis of 120 adjacency pairs involving DMs in my test corpus as a pre-pilot study. I performed the analysis mostly based on Schiffrin's (1987) and Brinton's (1996, 2008) analytic framework.

After studying the relevant literature, I designed questionnaires (after choosing its video excerpts from the test corpus and designing task sheets and answer sheets) to map average language users' intuitions about the salient functions of the selected items. I tried to select utterances with DMs with a view to mapping the functional spectra of the selected DMs (that I identified in the pre-pilot stage), involving examples for both prototypical and less typical textual and interpersonal functions as well.

Following the analysis of the results of the questionnaire, I have consequently designed a preliminary annotation scheme for the classification of DM functions. The findings and categories identified in the questionnaires led to the development of a preliminary annotation scheme in ELAN which was tested on a different test corpus of 100 DMs. Several shortcomings and limitations of the preliminary scheme were identified during the testing phase. These were mostly technical and organizational difficulties that sprang from the lack of divisions in the scheme on the one hand, and from the highly structured technological framework of ELAN on the other hand, which requires its users to think and work in a hierarchical model and annotate in various tiers that include mutually-exclusive categorical labels. In order to resolve difficulties in coding, I had to further refine and develop my model and organize discourse functions into larger categories. This multi-step method is designed to result in a systematic, empirically based description of the salient patterns of use of the selected DMs found through data analysis. The next section lists the phases of my research in greater detail. Following the description of my research methodology, I will present both prototypical and less

prototypical examples for the use of DMs and will provide a comprehensive (involving the analysis of information coming from all modalities) and coherent treatment of data by using my own multimodal annotation scheme. I would like to demonstrate with examples how the properties and accompanying features of DMs vary or co-vary across a variety of genres and contexts. In the following section let me guide you through the phases of my research procedure.

3.1.1 Stages of the research process

Figure 1 in Appendix 1 outlines my empirical research process in a flowchart with the stages on the left and the corresponding tasks on the right. You can find the detailed description of the research process with all the individual subtasks of the ten major stages below:

I. ***Preliminary stage****: Pre-recording and recording phases*

Team work within the Communication Modelling and Computational Linguistics subprojects of the HuComTech project (2009-2010)

- task design and corpus design (by the Communication Modelling and Computational Linguistics subprojects of the HuComTech project, led by prof. László Hunyadi)
- speaker recruitment and scheduling (organized by Kinga Pápay through Google Calendar)
- equipping the studio (studio equipment designed by the Computational Linguistics and Digital Image Processing subprojects of the HuComTech project)
- building the corpus[32] (following the pieces of advice of prof. László Hunyadi and prof. Tamás Váradi): signing consent, filling in background questionnaire, recording, coding file names

[32] Many thanks are due for their work to Kinga Pápay, the interviewer in the corpus and István Szekrényes, the studio technician in the project.

II. ***Corpus (audio and video) annotation stage***

Joint work with the Communication Modelling, Computational Linguistics subprojects and the annotators of the HuComTech project (2010-2012)

- annotation design[33] (by the Communication Modelling, Computational Linguistics and Digital Image Processing subprojects of the HuComTech project, led by prof. László Hunyadi)
- recruiting annotators (designing leaflets, visiting courses)
- training annotators
- transcripts, audio, video and pragmatic annotations performed by different annotators
- collecting and cross-checking annotations
- organizing regular annotators' meetings

III. ***Pre-pilot stage:*** *A combination of literature-based and corpus-based approaches to lay the foundations of the framework of my empirical research*

- overview of the relevant literature on functional taxonomies of DMs (Schiffrin 1987, Fraser 1999, Redeker 1990, 2006, Brinton 1996, 2008)
- selecting recordings for analysis and DM annotation (see the criteria for selection in the next section)
- in-depth qualitative analysis of 120 adjacency pairs involving DMs (60 *mondjuk*, 30 *ugye* and 30 *amúgy* tokens) in my subcorpus (following Brinton's (1996, 2008) dual functional taxonomy with textual and interactional functions)
- designing questionnaires (setting their goals and hypotheses)
- selecting 42 utterances/APs with DMs (14 of each) for questionnaires A and B (with open-ended questions)
- cutting video files (using the VideoPad Video Editor software[34])
- designing task sheets/questionnaires A and B

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33 See Appendix 4 for the annotation guidelines of tbe HuComTech corpus.

34 http://www.nchsoftware.com/videopad/index.html

IV. Pilot study stage

Development of the framework and annotation scheme based on questionnaires

A. *Questionnaire phase with open-ended questions with Groups A and B)*

- questionnaire in 4 groups of ten students (with 2 different task sheets)
- processing the answers of 40 informants in Microsoft Office Excel
- categorizing and counting informants' answers
- described in section 3.2.2

B *Questionnaire phase with multiple choice questions with Group C*

- narrowing down 42 utterances/APs to 21 utterances/APs for questionnaire C
- making a new task sheet and answer sheet with multiple choice questions (questionnaire C)
- entering the answers of 56 informants into Microsoft Office Excel
- statistical analysis of the results of 56 informants in SPSS 19.0
- identifying two most clearly distinct and semi-automatically distinguishable (most salient) functions for each item
- described in section 3.2.3

C *Testing the findings* (Data-driven approach to refining the framework)

- implementing the functional annotation (based on the categories identified by questionnaires) on a test corpus of 100 tokens of DMs
- identifying the difficulties and limitations of this type of coding
- described in section 3.3.1

V. ***DM segmentation stage***

- manual segmentation of DMs in ELAN (described in 3.3.1.1)

VI. ***Feature extraction stage***

- exporting transcriptions and DM segmentation from .eaf files (from ELAN) into Praat TextGrids (using UTF-8 coding) for acoustic analysis
- automatic annotation of silences in Praat
- automatic extraction of prosodic features using a Praat script: extracting the min, max, mean and range of F0 and intensity of DM segments, durational features (duration of DM segments and surrounding silences) (see its script in Appendix 5 and the results in Appendix 8)
- automatic annotation of pitch movement in Praat (Hunyadi, Szekrényes, Borbély & Kiss 2012)
- importing results from Praat to ELAN
- performing further queries in ELAN
- these procedures above are described in detail in section 3.3.1.2

VII. ***Statistical analysis stage***

- descriptive and inferential statistical tests of queries in SPSS 19.0

VIII. ***Interpretation stage***

- drawing conclusions from the results of the queries and statistical analyses
- attempts at semi-automatic disambiguation of the salient discourse functions of the items based on the findings of the queries
- designing and testing decision trees to disambiguate discourse functions
- described in section 3.4

IX. ***Comparative stage***

- analysis of the use of DMs in different genres, in mediatised political interviews and TV shows
- based on comparative analysis, deciding whether or not the uses of the selected discourse markers differ across the various discourse genres (spontaneous conversations, different types of political interviews and panel discussions)

- described in section 3.6

X. ***Conclusions stage***

- summarizing results, findings and implications, and drawing conclusions of both theoretical and empirical research described in the dissertation
- described in chapter 4

In the next sections I will describe my corpus with regards to its situations, speakers followed by the description of my questionnaire (tasks and informants).

3.1.2 Material: Description of corpora and speakers, questionnaires and informants

The material of the case studies contain approximately 14 hours of conversation of the Hungarian HuComTech corpus between a constant agent (28 years old, female) and twenty-five different young speakers (university students between 18-28 years of age) as well as 7.5 hours of mediatised political discourse.

Fifty dialogues of the HuComTech corpus[35] were used for the empirical analysis of discourse markers. The corpus was collected by the Speech Processing subproject of the HuComTech project[36] at the University of Debrecen. The corpus was originally designed to study the interrelation of the multimodal aspects (prosody, visual signals, etc.) of spontaneous human-human interaction (HHI) and model natural-like human-computer interaction (HCI) based on the findings. Speakers in the corpus were collected with the

[35] The HuComTech corpus contains 118 simulated job interviews and 118 informal conversations altogether between 2 agents/interviewers and 118 speakes/interviewees. The audio and video annotation of the corpus was performed between 2010 and 2012 by several trained annotators to whom many thanks are due for their meticulous work. The unimodal and multimodal pragmatic annotation of the corpus has been in progress since 2011. Out of the 118 recordings, I have analysed the following recordings (both their formal and informal parts): I and F audio and video files of speakers 003, 006, 007, 012, 013, 016, 018, 019, 020, 021, 023, 030, 040, 043, 057,059, 062, 063, 067, 069, 070, 085, 096, 114, 125.

[36] The HuComTech research group was supported by the TÁMOP 4.2.-08/1/0008-0009 project. My work was supported by the TÁMOP-4.2.2/B-10/1-2010-0024 project and the TÁMOP 4.2.4. A/2-11-1-2012-0001 'National Excellence Program'.

help of university instructors, professors[37] and leaflets. The recruited participants were scheduled using Google Calendar. During the recordings speakers were facing each other in seated position in a soundproof studio[38] of the Institute of English and American Studies. The interviewees were recorded using 4 cameras (2 HD cameras and 2 webcameras to record their faces and hand gestures) and a far-talk cardioid microphone (Shure 16 A) at a sample rate of 48,1 kHz with 16-bit precision. The interviewer was recorded using a HD camera and a far-talk cardioid microphone as well The synchronization of the cameras and microphones is achieved by using flash lights and beep sounds at the beginning and end of the recordings (Pápay-Szeghalmy-Szekrényes 2011).

The recordings consist of three parts (or "tasks") so that the behaviour of the participants can be investigated in three different types of settings. First, subjects were asked to read out 20 phonetically rich sentences collected and provided by the Laboratory of Speech Acoustics at the Technical University of Budapest (BME). This reading task took about two minutes and served three goals: to test studio equipment, to warm up speakers and make them used to the studio setting (the presence of cameras, etc.) on the one hand, and to provide training material for a phrase boundary detector and speech recognition engine on the other hand. The second part was the simulated job interview of about 10-14 minutes per speaker[39]. The interviewer followed a pre-defined set of questions (on previous education, work experience and carreer goals), but the interviewees were not restricted in time in their answers. Subjects were told that this is a chance for them to practice a job interview which might help them in the future in their real job applications. For many interviewees, it was their first job interview in their lives, which resulted in a relatively slowly proceeding interview and a somewhat stressed atmosphere in some cases. However, following our goals, all speakers warmed up and opened up by the last, longest and most important part of the recording, the informal conversation[40] on everyday topics (involving the initial, personal evaluation of their own

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37 Many thanks are due to Prof. László Hunyadi, Dr. Olga Bársony, Dr. Tibor Nagy and Dr. Alexa Bódog who encouraged their students to participate in the recordings as speakers.

38 Many thanks are due to Dr. Tibor Nagy who designed the studio.

39 Size of the entire formal part of the HuComTech corpus:
total vocabulary = 12556 types, project wordcount = 117382 tokens, types/tokens = 0.10696700

40 Size of the entire informal part of the HuComTech corpus:

performance during the job interview, followed by the discussion of university life and other life experiences). The interviewer moves toward more and more personal topics (e.g. relationships, religion) in this part and tries to provoke a variety of emotions with her questions. In order to make the atmosphere relaxed and interactive, the interviewer tells her own stories as well.

The most natural behaviours can be observed in this part of the interviews (lasting about 13-20 minutes per speaker). For instance, more gesticulation is produced in the informal than in the formal phases of the interview, which is also a typical marker of spontaneous conversations. Both interviews were mostly led by the interviewer (called *agent* in the HuComTech corpus) and followed the discussion of a list of pre-defined questions and topics. The reason for choosing this semi-structured interview format was that the interviews and the performance and language use of speakers should be comparable. In spite of the thematic limitations, the informal conversations often resulted in small talk and in a few cases even using bad language, which are signs of involvement in the topic of the conversation.

Finally, speaker data and consent for data storage and analysis were collected after the interview. Some of the speaker data (gender, age) are also indicated in the file names of the interviews. The following types of speaker data were collected:

- speaker ID (001-118)
- sex of the speaker (**m**ale/**f**emale)
- age of the speaker (19-30)
- geographical origin of the speaker

A filename indicates these speaker data as well as the type of situation (F=formal job interview, I=informal conversation), for instance: 001m21_I_shure where the three digit code stands for the speaker ID, f or m stands for sex, a two digit code stands for the speaker's age, F or I stands for formal or informal situation and *shure* stands for the microphone type (Pápay-Szeghalmy-Szekrényes 2011).

Concerning the speakers in the subcorpus analysed in this dissertation, 11 male and 15 female subjects[41] participated in the recordings of the corpus analysed in this

total vocabulary = 27534 types, project wordcount = 313361 tokens, types/tokens = 0.08786671

[41] A constant female interviewer and 25 inteviewees participated (out of whom 11 speakers are males and 14 are females). The proportion of the gender of the speakers is not balanced because studying

dissertation. All participants are native speakers of Hungarian and reported no hearing or speech disorders. Their ages ranged from 18 to 28 years, and the majority originate from North-Eastern Hungary. As a result, due to their similar age and origin, the speakers of the corpus comprised a relatively homogeneous group whose members are comparable to each other. (You can find detailed information about the corpus speakers in Appendix 2.A)

In order to ensure an essential ethical issue, that is, the corpus speakers' anonymity, a name list anonymisation procedure has been developed in ELAN (Brugman & Russel 2004: 2065–2068) to automatically filter personal information (e.g. person's names) in the transcripts. Regular expressions have been used to find and filter named entities. For instance, to find the names of the speakers during the introductory section of the simulated job interview in the HuComTech corpus, the following unions of regular expressions have been used in the search box of ELAN:

[A-Z]+ (-nek|-nak)+\s+hívnak

[A-Z]+\s+vagyok

[A-Z]+\s+[A-Z]

When names were found in the transcripts, they were replaced with the tag 'NAME' using the 'Find and Replace in Multiple Files' option in ELAN.

Besides name list anonymisation, the volunteers were also told that if they want to, they can withdraw from taking part in the corpus and the interaction research. In connection with informing the participants about the research, they were also notified that the aims of the corpus collection are twofold: (1) to collect material for analyzing the verbal and nonverbal communication of university students in general, and (2) to give them a chance to practice their performance in a simulated job interview.

Concerning the scenario and the size of the recordings, out of the fifty analysed interviews, twenty-five dialogues were simulated job interviews with asymmetrical power relations, while the other twenty-five were semi-guided informal conversations of the

differences in DM use in terms of gender was not the primary goal of my study. Instead, criteria for subject eligibility were the following: (1) native speaker of Hungarian, (2) without hearing or speech impairment, (3) aged 18-28, (4) student or employee of the University of Debrecen, and (5) low level of discomfort of the speaker (judged by myself) since I wanted to analyse interviews where the atmosphere is relaxed and the behaviour of the speaker is natural.

same speakers about casual topics. The project wordcount[42] of the analysed part (50 recordings) of the HuComTech corpus in this dissertation is 129307 tokens (Types/tokens = 0.06670173, Types/sqrt (tokens) = 23.98546126, Yule's k = 180.13108109). The duration of the formal, job interviews is approximately 10–14 minutes each, altogether roughly 300 minutes, with a constant interviewer talking 21% of the interview time, and 25 interviewees talking 79% of the job interview time; while the duration of the informal conversations is approximately 13–20 minutes each, totalling approximately 550 minutes, with a constant participant talking 44% of the interview time, and 25 other participants talking 56% of the interview time. In both kinds of dialogues the participants were equally participating, however, in the second type they had clearly different goals. The distinction between formal and informal conversations is important in order to define the level of spontaneity and planning within interaction, and to draw the technological limits of any prediction, explanation or disambiguation in dialogue management. Formal conversations follow rules, strong social norms and involve the use of symbolic gestures, high conscious control as well as displaced mimesis, while informal conversations are not so restricted in content or natural behaviours since they tend to involve a lot of overlapping turns, inconsistencies, discrepancies between modalities, iconic gestures and all sorts of colloquial expressions. Concerning the frequency of the scrutinised items in this dissertation (see Table 3.1), the analysed subcorpus of the HuComTech corpus contains 385 tokens of *mondjuk*, 185 tokens of *ugye* and 79 tokens of *amúgy*.[43]

lexical item	**uttered by the interviewee**	**uttered by the interviewer**	**TOTAL**
mondjuk (~'say')	208	177	385
ugye (~'is that so?')	103	82	185
amúgy (~'otherwise')	50	29	79

Table 3.1 *Frequency of the scrutinised lexical items in the analysed material of the HuComTech corpus*

[42] The project wordcount was performed by the Simple Concordance Software.

[43] Number of tokens of the following lexical items in the entire HuComTech corpus:

- Mondjuk: 1677 (34th most frequent word in I with 1338, 40th most frequent word in F with 328 occurences)
- Ugye: 553
- Amúgy: 285

Thirdly, the collection of mediatised interaction involves the following discourses:

- a collection of seven formal, confrontational evening political interviews broadcast on ATV (each of them last for approximately 60 minutes and feature one constant IR and seven different IEs),
- two more casual ”breakfast” political interviews (broadcast on TV2),
- two interviews from news reports (one broadcast on MTV, the other on Hír TV)
- two panel discussions (broadcast on Duna TV).

The media subcorpus comprises altogether approximately 450 minutes (7.5 hours) and it includes 135 tokens of *mondjuk*, 98 tokens of *ugye* and 25 tokens of *amúgy*.

The next chapters guide the reader through the analytical procedures and results of several case studies (on questionnaire work, corpus analysis of several discourse genres, disambiguation attempts) that all shaped my theoretical and methodological framework.

CASE STUDIES BASED ON THE HUCOMTECH CORPUS (3.2-3.5)

3.2 A questionnaire-based analysis of the functions of DMs

Apart from the overview of various theories in the DM literature as well as the dictionary entries of the selected lexical items (*mondjuk, amúgy,* and *ugye*), my aims also include mapping average language users' intuitions about the meanings/functions of and necessity/optionality judgement about these three pragma-linguistic explicitly, and finally contrast the two (findings in the literature and naïve judgements).

Using questionnaires as a work method results in both benefits and disadvantages which will be briefly outlined in this section. As a major motivation, I chose to use questionnaires because this method allows for fast collection of a relatively large amount of data in a short period of time. Although I am aware that the pragmatic knowledge of average (naïve) language users is not alwas a reliable source of information, and it must be handled and interpreted with great care, I still believe that their opinion can be considered and involved in a scientify study, along with the description of its consequences. Folk pragmatics (also referred to as ethnopragmatics) as a new branch of folk linguistics (Niedzielski & Preston 2003) also supports my approach as it argues that the judgements of naïve informants may form an integral scope of linguistic studies, especially those in cross-cultural pragmatics where norms of language use and the necessity or polite nature of the use of certain items are investigated from the point of view of insiders (Goddard 2011). In my reaerch framework, even the use of DMs itself indicates that language users do have metapragmatic awareness and practice metapragmatic reflection during interaction (cf. Verschueren 2000). At the same time, it must be noted among the limitations of a questionnaire-base research that identifying and naming the discourse functions of items is a challenging task not only for average language users but even for linguists. Still, it should be the task of the linguist to uncover these difficulties in an explicit way and try to explain the controversies between the judgements of naïve language users and linguists.

First of all, let me briefly describe the pre-pilot stage and questionnaire design procedure of my research process. During my initial classification of the functional

categories of the selected DMs (in the pre-pilot stage of my research), I followed Brinton's taxonomy because I found its underspecified nature useful for designing the questionnaires and selecting typical and less typical example adjacency pairs into it. Functionally, Brinton (1996, 2008) identifies two main classes as the function of DMs: (1) discourse marking / textual functions such as initiating and ending discourse, marking boundaries, signalling topic shift, repairing discourse; and (2) interpersonal functions such as express responses, attitudes, solidarity and face-saving. In the pre-pilot stage, I identified the following functions of the DMs under scrutiny:

- *mondjuk* (~'say'): giving example, approximation, contrast, reformulation, sudden realization;
- *ugye* (~'is that so?', 'as you know'): asking for reassurance, checking information, returning to a previous topic, evidentiality marker, filler;
- *amúgy* (~'otherwise'): explanation, marking a side sequence, introducing personal opinion or a new perspective, commenting.

I selected the APs to be involved in questionnaires A and B randomly, and then tried to select half of the APs from questionnaires A and B into questionnaire C in a way to cover all the possible and previously mentioned textual and interpersonal functions of the analysed items. My ultimate objective is to uncover the most salient function (or core instruction, cf. Bell 1998: 515–541) of each marker, and the contextual factors which may allow it to indicate peripheral functions and relations beyond its core. In what follows I will describe the types of questionnaires and tasks used as well as the analysis of the informants' answers.

3.2.1 Overview of the questionnaire: Hypotheses, tasks and participants

96 informants (all of them are BA, MA or PhD students between 18 and 31 years) participated in this study. Personal information (gender, age, hometown, major) of the informants can be read in Appendices 2.B and 2.C. As you can read in the Appendices, my dataset is not representative of the entire population but the results are still suggestive.

Based on my experience and linguistic competence as well as earlier findings in the DM literature about functional properties, I identified the following initial assumptions that I wanted to test using questionnaires:

1. Informants feel the **difference** between the two parts of minimal pairs where one does not involve one of the three selected items, while the other part does.

Furthermoreö, I postulated that the three lexical items under scrutiny significantly **differ** from each other in terms of:

2. their **functional spectra**

3. the degree of **multifunctionality** they display

4. their degree of **optionality** and contribution to the discourse; that is, they add subtlety to the utterance with varying extent.

5. There is no **difference** in the relative distribution of the assigned functions **between male and female informants**.

6. Discourse functions and coherence relations are usually expressed or implicitly conveyed by other means as well (e.g. intonation, temporal aspects, facial expression, hand moveme There is correspondence between the duration of an item and the degree of its perceived optionality (the shorter it is, the more optional/omittable it is felt). **Duration** influences the degree of optionality in the judgements of the informants.

7. Responses of the informants confirm the validity of the **core/periphery model** of DMs (Bell 1998). One or two functions of each DM are always significantly more frequent than other functions (not only by chance)[44].

In the following sections I will describe the process of data collection: preparing its material, recruiting informants, the setting of filling in the questionnaires, necessary material and equipment, the task of the informants (and its justification) and the instructions given to them. As for the material of the tasks in the questionnaires, I used example utterances and adjacency pairs (henceforth APs) taken from the HuComTech corpus because I wanted to involve naturally-occurring talk in context rather than made-

[44] I worked with the usual 5% (0,05) significance level.

up, artificial sentences given in isolation. I cut 42 APs from the video files of the HuComTech corpus involving any of the three selected lexical items[45]. The 42 APs included 14 instances of *mondjuk*, 14 instances of *amúgy* and 14 instances of *ugye* fulfilling various functions. The 42 APs were divided into 2 parts (Questionnaire A and B in the Appendices) with 7–7 examples of each item in context, different items following one another in the task sheet. Questionnaire A and B had open-ended questions, while Questionnaire C (with 21 carefully selected examples out of the original, randomly selected set of 42 utterances) involved multiple choice and scaling tasks. The list of categories offered in Questionnaire C was based on the findings of Questionnaire A and B (that is, the names of the functions provided by the informants, later categorized by me). I recruited informants at the university with the help of professors and PhD students who asked their students if they wanted to participate in a questionnaire, and then allowed me to meet the volunteering students at the end of their lesson and do the questionnaire in the classroom[46]. I wanted to make them fill in the questionnaire in the classroom in order to make sure that they do carefully listen to and watch the videos of the utterances. I gave instructions both on the task sheet and orally and emphasized that there is not a good or bad answer to these questions; I am interested in their intuitions and opinion. I played each of the short videos twice one after another with short breaks between them in order to give subjects enough time to reply. If any of them wanted to, I played the video for the third time as well in the end, but they rarely requested this. Their time was not limited; they could stay, read and think of the examples as long as they wanted to. The completion of a questionnaire (including giving instructions and watching the 21 short videos twice) usually lasted about 40 minutes, ranging between 30 and 50 minutes.

I used three types of questionnaires in two rounds: (1) two sets of 21 different minimal pairs of APs (see questionnaire A and B in Appendix 3) with open-ended questions in the first round, and (2) a new, mixed set of 21 different APs (that is questionnaire C in Appendix 3) with multiple choice questions, based on the categorization of answers and findings of the previous round. Naturally, each participant filled in only one of the questionnaires.

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45 I used the VideoPad Video Editor software (http://videopad-full.en.lo4d.com/) to cut the videos.

46 Many thanks are due to Prof. László Hunyadi, Dr. Péter Bálint Furkó, Ghazaleh Baiat Esfandiari, István Szekrényes, Kristóf János Bodnár and Gábor Kovács who helped me recruit informants to fill in the questionnaires.

The goal of the first round of questionnaires (A and B) was to explore what roles and functions average language users assign to the DM tokens, and help me ground my possible categorization system of discourse functions.

3.2.2 Results of the first round of questionnaires

In the first round (with open-ended questions) the informants (22 female and 18 male participants) were given a set of 21 randomly selected APs (also referred to as minimal pairs) with two recurring questions after each one. The two parts of the pairs differed only in one thing: the first utterance or adjacency pair did not contain *mondjuk* (~*'say'*), *ugye* (~*'is that so?'*) or *amúgy* (~*'otherwise'*); while the second utterance or adjacency pair included one of these selected items. I asked (1) if the informant felt any difference between the two parts of the pair, and (2) if s/he did feel a difference between the two, I asked them to describe this difference. I am aware that it might have been easier for the informants if I had given them larger context (larger than APs). However, I was concerned about the thing that they could not feel (and even more so, remember) the slight difference between the two extracts (one involving, one lacking the scrutinized item) if larger context had been given and longer extracts had been played. In this round I did not specifically ask them to provide the function/meaning of the selected items; however, they all focused on the meanings of these items in their answers, which was the implicit objective of the task. I did not provide them with options to choose from in their answers because I wanted to avoid having my hypotheses or any list of functions from the literature influence subjects in their answers. Not providing them with a set of options, I did not restrict them in their choices, so they had the chance to describe their intuitions and real opinion about the utterances. Apart from the advantages, this method led to some difficulties as well, especially in the data recording and analysis process because in the end I had to find a way of classifying various answers for the purposes of the systematic and comparative analysis of the three selected items and their functions. I categorized the answers relying on my own intuitions and focused on avoiding subjectivity.

The first question after each minimal pair was the following: the explicit question was if they felt the difference between the two parts of minimal pairs or not, but in fact, my implicit question addressed the question if the propositional content of the two utterances (one with and one without the scrutinized lexical item) was the same or not. The results clearly show that they did feel the difference between the two parts of minimal pairs. 40 participants were asked this question about 21 minimal pairs (20 participants about a set of 21 pairs in Questionnaire A, and 20 other participants about another set of 21 different pairs in Questionnaire B (see Appendix 3)), so I finally received 840 answers to the question if they think there is difference between the parts of the pair. Out of the 840 answers, only 113 (13.45%) claimed that there is no difference in meaning between the two parts of the pair. This finding is in contrast with mainstream DM literature which states that DMs do not change the propositional content of an utterance (Schourup 1999, González 2004). A possible explanation for this phenomenon perhaps lies in the way I put the question was not explicit enough and I influenced them by giving the two versions that they do differ in meaning. Perhaps they reported to feel a difference because there was a clearly visible and audible additional word in one of them. As a consequence, I came up with the idea of scaling the optionality/necessity of the items on a 1-4 Likert scale (so as to force them avoid choosing the "easy" option, that is, medial 3) in the second round of questionnaires.

Not surprisingly, the informants assigned a wide variety of functions[47]; therefore, I had to collapse several similar functional categories. They mentioned the following differences between the two parts of the minimal pairs containing ***mondjuk*** (~'say'), emphasizing that the additional word in bold fonts (that is, *mondjuk)* means, introduces or expresses:

- example, giving example, supporting ideas (identified in the first round as *core* functions)
- approximation, guessing a number
- meaning: 'but', contrast, limitation, disadvantage
- explanation, providing details

[47] When evaluating the replies I noticed that male informants gave shorter answers about the nature of the difference they feel between the parts of pairs.

- uncertainty, ambiguity
- delay, searching for ideas
- topic shift, change in attitude, shift of perspective
- less important, less relevant information

I collapsed the categories listed in the same row (under the same bullet point) due to their similarity and overlaps. The functions are presented in decreasing order in terms of the replies received. That is why giving example and supporting ideas are interpreted as *core* functions, while the rest are seen as *peripheral* functions, in this first round at least.

Secondly, the informants answered that the two parts of the minimal pairs containing ***ugye*** (~*'is that so?*') differ from one another since the item *ugye* expresses:

- explanation, giving further details, additional information (identified as *core* functions in the first round)
- marks obvious/clear/evident things, known/given information
- ~'being a smart Alec' (to put it in the words of the informants, in Hungarian: *okoskodni*)
- question marking, expecting agreement/acceptance, rhetorical question
- search for words or ideas, gaining time
- no meaning, filler word

The lists again reflect my division and categorisation of the answers, in decreasing order of the number of answers.

Thirdly, utterances involving ***amúgy*** (~*'otherwise*') differ from their counterparts, as in the one with the additional word, *amúgy* marks:

- topic elaboration, giving (useful) additional details, giving comments (interpreted as *core* functions in the first round)
- giving unrequested, not asked information (too many or irrelevant details or unwanted opinion)
- contrast
- meaning: 'in general', 'generally', 'usually', 'in normal circumstances' (note: non-DM use, conceptual meaning)

- meaning: 'in a different way', 'in the opposite way' (note: non-DM use, conceptual meaning)
- topic shift, topic change, meaning: 'otherwise', 'by the way'

Finally, I categorized the informants' answers about the differences between the utterances (one involving a DM, the other does not), that is, the role, function or meaning of DMs. The forty informants assigned altogether 2055 answers (meanings, functions, roles) about the 21–21 utterances/adjacency pairs; which mean that they listed 2.44 functions/roles/meanings on average to each utterance/adjacency pair. The following table (Table 3.2) displays the categories coined by the subjects, the numbers of identical answers/categories and the way I collapsed their categories:

Categories coined by informants	Number of identical answers (from 40 participants)	Collapsed categories to be used in Questionnaire C in the second round
explanation	323	explanation
giving details	76	
giving excuses (~'magyarázkodás')	14	
commenting, commentary	83	commenting
giving opinion	112	
giving unasked/unrequested personal opinion	25	
not closely related story, side sequence	11	
filler, filler word, empty word, no meaning, unnecessary item, omittable item	331	filler
emphasizing the point/opinion of the speaker	87	emphasis
emphasizing a piece of information, calls attention to a detail	45	
the speaker introduces obvious/evident things but still finds it important/necessary to emphasize them	18	
marking contrast with own previous discourse segment	85	contrast or concession
signalling contrast with the other speaker's previous utterance	33	
admitting something	11	
adding something, usually a new perspective and thus conceding a previously claimed argument (may overlap with the category of new information/new perspective, fuzzy sets)	25	
giving a counter-argument	9	
pointing/referring to the background	55	background

knowledge of the listener		knowledge or background information
marking evident information	15	
introducing less relevant, background information that is useful for understanding the argumentation in the utterance	20	
rhetorical question	3	
introducing an example, giving an example, means 'for example', 'like', 'such as'	188	example
giving details	13	
supporting own ideas	4	
tag question, question word, rogative word	41	question
signals a question	67	
expresses that the speaker expects a positive reply (agreement or acceptance)	12	
means 'about', 'approximately', 'like'	61	approximation
introduces a guess	4	
introduces a new piece of information	44	new information or new perspective
introduces a new perspective	40	
marking positive or negative attitude towards the conversation partner	41	attitude-marking
marking positive or negative attitude towards the discourse topic	12	
expecting agreement (may sometimes overlap with question)	9	
lexical search, recall	21	uncertainty or lexical search
expresses uncertainty on part of the speaker	54	
delay, delaying device	10	
topic shift, topic change, thematic change	53	topic change

Table 3.2 *Categorization of the informants' answers*

The most frequently assigned category is *explanation* which might suggest that informants indicated the communicative purposes and functions of the whole utterance instead of the single lexical item. This fact must be kept in mind and carefully handled during the interpretation of the answers.

Overlapping categories included *uncertainty* (as a cognitive feature), *lexical search* (as a a speech management function) and *approximation* which were later merged for the purpose of the disambiguation study since their machine-extractable surface features are very similar, so they are difficult to distinguish.

The table below (Table 3.3) provides the abbreviations and the prototypical description of the core members of the categories identified by my informants and simplified as well as categorized by me:

Abbreviated labels of categories	**Names of functional categories**	**Underspecified descriptions of the role of the core members of the categories**
TCH	topic change	introduces or signals topic change or topic shift, the DM plays a role in the thematic control of the conversation
EXAM	example	gives or signals an example (~'for example')
QST	question	a tag question that indicates a question which is expecting a positive answer, acceptance or agreement from the hearer; therefore, it involves the hearer in the discourse and challenges his/her position; it may strengthen the provoking force of an utterance
APPR	approximation	~'about', 'approximately'
EXPL	explanation	DM used during/to introduce/to signal explanations or giving excuses , introduces an objective reason or example that supports the

		content/arguments of the utterance of the speaker, may mark evidentiality[48]; may take the form of rhetorical questions (note: EXPL may overlap with the example, commenting and new information or new perspective categories, they are fuzzy sets)
UC/LS	uncertainty or lexical search	expresses the uncertainty of the speaker about what s/he is saying or is going/about to say; fills in the time used for thinking
CON	contrast or concession	links contrasting/opposing views (~'but') and discourse segments; may mark token agreement, softened disagreement, and may soften the illocutionary force of the utterance
COMM	commenting, commentary	gives personal comments, subjective opinion[49] or less important additional information
NEW	new perspective or new information	introduces a new perspective or new information
ATT	attitude-marking	expresses the attitude of the speaker towards the listener and/or the discourse topic, e.g. signalling sympathy or politeness
BCKG	background knowledge/information	refers to common ground, common background knowledge or obvious things, marks evidentiality
EMPH	emphasis	emphasizes something, aggravator, intensifier
FILL	filler	seemingly meaningless item, with little or no semantic contribution to discourse

Table 3.3 *Abbreviations and the prototypical description of the core members of the functional categories of DMs to be used in Questionnaire C*

[48] On evidentiality cf. Chafe (1986)

[49] The difference between comments and explanaions is that while the former is subjective, the latter is rather objective.

As seen from the labels and descriptions of categories above, they are rather **underspecified**, and should be seen as **fuzzy categories/sets**, since the borderline among them is not clear in every case. However, the answers identify the **salient** functions of DMs as seen by average language users. The most salient functions identified will be the target of disambiguation attempts described later in Chapter 3.4.

In the second round of questionnaires (see Appendix 3A for Questionnaire C in Hungarian, see Appendix 3B for Questionnaire C in English), I used the same list of categories for all three items so that the results will be comparable in terms of functions and items as well. The names and the brief underspecified descriptions of the categories provided for the informants were as follows:

1. Topic change (initiating, introducing topic change)
2. Giving an example
3. Expressing a question which expects a positive answer or agreement
4. Approximation, guess (~'more or less so', 'like', 'about')
5. Explanation or introducing an explanation
6. Lexical search or uncertainty (recalling something)
7. Contrast, concession, opposing views or ideas (~'as opposed to', 'while', 'on the other hand')
8. Marking the addition of extra information, commentary, unrequested opinion, side sequence (~'by the way')
9. Introducing new piece of important information, new perspective
10. Attitude marking, expressing personal feelings towards the discourse topic or the listener
11. Referring to background knowledge of the listener, to common knowledge or trivia, referring to already communicated content
12. Emphasising, calling attention to a detail
13. Filler, empty word without meaning, omittable, unnecessary item that does no add meaning to the utterance
14. Other functions (ragbag category)

3.2.3 Results of the second round of questionnaires

The present chapter discusses the results of the second round of the questionnaire. The results will be described in three sections: the findings on (1) *mondjuk* (~*'say'*), (2) *ugye* (~*'is that so?'*), and (3) *amúgy* (~*'otherwise'*). The sections on the individual items will be divided into three further parts: the discussion of (1) the answers on the optionality/necessity of the item, (2) the distribution of the functional categories assigned to the items, and (3) the analyses of a few example utterances in the light of the informants' answers.

56 informants (35 female and 21 male university students; described in more detail in Appendix 2.C) participated in my questionnaire survey. The majors of my informants included English language BA, Pharmacy, Liberal Arts/Philosophy BA, History BA and Digital Humanities MA.

As for the tasks of the informants (n=56) in this questionnaire (see Appendix 3 under the heading Questionnaire C), they were instructed to assign one or more of the 14 functions to the highlighted token in each example utterance. The transcripts of the examples and the answer sheets with the pre-defined list of functions were distributed and briefly explained[50]. The subjects were told that a token (a lexical item in bold fonts) may have multiple functions. After giving them enough time to familiarise with the task sheet and the categories and ask questions about the task, I played each video excerpt twice with a short pause. Naturally, where it was necessary, the informants were familiarised with the context of each video excerpt. They were reminded to watch the video instead of looking downward and reading the transcript while listening to the extract. After the informants had watched the video clip for the second time, they were given some more time read the transcript and the categories. As mentioned before, subjects were allowed to assign multiple functions to each utterance, as many as they felt necessary. 7 instances of *mondjuk* received 482 labels by the informants, *amúgy* was assigned 494, *ugye* was tagged 488 functions by the 56 informants[51]. I included an 'other'

[50] It must be mentioned that the functional categories are subject to individual informants' interpretations.

[51] Surprisingly, in the first round, *mondjuk* and *ugye* received more answers/categories than *amúgy*.

option as well on the right side of the answer sheet where informants could write their alternative replies in the box after the number of each utterance.

The second task of the participants was to mark the degree of the optionality/necessity of the highlighted lexical item in the examples on a 4-point Likert-type scale ranging from 1 to 4 where value 1 indicates that the word in entirely optional (it can be omitted) and value 4 expresses that is is an entirely necessary component of the meaning of the utterance (it cannot be omitted). Let me repeat here the instructions given to the informants (that you can also read both in English and Hungarian in the Questionnaire C section of Appendix 3):

- value 1 means: the words in bold can be left out of the sentences without a change in the meaning
- value 2 means: the word slightly modifies the meaning of the utterance and adds a bit of subtlety to its meaning
- value 3 means: the word considerably modifies the meaning of the utterance
- value 4 means: the word alters the meaning of the statement essentially, and without it, the statement would become meaningless, or have a different meaning

After I had entered the answers of informants into Microsoft Office Excel 2007 and SPSS 19.0, I performed Pearson's Chi-Square test, and independent samples t-test to see if there is a statistically significant difference between the distribution of the assigned functions in the judgements of male and female informants. Since their proportion was not the same (35 females, 21 males), I normalized the number of their replies in order to make their judgements comparable.

3.2.3.1 Findings about *mondjuk (~'say')*

This section describes the subjects' interpretations and optionality/necessity judgements about the utterances in Questionnaire C that contain the DM *mondjuk* (~*'say*'). Let me first paste here the relevant parts of Questionnaire C (translated from Hungarian into English) in order to help you follow the findings presented in this section. The examples in this section will be referred to by their numerical code provided in Table 3.4 below:

Code of example	Transcript
1.	• What are your salary requirements for this job? • Well, **mondjuk** about 250-300,000 HUF a month.
2.	• Here [in Debrecen], there's more to experience and to see, for me at least. • **Mondjuk** there [in Miskolc] there are beautiful mountains.
3.	• The accommodation was in the Soho which is one of the most dangerous neighborhoods in London, and two African-American young men stopped us and asked if we could give them some change. I said, sure, why not, there you go, ten pence. 'Cause, based on Hungarian mentality, whatever I give makes them happy, so, **mondjuk** in Hungary I actually never give anything. And then he said, well, it wasn't enough, I should give him ten pounds.
4.	• These things are good, I also tried some of them, **mondjuk** only Kung fu, for a month, but that was shaolin Kung fu, there were no stages like that, I think.
5.	• What sort of position wouldn't you work in? This is to be meant generally. So, what kind of work do you feel to be far from you? • From any point of view? • Yes. • Well, **mondjuk** I wouldn't work on a pig shed.
6.	• The goal is exactly to provoke surprise. • Yes. Wow, I was really surprised! I was trying to hold myself back. • **Mondjuk** I didn't notice. • I know, because I tried to hold my reaction back.
7.	• Is very delicious. Try it. • But I haven't even seen it. Can you get this in the supermarket? • Yeah, you can, like in Tesco for example. • Aha, aha. • **Mondjuk** It's not cheap.
Sorszám	**Beszélgetések szöveges átirata**
1.	• Mik az elképzelései a fizetési igényről? Vagy mi az az összeg, amiért elvállalná ezt a munkát? • Hát, **mondjuk** ilyen kétszázötven-háromszázezer forint havonta.

Code of example	Transcript
2.	• Itt [Debrecenben] több az élmény meg a látnivaló, nekem legalábbis. • **Mondjuk** ott [Miskolc körül] meg vannak szép hegyek.
3.	• Soho-ban volt a szállás, tehát az egyik legveszélyesebb környékén Londonnak, és két afro-amerikai fiatalember jött oda, és kérdezték, hogy tudnánk-e adni nekik pénzt. Mondom hát persze, hogyne tudnánk, itt van tíz penny. Hát magyar mentalitásból indultam ki, hogy bármit, amit adok, annak örülnek, úgyhogy, **mondjuk** Magyarországon nem szoktam adni igazából. És akkor mondta, hogy hát neki ez nem elég, adjak már neki tíz fontot.
4.	• Ezek jók, én is kipróbáltam párat, **mondjuk** a kung-fut csak egy hónapig, de az shaolin kung-fu volt, ott szerintem nem is voltak ilyen fokozatok.
5.	• Milyen jellegű az a pozíció, amiben nem dolgozna? Ez általában értendő a kérdés. Tehát mi az a munkakör, amit olyan távolállónak érez? • Bárhonnan? • Igen. • Hát **mondjuk** sertéstelepen nem szívesen dolgoznék.
6.	• Ennek pont az a célja, hogy meglepetést provokáljon ki. • Uhum. Hú nagyon meglepődtem!Úgyhogy próbáltam visszafogni magam. • **Mondjuk** nem látszott annyira. • Tudom próbáltam visszafogni a reakciót.
7.	• Finom nagyon. Próbáld ki! • Hát de nem is láttam. Ezt lehet boltban kapni? • Aha, lehet boltba, például a Tescoba is akár. • Aha, aha. • **Mondjuk** nem olcsó.

Table 3.4 *Examples with mondjuk (~'say') (listed first in English, then in Hungarian) from Questionnaire C and their numerical codes*

Figure 3.1 illustrates the distribution of the optionality/necessity values assigned to the utterances with *mondjuk* (~*'say*') in a box plot (also called box-and-whiskers plot)[52]. I have chosen this type of visual representation of my data because a box plot depicts the distribution of quantitative data by splitting the data into quartiles, which tells a lot about the proportion of the answers, and, at the same time, it is easy to read and interpret. The bottom line of the box indicates the 25th percentile, the middle line shows the median value of the dataset, and the top line represents the 75th percentile. The whiskers indicate

[52] A box plot summarizes the midpoint and range of a distribution by another, categorical, variable. The size of the box indicates the range of the middle 50% of values of the chosen variable, that is, the range from the 25th to the 75th quartile. A line across the box represents the median value. Whiskers extend from the box to reach the furthest values at either end, excluding *outliers* (Lewis-Beck, Bryman & Liao 2004).

the lowest and highest values in the data that are not outliers[53] (Lewis-Beck, Bryman & Liao 2004). The little dots/circles indicate outliers in the figure.

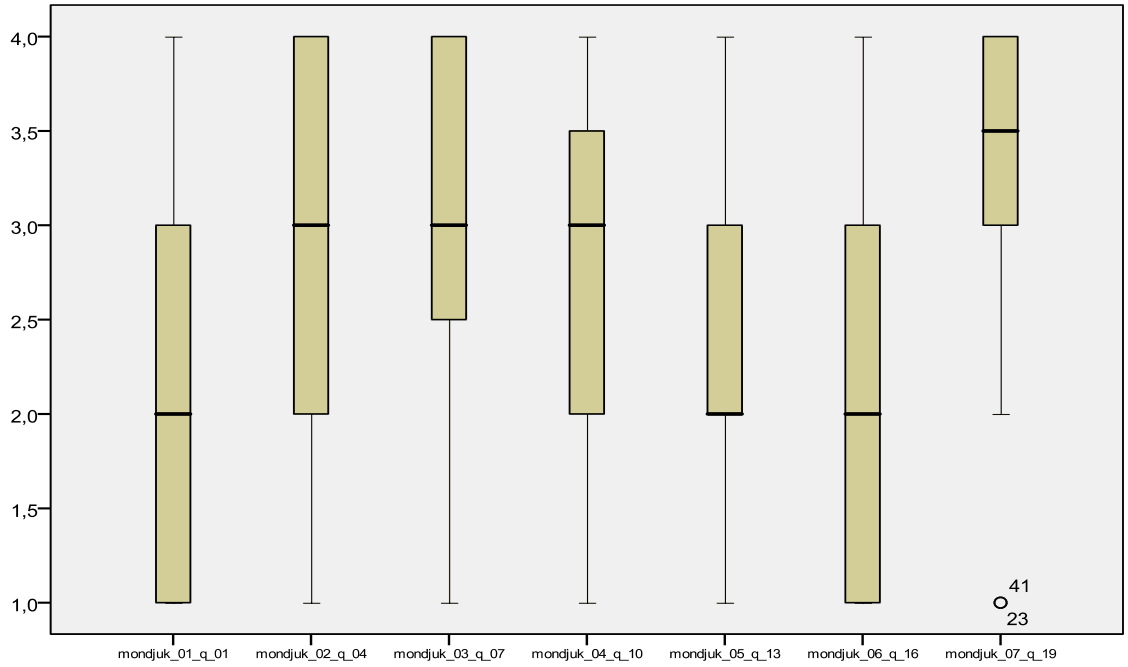

Figure 3.1 *Distributions of the optionality/necessity values (1–4) in seven different utterances with mondjuk* (~*'say*') *in Questionnaire C*

Figure 3.1 tells us that the middle tendency is to interpret *mondjuk* (~*'say*') as an element that modifies the meaning and/or adds subtlety to the meaning of the utterance(s). In examples[54] 1, 5 and 6, the central tendency was to assign value 2 to the *mondjuk* (~*'say*') tokens, while in examples 2, 3, 4 and 7, the central tendency was to assign value 3 to the tokens. *Mondjuk* (~*'say*') was interpreted as the most necessary among the seven utterances in example 7 where it expresses *concession*. *Mondjuk* (~*'say*') tokens were interpreted as the most optional and omittable among the seven items in examples 1 and 5 where the item marks *giving example* as well as in example 6 which was assigned multiple different categories, with a lot of *filler* answers among them. In fact, example 6

[53] An *outlier* is an observation that lies an abnormal distance from other values in a random sample from a population. The little dots/circles represent outliers in the figure (Lewis-Beck, Bryman & Liao 2004).

[54] You can find the English translations of the verbatim transcripts of the examples in Table 3.4.

was assigned the most filler tags among the seven items. Most of the scores fall into the upper part of the figure, the distribution of the values has a positive skew, which suggests that most people perceive *mondjuk* necessary and meaningful in the utterances.

Figure 3.2 illustrates the distribution of the assigned functions to the utterances:

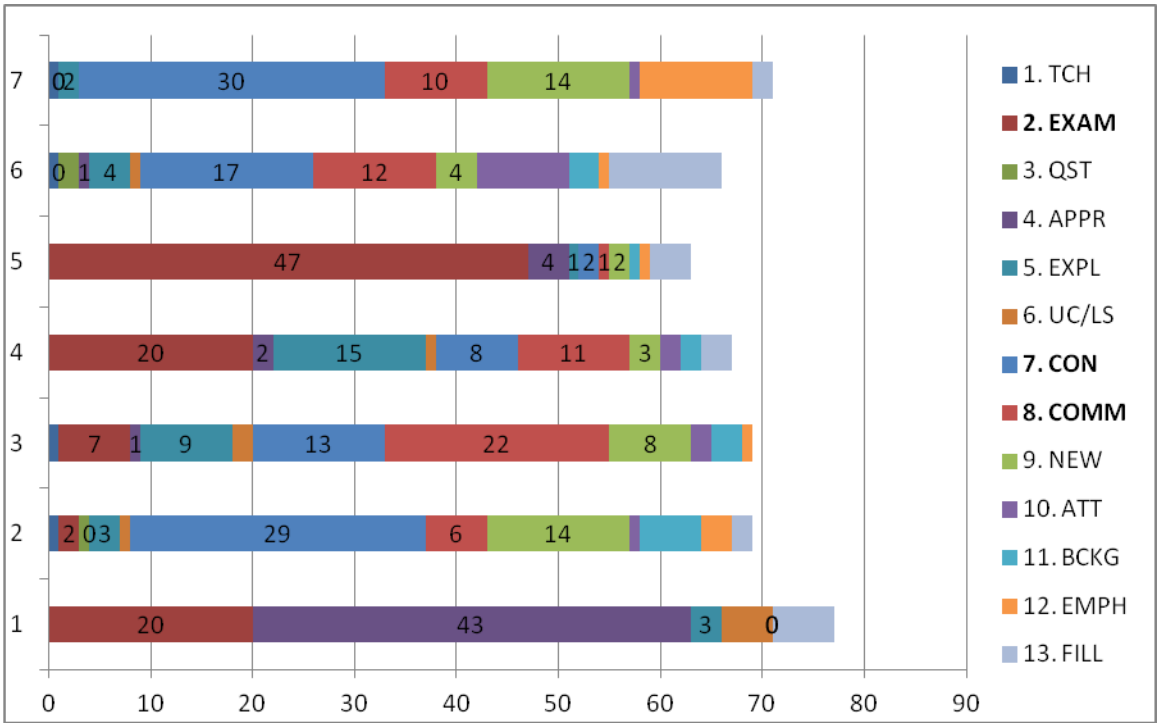

Figure 3.2 *Assigned functions of the utterances with mondjuk* (~*'say'*)

In the figure above the bars represent examples in the questionnaire with the numerical code of the utterances in front of each bar where the different colours stand for different functional categories coded as abbreviations[55]. It can be read in Figure 3.2 that examples 1 and 5 received the most homogeneous answers. The majority of informants assigned the function of *approximation* to example 1[56]. It must have been easy to interpret for the reason that it is followed by a numeral which implicitly suggests the function of *approximation.* Many of the subjects who perceived it as *approximation* also assigned the function of *giving example* to this utterance. Generally, the categories of *approximation* and *giving example* frequently co-occured in the answers of the informants. Besides, the categories of *approximation* and *uncertainty/lexical search* also

[55] You can find what the abbreviations stand for in Table 3.3.

[56] You can watch the video excerpt of example 1 at http://youtu.be/sgs7evZwyBw

often overlapped, especially when the numeral in the example was preceded by a pause or the acoustic realizations of hesitation.

As shown in Figure 3.2, *mondjuk* (~*'say*') in example 3[57] was assigned the highest number of and the most varied answers by the subjects. It was interpreted as a highly multifunctional DM, expressing *commenting* first of all, *contrast/concession* second of all, and *explanation* third of all. Let me mention here that none of the assigned functions is listed in the dictionary entries consulted (in section 2.2.6.1). When *mondjuk* is perceived to *give example*, it is interpreted to be smaller in scope, to refer only the the next adverbial phrase ("*mondjuk_DM* in Hungary"). When *mondjuk* is interpreted to mark *contrast/concession*, its scope is perceived to be larger, since it is seen as to mark a contrastive relationship between two clauses.

Mondjuk (~*'say*') was assigned the highest number of *filler* tags (among the seven questionnaire utterances) in example 6[58]. It was assigned many types of categories, which suggests that it is not a transparent lexical item. Similarly to example 3, it was also assigned *contrast/concession marking* first of all and *commenting* function second of all. *Mondjuk* (~*'say*') as a *contrast/concession marker* is larger in scope in example 6 since it indicates this relation between two utterances. The DM was also interpreted to mark the attitude and the politeness of the speaker.

As seen in bar 7 in Figure 3.2, *mondjuk* (~*'say*') in example 7 is also predominantly interpreted to mark the relation of *contrast/concession marker* between adjacent two utterances (of the interviewer and interviewee), so this example illustrates a highly pragmaticalized use of the DM *mondjuk*. Interestingly, it was also assigned functions not listed in dictionary entries, the functions of *emphasis* and *introducing new information*, since the DM was interpreted to emphasize the importance of the upcoming communicative content (upcoming new information).

My next research aim was to identify which functions are considered as more optional to signal verbally with a DM. Therefore, I organized the features of the items into a table (Table 3.5) to enable their comparison along several lines. I included in the table the two most salient functions of the each item assigned by the majority of the informants as well as the median optionality/necessity value of these two functions

[57] You can watch the video excerpt of example 3 at http://youtu.be/w6zaYWzX0SM

[58] You can watch the video excerpt of example 6 at http://youtu.be/3jI9UIO4a3g

respectively. I also aimed at finding a relation between the duration of the DM and its optionality/necessity value. Moreover, I also indicated in the table if the DM is accompanied by the simultaneous performance of manual gesticulation.

Numerical code of the examples with *mondjuk*	**Most salient function(s)**	**Hand movement**	**Duration of the segment (wordseg) (s)**	**Median optionality/ necessity value of the answers**
1	approximation; example	yes	0,61	2; 2
2	contrast/concession; new information	no	0,16	3; 3
3	commenting; contrast/concession	yes	0,32	3; 3
4	giving example; explanation	no	0,22	3; 2
5	giving example	no	0,18	2
6	contrast/concession; filler	no	0,2 (F0 range: 158,93 Hz)	3; 2
7	contrast/concession; emphasis	no	0,58	3; 3

Table 3.5 *Multimodal descriptions of the utterances including mondjuk* (~*'say'*)

As can be read in Table 3.5, the function of marking *contrast/concession* was generally assigned value 3, which means that average language users attribute an important role to this function of *mondjuk* (~*'say'*). The explicit marking of this relation helps the processing and the intended understanding of the utterance. Without the DM *mondjuk*, these utterances would have a different implicature. On the other hand, the functions of *giving example* and *approximation* were mostly assigned value 2, which means that they are more omittable in these meanings than in marking *contrast/concession*. These communicative functions of the utterance (*giving example* and *approximation*) are obvious even if we omit the DM.

Concerning further factors in judging the optionality/necessity value of the DMs, I expected that duration has an impact on the perceived optionality/necessity of the DM,

and consequently, DMs that are uttered shorter receive lower, and DMs that are uttered longer receive higher values. Contrary to my expectations, I did not find a relation between duration and optionality/necessity value. For instance, *mondjuk* in example 1 was uttered the longest (0,61 s) out of the seven examples, although it was assigned only value 2 on the optionality/necessity scale.

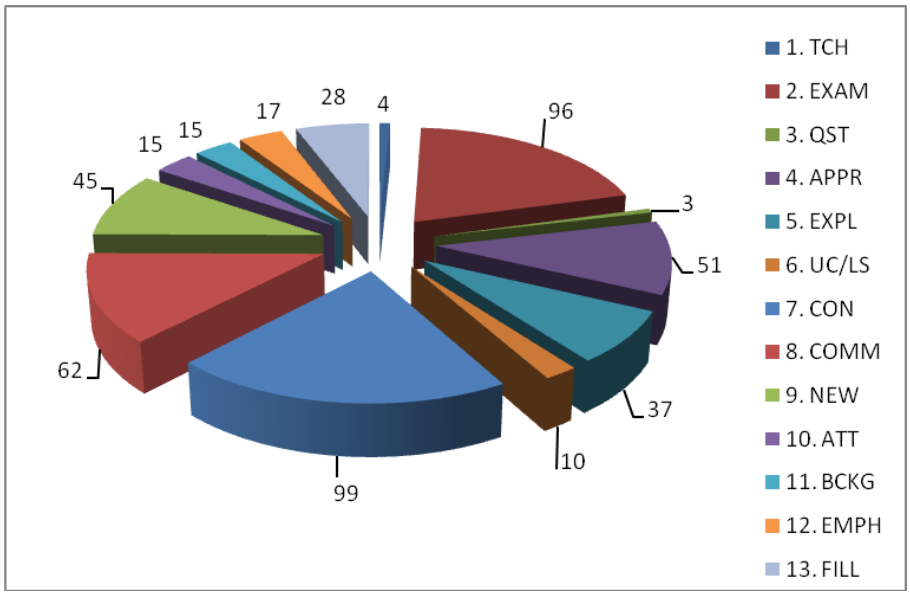

Figure 3.3 *Relative distributions of all assigned functions of the utterances with mondjuk* (~*'say'*)

As we can see in the above Figure 3.3, the intuitions of informants about the functions of the selected items support the hypothesis of the core/periphery approach; that is, each DM has *core* and *peripheral* functions. Frequent answers indicate the *core* communicative functions of *mondjuk* (that is, marking *contrast/concession* (21%) and *giving example* (20%), while rare categories show the *peripheral* uses and roles of the item (*commenting, approximation, uncertainty/lexical search, marking new information, explanation, filler, emphasis, attitude marking,* etc.). The explicit numerical borderline between *core* and *peripheral* functions is 20%; that is, functions that received 20% or more of the overall answers are considered *core* functions (one again, these are CON and EXAM), while functions that received less than 20% of the answers are considered *peripheral* functions (such as COMM with 12,6%, APPR with 10,5% and all the rest receiving much less than 10% of all the answers). It must also be kept in mind that the APs

in questionnaire C were selected in a way to cover all the textual and interpersonal functions of the items previously identified in questionnaires A and B whose APs were randomly selected.

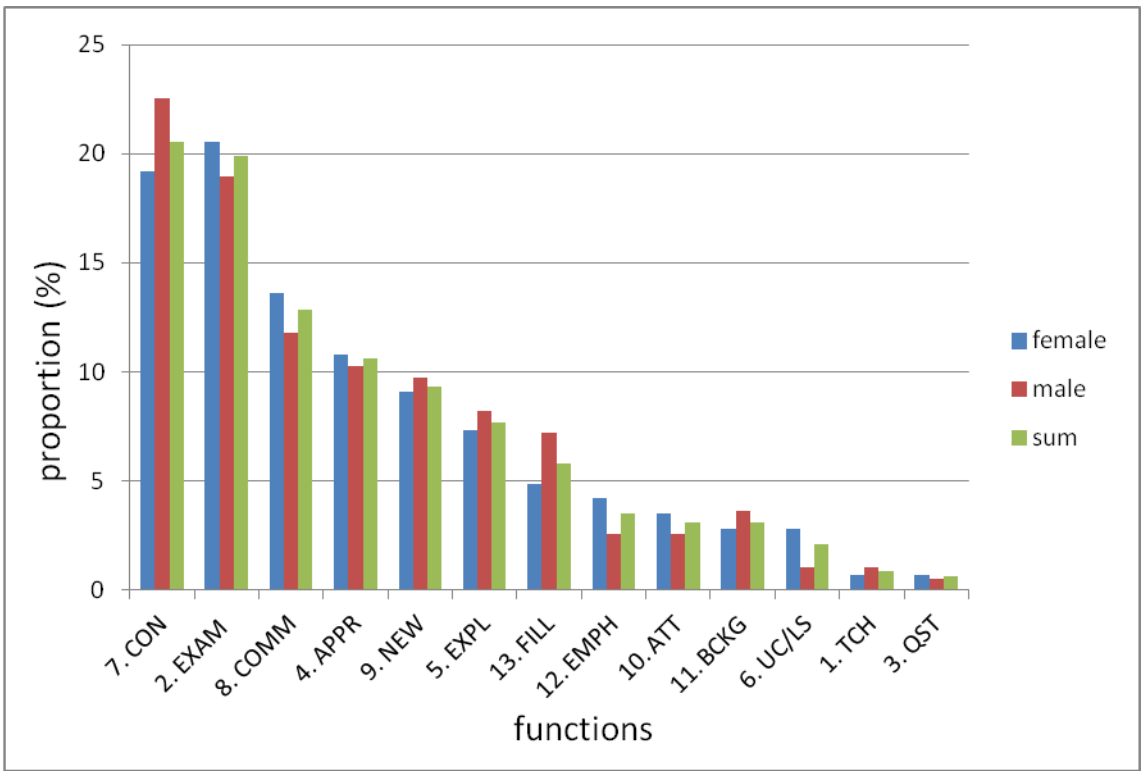

Figure 3.4 *Relative distributions (expressed in %) of assigned functions of mondjuk (~'say') in terms of gender*

Figure 3.4 presents gender differences in the interpretation of the items presents where axis x presents the abbreviations of the categories, and axis y displays the proportion of answers expressed in % with the red bar showing male informants' answers and the blue bar showing female informants' answers. As can be seen, the only suggestive (but statisticaslly insignificant[59]) differences are that male informants more frequently consider *mondjuk* to express *contrast/concession* or to act as a *filler* than female informants on the one hand, while female informants more typically consider *mondjuk* to mark *lexical search* and the *uncertainty* of the speaker on the other hand.

[59] Independent samples t-test and paired t-test were used.

3.2.3.2 Findings about *ugye (~'is that so?')*

The present section overviews the results of Questionnaire C (enclosed in Appendix C) concerning the informants' optionality/necessity judgements and interpretations about example utterances involving *ugye* (~*'is that so?*'). Table 3.6 presents the English translations of the examples taken from the HuComTech corpus. The examples in this section will be referred to by their numerical code provided in Table 3.6 below:

Code of examples	Transcript
1.	• I guess, in case I won't be able to find some job by then, I'll start working on my English then, because **ugye** now I still have a lot to learn.
2.	• I feel that basically I would be competent to work on something like this, moreover, **ugye** as I've said, I'm interested in it,too.
3.	• When we were driving with hundred-thirty, hundred-eighty kms/h, I started to think, like, that we should perhaps stop now, and not, like, practically chasing death, plus, like, risking my life, but then again, there was **ugye** the adrenaline spinning me up a lot, and it was good like that.
4.	• Japanese researchers found that cold beer may cause cancer. Do you know why? • No. • Because if you pour it on a crab [~'cancer' in Hungarian] then - on a sleeping crab, then it will wake up. • Ouch. • Well, I messed this one up **ugye** too, but… • No, this was good, I think. • And a very bad joke too. • No no, it wasn't bad.
5.	• I've been studying in Debrecen, first in the six-year-programme of Ady Endre Grammar School, and now I'm doing my final year majoring in English BA, **ugye** in this new three-year programme.
6.	• It was a happy moment when we took him home, it's **ugye** a shar pei, and so he was tiny like that, and very cute.
7.	• I'm sure I told you. • Is he at your parents now **ugye**? • Yes, yes. • If I remember well.
Sorszám	**Beszélgetések szöveges átirata**
1.	• Addigra úgy képzelem, hogy ha nem sikerül munkát találnom, akkor párhuzamosan elkezdeném fejleszteni a nyelvtudásomat, mer **ugye** még most angolból is hiányosságaim vannak.
2.	• Úgy érzem, hogy alapvetően tehát kompetens lennék arra, hogy ilyesmit csináljak, plusz **ugye**, ahogy mondtam, érdekel is.

Code of examples	Transcript
3.	• Aztán amikor ilyen százharminc-száznyolcvannal mentünk, akkor így elgondolkoztam, hogy lehet most kéne megállni, és nem így hajszolni lényegében így a halált, meg így kockára tenni így az életemet, de végülis **ugye** ott volt az adrenalin, és nagyon felpörgetett, és az úgy jó volt.
4.	• Japán tudósok felfedezték, hogy a hideg sör rákkeltő hatású. Tudod-e, hogy miért? • Nem. • Mert hogyha ráöntöd egy rákra, akkor az -- alvó rákra, akkor az felébred • Jaj. • Na ebbe is belesültem **ugye,** de -- • Nem, ez jó volt szerintem. • És nagyon rossz vicc. • Á, nem, nem rossz az.
5.	• Eddig Debrecenben tanultam, az Ady Endre Gimnáziumban hatosztályos képzésben, most pedig az egyetemen éppen végzős vagyok az anglisztika szakon, a BA képzésben, **ugye** ebben az új három éves képzésben.
6.	• Boldog élmény volt, mikor elhoztuk, **ugye** egy sharpeiről van szó, és hát ilyen kis pici volt, és nagyon aranyos.
7.	• Ő az, akiről meséltél egyszer a – • Biztos meséltem. • Most anyukádéknál van, **ugye?** • Igen, igen, • Ha jól emlékszem?

Table 3.6 *Transcript of utterances and adjacency pairs including ugye* (~*'is that so?*') *(first listed in English, then in Hungarian)*

Figure 3.5 below illustrates the proportion of the optionality/necessity judgements of the subjects assigned to the utterances with *ugye* (~*'is that so?*') in a box plot (for the definition of a box plot, see footnote 52).

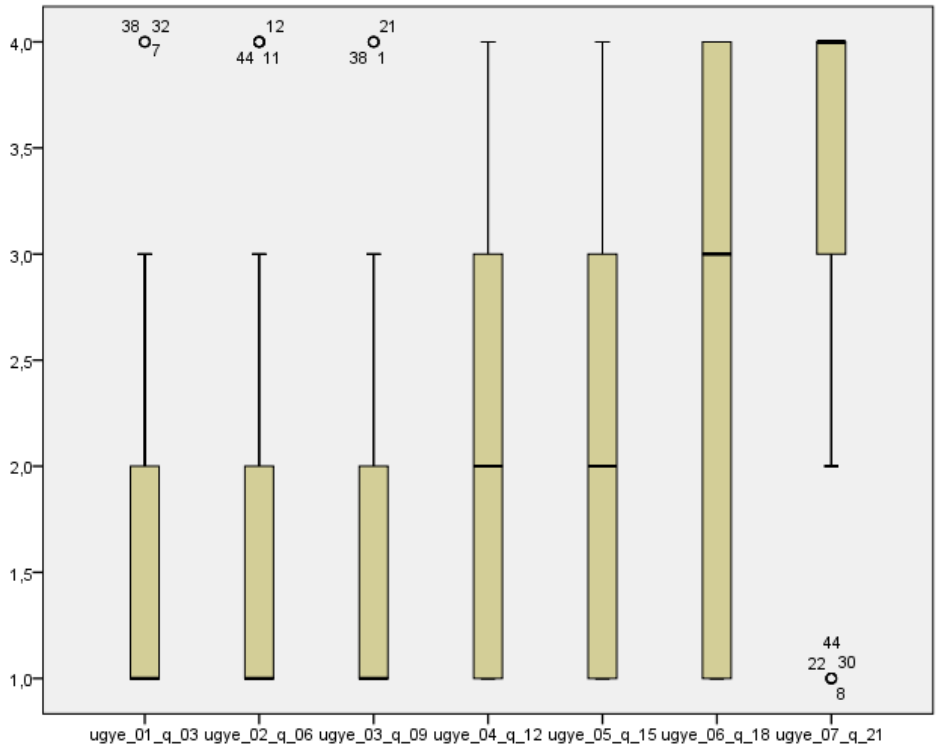

Figure 3.5 *Optionality values assigned to ugye*(~*'is that so?'*) *tokens in Questionnaire C*

Figure 3.5 suggests that the judgements of informants vary a lot depending on the meaning of *ugye* (~*'is that so?'*) and its role in the example utterance. In examples[60] 1, 2 and 3, the general tendency was to assign value 1 (meaning: optional, omittable item) to the *ugye* (~*'is that so?'*) tokens, while in examples 4 and 5, the central tendency was to assign value 2 to the items. *Ugye* (~*'is that so?'*) was assigned value 3 only in example 6, and value 4 only in example 7. It was interpreted as the most necessary among the seven utterances in example 7[61] where it is used as a tag question to check information. The speaker makes explicit by using *ugye* (~*'is that so?'*) that he should know or remember the answer to this question. In example 5 and 6 I interpret the primary role of *ugye* (~*'is that so?'*) as to mark the evidentiality of the information communicated in the host unit of the DM. Since the category of *evidentiality marker* was not among the offered functions to informants, they assigned various types of functional categories, including *explanation, giving background information* and *emphasis*. *Ugye* (~*'is that so?'*) tokens were interpreted as the most optional and omittable among the seven items in examples

60 You can find the English translations of the verbatim transcripts of the examples in Table 3.6.

61 You can watch the video extract of example 7 at http://youtu.be/1sd9BirHc9Q

1, 2 and 3 where they are used in explanatory narrative sequences. These instances were assigned multiple different categories, including a lot of *explanation, emphasis* and *filler* categories among them. Nevertheless, the majority of the scores fall into the lower part of the figure, which suggests that most subjects perceive *ugye* (~*'is that so?'*) as optional and omittable in these utterances.

Figure 3.6 displays the proportion of the assigned functions of *ugye* to each item in the examples. The colourful bars (including the different colours that stand for different functional categories coded by abbreviations[62]) represent the *ugye* examples in the questionnaire with the numerical code of the utterances in front of them.

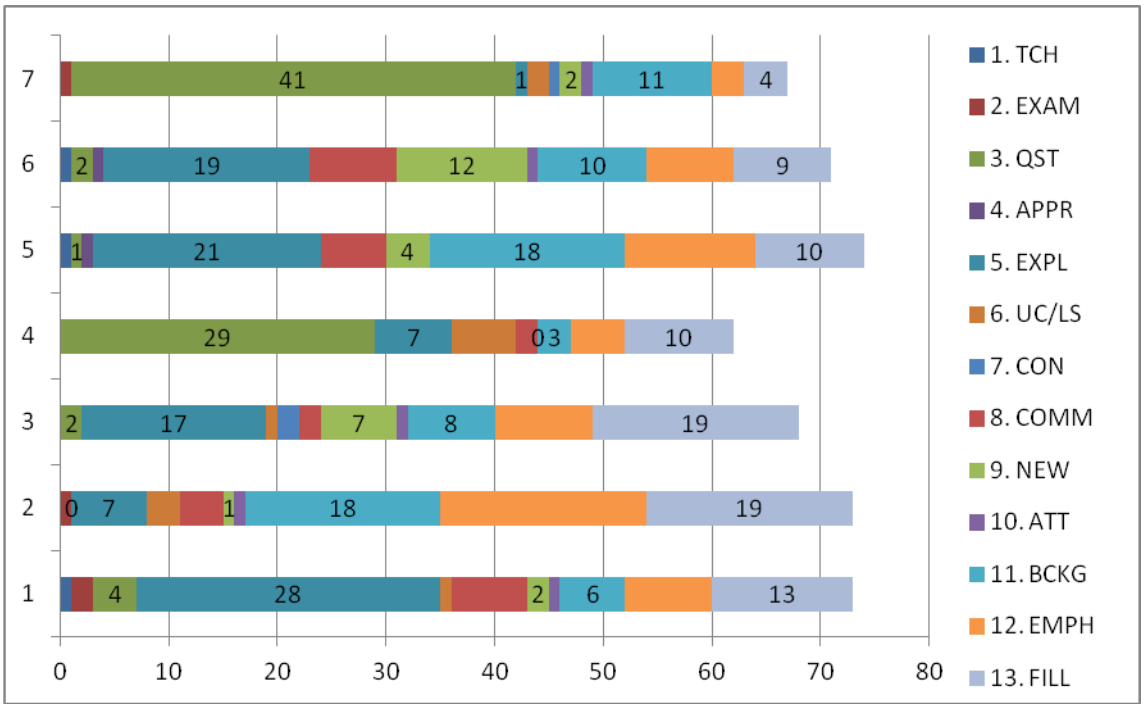

Figure 3.6 *Assigned functions of the utterances with ugye* (~*'is that so?'*)

As shown in Figure 3.6, example 7 was assigned the most homogeneous categories, with the *question marker* function dominating the answers. The position and the intonation pattern of *ugye* (~*'is that so?'*) made the question function evident. In examples 5, 6 and 7 *ugye* may be interpreted to refer back to previously mentioned, given information, but larger context would be necessary for the informants to interpret the utterance this way. Figure 3.7 presents the relative distribution of the categories assigned

[62] You can find what the abbreviations stand for in Table 3.3.

to *ugye* (~*'is that so?*') tokens. We can read from the pie chart that its most common, *core* role is to operate as an *explanation marker* (21%). Therefore, the numerical borderline between *core* and *peripheral* functions identified by me is 21%. This distinguishing proportion might seem little but it must be born in mind that DMs of various functions were selected on purpose and involved in this second round in order to map the entire functional spectra of the items. Second of all functions, *ugye* is perceived as a *filler* in 17% of the answers. Interestingly, as Figure 3.8 illustrates, male subjects were more likely to perceive it as a *filler* than female subjects. Concerning this second item on the list, which is rather unexpected, the question might be raised what the informants mean by the word *filler*[63] (*töltelékelem* in Hungarian, as they mostly referred to it). Based on the feedback of the informants given to my closing question in the questionnaire about the degree of difficulty of the tasks, I presume that they probably meant omittable *hesitation markers* when they referred to the concept of *fillers*. They typically marked both filler and hesitation items completely omittable in terms of contribution to utterance meaning. If the concept of a *filler* means *hesitation* to them, these items can be interpreted as omittable in the sense that they do not have discourse functions. In spite of the judgement of naïve language users, these items are not to be ignored when examining speech production since they are psycholinguistically and pragmatically relevant elements, implicitly informing the interlocutors about the speech planning process and the turn-keeping intention of the speaker. Based on the feedback of the informants, I interpret some of their filler choices as a quasi-functional category since they are by-products or acoustic realizations of disfluencies in cognitive processes, such as speech planning, and may express the uncertainty or hesitation of the speaker.

Third of all functions, *ugye* (~*'is that so?*') is perceived as a *marker of question* in these examples. *Background information* and *emphasis* were also assigned in a relatively high number of answers. *Peripheral* functions of *ugye* determined by the answers of the subjects involve *commenting/giving a commentary* and *introducing new information*. The rest of the functions (UC/LS, ATT, EXAM, CON, TCH ans APPR) were assigned in an ignorable number, under 2.5%.

[63] I would like to thank my opponents, Dr. Dér Csilla and Schirm Anita for their suggestion to look more closely at the filler answers and feedback of the informants.

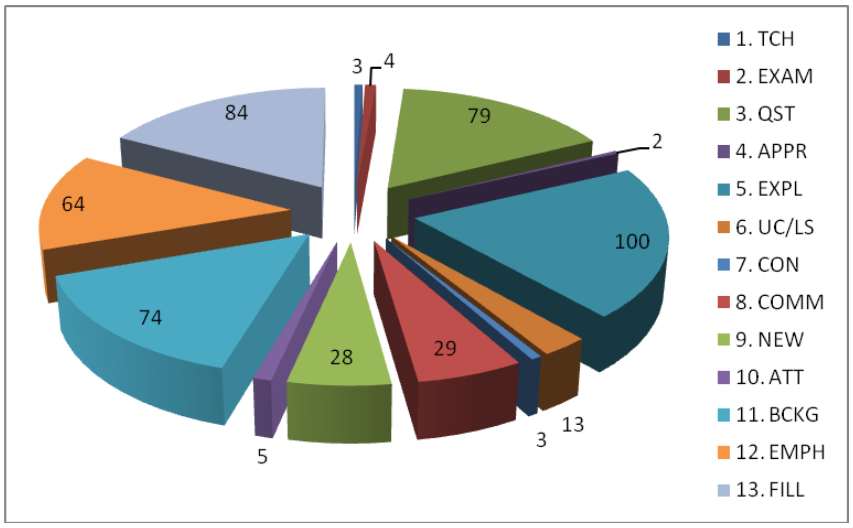

Figure 3.7 *Relative distributions of all assigned functions of the utterances with ugye* (~*'is that so?'*)

Naturally, the example utterances themselves have an impact on the functions assigned. Different sets of examples might have resulted in a different distribution of answers. However, I did not want to include more example utterances (with even more types of functions) due to the limited attention span of the informants.

Figure 3.8 displays the relative distribution of assigned functions of ugye in terms of gender. In short, neither independent samples t-test nor paired t-test identified a significant difference in the interpretation of the functions of *ugye* (~*'is that so?'*) in terms of the gender of the subjects.

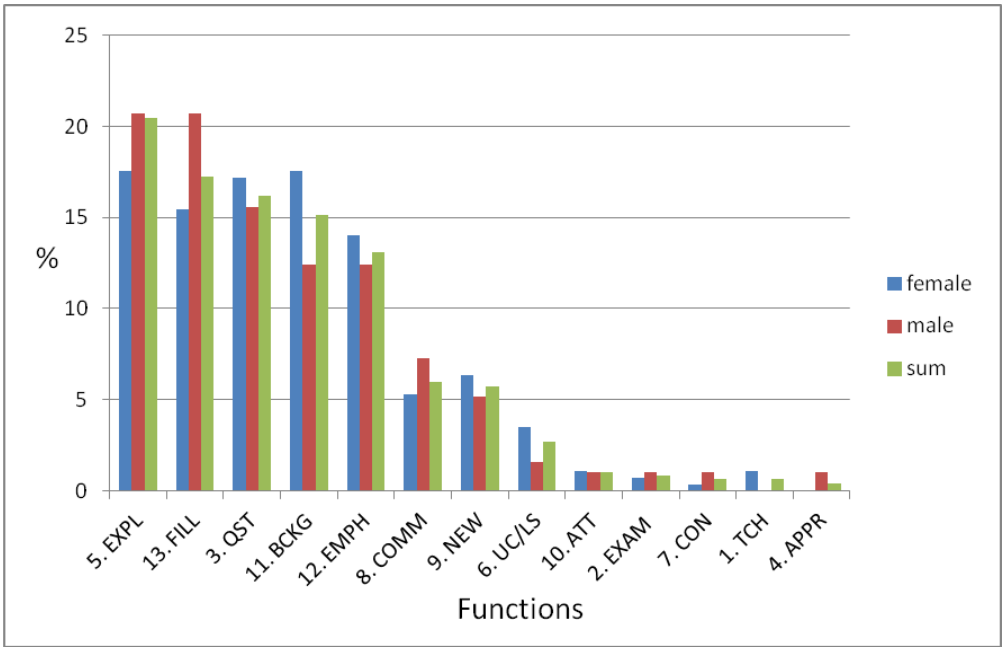

Figure 3.8 *Relative distributions of the functions of ugye* (~*'is that so?'*) *in terms of gender*

Table 3.7 below presents the two most common functions of each *ugye* (*~'is that so?*') item assigned by the majority of the informants as well as the median optionality/necessity value of these two functions respectively. Contrary to my expectations, I could not identify a relation again between the duration of the DM and its optionality/necessity value since most of the longer pronounced tokens (e.g. examples 1 and 2) were assigned lower while shorter uttered tokens (e.g. examples 4 and 6) were assigned higher values on the optionality/necessity scale (ranging from 1 to 4).

Numerical code of the examples with *ugye*	**Most salient function(s)**	**Hand movement**	**Duration of the segment (wordseg) (s)**	**Median optionality/ necessity value of these answers**
1	explanation; filler	no	0,39	1; 1
2	background; emphasis; filler	yes	0,38	1; 2; 1
3	filler; explanation	yes	0,22	1; 1
4	question; filler	no	0,17 (F0 range: 49,54)	3; 2
5	explanation; background	yes	0,18	2; 3
6	explanation, new information	no	0,21	3; 3
7	question marking; background	yes	0,34	4; 3

Table 3.7 *Multimodal descriptions of examples including ugye (~'is that so?')*

It can be concluded that *core* functions and *peripheral* roles can again be distinguished in the distribution of the answers of the subjects. However, the functions assigned display a less homogeneous pattern than in the case of *mondjuk (~'say').* This finding might imply two things: (1) that people need larger context to safely interpret the function of *ugye (~'is that so?'),* and/or (2) that *ugye (~'is that so?')* serves more functions than *mondjuk (~'say').*

3.2.3.3 Findings about *amúgy (~'otherwise')*

The goal of this section is to overview the interpretations and optionality/necessity judgements of the informants about the example utterances with the lexical item *amúgy (~'otherwise')* in Questionnaire C. For the sake of convenience, I insert the relevant parts of Questionnaire C (transcripts translated into English) in Table 3.8 in order to enable the readers to easily follow the findings, figures and tables.

As can be read in Table 3.8, the examples[64] contain non-DM, conceptual uses of the item as well because I was interested to see if subjects can identify them and what functions or comments they are assigned.

Code of examples	Transcript
1.	• He is also, he's working now a lot, too, so we can't meet so often even if I'm at home. • But he lives now in Budapest, doesn't he? • Yes, yes, yes. He's **amúgy** from Szolnok, but they've moved to Pest.
2.	• And, well, I remember him standing at the window, smoking 'cause he doesn't **amúgy** usually smoke in the house, but he was so stressed out that he just had to.
3.	• Unfortunately, I understood in English that he wanted to stab me. I, like, backed off a little, my sister, like, backed off too, and then we said we didn't have money on us. Well, we **amúgy** did have six hundred pounds and a notebook worth 200,000 HUF, so we didn't actually have cash, and then he was like pressing that we give him more.
4.	• All of them are about Chuck Norris, and how tough he is and stuff, that every kid wants a Superman T-shirt, but Superman wants one with Chuck Norris. • Hm, this one **amúgy** is good, too. • There are, there are some good ones among these.
5.	• I've been living here for two and a half years, but, dunno, I haven't been out to a lot of places, I've been to Club Tornado a couple of times. But I'm **amúgy** not like such a party animal.
6.	• Then there was a group or more that I took that decided that, yes, so they didn't want to drive there on the highway, but let's rather through Pilis. Now that was when I, like, almost threw up, and I was the last one to get to the peak. Well, they were trained Germans. 'Cause **amúgy** they were an age group around sixty, but they are quite sporty.
7.	• What I can remember is that for instance I was asked the same question, what would upset me, and it was like, well, so it's good to be prepared for this kind of questions, 'cause **amúgy** it can really surprise you. • Yes, it did surprise me indeed.

[64] The examples in this section will be referred to by their numerical code provided in Table 3.8.

Code of examples	Transcript
Sorszám	**Beszélgetések szöveges átirata**
1.	• Meg hát ő is, ő is most elég sokat dolgozik, úgyhogy még ha otthon vagyok, akkor se mindig tudunk találkozni. • De ő Pesten lakik most, nem? • Igen, igen, igen. **Amúgy** szolnoki, de most má Pestre költöztek.
2.	• Meg hát emlékszem, ott állt az ablakba, és így cigizett, mer **amúgy** nem szokott a lakásba rágyújtani, de akkor annyira ideges volt, hogy muszáj volt neki.
3.	• Sajnos értettem angolul, hogy meg akar késelni. Egy kicsit úgy hátrahőköltem, nővérem így kettőt hátrahőkölt, és akko mondtuk, hogy hát de nincs nálunk pénz értse meg. Hát **amúgy** volt hatszáz font meg egy kétszázezer forintos notebook, tehát végülis nem volt nálunk pénz, és akkor ott erősködött, hogy de igen.
4.	• Mindegyik arról szól, hogy Chuck Norris milyen kemény meg izé, hogy kiskorába mindenki Superman-es pólót akar, Superman viszont Chuck Norris-osat. • Hm, ez jó **amúgy** ez is. • Vannak, vannak ezek között jók.
5.	• Már két és fél éve itt lakom, de mit tudom én, nem voltam olyan sok helyen, Tornádóba voltam talán párszor. • Annyira **amúgy** én nem vagyok ilyen buliember.
6.	• Aztán volt olyan csoport, vagy több ilyet is vittem, akik úgy döntöttek, hogy igen tehát nem akarnak ott a főúton menni, hanem inkább menjünk a Pilisen keresztül. Na, ott aztán én izé dobtam ki a tacssot majdnem, még én értem föl utoljára. Hát edzett németek voltak. Mer **amúgy** ilyen hatvan év körüli korosztály, de hát ők ilyen sportosak.
7.	• Amik így eszembe jutottak, hogy tőlem is ezt például kérdezték tőlem, hogy ez hogy mi idegesítene, és ez olyan –, hát szal erre jó fölkészülni, mer **amúgy** eléggé váratlanul tudja érni az embert • Igen, ez tényleg váratlanul ért.

Table 3.8 *Transcript of utterances and adjacency pairs including amúgy (~'otherwise') in Questionnaire C (first listed in English, then in Hungarian)*

Figure 3.9 displays the distribution of the optionality/necessity scores assigned to the utterances with *amúgy (~'otherwise')* in a box plot. The thick line in each box shows the median value of the dataset. Figure 3.9 suggests that the tendency is to interpret *amúgy (~'otherwise')* to modify meaning or add subtlety to meaning. Most of the scores are placed in the medium part of the figure, which implies that most people perceive it as a necessary lexical item in the examples.

In example 1[65] *amúgy (~'otherwise')* can be analysed as a DM, meaning ~'otherwise'. In this example it is not an optional item since the implicature of the

[65] The video excerpt of example 1 is available at http://youtu.be/l9NwpCL885Y

utterance would be different without it as it makes explicit the relation of contrast between the clauses. Accordingly, it was assigned value 2 and 3 by the majority of the subjects.

The *amúgy (~'otherwise')* tokens in example 2 and example 7[66] can be glossed as ~'in the opposite way', 'in other circumstances'. These items are not interpreted as DMs because they have propositional, conceptual meaning, and the utterance would sound different and illogical without them.

Amúgy (~'otherwise') was assigned the lowest optionality scores and the most *filler* tags in example 4[67] where it can be left out without modifying the meaning of the utterance since it simply introduces an opinion which function is explicit even without the DM. Similarly, the *amúgy (~'otherwise')* token in example 5 introduces a *commentary* and is predominantly perceived as an optional item.

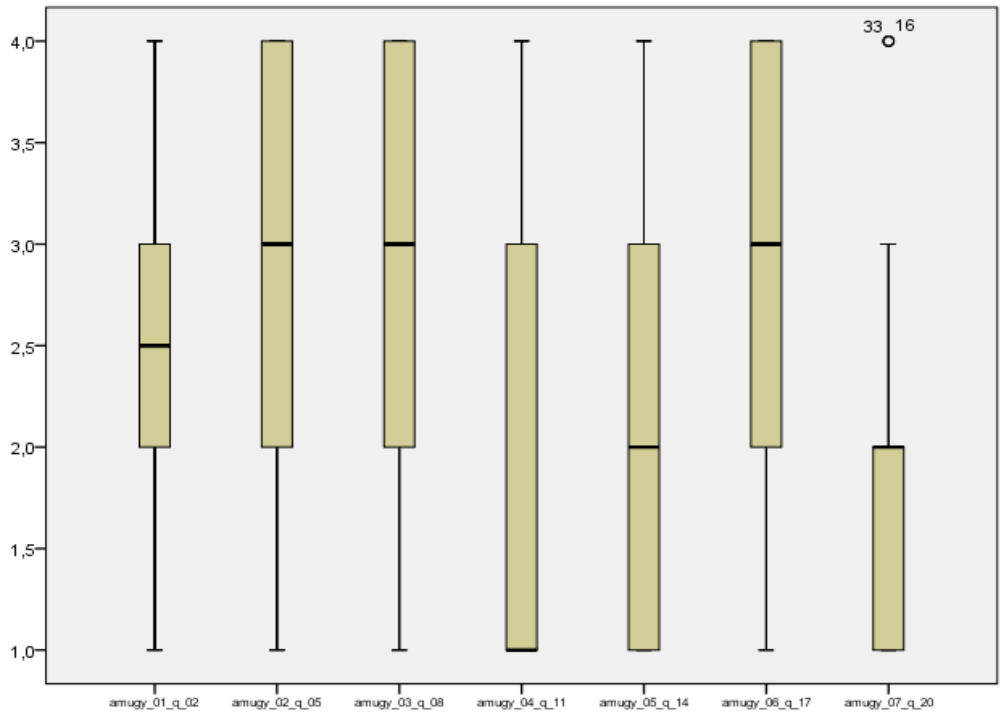

Figure 3.9 *Optionallity/necessity scores assigned to amúgy (~'otherwise') tokens*

66 The video excerpt of example 7 is available at http://youtu.be/MyHh_CbmqpU

67 The video excerpt of example 4 is available at http://youtu.be/7Q0yVgDfIv0

Figure 3.10 shows the distribution of the functional categories assigned to the utterances. In the figure below the bars represent examples in the questionnaire with the numerical code of the utterances in front of them. It can be read from Figure 3.10 that examples 1, 2, 3 and 6 received quite similar and relatively homogeneous answers with a very similar pattern and frequency of replies: they were all assigned marking *contrast*/*concession*, *commentary* and *new information* categories (in this order).

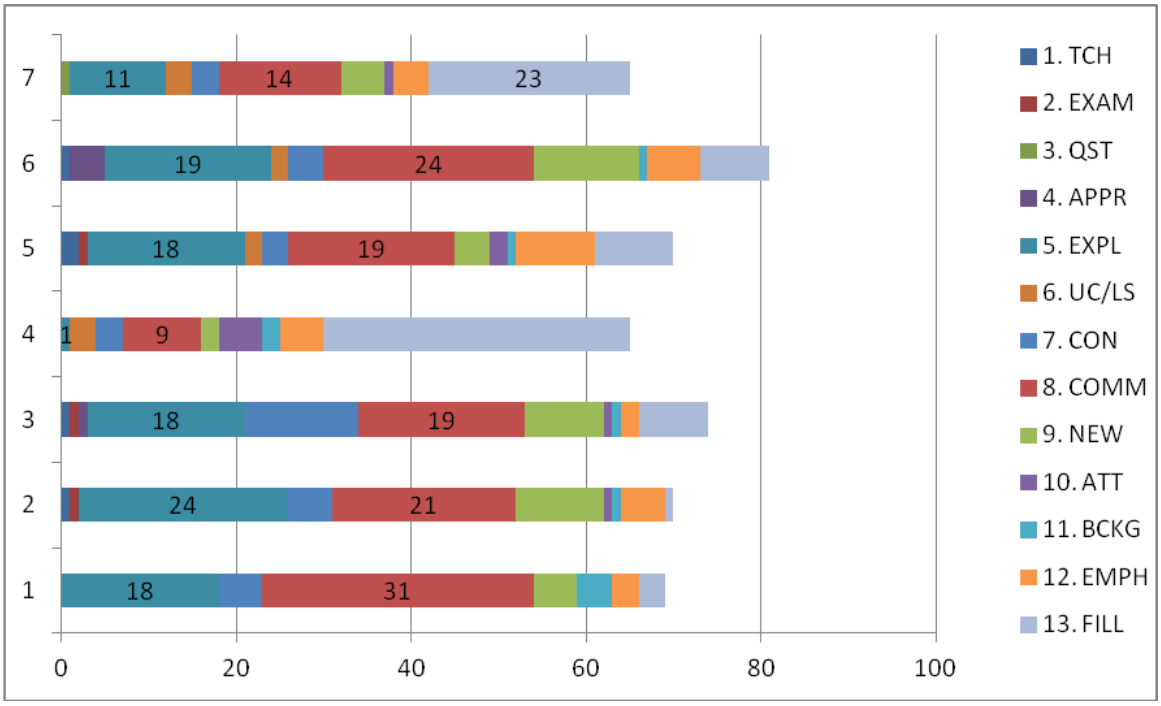

Figure 3.10 *The proportion of the assigned functions of amúgy (~'otherwise')*

My further goal was to uncover which functions are perceived as more optional to signal verbally with a DM. Therefore, I organized the features of the items into a table (Table 3.9) with the inclusion of the most common functions and the optionality/necessity values of each item. As can be read in Table 3.9, not surprisingly, *filler* items received low values (mostly 1, or 2), while the functions of commenting and explanation were typically assigned value 3, which means that average language users attribute an important role to these functions of *amúgy (~'otherwise')*. Prior to the analysis, I hypothesized that duration has an impact on the optionality/necessity of the DM in the interpretations of the subjects, and, consequently, DMs that are uttered shorter receive lower values, while longer pronounced DMs receive higher values.

Contrary to my expectations, I did not find a relation between duration and optionality/necessity value, so this hypothesis must be rejected.

Numerical code of the examples with *amúgy*	**Most salient function(s)**	**Hand movement**	**Duration of the segment (wordseg) (s)**	**Median optionality/ necessity value of the answers**	**Comments**
1	commenting	no	0,4	3	
2	explanation; commenting	no	0,23	3	non-DM (~'máskor', '*különben'*)
3	commenting; explanation	no	0,34	3	marker of concession
4	filler	no	0,42	1; 2	
5	explanation; commenting	no	0,21	2	
6	explanation; commenting	no	0,18	3	
7	filler	no	0,27	2	non-DM (~'egyébként', 'más*különben'*)

Table 3.9 *Multimodal descriptions of examples including amúgy (~'otherwise')*

As shown in Figure 3.11, c*ore* functions and *peripheral* functions can again be distinguished. *Commenting* is clearly the most frequently marked (27,7%) function by *amúgy(~'otherwise')*. It is followed by the function of *explanation* and its use as *filler*. The rest of the functions are its *peripheral* functions.

Before processing the answers, I expected to get more answers assigning the function of topic change to *amúgy (~'otherwise')*. Perhaps informants would have required larger context than providing them with only APs to identify the topic changing function of *amúgy (~'otherwise')*.

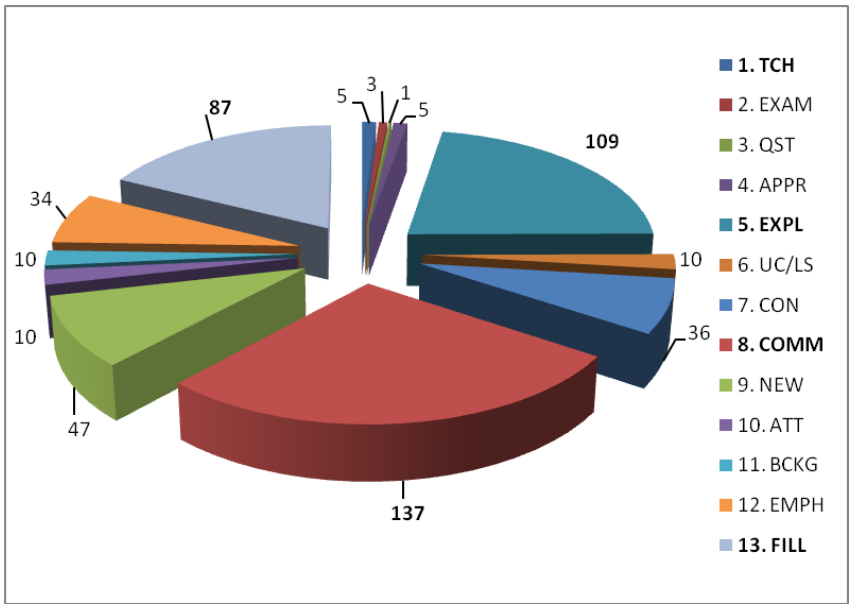

Figure 3.11 *Relative distributions of all assigned functions of the utterances with amúgy (~'otherwise')*

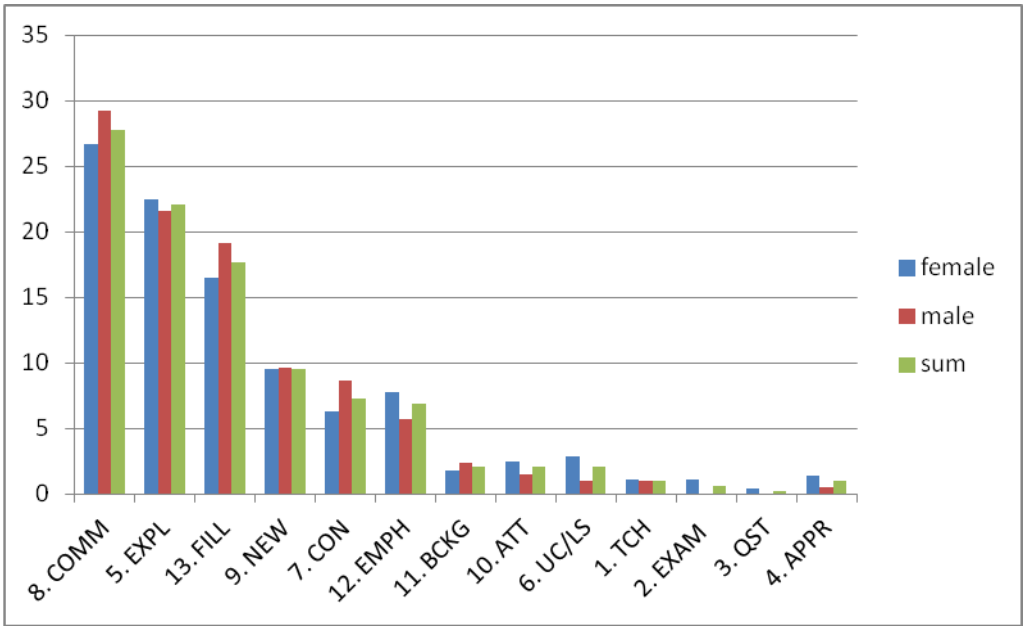

Figure 3.12 *Relative distributions of assigned functions of amúgy (~'otherwise') in terms of gender*

Regarding gender differences in the interpretation of the items (illustrated in Figure 3.12), the only suggestive but insignificant difference is that male informants more frequently assigned the *filler* role than female subjects. Concerning similarities, both male

and female informants typically consider *amúgy (~'otherwise')* to serve the functions of *giving commentary* and *explanation.*

In general, it can be concluded that the intuitions of informants about the functions of the selected items support the hypothesis of the core/periphery approach; that is, each DM has distinguishable *core* and *peripheral* functions. At the same time, it must also be noted as a limitation of the questionnaire-based research that some of the informants might have considered contextual information as part of the *core* meaning of DMs which is a weak point of the study that can never be completely excluded, given that I worked with naive language users, not professional linguists. Still, I consider their answers relevant and valid since they all successfully interact on a daily basis; that is, they must have some sort of metapragmatic awareness. However, it cannot be denied that ideally, the *core* meaning of an item should be underspecified, involving such properties that have the potential to be filled and specified in different contexts. For instance, clause-internally, *mondjuk (~'say')* tends to mean either *approximately* or *for example*; while in between, connecting adjacent clauses it tends to be glossed as *but* or *yes, but;* which two imply different discourse functions that are activated in different positions and contexts.

3.2.4 Conclusions: Hypotheses reconsidered

It can be concluded that most of my initial hypotheses have been confirmed based on the results of the questionnaires. Concerning my first hypothesis, 86.65% of informants do feel the difference between the two parts of minimal pairs where one does not involve one of the three selected items, while the other part does. This finding counters the view that DMs do not modify or change the propositional content of the utterance[68].

My second hypothesis that the three items differ in term of optionality has also been confirmed by the responses of the informants since the mode scores of the three items are different. As you can see in Figure 3.13., *mondjuk (~'say')* is considered to be the most necessary item/ the least likely item to be omitted (with a mode score of 3), and

[68] Some of it might have to do with the design of the questionnaires which is a limitation of this case study.

ugye (~'is that so?') is considered to be the most optional item/ the most likely item to omit (with a mode score of 1). The reason for this is probably that the salient function of *mondjuk (~'say')* is the expression of the relation of *contrast and concession*, and this coherence relation is rarely marked in other modalities. On the other hand, the most typical function of *ugye (~'is that so?')* is *explanation* which is marked by other means (usually by hand gesticulation) as well. *Filler* is the second most typical role assigned to *ugye (~'is that so?')*; which is usually considered to be an omittable, optional role. The third most salient function of *ugye (~'is that so?')* is to operate as a question word/rogative word which function again is marked by other modalities as well (especially by question intonation and forward gaze direction of the speaker).

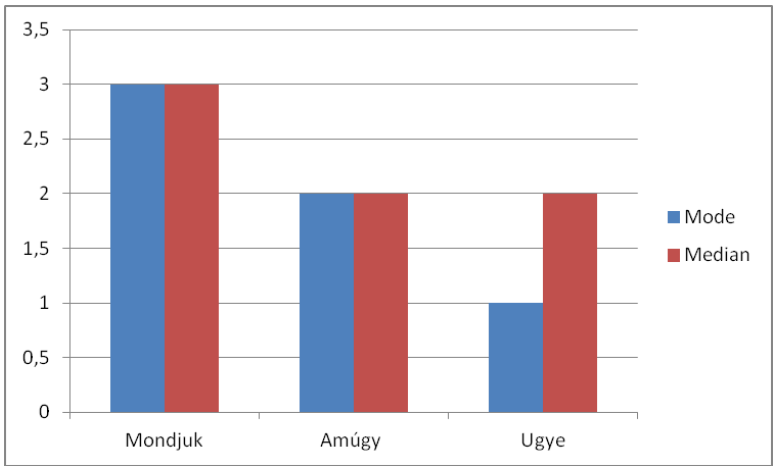

Figure 3.13 *Mode and median values of optionality judgements of informants*

According to the results of questionnaires A, B and C, all three scrutinised DMs were found to have multiple meanings. You can read in Figure 3.14 below that the functional spectra of the three items significantly differ from each other. Firstly, the most frequent and salient functions of *mondjuk (~'say')* involve contrast/concession and giving example. Secondly, the most frequent and salient functions of *amúgy (~'otherwise')* are commenting and explanation. Thirdly, *ugye (~'is that so?')* serves various functions to a similar extent/degree with explanation, filler, question, background information and emphasis being the top ones. Therefore, both my third and seventh hypotheses are confirmed concerning the functional mapping of DMs.

However, my fourth hypothesis that they display different degrees of multifunctionality has been rejected since instances of *mondjuk (~'say')* were assigned 1.23 functions on average (all seven *mondjuk* instances by all 56 participants received 482 labels), each *amúgy* instance was labelled 1.26 functions (altogether 494 labels), and each *ugye (~'is that so?')* instance was assigned 1.24 functions on average (altogether 488 labels). The difference among these values is not significant. Regarding the relative distribution of the top functional category of each item, the commenting function of *amúgy (~'otherwise')* shows the higher number/proportion (27.73%), while the top function of *mondjuk* (CON) and *ugye* (EXPL) each received around 20.5% of the answers. The difference among the top functions is again not significant; therefore, they do not show considerable differences in terms of the degree of multifunctionality. *Amúgy (~'otherwise')* seems to be the least multifunctional though, but the results are suggestive rather than significant.

My fifth hypothesis was that there is no difference in the relative distribution of the assigned functions as interpreted by male and female informants. Illustrated by Figures 3.4, 3.8 and 3.12, male and female informants did not assign significantly different functions to any of the three DMs. It only looked suggestive but did not prove to be significant that male informants are more likely than female informants to judge certain items as fillers. Therefore, my fifth hypothesis concerning the lack of gender differences in the judgements is also confirmed by the questionnaire results.

My sixth hypothesis concerning the correspondence between the duration of an item and the degree of its perceived optionality must be rejected. I found that the duration of an item does not influence the degree of optionality in the judgements of the informants.

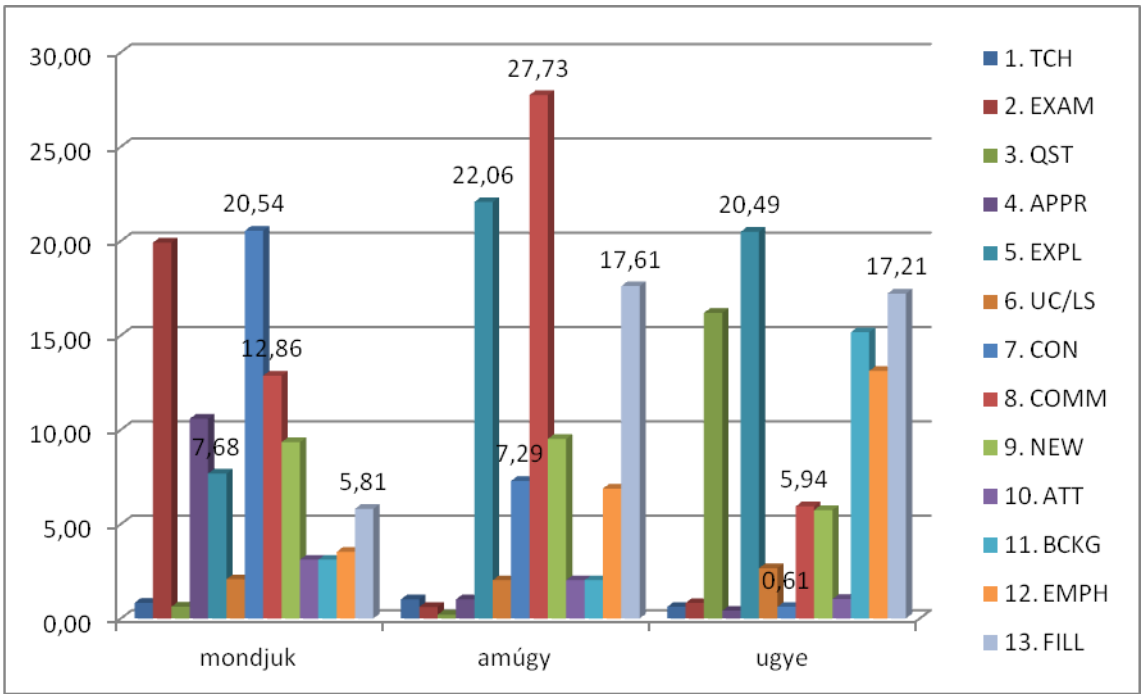

Figure 3.14 *The relative distribution of the functions (expressed in %) assigned to three lexical items*

It can be read from Figure 3.14 that the functions assigned to *amúgy (~'otherwise')* show a more homogeneous pattern (more homogeneous than that of *mondjuk* and *ugye*) with one overarching category (commenting: 27,73%).

The examples including *amúgy (~'otherwise')* and *ugye (~'is that so?')* were assigned many more filler category labels (17–18%) than the examples with *mondjuk (~'say')* (5,81%), which suggests that *mondjuk (~'say')* carries a lot of meaning and is generally interpreted as a necessary, meaningful lexical item rather than an empty filler word.

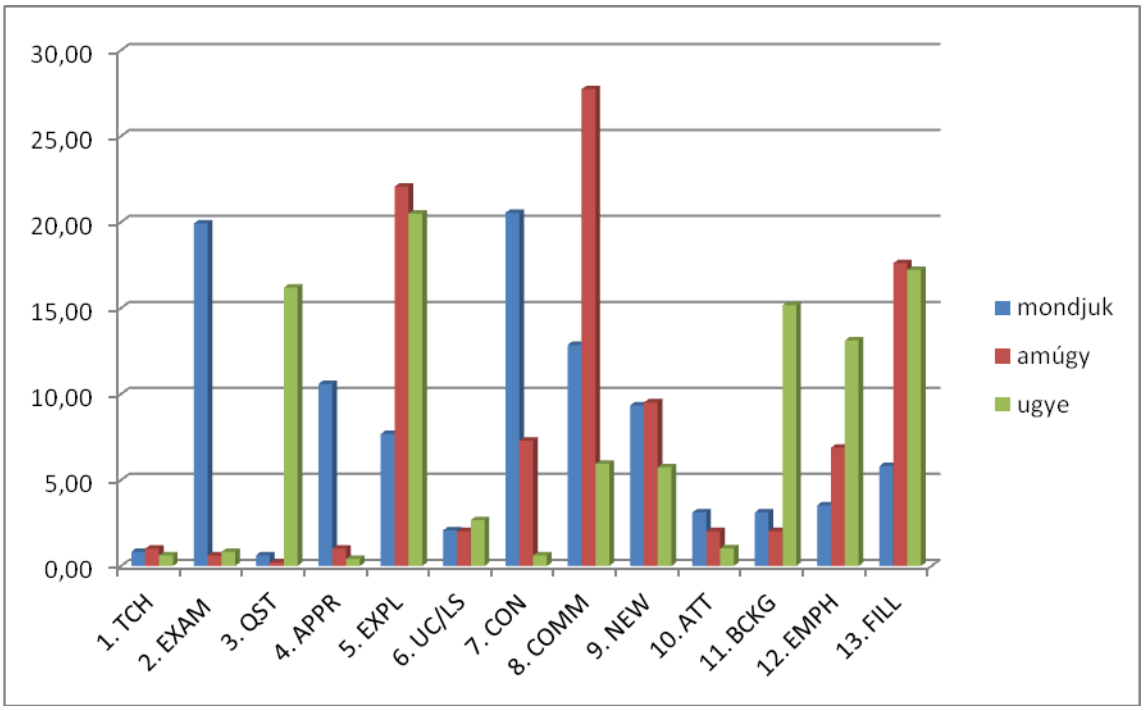

Figure 3.15 *The relative distribution of the three items along discourse-pragmatic functions*

Finally, let us see the distribution of the three items along various common discourse-pragmatic functions. The supporting acts of *giving example* and *approximation* are typically marked by *mondjuk (~'say')*. *Questions* are often signalled by *ugye (~'is that so?')*. Acts of *explanations* are made explicit by involving either *ugye (~'is that so?')* or *amúgy*. *Uncertainty* and *lexical search* can be expressed by all three items. *Commentaries* and personal opinions are also introduced by all three items in the corpus, but most frequently by *amúgy*. *New information* is signalled by *mondjuk (~'say')* and *amúgy (~'otherwise')* in the same ratio as well as distribution. Of the three, *mondjuk (~'say')* is the most capable of expressing the *attitude* of the speaker. *Evidentiality* is prototypically marked by *ugye (~'is that so?')*. Finally, besides discussing common functions, informants considered *amúgy (~'otherwise')* and *ugye (~'is that so?')* to be fillers much more frequently than *mondjuk (~'say')*.

It can be concluded that responses of the informants confirm the validity of the core/periphery approach to the multifunctionality of DMs (Bell 1998) since each selected item has distinct separable prototypical core functions and peripheral roles (as seen in Figures 3.14 and 3.15).

Contrasted with the dictionary entries described in section 2.2.6, several new functions of the DMs were identified, such as the ability of *mondjuk (~'say')* to express *contrastive* or *concessive* relation. It was found that *mondjuk (~'say'), ugye (~'is that so?')* and *amúgy (~'otherwise')* are all interpreted to express *emphasis* and introduce *commentaries*. The importance and relevance of highlighting the *example marking* and *approximation* roles of *mondjuk (~'say')*, the *question marking* use of *ugye (~'is that so?')* and the *contrastive* use of *amúgy (~'otherwise')* in dictionary entries is supported by my results as well.

3.3 A discourse-pragmatic analysis[69] of Hungarian discourse markers in multimodal context

This section has a threefold goal as it attempts (1) to map the functional spectra of the three DMs under scrutiny, (2) to describe their uses from a variety of perspectives, such as Conversation Analysis, Ethnomethodology, Multimodal Conversation Analysis, as well as (3) to collect their distinctive multimodal features, including nonverbal-visual behavioural cues (gaze direction, gesticulation) and nonverbal-acoustic properties as well, such as intonation. First, the segmentation and query procedure of the DMs and the queries on their sequential properties (lexical co-occurrences, position, etc.) will be described, followed by the interpretation of their functional roles (as they are used in the HuComTech corpus) as well as the analysis of their relation to the pitch movement in the DM and/or the host unit of the DM. The queries attempt to answer the following three sets of questions (A-C):

A Sequential and functional properties of DMs:

1. What common **lexical bundles, DM clusters** or patterns do the selected DMs form? What is the relative distribution of the **lexical co-occurrences** (preceding DMs and connectives) of the selected DM? Do the co-occurring DMs and/or connectives perform similar or contrasting functions?
2. What are the most **salient functions** of each of the DMs analysed?

[69] On the discourse-pragmatic view of DMs in English cf. Lewis (2006)

3. Are their uses **genre-dependent**? Do their functions typically differ in political discourse and informal conversations?

B Prosodic features of DMs:

Are the different versions of a DM expressing different functions **suprasegmentally marked?** In particular, is there a statistically significant relation between the **discourse function** of a DM and the

1. the presence of **preceding silence** in the utterance
2. the **mean F0** of the realization of a DM independent of each other
3. the **duration** of the realization of a DM?

Furthermore, is there a statistically significant relation between the **pitch movement** in the host unit of a DM and

4. the **position** of the DM in the **utterance**
5. the **position** of the DM in the **clause**?

C Nonverbal-visual behaviour of the speaker during and around uttering the selected DMs:

Is there a statistically significant relation between certain **discourse functions** of a DM and

1. the simultaneous **gaze direction**
2. the simultaneous **facial expression**
3. the simultaneous **manual gesticulation** of the speaker?

3.3.1 Procedures of discourse marker annotation, prosodic annotation and corresponding corpus queries

First, I had tested using the functional categories of questionnaire B (which were based on the findings of questionnaire A) by tagging 100 tokens/instances (50 *mondjuk*, 25 *ugye* and 25 *amúgy*) from the HuComTech corpus in the annotation software, ELAN; but it finally did not prove to be efficient enough because due to technological limitations and the highly hierarchical nature of the system of ELAN.

I transported the categories identified in Questionnaire B into the controlled vocabulary of ELAN so that I could use this scheme in it. The problem was that these 14 categories (described in Table 3.3) could not account for all functions expressed by these three items in the test corpus. For instance, the function of reformulation (commonly introduced by *mondjuk*) and the function of evidentiality marking (typically indicated by *ugye*) had to be added to the list. A further problem was that most items in my corpus displayed multiple functions[70] but the annotation software used (ELAN) allowed to tag only one function to each DM at that stage with the 14 categories from the questionnaire. I could attach only a single tag to a DM token which is not always enough, given its multifunctional nature.

Although the functional categories identified by the questionnaires were not proven to be completely suitable for the development of my annotation scheme in ELAN, they helped me decide the most salient functions of each item to be disambiguated later in the disambiguation phase of the research.

Instead of annotating with the functions identified in the questionnaires, I only segmented the DMs and tried to find surface features that divide the tokens into categories. Then I selected prototypical members of the two most salient functions of each DM and identified those machine-extractable cues that divide them into two distinct categories (with 80% precision).

3.3.1.1 Annotation procedures

As for the annotation of the corpus material, different annotation tools have been used to annotate the audio and video contents of a corpus that can later be merged in query systems (ELAN) or databases (MySQL). The HuComTech corpus is annotated at multiple multimodal levels in Praat, a fine grained audio analysis tool (Boersma & Weenink 2007) for the audio material and Qannot, a custom designed environment for the video material). Praat (Boersma & Weenink 2007) enables a much more precise and

[70] e.g. "*Mondjuk* ha kapnék vagy 200 ezret, annak tudnék örülni. (*'If I got DM_mondjuk like 200 thousand, I could appreciate that'*) (hucomtech formal 007) turn-taking, topic elaboration, giving an example, presenting a supposed situation

detailed acoustic analysis than compact multimodal annotation software such as Anvil (Multimodal Annotation and Visualization Tool[71]) or ELAN (Brugman & Russel 2004: 2065–2068). First, annotators were trained to follow the Annotation guidelines of the HuComTech corpus, handed in test annotations and discussed them in regular annotators' meetings.

First of all, their task was to transcribe the recordings and manually align the phrases to the speech signal in Praat. Verbatim (word-for-word) transcriptions involve non-lexical/nonverbal vocalisations, such as filled pauses, hesitations, breathing, coughing, sneezing, lip smack, and non-speaker voices, such as beep sound (used for the synchronization procedure of the audio and video material) as well. At the discourse level of audio annotation, the transcribed dialogue is segmented into floor control (also called turn segment) types (turn-take, turn-keep, turn-give, backchannel). In the Annotation guidelines, a turn is defined as a sequence of speech uttered by a single speaker, surrounded by silence and/or followed by speaker change. Acoustic features (durational data, pitch and intensity values, pitch movement and silence detection) were automatically extracted using a Praat script[72] (Boersma & Weenink 2007) because these prosodic features may mark how an utterance is meant; therefore, they are necessary for the analysis and functional disambiguation of DMs and their host units. The pitch movement of the speakers was also automatically annotated using a Prosogram-based application further developed by the Computational Linguistics Subproject of the HuComTech project (Szekrényes, Csipkés & Oravecz 2011, Hunyadi, Szekrényes, Borbély & Kiss 2012). We found it crucial to annotate intonation since it implicitly express the emotional state and attitudes of the speaker, add subtlety to meaning and may help distinguish various functions.

On the other hand, the video contents of the HuComTech corpus were annotated in Qannot (Pápay, Szeghalmy & Szekrényes 2011: 330–347, Hunyadi, Földesi, Szekrényes, Staudt, Kiss, Abuczki, & Bódog 2012: 265–309) which was designed instead of Anvil because Anvil sometimes failed to handle large files, and there was a risk that annotations might be out of snyc in these large files. The video annotation of the corpus involves the labelling of facial expressions, gaze, eyebrows, head movement, hand shape, posture,

[71] ANVIL is freely available at: http://www.anvil-software.org/

[72] You can find the Praat script in Appexdix 5.

touch motion, deictic gestures and emblems. Within this dissertation, three levels of the video annotation will be analysed in relation to DM segments: (1) gaze direction, (2) hand movements, and (3) facial expressions. Gaze direction is analysed owing to its several functions it plays in discourse. It is used to collect information in our environment, to express our emotions, attitudes and intentions, thereby influencing our conversation partners. Eyes reflect the degree of being interested and involved in conversation, and different gaze directions express our intention to take, keep or give the floor over to the next speaker. Gaze may also serve as a deictic device by looking at the desired object one want to get. Secondly, hand movements are also indispensable to analyse in relation to DMs since manual gestures include - among others - deictic, iconic and discourse structuring gestures which all reveal important aspects of discourse and contribute to the correct interpretation of utterances.

When the annotations were completed, the various annotation files of the HuComTech corpus were merged in an SQL database. Annotations are still stored in SQL and can also be queried in a very user-friendly way using the ELAN software (Brugman & Russel 2004). Custom query options of ELAN include: *N-gram within annotations; Structured search of multiple files; Multiple layer search; Find overlapping labels within a file;* and *Find left overlaps within a file*, etc. The availability of multimodal annotation tiers enables the systematic and joint search of the temporal alignment and/or synchronous co-occurrences of turns, clauses or specific lexical items with the use of manual gestures, head movement types, gaze directions, eyebrow movement types and posture changes in spontaneous interaction corpora.

The queries were performed on the cross-checked annotations of the formal and informal recordings of 20 speakers (5 male, 5 female), involving 40 Qannot files (20 video annotations of the formal, and 20 video annotations of the informal scenario) and 40 Praat textgrids (20 audio annotations of the formal, and 20 audio annotations of the informal scenario) temporally synchronized. After looking at the typical co-occurrences of DMs with floor control types, topic control segments (topic initiation, topic elaboration, topic change) and their accompanying visual features (especially gaze direction, manual gestures and affect displays as labelled in the gaze direction, hand shape-type and facial expressions levels of the video annotation), I investigated the meaning relations between

the discourse segments linked as well as the range of textual and interpersonal functions these forms may fulfil.

The methodology used involve (1) segmentation of DMs (shown in Figure 3.16); (2) analysis of their further textual, acoustic and visual features (position of the DM within the turn/utterance, sequential properties, statistical analysis of co-occurrence patterns) by using the custom query options of ELAN (Brugman & Russel 2004) such as *N-gram within annotations; Structured search of multiple files; Find overlapping labels within a file;* and *Find left overlaps within a file*; (3) silence annotation in Praat (Boersma & Weenink 2007), and then measuring the segment duration of the host unit and its preceding silence; as well as (4) collecting the synchronously performed hand gestures. Therefore, vertical label statistics have also been performed in order to reveal the co-occurrence of the audio labels with labels from the visual domain such as hand shape types.

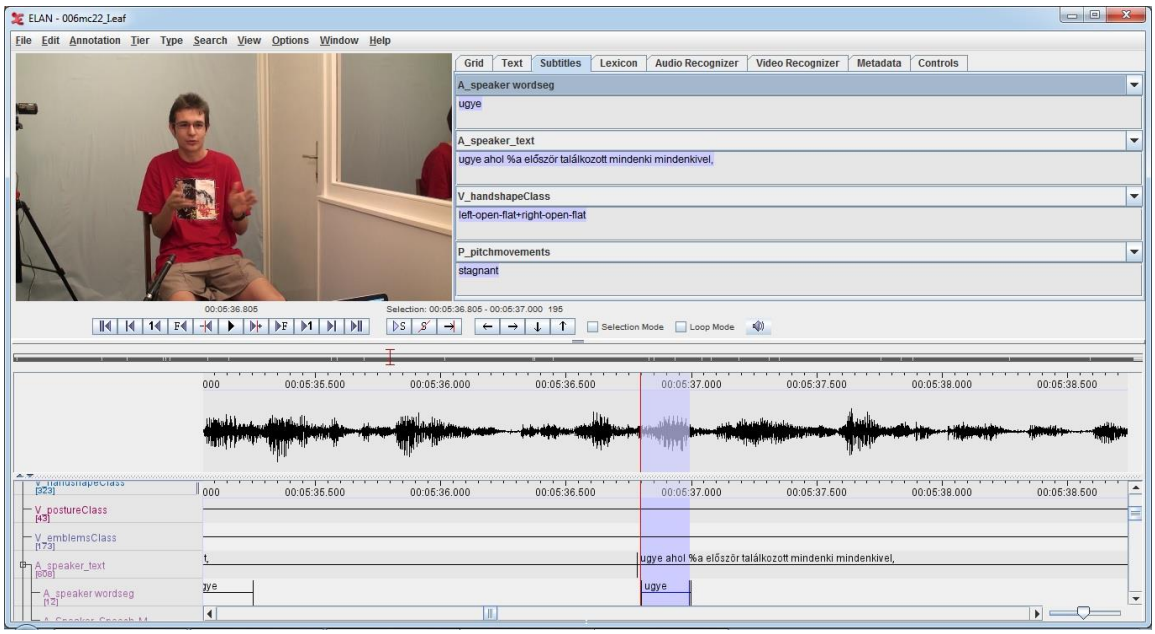

Figure 3.16 *DM segmentation in ELAN*

As described earlier in section 2.2.1, conflicting theoretical assumptions can be found in the literature of DMs concerning their name, category, status and definition (e.g. Fraser 1999, Polanyi 2001) as well as their typical position (Frank-Job 2006, Redeker 2006, Furkó 2007). Although it is a more or less generally accepted view that one of the major functions of DMs is the bracketing or connection of units of talk, there is disagreement concerning what the authors mean by units of talk, i.e. what segments DMs actually

bracket. This question has of course implications in empirical work as well regarding how to segment spontaneous speech in relation to DMs.

The units DMs are considered to connect are reflected in approaches towards them as well. The majority of DM researchers agree that syntactical independence (Brinton 1996:34) is one of DMs' defining formal traits. Jucker & Ziv (1998:3) claims DMs are used outside syntactic structure, independent of/ in between clauses, typically preceding independent clauses (Schiffrin 1987: 31); therefore, removing a DM from its initial position leaves sentence structure intact. While connectives are traditionally seen as elements used to signal the relationship between clauses and sentences (Rácz 1985), DMs are claimed to be used to make explicit the type of relationship between larges units of discourse such as utterances or topical units (Schiffrin 1987, Fraser 1990). Taking an alternative approach, Polanyi (2001) claims that clauses are discourse segments themselves at the same time; therefore, he considers all connectives DMs as well. In contrast with this perspective, the most generally accepted view is that only those connectives are DMs which join topics and messages (Fraser 1999: 938–942). Fraser (1990) emphasizes their quasi-initiality, i.e. that they tend to occur utterance-initially. However, the position of DMs is frequently defined at sentence level (Quirk & al. 1985, Fraser 1988), and they are typically claimed to appear sentence-initially (Brinton 1996, Dehé & Wichmann 2010). Instead of sentence-level distinction, it is argued in this dissertation that their position should rather be defined in terms of their position (1) within a clause (initial or non-initial), (2) within a turn (turn-initial, -medial or –final), (3) within an adjacency pair (first or second pair part), or (4) within topical units (topic initiation, elaboration or topic change). I prefer the identification of its position at utterance-level which is a discourse unit of pragmatic nature (as opposed to the sytanctic unit of clasues). The main argument for the utterance-level, in other words, turn-level analysis (Schiffrin 1987, Fraser 1990, Biber & al. 1999) can be that it is difficult to reliably detect sentence and clause boundaries in speech since the syntactic structure of spoken language greatly differs from that of written language (Hunyadi 2011, Hunyadi & al. 2012). Due to ellipsis and the intercalation of structures, syntactic boundaries are quite obscure in spontaneous conversations. The discrepancy between syntactic units and the units of speech acts (referred to as communicative acts in this dissertation) suggests that interactionally situated language use is sensitive to constraints rather independent of

syntax (Schiffrin 1987: 32). Moreover, Goodwin (1981) argues that even sentences are interactionally constructed and syntactiy boundaries are marked by nonverbal signals as well (such as gaze) besides verbal and acousatic ones. Therefore, segmentation will be supplemented with the annotation of nonverbal signals as wll in my annotation system. Taking everything into consideration, since the class of DMs is a functional, pragmatic category; I believe that it is not favourable to define it along the lines of syntax. Nevertheless, I will perform both types of segmentation (clause-based[73] and utterance-based) in the HuComTech corpus in order to compare the different distributions of positions and to identify if any types of the segmentations results in a significant relationship with the direction of pitch movement. As for my terminology, I borrow an early definition of the utterance from Harris (1951) who proposes that an utterance is "any stretch of talk by one person, before and after which there is silence on the part of that person" (1950:14). I use the terms utterance and turn as synonymous throughout the dissertation.

3.3.1.2 Feature extraction procedures after segmenting DMs

First, I briefly describe the mechanism of automatic prosodic annotation, then I overview the query options I used in ELAN during the analysis of DMs.

There are various techniques available to implement the automatic annotation of intonation. One of the most well-known and widely used annotation conventions is the tones and break indices labelling standard (ToBi) (Rosenberg 2010: 146–150) which is suitable for capturing prosodic structure by labelling pitch levels. The main problem with ToBi is that it has not been adapted to Hungarian yet. Conversely, the Tilt intonation model (Taylor 1998) is language independent. The system operates the basic unit of intonational events which are described as movements based on the RCF (rise/fall/connection) model. Tilt uses a set of continuous parameters determined from the examination of the local shape of the F0 contour to label pitch movements. However, the goal of the HuComTech project is to examine and annotate the movements of F0 contour but not in this parametric manner; instead, they use a different stylization, trend

[73] I am grateful for Dr. Dér Csilla for drawing my attention to the importance of clause-level segmentation and the idea of a comparative study in this respect.

calculation, segmentation, and classification methods. Since they want to illustrate the perceived intonation characterized by long stretches of smooth F0-movements rather than frequent significant momentary excursions of the actual measured F0 data, stylization of F0 curves is performed on the extracted pitch data (Hunyadi, Szekrényes, Borbély & Kiss 2012). There is an existing stylization method available which is theoretically founded and has a widely-tested application called Prosogram (d'Alessandro & Mertens 2004, Mertens 2004) The theoretical assumption underlying the application is the psychoacoustic model of tonal perception which concentrates on the perceptually relevant features of intonation, distinguishing audible F0 variations from inaudible ones (t'Hart 1976: 11–19). The Prosogram application (Hunyadi, Szekrényes, Borbély & Kiss 2012) was further developed within the speech processing subproject of the HuComTech research group and was implemented as a Praat script for automatic F0 stylization. For customization to our corpus and goals, Hunyadi, Szekrényes, Borbély & Kiss (2012) have developed a new script to make F0 stylizations for the recordings in HuComTech database sentence by sentence (with sentence boundaries manually annotated in syntactic annotation) using external pitch data generated before. Extremely high or low values were dropped from the stylization using the 10th and the 90th percentile value as a threshold. The Prosogram stores stylization in PitchTier files as well, and later the textual transcriptions of the recordings are also added to the graphical output. They (Hunyadi, Szekrényes, Borbély & Kiss 2012) use dynamic, speaker-dependent pitch range to extract F0 data and use a stylization method to calculate more holistic trend-lines from stylizations to describe the movement of pitch. Along trend-lines (point to point) pitch movement can be segmented into blocks for labelling. The standard deviation of the pitch values is used as a threshold to classify the movement progress using five simple categories: *rise*, *fall, upward, descending* and *stagnant* (see Figure 3.17).

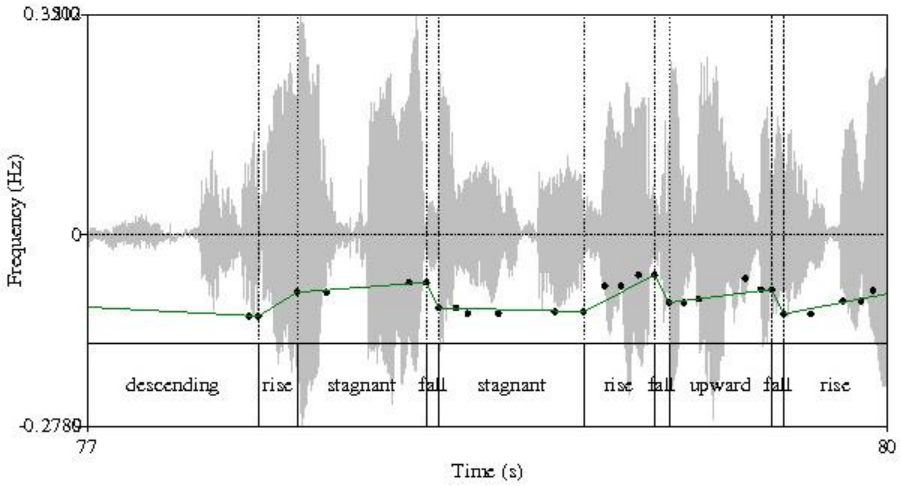

Figure 3.17 *Segmentation and classification of pitch movements using ProsoTool* (source: Szekrényes to appear)

However, to automatically perform prosodic annotation, I first had to export my .eaf annotation files from .eaf file format (from ELAN) into Praat TextGrids. You can simultaneously export multiple files as Praat TextGrids, so the procedure of this conversion can be instantly performed.

After annotating sound files, Prosogram also stores stylization in PitchTier files; therefore, they can be viewed in Praat as well. The following figure shows the result of exporting both automatic ProsoTool annotation results and manual DM segment annotation .eaf files into Praat TextGrids (Figure 3.18).

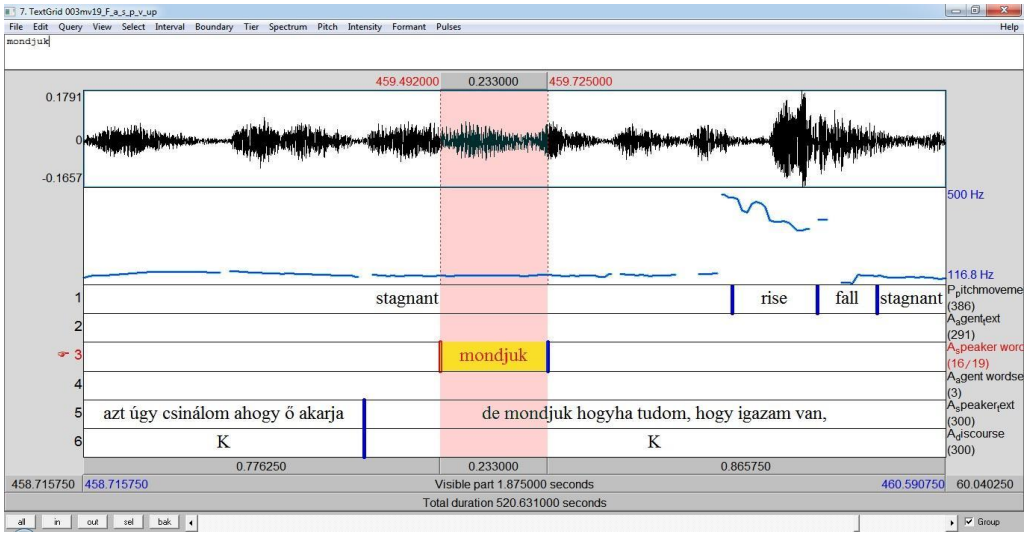

Figure 3.18 *ProsoTool results and ELAN DM segment annotations both exported into Praat*

Finally, Pitch Tier Files can be exported into several other software, such as ELAN, for further queries. The results of the queries will be described in sections 3.3 and 3.4.

3.3.1.3 Automatic annotation into sounding and silent parts

A further acoustic feature whose role in discourse interpretation is analysed in this dissertation is silence. This paragraph briefly describes the process of automatic silence annotation in Praat and its query results in ELAN (Brugman & Russel 2004). This analysis followed the segmentation of DMs and it was performed with the aim to test if DMs are predominantly separated, especially preceded, by pauses (as they are often described in the literature, such as in (Jucker & Ziv 1998:3, Fraser 1999:933)). The phonetic parameters set for automatic silence annotation were as follows:

- minimum pitch (to measure intensity): 100 Hz (subtract mean)
- time step: automatic (0,01 s)
- silence threshold: - 45 dB
- minimum silent interval duration: 0,15 s
- minimum sounding interval duration: 0,05 s

As a result, annotation segmented the recordings into sounding and silent segments (see Figure 3.19).

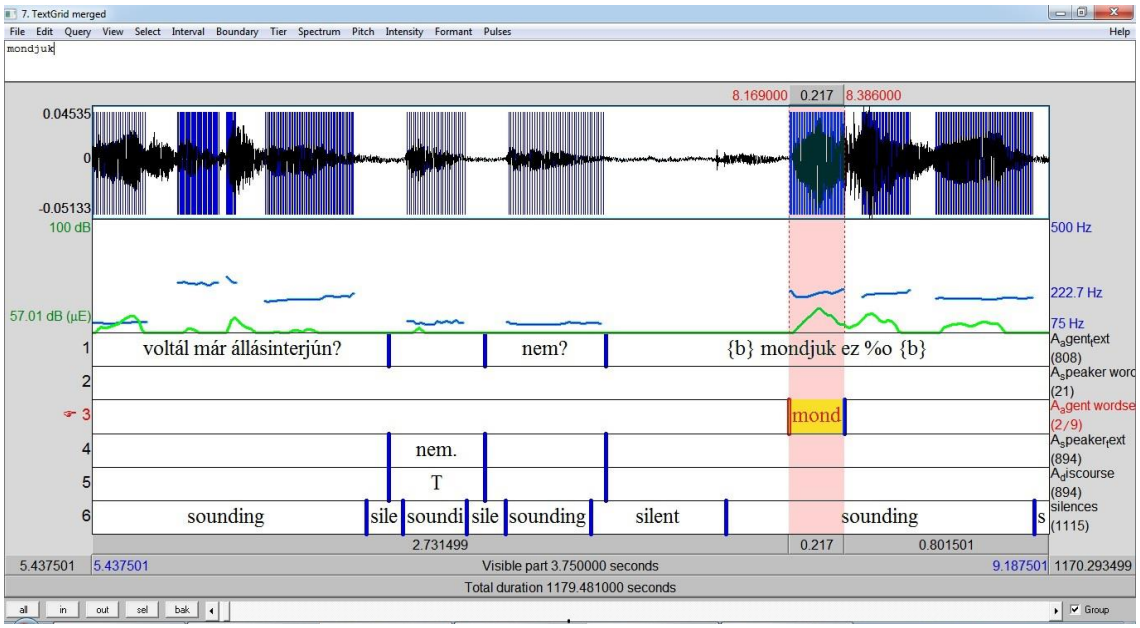

Figure 3.19 *Automatic annotation into sounding and silent segments in Praat*

Afterwards, labelling was merged with existing annotations and exported into ELAN (Brugman & Russel 2004) for querying. Silence annotation is useful when we want to empirically investigate if DMs are surrounded by silent parts or not. Of course, the duration of silence might be set to other parameters as well. In this study I wanted to consider relatively short silences as well, that is why I set the minimum silent interval duration as 150 ms (since it is audible).

When all manual and automatic annotations are merged in an .eaf file, possible query options in ELAN include various *Single Layer Search* and *Multiple Layer Search* options. Options *of Single Layer Search* include for instance '*Search for N-gram within annotations'* (see Figure 3.20) which helps us identify the co-occurrence patterns of the items. You can search the environment of the selected segment in the same tier (in our case, in the text tier): what it is left context (using *# mondjuk*), what it is right context (using *mondjuk #).* In Figure 3.20 I searched in the search domain of 48 annotation files for all instances where *mondjuk (~'say')* (either in the textual transcription of the agent's or speaker's speech) is preceded by something (that is, it is not in a segment-initial position). First I had to set the mode from '*exact search'* to '*regular expressions'* because I used the # regexp in the search box. In this example, I wanted to search both the agent's and speakers' text tiers, therefore, I chose to search all tiers.

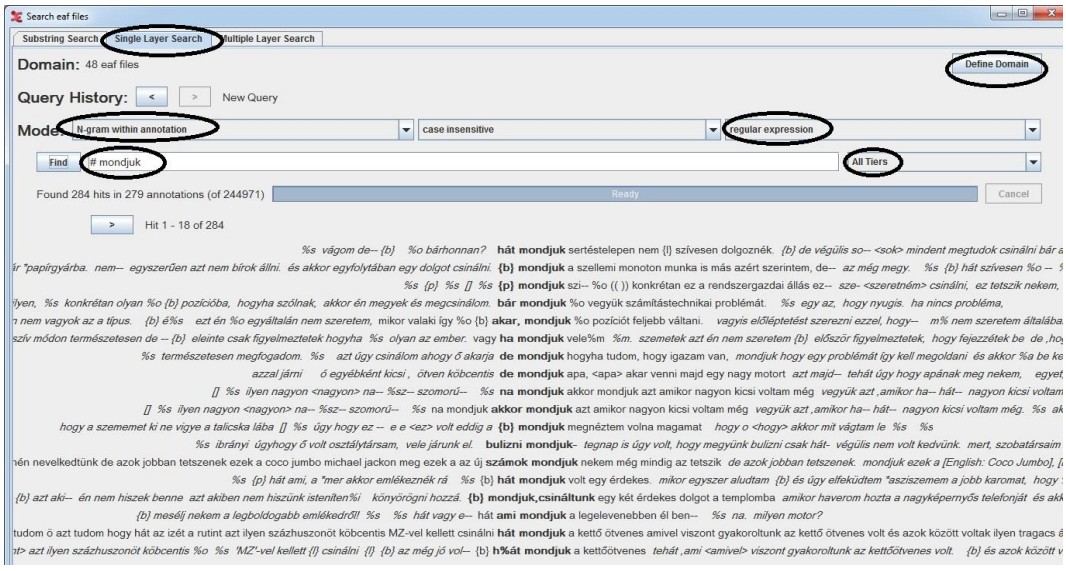

Figure 3.20 *Concordance view of the search '# mondjuk'*

The software also enables the researcher to search the transcription of only one of the speakers. To do so, you simply have to switch the search mode from 'All Tiers' to 'A_agent_text' and change the search term to '*mondjuk #'*. For example, Figure 3.21 shows the concordance view of a search to find out what elements *mondjuk (~'say')* is followed by in the interviewer's speech.

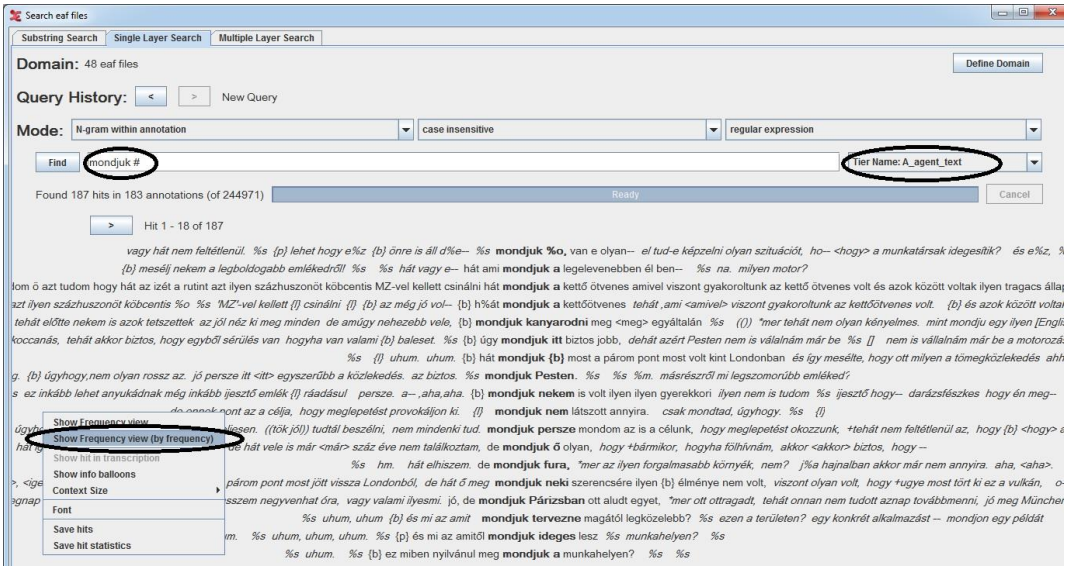

Figure 3.21 *Concordance view of the search results of 'mondjuk #'*

To do so, switch from Concordance view to Frequency view by right-clicking and choosing '*Show Frequency view (by frequency)*' from the drop-down menu. Figure 3.22 shows the first page of the results of this frequency query[74].

[74] You can jump to the following search result pages by clicking on the > button. You can move among the several queries and result pages by clicking on either the < (next) or > (previous) buttons.

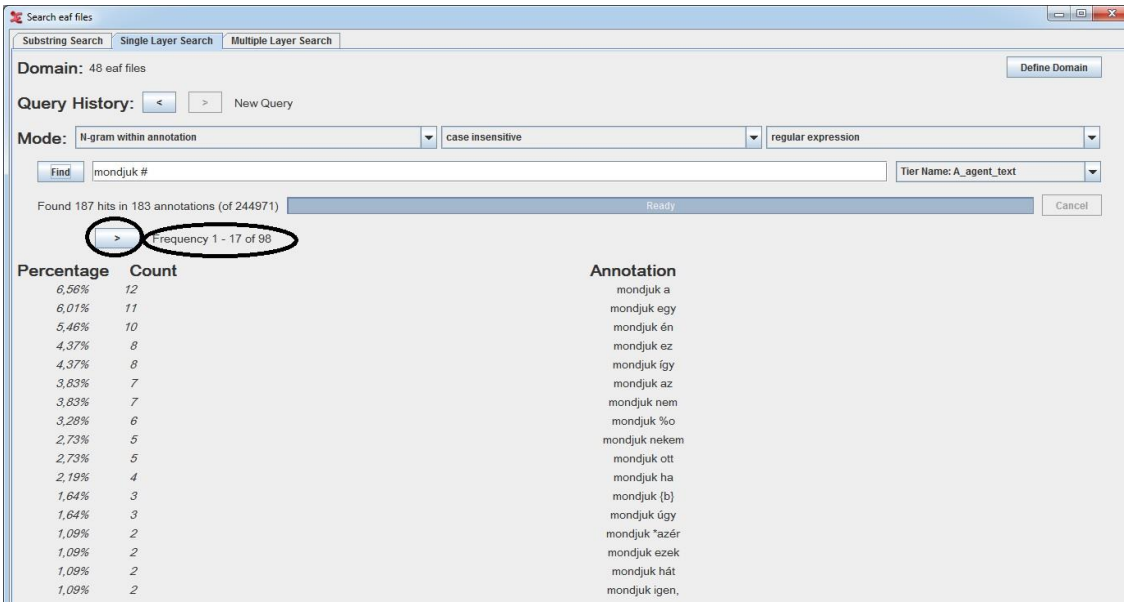

Figure 3.22 *Frequency view of the search 'mondjuk #' by frequency in decreasing order*

One can also search what labels in other tiers a segment (e.g. *ugye* wordseg) entirely or partially overlaps with (left or right overlap). For this purpose, you need to use Multiple Layer Search and have to set the names of the labels and tiers to be searched. For instance, if you want to find out if *ugye (~'is that so?')* is a separate unit and prosodically independent or not, you can choose from several search options: (1) search for instances when *ugye (~'is that so?')* is surrounded by SL (silence/pause) (shown in Figure 3.23), (2) search for either left or right overlaps of *ugye (~'is that so?')* with SL (this will show instances when *ugye (~'is that so?')* is either preceded or followed by silence), (3) search using custom-defined temporal constraints. The most exact results you can achieve using the third method, that is, if you set the time difference allowed between the begin time of a segment (e.g. *ugye (~'is that so?')* in wordseg tier) and another one (e.g. *SL* in text tier).

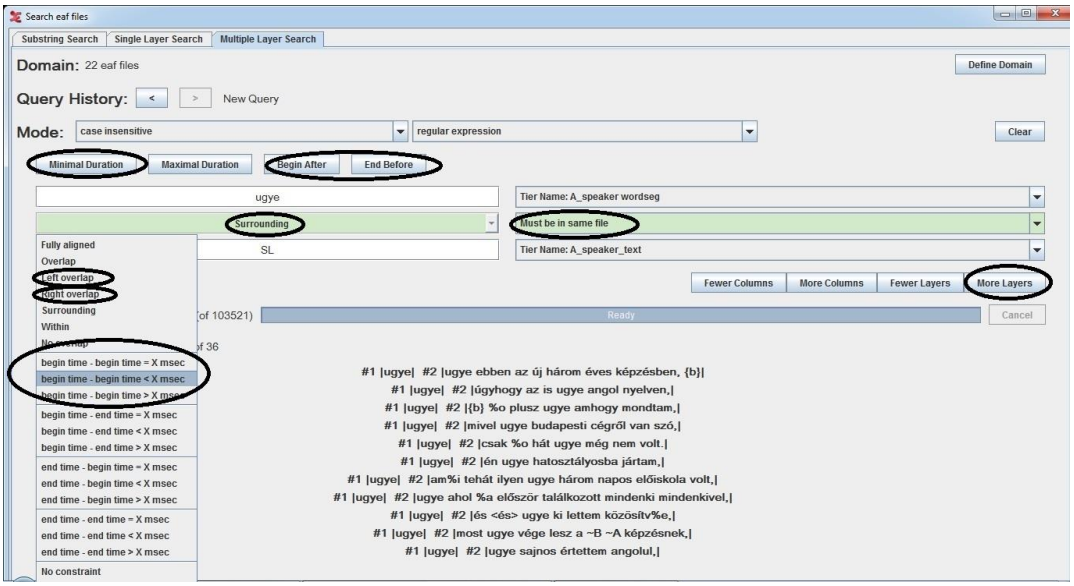

Figure 3.23 *Search for instances when ugye (~'is that so?') is preceded by silence*

As shown in Figure 3.24, there is an option to search for labels (e.g. pitch movement, position or thematic labels) overlapping with the target word segment. If you do not look for a certain pitch movement, but rather would like to search the distribution of all pitch movement types, you may use the regular expression '*.+*' which looks for all labels in the specified tier.

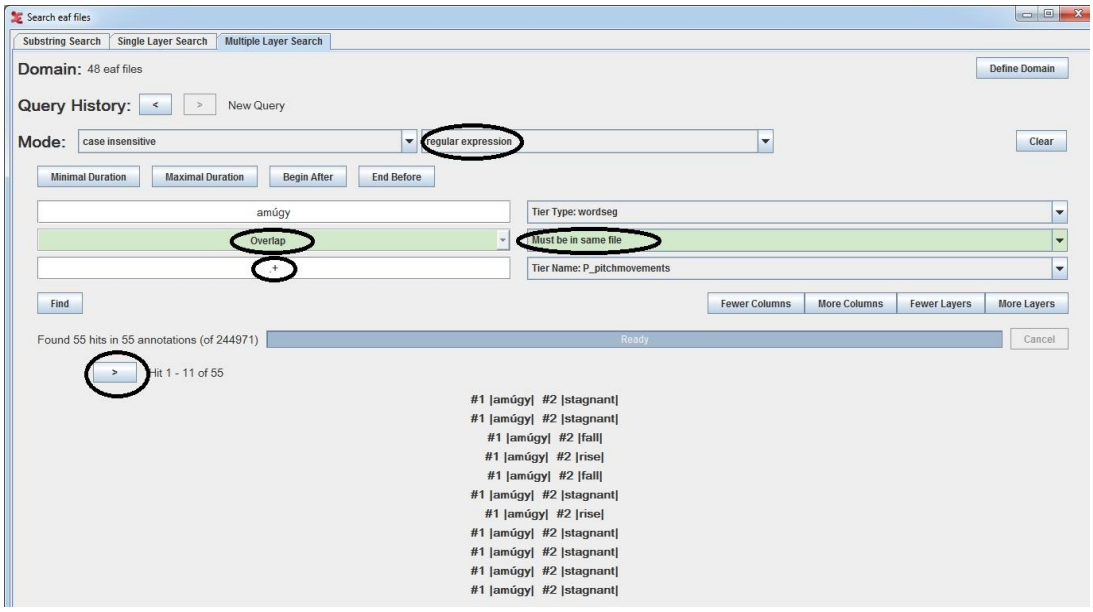

Figure 3.24 *First page of the search results for pitch movement overlapping with the wordseg amúgy*

If you want to refine your search and add more constraints, you may add more columns or tiers to advance your search. For instance, Figure 3.25 shows a search for the pitch movement types ('*.+*' stands for any type/any label/any word) of only those *mondjuk (~'say')* word segments which are in turn-initial (utterance-initial) positions (marked by T as turn-take in the audio annotation of the HuComtech corpus). If you want to get the results in frequency view, you can achieve this by right-clicking on the results and choosing this option. Finally, queries in ELAN can be saved as .xls files (by clicking on 'Save hits' or 'Save hit statistics'), which enables us to perform calculations on them.

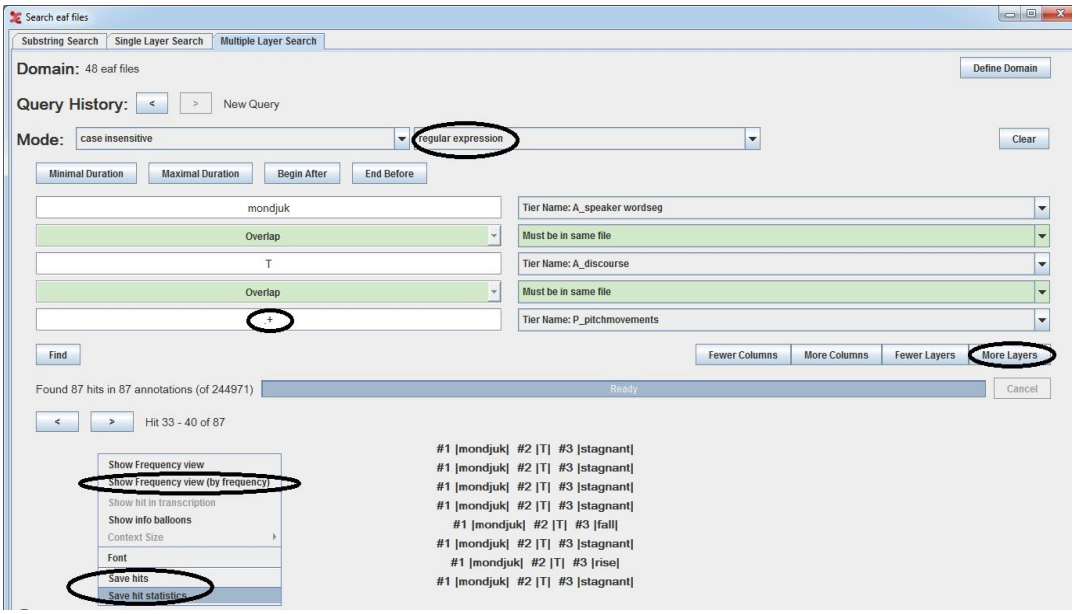

Figure 3.25 *An example for three-layered multiple layer search*

Further multiple layer search options used in this dissertation will be described in Chapter 3.4 on the disambiguation attempts of certain lexical items.

After the queries, the following statistical tests were performed on the data in SPSS 19.0: descriptive and inferential statistical tests, including Pearson's chi-square test, Fischer's exact test, Crosstabs test, independent samples t-test, paired t-test, and drawing box plot graphs. Descriptive statistical tests simply measured the frequency of the use of the selected items based on gender, speaker role (interviewer or interviewee) and situation type (informal conversation or job interview). Pearson's chi-square test, Fischer's exact test and Crosstabs test were performed to decide if there is a relationship

between two categorical variables (e.g. between thematic role and pitch movement, position and pitch movement, discourse function and hand movement, etc.).

3.3.2 A discourse-pragmatic analysis of *mondjuk* (~*'say'*) as a DM

The aim of this section is to overview the functions and features of the DM *mondjuk (~'say')* from a discourse-pragmatic perspective, based on multimodal empirical data. Altogether 385 tokens of *mondjuk (~'say')* can be found in the parts of the HuComTech corpus analysed by me (in 50 recordings). Among these, 208 instances are uttered by the interviewees, while 177 tokens are used by the constant female interviewer[75]. Surprisingly, I have found only two instances of *mondjuk (~'say')* encoding conceptual meaning[76] in the 50 recordings. In what follows I describe the results of qualitative corpus analysis and quantitative queries concerning the position, functions and multimodal features of the DM *mondjuk*.

3.3.2.1 The position, sequential features and lexical co-occurrences of *mondjuk (~'say')*

The results of a series of queries in ELAN (Brugman & Russel 2004) searching for occurrences of overlapping discourse labels, syntactic labels and DMs are presented in this section. As it can be read in Figures 3.26 and 3.27, I found in the analysed subcorpus of the HuComTech corpus that the majority of DMs used by the interviewees appear turn-internally (165 out of 208 tokens) and most (113) of these are used clause-internally as well. It can be concluded concerning position that if the position of a DM is defined at turn-level, we can reject the idea of the initiality of this DM; however, with the position defined in relation to syntactic structure, we can find more items (79 tokens) in initial position preceding clauses (outside syntactic structure) but still not enough to support the initiality-hypothesis of DMs.

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[75] At the time of making the recordings, the goal of studying DMs in the corpus was not set, so the interviewer could not have known about it.

[76] Examples for the conceptual use of *mondjuk* from the HuComtech corpus:
speaker: így jobban megtalálják azok {b} <azok az> emberek egymást, akik úgy hasonszőrűek, ahogy mi **mondjuk**
speaker: a másik haverom is egy %o országos bajnok, úgyhogy nem jártak jól igazából, bár olyan nagyot se kaptak, inkább **mondjuk** úgy, hogy helyre tettük a dolgokat velük. (hucomtech informal)

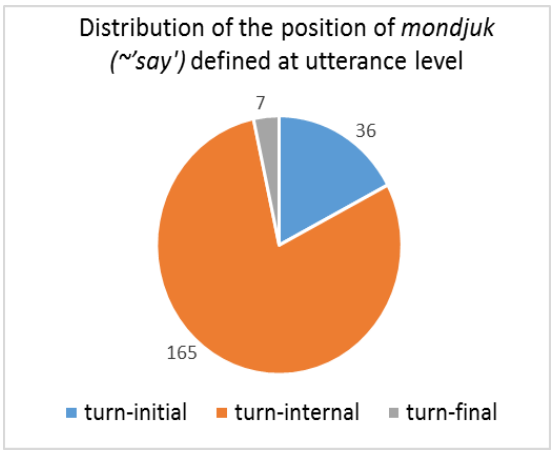

Figure 3.26 *Distribution of the position of mondjuk (~'say') in the utterances of the interviewees*[77] (p<0,01)

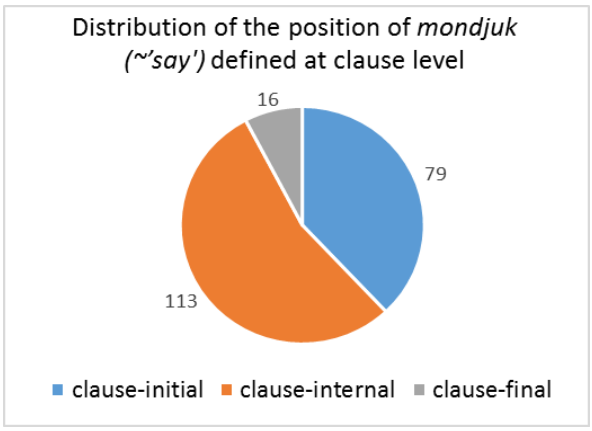

Figure 3.27 *Distribution of the position of mondjuk (~'say') in the clauses of the interviewees*

The turn-internal non-conceptual use of *mondjuk (~'say')* often indicates that the speaker has undergone some kind of a change concerning either his local knowledge state on the level of information management or her/his views and attitudes in the interpersonal domain of interaction. It may express the speaker's (subjective) orientation towards the topic or the other speaker's utterance (e.g. in the case of partial agreement, disagreement/contrast, modification). We can find several examples for subjective reorientation in naturally-occurring dialogues, exemplified by 3.1 below:

[77] At the time of writing the dissertation, the positions of only the interviewees' DMs were annotated and cross-checked. However, I am aware that the interviewer's DMs might show a different pattern of use.

example 3.1

... nem volt kellemes bár **mondjuk** ilyenekből is tanul az ember (*it wasn't very pleasant, but* ***DM***^{mondjuk} *you can learn from such experiences*) (HuComTech, 017)

I was also interested to find out what the lexical context of the turn-internal DMs is like and which word classes they are mostly preceded by. Tables 3.11 and 3.12 list the results of queries performed in ELAN (*N-gram within annotations: # mondjuk*). Approximately 45% of the occurrences of all *mondjuk (~'say')* tokens in the analysed corpus are preceded by another DM or a connective and therefore form so-called *DM*-clusters (42% in the interviewees' speech, 47% in the interviewer's speech). Tables 3.10 and 3.11 only present those items that preceded *mondjuk (~'say')* in at least two instances.

DM or connective preceding *mondjuk*	**Number of occurrences**	**Proportion (%)**
hát (~'well')	14	9,03
de (~'but')	8	5,16
hogy (~'that')	6	3,87
tehát (~'so')	6	3,87
bár (~'though')	4	2,58
hogyha (~'if')	4	2,58
meg (~'and')	4	2,58
mint (~'as')	2	1,29
vagy (~'or')	2	1,29
és (~'and')	2	1,29

Table 3.10 List of DMs or connectives preceding *mondjuk (~'say') in the* interviewees' talk (including 208 *mondjuk* tokens)

DM or connective preceding *mondjuk*	Number of occurrences	Proportion (%)
de (~'but')	18	14,52
hát (~'well')	9	7,26
hogyha (~'if')	5	4,03
meg (~'and')	5	4,03
tehát (~'so')	4	3,23
*mer (~'casue')	3	2,42
*tát (~'so')	3	2,42
úgy (~'like', 'like that')	3	2,42

Table 3.11 *List of DMs or connectives preceding mondjuk (~'say') in the interviewer's talk (including 177 mondjuk tokens)*

Its frequent co-occurrence with the connectives *de* (~*'but'*), *hát* (~'well') and *meg* (~'and') is not just the result of a coincidence; instead, these systematic, recurring patterns also prove the DM membership of *mondjuk.* There are often more than one DM following one another in the analysed material, either intensifying/strengthening each other's function or sometimes creating a completely new function. However, in certain cases their only function is to win some time for the speaker to compose the wording of the utterance following the DM; that is, to search for the appropriate word or expression in the mental lexicon (Furkó 2011: 44–45). The DM *mondjuk (~'say')* and the simultaneous nonverbal expressions (head tilt, upward and sideways gaze) mark lexical search, recall and self-correction in the following example:

example 3.2

ez egy éve lehetett vagy **mondjuk <mondjuk>** 10 hónapja (*this could've been a year ago or **DM_mondjuk** ten months ago)* (hucomtech, 002, informal)

DM *mondjuk (~'say')* follows a DM or a connective in over 50 percent of the HuComTech corpus material I have analysed (50 recordings). Tables 3.10 and 11 illustrate that DM *mondjuk (~'say')* often follows the connective *de* (~'but') and the DM *hát* (~'well'). The connective *de* (~'but') usually marks a contrasting relation between the

connected segments, while the DM *hát* (~'well') often has an introductory function or marks lexical search and recall in the discourse.

In the following utterance (example 3.3), *mondjuk (~'say')* and *de (~'but')* (in the DM-cluster/co-occurrence pattern) each functions to express contrast and correction, independently of one another, strengthening the contrasting effect between the clauses:

example 3.3

- Mesélj nekem a legboldogabb élményedről vagy ami -- hát nem feltétlen legboldogabb de **mondjuk** boldog élmény, ami úgy elevenebben él benned
- (*tell me about your happiest memory which...well, it doesn't have to be the happiest one, but **DM_mondjuk** a happy memory that you remember*) (hucomtech 020 informal)

In the next example, the DM-cluster *hát mondjuk* (~'well, say') marks recalling and also introduces the answer to the question, thus structuring and managing the course of the conversation.

*example 3.4 (*http://youtu.be/Fg3raiQGmaI)

- Milyen jellegű az a pozíció, amiben nem dolgozna? Ez általában értendő a kérdés. Tehát mi az a munkakör, amit olyan távolállónak érez?
- Bárhonnan?
- Igen.
- Hát **mondjuk** sertéstelepen nem szívesen dolgoznék.

- *(What sort of position wouldn't you work in? This is to be meant generally. So, what kind of work do you feel to be far from you?*
- *From any point of view?*
- *Yes.*
- *DM_Well, **DM_mondjuk** I wouldn't work on a pig shed.)* (003 hucomtech formal)

Based on Dér's analysis of the DM *azért* (~'because'), DMs often have a correlating/identical function with certain connectives and DMs (Dér 2012: 167). Based on my results, this is also true for DM *mondjuk*, and it can be argued that *mondjuk*-clusters have two major functions: to mark contrast/concession or lexical search/recall.

We can find a great number of examples when *mondjuk (~'say')* precedes a different type of connective or DM, such as:

*example 3.5 (*http://youtu.be/0BX9ehPN0uc)

- Szerintem jól reagáltál teljesen. Tök jól tudtál beszélni.
- Oké.
- Nem mindenki tud. **mondjuk** persze mondom az is a célunk, hogy meglepetést okozzunk, tehát nem feltétlenül az, hogy aztán elkezdjetek angolul beszélni.
- *(I think your reaction was totally OK. You were able to talk pretty well.*
- *OK.*
- *Not everyone can do that.* ***DM_mondjuk*** *of course, I'm telling you, our goal is also to surprise people, not necessarily to make you start talking in English.)*

In the previous example (example 3.5) the cluster *mondjuk persze* (~'DM_say DM_of course', glossed as 'I have to admit') marks the subjective reorientation of the speaker (Schiffrin 1987), while *mondom* (~'I'm telling you') signals that the speaker returns to his previous idea or utterance and emphasizes it again.

I attribute primary cognitive functions to the DM-clusters as well. I have found that the actual function of *mondjuk (~'say')* and the pragmatic force of the utterance is almost always influenced -- mostly strengthened - by the preceding connective or DM. The most frequent functions of DM clusters involving *mondjuk (~'say')* as their second element are contrast or concession and lexical search.

3.3.2.2 Pragmatic functions of *mondjuk (~'say')*

Applying Schiffrin's (1987) framework (involving various planes of talk) to describe the functional spectrum of *mondjuk*, one of its primary functions is to mark information state transitions. It can also be analysed on the action structure plane of talk (cf. Schiffrin 1987: 315–317) since it usually prefaces actions such as clarification/specification/approximation (example 3.6) and correction/self-repair (example 3.7).

example 3.6

gyorsan megy a motorom **mondjuk** 120–140-nel *(my bike is really fast, it can do* ***DM**^{mondjuk}* *120–140 kmphs)* (hucomteh 017 informal)

In example 3.7 below, *mondjuk (~'say')* primarily functions as a speaker-oriented participation coordinate but also helps the listener understand and process the content of the utterance by providing exact data. On the level of information management, it specifies 'high speed' with exact numbers. It signals a constative act, giving information and approximation in the action structure. It also fulfils a deictic role, referring backward, being connected to and specifying the preceding discourse segment[78]. At the same time, it can also be interpreted as an act of recalling, an attempt to recall the exact period of time that have passed since the described event.

example 3.7

ez egy éve lehetett vagy **mondjuk mondjuk** 10 hónapja (*this happened about a year ago or* ***DM**^{mondjuk}* ***DM**^{mondjuk}* *ten months ago)* (HuComTech, 002)

Based on the results of the questionnaires (described in 3.2), I am convinced that some naïve informants would attach omittable filler role and omittable hesitation role to

[78] Let me add here that markers in different languages can develop in similar ways (Fraser & Malmaud-Makowski 1996). For instance, English *like* developed similar pragmatic functions (e.g. approximation and giving example in examples 3.6 and 3.7) as Hungarian *mondjuk* even though they originate from different word classes.

this DM (in example 3.7) as well. Fillers are generally seen as unnecessary, meaningless, omittable items in the view of neologists and purists (such as Implom 1960); however, psycholinguists argue that these items implicitly provide information about speech planning and may mark hesitation, while in the framework of pragmatics, the very same item might play a role in turn management. This suggests that studying the same phenomemon in different frameworks (such as psycholinguistics or pragmatics) results in the use of different terms to describe the same thing. I believe that these different approaches might be merged in a detailed analysis.

In example 3.8 *mondjuk* probably indicates lexical recalling as well as providing example. In both examples 3.7 and 3.8 the speakers displayed nonverbal behaviour that strengthens and confirms the recalling nature of the DM and the whole action. The nonverbal markers common in recalls in my corpus are composed of the simultaneous presentation of averted, typically upward gaze direction and circular bimanual hand movement. The prosodic markers involve longer duration of the DM, uttered with relatively low intensity. The set of these nonverbal features also helps annotators identify the acts of lexical search and recall.

example 3.8

Rossz tulajdonságok? Nehéz megmondani, de **mondjuk** a késés sajnos

*(Negative traits? Hard to tell but **DM_mondjuk** being late, unfortunately*.)

(hucomtech 020 formal)

Mondjuk (~'say') encodes one of its peripheral (less prototypical) functions in the following example:

example 3.9

- IV: tudna-e valamit-- vagy <vagy> olyan tulajdonságot, amiket ilyen pozitívnak gondol? meg amiket kevésbé pozitívnak?
- IA: hát %o kevésbé pozitív, hogy szétszórt vagyok nagyon
- IV: uhum
- IA: ellustulom a dolgokat meg %o **mondjuk** ez egy állásinterjú

- (*Could you list traits that you think are positive? And ones that you think are less positive.*
- *Well, less positive is that I'm a little scatterbrained.*
- *Aha*
- *I get lazy over things, and ummm* ***DM_mondjuk*** *this is a job interview.)* (hucomtech 022 formal)

As seen in the verbatim transcription of example 3.9, *mondjuk (~'say')* is preceded by a voice break and hesitation (marked as %o in the transcript). It marks sudden realization and the subjective reorientation of the speaker concerning the situation and the discourse. The content of the following segment takes a new turn, the behaviour of the speaker changes as she displays a new attitude to the topic and to the conversation partner, too.

Next, let me highlight the frequent use of *mondjuk (~'say')* as a marker of concession which meaning is absent from the lexical entry of *mondjuk (~'say')* in dictionaries. Concession is a discourse-pragmatic relation signalling that the relationship between two ideas in two discourse segments is unexpected or surprising. Discourse markers expressing concessive relations typically mark and introduce a circumstance or condition which is, to some extent, in contrast with the meaning/message of the main clause but instead of preventing It, it allows the realization of the content of the main clause. This rather complex relationship can be expressed by various lexical items in Hungarian (such as *bár, pedig, noha, de*) which are typically not interchangeable in terms of meaning. In my corpus, concession is most frequently marked with the DM *mondjuk (~'say')* (see example 3.10). Here we must also consider the influence of situational parameters that affect the frequency of the realization of concessive relations. It might seem logical that concession prevails in written modes of discourse due to the availability of a lot of time for planning and editing. In spite of this assumption, I have identified a large number of concessive relations in the speech corpora, as well.

example 3.10

szeretek a belvárosban élni **mondjuk** elég nagy a szmog (*I like living in the city centre* ***DM***^{mondjuk} *the air is polluted*) (HuComTech, 017)

Furthermore, DMs may mark the relation of contrast or concession not only between two clauses, but also between the utterances of different speakers as well. *Mondjuk (~'say')* as a DM may also appear on its own in replies; however, it stood alone as a sentence word reacting to a question only once in my entire corpus: „Mondjuk", meaning 'so—so', expressing either partial agreement or token agreement.

Another common function of DMs is to mark a second pair part (response) as dispreferred (Pomerantz 1984). e.g. *mondjuk (~'say')* introduces disagreement with the previous statement of the other speaker in the example below. In example 3.11 *mondjuk* marks a concessive relation in the beginning of the utterance, expressing opposition to the previously communicated content, and it also introduces an alternative viewpoint towards the topic:

example 3.11

- Itt [Debrecenben] több az élmény meg a látnivaló nekem legalábbis
- **Mondjuk** ott [Miskolc körül] meg vannak szép hegyek
- (*Here [in Debrecen], there's more to experience and to see, for me at least.*
- *And **DM_mondjuk** there [in Miskolc]there are beautiful mountains*.) (hucomtech 085 informal)

Just to recall the intuitions of average language users about the DM *mondjuk*, the questionnaires described in section 3.2 also identified marking concession/contrast and giving example to be the two most common and salient functions of the non-conceptual use of this item.

In the next example (3.12), *mondjuk (~'say')* is uttered at a lower level of frequency and intensity (in comparison to other clauses surrounding it) in a clause-initial position in an embedded clause where it functions to introducing specification. This specifying embedded clause indicates that the speaker considers the conversational maxim of quality (Grice 1975).

example 3.12

Ezek jók, én is kipróbáltam párat **mondjuk** a kung-fut csak egy hónapig de az shaolin kung-fu volt ott szerintem nem is voltak ilyen fokozatok. (*These things are good, I also tried some of them, **DM_mondjuk** only like Kung fu, for a month, but that was shaolin Kung fu, there were no stages like that, I think.*) http://youtu.be/4nM_O8fL4Rw

On the other hand, in example 3.13 *mondjuk (~'say')* appears in a turn-final and clause-final position which is a very rare position in the non-conceptual usage of the DM. It functions here to signal an example:

example 3.13

- hát de annak elég széles kereke van szerintem
- {b} hát széles de %a nem olyan a rugózása mint <mint> egy [English: cross] motornak **mondjuk**
- (*But it has quite a wide wheel, I think.*
- *Well, wide but it doesn't have a suspension system of a cross motorcycle **DM_mondjuk**.) (*hucomtech 069 informal)

In the following example (3.14) we can find *mondjuk (~'say')* turn-internally, performing its most common function, meaning 'at the same time', 'I have to admit'. It introduces an alternative point of view, reorients the speaker and expresses the relation of contrast. *Mondjuk (~'say')* in this example does not express a point opposing the view of the other participant, but opposing his own previous utterance, as the speaker introduces his new perspective on the discourse topic:

example 3.14

nem volt kellemes {b} bár **mondjuk** ilyenekből is tanul az ember (*it wasn't pleasant, DM_although **DM_mondjuk** we learn from these mistakes*) (hucomtech 017 informal)

Let me also give an example for where *mondjuk (~'say')* is used to accent the personal viewpoint of the speaker. Example 3.15 illustrates that *mondjuk (~'say')* can also

be considered as a marker of emphasis, used to accent the personal perspective and opinion of the speaker, intensifying the personal commentary function of the DM:

example 3.15

- persze rengeteg nemzetiséggel lehetett találkozni (*DM^{persze}* you can meet a lot of minorities around here)
- én **mondjuk** ha kimennénk biztos azt várnám hogy na találkozzak ilyen tipikus angolokkal (*as for me, **DM^{mondjuk}** if I travelled to England, I would expect to DM^{na} meet typical British people*) (hucomtech 023 informal)

Further functions of *mondjuk (~'say')* as a DM include face management, also involving politeness properties, expressing mitigated dissatisfaction, showing interest and the management of topic elaboration. Examples 3.16 and 3.17 below illustrate these uses:

example 3.16

- {b} nagyon nehéz volt idetalálni
- na **mondjuk** ezzel más is így van
- *(it was hard to find the way here*
- *DM_na **DM_mondjuk** others also say the same)* (hucomtech informal)

example 3.17

- dolgoztam a Fórumban a Zara nevű helyen
- uhum
- ruhásboltban
- uhum, értem hát **mondjuk** ezek nem utolsó tapasztalatnak
- *(I worked in the Forum, in a place called Zara*
- *uhum*
- *in a fashion shop*
- *uhum, i see, DM_well **DM_mondjuk** these are not bad experiences*) (hucomtech informal)

On the basis of the analysis of the use of *mondjuk* (~'say') in the HuComTech corpus, it can be concluded that it often indicates that its producer has undergone some kind of a change in his/her local state of knowledge, internal information management and expresses subjective orientation towards either the topic or the other speaker('s utterance). On the level of participation framework (Schiffrin 1987), *mondjuk* commonly functions as a presentation marker modifying a unit of information, rather than a reception marker signalling a reaction to the other speaker's utterance(s)[79]. It is often inserted when the speaker replaces a unit of information with another one, especially in the narrative recalls of speakers during the dialogues.

3.3.2.3 The relation of position and intonation based on automatic pitch movement annotation

In order to test one of my hypotheses; that is, if there is a relation between position and pitch movement, the annotation of pitch movement was necessary. As a result, ProsoTool (described in section 3.3.1.2) was developed which is basically a Prosogram script further developed in Praat (Hunyadi, Szekrényes, Borbély & Kiss 2012).

Table 3.12 shows in a contingency table the direction of the pitch movement of the realizations of *mondjuk (~'say')* in relation to position in the utterance, as manifested in DM *mondjuk* tokens in 38 recordings[80] of the HuComTech corpus:

[79] For more details on the distinction between presentation markers and reception markers see section 2.2.6.2 and cf. Jucker and Smith 1998.

[80] Automatic pitch movement annotation has been performed on all the 385 *mondjuk* DM tokens in the 50 recordings of the HuComTech corpus analysed in this dissertation. The most relevant results of prosody-targeted queries can be found in Appendix 8. However, at the time of writing this section, the automatic pitch movement annotation of the DMs used by only the interviewees only in 38 recordings were manually checked by me; therefore, the results shown here pertain to only 174 *mondjuk* tokens. (In these 38 recordings, 110 *mondjuk* instances were uttered by the constant interviewer, and 174 tokens were used by the interviewees.)

		PitchMovement					Total
		stagnant	upward	rise	fall	descending	
Position_ Within_ Turn	turn-internal	61	21	18	21	16	137
	turn-initial	16	4	2	0	3	25
	turn-final	5	1	0	2	4	12
Total		82	25	20	23	23	174

Table 3.12 *Contingency table about the direction of the pitch movement in the realizations of mondjuk (~'say') in relation to its position in the utterance*

As seen in the table above, *mondjuk (~'say')* is most commonly uttered in turn-internal position and with stagnant intonation. In Figure 3.26 we can see the relation of position and automatically annotated pitch movement, and we can conclude that there is not a significant relation between these two variables (Fisher's exact test: p=0.153; the relative proportion of pitch is independent from position). In other words, position defined at utterance-level does not seem to determine the pitch movement of the host unit of the DM.

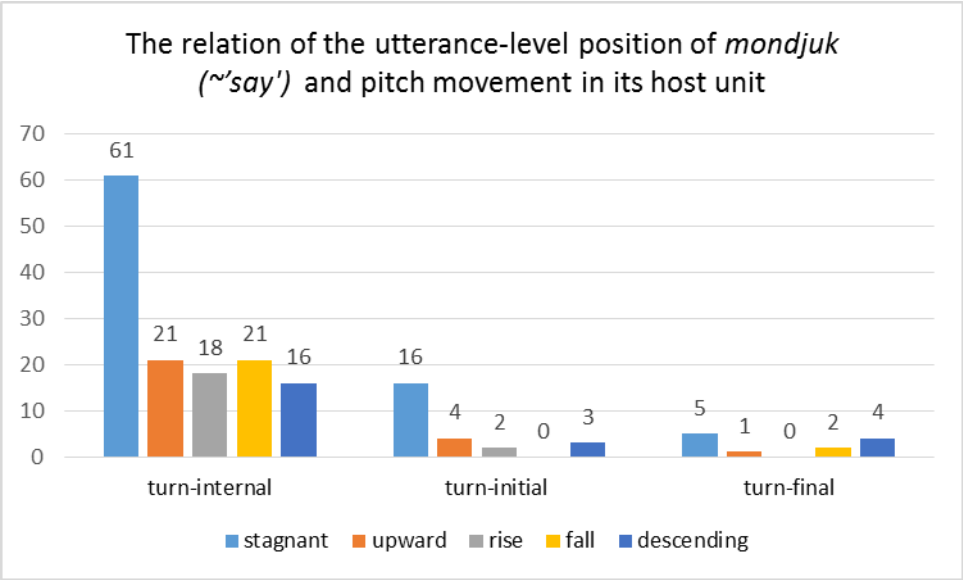

Figure 3.28 *The relation of the position of mondjuk (~'say') and pitch movement in its host unit*

As we can read in Figure 3.29, stagnant is the most common type of intonation in all three syntactic positions; however, in clause-final position, the distributions of directions is completely different and descending intonation is just as frequent a stagnant. Concerning the second most typical pitch movement direction, upward direction is common is initial/independent positions, while falling intonation is the second most common in clause-internal positions.

		PitchMovement					Total
		stagnant	upward	rise	fall	descending	
Position_ Within_ Clause	clause-internal	52	15	13	21	12	113
	clause-initial/outside clause	43	13	9	3	11	79
	clause-final/outside clause	6	2	0	2	6	16
Total		101	30	22	26	29	208

Table 3.13 *Contingency table about the direction of the pitch movement in the realizations of mondjuk (~'say') in relation to its position at clause-level*

Surprisingly, based on the contingency table presented in Table 3.13, it can be can concluded that there is a significant relation between syntactic position and the direction of pitch movement (Fisher's exact test: p=0.016), so position defined at clause-level seems to have an effect on the intonation in the host unit of the DM.

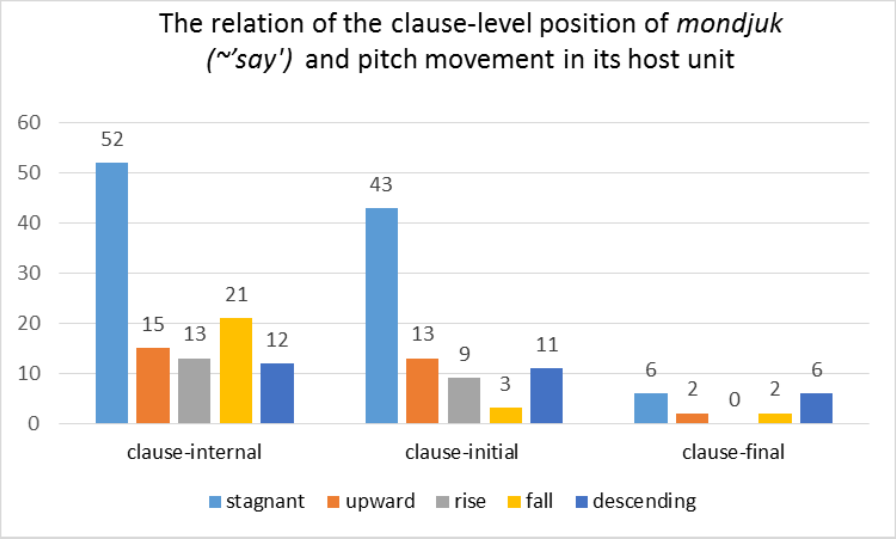

Figure 3.29 *The relation of the position of mondjuk (~'say') at clause-level and pitch movement in its host unit*

3.3.2.4 Nonverbal-visual features of uttering *mondjuk (~'say')*

Nonverbal signals also seem to contribute to the disambiguation of the actual meaning of *mondjuk (~'say')* items. When specification and providing example is introduced by the DM *mondjuk (~'say')* in the discourse domain of information state, hand gestures are also performed during topic elaboration (topic elaboration label in HuComTech). When the speaker emphasizes and marks the introduction of new information, the gesture is usually simultaneously performed with uttering *mondjuk*, or sometimes precedes it (with 100–2000 ms), in a way that either or both palms look upward. Functioning during lexical search, *mondjuk (~'say')* is often preceded by and simultaneous with upward gaze direction and a contemplating, recalling facial expression of the speaker.

When the function of *mondjuk (~'say')* is to mark the coherence relation of contrast and to express alternative viewpoints or disagreement in the action structure, *mondjuk (~'say')* is often used in a DM cluster (typically *de mondjuk ~'but say'*). The nonverbal behaviour of the speaker can be described by one or more of the following features: headshake, lifting eyebrows up, scowl, and looking aside (averted gaze). When *mondjuk (~'say')* functions in the discourse space of exchange structure and introduces a dispreferred second pair part, usually marking disagreement, it appears in utterance-internal position preceded by a pause. When the primary role of a DM is thematic control, and its meaning is 'well', 'yes but', or 'on the other hand', the speaker typically displays upward or sideways gaze.

In its attitude marking function *mondjuk (~'say')* is almost always accompanied by the change of the basic position of the eyebrows (*eyebrows up* or *scowl* tag). As seen in Figure 3.30, the verbal DM *mondjuk (~'say')* is often preceded by a communicative gesture (here: eyebrows scowl, looking down) expressing similar or identical function or attitude as the DM (here: empathy). These often appear 100–2000 ms prior to the DM and reach their gesture peak during the uttering the word *mondjuk*.

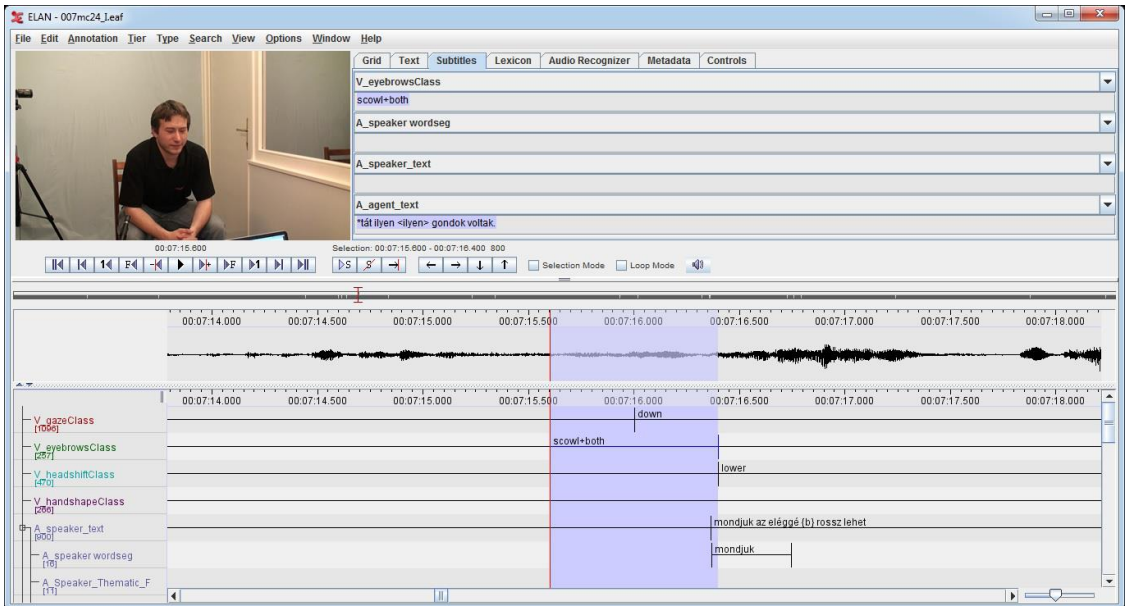

Figure 3.30 *Scowling performed before uttering a DM (both expressing empathy)*

3.3.2.5 Conclusions of the case study on *mondjuk (~'say')*

Interpreting *mondjuk (~'say')* from the perspective of ethnomethodology, it often introduces/signals dispreferred seconds (disagreements, rejections) or unexpected responses in adjacency pairs.

Mondjuk (~'say') as a *frame*:

- shifts the speaker's attitude or perspective towards the topic under discussion
- introduces explanations, disadvantages, etc.
- signals the beginning of direct and open speech
- functions as a self-repair device
- contribution to coherence

To conclude, let me note here that out of the three selected items analysed *mondjuk (~'say')* has the widest variety of meanings and corresponding functions. I identified the following interconnected and fuzzy non-conceptual meanings and submeanings of *mondjuk (~'say')* as a DM:

Core functions (evolving from its original, conceptual, verbal meaning, with its scope within a clause):

- *mondjuk1* meaning 'for example', which can be analysed as an adverb;

- *mondjuk2* meaning 'about, approximately, like', which can be analysed as an adverb[81];
- *mondjuk3* meaning '(let's) suppose, assume, imagine', which can be analysed as an imperative verb;

Textual-rhetoric uses (larger scope: it is used to link two coordinate clauses):

- *mondjuk4* meaning 'but, although, hovewer', which can be analysed as a connective/coordinating conjunction, marking the discourse-pragmatic relation of contrast or concession between two discourse segments;
- *mondjuk5*, used to clarify or explain the content in the previous segment of the speaker's utterance;
- *mondjuk6,* used to introduce/signal reformulation;
- *mondjuk7,* used to return to a previous topic.

Interactional uses (even larger scope: utterance-level, it is used to link two utterances):

- *mondjuk8* used in second-pair parts, meaning 'well, yes but, on the other hand, from a different perspective', indicating softened disagreement and involving the implicit expression of face-saving and politeness;
- *mondjuk9* used on its own in a short reply (~'*Mondjuk.*') to a question to express an agreement or token agreement, meaning 'so-so, more or less' and may also signal a mildly emotional response;

These different senses arose at different times in Hungarian, with *mondjuk1, mondjuk2* and *mondjuk3* dating back to earlier periods (probably mid-19th century) than the rest of the meanings (evolving around late 19th century, early and mid-20th century).

[81] Taking a contrastive perspective, both *mondjuk1* and *mondjuk2* could usually be replaced by *'like'* in youthful contemporary spoken English.

3.3.3 A discourse-pragmatic analysis of *ugye (~'is that so?')* as a DM

This section overviews the discourse-pragmatic analysis of 185 *ugye (~'is that so?')* tokens used in 50 recordings of the HuComTech corpus (of which 103 are uttered by the interviewees, 82 instances by the interviewer).

3.3.3.1 Pragmatic functions of *ugye* (*~'is that so?')*

Among various approaches, we can approach the function of *ugye (~'is that so?')* from the perspective of **processing information** along the lines of Jucker and Smith (1998), who distinguish between *reception markers* (e.g. *oh, okay*), which mark reactions to first-pair parts in adjacency pairs (e.g. statements, questions), and ***presentation markers***, which elaborate on and/or alter the information provided by the previous speaker. *Information-centred presentation markers*, such as *mondjuk (~'say')* modify the unit of information itself, while ***addressee-centred presentation markers***, such as *szerintem (~'I think'), ugye* (~'is that so?', 'as you know') or *vagyis* (~'or rather') relate the information to the assumed knowledge state of the addressee.

Based on a previous contrastive study of the use of English and Hungarian DMs in mediatised political interviews (Furkó & Abuczki to appear) as well as the examples illustrating the use of *ugye (~'is that so?')* as a marker of evidentiality, it can be argued that Hungarian *ugye* is similar to English *of course* in terms of its role in **information management**. O*f course,* similarly to *ugye*, can be used to signal new information and/or the newsworthiness of a given utterance (cf. Furkó 2007: 105). For instance, in example 3.18 *ugye (~'is that so?')* is used to preface **background information** in an inserted comment; therefore, it functions as a **marker of explicitation or specification**. Concerning its prosodic features, it is preceded and followed by voice break and characterized by lower intensity (displayed in Figure 3.31).

example 3.18 (http://www.youtube.com/watch?v=t7mEXNMxjAc)

boldog élmény volt, mikor elhoztuk, **ugye** egy <egy> sharpeiről van szó, {b} és hát ilyen kis pici {l} volt, és nagyon aranyos (*It was a happy moment when we*

*took him home, it's **DM_ugye** a shar pei, and so he was tiny like that, and very cute*) (hucomtech 016 informal)

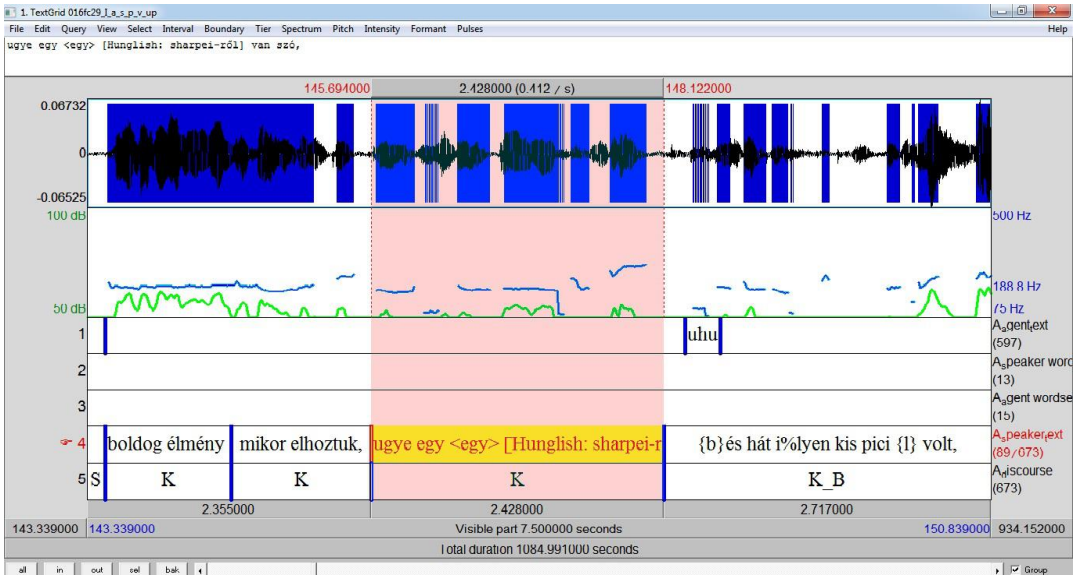

Figure 3.31 *Acoustic analysis of example 3.18 in Praat*

The following example (3.19) illustrates the **confidential use** of *ugye*, glossed as 'as you probably deduce on the basis of information or experience we have just shared'. This utterance was preceded by an unexpected segment in the simulated job interview part where the interviewer suddenly switched to speaking English and asked questions in English. This surprised the interviewee quite a lot and he could not answer in good English. So the interviewee assumes that the interviewer believes that he needs to improve his English. This assumed belief is rather specific to the context here.

example 3.19 (http://www.youtube.com/watch?v=bn4WmEi07fk)

Addigra úgy képzelem, hogy ha nem sikerül munkát találnom, akkor párhuzamosan elkezdeném fejleszteni a nyelvtudásomat, *mer **ugye** még most angolból is hiányosságaim vannak. (*I guess, in case I won't be able to find some job by then, I'll start to work on my English then, because **DM_ugye** now I still have a lot to learn*.) (020 hucomtech informal)

In the following two examples (3.20 and 3.21) *ugye* may either **refer back in the discourse** and, **clarify previous content** or **mark the evidentiality of the information** in the inserted clause:

*example 3.20 (*http://youtu.be/tuOgE6mmrEs)

Különböző világok vannak, ezek tudatállapotok, és mindegyik ilyen világban, **ugye** fokozatosan haladunk felfelé, és a legfelsőbb szinteken az istenek élnek. (*There are different worlds, these aredifferent states of mind, and in each of these worlds,* ***DM_ugye*** *we gradually move upward, and gods live at the highest level.*)

*example 3.21 (*http://youtu.be/ZLuKY9DAk4w)

Csak otthon hát **ugye** nyugalom kell hozzá, hogy ne zavarják az embert *mondjuk* egy félóráig. (*However,* ***DM_ugye*** *at home you need silence to do it, nobody should disturb you for DM_say half an hour.)*

Ugye (~'is that so?') functions as a **marker of shared knowledge, an evidentiality marker** in the utterance below (example 3.22) since both speakers in the interview are currently university students so they are likely to follow the changes in the system of higher education.

*example 3.22 (*http://youtu.be/Y1glqW3CPLQ)

Eddig Debrecenben tanultam, az Ady Endre Gimnáziumban hatosztályos képzésben, most pedig az egyetemen éppen végzős vagyok az anglisztika szakon, a BA képzésben, **ugye** ebben az új három éves képzésben. (*I've been studying in Debrecen, first in the six-year-programme of Ady Endre Grammar School, and now I'm doing my final year majoring in English BA,* ***DM_ugye*** *in this new three-year programme.*) (hucomtech 006 formal)

In the next narrative sequence[82] (example 3.23), the role of *ugye (~'is that so?')* is rather **fuzzy** as it can be interpreted as a combination of **evidentiality marker** or **preface**

[82] DMs have different functions in narrative sequences such as coding sequentiality, commenting on new episodes and pointing forward to a description (cf. Norrick 2001).

of giving an excuse or explanation. At the same time, a large group of informants assigned the ***filler*** label to this token (see section 3.2 for the detailed results of the questionnaires).

*example 3.23 (*http://www.youtube.com/watch?v=OPSDK81ariU)

Aztán amikor ilyen százharminc-száznyolcvannal mentünk, akkor így elgondolkoztam, hogy lehet most kéne megállni, és nem így hajszolni lényegében így a halált, meg így kockára tenni így az életemet, de végülis **ugye** ott volt az adrenalin, és nagyon felpörgetett, és az úgy jó volt. (*Then, when we were driving with hundred-thirty, hundred-eighty kms/h, I started to think, like, that we should maybe stop now, and not, like, practically chasing death, plus, like, risking my life, but then again, there was **DM_ugye** the adrenaline spinning me up a lot, and it was good like that.*) (hucomtech 018 informal)

As examples 3.24 and 3.25 show, *ugye (~'is that so?')* is frequently used in its **information checking** function as well in the HuComtech corpus, typically uttered in rising intonation (see section 3.4 for details on the prosody of *ugye* in questions):

*example 3.24 (*http://youtu.be/1sd9BirHc9Q)

I, agent, 153 .s (21.)

- Ő az, akiről meséltél egyszer a –
- Biztos meséltem.
- Most anyukádéknál van, **ugye?**
- Igen, igen,
- Ha jól emlékszem?
- *(Is he the dog you were telling me about?*
- *I'm sure I told you.*
- *Is he at your parents now **ugye** ?*
- *Yes, yes.*
- *If I remember well.)*

*example 3.25 (*http://youtu.be/XGKfsZQWSuo)

- Az volt a legjobb szállás, mert az egy ilyen kastélyszállószerűség volt, de nem a városba, hanem egy picit kijjebb tőle.
- Hm.
- De már nem jut eszembe, hogy mi a neve, de például
- Ez a Győr felé, **ugye**?
- Igen, igen.
- *(That was the best accommodation because it was like a castle, not in the city, but a little way out of it.*
- *Hm.*
- *But I can't remember the name, also, for instance...*
- *Is it on the way to Győr ugye?*
- *Yes yes.*
- *Yes, it's a bit out of the city on the way to Győr, it's like a separate castle actually.)*

As shown in the situation below, the DM *ugye (~'is that so?')* also functions to **refer back to previously mentioned/given content/information**:

example 3.26 (http://www.youtube.com/watch?v=B_gTI332tms)

- Hát a szomorú élmény az meg szintén ide kapcsolódik amikor el kellett válni tőle. Hát amikor elpusztult szegény, **ugye** a csau-csau, az előző kutya.
- Ja, uhum.
- Az elég rossz volt.
- *(Well, the sad memory is also connected to this experience. When we had to say good bye to him. When he deceased, the poor thing**, DM_ugye** the chau chau, the previous dog.*
- *Yeah, uhum.*
- *That was pretty bad.)*

In **narrative sequences** (e.g. examples 3.27 and 3.28) *ugye* displays **story structure** and segments events and narration (cf. Norrick 2001).

*example 3.27 (*http://www.youtube.com/watch?v=q5KbZthmJHc)

Most a legutóbbi, amit hallottam, az is ilyen Chuck Norrisos, hogy nemtom valami filmjéből jelenet, hogy a med-- a medvével, és **ugye** hogy hogy nem is tom, hogy így alszik ott az erdőbe ilyen tábor-- mármint a medve, vagy vagy nem, Chuck-- Chuck Norris, és akkor **ugye** jön a medve, és így megtámadja, és hát akkor az is így van ilyen komoly küzdelem, aztán végülis a medve így elkezd hátrálni.

*(Now the last one I've heard is a Chuck Norris one too, that, dunno, some movie of his had a scene with a b- bear, and that, the bear is like sleeping in the forest or whatever in that campsite - the bear,I mean..or, or no, Chuck-- Chuck Norris, and then **DM_ugye** the bear is coming and attacking him, and, well, there is like this serious fight then, then the bear starts to back off finally.)*

*example 3.28 (*http://www.youtube.com/watch?v=5PFI4cw2-LI)

Ja igen, és akkor attól ijedtem meg, hogy **ugye** megyek be, és akkor apukám meg ott állt az ajtóban. És akkor attól nagyon megijedtem, mer nem számítottam rá. *(Oh yes, and then I got scared when I was **ugye** entering the door, and my dad was there standing in the door. And that really scared me,'cause I hadn't expected that to happen.)*

According to informants participating in my questionnaire (see section 3.2 for details), DM *ugye (~'is that so?')* plays a very salient role in **explanation** (as illustrated in example 3.29 below).

*example 3.29 (*http://youtu.be/ZYXxFoghubI)

- Igen, hát a krisnások például arra szoktak hivatkozni, hogy ez **ugye** benne van a izébe Bhagavad-Gítában, hogy ezt és ezt nem szabad.
- Ja, ja, ja.
- És ez **ugye** tényleg egy régi könyv.

- *Yes, well, the Krishna people for instance usually refer to the Bhagavad Ghita or whatever, that this is mentioned in that, and you mustn't do it.*
- *Yeah I know*
- *And this is **ugye** in fact really an old book.*

3.3.3.2 Lexical co-occurrences of *ugye (~'is that so?')*

I also aimed at mapping the lexical environment of the DM; therefore, I run a query (called *Find N-gram within annotations*) in ELAN on the segmented DM *ugye (~'is that so?')* tokens. The tables below (3.14 and 3.15) present the co-occurrence patterns of *ugye*, but only show those DMs and connectives that preceded *ugye (~'is that so?')* in at least two instances.

DM or connective preceding *ugye*	**Number of occurrences**	**Proportion (%)**
meg (~'and')	7	6,93
hát (~'well')	6	5,94
*mer (~'cause')	4	3,96
akkor (~'then')	4	3,96
hogy (~'that')	4	3,96
és (~'and')	3	2,97

Table 3.14 *A list of DMs and connectives preceding ugye (~'is that so?') in the interviewees' talk*

DM or connective preceding *ugye*	**Number of occurrences**	**Proportion (%)**
hát (~'well')	6	8,96
*mer (~'cause')	5	7,46
hogy (~'that')	4	5,97
akkor (~'then')	2	2,99
mert (~'because')	2	2,99
tehát (~'so')	2	2,99
és (~'and')	2	2,99

Table 3.15 *A list of DMs and connectives preceding ugye (~'is that so?') in the interviewer's talk*

It can be concluded from the queries that *ugye (~'is that so?')* was preceded by a DM or a connective in approximately 40% of the cases (altogether 103 tokens) in the interviewees' talk, while in the interviewer's speech *ugye (~'is that so?')* followed a DM or a connective in approximately 43% of the cases (altogether 82 tokens). Most of these *ugye-clusters (meg* (~*'and'*), *hát* (~*'well'*) and *hogy* (~*'that'*) + *ugye* (~*'is that so?*')) are used in explanations.

3.3.3.3 The relation of position and intonation based on automatic pitch movement annotation

Automatic pitch movement annotation (Hunyadi, Szekrényes, Borbély & Kiss 2012) has been performed on all the 185 *ugye (~'is that so?')* tokens segmented in the 50 recordings of the HuComTech corpus analysed in this dissertation. The most relevant results of prosody-targeted queries can be found in Appendix 8. However, at the time of writing the dissertation, the automatic pitch movement annotation of only the DMs used by the interviewees only in 30 recordings were manually checked by me; therefore, the results shown here pertain to only 50 *ugye (~'is that so?')* tokens[83]. (In these 30 analysed recordings, 50 tokens were used by the interviewees.)

Figures 3.32 and 3.33 present the distributions of the positions of the tokens in relation to discourse and syntactic units respectively. They show similar patterns of use, internal positions predominating the scene, rejecting the initiality claims about DMs, if we consider *ugye (~'is that so?')* a DM.

[83] I am aware that this is a small set so I do not draw decisive conclusions based on this amount of data.

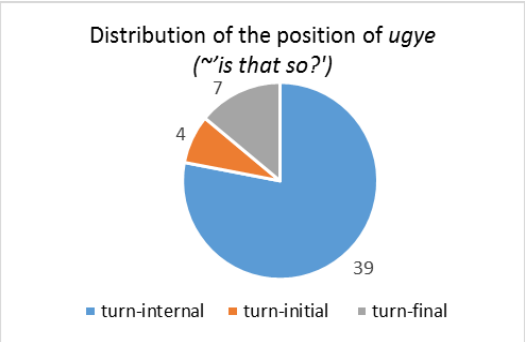

Figure3.32 *Distributions of ugye (~'is that so?') positions at turn-level*

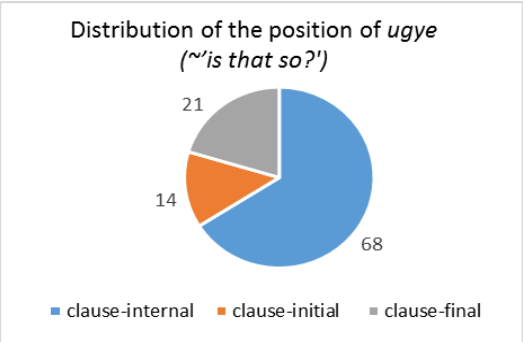

Figure 3.33 *Distributions of ugye (~'is that so?') positions at clause-level*

Table 3.16 presents the results of the automatic pitch movement annotation of 50 *ugye (~'is that so?')* tokens uttered by the interviewees, in relation to their position in the host utterance.

		PitchMovement					Total
		stagnant	upward	rise	fall	descending	
Position_ Within_ Turn	turn-internal	21	3	5	4	6	39
	turn-initial	1	2	1	0	0	4
	turn-final	1	3	2	0	1	7
TotaL		23	8	8	4	7	50

Table 3.16 *Contingency table about the relation of the position of ugye (~'is that so?') in the utterance and pitch movement*

It can be read in Table 3.16 and Figure 3.34 that stagnant intonation is the most common type in turn-internal position. In turn-initial position, *ugye (~'is that so?')* is uttered in either stagnant, upward or rising intonation. On the other hand, upward and rising pitch movement direction types are the most frequent in turn-final position which can be associated with their tag question status.

Fisher's exact test performed on the query results (p=0.110) suggests that the relative proportion of pitch is independent from position in the turn. Therefore, I have to reject my initial hypothesis that suspects a significant relation between the two.

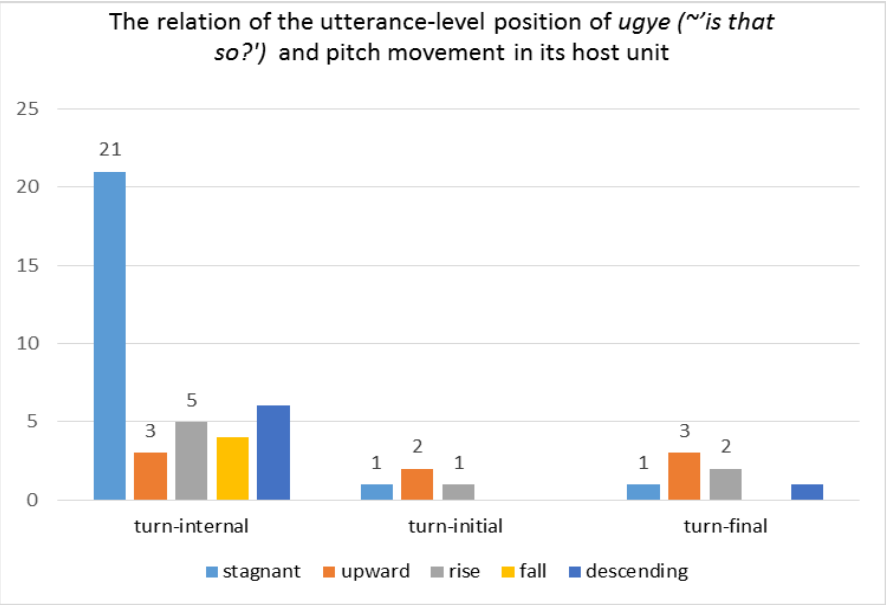

Figure 3.34 *The relation of the position of ugye (~'is that so?') in the utterance and pitch movement*

In contrast, the position of the DM defined at clause-level (presented in Table 3.17 and Figure 3.35) has a statistically significant impact (p=0.001) on automatically annotated pitch movement. In other words, there must be a relationship between the two variables (position defined at clause-level and the automatically annotated direction of pitch movement).

		PitchMovement					Total
		stagnant	upward	rise	fall	descending	
Position_ Within_ Clause	clause-internal	39	5	7	6	11	68
	clause-initial	3	6	3	1	1	14
	clause-final	3	8	6	1	3	21
Total		45	19	16	8	15	103

Table 3.17 *Contingency table about the relation of the position of ugye (~'is that so?') defined at clause-level and pitch movement*

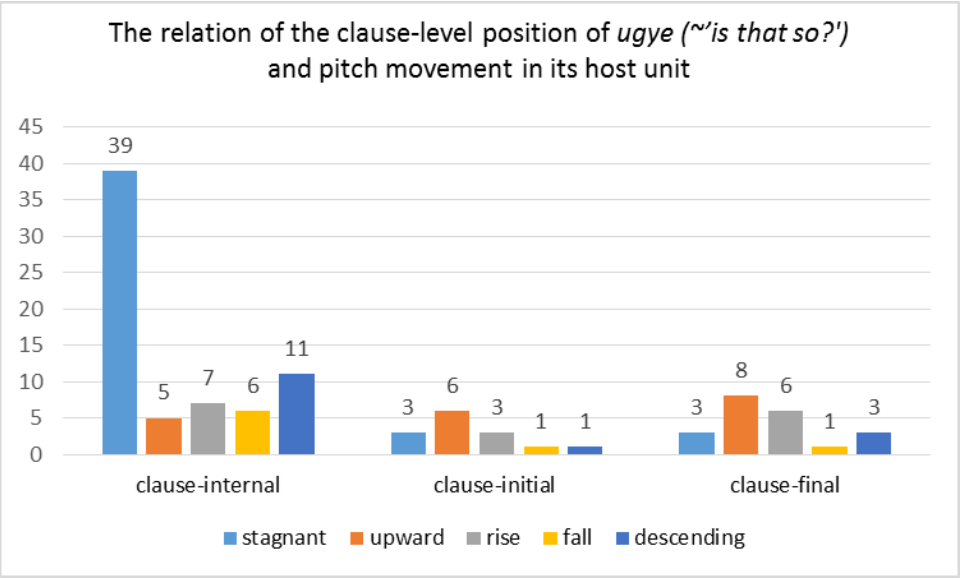

Figure 3.35 *The relation of the position of ugye (~'is that so?') defined at clause-level and pitch movement*

I have to reject my initial hypothesis that position defined at turn-level has a statistically significant impact on the automatically annotated pitch movement of the DM or its host unit. However, position defined at clause-level does have a significant effect on the pitch movement of the DM or its host unit.

A further question is if there is a marked difference between the intonations of *ugye (~'is that so?')* in declarative sentences (e.g. in explanatory sequences as an evidentiality marker) and in interrogative sentences (e.g. when it is used to ask for reassurance or check information). This question will be discussed in section 3.4 in connection with the semi-automatoc disambiguation of discourse function based on physical markers.

3.3.3.4 Conclusions of the case study on *ugye (~'is that so?')*

Taking into consideration all instances of *ugye (~'is that so?')* in the HuComTech corpus, *ugye (~'is that so?')* as a DM expresses the following meanings and functions:

- *ugye1* used as an interrogative adverb of manner/ as a tag question, uttered with high pitch (the most ancient, the core meaning of *ugye*):
  - *ugye1a* used to signal a question asking for reassurance and/or expecting a positive reply (agreement or acceptance)

- *ugye1b* used to check information

- *ugye2*used as a marker of evidentiality:
    - *ugye2a* refers to common knowledge and can be glossed as 'as everyone knows' (*impersonal* use of *ugye*)
    - *ugye2b* is used to refer to and activate the shared background knowledge of the speakers in the conversation (*confidential* use of *ugye*)
    - *ugye2c* indicating a rhetorical question where the speaker does not expect to receive a reply (*rhetorical* use of *ugye*)
    - *ugye2d* is uttered when the speaker mentions something that s/he assumes the other participant in the conversation already knows
    - *ugye2e* is sometimes used to avoid implying that someone should know the thing that you are saying but you are not certain about it

- *ugye3* used as an additioinal function to express emphasis and to make a discourse-pragmatic function more emphatic (emphasizing, strengthening the force of a primary, not emphatic or not obvious function such as information management in *ugye3a*, evidentiality in *ugye3b,* or explanation in *ugye3d, etc.*)
    - *ugye3a* as a marker of new information to call or evoke the hearer's attention (to pieces of new/unknown information)
    - *ugye3b* used to emphasize the validity of facts
    - *ugye3c* used to emphasize that the speaker has chosen certain words or communicated certain content/message
    - *ugye3d* used to introduce explanations and excuses or clarify the use of words by introducing an explanation
    - *ugye3e* used as a marker of story structure and new development in narratives

Besides DM uses, *ugye (~'is that so?')* in certain contexts was identified by the informants of my questionnaires (see section 3.2 for details) as a filler word without adding any meaning or subtlety to the utterance or as a marker of hesitation.

3.3.4 A discourse-pragmatic analysis of *amúgy (~'otherwise', 'by the way')*

The goal of this section is to map the functions and make explicit the features of the DM *amúgy (~'otherwise')* from a discourse-pragmatic perspective, based on empirical data. Altogether 79 tokens of *amúgy (~'otherwise')* can be found in the parts of the HuComTech corpus analysed by me (in 50 recordings). Among these, 50 tokens are used by the interviewees, while 29 instances are uttered by the constant interviewer. 65 tokens can be analysed as DMs, expressing procedural meaning, and 14 items are adverbs, adverbials or sentence adverbs.

3.3.4.1 Lexical co-occurrence patterns of *amúgy (~'otherwise', 'by the way')*

Tables 3.18 and 3.19 display the distribution of lexical co-occurrences with *amúgy (~'otherwise')* as they are used by speakers in the HuComTech corpus[84]. In the interviewees' speech, DM *amúgy (~'otherwise')* follows a connective in approximately 42% of the cases.

Connective preceding *amúgy*	Number of occurrences	Proportion (%)
de (~'but')	12	26,67
*mer (~'cause')	2	4,44
{b} de (breathing + ~'but')[85]	2	4,44

Table 3.18 *Lexical co-occurrences with amúgy (~'otherwise') in the interviewees' speech*

Connective preceding *amúgy*	Number of occurrences	Proportion (%)
*mer (~'cause')	10	38,46
de (~'but')	5	19,23

Table 3.19 *Lexical co-occurrences with amúgy (~'otherwise') in the interviewer's speech*

[84] The tables only show those items which preceded *amúgy* in at least two instances.

[85] Besides de (~'but'), {b} de (breathing + ~'but') was introduced as a separate category in the sequential anlysis because I followed the audio annotation system of the HuComTech corpus which requires the annotation of all audible signals, including breaths, because they also convey information about the speech planning processes and the speech production of the speaker.

As seen in Tables 3.18 and 3.19, *amúgy (~'otherwise')* does not tend to form a *DM cluster* with other DMs. Moreover, it is followed by a smaller set of connectives (only two connectives) than the other two analysed items (*mondjuk* and *ugye*). Its relatively common co-occurrence with the subordinating connective**mer* (~'cause') strengthens its role in explanations, while its co-occurrence with the coordinating connective *de* (~'but') indicates the relation of contrast or concession between the linked segments (clauses, utterances or even larger thematic units). In the interviewer's speech *de* (~'but') is typically used to introduce a new topic (e.g. *de amúgy térjünk át...,* meaning ~'but otherwise let's move on to ...'). In the interviewer's speech, DM *amúgy (~'otherwise')* follows a connective in approximately 70% of the cases. Most typically, it follows **mer* (~'cause') in 38,46% of the utterances, and it follows *de* (~'but') in 19,23% of the cases.

3.3.4.2 The functions of *amúgy (~'otherwise', 'by the way')*

After providing a few examples for the conceptual use of *amúgy*, this section lists the pragmatic functions of DM *amúgy (~'otherwise')* as observed in the HuComTech corpus.

First, let us see two utterances (example 3.30 and example 3.31) where it is rather difficult to determine the status of *amúgy*:

example 3.30 http://youtu.be/InpYDzwuWlo

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- Meg hát emlékszem, ott állt az ablakba, és így cigizett, mer **amúgy** nem szokott a lakásba rágyújtani, de akkor annyira ideges volt, hogy muszáj volt neki.
- (*And, well, I remember him standing at the window, smoking 'cause he doesn't* ***ADV_amúgy*** *usually smoke in the house, but he was so stressed out that he just had to.*)

example 3.31 http://youtu.be/q7VB-cxa2mM

- Akkor nem tudsz most viccet mondani?

- Nem. Egyet se tudok. Hát ilyen megy a nyuszika az erdő szélén, és leesik, tehát ilyen fárasztó viccekben nagyon otthon vagyok, de **amúgy** nem.
- *(So you can't tell a joke right now?*
- *No. I don't know any. Well, like little rabbit is walking by the forest and falls off..so I'm like familiar with these kinds of lame jokes, but **ADV_amúgy** no.)*

In examples 3.30 and 3.31 the meaning of *amúgy (~'otherwise')* can be glossed as ~ 'in another way', 'in the opposite way', 'in other circumstances'. These *amúgy (~'otherwise')* tokens are not considered as DMs because (1) they are not optional, (2) they do have propositional meaning, and (3) omitting them would make the utterance illogical or would change its meaning. Furkó argues that "DMs are considered optional from the perspective of sentence meaning because their absence does not change the conditions under which the sentence is true … secondly, they are optional in the sense that if a DM is omitted, the relationship it signals is still available to the hearer, though no longer explicitly cued" (2007: 57). In this respect, *amúgy (~'otherwise')* tokens in examples 3.30 and 3.31 are not considered optional. At the same time, there is some variation among the degree of propositionality of the meaning of *amúgy (~'otherwise')* items, since example 3.31 involves a higher degree of conceptual meaning than example 3.30. Taking all DM criteria (Furkó 2007: 73) into consideration, *amúgy (~'otherwise')* tokens in these examples fail most of the tests; therefore, they are not core DMs; rather, they function as **sentence adverbs** with a rather high degree of conceptual meaning.

Now, let us move on to the interpretation of the **pragmatic functions of DM *amúgy***, illustrated by examples taken from the HuComTech corpus. In examples 3.32-3.35 (in contrast with examples 3.30, 3.31), *amúgy (~'otherwise')* is analysed as a DM because it is an optional, omittable item there (after omitting it, the meaning of the utterance does not change). *Amúgy (~'otherwise')* in example 3.32 and 3.33 signals that the communicated content is not so important and relevant; it is only an **inserted comment (personal opinion)** of the speaker. The use of *amúgy (~'otherwise')* indicates the intention of the speaker to further elaborate on the topic; also, it is used to **refer back to a previous sub-topic** (to Pest and partying, respectively).

*example 3.32 (*http://youtu.be/amQInGR78DM)

- Én tervezem egyébként, hogy Pestre költözzek. Tehát a suli az, ami itt [Debrecenben] tart csak. Imádom Pestet **amúgy**.
- *(I'm planning to move to Pest. So, it's only school that keeps me here [in Debrecen]. I love Pest **DM_amúgy**.)* (hucomtech informal)

example 3.33 (http://youtu.be/KV_zj8y4T7I)

- Már két és fél éve itt lakom, de mit tudom én, nem voltam olyan sok helyen, Tornádóba voltam talán párszor. Annyira **amúgy** én nem vagyok ilyen buliember.
- *(I've been living here for two and a half years, but, dunno, I haven't been out to a lot of places, I've been to Club Tornado a couple of times. But I'm **DM_amúgy** not like such a party animal.)* (hucomtech 030 informal)

In the following example *amúgy (~'otherwise')* marks **topic elaboration** and the **shift of perspective** of the speaker:

*example 3.34 (*http://youtu.be/OBH9LIf2uCs)

- Most sokan fognak rám haragudni szóval, hát, így a zsidó vallásba az nem, az nem tetszik, hogy ők a kiválasztott nép.
- Akkor o%, te magad **amúgy** vallásos vagy?

In example 3.34 *amúgy (~'otherwise')* could be glossed as 'by the way' in English. Besides marking thematic features, it is also used to **decrease the face threatening force** of the question.

A different use of *amúgy (~'otherwise')* can be observed in the following example:

*example 3.35 (*http://youtu.be/e8Dju5tpXlk)

- Sajnos értettem angolul, hogy meg akar késelni. Egy kicsit úgy hátrahőköltem, nővérem így kettőt hátrahőkölt, és akko mondtuk, hogy hát de nincs nálunk pénz értse meg. Hát **amúgy** volt hatszáz font meg egy kétszázezer forintos

notebook, tehát végülis nem volt nálunk pénz, és akkor ott erősködött, hogy de igen.

- (*Unfortunately, I understood in English that he wanted to stab me. I, like, backed off a little, my sister, like, backed of,f too, and then we said we didn't have money on us. Well, wdid have six hundred pounds and a notebook worth 200,000 HUF, so we didn't actually have cash, and then he was like pressing that we give him more.)* (hucomtech 006 informal)

In example 3.35 above *amúgy (~'otherwise')* can be glossed as 'otherwise' and it marks a **concessive** relation with the preceding content. Additionally, it expresses some attitudinal features since it implies that the speaker is about to admit or reveal something (especially when interpreted jointly with the simultaneous facial expressions and gesticulation of the speaker).

Just for the sake of comparison, let me repeat the relevant results of my questionnaire study (see section 3.2 for details) concerning the function of *amúgy*. According to the intuitions of average language users participating in my questionnaire, the most common and salient function of *amúgy (~'otherwise')* is marking/introducing commentaries, personal opinions and side sequences. Its second most frequently assigned function is the introduction of explanatory sequences, while its third most common function is marking new information. Lastly, it is also often seen as a meaningless filler word.

3.3.4.3 The relation of position and intonation

I queried the co-occurrence of discourse labels, syntactic labels (concerning position) and pitch movement in the host unit of the DM because I wanted to test if there is a relation between any of these variables.

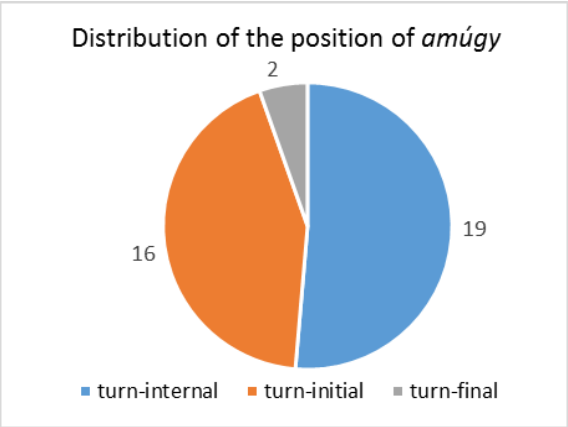

Figure 3.36 *Distributions of amúgy (~'otherwise') positions at turn-level*

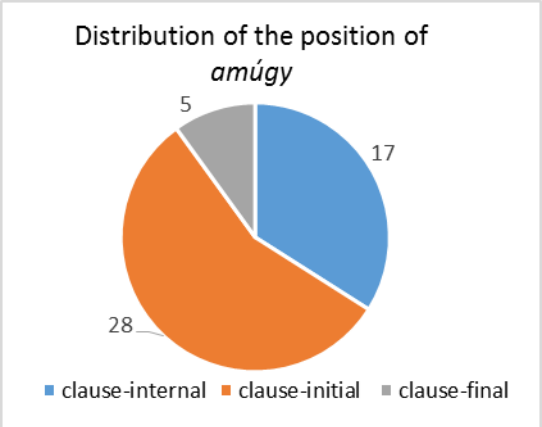

Figure 3.37 *Distributions of amúgy (~'otherwise') positions at clause-level*

Automatic pitch movement annotation has been performed on all the 79 *amúgy (~'otherwise')* tokens in the 50 recordings of the HuComTech corpus analysed in this dissertation. The most relevant results of prosody-targeted queries can be found in Appendix 8. However, at the time of writing this section, the automatic pitch movement annotation of the DMs used by only the interviewees only in 30 recordings were manually checked by me; therefore, the results shown here pertain to only 37 *amúgy (~'otherwise')* tokens. (In these 30 recordings, only 37 *amúgy (~'otherwise')* instances were uttered by the interviewees). The small number of tokens analysed is a limitation of this case study; consequently, the findings must be analysed sceptically and not to be considered as conclusive evidence, because they may not prove universal in Hungarian language if we compare them to findings based on a larger material. This asymmetry in the number of tokens is due to the difference in the frequency of their uses (*mondjuk* being the most, and *amúgy (~'otherwise')* being the least frequent item). Still, in order to make the three studies on the three DMs (*mondjuk, amúgy* and *ugye)* comparable and symmetrical, I include the findings of this small set of *amúgy (~'otherwise')* in the dissertation as well, although I am fully aware that plausible consequences cannot be drawn from them.

		Pitch Movement					
		stagnant	upward	rise	fall	descending	Total
Position_ Within_ Turn	turn-internal	14	4	1	0	0	19
	turn-initial	8	5	2	0	1	16
	turn-final	1	0	0	1	0	2
Total		23	9	3	1	1	37

Table 3.20 *Contingency table about the turn-level position and intonation of amúgy*

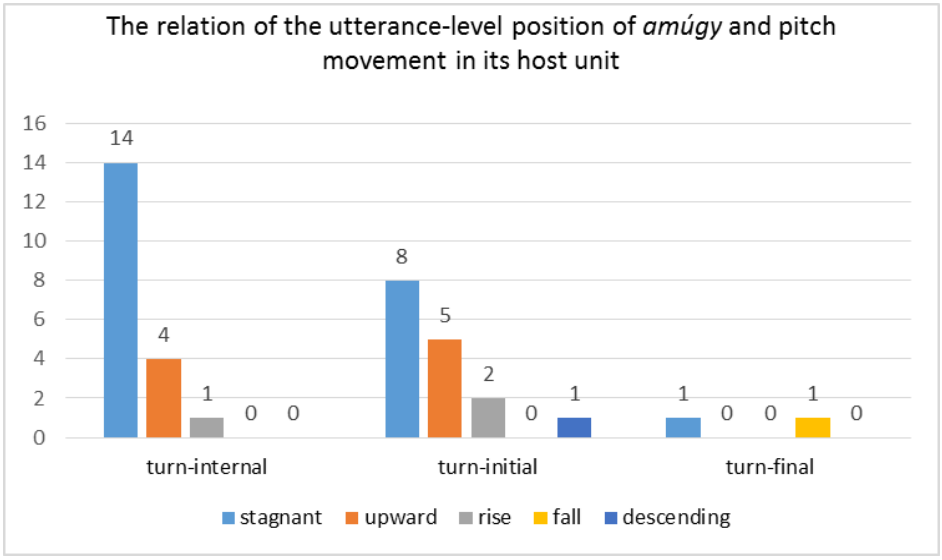

Figure 3.38 *Crosstabulation of the turn-level position and intonation of amúgy*

As seen in Table 3.20 and Figure 3.38, *amúgy* as a DM is most frequently used turn-internally, although the difference between the distribution of turn-internal and -initial positions is not significant. The idea of the quasi-initiality of DMs (Fraser 1990) is challenged again by this result. Stagnant intonation is the most frequent type in all positions. On the other hand, upward, rising, falling and descending pitch movement direction types are very rare. Fisher's exact test performed on the query results (p=0.006) suggest that position in the utterance has a significant impact on the relative proportion of pitch. Therefore, I can confirm one of my initial hypotheses that suspected a relation between the two variables.

On the other hand, I found that there is not a significant relation (p=0.365) between the relative proportion of pitch annotation and the position defined at clause-level either(presented in Table 3.21 and Figure 3.39). In other words, as opposed to my findings about *mondjuk (~'say')* and *ugye*, the position of *amúgy (~'otherwise')* defined at clause-level does not seem to determine the direction of pitch movement of the host unit of the lexical item. This prosodic distinction of the more pragmaticalised items such as *mondjuk (~'say')* and *ugye* (being in a later stage of the grammaticalization process) versus the less pragmaticalised item *amúgy (~'otherwise')* might have to with either the difference in their DM status or simply the (too small) amount of data analysed.

		Pitch Movement					Total
		stagnant	upward	rise	fall	descending	
Position_ Within_ Clause	clause-internal	13	2	1	0	1	17
	clause-initial	16	6	4	1	1	28
	clause-final	2	1	0	1	1	5
Total		31	9	5	2	3	50

Table 3.21 *Contingency table about the relation of the clause-level position and intonation of amúgy*

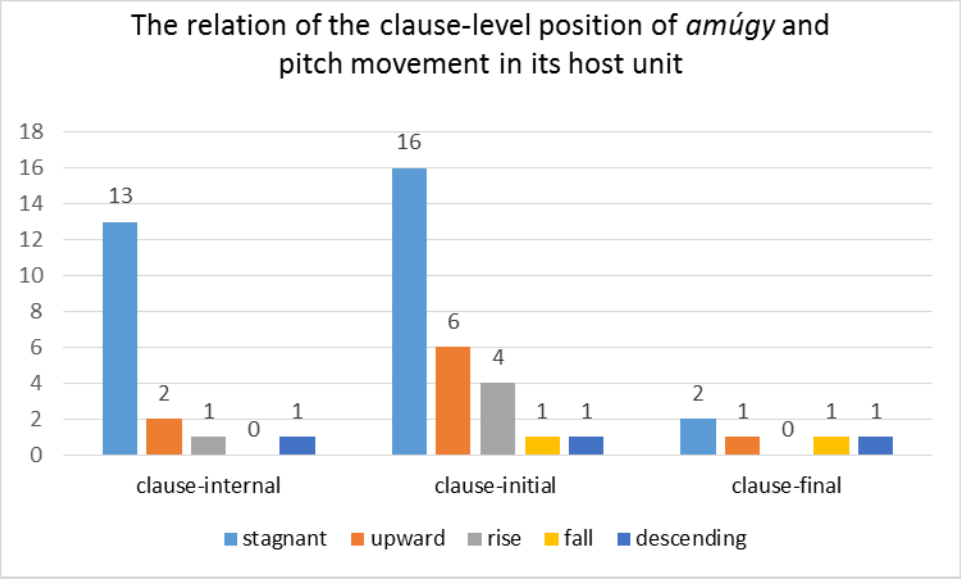

Figure 3.39 *Crosstabulation of the clause-level position and intonation of amúgy*

3.3.4.4 Conclusions of the case study on *amúgy (~'otherwise', 'by the way')*

As the examples from the HuComTech corpus of spontaneous speech suggest, the various interconnected senses of *amúgy (~'otherwise')* as a DM include:

- *amúgy1* (core function) used to mark/introduce comments, unrequested opinions and side sequences in narratives
- *amúgy2* used to introduce explanations – some informants in my questionnaire work identified these instances as empty filler words
- *amúgy3* used to mark new information.

It can be concluded from the analysis of my material that despite the rather peripheral status of *amúgy (~'otherwise')* as a discourse marker, it displays a whole range of the (formal, functional and prosodic) properties of the category of DMs, such as:

- non-propositionality: *amúgy (~'otherwise')* as a DM is non-propositional
- non-conceptual, procedural meaning (although the results of ther questionnaires show that average language users have a difficulty in distinguishing conceptual and procedural meaning in the case of *amúgy*)
- multifunctionality (it simultaneously marks topic change, topic elaboration, turn-taking and unrequested commentaries, side sequences)
- *amúgy (~'otherwise')* as a DM is optional
- weak clause association
- sequentiality, connectivity, textuality: it marks that its host utterance introduces a new aspect or topic, it connects loosely related topics or it introduces side sequences or commentaries
- medium frequency in colloquial conversation (its frequency is not so high as that of more prototypical DMs)
- orality.

3.3.5 Conclusions of the discourse-pragmatic analysis

To sum up the findings of the questionnaires (described in 3.2) and the three case studies (in 3.3), it can be concluded that of the three DMs analysed, *mondjuk (~'say')* has the widest, and *amúgy (~'otherwise')* has the narrowest functional spectrum. My hypotheses concerning the relation of functional spectrum and core meaning are confirmed: (1) the smaller functional spectrum a DM has, the stronger its core meaning is; (2) the larger functional spectrum a DM has, the conceptually weaker it is. Core functions of DMs are more frequently expressed (by speakers) and perceived (by hearers, represented by the informants in my questionnaires) than their peripheral functions.

3.4 Attempts at disambiguating discourse functions[86]

As discussed in 3.3, the scrutinised lexical items provide information about discourse structure and dialog acts which helps listeners process the utterance and helps speakers to organize conversational moves, such as speaker changes or topic changes. From all their possible functions, two salient functions of each selected DM will be described by multiple multimodal features in order to increase their naturalness in spoken language generation and to enhance their semi-automatic disambiguation. This goal is crucial in natural language processing since the proper generation and understanding of such frequent lexical items based on multimodal description might be a component of interactive voice response systems, especially for producing and interpreting communicative messages.

3.4.1 Material and feature extraction methods

I have selected 2-2 functions of each DM to analyse in detail because (1) they are salient[87] functions of the given DM and (2) these two different functions (of each item) seem to be relatively easy to distinguish by relying on only observable, measurable and

[86] This chapter is a further developed, modified version of a previous publication of the author (Abuczki 2014). The findings of this chapter were also presented at the CECIL'c conference (Abuczki 2013).

[87] Criteria for saliency was the high frequency of the function assigned during the questionnaires as well as my qualitative observations about its frequncy in the HuComTech corpus.

machine-extractable features. I tagged only prototypical members of the categories and excluded borderline cases with ambiguous and highly mixed functions. The specification of this strict tagging might result in better precision results in classification attempts.

Low-level prosodic features such as min, max and mean pitch and intensity, as well as temporal features (durations of DMs and preceding silences) were extracted from the segmented sound files (.wav) using Praat and Prosogram scripts. The values of the F0 range and intensity range of each DM were calculated in Microsoft Excel. Speaker normalization can also be achieved using Z-scores. Lexical features concerning lexical-co-occurrences and position (in the utterance) were extracted from the textgrid files of the annotations. Nonverbal-visual features of the speaker's behaviour can be extracted from the manually-performed video annotations of the recordings and can be automatically queried with the ELAN software (using the command *Find overlapping label of 'wordseg' in the 'gaze' or/and 'facial expression' tiers*.).

On the other hand, visual features can also be machine-extracted from the video files with relatively high reliability using facial expression recognition software, such as the FaceReader software of Noldus[88]. Several single layer search options and multiple layer search options will be performed to identify the common features of the prototypical uses of the three items.

Finally, the machine-extractable features will be organized in order of prominence into a decision tree which quite reliably (with at least 80% precision, depending on the end node) distinguishes the two salient uses of the given DM.

The material of this empirical case study is comprised of twenty-two informal recordings[89] of the HuComTech corpus. This cross-checked subcorpus contains 208 tokens of *mondjuk*, 70 tokens of *ugye* and 33 tokens of *amúgy.* The decision of the selection of the two-two salient functions to be distinguished is based on the results of the questionnaires (described in section 3.2).

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[88] You can read about FaceReader and request a free trial version of it at http://www.noldus.com/human-behavior-research/products/facereader.

[89] I selected these twenty-two recordings because on the one hand, I wanted to have equal distribution of male and female speakers in this subcorpus; on the other hand, all the audio, video, pragmatic and functional DM annotations of these recordings had been checked at/by the time of writing this chapter.

The two functions of *mondjuk (~'say')* to be distinguished by machine-extractable multimodal cues were (1) lexical search/approximation and (2) contrast/concession:

1. markers of lexical search + approximation (abbreviated as LXS):

example 3.36

„gyorsan megy a motorom **mondjuk** 120–140-nel" *('my bike is really fast, it can do **DM**^{mondjuk} 120–140 kmphs')* (HuComTech, 017_I)

2. markers of contrast + concession (abbreviated as CON):

example 3.37

„szeretek a belvárosban élni **mondjuk** elég nagy a szmog" ('*I like living in the city centre **DM**^{mondjuk} the air is polluted'*) (HuComTech, 019_I)

Lexical search and approximation (LXS APPR) functions were merged to be analysed together as a single class for two reasons: (1) the results of the questionnaires showed that they are often simultaneously performed as many subjects marked both functions for the same token of DM, and (2) their machine-extractable surface features (position, duration, surrounding silence) seem to be similar or at least not distinctive.

Contrast and concession (CON) also seemed to be difficult to distinguish for average language users, so these two functions (answers in the questionnaire) concerning one token often overlapped. The functional categories of contrast and concession were finally merged (1) because of the mixed questionnaire results and (2) because they fall into the same logical category.

Out of the 208 tokens of *mondjuk,* 46 tokens fall into the category of LSX and 41 into the category of CON.

The two salient major functions of *ugye (~'is that so?')* to be distinguished were (1) marker of explanation and (2) marker of question. The category of *marker of explanation* includes tokens used during acts of explanation, including evidentiality markers and markers of shared knowledge, since all these two categories overlapped in the responses of my questionnaire informants. Markers of question include information-checking and facilitating (tag) questions that ask for reassurance. 23 tokens fall into the category of EXPL and 15 into the category of QSTN out of the 70 tokens of *ugye*.

1. marker of explanation (abbreviated as EXPLN):

example 3.38

"BA-s hallgató vagyok **ugye** ezt a 3 éves képzést csinálom". ('I'm a BA student ***DM^{ugye}*** I do this three-year course.') (HuComTech, 006_I);

2. marker of question (abbreviated as QSTN):

example 3.39

Pestre fogsz költözni, **ugye**? ('You're moving to Pest, ***DM^{ugye}*** ?') (HuComTech, 085_I)

The two functions of *amúgy ('otherwise')* to be distinguished were the following:

1. COMM=introducing a longer commentary, commenting, giving opinion and additional information;
2. EXPL=explanation.

Commenting, giving opinion and additional information (COMM) were typically simultaneously assigned to DM *amúgy (~'otherwise')* tokens in the questionnaire by many of the respondents, so I consider these functions as overlapping and merge them in a single category. Out of the 33 tokens of *amúgy*, 12 fall into the category of COMM and 9 tokens into the category of EXPL. Since COMM and EXPL themselves are overlapping functions as well, I expect that they are difficult to distinguish and disambiguate.

3.4.2 The relation of discourse function and manual gesticulation

As mentioned before, I expected to find correspondences between discourse function and hand movements. During the queries of manual gestures, I considered any kind of hand movement (and any handshape type other than the default handshape type of the current speaker) as manual gesticulation. I queried the relation of hand gesticulation and each of the salient functions of DMs one by one in separate queries (with the 'Find overlapping labels' command), and then joined them in contingency tables for statistical analysis in SPSS 19. 0.

My earlier expectation and general observation was that lexical search and approximation are the functions that are more frequently accompanied by hand gesticulation. The following picture (Figure 3.40) shows an example of hand movements during approximation:

Figure 3.40 *Approximation and simultaneous gesticulation*

Contrary to my expectations, the verbal expressions of contrast and concession (abbreviated as CON) are more typically accompanied by hand movements than lexical search and approximation (abbreviated as LXS_APP). As can be seen in Figure 3.41, mondjuk_CON is usually simultaneously accompanied by bimanul hand movements to either side, while if *mondjuk_LXS_APP* is used simultaneously with hand movements, the manual gesture involves the circular movement of only one of the hands.

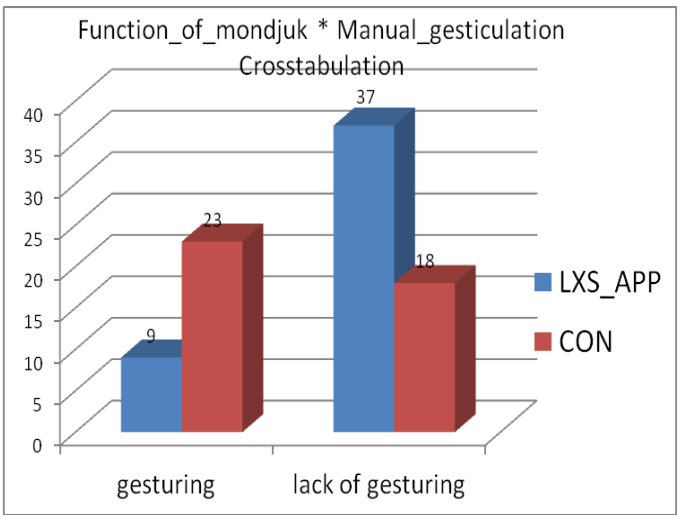

Figure 3.41 *Mondjuk (~'say'): the relation of function and hand movement*

As it is presented in Figures 3.41 and 3.42, there is a highly significant relation ($p<0,01$) between different discourse functions and accompanying, overlapping manual gesticulation in the case of *mondjuk* (~'*say*') ($\chi^2(1)=12,442$) and *ugye (~'is that so?')*, ($\chi^2(1)= 14,528$) which means that the feature of simultaneously performed hand gestures may contribute to the disambiguation of their meaning. Contrast and concession is more frequently accompanied by manual gesturing than lexical search and approximation. The difference in the frequency and extent of hand gestures is even more considerable in the case of *ugye (~'is that so?')* where explanations (abbreviated as EXPL) are frequently, while questions (abbreviated as QSTN, including the acts of checking information and asking for reassurance) are very rarely performed with simultaneous manual gesturing.

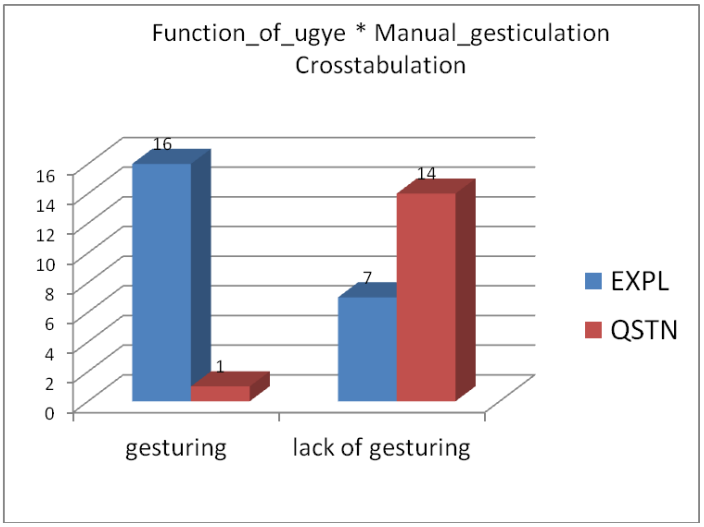

Figure 3.42 *Ugye (~'is that so?'): the relation of function and hand movement*

In contrast, as it can be seen in Figure 3.43, the presence or absence of hand gestures is not a feature with distinguishing ability in the case of *amúgy (~'otherwise')*, since the difference in manual gesticulation in its two salient functions (commenting personal opinion and explanation) is not significantly different ($\chi^2(1)= 0.022$, $p=0.882$), so no significant relation is found between the two variables in my corpora.

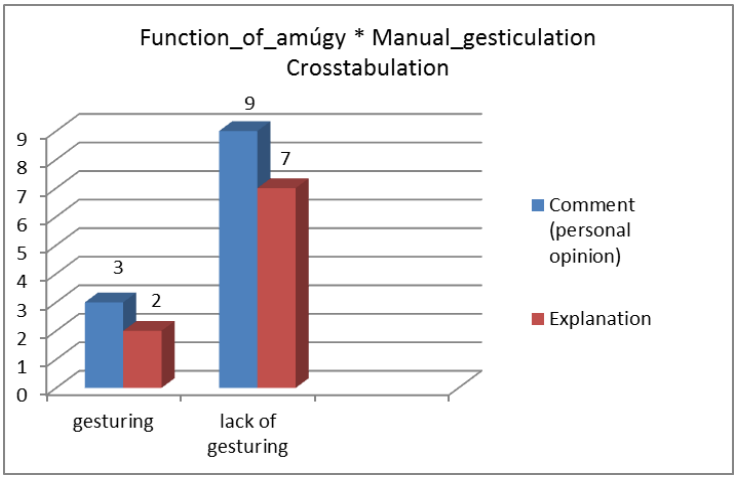

Figure 3.43 *Amúgy (~'otherwise'): the relation of function and hand movement*

The results suggest that explanation is typically accompanied by the movements of the hands, as seen in Figure 3.44.

Figure 3.44 *Explanation and simultaneous hand movements*

As a qualitative observation, I have found that new lexical-semantic information (new in comparison to what has just been uttered previously in the context of the conversation) are most often brought into the domain of discourse during the turn-keep and topic elaboration discourse segments. Pieces of novel information are almost always marked, usually not verbally, but by nonverbal means, very often accompanied by heavy gesturing, especially bilateral open hand manual gesturing.

3.4.3 The relation of discourse function and facial expression

I also expected to find a relation between discourse function and facial expression; therefore, I queried the distributions of facial expressions during the salient functions of all three analysed items. In expressing the two-two salient functions of *ugye* and *amúgy*, no difference was found between the distributions of the various affect displays. In the case of mondjuk (*mondjuk_CON* and *mondjuk_LXS_APPR*) I have earlier observed and hypothesized that in the majority of the cases, lexical search is simultaneously expressed by recalling facial expression, as shown in Figure 3.45 below:

Figure 3.45 *Recalling affect display during mondjuk_LXS_APPR*

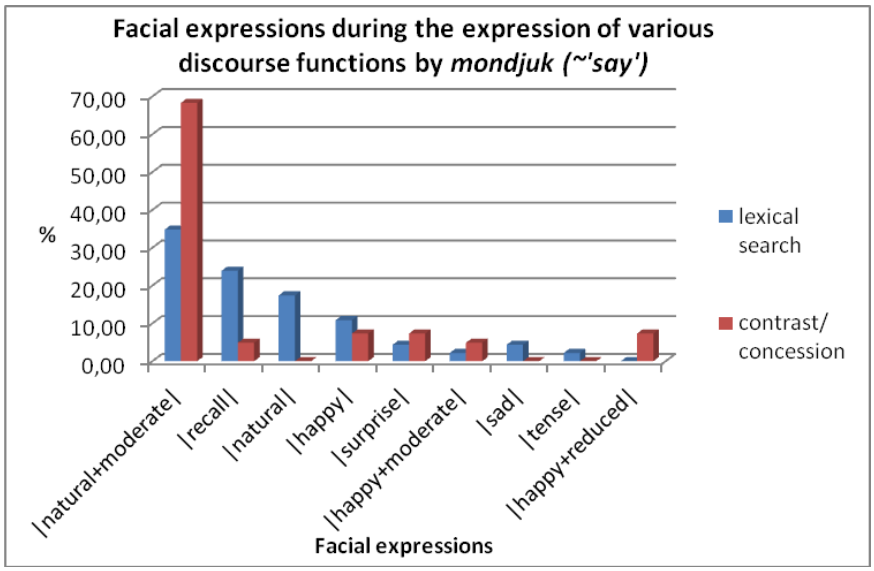

Figure 3.46 *The comparison of the distribution of facial expressions during mondjuk_LXS and mondjuk_CON*

As can be read in Figure 3.46 above, even though *moderate_natural*[90] is the most frequent facial expression type among the instances of both functions, there is a considerable difference among the distribution of the *recall* facial expression types. The fact that natural facial expressions are more common than recall expressions during lexical search can be explained by two facts: (1) the use of gestures, just like the use of DMs, is optional; (2) gestures (including facial expresssions) may be displayed either before or after uttering a DM, not necessarily simultaneously. However, the vast majority of recall expressions are made during lexical search and with this, *recall* is the second most frequent expression type after natural during lexical search.

3.4.4 The relation of discourse function and gaze direction

Similarly to the role of facial expression, I also expected to find a relation between discourse function and gaze direction; therefore, I queried the distribution of gaze direction during the uses of all the salint discourse functions of all three analysed tiems.

[90] Video annotators annotated not only the type of facial expresion but their intensity as well. This way, they distinguished strong, moderate and reduced expressions. In the case of natural facial expressions, this distinction is not relevant. This distinction of natural types was terminated in the middle stage of the annotation process but a few items still remained in the system. This deficiency will soon be corrected and all natural types (moderate, etc.) will be united under a general natural type.

However, I found different patterns of distributions between only the two salient functions of *ugye*: *ugye_QSTN* and *ugye_EXPL.* The following figure (Figure 3.47) presents the typical *forward* gaze direction type (that I wanted to confirm by the queries) right after a tag question:

Figure 3.47 *Ugye_question and the simultaneous cessation of manual gesturing, gaze at the other participant/next speaker selection*

As the bar chart in Figure 3.48 shows, while the distribution of gaze direction types during explanations is rather varied and balanced, the overarchingly most frequent gaze direction type during tag questions is forwards, in other words, eye contact (given the seating position of the speakers facing each other) which marks giving the floor over to the listener.

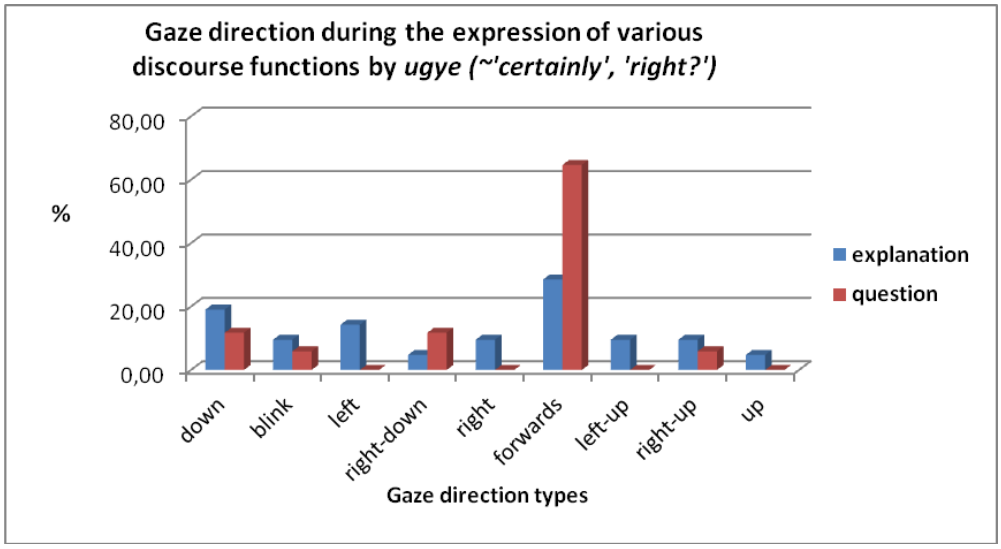

Figure 3.48 *The distribution of gaze direction types during explanations and tag questions*

In addition, Figure 3.49 demonstrates a prototypical gaze direction type during *mondjuk (~'say')* as a marker of contrast or concession:

Figure 3.49 *Typical averted gaze direction type during mondjuk (~'say') as a marker of contrast or concession*

3.4.5 Typical patterns of simultaneous nonverbal behavioural cues of spekaers

In sum, the distinctive nonverbal-visual properties of the functions of the DMs based on queries and qualitative analyses are the following:

1. *mondjuk (~'say')*: **gaze** direction (LXS APPR function is typically accompanied by very frequent looks up and simultaneous recalling **facial expression**)*;*
2. *ugye (~'is that so?')*: **hand** movement (the presence of manual gesticulation is typical in explanations, while the absence of hand movement characterizes questions); **gaze** direction (shifting gaze of the speaker is typical in explanations, forward gaze/eye contact is common in questions);
3. *amúgy (~'otherwise')*: no distinctive feature was identified; gaze direction is suggestive, but statistically not significant.

3.4.6 The relation of discourse function and preceding pause

The present section describes the query results of automatic segmentation of the sound files into silent and sounding parts in Praat. The procedure of this automatic segmentation and annotation is described in section 3.1.2. This analysis followed the segmentation of DMs and it was performed with the aim to test if DMs are predominantly preceded by pause.

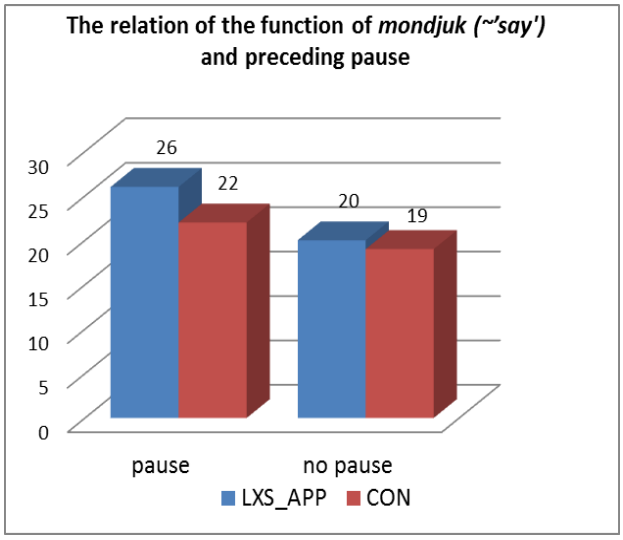

Figure 3.50 *Mondjuk (~'say'): the relation of function and preceding pause*

As seen in Figure 3.50, *mondjuk (~'say')* was more frequently preceded by silence (48 tokens) than with sounding parts (39 tokens) in this subcorpus of the HuComTech corpus. However, the difference between the two categories has not been found significant by Pearson's Chi-Square test (p>0,05). When *mondjuk (~'say')* plays a role in cognitive planning or expresses recall problems, it is often preceded by a pause. Also, when it is placed in the second pair part (usually prefacing dispreferred response, disagreement or contrast) in an adjacency pair, it is typically inserted in the beginning of responses, so it is preceded by a pause indicating a transition relevant place where the floor is open. Similarly, the difference between the two categories was not found significant by Pearson's Chi-Square test in the case of *amúgy* (p>0,05) (shown in Figure 3.51). Due to the low number of analysed amúgy *(~'otherwise')* tokens, the results just indicate tendencies rather than confirm a hypothesis.

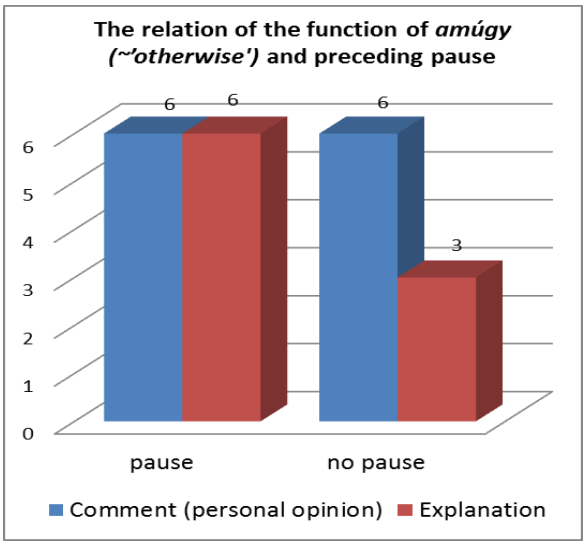

Figure 3.51 *Amúgy (~'otherwise'): the relation of function and preceding silence*

In contrast with *mondjuk* and *amúgy*, *ugye* tokens rarely occur in utterance-initial position and are rarely preceded by pauses. Instead, they are typically placed in the middle or end of clauses and utterances, and therefore, they are preceded by sounding parts. As it can be read in Figure 3.52, the difference between the acts of explanation and question are again not significant (p>0,05) in terms of the frequency of preceding pauses.

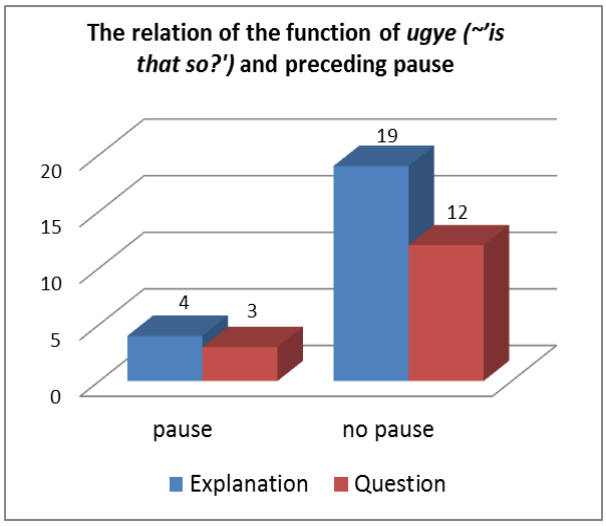

Figure 3.52 *Ugye (~'is that so?'): the relation of function and preceding silence*

3.4.7 The relation of discourse function and F0

After the segmentation and functional annotation of DMs, a Praat script (Boersma & Weenink 2007) was run in order to measure min, max and mean values of F0, intensity and duration of the individual DM tokens performing the two most salient functions, and save them in a spreadsheet file. In a few cases, F0 values could not be defined, therefore, DM tokens with undefined F0 values were dropped out of the analysis. *Amúgy (~'otherwise')* was not analysed in terms of F0 due to (1) its relatively low frequency of use, (2) relatively high ratio (19,05%: 4 out of 21 tokens) with undefined F0 values, and (3) the lack of distinctive cues in the visual domain (presented in sections 3.4.2 and 3.4.5). Therefore, only *mondjuk* (~'say') tokens with lexical search and/or approximation (LXS_APP) function and contrast/concession (CON) functions, and *ugye* tokens with explanation (EXPL) and question (QST) functions were analysed in terms of these prosodic parameters. Owing to the physical and speech production differences of the two sexes, F0 values of female (Figures 3.53 and 3.54) and male speakers (Figure 3.55) were queried and analysed separately.

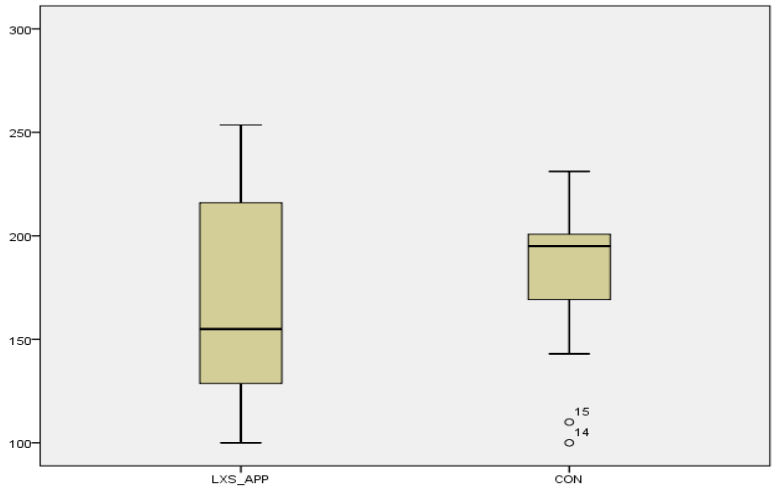

Figure 3.53 *Distributions of the mean F0 of mondjuk (~'say') among female speakers*

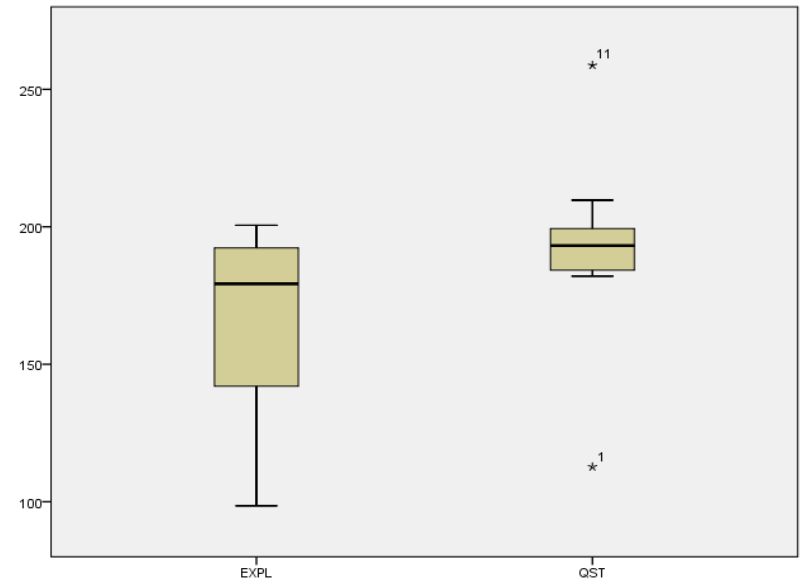

Figure 3.54 *Distributions of mean F0 of ugye (~'is that so?') among female speakers*

Figure 3.55 *Distributions of mean F0 of DMs with different functions among male speakers*

The difference between the mean F0 values of DMs expressing different functions is not significant either among male or female speakers. However, interestingly, the standard distribution of F0 values in different functions differs among the five male and

five female speakers. Among male speakers the range of F0 values is larger in DMs with contrast and question functions than among female speakers. In contrast, lexical search/approximation function is realized with the largest variation among female speakers. Among male speakers, lower mean F0 during lexical search might indicate that they focus on cognitive processes such as lexical selection and meanwhile, they pay less attention to their articulation process. However, this hypothesis is not supported by the frequency data of female speakers who do not realize lexical search with lower F0. Instead, they realize *ugye* (~'as you know') tokens used in explanations with lower fundamental frequency. The majority of the female speakers pronounce *ugye (~'is that so?')* in question function with relatively higher pitch than in explanatory sequences in assertions (presented in Figure 3.54). This is not surprising since Gussenhoven & Chen (2000) claim that high pitch, as a suprasegmental/paralinguistic feature, universally marks dependence and questioning. It is surprising though that the F0 data of male speakers (presented in Figure 3.55) do not reflect this tendency.

3.4.8 The relation of discourse function and duration

This section overviews the results of queries in ELAN (Brugman & Russel 2004) about the duration of DMs. My hypothesis about the duration of the various functions of DMs was that they probably significantly differ when they express different functions. I expected to find that *mondjuk (~'say')* expressing lexical search and approximation would be realized longer than *mondjuk (~'say')* expressing contrast or concession. Similarly, I expected that *ugye (~'is that so?')* in questions would be realized longer than *ugye (~'is that so?')* in explanations (usually occurring in the middle of clauses). Again, *amúgy (~'otherwise')* was not analysed in terms of duration due to its relatively low frequency of use.

As presented in Figure 3.56, significant difference was found between the mean durations of the realizations the of two most salient functions of *mondjuk*, since its lexical search/approximation function is typically uttered longer (0.295 s) than its contrast/concession functions (0,208 s) ($p<0,05$). On the other hand, the difference

between the relative distributions of the durations of the two most salient functions of *ugye (~'is that so?')* was not proven to be significant by independent samples t-test.

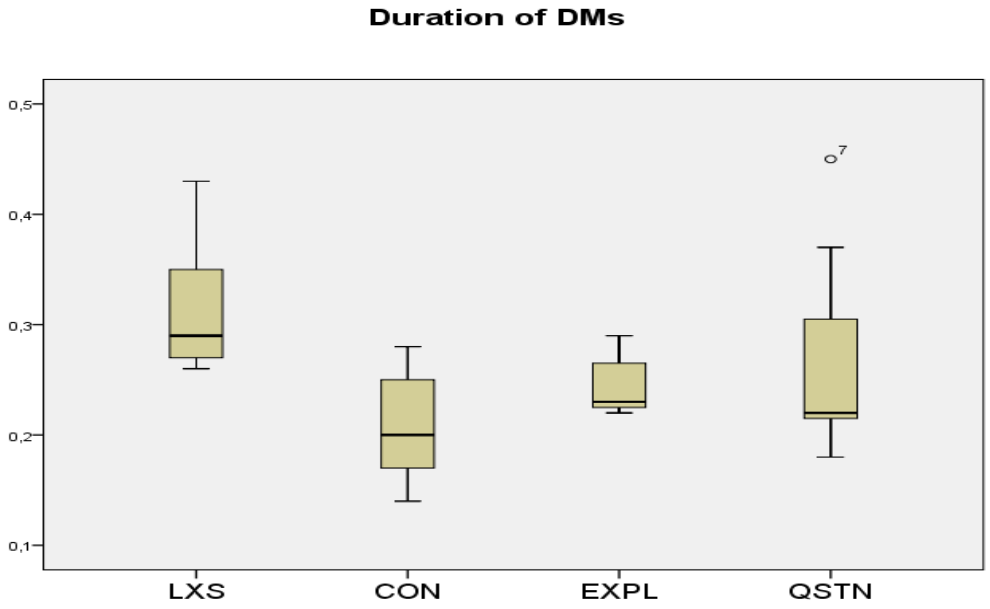

Figure 3.56 *Box plot representation* of *the duration of DMs with different discourse functions*

3.4.9 Multimodal machine-extractable features of DMs

The most typical and reliable defining features distinguishing different functions of the analysed DMs are their duration (in the case of *mondjuk*) and the simultaneous activation or the lack of manual gesticulation (in the cases of both *mondjuk* and *ugye)*. Based on several single layer queries (most of them presented, some are not), the following sets of features were found to describe the expressions of the salient functions of the scrutinised DMs:

1. *mondjuk (~'say')* expressing the cognitive state of **lexical search and/or approximation**: longer duration (usually longer than 250 ms) and frequent look up with recalling facial expression, relatively frequent co-occurrence with the DM *hát (~'well') ("hát mondjuk"),* various positions (but mostly utterance-internal);

2. *mondjuk (~'say')* expressing the discourse-pragmatic relationship of **contrast or concession** between two segments: significantly more frequent

manual gesturing than during lexical search and/or approximation with looking forward, left or right (very rarely up), frequent co-occurrence with the connective *de* (~'*but*') ("de mondjuk"), various positions (mostly utterance-internal, but utterance-initial in dispreferred second pair parts when it marks contrast or concession with the content of the other speaker's previous utterance);

3. *ugye (~'as you know')* marking **explanation**: presence of manual gesticulation, lower mean F0 than in questions, various positions (but mostly utterance-internal)*;*

4. *ugye (~'isn't it?'*) in **questions** (including checking information and asking for reassurance): higher mean F0 than the mean F0 of its host unit as well as that of explanation, rising intonation, larger F0 range than during *ugye_EXPL,* absence of hand movement, mostly gaze forward (eye contact with the conversation partner, marking giving the floor over to him/her with the question), various positions (rarely utterance-initial, but mostly utterance-final);

5. *amúgy (~'otherwise')*: Based on my qualitative analysis and a set of quantitative queries concerning the duration and mean F0 of the word segment as well as its overlaps with gaze label types, no distinctive machine-extractable surface feature was found between the expressions of its different discourse functions (subjective commenting and objective explanation). They are both used mostly utterance-initially. The distribution of the speaker's gaze direction of label types is suggestive, but it is not statistically significant. These similarities might spring from the similar nature of the two categories as both are constative acts that provide further, additional information.

3.4.10 Conclusions: Modelling multimodal features in a decision tree

After identifying the individual prominent features that distinguish the two types of the selected items, I tried to organize the machine-extractable features into a decision tree[91]. Naturally, besides machine-detectable cues, the speech act (illocutionary force) of

[91] My considerations for modellling multimodal features in decision trees as can be found in Abuczki (2012a: 335–342). I have earlier developed a decision tree that similarly relies on multimodal features (such as gaze direction, manual gesturing, duration of segments and silences) and

the DM's host unit as well as its lexical environment also have impact on its functional interpretation but these are not considered here due to the difficulty of their automatic analysis. I experimented with various parameters and threshold values of each machine-extractable feature that may best distinguish the expression of two functions. ELAN enables multi-level, hierarchical, embedded queries in any combination of the tiers and labels, called Multiple Layer Search. I used this search option in a great number of variations. Figure 3.57 shows an example query where I searched for *mondjuk* (~''say') tokens marking lexical search which are accompanied by any hand movement, and I wanted to find out what facial expressions these are accompanied with.

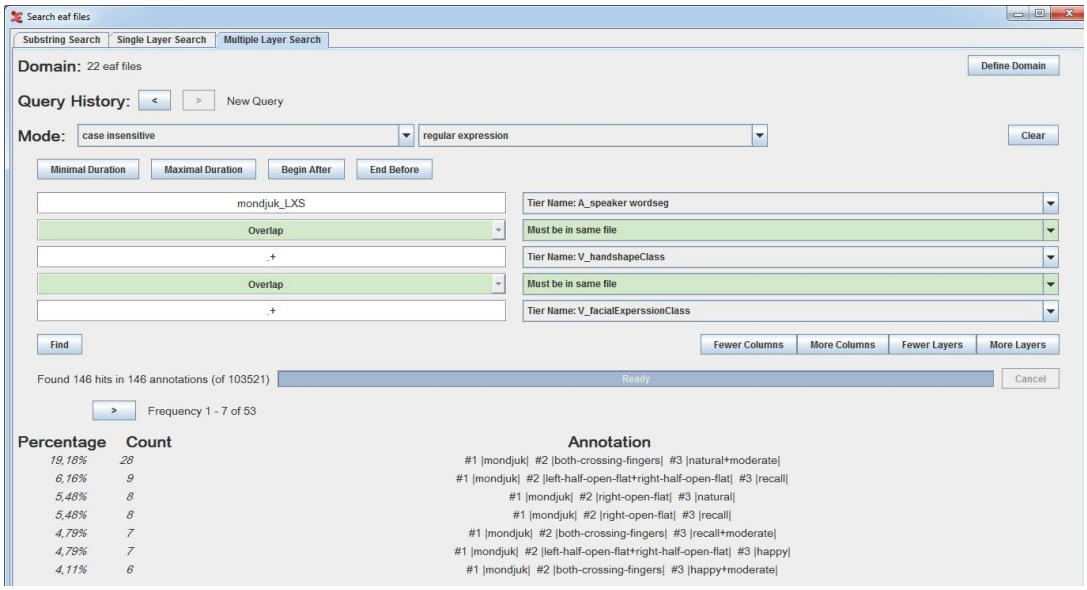

Figure 3.57 *An example for multiple layer search*

My ultimate goal was to identify parameters and threshold values that best distinguish categories and divide tokens into two categories in such a way that at least 80% of the tokens of the divided categories fall into the same category; therefore, the reliability/precision of the decision tree would be at least 80%, depending on which node the decision ends in (the later/the further down it ends, the more reliable the query is, between 80% and 100%).

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distinguishes silent moments in conversation based on contextual (previous and simultaneous multimodal cues) as either markers of turn ends (transition relevant places, cf. Sacks 1992) or turn-internal pauses (Bódog, Abuczki & Németh T. 2011: 245-246).

Figure 3.58 shows the final version of my decision tree (in the best combination and order of features) which distinguishes between lexical search and contrast/concession functions with at least 80% reliability depending on the position of the last node (that is, much better than chance reliability; however, it can of course be further developed in the future). The yellow boxes on the left show the steps of the analysis and the blue circles show the distinctive parameters with the number of the tokens in brackets that fall into that category. My criterion during setting the threshold values and parameters was that at least 80% of the tokens must fall into the category indicated in bold fonts. The further down we move in the decision tree (that is, the more criteria the token passes), the higher reliability values we have (that is, the more tokens fall into the indicated category, between 80–100%).

The details (features and parameters) of the decision tree on *mondjuk (~'say'*) were grounded in the detailed multimodal analyses and ELAN queries of 50 *mondjuk* DM tokens and their context. As can be seen in Figure 3.58, the first factor/feature that divided the 50 tokens into two categories is the duration of the DM. Choosing 250 ms as the threshold value, 23 tokens are shorter and 27 tokens are longer than 250 ms, and at least 80% of shorter tokens mark the pragmatic relation of contrast or concession between the linked segments, while at least 80% of longer tokens signal lexical search. The second step that further refines the precision of their categorization is the gaze direction of the speaker. Among shorter (than 250 ms) DMs, the majority (19 tokens) can be characterized by the simultaneous non-upward gaze of the speaker (that is, forward, left, right, down, or a mixture of any of these directions), and at least 80% of these tokens indicate contrast or concession. In contrast, only 4 tokens out of the shorter DMs are accompanied by upward gaze direction of the speaker, and all of these are markers of lexical search. On the other hand, the performance of upward gaze direction is much more common among longer DMs (20 tokens), with only 7 tokens characterized by non-upward gaze (all of which mark concession). The third distinguishing feature is the simultaneous facial expression of the speaker[92] (during uttering the DM segment). As can be read in Figure 3.58, at least 80% of the markers of lexical search can be described by

[92] Gaze direction and facial expressions can be both tracked and stored using the FaceReader software. However, I used the manual video annotation of the HuComTech corpus during the analyses and queries in order to ensure the reliability of the annotations.

the simultaneous expression of recalling affect displays, while 80% of the markers of contrast or concession are accompanied by facial expressions other than recall (that is, neutral, happy, sad, tense, disgusted or surprised). The fourth distinguishing feature is the performance or cessation of hand gestures. Contrary to my initial expectations (to find the movements of one of the hands in a circle-like trajectory), very few tokens of lexical search are accompanied by manual gesticulation, while the majority of concession markers are characterized by simultaneous discourse structuring bi-manual hand movements. Finally, the duration of silence (if any) preceding the DM also seems to be different between the two categories where lexical search (longer ones with recalling face and upward gaze, without accompanying hand gestures) is typically (in at least 80% of the cases) preceded by a pause shorter than 150 ms or no silence at all. On the other hand, those concession markers that are characterized by shorter duration, accompanying hand gestures, non-recalling expression and non-upward gaze are commonly preceded by a pause longer than 150 ms. This is due to the fact that markers of contrast and concession often introduce dispreferred second pair parts which are often preceded by a pause marking a transition relevant place, a possibility for speaker change (Sacks 1992, Schegloff 2006).

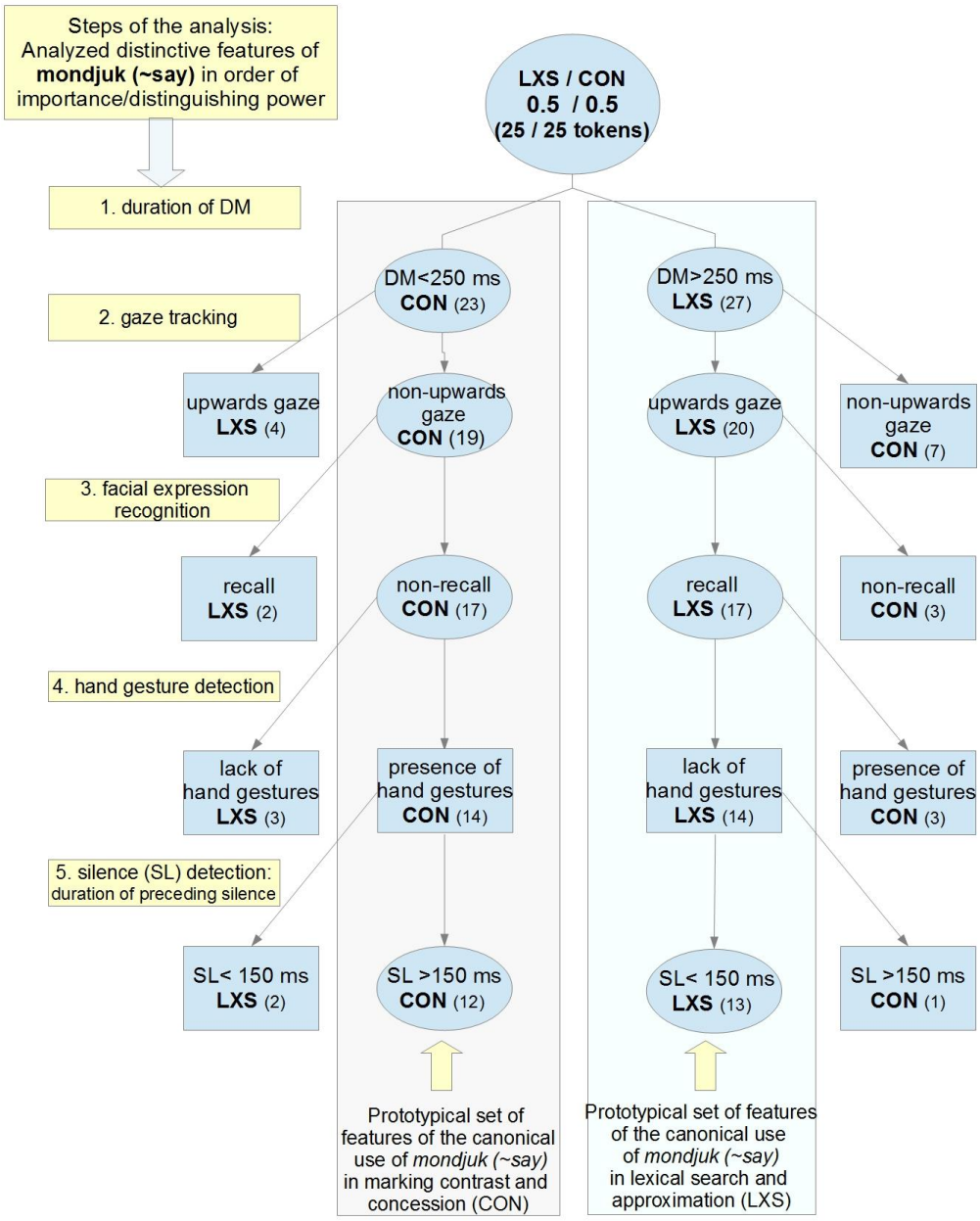

Figure 3.58 *A possible decision tree distinguishing between salient functions of mondjuk (~'say') based on multimodal features*

Figure 3.59 illustrates the distinctive features of two uses of *ugye*, as a marker of explanation (abbreviated as EXPL) as opposed to a marker of question (checking information / assumptions or asking for reassurance, abbreviated as QSTN), organized into a decision tree that can distinguish the two salient functions of a form with at least

80% precision[93] (depending on the end node of the decision process). As can be read in the tree (Figure 3.59), the prototypical multimodal features of *ugye* (true for 80% of the cases[94]) as marker of question are the following (in order of importance):

- F0 range of the DM[95] > 20 Hz
- turn-final position
- rising or upward intonation[96] (in the DM or its host unit)
- forward gaze direction of the speaker, making eye contact with the listener (longer than during explanations), signalling the intention to give the floor over to the listener
- lack of hang gesturing, indicating the end of speaking and speech planning

In contrast, the prototypical multimodal features[97] of *ugye (~'is that so?')* as a marker of explanation are as follows:

- F0 range of the DM < 20 Hz
- turn-initial or turn-internal position
- stagnant, fall or descending intonation (in the DM or its host unit)
- shifting gaze direction of the speaker (forward, sideways, up)
- hand gestures performed

It must be noted as a limitation of the generalizability of the results that the decision trees was modelled based on the data of only 30 *ugye* tokens (15 tokens of EXPL, 15 tokens of QSTN); however, it may serve as a springboard for further theoretical modelling.

93 Manually checked results.

94 80% of the analysed cases in the HuComTech corpus.

95 Autmatically extracted by using a Praat script (Boersma & Weenink 2007)

96 The annotation of pitch movement was automatically performed (into five categories) and then manually checked.

97 Each set of features describes at least 80% of the members of the analysed category.

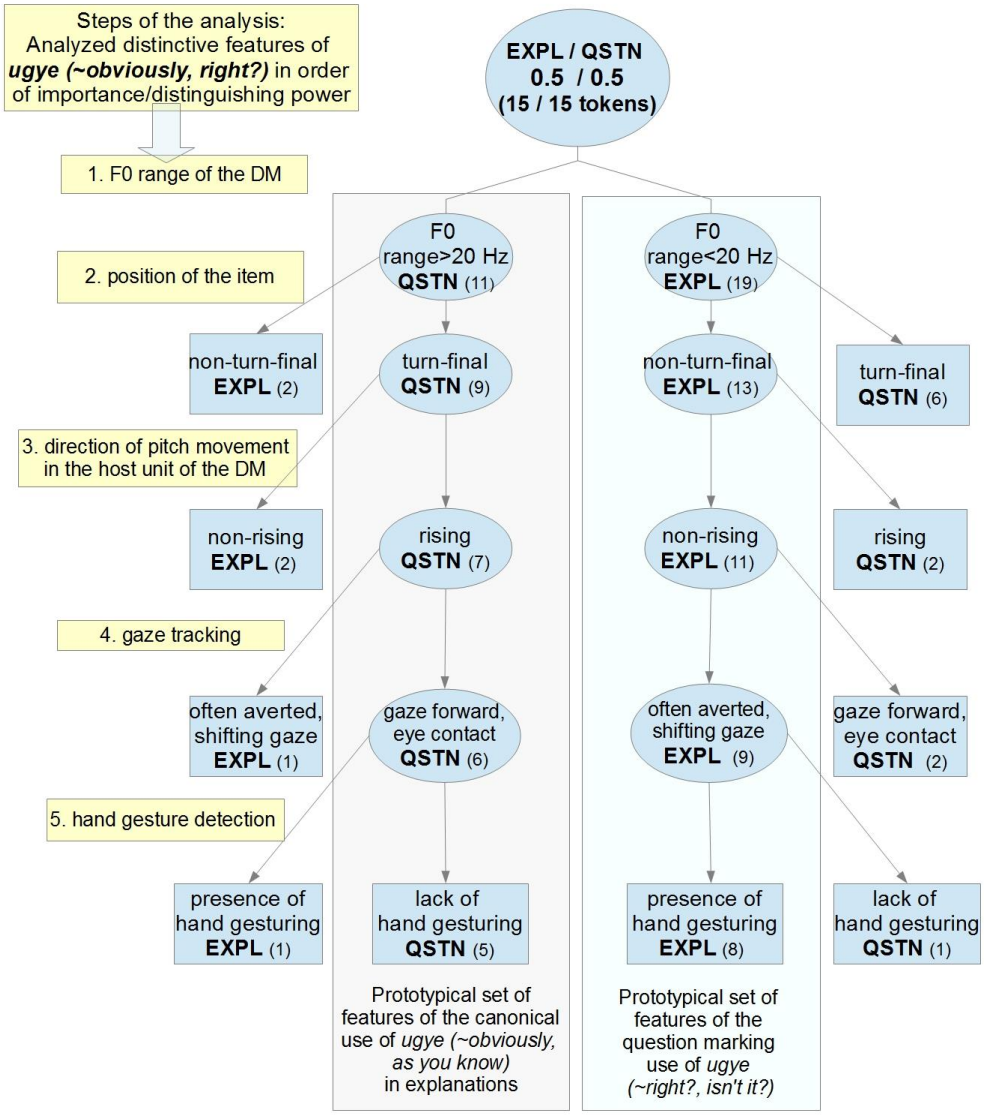

Figure 3.59 *A possible decision tree distinguishing between salient functions of ugye (~'is that so?') based on multimodal features*

It can be concluded that specific combinations of multimodal characteristics together help the interlocutors in the disambiguation of DMs. I managed to identify two sets of multimodal surface cues that distinguish two salient functions of each of the DMs, *mondjuk (~'say')* and *ugye (~'is that so?') with 80% precision*. In the case of *mondjuk (~'say')* the distinctive features were segment duration, gaze, facial expression, hand gesture and preceding silence. To distinguish between the two salient uses of *ugye*, I also involved the analysis of intonation and included F0 range and pitch movement direction. Furthermore, sequential features such as the position of the DM also seemed to play a

role in disambiguation (after F0 range), but the distribution of facial expression labels and DM duration values were not significantly different between the two categories.

The efficiency and reliability of the two trees could be developed by involving even more features such as the intensity values of uttering the DM and the position of the eyebrows of the speaker.

However, I did not manage to find any sets of features that can distinguish the two pragmatic functions of *amúgy (commentary marker* as opposed to a *marker of explanation*). The failure of this attempt might have to do with either the overlap between the two functional categories (both of them are constative communicative acts, giving additional information) or the conceptual nature of the item.

3.5 Conclusions of the case studies on the HuComTech corpus

Having applied both qualitative and quantitative methods, I sum up my conclusions concerning the multimodal features of the functional categories of the selected DMs (categories identified by my informants) in Table 3.22 below:

Abbreviated labels of categories	**Names of functional categories**	**Typical multimodal correspondences (if any)**	**Common lexical co-occurrences (if any)**	**Typical position**
TCH	topic change	posture shift	*és amúgy (~'and otherwise')*	turn-initial
EXAM	example	common look/gaze upward, averted gaze	*mint mondjuk (~'like say')*	turn-internal or rarely –initial or -final
QST	question	look forward/eye contact between interlocutors, final rising intonation	*ugye (~'is that so?')*	mostly turn-final (less frequent in -initial and –internal positions)
APPR	approximation	frequent look/gaze upward, averted gaze	*mondjuk olyan (~'say about')*	turn-internal

EXPL	explanation	manual gesticulation	*ugye (~'as you know'), meg amúgy (~'and otherwise')*	turn-internal
UC/LS	uncertainty or lexical search	common look/gaze upward, averted gaze	*hát mondjuk (~'well say')*	turn-initial or -internal
CON	contrast or concession	frequent manual gesticulation (mostly with flat palms looking upward)	*de mondjuk (~'but say')*	turn-internal or rarely turn-initial
COMM	commenting, commentary	look sideways, averted gaze	*de amúgy (~'but otherwise'),* amúgy meg *(~otherwise')*	turn-initial or -internal
NEW	new perspective or new information	manual gesticulation, look forward, eye contact	mondjuk (~'say'), *meg amúgy (~'and otherwise')*	turn-initial or -internal
ATT	attitude-marking	look forward, eye contact, eyebrow(s) movement	-	turn- internal or -initial
BCKG	background knowledge/ information	-	-	turn- internal or -initial
EMPH	emphasis	stressed item, sometimes comma intonation around the DM	*ugye (~'of course')*	turn-internal or rarely turn-initial or -final
FILL	filler	sometimes: acoustic realizations of hesitation	-	-
OTH	other functions	-	-	-

Table 3.22 *Multimodal features of the functional categories of the selected DMs*

3.6 CASE STUDIES BASED ON MEDIATISED DISCOURSE: The use of discourse markers in mediatised political interviews[98]

Having looked at the use of the selected DMs in informal conversations and simulated job interviews of the HuComTech corpus, I now turn to their qualitative analyses in another discourse type since I aim at observing patterns of DM use across a variety of genres and contexts. I selected to study mediatised discourse, political interviews specifically because I expected to find strategic uses of the DMs in these materials that might shed light on rare functions of the DMs and might complement my framework.

In the present case study I will take a discourse-pragmatic as well as contrastive approach to some of the most frequently used discourse markers in spoken Hungarian: *hát* (~'*well*'), *mondjuk (~'let's say'), ugye (~'as you know', 'is that so?')* and *amúgy (~'otherwise', ~'by the way')*. I will examine their use in two corpora: (1) a corpus of different types of media discourse (including political interviews and panel discussions) broadcast between 2009 and 2012 by the Hungarian TV channels Duna TV, ATV, Hír TV, MTV and TV2, and (3) part of the HuComTech corpus. The major question I would like to answer is whether or not the uses of the selected discourse markers differ across the various discourse types/genres (spontaneous conversations, different types of political interviews and panel discussions).

After a short introduction to the characteristics of the political interview as institutional, political and media discourse, I will briefly outline the state of research into the functional class of non-conceptual items that I refer to as discourse markers (henceforth DMs). I will argue that DM research can contribute a great deal to the study of media discourse, since several DMs are used strategically (at times manipulatively) in political interviews, thus, my secondary aim is to uncover the underlying strategies behind such DM uses. In the empirical sections of the study I will present the results of a series of corpus analyses, with a view to comparing and contrasting the functional spectra of some of the most frequent DMs in English and Hungarian across a range of discourse

[98] This chapter is a shortened, modified version of a previous paper of the author co-authored by Furkó Péter and submitted to *Sprachtheorie und gemanistische Linguistik*, cf. Furkó & Abuczki (to appear)

genres with special reference to the similarities and differences between their uses in naturally-occurring conversations and different types of political interviews.

3.6.1 Political interview as a genre

A mediated political interview can be defined as a dyadic encounter between an interviewer (henceforth IR) and an interviewee (henceforth IE), directed at a public audience (Fetzer & Weizman 2006, Fetzer 2008). The nature of the political interview is best understood in terms of its formal-functional characteristics as institutional talk, (cf. Heritage and Greatbatch 1991) political discourse and mediated as well as mediatised discourse. The participants' roles, functions and underlying motivations are determined by the institutional setting in which political interviews are produced. As a result, the IR's role is to represent a media organization (in my corpora, Duna TV, ATV, Hír TV, MTV, TV2) in accordance with the specific guidelines set forth (such as guidelines for impartiality, accuracy, integrity, etc.), whereas the IE represents a political organization (political party, government, civil society, etc.) with a clear purpose to spread and propagate the organization's concepts, views, activities and slogans. Regarding the mediatisation of political interviews, it is commonly observed that in political interviews there are two different frames of interaction that occur simultaneously: a first-frame interaction between the IR(s) and the IE(s), as well as a second-frame interaction between the first-frame participants and the audience, either present in the studio or in front of their television sets (cf. Fetzer 2000). Thus, the political interview can be best described as a dialogue-within-dialogue scenario (cf. Fetzer 2008). Ideally, the IR voices the whole spectrum of public opinion, or at least, that of the target audience of the TV channel, while the IEs' aim is to gain favour with the audience, influence their views, beliefs, decisions, actions, etc. in a way that is beneficial to the organization represented.

From a structural-organizational perspective, political interviews can be described as dyadic with a very specific turn-taking mechanism and set of constraints: there is an asymmetrical relationship between the IR and the IE in that the former invariably produces the first-pair part of adjacency pairs (usually a question prefaced or followed by a comment), selects the IE as the next speaker, who produces the second-pair part (a

response / reaction to the IR's preceding question or comment), and not vice versa. Due to the genre-specific norms of interviews as well as a set of expectations on the part of the audience, the content of the IE's turns always have to, at least, appear relevant to the IR's first-pair part. If, however, the IE's second-pair part is dispreferred (e.g. it expresses disagreement) or appears irrelevant, it is duly noted by the IR, a feature that is clearly different from the mechanisms of other genres such as naturally-occurring conversations. Moreover, the avoidance of direct/straight answers – usually introduced/marked by DMs, such as *nos (~'well')* – is also typical of political interviews. While political interviews are expected to proceed in a series of Q-A pairs, informal conversations are more likely to proceed in a less predictable manner and are intertwined with lengthy elaborations, narratives and side sequences as the speakers jump from one topic to another in a sometimes unmotivated way. Due to the different scenarios followed in these different discourse types, the functional spectra of DMs are also likely to differ in the discourse genres under scrutiny (spontaneous conversation, political interview, panel discussion). Typical participants of everyday, casual conversations usually aim at gaining favour with their interlocutors. In other words, their goal is to save their own and their partner's face, i.e. to avoid or reduce the force of face-threatening acts. In contrast, most types of political interviews typically include face-threatening acts such as impolite, direct questions.

3.6.2 Previous research on mediatised political discourse

Political interviews have been studied from several semantic, pragmatic and discourse-organizational aspects, such as information structure, overlapping speech, discursive modes and manipulative language strategies, to mention but a few. However, as mentioned above, very few studies have focussed specifically on the role of DMs. A notable exception is Zovko (2012), who compared the use of DMs in interviews with presidents of Bosnia and Herzegovina with the functions of DMs in interviews with US presidents. There are a number of additional case studies, which, however, concentrate on particular DMs, such as *of course* or *really*, rather than the functional distribution of a set of DMs, cf. e.g. Simon-Vandenbergen & al. (2007) or Simon-Vandenbergen (1988).

The functional distribution of a set of DMs has not been studied in Hungarian political interviews, either. Zimányi (2008: 116–8), for example, analyses manipulative language use in general using Hungarian parliamentary speeches as data, and points out that they are not aimed at providing factual information, but, instead try to manipulate the emotions of the audience by asking face-threatening questions and giving face-threatening replies most of the time with a view to painting an unfavourable picture of the political opponent. Schirm (2009b) examines the strategic use of *ugye (~'is that so?')* in parliamentary speeches. Among its other senses, *ugye (~'is that so?')* often marks the attitude and emotional state of the speaker in parliamentary debates. Moreover, she distinguishes the various functions of *ugye (~'is that so?')* based on its position in the utterance. For instance, it is argued that *ugye (~'is that so?')* is used utterance-initially in order to express blaming or gloating by the speaker (Schirm 2009b: 172). Schirm identifies that a peculiar argumentation strategy is linked to the use of *ugye (~'is that so?')* in parliamentary speeches since it is often used as a rhetorical device, a rhetorical question that does not actually elicit a reply from the hearer(s). The constant repetition of *ugye (~'is that so?')* makes the intention of influencing the audience even more evident or ironic (Schirm 2009b: 172–173). Further underlying purposes of using this DM identified by Schirm (2009b) include saving the face of the speaker since it is less face-threatening to ask something using *ugye (~'is that so?')* than openly stating/declaring the same; therefore, the use of *ugye (~'is that so?')* somewhat mitigates the explicit expression of the opposing views of the speaker (as opposed to the views of the prime minister) (Schirm 2009b: 172–173).

Due to DMs' extreme multifunctionality and context-dependence, their study is especially relevant to genre-based analyses. Therefore, it is surprising that, in spite of the widespread interest in DMs in a variety of research fields including genre analysis, very few studies have investigated the role of DMs in mediatised political discourse. In the following section I will provide a brief overview of some of the most relevant case studies pertaining to English and Hungarian political interviews. After the description of my research corpus, I will try to narrow the empirical gap by describing some of the most frequent Hungarian DMs' genre-specific use in several types of media discourse (political and news interviews, panel discussions and breakfast shows) along with their use in spontaneous conversations (in the informal part of the HuComTech corpus).

3.6.3 Materials and methods

The analyses of the selected Hungarian DMs have been carried out on two different types of spoken corpora which are comparable in terms of their size: one involving spontaneous conversations and one comprising different types of mediatised political discourse. The spontaneous speech subcorpus comprises 20 informal/casual dialogues on everyday topics (approximately 20–25 minutes each) extracted from the multimodal HuComTech corpus (altogether approximately 450 minutes (7.5 hours), with a constant participant talking 44% of the interview time, and 20 other participants talking 66% of the interview time). This subcorpus of the HuComTech corpus contains 195 tokens of *mondjuk*, 60 tokens of *ugye* and 33 tokens of *amúgy*. The second Hungarian subcorpus involves a variety of media discourses:

- a collection of seven formal/confrontational evening political interviews broadcast on ATV (each of them last for approximately 60 minutes and feature one constant IR and seven different IEs,),
- two more casual ”breakfast” political interviews (broadcast on TV2),
- two interviews from news reports (one broadcast on MTV, the other on Hír TV)
- two panel discussions (broadcast on Duna TV).

This media subcorpus also comprises altogether approximately 450 minutes (7.5 hours), collected from mindroom.hu, an automatic media observer website. It includes 135 tokens of *mondjuk*, 98 tokens of *ugye* and 25 tokens of *amúgy*. The majority of the Hungarian media interviews that I analysed were taken from two programmes that can be contrasted in terms of their different scenarios and the different strategies employed: one is *Egyenes beszéd* (~’Straight talk’) broadcast on Hungarian ATV and the other is *Törzsasztal* (~’Customary table’) aired on Duna TV. On the one hand, the typical scenario that unfolds in *Egyenes beszéd* is a series of questions posed by the IR and the corresponding answers produced by the IE. Here I can observe an assymetricity in power relations in that the IR directs the flow and the topics of the conversation. *Törzsasztal*, on the other hand, is a panel discussion featuring acknowledged experts with symmetrical power relations. Even though these panel discussions also feature a host who tends to allocate speaker turns, all panel members have the opportunity to take the floor at any time, and defend their views against those of other panel members. The topics of the

show centre on various controversial social, political and cultural issues that usually trigger interesting discussions and clashing viewpoints.

3.6.4 Findings

In the present section I discuss the results of a series of corpus-based analyses and provide the classification of DMs according to different contexts of use. The subsections describe the various textual relations/contextual factors DMs may mark in discourse. The relations and functions in question include elaboration/expansion, modification/specification, response-marking vs. marking questions, evidentiality and ventriloquizing.

The IR's and the IE's respective roles in political interviews can be contrasted from the perspective of information management as well as conversational mechanisms. For instance, among Hungarian DMs, *ugye (~'is that so?')* marks the contrastive roles of IRs' and IEs'. On the one hand, IRs often insert it into yes-no questions to signal that they expect to receive a preferred response/agreement. In this position, its function is similar to that of an English tag question and its meaning can be glossed as 'right?', 'do you agree?'. On the other hand, IEs tend to use *ugye (~'is that so?')* in their explanations in order to emphasize the validity/importance of their arguments. With respect to these two functions, *ugye (~'is that so?')* can be considered as the functional equivalent of *I mean* in English. Concerning its use in questions, two distinct ways of use can be described in my corpus of Hungarian political interviews and panel discussion in terms of whether or not the speaker actually expects a reply. If s/he does not, that is, if the question is not directly addressed to the other speaker, *ugye (~'is that so?')* marks a rhetorical question aimed at manipulating the audience's perception of the validity of an argument.

Similarly, *mondjuk* (~'*let's say', 'or say'*) also operates on the level of participation framework, most of the time anchoring the speaker's productive role, therefore, it can also be seen as a *presentation marker* (Jucker and Smith 1998), a *marker of expansion* or a *marker of modification* (cf. Saz Rubio 2007: 97–98). As a reception marker, it may either stand alone (~'*Mondjuk.*') in the second pair part of an adjacency pair (with only 3 occurrences in my corpus) marking a reaction of partial agreement with the statement, opinion or yes-no question of the other speaker. Alternatively, *mondjuk (~'say')* may

introduce a second-pair part marking the speaker's attitude and framing the entire subsequent utterance as its host unit as in the following example:

example 3.40

Interviewee (henceforth: IE): Ha jól gondoljuk és a kutatásoknak hiszünk, akkor nem valószínű, nem biztos, vagy csak ötven százalékban tekerik át a reklámblokkokat. (*If we are right and if we can believe the opinion polls, it's not likely... we can't be sure that people fast forward commercials only 50% of the time)*

Interviewer (henceforth: IR): Ez ***mondjuk*** meglepő számomra, ez a szám! *(This is* ***DM****^{mondjuk} a surprise for me, this data)(*TV2 *Mokka 2013-03-26)*

The following subsection analyses the various subtypes of elaboration and expansion, namely, modification, specification and explanation. In general terms, the elaboration of a previous aspect or aspects of the preceding discourse segment can take the form of clarification, specification or definition in terms of the notion or the idea conveyed in the previous discourse segment. I will, first of all, see if all these functions are expressed by *mondjuk (~'say')* in Hungarian in my corpora. In section 3.3 I provided several examples to illustrate the use of *mondjuk (~'say')* when it introduces clarification/specification/approximation and correction/self-repair. Based on my corpora, the use of *mondjuk (~'say')* as a DM is common in political interviews (see examples 3.40, 3.41 and 3.42), although somewhat less frequent (18 tokens/hour) than in naturally-occurring conversations (26 tokens/hour). Now let us see examples from political interviews where *mondjuk (~'say')* introduces modification (example 3.41) and compression (example 3.42), as subtypes of reformulation (c.f. Saz Rubio 2007: 84–98).

example 3.41

IR: Jó, de nyilvánvalóan jelentős hatása lesz egyébként ez a médiapiacra is, mármint a médiapiacnak az offline-részére, tehát **mondjuk** az írottra, igen. (*Let's say you're right, this will still have an enourmous effect on the media market, I mean the off-line segment of the media market, so* ***DM****^{mondjuk} the written segment*) (TV2 *Mokka* 2013-03-26)

The strategies of elaboration and explanation also frequently involve the expression of assumption, in these cases *mondjuk (~'say')* preserves some of its original, conceptual meaning, which can be glossed as 'let's suppose', as in the next example:

example 3.42

Úgy történik ez, hogy **mondjuk** tudjuk, hogy lesz egy sajtótájékoztató, nyilvánvaló az nem titok. *(This is how it works:* ***DM**^{mondjuk}* *we know that there will be a press conference, it is obviously not a secret) (*ATV *Egyenes Beszéd* 2010-12-02)

The functions of reformulation, correction, specification, approximation, giving example and lexical search are more frequent in informal conversations than in political interviews due to the unplanned nature of casual talk. Natural conversation is a type of spontaneous, unplanned discourse, without any specific scenario to be followed, in contrast, political interviews are pre-planned events where the IR follows a pre-determined set of questions and has a pre-allocated sequence of turns and topical units in mind. Similarly to the IRs, most IEs also prepare for the interview since their goal is to gain favour with the audience. Therefore, it is not surprising that media discourses generally contain fewer instances of reformulation and lexical search.

As described above, there are two different layers of interaction present in political interviews: a first-frame interaction between the IR(s) and the IE(s) and the second-frame interaction between the first-frame participants and the audience. For the most part, there is a mismatch between the background information available to the IR and the (public) knowledge available to the audience whose voice the IR represents. The use of evidential markers makes this knowledge gap between the first-frame and second-frame participants explicit. One of the most common DMs of evidentiality is *ugye (~'is that so?')* in Hungarian; therefore, its use will be described in the present section.

Markers of evidentiality are much more common in political interviews than in spontaneous conversations. My Hungarian corpus of naturally-occurring talk contains 36 tokens of *ugye (~'is that so?')* expressing evidentiality, while the Hungarian political corpus contains 61 tokens of *ugye (~'is that so?')* serving the same purpose, making it the most common function of this DM. The most probable explanation is that the speakers (both IR and IE) assume that the piece of information introduced by *ugye (~'is that so?')* is

an obvious/evident fact (known to both interlocutors in the first frame of the interaction), however, they still find it necessary to explicitly point it out to the audience. In the panel discussion programme, *Törzsasztal,* broadcast by Duna TV, participants use an especially large number of evidential markers since their use implies that the subject matter of the discussions in general as well as the arguments and examples that are provided in particular are well-known to the first-frame interactants, who are all highly educated, widely acknowledged experts from similar fields. At the same time, the use of evidential markers (presented in examples 3.43, 3.44 and 3.45) is also justified by the fact that the first-frame participant feels a need to mention certain details for the sake of the audience who have a more limited knowledge on the subject:

example 3.43

IE: Valószínű, hogy az irodalom is ugyanilyen problémákkal küzd, tehát **ugye** egy nagyon jó fordító kell hozzá, egy nagyon jól kiépített marketing kell hozzá, tehát nem elegendő lefordítani valamit. (*The book market probably faces the same problems, so* ***DM**^{ugye}* *you need an excellent translator, a well-built marketing strategy, it is not enough to provide a good translation*) (Duna TV *Törzsasztal* 2010-11-28)

example 3.44

IE: … a reálisabb makrogazdasági pálya, tehát a fél százalék körüli, vagy stagnáláshoz közeli gazdasági növekedés, illetve hát most **ugye** a 299 ft os euro árfolyamra átszámított költségvetés. (*we need a more realistic macroeconomic projection, that is, a projected growth of about 0.5%, or stagnation, I mean, right now* ***DM**^{ugye}* *the budget is calculated on an exchange rate of HUF 299 to the Euro*) (ATV *Egyenes Beszéd* 2011-12-27**)**

example 3.45

IE: **Ugye**, set-top-boxnak hívják, amit ők beépítenek a rendszerbe, vagy olyan televízió, amibe már be van építve. (*This is called* ***DM**^{ugye}* *a set-top box, which is built into the system, or there are TV sets that already include them*) (TV2 *Mokka* -03-16)

A further function of *ugye (~'is that so?')* which is salient in political interviews is emphasis. This function is more frequently expressed in the corpus of political interviews than in the corpus of spontaneous conversations since the use of *ugye (~'is that so?')* strategically signals the validity of facts and the importance/force of the content of the utterance, thus its primary function is to convince the audience that the speaker's arguments are valid:

example 3.46

IE: ...az összes hiba, mindaz ami **ugye** recesszióba sodorja a gazdaságot (*all the mistakes they've made, all the things that have* ***DM**^{ugye}* *lead the economy into recession*) (ATV *Egyenes Beszéd* 2011-12-27)

example 3.47

IE: Ezenkívül, hogy együttműködünk, ahogy a beszélgetés elején is elhangzott, együttműködünk fogyasztói tudatosságot elősegítő kampányokban is, **ugye** nagyon fontos, hogy a hatóságok munkáját közvetítsük a fogyasztók felé. (*In addition, we cooperate, as was said at the beginning of the interview, we cooperate in campaigns that are aimed at raising consumer awareness,* ***DM**^{ugye}* *it is very important that we inform the consumers about the authorities' activities*) (MTV *Ma reggel* 2013-03-07)

As for a further major function, discourse markers are of course often used to regulate verbal interaction (its speaker changes, thematic control and information structure). It has been shown in a number of studies (cf. e.g. Petukhova & Bunt 2009) that discourse structure and coherence are maintained and expressed by various verbal markers. Coherence relations establish various links between discourse segments, and these relations are frequently expressed by DMs, such as *well, you know, I mean* or *by the way*. Besides marking boundaries, transitions and transition relevance places between discourse segments, DMs also signal the communicative function(s) of their host units. On the one hand, *mondjuk (~'say')* and *amúgy* signal that the speaker has not finished his or her turn, but needs some time in the production process. On the other hand, hearers also use it to interrupt the current speaker's turn, signalling that the participant uttering the

DM wishes to take the floor. Marked interactional behaviours such as taking the floor (grabbing a turn) by uttering a dispreferred second pair part or shifting the discourse topic have to be announced before they occur. Marked behaviours are labelled as dispreferred because the speakers are required to give an account of their acts in order to inform the listeners about the circumstances of / reasons for the unexpected response. Dispreferred answers such as disagreements are usually of 'No-plus' form (cf. Sacks 1992: 414) since they elaborate on the reasons for the negative reply (e.g. *Igazából* …, *Hát* …). The following three examples (3.48, 3.49 and 3.50) illustrate dispreferred seconds introduced by the DM *hát* (~'*well'*) which acts as a response marker as well as a disagreement minimizer in these examples:

example 3.48

IR: Dehát mindjárt lejár a mandátuma. (*His mandate will expire soon*)

IE: **Hát** az még több mint egy év, 2013. február. (***DM**^{hát} that'll be in more than a year, in February 2013*)

example 3.49

IR: ...MOL részvények vásárlásán... (*... such as buying MOL shares*)

IE: Amin sokat nyertünk. (*We can make a lot of profit that way*)

IR: **Hát** eddig veszítettünk rajta, kb. olyan 600 milliárdot. (***DM**^{hát} so far we've made losses, about HUF 600 billion*) (ATV *Egyenes Beszéd* 2011-12-27)

example 3.50

IE: Azokat a média kollégákat szeretem, akik váratlan dolgokat kérdeznek. (*I like colleagues in the media who ask unexpected questions*)

IR: Frappíroznak? (*Those who like to startle people?*)

IE: **Hát**, **mondjuk** egy bizonyos adrenalin szint kell ahhoz, hogy ne legyen unalmas. (***DM**^{hát} **DM**^{mondjuk} you need a certain level of adrenaline not to be boring*)

(ATV *Egyenes Beszéd* 2012-01-23)

As the above examples from political interviews also suggest conversational turn openers can set up a frame for the entire turn, thus allowing interlocutors to predict what is going to come next in the conversation.

Before I move on to the analysis of topic orientation markers, let me define the concept of discourse topic. Fraser (2009) provides a general definition of discourse topic as "what the discourse is currently about, what the participants recognize they are talking about from what has been contributed to this point". Chafe (1994) defines *discourse topic* in terms of the notion of semiactive information, and adds that the fact that speakers use DMs (e.g. *you know, well* or *amúgy* ~'*by the way*') before introducing a new topic suggests their awareness of a need to raise consciousness about their next move.

Topic changes marked by DMs in my Hungarian corpus are more frequent in informal conversations than in my corpus of Hungarian political interviews. The main reason for this is that while political interviews mostly centre on a focal topic, speakers in informal conversation tend to move from one topic to another and often completely change the topic of talk in an unmotivated way, which is usually made explicit by the use of DMs. On the other hand, the introduction of unsolicited opinion statements, additional information and side sequences is more common in political interviews than in informal conversation due to the high significance of expressing personal opinion, giving background information, listing arguments and opposing viewpoints in political interviews:

example 3.51

IE: Úgy gondoltam, hogy erről érdemes könyvet írni. ***Amúgy*** is ma Magyarországon rengeteg hasonló vállalkozás van. (*I thought this was worth writing a book about.* ***DM**^{amúgy}* *there are a lot of similar attempts in Hungary at present.*) (*A nap vendége* 2011-08-22)

example 3.52

Ezért nem is azt mondtuk, hogy ez a törvény, ami **amúgy** a Lázár-féle benyújtott javaslatban ne lett volna tárgyalható, hanem attól, hogy … (*This is why we don't say that this act of Parliament, which* ***DM**^{amúgy}* *could've been discussed together with Lázár's motion, but because [sic]*) (ATV Egyenes Beszéd 2011-05-09)

After describing markers of conversation management and thematic control, let me move on to the discussion of miscellaneous strategic uses of DMs, such as ventriloquizing. Ventriloquizing (sometimes referred to as voicing) the discourse of others is a device by which speakers can distance themselves from what is being said, and position themselves in voices of others rather than their own (White 2000). As Goffman's (1981) states, a figure other than the speaker is being animated without the speaker being understood to be either the author of the words or to be responsible for them. If this is done by putting one's own words into the mouths of others, Goffman speaks of "say-foring" or ventriloquizing.

Tannen (2010) investigated the phenomenon of ventriloquizing as a device of indirectness in family interaction. She argues that ventriloquizing "creates meaning by abduction, as speakers borrow others' identities and thereby temporarily assign to themselves characteristics associated with those whose voices they borrow" (Tannen 2010: 307). She also argues that ventriloquizing can be understood as a type of indirectness, one that is very frequent in everyday interaction (Tannen 2010: 311).

Lauerbach (2006: 150) analysed the practices of voicing and ventriloquizing and concluded that they have the effect of personalizing and dramatizing political discourse and implicitly construct identities and relations in the interplay between IR and IE. She describes ventriloquizing as "a particularly vivid way of enacting one's own discourse through another", which, in addition, "greatly increases the strategic potential of communicators" (Lauerbach 2006: 199).

Naturally, there are a range of DMs that are used strategically in political interviews and whose description would deserve separate sections. Because of space considerations, however, in this section I will briefly illustrate the strategic use of *hát (~'well')*and *mondjuk (~'say')* in my corpus of political interviews, focusing on the patterns that have not emerged in studies based on other types of discourse.

Finally, let me highlight the frequent use of *mondjuk (~'say')* as a marker of concession in both media discourses and informal conversations. It is a common monologic argumentation strategy to introduce one's own concessions, thus, minimizing their salience and emphasizing one's own preferred course of argument, but I can observe it in dialogues, as well, especially in shorter narrative or argumentative parts of

the IEs' speech in political interviews as well as in naturally-occurring conversation. Both dialogic and monologic concessions are frequent in both types of discourse (political interviews and casual conversations, respectively):

example 3.53

IE: az igazi kérdés, hogy ez hogyan megy tovább, ***mondjuk*** éppen a klímaváltozás témájában is 2010-ben lesz egy következő nagyon fontos találkozó (*The real question is how we can go on,* ***DM**^{mondjuk}* *there will be a major conference on climate change in 2010*) (Duna TV *Törzsasztal* 2010-01-17)

However, markers of contrast and concession have been found to be slightly more frequent in political interviews than in spontaneous conversations. Two explanations can be offered for this difference. On the one hand, speakers are more cooperative (and less confrontational) in informal conversations on the other hand, the relation of concession might be more explicitly marked by DMs in political interviews due to Bakhtin's (1987) notion of heteroglossia.

As the examples (in sections 3.3 and 3.5) suggest, the markers of concession listed above are multifunctional, occurring in various different rhetorical contexts, often combining concessive function with backgrounding, opposition, topic change, and so on. Rare uses of *mondjuk (~'say')* involve distancing the speaker from the proposition, expressing irony or disapproval; however, these functions are more frequent in naturally-occurring casual talk than in media discourse. In such contexts, the DM reinforces the implicature that the ideas are presented ironically.

3.6.5 Conclusions from a contrastive perspective

Regarding the comparison of the frequency of the Hungarian DMs in the two different discourse genres, I have found *mondjuk (~'say')* to be more common in informal conversations (with 195 occurrences) than in political interviews (with 135 occurrences). Since the number of tokens in each corpus was not completely the same, I normalized the frequency to tokens per hour of interaction. Figure 3.60 presents the comparison of the

frequency of the selected DMs. The reason for the difference most probably has to do with the conversational, colloquial nature of this DM. Its counterparts in a more formal register could be either *tegyük fel* (~'let's suppose'), *például* (~'*for instance'*) or *ellenben (~'however', 'although')*.

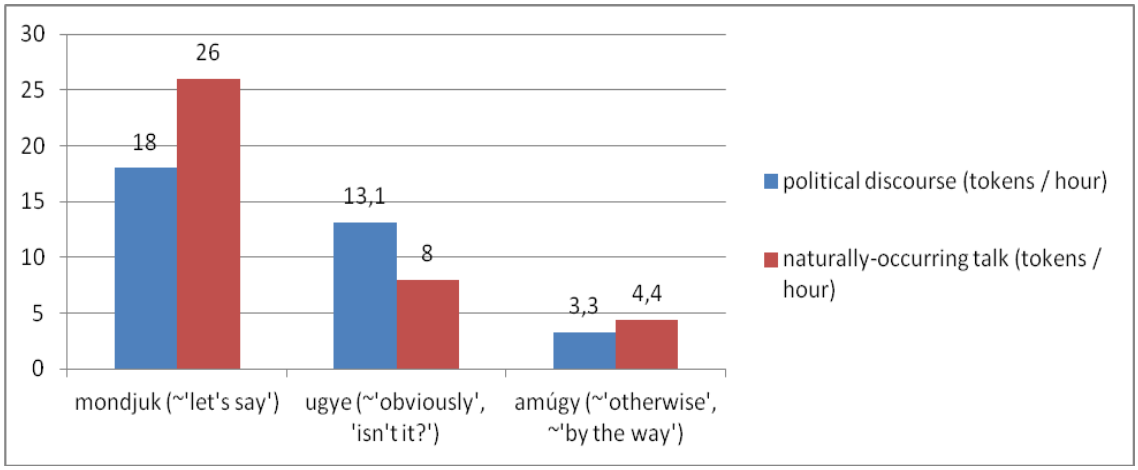

Figure 3.60 *Frequency of Hungarian DMs in two discourse genres*

Concerning the frequency of *ugye*, I have found a different tendency as it is significantly more frequent in my corpus of political interviews than in informal conversations. This finding is most probably related to a salient feature of political interviews discussed above, that is, the fact that there are two different frames of interaction: one between the IR and the IE and one between the first-frame participants and the audience. As I outlined earlier, the difference in the available background information and the degree of shared knowledge between the IR and the audience is explicitly expressed by *ugye (~'is that so?')* in order to let the first-frame participants know that the speaker is aware that they are familiar with the facts under discussion.

It is also important to point out that I have not found significant cross-genre differences in the frequency of *amúgy*, although it is somewhat more commonly used as a DM in informal conversations than in political interviews. The reason for this might be the conversational, colloquial nature of this DM. Further research might prove that political interviews are characterized by more formal counterparts of *amúgy*, such as *egyébként (~'otherwise', 'furthermore')* or *mellesleg (~'besides')*.

It can be concluded that both types of corpora display recurrent coherence sequences. Some of these, such as question and answer sequences, are more often associated with interviews, while others, such as explanation, specification, approximation or example, are more likely to be associated with naturally-occurring talk. Therefore, genre seems to be a powerful variable in the production of discourse relations as well as the resulting patterns in the functional spectra of DMs.

4 RESEARCH CONCLUSIONS

4.1 Results and implications

In the course of my dissertation I presented the results of quantitative as well as qualitative analyses aimed at mapping the functional spectra of three Hungarian DMs as they are used in a variety of contexts. The materials analysed shed light on current theoretical issues on multimodality studies concerning the synchrony of communicative signals across modalities as well as connect with practical issues in multimodal corpus markup. In general, it can be concluded that the study of discourse markers may contribute both to dialogue interpretation and generation. On the one hand, it was argued that discourse markers guide the listener(s) in the interpretation of the discourse since they express the cognitive orientation of the speaker. On the other hand, it was suggested that the use of discourse markers in dialogue modelling and generation should be facilitated in order to enable natural human-computer interaction.

4.1.1 Theoretical results

In the theoretical introduction (in Chapter 2) I briefly described the discourse models of various authors that might help me categorize the functions of the scrutinised Hungarian DMs.

To account for the multifunctionality of DMs and to explain the changes in their scope, meaning and functions, I turned to the theory of ***pragmaticalization*** and the methodology of historical pragmatics. In order to find traces of the *pragmaticalization* process of the analysed DMs, I searched them in Hungarian Historical Corpus (see section

2.2.6 for details). Based on dictionaries and historical corpus material, I have traced the following **historical development** of the meanings of ***mondjuk*** *(~'say')* as a DM*:*

> verb with propositional and conceptual meaning (declarative and imperative *mondjuk*) → frequent use in matrix clause/embedded clause (*hogy ugy mondjuk*; *mondjuk ki, hogy*) → semantically bleached parenthetical expression (*mondjuk*) → discourse marker with non-conceptual and non-propositional meaning, including the potential to express subjectivity and politeness as well

Let me also sum up the historical development of the meanings of ***ugye*** *(~'is that so?')* as a DM*:*

> simultaneous uses of various compound forms: *úgy van-é? / úgy van-e? / úgy-é? / úgy é? / úgy-e*? → merging and phonological reduction → *ugye*: interrogative adverb → question expecting positive reply and/or reassurance → marker of evidentiality expecting the confirmation of the validity of the content of the host utterance of the DM

Finally, the historical development of the meanings of ***amúgy*** *(~'otherwise')* as a DM can be outlined as follows:

> merge of two sentence words*, a* and *m* → *am/ ám (allophones)* → *am(a) + úgy* → *amúgy* adverb →*amúgy* sentence adverb → *amúgy* DM

In sum, I have found that *mondjuk (~'say')* is currently at a later stage of pragmaticalization than *ugye (~'is that so?')* and *amúgy (~'otherwise')*. In other words, *ugye (~'is that so?')* and *amúgy (~'otherwise')* retained more of their conceptual meaning.

4.1.2 Findings based on the analyses of the questionnaires

As far as **average language users' intuitions** are concerned about the use of selected DMs, my following hypotheses were confirmed:

- **(1)** DMs are predominantly interpreted to modify or **change the propositional content** of the utterance since 86.65% of the informants feel the difference between the two parts of minimal pairs where one does not involve one of the three DMs, while the other part does.

- **The three selected items differ in terms of their**
    - **(2) functional spectra** (cf. sections 3.2.3 and 3.2.4 and the list of the most salient functions of the selected DMs in the next paragraph). All three scrutinised DMs were found to have **multiple meanings,** and their **functional spectra** significantly differ from each other. Firstly, the most frequent and salient functions of *mondjuk (~'say')* involve contrast/concession and giving example. Secondly, *ugye (~'is that so?')* serves various functions to a similar extent/degree with explanation, question, background information and emphasis being the top ones. Thirdly, the most frequent and salient functions of *amúgy (~'otherwise')* are commenting and explanation.
    - **(3) degree of optionality** and contribution to the discourse; that is, they add subtlety to the utterance with varying extent (cf. sections 3.2.3 and 3.2.4) since the mode scores of the three items are different. *Mondjuk (~'say')* is considered to be the most necessary item/ the least likely item to be omitted (with a mode score of 3), and *ugye (~'is that so?')* is considered to be the most optional item/ the most likely item to omit (with a mode score of 1). The reason for this is probably that the most salient function of *mondjuk (~'say')* is the expression of the relation of *contrast and concession*, and this coherence relation is rarely marked in other modalities. On the other hand, the most typical function of *ugye (~'is that so?')* is *explanation* which is marked by other means (usually by hand gesticulation) as well.
- Responses of the informants **confirm the validity of**

- **(4)** the assumption of the **lack of gender difference** in both the use and the interpretation of the DMs under scrutiny as male and female informants did not assign significantly different functions to any of the three DMs. It only looked suggestive but did not prove to be significant that male informants are more likely than female informants to judge certain items as fillers.
- **(5)** the **core/periphery model** of DMs (Bell 1998) since one or two functions of each DM are always considerably more frequent than other functions, as described below:

↓

According to the intuitions of lay people, **the most salient functions** of the selected DMs are the following:

- *mondjuk (~'say')*: giving example, approximation, concession;
- *ugye (~'is that so?')*: explanation, evidentility marking, asking for reassurance;
- *amúgy (~'otherwise')*: marker of commentary and explanation.

However, **the following hypotheses were rejected**:

- **(1)** The three DMs differ in terms of their **degree of multifunctionality** (rejected) since instances of *mondjuk (~'say')* were assigned 1.23 functions on average (all seven *mondjuk (~'say')* instances by all 56 participants received 482 labels), each *amúgy (~'otherwise')* instance was labelled 1.26 functions (altogether 494 labels), and each *ugye (~'is that so?')* instance was assigned 1.24 functions on average (altogether 488 labels). The difference among these values is not significant.
- **(2)** There is **relation between** the **duration** of an item **and** the degree of its perceived **optionality (rejected)**. Instead, I found that the duration of an item does not influence the degree of optionality in the judgements of the informants. The shorter the DM, the more optional/omittable it is. (cf. section 3.2.3)

4.1.3 Findings of the corpus-based qualitative and quantitative analyses

4.1.3.1 Functional categories identified

Based on my analysis, the DM ***mondjuk*** *(~'say')* has the most functions among the three items. Its *core procedural* functions (evolving from its original, conceptual, verbal meaning, with its scope usually within a turn and within a clause) are as follows:

- *mondjuk1* meaning 'for example';
- *mondjuk2* meaning 'about, approximately, like', which can be analysed as an adverb[99];
- *mondjuk3* meaning '(let's) suppose, assume, imagine', which can be analysed as an imperative verb;

In addition, it expresses the following interconneccted procedural meanings in my corpus material:

Textual-rhetoric uses (larger scope: it is used to link two coordinate clauses):

- *mondjuk4* meaning 'but, although, however';
- *mondjuk5*, used to clarify or explain the content in the previous segment of the speaker's utterance;
- *mondjuk6,* used to introduce/signal reformulation;
- *mondjuk7,* used to return to a previous topic.

Interactional uses (even larger scope: utterance-level, it is used to link two utterances):

- *mondjuk8* used in second-pair parts, meaning 'well, yes but, on the other hand, from a different perspective';
- *mondjuk9* used on its own in a short reply (~'*Mondjuk*.') to a question to express an agreement or token agreement, meaning 'so-so, more or less'.

Considering instances of ***ugye*** *(~'is that so?')* in the HuComTech corpus as well as in my collection of political interviews, it is used to express the following meanings and functions:

[99] Taking a contrastive perspective, both *mondjuk1* and *mondjuk2* could usually be replaced by *'like'* in youthful contemporary spoken English.

- *ugye1* used as an interrogative adverb of manner, mostly asking for reassurance (the most ancient, the core meaning of *ugye*);
- *ugye2*used as a marker of evidentiality (very frequent use in political interviews);
- *ugye3* used to express emphasis.

In the HuComTech corpus and in a collection of mediatised interviews ***amúgy*** *(~'otherwise')* as a DM is used to perform the following functions:

- *amúgy1* used to mark/introduce comments, unrequested opinions and side sequences in narratives
- *amúgy2* used to introduce explanations – some informants in my questionnaire work identified these instances as empty filler words
- *amúgy3* used to mark new information.

The diachronic and synchronic description of the DMs, suggest that *mondjuk (~'say')* is the most prototypical, and *amúgy* is the most peripheral DM out of the three.

Concerning the multimodal (prosodic and nonverbal-visual) description of DMs, some of my hypotheses were supported and most of them were rejected. In terms of F0 (mean F0 and the direction of pitch movement), regular difference was not found between the different functional versions of the same DM (in the case of *mondjuk* and *amúgy* respectively). My findings do not lend support to the statements in the literature about the quasy-initial, turn-initial position of DMs and the regular presence of preceding or following pauses in Hungarian (similarly to the findings of Dér & Markó 2007). However, individual differences (i.e. the speakers' usual manner of speaking) might also result in great variation in the results.

The consequent **corpus queries** addressed the the **discourse-pragmatic description** of the scrutinised DMs in three aspects: sequential, prosodic and visual features. Concerning the multimodal description of DMs, some of my hypotheses were supported and most of them were rejected.

4.1.3.2 Sequential and functional properties

One of my major goals was to find out what common **lexical bundles, DM clusters** or patterns the selected DMs form. → I identified that there are often more than one DM following one another in the analysed material, either intensifying each other's function or sometimes creating a completely new function. First, the frequent co-occurrence of *mondjuk* (~*'say'*) with the connectives *de* (~*'but'*), *hát* (~'well') and *meg* (~'and') is not just the result of a coincidence; instead, these systematic, recurring patterns also prove the DM membership of *mondjuk.* Second, *ugye (~'is that so?')* was preceded by a DM or a connective in approximately 40% of the cases in the interviewees' talk, while in the interviewer's speech *ugye (~'is that so?')* followed a DM or a connective in approximately 43% of the cases. Most of these *ugye-clusters (meg* (~*'and'*), *hát* (~*'well'*) and *hogy* (~*'that'*) + *ugye* (~*'is that so?*')) are used in explanations. Third, *amúgy* (~'*otherwise', 'by the way'*) is followed by a smaller set of connectives than the other two analysed DMs. Its relatively common co-occurrence (38,46%) with the subordinating connective **mer* (~'cause') strengthens its role in explanations, while its co-occurrence (19,23%) with the coordinating connective *de* (~'but') either indicates the relation of contrast or concession between the linked segments or it is typically used to introduce a new topic.

My second question addressed the identification of the most **salient functions** of each of the DMs analysed. → Firstly, the most frequent and **salient functions** of *mondjuk (~'say')* involve contrast/concession and giving example. Secondly, *ugye (~'is that so?')* serves various functions to a similar extent/degree with explanation, question, background information and emphasis being the top ones. Thirdly, the most frequent and salient functions of *amúgy (~'otherwise')* are commenting and explanation.

My third question was if their uses are **genre-dependent**, and if their functions typically differ in mediatized political discourse and informal conversation. → Regarding the **comparison of the frequency of use** of the DMs **in two different discourse genres**, I found *mondjuk (~'say'*) to be more common in informal conversations than in political interviews. The reason for the difference most probably has to do with the conversational, colloquial nature of this DM. Concerning the frequency of *ugye (~'is that so?'*), I found a different tendency as it is significantly more frequent in my corpus of political interviews than in informal conversations. This finding is most probably related to the fact that there are two different frames of interaction: one between the IR and the

IE and one between the first-frame participants and the audience. The difference in the available background information and the degree of shared knowledge between the IR and the audience is explicitly expressed by *ugye (~'is that so?'*) in order to let the first-frame participants know that the speaker is aware that they are familiar with the facts under discussion. It is also important to mention that I did not find significant cross-genre differences in the frequency of use of *amúgy (~'otherwise')*, although it is somewhat more commonly used as a DM in informal conversations than in political interviews. Further research might prove that political interviews are characterized by more formal counterparts of *amúgy*, such as *egyébként, (~'otherwise', 'furthermore')* or *mellesleg (~'besides')*.

4.1.3.3 Prosodic features

Running prosodic queries, I aimed to find out if the different versions of a DM expressing different functions are **suprasegmentally marked.**

A **statistically significant relation was not found** between the **direction of pitch movement** in the host unit of a DM and the position of the DM in the utterance. Surprisingly, defined at clause-level, significant relationship was identified between the two variables in the case of *mondjuk (~'say')* and *ugye (~'is that so?'*). I did not find a relation either between pitch movement in the host unit and the discourse function of the DM, **except for** two core functions of ***ugye*** *(~'is that so?'*) where rising intonation is typically used in questions, while stagnant intonation is the most common in explanations.

Similarly, no significant relation was found between the discourse function of a DM and the presence of **preceding silence** in the utterance, ***except for mondjuk*** *(~'say').* When *mondjuk (~'say')* operates in the discourse space of exchange structure and introduces a dispreferred second pair part, usually marking disagreement, it appears in utterance-internal position preceded by a pause.

Surprisingly, the correspondence between discourse-pragmatic function and the **mean F0 of the realization of a DM** is not significant in the language use of both male and female speakers. The majority of the female speakers pronounce *ugye (~'is that so?')* in question function with relatively higher pitch than in explanatory sequences in assertions. This is not surprising since Gussenhoven & Chen (2000) claim that high pitch, as a

suprasegmental feature, universally marks dependence and questioning. However, it is surprising that the F0 data of male speakers do not reflect this tendency.

As a result of the queries, **significant difference was found** between the **mean durations** of the realizations of *mondjuk (~'say')* and its two most salient functions, since its lexical search or approximation function is typically uttered longer (0.295 s) than its contrast/concession functions (0,208 s) ($p<0,05$). Both the segment duration of *mondjuk* and preceding silence also seem to play a role in the production and interpretation of its function. On the other hand, the difference between the relative distribution of the durations of the two most salient functions of *ugye (~'is that so?'*) and *amúgy (~'otherwise')* was not proven to be significant by independent samples t-test.

4.1.3.4 Nonverbal-visual behaviour of the speaker around uttering the selected DMs

Regarding accompanying visual features, I found that **there is a relation between certain discourse functions** of a given DM **and** the:

- simultaneous **gaze** direction of the speaker (in the case of certain functions of the DMs, *mondjuk* and *ugye)*
- simultaneous **facial expression** of the speaker (only in the case of recalling facial expression and the lexical search or approximation functions of *mondjuk)*
- simultaneous **manual gesticulation** of the speaker (only in distinguishing two major functions of *mondjuk*).

In detail, when the primary role of a DM is thematic control, and its meaning can be glossed as 'well', 'yes but', or 'on the other hand', the speaker typically displays upward or sideways **gaze**. Furthermore, when the function of *mondjuk* (~'*say*') is to mark the coherence relation of contrast and to express alternative viewpoints or disagreement in the action structure, the nonverbal behaviour of the speaker can be described by one or more of the following features: looking aside (averted gaze), headshake, lifting eyebrows up and/or scowl. In contrast, operating during lexical search, *mondjuk* is often preceded by and simultaneous with upward gaze direction and a contemplating, recalling facial expression of the speaker. On the one hand, explanatory sequences (marked by *ugye*) are typically accompanied by the shifting gaze of the speaker where the distribution of gaze direction types during explanations is rather varied and balanced. On the other hand,

during tag questions (checking information or asking for reassurance), the overarchingly most frequent gaze direction type is forward, or eye contact in other words, which marks giving the floor over to the listener.

There is a considerable difference among the distribution of the *recall* **facial expression** types. As mentioned before, the vast majority of recall expressions are made during lexical search and with this, *recall* is the second most frequent expression type after *natural* during lexical search.

Concerning **manual gesticulation**, when specification and providing example is introduced by *mondjuk* (~'*say'*) in the discourse domain of information state, hand gestures are performed during topic elaboration. When the speaker emphasizes and marks the introduction of new information, the gesture is usually simultaneously performed with uttering *mondjuk*, or sometimes precedes it (with 100–2000 ms), in a way that either or both palms look upward. Contrary to my expectations, the verbal expressions of contrast and concession are more typically accompanied by hand movements than lexical search and approximation (especially by bimanul hand movements to either side). If, however, *mondjuk* expressing lexical search and approximation is used simultaneously with hand movements, the manual gesture involves the circular movement of only one of the hands. There is a highly significant relation ($p<0,01$) between different discourse functions and accompanying, overlapping manual gesticulation in the case of *mondjuk* (~'*say'*) ($\chi^2(1)=12,442$) and *ugye (~'is that so?')*, ($\chi^2(1)= 14,528$) which means that the feature of simultaneously performed hand gestures may contribute to the disambiguation of their meaning. The difference in the frequency and extent of hand gestures is even more considerable in the case of *ugye (~'is that so?')* where explanations are frequently, while questions (asking for reassurance or checking information) are very rarely performed with simultaneous manual gesturing.

In short, I found that **there is a relation between** the actual **discourse function** of a DM and the:

- **duration** of the realization of a DM (but only in the case of distinguishing two functions of *mondjuk*)
- simultaneous **gaze** direction of the speaker (in the case of certain discourse functions of the DMs *mondjuk* and *ugye)*
- simultaneous **facial expression** of the speaker

- simultaneous **manual gesticulation** of the speaker (but only in the case of distinguishing two functions of *mondjuk*)

On the other hand, I **did not find a relation between**:

- the direction of **pitch movement** in the host unit of a DM and the
  - **position** of the DM in the **utterance**
  - **position** of the DM in the **clause**
- discourse **function** of a DM and the
  - presence of **preceding silence** in the utterance
  - **mean F0** of the realization of a DM

Based on the findings of the queries listed above, I attempted to collect the machine-extractable features of the identified most salient functions into a decision tree model in order to contribute to dialog modelling and meaning disambiguation. I used corpus queries in ELAN and statistical analysis in SPSS to find the relevant features of the DMs as well as their parameters. I have managed to distinguish two functions of *mondjuk (~'say')* and *ugye (~'is that so?'*) based on physical, machine-detectable features, including as silence, gaze direction, manual gestures and facial expressions.

4.2 A proposed model for functional DM annotation

I developed an annotation scheme (described in this section, 4.1) for tagging DMs after reviewing the relevant literature (Schiffrin 1987, Brinton 1996, Brinton 2008, Frank-Job 2006, Furkó 2007, Petukhova & Bunt 2009) and most importantly, after a series of questionnaires (described in section 3.2) about the intuitions of average language users about the functions and optionality/importance of these items in multimodal examples taken from the HuComTech corpus. Then I performed an in-depth discourse-pragmatic analysis of the scrutinised DMs (described in section 3.3) combining qualitative and quantitative methods; therefore, the development of the proposed scheme was mostly a data-driven process.

I aimed to categorize the identified functions into larger classes; that is, I attempted to introduce various larger functional categories to which the functions and meanings are subordinated. The thirteen categories (and the additional ragbag category) identified in the course of questionnaires were not originally classified as members of larger categories and would have been difficult to organize them into larger categories so that the members of categories are mutually exclusive. I attempted to place the informants' functional categories into Schiffrin's (1987, 2006) model of planes of talk, but it seemed very difficult due to the overlapping categories and vague category boundaries. My attempt at this type of categorisation can be read in Table 4.1 below.

Schiffrin 1987 and 2006	Ideational structure	Action structure	Participation framework	Exchange structure	Information state
Functional categories identified by informants via questionnaires	contrast/ concession	giving example, approximation, explanation, commenting, attitude marking	question marking , commenting	topic change, question marking	evidentiality, marking background info./common ground, new info., uncertainty/ lexical search, emphasis

Table 4.1 *An attempt to categorise informants' categories in Schiffrin's (1987, 2006) model*

Further problems with the replies of the informants in the questionnaires that made me refrain from using the same scheme for annotation include that (1) some of them tended to identify the function of the whole utterance rather than the function of the individual DM; and (2) some of them seemed to mix functional and formal classification (the notions of function/role and (surface) form), and (3) the categories identified by the informants cannot acccount for and tag such phenomena as *turn-taking, concession, evidentiality, ventriloquizing*, although DMs also play a role in expressing and performing these functions.

I had to create a new classification scheme[100] (a step of its procedure is shown in Figure 4.1) which covers all the domains of discourse, and then, within these domains I had to offer mutually exclusive categories. Therefore, a single DM can be described in several domains of discourse by using the new scheme. For instance, '*lexical search'*, '*giving example'*, and '*explanation'* were merged under the umbrella term of the '*own speech management'* functional group (the name of this larger category comes from Dialog Act Markup Language, cf. Petukhova & Bunt 2009). Reformulation was also added to this group, since *mondjuk* was observed several times in the test corpus (with 100 tokens) to appear expressing this function and could not be accounted for it without this new tag/label. I also wanted to label the illocutionary function of the speech act DM is the part of. Thus, I introduced a new level in my annotation system to describe the illocutionary function of the host unit of the DM, and based on the multimodal pragmatic annotation of the HuComTech corpus (Abuczki, Bódog & Németh T. 2011, Bódog, Abuczki & Németh T. 2011), I included the following communicative act types: constative, directive (involving questions), acknowledging, commissive, and indirect acts. It was important that the category labels within a tier must be mutually exclusive so that the annotator can attach only one label/tag at one functional discourse level, but may attach a label at any number of the large functional categories. The functional DM annotation proposed involves the segmentation and labelling of DMs along the following aspects and domains of interaction:

1. **Own Speech / Communication Management Functions (Speech_M):** *lexical search, reformulation, giving example, explanation* (~based on DiAMSL's Own Communication Management level).

2. **Attitudinal Functions / Attitude Marking (Attitudinal_F):** *approximation, emphasis, PFM_booster*[101]*, PFM_hedge* (usually involving mitigation and politeness), *rhetorical question* (to which answer is not expected since it only calls attention to and makes emphatic the content of the utterance).

DMs expressing attitudinal functions mark the attitude of the speaker towards the current topic, and may modify the force of the host utterance.

[100] I am indebted to Dr. Furkó B. Péter, Dr. Dér Csilla, Dr. Schirm Anita, Dr. Németh T. Enikő for their useful suggestions concerning the taxonomy of the DM annotation scheme.

[101] The abbreviation PFM stands for pragmatic force modifier (Nikula 1996).

3. **Interpersonal Functions (Interpersonal_F):** *agreement, emphasis, asking for reassurance, expressing sympathy* — all these functions playing a role in efficient communication management and aspects of face management as well (partly based on DiAMSL's Social Obligations Management and Contact Management, cf. Petukhova & Bunt 2009).

DMs performing interpersonal functions mark the attitude of the speaker towards the conversation partner(s) and either the previous or the upcoming utterance of other speaker. For instance, tag questions (with *ugye*) expect to trigger assurance, agreement, acceptance or approval from the listener.

4: already annotated in the discourse level of the *audio-based* annotation of the HuComTech corpus (Pápay, Szeghalmy & Szekrényes 2011):

4. **Structural Conversation Management (Conversation_M)**: *turn-take* (the distinction of *preferred second pair parts* and d*ispreferred second pair parts* is introduced by me specifically for the purpose of DM functional annotation), *turn-keep, turn-give (end-of-turn), (listener's) backchannel*.

5–7: already annotated in the *multimodal pragmatic annotation* of the HuComTech corpus (Abuczki, Bódog & Németh T. 2011, Bódog, Abuczki & Németh T. 2011) of the HuComTech corpus:

5. **Thematic Control (Thematic_C):** introducing *topic initiation, topic elaboration, topic change, marking concession* (concession is a new label within this level introduced by me specifically for the purpose of DM functional annotation).

6. **Communicative Acts (CA):** *constative* (including explanations), *directive* (including questions: checking information, asking for reassurance*), acknowledgment, commissive, indirect acts* as the host unit of a DM (classification based on Bach & Harnisch 1979).

7. **Information Management (Information_M):** signalling *new information*, *evidentiality marker* (marking the evidentiality of the information, signalling *given*/*known information*).

The categories to be labelled should be seen as prototype categories. The labels reflect their core functions. However, there are not sharp distinguishing borders between/among categories. In contrast, these categories should rather be considered as fuzzy sets which might be overlapping. The annotation tool used (ELAN 4.6.1, presented in Figures 4.1 and 4.2) enables tagging multiple functions to a single DM, which is necessary because most DMs simultaneously perform multiple functions.

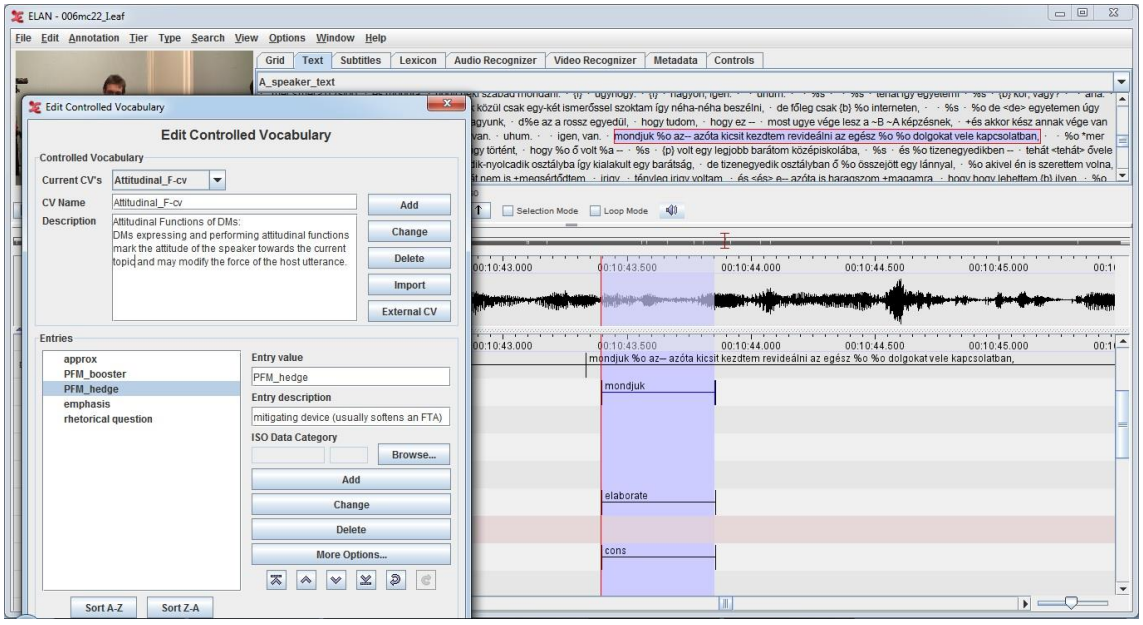

Figure 4.1 *Final refinements of the taxonomy in ELAN: Designing the interface and editing the controlled vocabulary of the annotation scheme*

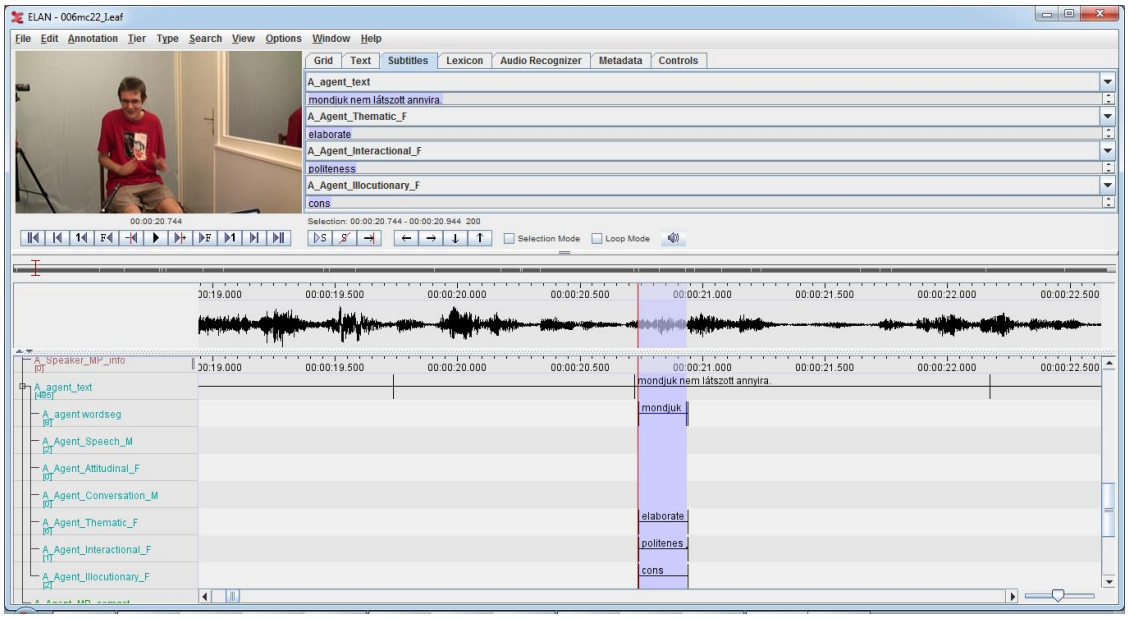

Figure 4.2 *User interface of a proposed functional annotation scheme for DMs*

To provide a few sample analyses using the proposed new framework, let me refer back to previously mentioned examples and repeat them here for convenience. The examples (taken from previous chapters) will be followed by the tags assigned to them in the new annotation scheme:

example 4.1

- {b} nagyon nehéz volt idetalálni
- na **mondjuk** ezzel más is így van

- *(it was hard to find the way here*
- ***DM_mondjuk*** *others also say the same)* (hucomtech informal)

➔ tagged functions: *turn-taking, topic elaboration, concession, mitigation*

example 4.2

- dolgoztam a Fórumban a Zara nevű helyen
- uhum
- ruhásboltban
- uhum, értem hát **mondjuk** ezek nem utolsó tapasztalatnak

- *(I worked in the Forum, in a place called Zara*
- *uhum*
- *in a fashion shop*
- *uhum, i see, DM_well **DM_mondjuk** these are not bad experiences*)

(hucomtech informal)

➔ tagged functions: *turn-keeping, topic elaboration, concession, face management*

*example 4.3 (*http://youtu.be/1sd9BirHc9Q)

I, agent, 153 .s (21.)

- Ő az, akiről meséltél egyszer a –
- Biztos meséltem.
- Most anyukádéknál van, **ugye?**
- Igen, igen,
- Ha jól emlékszem?
- *(Is he the dog you were telling me about?*
- *I'm sure I told you.*
- *Is he at your parents now **ugye**?*
- *Yes, yes.*
- *If I remember well.*

➔ tagged functions: *turn-giving, directive, checking information, expecting a positive reply*

*example 4.4 (*http://youtu.be/Y1glqW3CPLQ)

Eddig Debrecenben tanultam, az Ady Endre Gimnáziumban hatosztályos képzésben, most pedig az egyetemen éppen végzős vagyok az anglisztika szakon, a BA képzésben, **ugye** ebben az új három éves képzésben. (*I've been studying in Debrecen, first in the six-year-programme of Ady Endre Grammar*

School, and now I'm doing my final year majoring in English BA, ***DM_ugye*** *in this new three-year programme.*) (hucomtech 006 formal)

➔ tagged functions: *evidentiality marker, explanation, constative act, turn-keeping*

*example 4.5 (*http://youtu.be/e8Dju5tpXlk)

- Sajnos értettem angolul, hogy meg akar késelni. Egy kicsit úgy hátrahőköltem, nővérem így kettőt hátrahőkölt, és akko mondtuk, hogy hát de nincs nálunk pénz értse meg. Hát **amúgy** volt hatszáz font meg egy kétszázezer forintos notebook, tehát végülis nem volt nálunk pénz, és akkor ott erősködött, hogy de igen.
- (*Unfortunately, I understood in English that he wanted to stab me. I, like, backed off a little, my sister, like, backed off, too, and then we said we didn't have money on us. Well, we* ***amúgy*** *did have six hundred pounds and a notebook worth 200,000 HUF, so we didn't actually have cash, and then he was like pressing that we give him more.)* (hucomtech 006 informal)

➔ tagged functions: *marker of contrast/concession, turn-keeping, explanation*

As the examples suggest, the proposed taxonomy is capable of capturing and tagging multiple dimensions of the discourse instead of assigning only a single function to a DM.

4.3 Limitations and directions for future research

The research described in this dissertation can be described as mostly empirical rather than theoretical, since it is based on an in-depth multimodal analysis of discourse markers in natural language corpora; therefore, it primarily contributes to the methodological considerations in discourse analysis, emphasizing the study of the role of nonverbal modalities both in the production and interpretation of social interaction. The

research provides insight into the largely unexplored field of the interplay of verbal discourse markers and nonverbal (visual and acoustic) behavioural cues. The findings of the empirical case studies contribute to DM research, computational pragmatics and communication modelling. Whether the findings are unique to Hungarian language (the language use of Hungarian university students) is another question to investigate in further research.

As far as the weak points of the analysis are concerned, firstly, the findings of the questionnaires could be even more deeply analysed and exploited. Secondly, the plausibility of core-periphery approach requires the use of more historic material and diachronic analysis. Thirdly, the annotation of pitch movement and the clause-level annotation was carried on a relatively small set of data; therefore, I will increase the amount of the analysed material and the will extend the case studies.

Due to their significant variation in their extent and frequency of gesture use among speakers, modelling of the relation between DMs and nonverbal behaviour involves significant complexity. The study of nonverbal-visual cues accompanying DMs involved the observation of hand movements, gaze direction and facial expressions only; however, other nonverbal expressions such as posture changes and eyebrow movements are also expected to play a role in disambiguating functions. My future plans involve the analysis of further nonverbal features of DMs as well. On the other hand, interpersonal variation in the frequency and intensity of use of gestures also makes it very difficult to create a model of DMs with explanatory power or to make any predictions on the actual function of a DM. A further challenging factor in human communication is the multiplicity of signals used and the flexibility in using communicative signals. A further difficulty is that temporal aspects of communication must also be taken into account during interpretation, that is, we interpret things and actions happening around us over time and processing communicative signals also requires some time.

The difficulty of quantification in interaction research (cf. Schegloff 1993, Carver 1978) must also be addressed in this section. Among the difficulties, the limitations of using certain statistical tests also need to be mentioned. For instance, it is argued that correlation does not prove the existence of causation since significant effects can be caused by external factors as well. Variables co-vary (in my research, e.g. the use of manual gesticulation and the simultaneous act of explanation co-vary), but we can never

be a hundred percent sure why, there might not be interaction between them; it might be the result of a third, unknown factor. The external and ecological validity of the results might also be questioned. As for external validity, one might ask if the results can be generalized to population. Of course, due to considerable interpersonal variation in the use of both DMs and gestures, I do not believe that my results can be generalized to the entire Hungarian population. All queries presented in the dissertation are based on the HuComTech corpus; therefore, my results cannot be generalized to the entire population, e.g. to older generations speaking another dialect of Hungarian or in a different genre (since all speakers were young people, mostly from North-Eastern Hungary). Future research should verify the validity of the research findings in the language use of speakers of Hungarian living in different parts of Hungary. Concerning ecological validity, the question arises if results can be generalized from laboratory to natural conditions. In this case, I do not think that studio conditions considerably affected either the DM use or the gesticulation of the participants. However, we can never fully exclude specific task artefacts and the influence of contextual factors. For instance, in the HuComTech corpus, two strangers interacted; therefore, this might have resulted in a slower-paced interaction. However, if we want to record communication in studio quality, we must accept the tradeoff between naturalness and control.

Finally, further research is needed (cross-cultural as well as cross-linguistic, quantitative as well as qualitative) in order to substantiate our findings about, for example, DMs' contribution to heteroglossia and stance-taking, so that we can gain new and deeper insights about the functional spectrum of DMs as a heuristic tool for genre analysis.

All in all, what I hope to have illustrated is that DMs and their accompanying nonverbal features make an important contribution to the interpretation of various discourse transitions; and that a primarily discourse-pragmatic, corpus-driven perspective on the functional spectra of individual DMs is a more fruitful approach than semantic-taxonomic methods, often adopted in the pertinent DM literature.

REFERENCES

Works Cited

Abuczki, Á., Bódog, A. & Németh T. E. (2011). A multimodális pragmatikai annotáció elméleti alapjai az ember-gép kommunikáció modellálásában. In: Németh T. E. (Ed.) *Ember-gép kapcsolat: A multimodális ember-gép kommunikáció modellezésének alapjai. (Segédkönyvek a nyelvészet tanulmányozásához; 133)* (pp. 179–201). Budapest: Tinta Könyvkiadó.

Abuczki, Á. (2011). A multimodal analysis of the sequential organization of verbal and nonverbal interaction. *Argumentum*, 7, 261–279.

Abuczki, Á. (2012a). A Conversation-Analytical Study on Turn-giving Cues: End-of-turn prediction. In: A. Esposito, A.M. Esposito, A. Vinciarelli, R. Hoffmann & V.C. Müller. *Behavioural Cognitive Systems, LNCS 7403* (pp. 335–342). Berlin: Springer-Verlag.

Abuczki, Á. (2012b). The Role of Discourse Markers in the Generation and Interpretation of Discourse Structure and Coherence. In: *Proceedings of 3rd International Conference on Cognitive Infocommunications*. Kosice: Technical University of Kosice.

Abuczki, Á. & Esfandiari B. G. (2013). An overview of multimodal corpora, annotation tools and schemes. *Argumentum*, 9, 86–98.

Abuczki, Á. (2013a). A Corpus-based Study to Disambiguate Discourse Markers in Multimodal Context (poster presentation). Central European Conference in Linguistics for Graduate Students. Péter Pázmány Catholic University, Piliscsaba, 22–23 August, 2013.

Abuczki, Á. (2013b) A mondjuk nem konceptuális használatának vizsgálata multimodális kontextusban. Alknyelvdok 7 (*VII. Alkalmazott Nyelvészeti Doktoranduszkonferencia)*. Szerk: Váradi Tamás. (ISBN: 978-963-9074-59-0) Budapest: MTA Nyelvtudományi Intézet.
http://www.nytud.hu/alknyelvdok13/proceedings13/ANyD7-Abuczki-Agnes.pdf

Abuczki, Á. (2014) On the Disambiguation of Multifunctional Discourse Markers in Multimodal Interaction. *Journal on Multimodal User Interfaces, Special Issue on Cognitive Infocommunications*., Volume 8, Issue 2, pp. 121-134. Berlin, Heidelberg: Springer.

Aijmer, K. (2002). *English discourse particles: evidence from a corpus.* Amsterdam and Philadelphia: John Benjamins.

Aijmer, K. & Simon-Vandenbergen A. (2006). Introduction. In: K. Aijmer & A. Simon-Vandenbergen (Eds.). *Pragmatic Markers in Contrast* (pp. 1–10). Amsterdam: Elsevier.

Aijmer, K. & Simon-Vandenbergen A. (2009). Pragmatic Markers. In: J. Östman & J. Verschueren (Eds.) *Handbook of Pragmatics*. Amsterdam: John Benjamins.

Algeo, John (1990). "It's a Myth, Innit? Politeness and the English Tag Question". In: Ch. Ricks & L. Michaels (Eds.) *The State of the Language* (pp. 443–450). Berkeley: University of California Press.

Allwood, J., Cerrato, L., Jokinen, K., Navarretta, C., & Paggio, P. (2007). The MUMIN coding scheme for the annotation of feedback, turn management and sequencing phenomena. *Proceedings of the International Language Resources and Evaluation Conference (LREC)* 41(3–4), 273–287.

Andersen, G. (1998). Are Tag Questions questions? Evidence from spoken data. Paper presented at *ICAME 19*, Belfast.

Andersen, G. (2001). *Pragmatic Markers and Sociolinguistic Variation: A Relevance-Theoretic Approach to the Language of Adolescents.* Amsterdam & Philadelphia: John Benjamins.

Ariel, Mira. (1998). Discourse Markers and Form-Function Correlations. In: Jucker, A. H. & Ziv, Y.. (Eds.) *Discourse markers: descriptions and theory*. Pragmatics and Beyond Series, 57. Amsterdam and Philadelphia: John Benjamins.

Arzarello, F., Ferrara, F., Paola, D. & Robutti, O. (2005). The genesis of signs by gestures. The case of Gustavo. In H. L. Chick & J. L. Vincent (Eds.), *Proceedings of the 29th Conference of the International Group for the PME*, 1. (pp. 73–83). Melbourne, University of Melbourne.

Axelsson, K. (2011). *Tag Questions in fiction dialogue.* Göteborg: University of Gothenburg PhD dissertation. Available online at: http://hdl.handle.net/2077/24047 (1 February, 2013).

B. Lőrinczy, É. (Ed.) (1979). *Új Magyar Tájszótár. 1. kötet*. Budapest: Akadmiai Kiadó.

Bach, K. & Harnish, R. M. (1979). *Linguistic communication and speech acts.* Cambridge, Mass, and London: MIT Press.

Bakhtin, M. (1987). *The Dialogic Imagination: 4 Essays*. Austin: University of Texas Press.

Ballagi, M. (Ed.) (1867–1872). *A magyar nyelv teljes szótára. Első rész.* Budapest: Franklin Társulat. (MNyTSz.)

Bańczerowski, J. (2005). A kötőszók mint metaszövegbeli operátorok. *Magyar Nyelvőr*, 129 (4) 488–495.

Bangerter, A. (2004). Using pointing and describing to achieve joint focus of attention in dialogue. *Psychological Science,* 15, 415–419.

Baranyi, P. & Csapó , A. (2010). Cognitive Infocommunications: CogInfoCom, *11th IEEE International Symposium on Computational Intelligence and Informatics*, Budapest, Hungary.

Baron, R. M. (2007) Situating coordination and cooperation between ecological and social psychology. *Ecological Psychology* 19(2) 179–199.

Bárczi G. (Ed.) (1959–1962) *A magyar nyelv értelmező szótára I–VII*. Budapest: Akadémiai Kiadó.

Bell, D. (1998). Cancellative discourse markers: a core/periphery approach. *Pragmatics* 8 (4) 515–541.

Benkő, L. (Ed.) (1967). *A magyar nyelv történeti-etimológiai szótára. 1. kötet. A-Gy.* Budapest: Akadémiai Kiadó.

Benkő, L. (Ed.) (1992). *A magyar nyelv történeti nyelvtana II/1. A kései ómagyar kor. Morfematika.* Budapest: Akadémiai Kiadó.

Biber, D., Johansson, S., Leech, G., Conrad, S. & Finegan, E. (1999). *Longman Grammar of Spoken and Written English*. London: Longman.

Biber, D. (2010). Corpus-based and corpus-driven analyses of language variation and use. In: Heine, B. & Narrog, H. (Eds.): *The Oxford Handbook of Linguistic Analysis (pp. 159–194)*

Biber, D. & Reppen, R. (2012). *Corpus Linguistics*. SAGE Publications Ltd.

Bibok, K. (2010). From syntactic alternation to lexical pragmatics. In: E. Németh T. & K. Bibok (Eds.) *The role of data at the semantics-pragmatics interface*. Berlin/New York: Mouton de Gruyter, 261—304.

Bierwisch, M. (1983) Semantische und konzeptuelle Repräsentation lexikalischer Einheiten. In: R. Růžička and W. Motsch (Eds.) *Untersuchungen zur Semantik.* (*Studia grammatica* 22) Berlin: Akademie Verlag, 61—99.

Bierwisch, M. (1996) How much space gets into language? In: P. Bloom, M. A. Peterson, L. Nadel & M. F. Garrett (Eds.) *Language and space.* Cambridge, MA: MIT Press, 31—76

Blakemore, D. (1987). *Semantic constraints on relevance.* Oxford: Blackwell.

Blakemore, D. (1992). *Understanding utterances. An introduction to pragmatics.* Oxford: Blackwell.

Blakemore, D. (2002). *Relevance and Linguistic Meaning: The Semantics and Pragmatics of Discourse Markers.* Cambridge: Cambridge University Press.

Bódog A., Abuczki Á. & Németh T. E. 2011. A multimodális pragmatikai annotáció jelentősége a számítógépes nyelvészetben. In: VIII. Magyar Számítógépes Nyelvészeti Konferencia (pp. 240–251). Szeged: Szegedi Tudományegyetem

Boersma P. & Weenink, D. 2007. *Praat: doing phonetics by computer 5.0.02.* University of Amsterdam: Institute of Phonetic Sciences. http://www.praat.org

Brinton, L. J. (1996). *Pragmatic Markers in English.* Berlin: Walter de Gruyter.

Brinton, L. J. (2008). *The Comment Clause in English. Syntactic Origins and Pragmatic Developments.* Cambridge: Cambridge University Press.

Brown, R. (1986). *Social psychology* (2nd ed.). New York: Free Press.

Brugman, H. & Russel, A. 2004. Annotating multi-media / multi-modal resources with elan. In: Lino, M., Xavier, M., Ferreire, F., Costa, R., Silva, R. (Eds). *Proceedings of the Fourth International Conference on Language Resources and Evaluation (LREC)* (pp. 2065–2068). Lisbon: Portugal.

Bunt, H. & Black, W. J. (2000). The ABC of Computational Pragmatics. In: Bunt, H., Black, W. (szerk.) *Abduction, Belief and Context in Dialogue: Studies in Computational Pragmatics* (pp. 1–46). Amsterdam: John Benjamins.

Bunt, H., Alexandersson, J., Choe, J.W., Fang, A.Ch., Hasida, K., Petukhova, V., Popescu-Belis, A. & Traum D. (2012): ISO 24617-2: A semantically-based standard for dialogue annotation. *Proceedings of the International Language Resources and Evaluation Conference (LREC),* 430–437.

Carletta, J., Ashby, S., Bourban, S., Flynn, M., Guillemot, M., Hain, T., Kadlec, J., Karaiskos, V., Kraaij, W., Kronenthal, M., Lathoud, G., Lincoln, M., Lisowska, A., McCowan, I., Post, W., Reidsma, D. & Wellner. P. (2005): The AMI Meeting Corpus: A Pre-Announcement. *Proceedings of the Second international conference on Machine Learning for Multimodal Interaction*, 28–39.

Carver, R. P. (1978) The Case Against Statistical Significance Testing. *Harvard Educational Review*, Vol 48. Issue 3. 378–399.

Chafe, W. L. (1980). The deployment of consciousness in the construction of narrative. In: W. L. Chafe (Ed.) *The Pear Stories: Cognitive, Cultural, and Linguistic Aspects of Narrative Production*. NJ: Ablex, 9–50.

Chafe, W. L. (1986). Evidentiality in English Conversation and Academic Writing. In: W. L. Chafe & J. Nichols (Eds.) *Evidentiality: The Linguistic Coding of Epistemology*. (pp. 261–272). Norwood, NJ: Ablex.

Chafe, W. L. (1994). *Discourse, consciousness, and time: The flow and displacement of conscious experience in speaking and writing*. Chicago: University of Chicago Press.

Clark, H. & Brennan, S. E. (1991). Resnick, L. B.; Levine, J. M. (Eds.) *Perspectives on socially shared cognition*, American Psychological Association

Cohen, R. (1984). A Computational Theory of the Function of Clue Words in Argument Understanding. In *Proceedings of 1984 International Computational Linguistics Conference* (pp. 251–255). California.

Cruse, D. A. (2000). *Meaning in Language*. Oxford: Oxford University Press.

Csibra, G. (2010). Recognizing Communicative Intentions in Infancy. *Mind & Language* 25/2. 141–168.

Csűry, I. (2011). A forgatókönyv mint elméleti kategória és kommunikációs eseménytípus multimodális megközelítésben. In: Németh T. E. (Ed.): *Ember-gép kapcsolat. A multimodális ember-gép kommunikáció modellezésének alapjai. Segédkönyvek a nyelvészet tanulmányozásához 133* (pp. 145–178). Budapest: Tinta Könyvkiadó.

Cuenca, M. J. (2006). Interjections and pragmatic errors in dubbing. *Meta: journal destraducteurs/Meta: Translators' Journal* , 51(1): 20–35.

Czuczor, G. & Fogarasi, J. (1862). *A magyar nyelv szótára*. Pest: Emich.

'd Alessandro, C. & Mertens P. (2004). Prosogram: Semi-automatic Transcription of Prosody based on a Tonal Perception Model, In: B. Bel, I. Marlen (Eds.) *Proceedings of the 2nd International Conference of Speech Prosody* (pp. !!!) Nara, 23 – 26 March 2004.

Dehé, N. & Wichmann, A. (2010). Sentence-initial *I think (that)* and *I believe (that)* - Prosodic evidence for uses as main clause, comment clause and discourse marker. In: *Studies in Language* 34:1. iv, 36–74.

De Ruiter, J. P. (2000). The production of gesture and speech. In McNeill, D. (Ed.), *Language and Gesture* (pp. 248–311). Cambridge: Cambridge University Press.

De Ruiter, J. P. (2003). *The function of hand gesture in spoken conversation.* In Bickenback, M., Klappert, A. & Pompe, H. (Eds.), *Manus Loquens* (pp. 338–247). Cologne: DuMont.

De Ruiter, J. P., Rossignol, S., Vuurpijl, L., Cunningham, D. & Levelt, W. (2003). SLOT: A research platform for investigating multimodal communication. *Behavior Research Methods, Instruments, & Computers, 35*(3), 408–419.

De Ruiter, J. P. (2006). Can gesticulation help aphasic people speak, or rather, communicate? *Advances in Speech Language Pathology*, 8, 124–127.

De Ruiter, J. P. (2007). Postcards from the mind: the relationship between speech, imagistic gesture, and thought. *Gesture, 7*(1), 21–38.

De Ruiter, J.P., Bangerter, A. & Dings, P. (2012). The Interplay between Gesture and Speech in the Production of Referring Expressions: Investigating the Tradeoff Hypothesis. *Topics in Cognitive Science 4*, 232–248.

Dér, Cs. I. (2005). Diskurzusszerveződés és grammatikalizáció – néhány Magyar diskurzusjelölő kialakulásáról. *Nyelvtudományi Közlemények 102*, 247–264.

Dér, Cs. I. & Markó A. (2007). A magyar diskurzusjelölők szupraszegmentális jelöltsége. In: Gecső T. & Sárdi Cs. (Eds.) *Nyelvelmélet – nyelvhasználat. Segédkönyvek a Nyelvészet Tanulmányozásához* 74 (pp. 61–67). Székesfehérvár, Budapest: Kodolányi János Főiskola – Tinta.

Dér Cs. I. (2010). "Töltelékelem" vagy új nyelvi változó? A hát, úgyhogy, így és ilyen újabb funkciójáról a spontán beszédben. In: *Beszédkutatás*. (pp. 159-170.)

Dér, Cs. I. (2012). Az *azért* és az *akkor* pragmatikai funkcióiról a mai magyar spontán beszédben. In: Gósy, M. (Eds.) *Beszéd, adatbázis, kutatások.* Budapest: Akadémiai Kiadó (pp. 154–177).

Dömötör A. (2008a). Az úgy mond-tól az úgymondig. Egy diskurzusjelölő elem története az ómagyar kortól napjainkig. *Magyar Nyelvőr* 132, 37–52.

Dömötör, A. (2008b). A *hogy úgy mondjam* diskurzusjelölő. *Magyar Nyelv 104,* 427–442.

Dubois, B.L. & Crouch, I. (1975). The question of tag questions in women's speech: they don't really use more of them, do they? *Language in society* 4. 289–294.

Duncan, S. (1972). Some signals and rules for taking speaking turns in conversations. *Journal of Personality and Social Psychology,* 23 (2), 283–292.

Efron, D. (1972). Gesture, Race and Culture. Paris: Mouton. The Hague.

Ekman, P. & Friesen, W. V. (1969). The repertoire of non-verbal behavior: Categories, origins, usage and coding. *Semiotica,* 1(1), 49–98.

Ekman, P. & Friesen, W. V. (1981). The repertoire of nonverbal behavior: categories, origins, usage and coding. In: Kendon, A. Mouton. (Eds.) *Nonverbal communication, interaction, and gesture* (pp. 57–107)

Ekman, P., Friesen, W. V. & Hager, J. C. (2002). *Facial Action Coding System: The Manual on CD ROM.* Salt Lake City: A Human Face. (Description of FACS and information on the CD ROM is available at: http://face-and-emotion.com/dataface/facs/description.jsp)

Ekman, P. & Rosenberg, E.L. (1998). *What the Face Reveals*. Oxford: Oxford University Press.

Ellsworth, P. C., & Ludwig, L. M. (1972). Visual behavior in social interaction. *Journal of Communications*, 22, 375–403.

Enfield, N.J. (2009). *The Anatomy of Meaning. Speech, gesture, and composite utterances.* Cambridge: Cambridge University Press.

Erman, B. & Kotsinas, U. (1993). Pragmaticalization: the case of ba' and you know. *Studier i Modern Språkvetenskap. Acta Universitatis Stockholmiensis, New Series* 10, 76–93.

Erman, B. (1998). 'Just wear the wig innit!' From identifying and proposition oriented to intensifying and speaker-oriented: grammaticalization in progress. In: T. Haukioja, Turku; Ylio- pisto, Turun, (Eds.) *Papers from the 16th Scandinavian Conference of Linguistics*, pp. 87–100.

Erman, B. (2001). Pragmatic markers revisited with a focus on you know in adult and adolescent talk. *Journal of Pragmatics,* 33, 337–1359

Evans, J.L., Alibali, M.W. & McNeill, N.M. (2001): Divergence of verbal expression and embodied knowledge: Evidence from speech and gesture in children with specific language impairment. *Language and Cognitive Processes* 16(2–3), 309–331.

Feldman-Barrett, L., Lindquist, K. A. & Gendron, M. (2007). Language as context for the perception of emotion. *Trends in Cognitive Sciencesi* 11(8) 327–32.

Ferrara, K. (1997). Form and function of the discourse marker anyway: Implications for discourse analysis. *Linguistics* 35, 343–378.

Fetzer, A. (2000). Negotiating validity claims in political interviews. *Text* 20(4), 1–46.

Fetzer, A. & Weizman E. (2006). Political Discourse as Mediated and Public Discourse. *Journal of Pragmatics* 38, 143–153.

Fetzer, A. (2008). Theme zones in contrast: An analysis of their linguistic realization in the communicative act of non-acceptance. In: Gómez-González, Maria & al. (Eds.) *Languages and Cultures in Contrast and Comparison*. Amsterdam: John Benjamins, 3–32.

Fischer, K. (2000). *From Cognitive Semantics to Lexical Pragmatics: The Functional Polysemy of Discourse Particles.* Mouton de Gruyter: Berlin, New York

Fischer, K. (2006). Towards an Understanding of the Spectrum of Approaches to Discourse Particles: Introduction to the Volume. In: K. Fischer (Ed.) *Approaches to Discourse Particles* (pp. 1–20). Oxford/Amsterdam: Elsevier.

Foster, M.E. & Oberlander, J. (2007): Corpus-based generation of head and eyebrow motion for an embodied conversational agent. *Proceedings of the International Language Resources and Evaluation Conference (LREC)* 41 (3/4), 305–323.

Frank-Job, B. (2006). A dynamic-interactional approach to discourse markers. In: K. Fischer (Ed.) *Approaches to Discourse Particles* (pp. 359–374). Amsterdam: Elsevier.

Fraser, B. (1988). Types of English discourse markers. *Acta Linguistica Hungarica* 38, 19–33.

Fraser, B. (1990). An approach to discourse markers. *Journal of Pragmatics,* 14, 383–395.

Fraser, B. (1996). Pragmatic markers. *Pragmatics* 6, 167–190.

Fraser, B. & Malmaud-Makowski, M. (1996). English and Spanish contrastive markers. *Language Sciences* 18, 863–881.

Fraser, B. (1999). What are discourse markers? *Journal of Pragmatics* 31, 931–952.

Fraser, B. (2006). Towards a theory of discourse markers. In: K. Fischer (Ed.) *Approaches to Discourse Particles* (pp. 189–204). Oxford/Amsterdam: Elsevier.

Fraser, B. (2009). Topic orientation markers. *Journal of Pragmatics* 41, 892–898.

Furkó, P. B. (2007). *The pragmatic marker-discourse marker dichotomy reconsidered – the case of well and of course.* Debrecen: Kossuth Egyetemi Kiadó

Furkó, P. B. (2011). Diskurzusjelölők és szövegösszefüggés: a kohézió vagy a koherencia eszközei?: Az implikáció mint a szövegösszefüggés eszköze. In: Dobi, E. (Ed.) *Officina Textologica 16*. *A szövegösszefüggés* elméleti és gyakorlati megközelítési módjai: *poliglott* terminológiai és fogalmi áttekintés (pp. 36–57). Debrecen: Debreceni Egyetemi Kiadó.

Furkó, P. B., (2012). Marking discourse – towards an integrated model of discourse spaces. *Acta Universitatis Sapientiae, Philologica*, 4 (2), 275–289.

Furkó, P. B. & Abuczki, Á. (to appear). A Contrastive Study of English and Hungarian Discourse Markers in Mediatised Interviews and Spontaneous Conversations. *Sprachtheorie und gemanistische Linguistik.* Münster: Nodus

Gärtner, H. & Gyuris B. (2012). Pragmatic markers in Hungarian: Some introductory remarks. *Acta Linguistica Hungarica* 59(4), 387–426.

Goddard, C. (Ed.) (2011). *Ethnopragmatics: Understanding discourse in cultural context* (Applications of Cognitive Linguistics [ACL] 3). Berlin: De Gruyter.

Goffman, E. (1981). *Forms of talk*. Philadelphia: University of Pennsylvania.

González, M. (2004). *Pragmatic markers in oral narrative - the case of English and Catalan*. Amsterdam/Philadelphia: John Benjamins.

González-Ledesma, A. (2007). *Pragmatext, Annotating the Spanish C-ORAL-ROM Corpus with Pragmatic Knowledge.* Proceedings of 4th Corpus Linguistics Conference, University of Birmingham.

Goodwin, C. (1981). *Conversational organisation. Interaction between speakers and hearers.* New York: Academic Press.

Grice, H.P. (1957) Meaning. *Philosophical Review,* 66, 3, pp.377–88.

Grice, H. P. (1975). Logic and conversation. In: Peter, C., Morgan, J. (Eds.) *Speech Acts (Syntax and Semantics, Volume 3)* (pp. 41–58). New York: Academic Press.

Grosz, B. & Sidner, C. (1986). Attention, intentions, and the structure of discourse. *Computational Linguistics,* 12.

Gumperz, J. (1982). *Discourse Strategies.* Cambridge: Cambridge University Press.

Gussenhoven, C. & Chen, A. (2000). Universal and language-specific effects in the perception of question intonation. *ICSLP 6. Vol. II.* Beijing, 91–94.

Gyarmathy, D. (2012) Az izé funkciófüggő realizációi. In: Gósy, M. (Eds.) *Beszéd, adatbázis, kutatások.* Budapest: Akadémiai Kiadó (pp. 178–194).

Gyuris, B. (2008a). A diskurzus-partikulák formális vizsgálata felé. In: Kiefer Ferenc (Ed.) *Strukturális magyar nyelvtan IV. A lexikon szerkezete* (pp. 639–682). Budapest: Akadémiai Kiadó.

Gyuris, B. (2008b). 'Sentence-types, discourse particles and intonation in Hungarian.' Talk given at Sinn und Bedeutung 13, Univ. Stuttgart, 30 September - 1 October 2008.

Hansen, M.-B. M. (1998). *The function of discourse particles: a study with special reference to spoken standard French.* John Benjamins Publishing Company, Amsterdam/Philadelphia.

Hansen, M.-B. M. (2006). A dynamic polysemy approach to the lexical semantics of discourse markers. In: Fischer, K. (Ed.) *Approaches to Discourse Particles* (pp. 21–42). Oxford/Amsterdam: Elsevier.

Harris, Z. (1951). *Methods in structural linguistics.* Chicago: University of Chicago Press.

Heritage, J. & Greatbatch, D. L. (1991). On the institutional character of institutional talk: the case of news interviews. In: B., Deirdre, & D. H. Zimmerman, (Eds.). *Talk and Social Structure: Studies in Ethnomethodology and Conversation Analysis* (pp. 93–137). Berkley: University of California Press.

Hirschberg, J. & Litman, D. (1993). Empirical studies on the disambiguation of cue phrases. *Computational Linguistics*, 25 (4), 501–530.

H. Molnár, I. (1959). A módosító szók mondattani arculatának kérdéséhez. *Magyar Nyelv* 55, 357–61.

Hodges, B. H. (2007). Values define fields: the intentional dynamics of driving, carrying, leading, negotiation, and conversing. *Ecological Psychology* 19(2). 153–78.

Holmes, J. 1982. The functions of Tag Questions. *English Language Research Journal* 3, 40–65.

Holmes, J. (1990). Hedges and boosters in women's and men's speech. *Language and Communication* 10, 185–205.

Hopper, P. & Traugott, E. C. (1994, 2003). *Grammaticalization*. Cambridge: Cambridge University Press.

Hovy, E. H. (1995). The multifunctionality of discourse markers. Proceedings of the Workshop on Discourse Markers. Egmond-aan-Zee (The Netherlands).

Hunyadi, L. (2011). Multimodal human-computer interaction technologies. *Argumentum, 7,* Debrecen: Debreceni Egyetemi Kiadó, 240–260.

Hunyadi, L., Szekrényes I., Borbély A. & Kiss H. (2012). Annotation of spoken syntax in relation to prosody and multimodal pragmatics. In: *Proceedings of 3rd Cognitive Infocommunications Conference.* Kosice: IEEE Conference Publications. 537–541.

Hunyadi, L., Földesi, A., Szekrényes, I., Staudt, A, Kiss, H., Abuczki, A. & Bódog A. (2012): Az ember-gép kommunikáció elméleti-technológiai modellje és nyelvtechnológiai vonatkozásai. In: Kenesei, I., Prószéky, G. & Várady T. (Eds.): *Általános Nyelvészeti Tanulmányok XXIV. Nyelvtechnológiai kutatások* (pp. 265–309). Budapest: Akadémiai Kiadó.

Hunyadi, L., Szekrényes, I., Borbély, A. & Kiss H. (2012): Annotation of spoken syntax in relation to prosody and multimodal pragmatics. *Proceedings of IEEE 3rd International Conference on Cognitive Infocommunications (CogInfoCom)*, 537–541.

Implom, J. (1960). Beszédtöltelékek. *Magyar Nyelvőr,* 84, 301–306.

Ivaskó, L. (2011). Az osztenzió felismerésének fejlődéses hátteréről a HuComTech-projekt céljainak tükrében. In: Németh T. E. (Ed.): *Ember-gép kapcsolat. A multimodális ember-gép kommunikáció modellezésének alapjai. Segédkönyvek a nyelvészet tanulmányozásához 133* (pp. 83–100). Budapest: Tinta Könyvkiadó.

Ittzés, N. (Ed.) (2006). *A magyar nyelv nagyszótára.* II. Budapest: MTA Nyelvtudományi Intézete.

Jackendoff, R. (1990). *Semantic structures.* Cambridge, MA: MIT Press.

Jucker, A. H. (1993). The discourse marker *well*: A relevance-theoretical account. *Journal of Pragmatics,* 19: 435–452.

Jucker, A. H. & Smith S. W. (1998). And people just you know like 'wow': Discourse markers as negotiating strategies. In: Jucker, A. H. and Ziv, Y. (Eds.) *Discourse markers: descriptions and theory* (pp. 171–203). Amsterdam and Philadelphia: John Benjamins.

Jucker, A. H. & Ziv, Y. (Eds.) (1998). Discourse Markers. Descriptions and Theory. John Benjamins.

Kendon, A. (1972). Some relationships between body motion and speech. In A. Seigman and B. Pope (Eds.), *Studies in Dyadic Communication*. (pp. 177–216). Elmsford, New York: Pergamon Press.

Kendon, A. (1995). Gestures as illocutionary and discourse structure markers in Southern Italian conversation. *Journal of Pragmatics*, 23, 247–280.

Kendon, A. (2004). *Gesture. Visible action as utterance.* Cambridge: Cambridge University Press.

Keszler B. (2000). A mai magyar nyelv szófaji rendszere. In: Keszler, B. (Ed.) *Magyar grammatika* (pp. 67–76). Budapest: Nemzeti Tankönyvkiadó.

Kiefer, F. (1988). Modal particles as discourse markers in questions. *Acta Linguistica Hungarica 38,* 107–125.

Knight, D., Bayoumi, S., Mills, S., Crabtree, A., Adolphs, S., Pridmore, T. & Carter, R.A. (2006): Beyond the Text: Construction and Analysis of Multi-Modal Linguistic Corpora. *Proceedings of the 2nd International Conference on e-Social Science*, Manchester. Available at: http://www.ncess.ac.uk/events/conference/2006/papers/abstracts/KnightBeyondTheText.shtml

Knight, D, (2009). *A Multimodal Corpus Approach to the Analysis of Backchannelling Behaviour* (doctoral dissertation). The University of Nottingham.

Knott, A. & Sanders, T. (1998). The classification of coherence relations and their linguistic markers: An exploration of two languages. *Journal of Pragmatics* 30, 135–175.

Krauss, R. M., Apple, W., Morency, N., Wenzel, C., & Winton, W. (1981). Verbal, vocal, and visible factors in judgments of another's affect. *Journal of Personality & Social Psychology*, 40, 312–319.

Krauss, R. M., Chen, Y. & Gottesmann R. F. (2000) Lexical gestures and lexical access: a process model. In: McNeill, D. (Ed.) *Language and Gesture* (pp. 261–283. Cambridge: Cambridge University Press.

Kroon, C. (1995). *Discourse particles in Latin*. Amsterdam: Gieben.

Kugler N. (1998). A partikula. In: *Magyar Nyelvőr,* 122 (2), 214–219.

Kugler N. (2000). A módosítószó. In: Keszler B. (Ed.) *Magyar Grammatika* (pp. 298–302). Budapest: Nemzeti Tankönyvkiadó.

Lakoff, G. (1987). *Women, Fire and Dangerous Things. What Categories Reveal about the Mind*. Chicago: The University of Chicago Press.

Lauerbach, G. (2006). Discourse representation in political interviews: The construction of identities and relations through voicing and ventriloquizing. *Journal of Pragmatics* 38, 196–215.

Lenk, U. (1998). Discourse markers and global coherence in conversation. *Journal of Pragmatics 30,* 245–257.

Lewis, D. (2006). Discourse markers in English: a discourse-pragmatic view. In: Fischer, K. (Ed.) *Approaches to Discourse Particles* (pp. 43–59). Oxford/Amsterdam: Elsevier.

Lewis-Beck, M. S., Bryman, A. & Liao, T. F. (2004). (Eds.) *The SAGE Encyclopedia of Social Science Research Methods*. Sage Publications.

Litman, D. (1996). Cue phrase classification using machine learning. *Journal of Artificial Intelligence*, 5, 53–94.

Litman, D. J. & Passonneau, R. J. (1995). Combining multiple knowledge sources for discourse segmentation. *Proceedings of ACL*, 108–115.

Lyons, J. (1977). *Semantics*. Vol. 1 and 2. Cambridge: Cambridge University Press.

Mann, W. & Thompson, S. (1988). Rhetorical structure theory. *Text,* 8, 243–281.

Markó, A. & Dér, Cs. I. (2008). Magyar diskurzusjelölők korpuszalapú vizsgálata. In: Bereczki, A., Csepregi, M., Klima L. (szerk.) *Urálisztikai Tanulmányok 18. Ünnepi írások Havas Ferenc tiszteletére* (pp. 535–556). Budapest: ELTE BTK Finnugor Tanszék - Numi-Tórem Finnugor Alapítvány.

Massaro, D. W. (1987). *Speech Perception by Ear and Eye: A Paradigm for Psychological Inquiry*. Hillsdale, New Jersey: Lawrence Erlbaum.

McCowan, I., Carletta, J., Kraaij, W., Ashby, S., Bourban, S., Flynn, M., Guillemot, M., Hain, T., Kadlec, J., Karaiskos, V., Kronenthal, M., Lathoud, G., Lincoln, M., Lisowska, A., Post, W., Reidsma, D. & Wellner. P. (2005). The AMI Meeting Corpus. *Proceedings of the 5th International Conference on Methods and Techniques in Behavioral Research.*

McNeill, D. (1992). *Hand and Mind: What Gestures Reveal about Thought.* Chicago: University Of Chicago Press.

McNeill, D. (1996). *Hand and mind: What gestures reveal about thought*. Chicago: University of Chicago Press.

Mertens, P. (2004). Un outil pour la transcription de la prosodie dans les corpus oraoux. *Traitement Automatique des Langues,* 45 (2): 109–130.

Németh T. E. (1988). A kötőszók szerepe a megnyilatkozáshatár vizsgálatában. *Néprajz és Nyelvtudomány* (31–32), 168–181.

Németh T., E. (1996a). A szóbeli diskurzusok megnyilatkozáspéldányokra tagolása. *Nyelvtudományi Értekezések* 142. Budapest, Akadémiai Kiadó.

Németh T. E. (1996b). *On the Role of Pragmatic Connectives in Hungarian Spoken Discourses*. ERIC Document Reproduction Service No. ED 379 937, Washington.

Németh T., E. (1998). A *hát, így, tehát*, *mert* kötőszók pragmatikai funkciójának vizsgálata. *Magyar Nyelv* 94, 324–331.

Németh T., E. (2004). The principles of communicative language use. *Acta Linguistica Hungarica* 51, 379–418.

Németh T., E. (2011). A humán kommunikáció modelljei és az ember-gép kommunikáció. In: Németh T Enikő (Eds.) *Ember-gép kapcsolat: A multimodális ember-gép kommunikáció modellezésének alapjai. (Segédkönyvek a nyelvészet tanulmányozásához; 133.)* Budapest: Tinta Könyvkiadó. 43–61.

Németh T., E. (2011). A humán kommunikáció modelljei és az ember–gép kommunikáció. In: Németh T. E. (Eds.) *Ember-gép kapcsolat: A multimodális ember-gép kommunikáció modellezésének alapjai. (Segédkönyvek a nyelvészet tanulmányozásához; 133).* Budapest: Tinta Könyvkiadó. (pp. 43–62).

Niedzielski, N. & Preston, D. R. (2003). *Folk linguistics*. Berlin and New York: Mouton de Gruyter.

Nikula, T. (1996). *Pragmatic Force Modifiers*. Jyväskylä: Jyväskylä University Printing House.

Noordzij, M. L., Newman-Norlund, S. E., De Ruiter, J. P., Hagoort, P., Levinson, S. C. & Toni, I. (2009). Brain mechanisms underlying human communication. *Frontiers in Human Neuroscience, 3(14)*, 14–27.

Norenzayan, A. & Heine, S. J. (2005). Psychological universals: what are they and how can we know? *Psychological Bulletin* 131(5) 763–84.

Norrick, N. R. (2001). Discourse markers in oral narrative. *Journal of Pragmatics* 33, 849–878.

Östman, J. (1986) *Pragmatics as implicitness: An analysis of question particles in Solf Swedish, with implications for the study of passive clauses and the language of persuasion.* PhD dissertation, University of California.

Östman, J. (1995). Pragmatic particles twenty years after. In: Wårvik, Brita, Tanskanen, Sanna-Kaisa and Risto Hiltunen (Eds.), *Organization in discourse*. *Proceedings from the Turku Conference* (pp. 95–108). Turku: University of Turku.

Kiss G., Kiss M. & Pajzs, J. (2004). A Nagyszótár történeti korpuszának elemzéséről. *Magyar Nyelv* C. évf. 2004. 2. szám. Magyar Nyelvtudományi Társaság, Argumentum Kiadó, Budapest, 185-191.

Pápay, K., Szeghalmy Sz. & Szekrényes I. (2011). HuComTech Multimodal Corpus Annotation. *Argumentum*, 7. Debrecen: Debreceni Egyetemi Kiadó, 330–347.

Pelyvás, P. (1995). A radial category: auxiliaries and 'related verbs' in English. In: Pelyvás P. (Ed.). *A Reader in Cognitive Grammar for Students of English.* Debrecen: KLTE

Petukhova, V. & Bunt H. C. (2009). Towards a multidimensional semantics of discourse markers in spoken dialogue. *Proceedings of the 8th International Conference on Computational Semantics*. Tilburg, 157–168.

Péteri, A. (2001). Az árnyaló partikulák elhatárolásának problémája a magyar nyelvben. *Magyar Nyelvőr*, 125 (1), 94–102.

Péteri, A. (2002). *Abtönungspartikeln im deutsch-ungarischen Sprachvergleich.* Budapest: ELTE.

Pomerantz, A. 1984. Agreeing and disagreeing with assessments: Some features of preferred/dispreferred turn shapes. In: J. Atkinson, J. Maxwell & J. Heritage. (Eds.) *Structures of Social Action: Studies in Conversation Analysis* (pp. 152–163). Cambridge: Cambridge University Press.

Pusztai, F., Juhász J., Gerstner, K. J. & Soltész K. (Eds.) (2003). *Magyar értelmező kéziszótár.* Budapest: Akadémiai Kiadó.

Quirk, R., Greenbaum, S., Leech, G. & Svartvik, J. (1972). *A Grammar of Contemporary English*. London: Longman.

Quirk, R., Greenbaum, S., Leech, G. & Svartvik, J. (1985). *A Comprehensive Grammar of the English Language.* London: Longman.

Ramsey, J. L., Langlois, J. H. & Marti, N. C. (2005). Infant categorization of faces: Ladies first. *Developmental Review* 25, 212–46.

Rácz, E. (1985) A grammatika szerepe az anyanyelvi nevelésben. *MNy*. LXXXI. 258–266.

Redeker, G. (1990). Ideational and pragmatic markers of discourse structure. *Journal of Pragmatics* 14, 367–381.

Redeker, G. (1991). Linguistic markers of discourse structure. *Linguistic 29*, 1139–1172.

Redeker, G. (2006). Discourse markers as attentional cues at discourse transitions. In: Fischer, K. (Ed.) *Approaches to discourse particles* (pp. 339–358). Oxford/Amsterdam: Elsevier.

Reese, B. (2007). *Bias in Questions*. PhD Dissertation. University of Texas, Austin.

Reichman, R. (1985). Getting Computers to Talk like You and Me. MIT Press.

Risselada, R. & Spooren, W. (1998). Discourse markers and coherence relations. *Journal of Pragmatics* 30, 131–133.

Romaine, S. & Lange, D. (1998). The use of like as a marker of reported speech and thought: a case of grammaticalization in progress. In: J. Chesire & P. Trudgill (Eds.) *The Sociolinguistics Reader Vol. 2: Gender and Discourse.* Bristol: J. W. Arrowsmith.

Rosenberg, A. (2011). AuToBI – A Tool for Automatic ToBI annotation. 11th Annual Conference of the International Speech Communication Association 2010 (INTERSPEECH 2010) Curran Associates, 146–150.

Rouchota, V. (1998). Connectives, coherence and relevance, In: Villy Rouchota–Andreas H. Jucker (eds): *Current issues in relevance theory, Pragmatics & Beyond New Series* 58, 11–58.

Sacks, H. (1992). *Lectures on Conversation*. Oxford: Blackwell.

Saferstein, B. (2004). Digital technology- methodological adoption: Text and video as a resource for analytical reflectivity. *Journal of Applied Linguistics*, 1(2), 197–223.

Saz Rubio, M. M. (2007). *English Discourse Markers of Reformulation.* Bern: Peter Lang.

Schegloff, E. A. (1993). Reflections on Quantification in the Study of Conversation. *Research on Language and Social Interaction*, 26, 99–128.

Schegloff, E.A. (2006). *Sequence organization in interaction: A primer in conversation analysis.* Cambridge: Cambridge University Press.

Schiel, F., Steininger, S. & Türk, U. (2002). The SmartKom Multimodal Corpus at BAS. *Proceedings of the International Language Resources and Evaluation Conference (LREC)*.

Schiffrin, D. (1987). *Discourse Markers*. Cambridge: Cambridge University Press.

Schiffrin, D. (2006). Discourse marker research and theory: revisiting *and*. In: K. Fischer (Ed.) *Approaches to Discourse Particles* (pp. 315–338). Oxford/Amsterdam: Elsevier.

Schirm A. (2009a). Partikula és/vagy diskurzusjelölő? In: Keszler B. & Tátrai Sz. (Eds.) *Diskurzus a grammatikában – grammatika a diskurzusban* (pp. 304–311). Budapest: Tinta Könyvkiadó.

Schirm, A. (2009b). Diskurzusjelölők a parlamenti beszédekben. In: Kukorelli Katalin (Ed.) *Hatékony nyelvi, idegen nyelvi és szakmai kommunikáció interkulturális környezetben* (pp. 168–175). Dunaújváros: Dunaújvárosi Főiskola.

Schirm, A. (2011). *Diskurzusjelölők funkciói: a hát, az -e és a vajon elemek története és jelenkori szinkrón státusa alapján* (doktori értekezés). SzTE Bölcsészettudományi Kar. Szeged.

Schourup, L. (1985). *Common discourse particles in English conversation*. New York: Garland.

Schourup, L. (1999). Discourse markers: tutorial overview. *Lingua* 107: 227–265.

Shaw, R. (2001). Processes, acts, and experiences: three stances on the problem of intentionality. *Ecological Psychology* 13(4) 275–314.

Simon-Vandenbergen, A. (1988). What *really* really means in casual conversation and in political interviews. *Linguistica Antverpiensia* 22, 206–225.

Simon-Vandenbergen, A. (1992). The interactional utility of *of course* in spoken discourse. *Occasional Papers in Systemic Linguistics* 6, 213–226.

Simon-Vandenbergen, A. & Aijmer, K. (2002/03). The expectation marker 'of course'. *Languages in Contrast* 4, 13–43.

Simon-Vandenbergen, A., White, P. R. R. & Aijmer, K. (2007). Presupposition and 'taking-for-granted' in mass communicated political argument: An illustration from

British, Flemish and Swedish political colloquy. In: Fetzer, A. and Lauerbach, G. E. (Eds.) *Political Discourse in the Media* (pp. 31–75). Amsterdam / Philadelphia: John Benjamins.

So, W. C., Kita, S., & Goldin-Meadow, S. (2009). Using the hands to identify who does what to whom: Gesture and speech go hand-in-hand. *Cognitive Science*, 33, 115–125.

Sperber, D., Wilson, D. (1986/1995). *Relevance. Communication and cognition*. (1st and 2nd editions.) Cambridge, MA, Oxford: Blackwell.

Steininger, S., Rabold, S., Dioubina, O. & Schiel, F. (2002). Development of the User-State Conventions for the Multimodal Corpus in SmartKom. SmartKom. *Proceedings of the International Language Resources and Evaluation Conference (LREC)*.

Stenström, A. (1994). *An introduction to spoken interaction*. London and New York: Longman.

Szarvas, G. & Simonyi, Zs. (Eds.) (1893). *Magyar Nyelvtörténeti Szótár.* Budapest: Hornyánszky Viktor Akadémiai Könyvkereskedése. (MNyTSz.)

Szekrényes, I. (to appear) Annotation and Interpretation of Prosodic Data in the HuComTech Corpus for Multimodal User Interfaces. *Journal on Multimodal User Interfaces*. Berlin, Heidelberg: Springer.

Szekrényes, I., Csipkés L. & Oravecz Cs. (2011). A HuComTech-korpusz és -adatbázis számítógépes feldolgozási lehetbségei. Automatikus prozódiai annotáció. In: Tanács, A., Vincze V. (Eds.) *VIII. Magyar Számítógépes Nyelvészeti Konferencia* (pp. 190–198). Szeged: JATEPress.

Tannen, D. (2010). Abduction in family interaction: Ventriloquizing as indirectness. *Journal of Pragmatics* 42, 307–316.

Taylor, P. A. (1998). The tilt intonation model In: Proceedings of the International Conference on Spoken Language Processing, Sydney.

Thanh, N. (2006.) From procedural meaning to processing requirement. In: K. Fischer (Ed.) *Approaches to Discourse Particles* (pp. 167–188). Oxford/Amsterdam: Elsevier.

t' Hart, J. (1976) Psychoacoustic backgrounds of pitch contour stylisation, I.P.O. Annual Progress Report 11, 11–19.

Thompson, S. (1992). Functionalism. In: Bright, W. (Ed.*) International Encyclopedia of Linguistics Band 2.* Oxford: Oxford University Press.

Traugott, E. G. (1982). From propositional to textual and expressive meanings: Some semantic-pragmatic aspects of grammaticalization. In: Lehmann, W.P., Malkiel, Y. (Eds.) *Perspectives on Historical Linguistics*. Amsterdam: John Benjamins, (pp. 245–272).

Traugott, E. G. (1990). From less to more situated in language: The unidirectionality of semantic change. In: S. Adamson, V. Law, N. Vincent & S. Wright. (Eds.) *Papers from the 5th international conference on English historical linguistics* (pp. 497–517). Amsterdam: Benjamins.

Traugott, E. G. (1995). The Role of the Development of Discourse Markers in a Theory of Grammaticalization. *Paper given at the 12th International Conference on Historical Linguistics.* Manchester; 13–18, August, 1995.

Traugott, E. G. & Dasher, R. B. (2002). *Regularity in Semantic Change*. Cambridge University Press.

Travis, C. E. (2006) The Natural Semantic Metalanguage approach to discourse markers. In: K. Fischer (Ed.) *Approaches to Discourse Particles* (pp. 219–241). Oxford/Amsterdam: Elsevier.

Varga, L. (2002). *Intonation and Stress: Evidence from Hungarian.* Houndmills, New York: Palgrave Macmillan.

Vaskó I. (2012): Tenk pa det, da gitt!: Pragmatikai jelölők a norvég nyelvben. *Budapester Beiträge zur Germanistik* 62. ELTE Germanistisches Inst.

Verschueren, J. (2000) Notes on the role of metapragmatic awareness in language use. Pragmatics 10:4.439-456 International Pragmatics Association.

Vilhjalmsson, H., Cantelmo, N., Cassell, J., Chafai, N.E., Kipp, M. & Kopp, S. (2007): The Behavior Markup Language: Recent Developments and Challenges. In: *Proceedings of Intelligent Virtual Agents* (pp. 99–111). Berlin, Heidelberg: Springer.

Weaver, W. & Shannon, C. E. (1963). *The Mathematical Theory of Communication*. Univ. of Illinois Press.

Weydt, H. (2006). What are particles good for? In: K. Fischer (Ed.) *Approaches to Discourse Particles* (pp. 205–217). Oxford/Amsterdam: Elsevier.

White, P. (2000). Dialogue and inter-subjectivity: reinterpreting the semantics of modality and hedging. In: M. Coulthard, J. Cotterill & F. Rock. (Eds) *Dialogue Analysis VII: Working with Dialogue. Selected Papers from the 7th International Association of Dialogue Analysis Conference* (pp. 67–80). Tübingen: Niemeyer.

Wierzbicka, A. (1986). A semantic metalanguage for the description and comparison of illocutionary meanings. *Journal of Pragmatics* 10, 67–107.

Zimányi, Á. (2008). A politikai-közéleti nyelv érzelmi színezete. In: Zimányi, Á. (Ed.) *Az agressziókutatásról interdiszciplináris keretben* (pp. 114–122). Eger: Líceum Kiadó.

Zovko, I. (2012). Contrastive Analysis of Discourse Markers in the Interviews with Presidents of Bosnia and Herzegovina and the U.S.A. In: *2nd International Conference on Foreign Language Teaching and Applied Linguistics (FLTAL'12)*. Sarajevo.

Sources of diachronic data

Bessenyei, Gy. (1773/1983). *A Holmi*. (written in 1773, published in 1983)**.** Budapest**:** Akadémiai Kiadó. p. 129.

Eötvös, J. (1845) *A falu jegyzője 1.* Pest: Hartleben. p.95.

Eötvös, J. (1978). *Reform és hazafiság. Publicisztikai írások. 1. Reform* (written in 1846, published in 1978). Budapest: Magyar Helikon. p. 368.

Füst, M. (1948). *Látomás és indulat a művészetben. Tizenkét esztétikai elõadás*. Budapest**:** Egyetemi Nyomda. p. 141.

Madách, I. (1863/1942). *Összes művei 1. (Az ember tragédiája. Mózes*.) (written in 1863, published in 1942). Budapest: Révai Kiadó. p. 806.

Mezőfi, V. (1898). *Anarkisták vagy szocialisták?! Kik ölték meg Erzsébet királynét?* Budapest: Gutenberg Könyvkiadó. p. 10.

Nagy, I. (1964) *Debreceni diákirodalom a felvilágosodás korában. Lakadalmi játék.* Budapest: Akadémiai Kiadó. p. 79.

Palágyi, M. (1900). *Madách Imre élete és költészete.* Budapest: Athenaeum. p. 332.

Rácz, S. (1789). *A physiologiának rövid sommája.* Pest: Patzkó. p. 92.

Rettegi, Gy. (1775/1970). Emlékezetre méltó dolgok. 1718—1784 (written in 1775, published in 1970). Bukarest: Kriterion Könyvkiadó.

Révai, M. (1780/1815*). A magyar nyelvnek helyes írása, és kimondása felö4l kettö4s tanúság, avagy Ortografia a nemzeti oskolák számára* (written in 1780, published in 1815). Buda: Egyetemi Nyomda, p. 10.

Sárosi, Gy. (1954). *Kisebb költeményei, prózai munkái és levelezése.* Budapest: Akadémiai Kiadó. p. 184.

Szerelemhegyi, A. (1795). *A jó-tévö szarándok, vagy-is A tsörgö sapka*. Pest: Trattner. p. 55.

Vajda, J. (1979). *Összes mûvei. 7. Publicisztikai írások. 1. A magyar öltözet halhatatlansága.* Budapest: Akadémiai Kiadó. p. 226.

Verseghy, F. (1786/1982). *Verseghy Ferenc Kiadatlan írásai. 1. Erkölcsi levelek.* (written in 1786, published in 1982). Szolnok: Verseghy Ferenc Megyei Könyvtár. p. 247.

Weszprémi, I. (1776). *Gazda ember könyvetskéje. 2*. Pozsony: Landerer. p. 24.

Hungarian Historical Corpus (Magyar Történeti Szövegtár): http://www.nytud.hu/hhc/ (last accessed 08.22. 2013)

Sources of mediatised political interviews

http://mindroom.hu/ (last accessed 08.15. 2013)

Sources of spontaneous multimodal conversations

HuComTech multimodal corpus
http://lingua.arts.unideb.hu/hucomtech-database/

The candidate's scientific work

Abuczki, Á. 2009. The Use of Metaphors in Advertising. Argumentum, 2009/1. Debrecen, Kossuth Egyetemi Kiadó.

Abuczki, Á. 2011a. Társalgási fordulók multimodális vizsgálata a HuComTech adatbázis informális dialógusaiban. In: MANYE XX. Az alkalmazott nyelvészet ma: innováció, technológia, tradíció, szerk: Boda I. K. – Mónos K. Debrecen: Debreceni Egyetemi Kiadó. (282–288.)

Abuczki, Á. 2011b. Multimodal Annotation and Analysis of Turn Management Strategies: A Comparative Study of Formal and Informal Dialogues of the HuComTech Corpus. In: K. Balogné Bérces - K. Földváry - R. Mészárosné Kóris: HUSSE10-Linx. Debrecen: Hungarian Society for the Study of English. (107–115.)

Abuczki, Á. 2011c. A multimodális interakció szekvenciális elemzése. In: Ember–gép kapcsolat: A multimodális ember–gép kommunikáció modellezésének alapjai. (szerk: Németh T. Enikő). Budapest, Tinta Kiadó. (119–144.)

Abuczki, Á. 2011d. A multimodal analysis of the sequential organization of verbal and nonverbal interaction. Argumentum, 7. Debrecen, Kossuth Egyetemi Kiadó. (261–279.)

Abuczki, Á. 2011e. Személyközi kapcsolatokat leíró metaforák a hétköznapi kommunikációban és reklámokban. In: Az ember-gép kommunikáció technológiájának elméleti alapjai. IKUT zárókötet, szerk: Bódog Alexa. Debrecen: Kossuth Egyetemi Kiadó. (90-101.)

Abuczki Á. – Bódog A. – Németh T. E. 2011. A pragmatikai annotáció elméleti alapjai az ember– gép kommunikáció modellálásában. In: Ember–gép kapcsolat: A multimodális ember–gép kommunikáció modellezésének alapjai. (szerk: Németh T. E.). Budapest, Tinta Kiadó. (179–201.)

Bódog A. – **Abuczki Á.** – Németh T. E. 2011. A multimodális pragmatikai annotáció jelentősége a számítógépes nyelvészetben. In: VIII. Magyar Számítógépes Nyelvészeti Konferencia. Szeged: Szegedi Tudományegyetem (240–251.)

Hunyadi, L. - Bertok, K. - Nemeth T., E. - Szekrenyes, I. - **Abuczki, A**. - Nagy, G. - Nagy, N. - Nemeti, P. - Bodog, A. 2011. The outlines of a theory and technology of human-computer interaction as represented in the model of the HuComTech project. In: Proceedings of 2nd Cognitive Infocommunications International Conference.

Abuczki, Á. 2012a. A Conversation-Analytical Study on Turn-giving Cues: End-of-turn prediction. In: Behavioural Cognitive Systems, LNCS 7403. szerk: A. Esposito, A.M. Esposito, A. Vinciarelli, R. Hoffmann, V.C. Müller. Berlin: Springer-Verlag. (335–342.)

Abuczki, Á. 2012b. The Role of Discourse Markers in the Generation and Interpretation of Discourse Structure and Coherence. In: Proceedings of 3rd International Conference on Cognitive

Infocommunications. Kosice: Technical University of Kosice. IEEE Conference Publications. (531-536.)

Hunyadi, L., Földesi, A., Szekrényes, I., Staudt, A, Kiss, H., **Abuczki, A.** & Bódog A. 2012. Az ember-gép kommunikáció elméleti-technológiai modellje és nyelvtechnológiai vonatkozásai. In: Kenesei, I., Prószéky, G. & Várady T. (szerk.): Általános Nyelvészeti Tanulmányok XXIV. Nyelvtechnológiai kutatások. Budapest: Akadémiai Kiadó. (265–309.)

Abuczki, Á. 2013. A mondjuk nem konceptuális használatának vizsgálata multimodális kontextusban. VII. Alkalmazott Nyelvészeti Doktoranduszkonferencia. Konferenciakötet. (3–16.) http://www.nytud.hu/alknyelvdok13/proceedings13/index.html

Abuczki, Á. & Esfandiari B. G. 2013. An overview of multimodal corpora, annotation tools and schemes. *Argumentum*, 9, 86–98.

Abuczki, Á. 2014. On the Disambiguation of Multifunctional Discourse Markers in Multimodal Interaction. *Journal on Multimodal User Interfaces, Special Issue on Cognitive Infocommunications*, Eds: Peter, Baranyi & Adam, Csapo. June 2014, Volume 8, Issue 2, pp. 121-134. Berlin, Heidelberg: Springer

Abuczki, Á. (in press). A multimodal discourse-pragmatic analysis of *ugye* (~'is that so?'). *Sprachtheorie und gemanistische Linguistik.* Münster: Nodus.

Furkó, B. P. & **Abuczki, Á.** (in press). A Contrastive Study of English and Hungarian Discourse Markers in Mediatised Interviews and Spontaneous Conversations. *Sprachtheorie und gemanistische Linguistik.* Münster: Nodus.

APPENDICES

Appendix 1 Additional figures

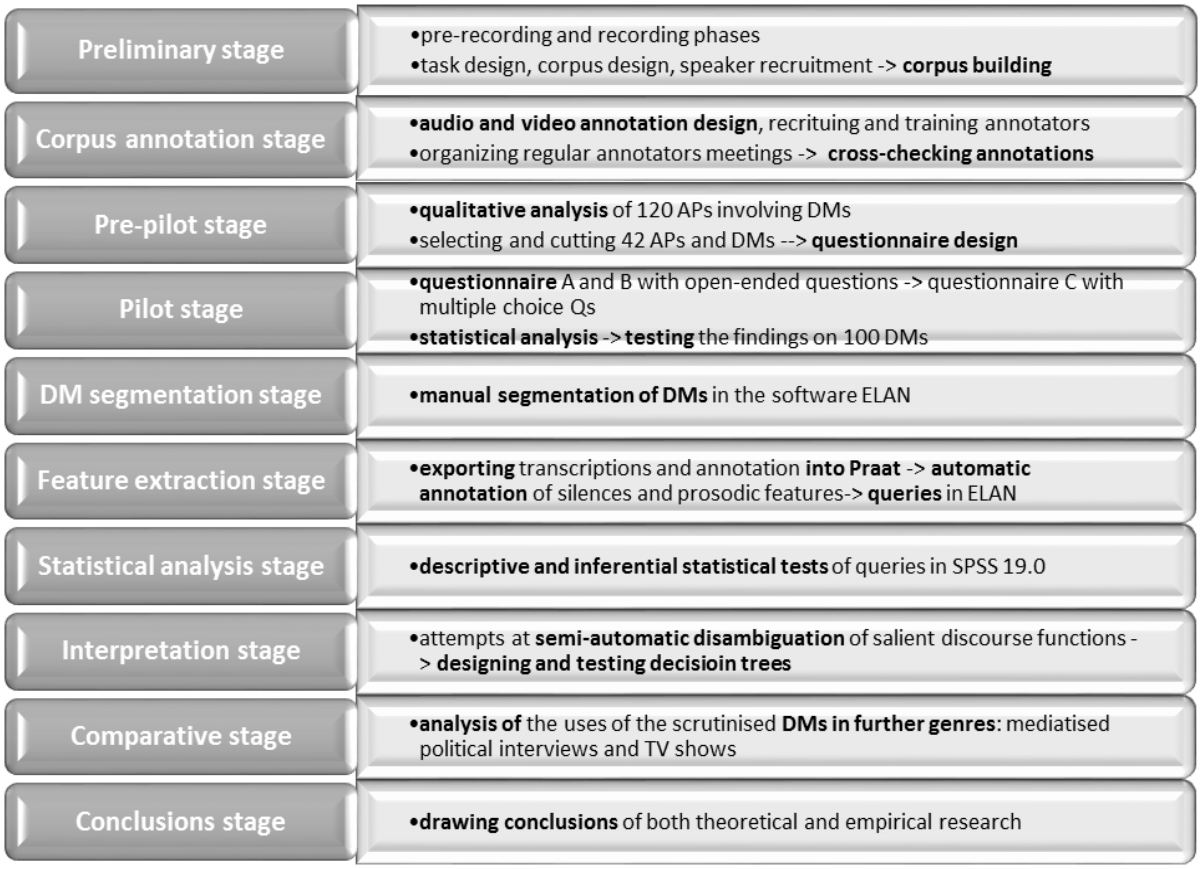

Figure 1 *Stages of the empirical research process*

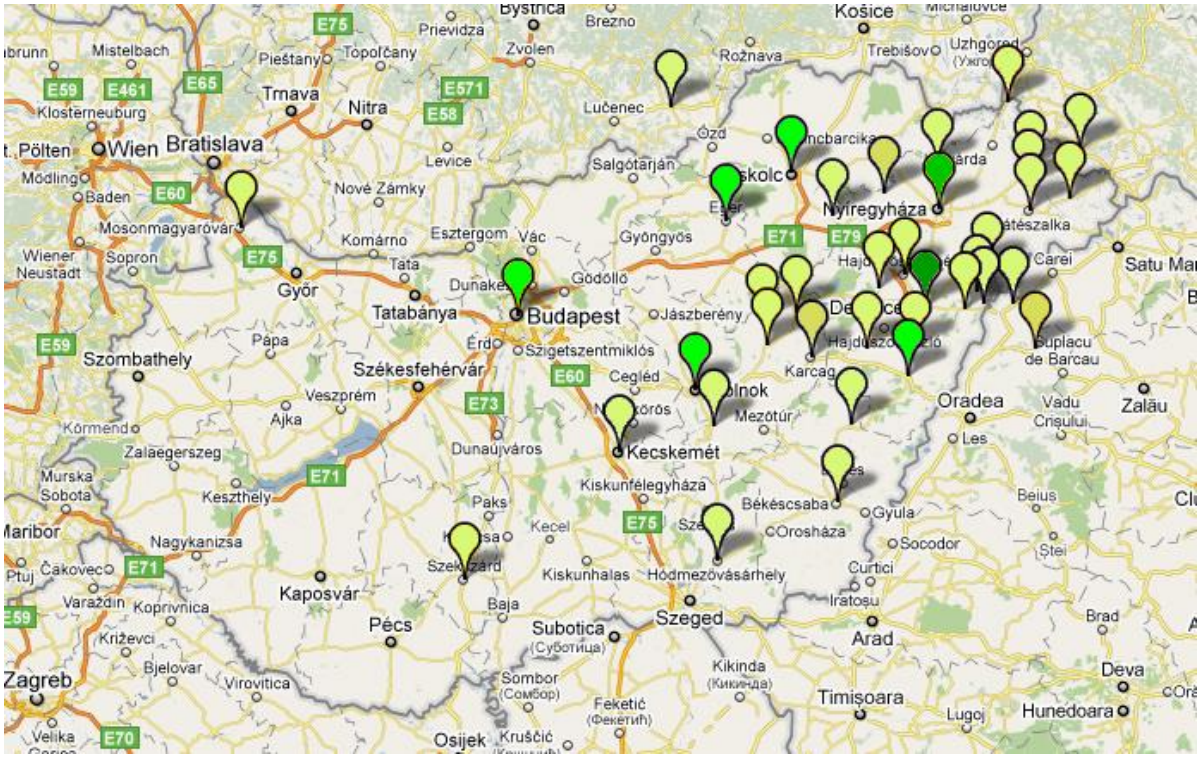

Figure 2 *Origin distributions of the speakers of the HuComTech corpus*

(Pápay, Szeghalmy & Szekrényes 2011: 334)

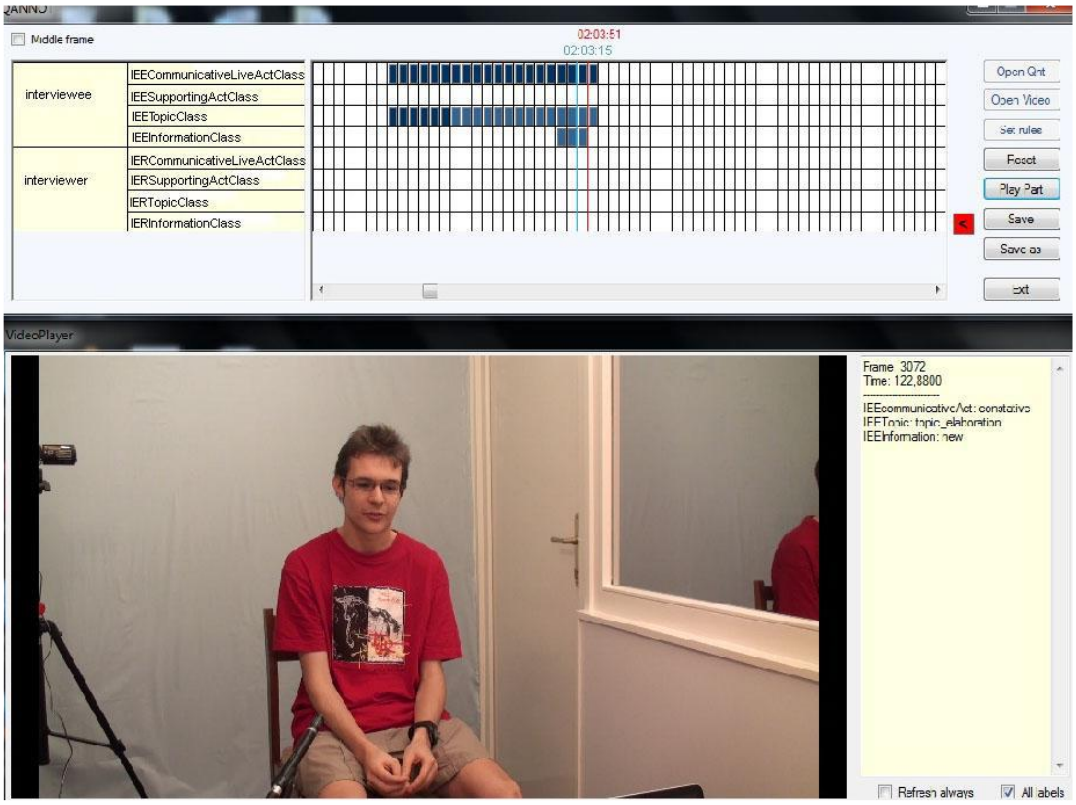

Figure 3 *User interface of the multimodal pragmatic annotation of the HuComTech corpus*

(Abuczki, Bódog & Németh T. 2011: 196)

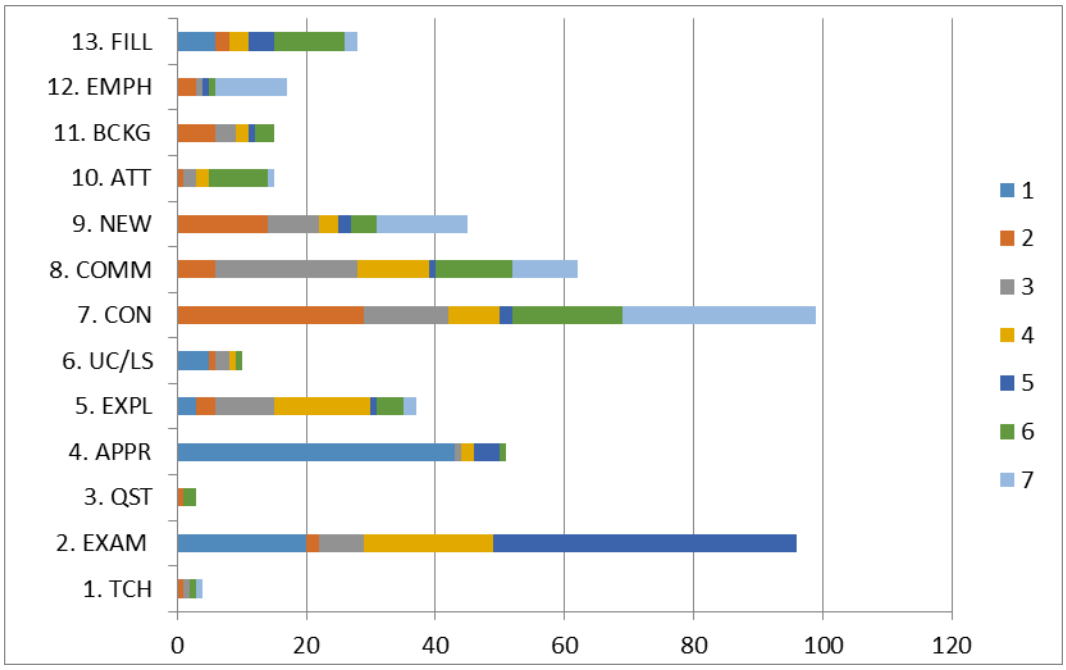

Figure 4 *Functions of mondjuk (~'say') assigned in Questionnaire C*

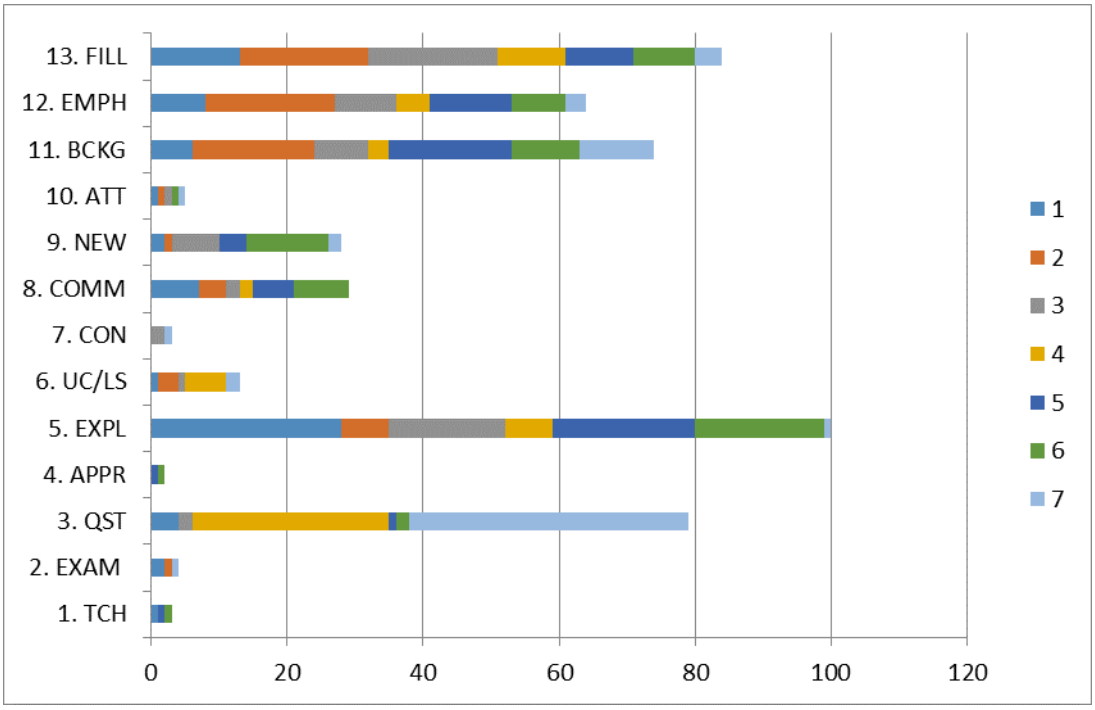

Figure 5 *Functions of ugye (~'is that so?') assigned in Questionnaire C*

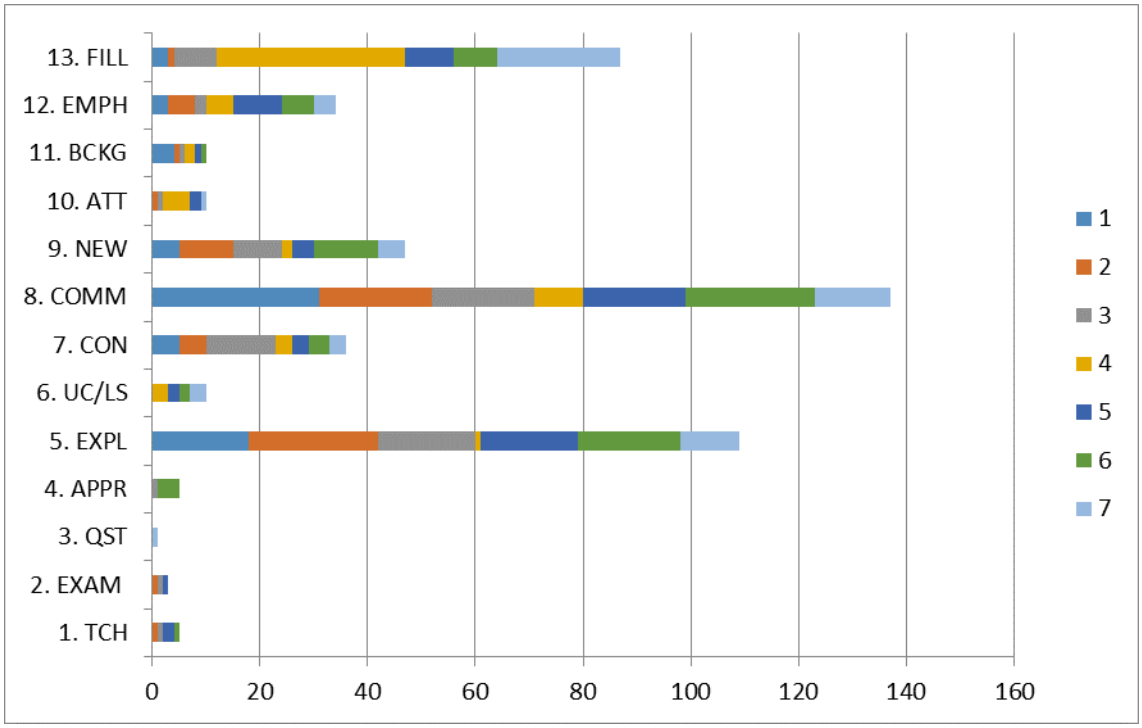

Figure 6 *Functions of amúgy (~'otherwise') assigned in Questionnaire C*

Appendix 2 Background of speakers and informants

2.A. Background of speakers in the HuComTech corpus

gender	*birth place*	*date of birth*	*speaker_ID*
m	Ibrány	1991	3
m	Debrecen	1988	6
m	Debrecen	1986	7
m	Debrecen	1985	12
m	Derecske	1988	13
f	Budapest	1981	16
f	Debrecen	1991	18
f	Debrecen	1990	19
m	Debrecen	1985	20
f	Debrecen	1989	21
f	Eger	1986	23
f	Nyíregyháza	1989	30
f	Mosonmagyaróvár	1986	40
f	Debrecen	1989	43
f	Debrecen	1980	57
f	Karcag	1991	59
m	Penyige	1990	62
f	Berettyóújfalu	1990	63
m	Nyíregyháza	1989	67
m	Nyíregyháza	1990	69
f	Nyíregyháza	1989	70
f	Miskolc	1988	85
f	Debrecen	1991	96
m	Berettyóújfalu	1990	114
m	Debrecen	1985	125
f	Budapest	1983	agent

2. B. Background of informants in the first round of the questionnaire survey

(Informants of questionnaires A and B)

Number	*Gender*	*Age*	*Origin (town)*	*Facuty*	*Qualification*
1	M	21	Debrecen	Economics	maturity exam
2	M	21	Debrecen	Informatics	maturity exam
3	M	26	Debrecen	Arts	maturity exam
4	F	21	Hajdúböszörmény	Arts	maturity exam
5	F	23	Kisvárda	Arts	maturity exam
6	M	23	Szolnok	Informatics	maturity exam
7	F	20	Nyíregyháza	Arts	maturity exam
8	F	24	Debrecen	Arts	BA
9	M	22	Kunhegyes	Engineering	maturity exam
10	M	22	Debrecen	Law	maturity exam
11	F	20	Mezőgyán	Arts	maturity exam
12	M	19	Hosszúpályi	Arts	maturity exam
13	F	20	Edelény	Arts	maturity exam
14	F	25	Hajdúsámson		BA
15	M	20	Debrecen	Arts	maturity exam
16	M	22	Debrecen	Informatics	maturity exam
17	F	22	Debrecen	Arts	maturity exam
18	M	20	Hajdúszoboszló	Informatics	maturity exam
19	M	36	Görbeháza	Science	maturity exam
20	F	21	Nyíregyháza	Arts	maturity exam
21	M	21	Debrecen	Arts	maturity exam
22	M	22	Debrecen	Arts	maturity exam
23	F	20	Nyíregyháza	Informatics	maturity exam
24	F	23	Hajdúszoboszló	Informatics	maturity exam
25	F	22	Cegléd	Arts	maturity exam
26	M	20	Debrecen	Arts	maturity exam
27	M	21	Debrecen	Arts	maturity exam
28	M	22	Emőd	Economics	maturity exam
29	M	22	Polgár	Economics	maturity exam
30	F	20	Debrecen	Arts	maturity exam
31	F	20	Nyíregyháza	Arts	BA
32	F	22	Nyíregyháza	Arts	maturity exam
33	M	24	Újfehértó	Arts	maturity exam
34	M	23	Debrecen	Informatics	maturity exam
35	M	20	Hajdúböszörmény	Arts	maturity exam
36	F	21	Hajdúsámson	Arts	maturity exam
37	F	20	Mezőkövesd	Arts	maturity exam
38	M	20	Mikepércs	Arts	maturity exam
39	M	22	Debrecen	Informatics	maturity exam
40	F	23	Debrecen	Arts	maturity exam

2. C. Background of informants in the second round of the questionnaire survey (Informants of questionnaire C)

Number	*Gende*	*Age*	*Origin (town)*	*Facuty*	*Qualification*	*Languages*
1	M	28	Nyíregyháza	Arts	MA	Eng. B2. Lat. B2
2	F	23	Tiszaberek	Pharmacy	maturity	Eng. B2, Ger. B2
3	F	23	Técső	Pharmacy	maturity	Ukr. C1
4	F	22	Újfehértó	Pharmacy	maturity	Ger. C1, Eng. B2
5	F	22	Kisvárda	Pharmacy	maturity	Ger. B2
6	F	25	Abony	Pharmacy	maturity	Ger. B2
7	M	24	Nyíregyháza	Pharmacy	maturity	Eng. B2, Eszp.
8	M	23				
9	F	22	Baktalórántház	Pharmacy	maturity	Eng B2, Eszp. B2
10	M	23	Debrecen	Pharmacy	maturity	Eng. B2
11	M	22	Debrecen	Pharmacy	maturity	Eng. B2
12	M	22	Békéscsaba	Pharmacy	maturity	Eng. B2
13	F	22	Hajdúnánás	Pharmacy	maturity	Ger. B2
14	M	23		Pharmacy	maturity	Ger. B2, Eng. B1
15	F	22	Debrecen	Pharmacy	maturity	Ger. B2
16	M	21	Hajdúszoboszl	Pharmacy	maturity	Eng. B2
17	F	22	Nagyhalász	Pharmacy	maturity	Eng. B2, Ger. B2
18	M	22	Tiszafüred	Pharmacy	maturity	Eng. B2, Fra. B2
19	M	22	Mátészalka	Pharmacy	maturity	Eng. B2, Ger. B2
20	M	22	Cegléd	Pharmacy	maturity	Eng. B2, Ger. B2
21	F	22	Pap	Pharmacy	maturity	Ger. B2
22	F	22	Debrecen	Pharmacy	maturity	Eng. B2, Fra. B2
23	F	23	Debrecen	Pharmacy	maturity	Eng. C1
24	F	22	Szerencs	Pharmacy	maturity	Eng. C1, Ger. B2
25	F	22	Debrecen	Pharmacy	maturity	Eng. C1, Ger. B2
26	M	24	Miskolc	Pharmacy	maturity	Eng. B2, Ger. B1
27	M	23	Debrecen	Pharmacy	maturity	Eng. B2, Ger. B2
28	M	22	Szentpéterszeg	Pharmacy	maturity	Eng. B2
29	F	23	Debrecen	Pharmacy	maturity	Eng. B2, Ita. B2
30	F	25	Salgótarján	Pharmacy	maturity	Eng. C1
31	F	22	Derecske	Pharmacy	maturity	
32	F	22	Létavértes	Pharmacy	maturity	Eng. B2
33	F	22	Miskolc	Pharmacy	maturity	Eng. B2
34	F	22	Pátroha	Pharmacy	maturity	Eng. B2
35	F	23	Gyöngyöspata	Pharmacy	maturity	Eng. C1
36	M	27	Debrecen	Arts	MA	Eng. B2, Ger. B2
37	F	27	Nyíregyháza	Arts	MA	Eng. B2, Ita. B2
38	M	25	Nyírmihálydi	Info	maturity	Ger. B2
39	M	22	Budapest	Arts	maturity	Eng. B2
40	M	24	Nyíregyháza	Arts	maturity	Eng. B2
41	M	25	Tiszacsege	Arts	maturity	Eng. B2
42	F	20	Panyola	Arts	maturity	Ger. B2
43	F	19		Arts	maturity	
44	M	19	Hosszúpályi	Arts	maturity	Eng. C1, Ita B2
45	F	28	Kecskemét	Arts	MA	Eng. B2, Ger. C1
46	F	19	Debrecen	Arts	maturity	Eng. C1
47	F	19	Érsemjén	Arts	maturity	Eng. B2, Rom.
48	M	19	Eger	Arts	maturity	Eng B2, Ita B2
49	F	28	Derekegyháza	Arts	BA	Eng. B2
50	F	20	Mezőgyán	Arts	maturity	Eng. C1
51	F	20	Fényeslitke	Arts	maturity	Eng. C1, Kor. B1
52	F	20	Kállósemjén	Arts	maturity	Eng. C1, Spa. B2
53	F	19	Tokaj	Arts	maturity	Eng. C1, Ger. B1

54	F	19	Debrecen	Arts	maturity	Eng. C1, Fra. B2
55	F	20	Hajdúbagos	Arts	maturity	Eng. C1, Ita B2
56	F	20	Tiszaújváros	Arts	maturity	Eng. B2, Ger. B1

Appendix 3 Questionnaires

3.A. Questionnaires in Hungarian

- ***Kérdőív_A***

Kedves Adatközlő!
Kérlek, add meg a kérdőív értékeléséhez szükséges személyes adatokat magadról.
Nem: ……
Életkor: ……
Származási hely (város vagy község, ahol nevelkedtél): ……
Karod neve: ……

A feladat lépései:
1. Nézd meg az alábbi rövid videókat.
2. Alaposan olvasd el a közlések szöveges átiratát.
3. Megtekintés és elolvasás után:
a. Egyesével írd le a közléspárok után, hogy **érzel-e különbséget A és B között.** (*Igen / Nem*)
b. Ha érzel különbséget a pár tagjai között, fogalmazd meg saját szavaiddal, hogy benyomásaid alapján **mit/miket fejez ki a félkövérrel szedett szó (mondjuk, amúgy, ugye)** az adott szituációban, és **erre mi(k)ből következtetsz.**
Megjegyzés: Fontos tudnod, hogy a kérdésekre nincs jó vagy rossz válasz, a véleményedre vagyok kíváncsi.

A közlések szöveges átirata:

1.A.
- Mik az elképzelései a fizetési igényről? Vagy mi az az összeg, amiért elvállalná ezt a munkát?
- Hát, ilyen kétszázötven-háromszázezer forint havonta.

1.B.
- Mik az elképzelései a fizetési igényről? Vagy mi az az összeg, amiért elvállalná ezt a munkát?
- Hát, **mondjuk** ilyen kétszázötven-háromszázezer forint havonta.

Van-e különbség A és B között? Igen / nem
Véleményed: ……

2.A.
- Meg hát ő is, ő is most elég sokat dolgozik, úgyhogy még ha otthon vagyok, akkor se mindig tudunk találkozni.
- De ő Pesten lakik most, nem?
- Igen, igen, igen. Szolnoki, de most má Pestre költöztek.

2.B.
- Meg hát ő is, ő is most elég sokat dolgozik, úgyhogy még ha otthon vagyok, akkor se mindig tudunk találkozni.
- De ő Pesten lakik most, nem?
- Igen, igen, igen. **Amúgy** szolnoki, de most má Pestre költöztek.

Van-e különbség A és B között? Igen / nem
Véleményed: ……

3.A.

- Addigra úgy képzelem, hogy ha nem sikerül munkát találnom, akkor párhuzamosan elkezdeném fejleszteni a nyelvtudásomat, mer még most angolból is hiányosságaim vannak.

3.B.

- Addigra úgy képzelem, hogy ha nem sikerül munkát találnom, akkor párhuzamosan elkezdeném fejleszteni a nyelvtudásomat, mer **ugye** még most angolból is hiányosságaim vannak.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

4.A.

- Itt [Debrecenben] több az élmény meg a látnivaló, nekem legalábbis.
- Ott [Miskolc körül] meg vannak szép hegyek.

4.B.

- Itt [Debrecenben] több az élmény meg a látnivaló, nekem legalábbis.
- **Mondjuk** ott [Miskolc körül] meg vannak szép hegyek.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

5.A.

- Meg hát emlékszem, ott állt az ablakba, és így cigizett, mer nem szokott a lakásba rágyújtani, de akkor annyira ideges volt, hogy muszáj volt neki.

5.B.

- Meg hát emlékszem, ott állt az ablakba, és így cigizett, mer **amúgy** nem szokott a lakásba rágyújtani, de akkor annyira ideges volt, hogy muszáj volt neki.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

6.A.

- Csak otthon hát nyugalom kell hozzá, hogy ne zavarják az embert mondjuk egy félóráig.

6.B.

- Csak otthon hát **ugye** nyugalom kell hozzá, hogy ne zavarják az embert mondjuk egy félóráig.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

7.A.

- Nehéz így az embernek magáról pozitív dolgokat mondani, de igen, szeretek társaságban lenni, jó a kommunikatív képességem, a problémamegoldó képességem, azt hiszem.

7.B.

- Nehéz így az embernek magáról pozitív dolgokat mondani, de **mondjuk** igen, szeretek társaságban lenni, jó a kommunikatív képességem, a problémamegoldó képességem, azt hiszem.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

8.A.

- Én tervezem egyébként, hogy Pestre költözzek. Tehát a suli az, ami itt tart csak. Imádom Pestet.

8.B.

- Én tervezem egyébként, hogy Pestre költözzek. Tehát a suli az, ami itt [Debrecenben] tart csak. Imádom Pestet **amúgy**.

Van-e különbség A és B között? Igen / nem

Véleményed: ……..

9.A.

- Aztán amikor ilyen százharminc-száznyolcvannal mentünk, akkor így elgondolkoztam, hogy lehet most kéne megállni, és nem így hajszolni lényegében így a halált, meg így kockára tenni így az életemet, de végülis ott volt az adrenalin, és nagyon felpörgetett, és az úgy jó volt.

9.B.

- Aztán amikor ilyen százharminc-száznyolcvannal mentünk, akkor így elgondolkoztam, hogy lehet most kéne megállni, és nem így hajszolni lényegében így a halált, meg így kockára tenni így az életemet, de végülis **ugye** ott volt az adrenalin, és nagyon felpörgetett, és az úgy jó volt.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

10.A.

- Ezek jók, én is kipróbáltam párat, a kung-fut csak egy hónapig, de az shaolin kung-fu volt, ott szerintem nem is voltak ilyen fokozatok.

10.B.

- Ezek jók, én is kipróbáltam párat, **mondjuk** a kung-fut csak egy hónapig, de az shaolin kung-fu volt, ott szerintem nem is voltak ilyen fokozatok.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

11.A.

- Mindegyik arról szól, hogy Chuck Norris milyen kemény meg izé, hogy kiskorába mindenki Superman-es pólót akar, Superman viszont Chuck Norris-osat.
- Hm, ez jó ez is.
- Vannak, vannak ezek között jók.

11.B.

- Mindegyik arról szól, hogy Chuck Norris milyen kemény meg izé, hogy kiskorába mindenki Superman-es pólót akar, Superman viszont Chuck Norris-osat.
- Hm, ez jó **amúgy** ez is.
- Vannak, vannak ezek között jók.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

12.A.

- Japán tudósok felfedezték, hogy a hideg sör rákkeltő hatású. Tudod-e, hogy miért?
- Nem.
- Mert hogyha ráöntöd egy rákra, akkor az -- alvó rákra, akkor az felébred.
- Jaj.
- Na ebbe is belesültem, de --
- Nem, ez jó volt szerintem.
- És nagyon rossz vicc.
- Á, nem, nem rossz az.

12.B.

- Japán tudósok felfedezték, hogy a hideg sör rákkeltő hatású. Tudod-e, hogy miért?
- Nem.
- Mert hogyha ráöntöd egy rákra, akkor az -- alvó rákra, akkor az felébred.
- Jaj.
- Na ebbe is belesültem **ugye,** de --
- Nem, ez jó volt szerintem.
- És nagyon rossz vicc.
- Á, nem, nem rossz az.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

13.A.

- Milyen jellegű az a pozíció, amiben nem dolgozna? Ez általában értendő a kérdés. Tehát mi az a munkakör, amit olyan távolállónak érez?
- Bárhonnan?
- Igen.
- Hát sertéstelepen nem szívesen dolgoznék.

13.B.

- Milyen jellegű az a pozíció, amiben nem dolgozna? Ez általában értendő a kérdés. Tehát mi az a munkakör, amit olyan távolállónak érez?
- Bárhonnan?
- Igen.
- Hát **mondjuk** sertéstelepen nem szívesen dolgoznék.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

14.A.

- Már két és fél éve itt lakom, de mit tudom én, nem voltam olyan sok helyen, Tornádóba voltam talán párszor. Annyira én nem vagyok ilyen buliember.

14.B

- Már két és fél éve itt lakom, de mit tudom én, nem voltam olyan sok helyen, Tornádóba voltam talán párszor. Annyira **amúgy** én nem vagyok ilyen buliember.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

15.A.

- Eddig Debrecenben tanultam, az Ady Endre Gimnáziumban hatosztályos képzésben, most pedig az egyetemen éppen végzős vagyok az anglisztika szakon, a BA képzésben, ebben az új három éves képzésben.

15.B.

- Eddig Debrecenben tanultam, az Ady Endre Gimnáziumban hatosztályos képzésben, most pedig az egyetemen éppen végzős vagyok az anglisztika szakon, a BA képzésben, **ugye** ebben az új három éves képzésben.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

16.A.

- Ennek pont az a célja, hogy meglepetést provokáljon ki.
- Uhum. Hú nagyon meglepődtem!Úgyhogy próbáltam visszafogni magam.
- Nem látszott annyira.
- Tudom próbáltam visszafogni a reakciót.

16.B.

- Ennek pont az a célja, hogy meglepetést provokáljon ki.
- Uhum. Hú nagyon meglepődtem!Úgyhogy próbáltam visszafogni magam.
- **Mondjuk** nem látszott annyira.
- Tudom próbáltam visszafogni a reakciót.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

17.A.

- Akkor nem tudsz most viccet mondani?
- Nem. Egyet se tudok. Hát ilyen megy a nyuszika az erdő szélén, és leesik, tehát ilyen fárasztó viccekben nagyon otthon vagyok, de nem.

17.B.

- Akkor nem tudsz most viccet mondani?
- Nem. Egyet se tudok. Hát ilyen megy a nyuszika az erdő szélén, és leesik, tehát ilyen fárasztó viccekben nagyon otthon vagyok, de **amúgy** nem.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

18.A.

- Boldog élmény volt, mikor elhoztuk, egy sharpeiről van szó, és hát ilyen kis pici volt, és nagyon aranyos.

18.B.

- Boldog élmény volt, mikor elhoztuk, **ugye** egy sharpeiről van szó, és hát ilyen kis pici volt, és nagyon aranyos.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

19.A.

- Szerintem jól reagáltál teljesen. Tök jól tudtál beszélni.
- Oké.
- Nem mindenki tud. Persze mondom az is a célunk, hogy meglepetést okozzunk, tehát nem feltétlenül az, hogy aztán elkezdjetek angolul beszélni.

19.B.

- Szerintem jól reagáltál teljesen. Tök jól tudtál beszélni.
- Oké.
- Nem mindenki tud. **Mondjuk** persze mondom az is a célunk, hogy meglepetést okozzunk, tehát nem feltétlenül az, hogy aztán elkezdjetek angolul beszélni.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

20.A.

- Amik így eszembe jutottak, hogy tőlem is ezt például kérdezték tőlem, hogy ez hogy mi idegesítene, és ez olyan –, hát szal erre jó fölkészülni, mer eléggé váratlanul tudja érni az embert
- Igen, ez tényleg váratlanul ért.

20.B.

- Amik így eszembe jutottak, hogy tőlem is ezt például kérdezték tőlem, hogy ez hogy mi idegesítene, és ez olyan –, hát szal erre jó fölkészülni, mer **amúgy** eléggé váratlanul tudja érni az embert
- Igen, ez tényleg váratlanul ért.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

21.A.

- Ő az, akiről meséltél egyszer a –
- Biztos meséltem.
- Most anyukádéknál van**?**
- Igen, igen,
- Ha jól emlékszem?

21.B.

- Ő az, akiről meséltél egyszer a –
- Biztos meséltem.
- Most anyukádéknál van, **ugye?**
- Igen, igen,
- Ha jól emlékszem?

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

Végezetül fogalmazd meg néhány mondatban, hogy nehéznek érezted-e a feladatot? Ha igen, mi okozta a nehézséget? Van-e javaslatod, hogyan dolgozzam át, vagy hogyan tehetném könnyebbé a feladatot?

Véleményed: ……..

Nagyon köszönöm a kérdőívre szánt idődet és a segítségedet a véleményeddel!

- ***Kérdőív_B***

Kedves Adatközlő!
Kérlek, add meg a kérdőív értékeléséhez szükséges személyes adatokat magadról.
Nem: ……
Életkor: ……
Származási hely (város vagy község, ahol nevelkedtél): ……
Karod neve: ……

A feladat lépései:
1. Nézd meg az alábbi rövid videókat.
2. Alaposan olvasd el a közlések szöveges átiratát.
3. Megtekintés és elolvasás után:
a. Egyesével írd le a közléspárok után, hogy **érzel-e különbséget A és B között.** (*Igen / Nem*)
b. Ha érzel különbséget a pár tagjai között, fogalmazd meg saját szavaiddal, hogy benyomásaid alapján **mit/miket fejez ki a félkövérrel szedett szó (mondjuk, amúgy, ugye)** az adott szituációban, és **erre mi(k)ből következtetsz.**
Megjegyzés: Fontos tudnod, hogy a kérdésekre nincs jó vagy rossz válasz, a véleményedre vagyok kíváncsi.

A közlések szöveges átirata:

1.A.

- Soho-ban volt a szállás, tehát az egyik legveszélyesebb környékén Londonnak, és két afro-amerikai fiatalember jött oda, és kérdezték, hogy tudnánk-e adni nekik pénzt. Mondom hát persze, hogyne tudnánk, itt van tíz penny. Hát magyar mentalitásból indultam ki, hogy bármit, amit adok, annak örülnek, úgyhogy, Magyarországon nem szoktam adni igazából. És akkor mondta, hogy hát neki ez nem elég, adjak már neki tíz fontot.

1.B.

- Soho-ban volt a szállás, tehát az egyik legveszélyesebb környékén Londonnak, és két afro-amerikai fiatalember jött oda, és kérdezték, hogy tudnánk-e adni nekik pénzt. Mondom hát persze, hogyne tudnánk, itt van tíz penny. Hát magyar mentalitásból indultam ki, hogy bármit, amit adok, annak örülnek, úgyhogy, **mondjuk** Magyarországon nem szoktam adni igazából. És akkor mondta, hogy hát neki ez nem elég, adjak már neki tíz fontot.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

2.A.

- Sajnos értettem angolul, hogy meg akar késelni. Egy kicsit úgy hátrahőköltem, nővérem így kettőt hátrahőkölt, és akko mondtuk, hogy hát de nincs nálunk pénz értse meg. Hát volt hatszáz font meg egy kétszázezer forintos notebook, tehát végülis nem volt nálunk pénz, és akkor ott erősködött, hogy de igen.

2.B.

- Sajnos értettem angolul, hogy meg akar késelni. Egy kicsit úgy hátrahőköltem, nővérem így kettőt hátrahőkölt, és akko mondtuk, hogy hát de nincs nálunk pénz értse meg. Hát **amúgy** volt hatszáz font meg egy kétszázezer forintos notebook, tehát végülis nem volt nálunk pénz, és akkor ott erősködött, hogy de igen.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

3.A.

- Hát a szomorú élmény az meg szintén ide kapcsolódik amikor el kellett válni tőle. Hát amikor elpusztult szegény, a csau-csau, az előző kutya.
- Ja, uhum.
- Az elég rossz volt.

3.B.

- Hát a szomorú élmény az meg szintén ide kapcsolódik amikor el kellett válni tőle. Hát amikor elpusztult szegény, **ugye** a csau-csau, az előző kutya.
- Ja, uhum.
- Az elég rossz volt.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

4.A.

- És mi az, amitől ideges lesz munkahelyen?

4.B.

- És mi az, amitől **mondjuk** ideges lesz munkahelyen?

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

5.A.

- Hát azelőtt mindig a Balatonon szerveztük, csak pont abba az évben váltottak, mármint Tiszaújvárosba. Végülis annak sokkal a felszerelése, meg a pályák, meg minden, csak hát nem olyan népszerű, mint a Balaton. De könnyebb mondjuk ott megszervezni egy ilyet, mert a Balatonon ott hát eleve messzebb vannak a pályák.

5.B.

- Hát azelőtt mindig a Balatonon szerveztük, csak pont abba az évben váltottak, mármint Tiszaújvárosba. Végülis annak sokkal a felszerelése, meg a pályák, meg minden, csak hát nem olyan népszerű, mint a Balaton. De **amúgy** könnyebb mondjuk ott megszervezni egy ilyet, mert a Balatonon ott hát eleve messzebb vannak a pályák.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

6.A.

- Most a legutóbbi, amit hallottam, az is ilyen Chuck Norrisos, hogy nemtom valami filmjéből jelenet, hogy a med-- a medvével, és hogy hogy nem is tom, hogy így alszik ott az erdőbe ilyen tábor-- mármint a medve, vagy vagy nem, Chuck-- Chuck Norris, és akkor jön a medve, és így megtámadja, és hát akkor az is így van ilyen komoly küzdelem, aztán végülis a medve így elkezd hátrálni.

6.B.

- Most a legutóbbi, amit hallottam, az is ilyen Chuck Norrisos, hogy nemtom valami filmjéből jelenet, hogy a med-- a medvével, és **ugye** hogy hogy nem is tom, hogy így alszik ott az erdőbe ilyen tábor-- mármint a medve, vagy vagy nem, Chuck-- Chuck Norris, és akkor **ugye** jön a medve, és így megtámadja, és hát akkor az is így van ilyen komoly küzdelem, aztán végülis a medve így elkezd hátrálni.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

7.A.

- Futsal [teremfoci] edzés volt az egyetemen belül, és hát odajött hozzám, elkésett egy kicsit, de odajött hozzám, és hát fogta és mondta, hogy boldog születésnapot, és kezembe nyomta az ajándékot.

7.B.

- Futsal [teremfoci] edzés volt az egyetemen belül, és hát odajött hozzám, **mondjuk** elkésett egy kicsit, de odajött hozzám, és hát fogta és mondta, hogy boldog születésnapot, és kezembe nyomta az ajándékot.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

8.A.

- Azóta nem is nagyon járok azon a részen, pedig nagyon szeretem a nyugat- magyarországi részt. Mer pesti vagyok, csak itt hát úgy két és fél éve vagyok itt a munka miatt.

8.B.

- Azóta nem is nagyon járok azon a részen, pedig nagyon szeretem a nyugat- magyarországi részt. Mer **amúgy** pesti vagyok, csak itt hát úgy két és fél éve vagyok itt a munka miatt.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

9.A.

- Ja igen, és akkor attól ijedtem meg, hogy megyek be, és akkor apukám meg ott állt az ajtóban. És akkor attól nagyon megijedtem, mer nem számítottam rá.

9.B.

- Ja igen, és akkor attól ijedtem meg, hogy **ugye** megyek be, és akkor apukám meg ott állt az ajtóban. És akkor attól nagyon megijedtem, mer nem számítottam rá.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

10.A.

- Finom nagyon. Próbáld ki!
- Hát de nem is láttam. Ezt lehet boltban kapni?
- Aha, lehet boltba, például a Tescoba is akár.
- Aha, aha.
- Nem olcsó.

10.B.

- Finom nagyon. Próbáld ki!
- Hát de nem is láttam. Ezt lehet boltban kapni?
- Aha, lehet boltba, például a Tescoba is akár.

- Aha, aha.
- **Mondjuk** nem olcsó.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

11. A.
- Aztán volt olyan csoport, vagy több ilyet is vittem, akik úgy döntöttek, hogy igen tehát nem akarnak ott a főúton menni, hanem inkább menjünk a Pilisen keresztül. Na, ott aztán én izé dobtam ki a tacssot majdnem, még én értem föl utoljára. Hát edzett németek voltak. Mer ilyen hatvan év körüli korosztály, de hát ők ilyen sportosak.

11. B.
- Aztán volt olyan csoport, vagy több ilyet is vittem, akik úgy döntöttek, hogy igen tehát nem akarnak ott a főúton menni, hanem inkább menjünk a Pilisen keresztül. Na, ott aztán én izé dobtam ki a tacssot majdnem, még én értem föl utoljára. Hát edzett németek voltak. Mer **amúgy** ilyen hatvan év körüli korosztály, de hát ők ilyen sportosak.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

12.A.
- Mosonmagyaróvár még mindig izgat, mer most úgy, hogy csak eszembe jutott, hogy nemtom ismered-e azt a helyet, volt egy étterem, ahol mindig megálltunk, asziszem úgy hívták, hogy Park büfé. Ilyen erdős résznek a közepén volt.
- Egy parkba volt?
- Hát egy park. Vagy hát ilyen erdős.

12.B.
- Mosonmagyaróvár még mindig izgat, mer most úgy, hogy csak eszembe jutott, hogy nemtom ismered-e azt a helyet, volt egy étterem, ahol mindig megálltunk, asziszem úgy hívták, hogy Park büfé. Ilyen erdős résznek a közepén volt.
- Egy parkba volt, **ugye**?
- Hát egy park. Vagy hát ilyen erdős.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

13.A.
- Valahogy a Balaton az hiányzik nekem nagyon, csak innen olyan messze van.
- Hát igen, a Tisza-part is nagyon jó hely.

13.B.
- Valahogy a Balaton az hiányzik nekem nagyon, csak innen olyan messze van.
- Hát igen, **mondjuk** a Tisza-part is nagyon jó hely.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

14.A.
- Lehet nem tudják kezelni ezt a nagy népszerűséget, mer azér az olyan más, hogyha az ember nem tud kimenni az utcára így naponta.
- Iszonyat lehet, anyumékkal is szoktunk így ezekről beszélni, hogy így minden fotós így azt nézi, hogy éppen milyen ruhába vagyok.

14.B.
- Lehet nem tudják kezelni ezt a nagy népszerűséget, mer azér az olyan más, hogyha az ember nem tud kimenni az utcára így naponta.
- **Amúgy** iszonyat lehet, anyumékkal is szoktunk így ezekről beszélni, hogy így minden fotós így azt nézi, hogy éppen milyen ruhába vagyok.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

15.A.

- Igen, hát a krisnások például arra szoktak hivatkozni, hogy ez benne van a izébe Bhagavad-Gítában, hogy ezt és ezt nem szabad.
- Ja, ja, ja.
- És ez tényleg egy régi könyv.

15.B.

- Igen, hát a krisnások például arra szoktak hivatkozni, hogy ez **ugye** benne van a izébe Bhagavad-Gítában, hogy ezt és ezt nem szabad.
- Ja, ja, ja.
- És ez **ugye** tényleg egy régi könyv.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

16.A.

- Úgy kellett megkérdeznem, hogy akkor most hova is kell jönnöm? Egy pont négyes? És akkor az merre is van? És akkor itt elkezdtem keresni, jó, hogy könyvesbolt, de hol van itt a könyvesbolt? Nagyon nehéz volt idetalálni.
- Na ezzel más is így van. Hát ez tényleg egy kicsit eldugott helyen van.

16.B.

- Úgy kellett megkérdeznem, hogy akkor most hova is kell jönnöm? Egy pont négyes? És akkor az merre is van? És akkor itt elkezdtem keresni, jó, hogy könyvesbolt, de hol van itt a könyvesbolt? Nagyon nehéz volt idetalálni.
- Na **mondjuk** ezzel más is így van. Hát ez tényleg egy kicsit eldugott helyen van.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

17.A.

- Volt-e már halálfélelmed, vagy halálközeli élményed?
- Hát halálfélelmem már volt. Hogy ültem egy ilyen hát kocsiba Pesten, és akko ott egy pesti öööö szülő vezetett, egy apuka, és akkor olyan szinten vezetett, én megijedtem, vagy nem tudom, így a kocsiba így belesüllyedtem, és öööö mondom úristen mondom, itt meg fogunk halni, így majnem nekimentünk a kocsi--, mer én nem vagyok hozzászokva a pesti közlekedéshez.

17.B.

- Volt-e már halálfélelmed, vagy halálközeli élményed?
- Hát halálfélelmem már volt **amúgy**. Hogy ültem egy ilyen hát kocsiba Pesten, és akko ott egy pesti öööö szülő vezetett, egy apuka, és akkor olyan szinten vezetett, én megijedtem, vagy nem tudom, így a kocsiba így belesüllyedtem, és öööö mondom úristen mondom, itt meg fogunk halni, így majnem nekimentünk a kocsi--, mer én nem vagyok hozzászokva a pesti közlekedéshez.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

18.A.

- Úgy érzem, hogy alapvetően tehát kompetens lennék arra, hogy ilyesmit csináljak, plusz ahogy mondtam, érdekel is.

18.B.

- Úgy érzem, hogy alapvetően tehát kompetens lennék arra, hogy ilyesmit csináljak, plusz **ugye**, ahogy mondtam, érdekel is.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

19.A.

- Az iwiw, tehát az iwiw az inkább az anyukámnak a generációja tényleg, tehát, hogy megtalálják egymást a gimnázium, gimnazista osztálytársakat.
- Aha, aha, aha.
- Meg az egyetemi csoporttársakat.
- Aha.
- Nekünk már nem poén, mer végülis mi telefonon elintézzük.
- Hát i-- bár, amikor indult akkor, akkor így a mi körünkben, jó én idősebb vagyok, én idősebb vagyok nálad. Ez divat volt amúgy, nálunk volt nagyon népszerű meg -- hogy tehát általános iskolás volt osztálytársakat ugye, akkor már mi is rég láttuk, akkor őket egyből össze lehetett szedni.

19.B.

- Az iwiw, tehát az iwiw az inkább az anyukámnak a generációja tényleg, tehát, hogy megtalálják egymást a gimnázium, gimnazista osztálytársakat.
- Aha, aha, aha.
- Meg az egyetemi csoporttársakat.
- Aha.
- Nekünk már nem poén, mer végülis mi telefonon elintézzük.
- Hát i-- bár **mondjuk**, amikor indult akkor, akkor így a mi körünkben, jó **mondjuk** én idősebb vagyok, én idősebb vagyok nálad. Ez divat volt amúgy, nálunk volt nagyon népszerű meg -- hogy tehát általános iskolás volt osztálytársakat ugye, akkor már mi is rég láttuk, akkor őket egyből össze lehetett szedni.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

20.A.

- Ú ott nagyon féltem.
- Aha.
-
- Ott, ott télleg. Ott nem tudom, de úgy majdnem nekimentünk a kocsinak.

20.B.

- Ú ott nagyon féltem **amúgy**.
- Aha.
- Ott, ott télleg. Ott nem tudom, de úgy majdnem nekimentünk a kocsinak.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

21.A.

- Az volt a legjobb szállás, mert az egy ilyen kastélyszállószerűség volt, de nem a városba, hanem egy picit kijjebb tőle.
- Hm.
- De már nem jut eszembe, hogy mi a neve, de például
- Ez a Győr felé?
- Igen, igen.
- Igen, az ott van egy öööö a várostól egy kicsit öööö Győr irányába, egy külön egy ilyen kastély végül is.

21.B.

- Az volt a legjobb szállás, mert az egy ilyen kastélyszállószerűség volt, de nem a városba, hanem egy picit kijjebb tőle.
- Hm.
- De már nem jut eszembe, hogy mi a neve, de például
- Ez a Győr felé, **ugye**?

- Igen, igen.
- Igen, az ott van egy öööö a várostól egy kicsit öööö Győr irányába, egy külön egy ilyen kastély végül is.

Van-e különbség A és B között? Igen / nem
Véleményed: ……..

Végezetül fogalmazd meg néhány mondatban, hogy nehéznek érezted-e a feladatot? Ha igen, mi okozta a nehézséget? Van-e javaslatod, hogyan dolgozzam át, vagy hogyan tehetném könnyebbé a feladatot?
Véleményed: ……..

Nagyon köszönöm a kérdőívre szánt idődet és a segítségedet

- ***Kérdőív_C***

Feladatlap

Kedves Adatközlő!

Kérlek, add meg az alábbi személyes adatokat magadról!
Nem: ……
Életkor: ……
Származási hely (város vagy község, ahol nevelkedtél): ……
Karod neve: ……
Nyelvismeret (nyelvek, fok): ……

A feladat lépései:

- Nézd meg a rövid videókat és olvasd el a közlések szöveges átiratát!
- **Minden egyes beszélgetésrészletnél jelöld meg 1-4-es skálán, hogy a félkövérrel szedett szó mennyire elhagyható (1) vagy éppen szerves része a közlésnek (4):**
  - **ha úgy ítéled meg, hogy a félkövérrel szedett szó elhagyható közlésből a jelentés megváltoztatása nélkül, jelöld az (1)-t;**
  - **ha úgy ítéled meg, hogy a félkövérrel szedett szó színezi annak jelentését, jelöld a (2)-t vagy (3)-t (2: enyhén színezi a jelentést, 3: jelentősen színezi a jelentést);**
  - **vagy fontos, szerves része a közlésnek, így az nélküle értelmetlen lenne, vagy más értelmet nyerne (4)!**
- **Minden egyes beszélgetésrészlethez rendeld hozzá a lenti kategóriák (1-13.) számát a félkövérrel szedett szó jelentésére és szerepére vonatkozóan** (más szóval: az a kérdés, hogy mit fejez ki a félkövérrel szedett szó)! Egy közléshez több kategória is rendelhető. Ha nem találsz megfelelő kategóriát a megadottak között, a 'Megjegyzés' részben fogalmazd meg véleményedet, hogy mit fejez ki az adott szó.

Kategóriák:

1. témaváltás (témaváltás bevezetése)
2. példaadás ('például')
3. olyan kérdést fejez ki, ami általában igenlő választ vagy beleegyezést vár ('nemde')
4. saccolás ('körülbelül')
5. magyarázat vagy magyarázkodás bevezetése
6. határozatlanság vagy bizonytalanság (pl. szó felidézése miatt/közben)
7. ellentét, ellentétezés ('de', 'viszont', 'ellenben', 'előbbivel ellentétes módon')
8. mellékes/kevésbé lényegesnek tartott információ bevezetése/közbevetése, kitérő megjegyzés/kommentálás vagy (nem kért) véleményezés ('mellesleg', 'egyébként')
9. új nézőpont, új/fontosnak tartott információ bevezetése vagy perspektívaváltás
10. attitűdjelölés, érzelemkifejezés (barátságos hangvétel, udvariasság, vagy finomkodó kérdés)
11. közös háttérismeretekre, közismert tényre vagy nyilvánvaló dologra való utalás vagy visszautalás korábban közölt dologra
12. nyomatékosítás, nyomósítás vagy figyelemfelkeltés
13. töltelékszó (jelentést nem hordozó, funkciótlan, teljesen kihagyható elem)

Válaszlap

Beszélgetés sorszáma	Elhagyhatóság-szükségesség foka	Kategória / Kategóriák	Megjegyzés
1	1 2 3 4		
2	1 2 3 4		
3	1 2 3 4		
4	1 2 3 4		
5	1 2 3 4		
6	1 2 3 4		
7	1 2 3 4		
8	1 2 3 4		
9	1 2 3 4		
10	1 2 3 4		
11	1 2 3 4		
12	1 2 3 4		
13	1 2 3 4		
14	1 2 3 4		
15	1 2 3 4		
16	1 2 3 4		
17	1 2 3 4		
18	1 2 3 4		
19	1 2 3 4		
20	1 2 3 4		
21	1 2 3 4		

Nagyon köszönöm a kérdőívre szánt idődet és a segítségedet!

Sorszám	Beszélgetések szöveges átirata
1.	• Mik az elképzelései a fizetési igényről? Vagy mi az az összeg, amiért elvállalná ezt a munkát? • Hát, **mondjuk** ilyen kétszázötven-háromszázezer forint havonta.
2.	• Meg hát ő is, ő is most elég sokat dolgozik, úgyhogy még ha otthon vagyok, akkor se mindig tudunk találkozni. • De ő Pesten lakik most, nem? • Igen, igen, igen. **Amúgy** szolnoki, de most má Pestre költöztek.
3.	• Addigra úgy képzelem, hogy ha nem sikerül munkát találnom, akkor párhuzamosan elkezdeném fejleszteni a nyelvtudásomat, mer **ugye** még most angolból is hiányosságaim vannak.
4.	• Itt [Debrecenben] több az élmény meg a látnivaló, nekem legalábbis. • **Mondjuk** ott [Miskolc körül] meg vannak szép hegyek.
5.	• Meg hát emlékszem, ott állt az ablakba, és így cigizett, mer **amúgy** nem szokott a lakásba rágyújtani, de akkor annyira ideges volt, hogy muszáj volt neki.
6.	• Úgy érzem, hogy alapvetően tehát kompetens lennék arra, hogy ilyesmit csináljak, plusz **ugye**, ahogy mondtam, érdekel is.
7.	• Soho-ban volt a szállás, tehát az egyik legveszélyesebb környékén Londonnak, és két afro-amerikai fiatalember jött oda, és kérdezték, hogy tudnánk-e adni nekik pénzt. Mondom hát persze, hogyne tudnánk, itt van tíz penny. Hát magyar mentalitásból indultam ki, hogy bármit, amit adok, annak örülnek, úgyhogy, **mondjuk** Magyarországon nem szoktam adni igazából. És akkor mondta, hogy hát neki ez nem elég, adjak már neki tíz fontot.
8.	• Sajnos értettem angolul, hogy meg akar késelni. Egy kicsit úgy hátrahőköltem, nővérem így kettőt hátrahőkölt, és akko mondtuk, hogy hát de nincs nálunk pénz értse meg. Hát **amúgy** volt hatszáz font meg egy kétszázezer forintos notebook, tehát végülis nem volt nálunk pénz, és akkor ott erősködött, hogy de igen.
9.	• Aztán amikor ilyen százharminc-száznyolcvannal mentünk, akkor így elgondolkoztam, hogy lehet most kéne megállni, és nem így hajszolni lényegében így a halált, meg így kockára tenni így az életemet, de végülis **ugye** ott volt az adrenalin, és nagyon felpörgetett, és az úgy jó volt.
10.	• Ezek jók, én is kipróbáltam párat, **mondjuk** a kung-fut csak egy hónapig, de az shaolin kung-fu volt, ott szerintem nem is voltak ilyen fokozatok.
11.	• Mindegyik arról szól, hogy Chuck Norris milyen kemény meg izé, hogy kiskorába mindenki Superman-es pólót akar, Superman viszont Chuck Norris-osat. • Hm, ez jó **amúgy** ez is. • Vannak, vannak ezek között jók.
12.	• Japán tudósok felfedezték, hogy a hideg sör rákkeltő hatású. Tudod-e, hogy miért? • Nem. • Mert hogyha ráöntöd egy rákra, akkor az -- alvó rákra, akkor az felébred • Jaj. • Na ebbe is belesültem **ugye,** de -- • Nem, ez jó volt szerintem. • És nagyon rossz vicc. • Á, nem, nem rossz az.

Sorszám	Beszélgetések szöveges átirata
13.	• Milyen jellegű az a pozíció, amiben nem dolgozna? Ez általában értendő a kérdés. Tehát mi az a munkakör, amit olyan távolállónak érez? • Bárhonnan? • Igen. • Hát **mondjuk** sertéstelepen nem szívesen dolgoznék.
14.	• Már két és fél éve itt lakom, de mit tudom én, nem voltam olyan sok helyen, Tornádóba voltam talán párszor. • Annyira **amúgy** én nem vagyok ilyen buliember.
15.	• Eddig Debrecenben tanultam, az Ady Endre Gimnáziumban hatosztályos képzésben, most pedig az egyetemen éppen végzős vagyok az anglisztika szakon, a BA képzésben, **ugye** ebben az új három éves képzésben.
16.	• Ennek pont az a célja, hogy meglepetést provokáljon ki. • Uhum. Hú nagyon meglepődtem!Úgyhogy próbáltam visszafogni magam. • **Mondjuk** nem látszott annyira. • Tudom próbáltam visszafogni a reakciót.
17.	• Aztán volt olyan csoport, vagy több ilyet is vittem, akik úgy döntöttek, hogy igen tehát nem akarnak ott a főúton menni, hanem inkább menjünk a Pilisen keresztül. Na, ott aztán én izé dobtam ki a tacssot majdnem, még én értem föl utoljára. Hát edzett németek voltak. Mer **amúgy** ilyen hatvan év körüli korosztály, de hát ők ilyen sportosak.
18.	• Boldog élmény volt, mikor elhoztuk, **ugye** egy sharpeiről van szó, és hát ilyen kis pici volt, és nagyon aranyos.
19.	• Finom nagyon. Próbáld ki! • Hát de nem is láttam. Ezt lehet boltban kapni? • Aha, lehet boltba, például a Tescoba is akár. • Aha, aha. • **Mondjuk** nem olcsó.
20.	• Amik így eszembe jutottak, hogy tőlem is ezt például kérdezték tőlem, hogy ez hogy mi idegesítene, és ez olyan –, hát szal erre jó fölkészülni, mer **amúgy** eléggé váratlanul tudja érni az embert • Igen, ez tényleg váratlanul ért.
21.	• Ő az, akiről meséltél egyszer a – • Biztos meséltem. • Most anyukádéknál van, **ugye?** • Igen, igen, • Ha jól emlékszem?

3.B. Questionnaires in English

- ***Questionnaire A***

Dear Informant,

Please provide your personal data below required for the evaluation of this questionnaire.
Gender: ……..
Age: ……
Place of origin (city or town you have grown up in and spent most of your life so far): ……..
Major: ……..

The steps of the task :
1. Watch the videos.
2.Read the transcription of the statements thoroughly
3. After watching and reading each one of them:

a. Note if you could feel any difference between A and B (yes or no)

b. If any difference was noted, share your impressions -using your own words- to describe what the words in bold (***amúgy, mondjuk, ugye***) express in the particular situation, and what makes you feel that way.
Note: it is important that answers given here cannot be judged as either correct or false. I am interested in your opinion.

Transcriptions of the excerpts:

1.A.
- What are your salary requirements for this job?
- Well, about 250-300,000 HUF a month.

1.B.
- What are your salary requirements for this job?
- Well, **mondjuk** about 250-300,000 HUF a month.

Is there a difference between A and B? : Yes / No
Your opinion:……..

2.A.
- He is also, he's working now a lot, too, so we can't meet so often even if I'm at home.
- But he lives now in Budapest, doesn't he?
- Yes, yes, yes. He's from Szolnok, but they've moved to Pest.

2.B.
- He is also, he's working now a lot, too, so we can't meet so often even if I'm at home.
- But he lives now in Budapest, doesn't he?
- Yes, yes, yes. He's **amúgy** from Szolnok, but they've moved to Pest.

Is there a difference between A and B? : Yes / No
Your opinion:

3.A.
- I guess, in case I won't be able to find some job by then, I'll start to work on my English then, because now I still have a lot to learn.

3.B.

- I guess, in case I won't be able to find some job by then, I'll start to work on my English then, because **ugye** now I still have a lot to learn.

Is there a difference between A and B? : Yes / No
Your opinion:

4.A.
- Here [in Debrecen], there's more to experience and to see, for me at least.
- There [in Miskolc] there are beautiful mountains.

4.B.
- Here [in Debrecen], there's more to experience and to see, for me at least.
- **mondjuk** there [in Miskolc]there are beautiful mountains.

Is there a difference between A and B? : Yes / No
Your opinion:

5.A.
- And, well, I remember him standing at the window, smoking 'cause he doesn't usually smoke in the house, but he was so stressed out then that he just had to.

5.B.
- And, well, I remember him standing at the window, smoking 'cause he doesn't **amúgy** usually smoke in the house, but he was so stressed out that he just had to.

Is there a difference between A and B? : Yes / No
Your opinion:

6.A.
- However, at home you need silence to do it, nobody ahould disturb you for at least half an hour.

6.B.
- However, **ugye** at home you need silence to do it, nobody should disturb you for at least half an hour.

Is there a difference between A and B? : Yes / No
Your opinion:

7.A.
- It's hard to say positive things about myself, but yes, I like being in community, I can communicate well, I'm good at solving problems, I believe.

7.B.
- It's hard to say positive things about myself, but **mondjuk** yes, I like being in community, I can communicate well, I'm good at solving problems, I believe.

Is there a difference between A and B? : Yes / No
Your opinion:

8.A.
- I'm planning to move to Pest. So, it's only school that keeps me here [in Debrecen]. I love Pest.

8.B.
- I'm planning to move to Pest. So, it's only school that keeps me here [in Debrecen]. I love Pest **amúgy**.

Is there a difference between A and B? : Yes / No
Your opinion:

9.A.

- Then, when we were driving with hundred-thirty, hundred-eighty kms/h, I started to think, like, that we should maybe stop now, and not, like, practically chasing death, plus, like, risking my life, but then again, there was the adrenaline spinning me up a lot, and it was good like that.

9.B.

- Then, when we were driving with hundred-thirty, hundred-eighty kms/h, I started to think, like, that we should maybe stop now, and not, like, practically chasing death, plus, like, risking my life, but then again, there was **ugye** the adrenaline spinning me up a lot, and it was good like that.

Is there a difference between A and B? : Yes / No
Your opinion:

10.A.

- These things are good, I also tried some of them, only Kung fu, for a month, but that was shaolin Kung fu, there were no stages like that, I think.

10.B.

- These things are good, I also tried some of them, **mondjuk** only Kung fu, for a month, but that was shaolin Kung fu, there were no stages like that, I think.

Is there a difference between A and B? : Yes / No
Your opinion:

11.A.

- All of them are about Chuck Norris, and how tough he is and stuff, that every kid wants a Superman T-shirt, but Superman wants one with Chuck Norris.
- Hm, this one is good, too.
- There are, there are some good ones among these.

11.B.

- All of them are about Chuck Norris, and how tough he is and stuff, that every kid wants a Superman T-shirt, but Superman wants one with Chuck Norris.
- Hm, this one **amúgy** is good, too.
- There are, there are some good ones among these.

Is there a difference between A and B? : Yes / No
Your opinion:

12.A.

2. Japanese researchers found that cold beer may cause cancer. Do you know why?
3. No.
4. Because if you pour it on a crab [~'cancer' in Hungarian] then - on a sleeping crab, then it will wake up.
5. Ouch.
6. Well, I messed this one up too, but…
7. No, this was good, I think.
8. And a very bad joke too.
9. No no, it wasn't bad.

12.B.

- Japanese researchers found that cold beer may cause cancer. Do you know why?
- No.
- Because if you pour it on a crab [~'cancer' in Hungarian] then - on a sleeping crab, then it will wake up.
- Ouch.
- Well, I messed this one up **ugye** too, but…
- No, this was good, I think.
- And a very bad joke too.
- No no, it wasn't bad.

Is there a difference between A and B? : Yes / No

Your opinion:

13.A.

- What sort of position wouldn't you work in? This is to be meant generally. So, what kind of work do you feel to be far from you?
- From any point of view?
- Yes.
- Well, I wouldn't work on a pig shed.

13.B.

- What sort of position wouldn't you work in? This is to be meant generally. So, what kind of work do you feel to be far from you?
- From any point of view?
- Yes.
- Well, **mondjuk** I wouldn't work on a pig shed.

Is there a difference between A and B? : Yes / No
Your opinion:……...

14.A.
I've been living here for two and a half years, but, dunno, I haven't been out to a lot of places, I've been to Club Tornado a couple of times. But I'm not like such a party animal.
14.B
I've been living here for two and a half years, but, dunno, I haven't been out to a lot of places, I've been to Club Tornado a couple of times. But I'm **amúgy** not like such a party animal.

Is there a difference between A and B? : Yes / No
Your opinion:……...

15.A.
I've been studying in Debrecen, first in the six-year-programme of Ady Endre Grammar School, and now I'm doing my final year majoring in English BA, in this new three-year programme.
15.B.
I've been studying in Debrecen, first in the six-year-programme of Ady Endre Grammar School, and now I'm doing my final year majoring in English BA, **ugye** in this new three-year programme.

Is there a difference between A and B? : Yes / No
Your opinion: ……...

16.A.

- The goal is exactly to provoke surprise.
- Yes. Wow, I was really surprised! I was trying to hold myself back.
- I didn't notice.
- I know, because I tried to hold my reaction back.

16.B.

- The goal is exactly to provoke surprise.
- Yes. Wow, I was really surprised! I was trying to hold myself back.
- **Mondjuk** I didn't notice.
- I know, because I tried to hold my reaction back.

Is there a difference between A and B? : Yes / No
Your opinion: ……...

17.A.

- So you can't tell a joke right now?
- No. I don't know any. Well, like little rabbit is walking by the forest and falls off..so I'm like familiar with these kinds of lame jokes, but no.

17.B.

- So you can't tell a joke right now?
- No. I don't know any. Well, like little rabbit is walking by the forest and falls off..so I'm like familiar with these kinds of lame jokes, but **amúgy** no.

Is there a difference between A and B? : Yes / No
Your opinion: ……..

18.A.

- It was a happy moment when we took him home, it's a shar pei, and so he was tiny like that, and very cute.

18.B.

- It was a happy moment when we took him home, it's **ugye** a shar pei, and so he was tiny like that, and very cute.

Is there a difference between A and B? : Yes / No
Your opinion: ……..

19.A.

- I think your reaction was totally OK. You were able to talk pretty well.
- OK.
- Not everyone can do that. Of course, I'm telling you, our goal is also to surprise people, not necessarily to make you start talking in English.

19.B.

- I think your reaction was totally OK. You were able to talk pretty well.
- OK.
- Not everyone can do that. **mondjuk** Of course, I'm telling you, our goal is also to surprise people, not necessarily to make you start talking in English.

Is there a difference between A and B? : Yes / No
Your opinion: ……..

20.A.

- What I can remember is that for instance I was asked the same question, what would upset me, and it was like, well, so it's good to be prepared for this kind of questions, 'cause it can really surprise you.
- Yes, it did surprise me indeed.

20.B.

3. What I can remember is that for instance I was asked the same question, what would upset me, and it was like, well, so it's good to be prepared for this kind of questions, 'cause **amúgy** it can really surprise you.
4. Yes, it did surprise me indeed.

Is there a difference between A and B? : Yes / No
Your opinion: ……..

21.A.

3. Is he the one you talked about-
4. I'm sure I told you.
5. Is he at your parents now?
6. Yes, yes.
7. If I remember well.

21.B.

- I'm sure I told you.

- Is he at your parents now **ugye** ?
- Yes, yes.
- If I remember well.

Is there a difference between A and B? : Yes / No
Your opinion: ……..

Lastly, please leave a comment about how difficult you felt this task. What might have caused the difficulty? Do you have any suggestions on how the task could be made easier.
Thank you for your time, help and suggestions with this questionnaire.

▪ *Questionnaire B*

Please provide your personal data below required for the evaluation of this questionnaire.
Gender: ……..
Age: ……
Place of origin (city or town you have grown up in and spent most of your life so far): ……..
Major: ……..

The steps of the task :
1. Watch the videos.
2.Read the transcription of the statements thoroughly
3. After watching and reading each one of them:

a. Note if you could feel any difference between A and B (yes or no)

b. If any difference was noted, share your impressions -using your own words- to describe what the words in bold (*amúgy, mondjuk, ugye*) express in the particular situation, and what makes you feel that way.
Note: it is important that answers given here cannot be judged as either correct or false. I am interested in your opinion.

Transcriptions of the excerpts:

1.A.
The accommodation was in the Soho, which is one of the most dangerous neighborhoods in London, and two African-American young men stopped us and asked if we could give them some change. I said, sure, why not, there you go, ten pence. 'Cause, based on Hungarian mentality, whatever I give would make them happy, so, in Hungary I actually never give anything. And then he said, well, it wasn't enough for him, that I should give him ten pounds.
1.B.
The accommodation was in the Soho, which is one of the most dangerous neighborhoods in London, and two African-American young men stopped us and asked if we could give them some change. I said, sure, why not, there you go, ten pence. 'Cause, based on Hungarian mentality, whatever I give would make them happy, so, **mondjuk** in Hungary I actually never give anything. And then he said, well, it wasn't enough for him, that I should give him ten pounds.

Is there a difference between A and B? : Yes / No
Your opinion:……..

2.A.

Unfortunately, I understood in English that he wanted to stab me. I, like, backed off a little, my sister, like, backed off too, and then we said we didn't have money on us. Well, we had six hundred pounds and a notebook worth 200,000 HUF, so we didn't actually have cash, and then he was like pressing that we give him more.

2.B.

Unfortunately, I understood in English that he wanted to stab me. I, like, backed off a little, my sister, like, backed off too, and then we said we didn't have money on us. Well, we **amúgy** did have six hundred pounds and a notebook worth 200,000 HUF, so we didn't actually have cash, and then he was like pressing that we give him more.

Is there a difference between A and B? : Yes / No
Your opinion:……..

3.A.

- Well, the sad memory is also connected to this experience. When we had to say good bye to him. When he deceased, the poor thing, the chau chau, the previous dog.
- Yeah, uhum.
- That was pretty bad.

3.B.

1. Well, the sad memory is also connected to this experience. When we had to say good bye to him. When he deceased, the poor thing, **ugye** the chau chau, the previous dog.
2. Yeah, uhum.
3. That was pretty bad.

Is there a difference between A and B? : Yes / No
Your opinion:……..

4.A.

And what makes you upset at work?

4.B.

And what makes you **mondjuk** upset at work?

Is there a difference between A and B? : Yes / No
Your opinion:……..

5.A.

Well, we always used to organize it at Lake Balaton, but they switched exactly that year, I mean to Tiszaújváros. After all, it has a much nicer set of equipment and pitches and all, only it's not that popular as Balaton. But it's easier to organize something like that there because the pitches at Balaton are basically farther to begin with.

5.B.

Well, we always used to organize it at Lake Balaton, but they switched exactly that year, I mean to Tiszaújváros. After all, it has a much nicer set of equipment and pitches and all, only it's not that popular as Balaton. But **mondjuk** it's easier to organize something like that there because the pitches at Balaton are basically farther to begin with.

Is there a difference between A and B? : Yes / No
Your opinion:……..

6.A.

Now the last one I've heard is a Chuck Norris one too, that, dunno, some movie of his had a scene with a b-bear, and that, the bear is like sleeping in the forest or whatever in that campsite - the bear,I mean..or, or no, Chuck-- Chuck Norris, and then the bear is coming and attacking him, and, well, there is like this serious fight then, then the bear starts to back off finally.

6.B.

Now the last one I've heard is a Chuck Norris one too, that, dunno, some movie of his had a scene with a b-bear, and that, the bear is like sleeping in the forest or whatever in that campsite - the bear,I mean..or, or no,

Chuck-- Chuck Norris, and then **ugye** the bear is coming and attacking him, and, well, there is like this serious fight then, then the bear starts to back off finally.

Is there a difference between A and B? : Yes / No
Your opinion:……..

7.A.
There was a Futsal training at the university, and, well, he came to me, he was a little late, but he came and took the thing and said happy birthday and gave me a present.
7.B.
There was a Futsal training at the university, and, well, he came to me, **mondjuk** he was a little late, but he came and took the thing and said happy birthday and gave me a present.

Is there a difference between A and B? : Yes / No
Your opinion:……..

8.A.
I haven't really been in that area, even if I really like the western Hungarian part. 'Cause I'm from Pest, but I've been here for like two and a half years for work.
8.B.
I haven't really been in that area, even if I really like the western Hungarian part. 'Cause **amúgy** I'm from Pest, but I've been here for like two and a half years for work.

Is there a difference between A and B? : Yes / No
Your opinion:……..

9.A.
Oh yes, and then I got scared when I was entering the door, and my dad was there standing in the door. And that really scared me,'cause I hadn't expected that to happen.
9.B.
Oh yes, and then I got scared when I was **ugye** entering the door, and my dad was there standing in the door. And that really scared me,'cause I hadn't expected that to happen.

Is there a difference between A and B? : Yes / No
Your opinion:……..

10.A.

- Is very delicious. Try it.
- But I haven't even seen it. Can you get this in the supermarket?
- Yeah, you can, like in Tesco for example.
- Aha, aha.
- It's not cheap.

10.B.

- Is very delicious. Try it.
- But I haven't even seen it. Can you get this in the supermarket?
- Yeah, you can, like in Tesco for example.
- Aha, aha.
- **Mondjuk** It's not cheap.

Is there a difference between A and B? : Yes / No
Your opinion:……..

11. A.
Then there was a group or more that I took that decided that, yes, so they didn't want to drive there on the highway, but let's rather through Pilis. Now that was when I, like, almost threw up, and I was the last one to

get to the peak. Well, they were trained Germans. 'Cause they were an age group around sixty, but they are sporty like that.

11. B.

Then there was a group or more that I took that decided that, yes, so they didn't want to drive there on the highway, but let's rather through Pilis. Now that was when I, like, almost threw up, and I was the last one to get to the peak. Well, they were trained Germans. 'Cause **amúgy** they were an age group around sixty, but they are sporty like that.

Is there a difference between A and B? : Yes / No
Your opinion:……..

12.A.

- I'm still excited about Mosonmagyaróvár, 'cause now like, I just remembered, I wonder if you know that place, the was a restaurant where we always used to stop, I think it was called Park bufé. It was in the middle of , like, a forest.
- Was it in a park?
- A park. Or something, like, a forest

12.B.

- I'm still excited about Mosonmagyaróvár, 'cause now like, I just remembered, I wonder if you know that place, the was a restaurant where we always used to stop, I think it was called Park bufé. It was in the middle of , like, a forest.
- Was it in a park, **ugye**?
- A park. Or something, like, a forest

Is there a difference between A and B? : Yes / No
Your opinion: ……..

13.A.

- I somehow really miss the Lake Balaton, only it's too far from here.
- Well, yes, the Lake Tisza is also a very nice place.

13.B.

- I somehow really miss the Lake Balaton, only it's too far from here.
- Well, yes, **mondjuk** the Lake Tisza is also a very nice place.

Is there a difference between A and B? : Yes / No
Your opinion: ……..

14.A.

- They might not be able to handle this great popularity, 'cause its so different, not being able to go to the streets like that.
- It must be horrible, we also talk about these things with my parents, that all the photographers are looking at which dress I'm wearing at the moment.

14.B.

8. They might not be able to handle this great popularity, 'cause its so different, not being able to go to the streets like that.
9. **Amúgy** it must be horrible, we also talk about these things with my parents, that all the photographers are looking at which dress I'm wearing at the moment.

Is there a difference between A and B? : Yes / No
Your opinion: ……..

15.A.

- Yes, well, the Krishna people for instance usually refer to the Bhagavad Ghita or whatever, that this is mentioned in that, and you mustn't do it.
- Yeah I know

- And this is in fact really an old book.

15.B.

- Yes, well, the Krishna people for instance usually refer to the Bhagavad Ghita or whatever, that this is mentioned in that, and you mustn't do it.
- Yeah I know
- And this is **ugye** in fact really an old book.

Is there a difference between A and B? : Yes / No
Your opinion: ……..

16.A.

1. I should have asked where exactly I could find you. One point four? And where exactly is that? And then I started to look for it here, okay that it's a book store but where around is the bookstore? It was very hard to find you here.
2. Well, other people usually also have a problem finding us. This is really a bit of a hidden corner of the place.

16.B.

A. I should have asked where exactly I could find you. One point four? And where exactly is that? And then I started to look for it here, okay that it's a book store but where around is the bookstore? It was very hard to find you here.
B. Well, mondjuk other people usually also have a problem finding us. This is really a bit of a hidden corner of the place.

Is there a difference between A and B? : Yes / No
Your opinion:……..

17.A.

- Have you ever had fear of death or ever been in a near-death state?
- Well, I've had fear of death. That I was sitting in a, like, car, in Pest, and then there was a parent from Pest driving the car, a dad, and then he was driving in a way, I got scared or whatever, and , I, like, sank in the seat and thought that, err, god, we're gonna die, we almost hit that car-- 'cause I'm not used to Budapest traffic.

17.B.

- Have you ever had fear of death or ever been in a near-death state?
- Well, I've had fear of death amúgy. That I was sitting in a, like, car, in Pest, and then there was a parent from Pest driving the car, a dad, and then he was driving in a way that scared me a lot or whatever, and , I, like, sank in the seat and thought that, err, god, we're gonna die, we almost hit that car-- 'cause I'm not used to Budapest traffic.

Is there a difference between A and B? : Yes / No
Your opinion:……..

18.A.

I feel that basically I would be competent to work in something like this, moreover, as I've said, I'm interested in it, too.

18.B.

I feel that basically I would be competent to work in something like this, moreover, ugye as I've said, I'm interested in it,too.

Is there a difference between A and B? : Yes / No
Your opinion:……..

19.A.

- The iwiw, so the iwiw is rather my moms' generation, really, so that they find each others high school class, classmates.

- Aha, aha, aha.
- And the university classmates.
- Aha.
- It's not fun for us though, 'cause after all, we're doing all that on the phone.
- Yes, well, although when it came out back then, like, in our circles, 'cause I'm a bit older, older than you. This was cool then, it was very popular, so , I mean that primary school classmates, right? We hadn't seen them for a long time and it was easy to find them.

19.B.

- The iwiw, so the iwiw is rather my moms' generation, really, so that they find each others high school class, classmates.
- Aha, aha, aha.
- And the university classmates.
- Aha.
- It's not fun for us though, 'cause after all, we're doing all that on the phone.
- Yes, well, although mondjuk when it came out back then, like, in our circles, 'cause I'm a bit older, older than you. This was cool then, it was very popular, so , I mean that primary school classmates, right? We hadn't seen them for a long time and it was easy to find them.

Is there a difference between A and B? : Yes / No
Your opinion:……..

20.A.

- Wow I was really afraid then.
- Aha
- There, really. Dunno, but then there we almost hit that car.

20.B.

- Wow I was really afraid then amúgy.
- Aha
- There, really. Dunno, but then there we almost hit that car.

Is there a difference between A and B? : Yes / No
Your opinion:……..

21.A.

1. That was the best accommodation because it was like a castle, not in the city, but a little way out of it.
2. Hm.
3. But I can't remember the name, also, for instance...
4. Is it on the way to Győr?
5. Yes yes.
6. Yes, it's a bit out of the city on the way to Győr, it's like a separate castle actually.

21.B.

- That was the best accommodation because it was like a castle, not in the city, but a little way out of it.
- Hm.
- But I can't remember the name, also, for instance...
- Is it on the way to Győr ugye?
- Yes yes.
- Yes, it's a bit out of the city on the way to Győr, it's like a separate castle actually.

Is there a difference between A and B? : Yes / No
Your opinion: ……..

Finally, please leave a comment about how difficult you felt this task. What might have caused the difficulty? Do you have any suggestions on how the task could be made easier?
Thank you for your time, help and suggestions with this questionnaire.

- ***Questionnaire C***

Task sheet

Dear Informant,

Please provide the following personal data:

Gender: ……
Age: ……
Place of birth (where you grew up): ……
Major: ……
Languages you speak (languages,level): ……

Follow the steps:

• Watch the short videos and read the transcripts of the statements.
• Please mark on a scale (1-4) if
  - the words in bold can be left out of the sentences without a change in the meaning (1),
  - that the word modifies and add subtlety to meaning (2,3), or
  - that the word alters the meaning of the statement essentially, and without it, the statement would become meaningless, or have a different meaning (4).

• Please match the number of the categories below expressing the role and function/meaning of the words in bold in the particular sentence. Several (mre than one) categories can be assigned to one sentence if you find it necessary. In case you don't find the right category in our list, don't hesitate to give your personal opinion in the comments section about the meaning /function of the words.

Categories:

1. Topic change (initiating, introducing topic change)
2. Giving an example (meaning: ~'for example', supporting own ideas)
3. Expressing a question which expects a positive answer or agreement (asking for reassurance)
4. Approximation, guess (meaning: ~'more or less so', 'like', 'about')
5. Explanation, explanatory sequence, introducing an explanation, marking the evidentiality of the communicated content
6. Lexical search or uncertainty (recalling something)
7. Contrast, concession, opposing views or ideas (meaning: ~'as opposed to', 'while', 'on the other hand')
8. Marking the addition of extra information, commentary, giving unrequested opinion , side sequence (meaning: ~'by the way')
9. Introducing new piece of important information, new perspective
10. Attitude marking, expressing personal feelings towards either the discourse topic or the listener
11. Referring to background knowledge of the listener, to common knowledge or trivia, referring to already communicated content
12. Emphasizing, calling attention to a detail
13. Filler, empty word without meaning, omittable, unnecessary item that does not add any meaning to the utterance

Code	Transcript
1.	• What are your salary requirements for this job? • Well, **mondjuk** about 250-300,000 HUF a month.
2.	• He is also, he's working now a lot, too, so we can't meet so often even if I'm at home. • But he lives now in Budapest, doesn't he? • Yes, yes, yes. He's **amúgy** from Szolnok, but they've moved to Pest.
3.	• I guess, in case I won't be able to find some job by then, I'll start to work on my English then, because **ugye** now I still have a lot to learn.
4.	• Here [in Debrecen], there's more to experience and to see, for me at least. • **mondjuk** there [in Miskolc]there are beautiful mountains.
5.	• And, well, I remember him standing at the window, smoking 'cause he doesn't **amúgy** usually smoke in the house, but he was so stressed out that he just had to.
6.	• I feel that basically I would be competent to work in something like this, moreover, **ugye** as I've said, I'm interested in it,too.
7.	• The accommodation was in the Soho, which is one of the most dangerous neighborhoods in London, and two African-American young men stopped us and asked if we could give them some change. I said, sure, why not, there you go, ten pence. 'Cause, based on Hungarian mentality, whatever I give would make them happy, so, **mondjuk** in Hungary I actually never give anything. And then he said, well, it wasn't enough for him, that I should give him ten pounds.
8.	• Unfortunately, I understood in English that he wanted to stab me. I, like, backed off a little, my sister, like, backed off too, and then we said we didn't have money on us. Well, we **amúgy** did have six hundred pounds and a notebook worth 200,000 HUF, so we didn't actually have cash, and then he was like pressing that we give him more.
9.	• Then, when we were driving with hundred-thirty, hundred-eighty kms/h, I started to think, like, that we should maybe stop now, and not, like, practically chasing death, plus, like, risking my life, but then again, there was **ugye** the adrenaline spinning me up a lot, and it was good like that.
10.	• These things are good, I also tried some of them, **mondjuk** only Kung fu, for a month, but that was shaolin Kung fu, there were no stages like that, I think.
11.	• All of them are about Chuck Norris, and how tough he is and stuff, that every kid wants a Superman T-shirt, but Superman wants one with Chuck Norris. • Hm, this one **amúgy** is good, too. • There are, there are some good ones among these.
12.	• Japanese researchers found that cold beer may cause cancer. Do you know why? • No. • Because if you pour it on a crab [~'cancer' in Hungarian] then - on a sleeping crab, then it will wake up. • Ouch. • Well, I messed this one up **ugye** too, but… • No, this was good, I think. • And a very bad joke too. • No no, it wasn't bad.
13.	• What sort of position wouldn't you work in? This is to be meant generally. So, what kind of work do you feel to be far from you? • From any point of view?

Code	Transcript
	• Yes. • Well, **mondjuk** I wouldn't work on a pig shed.
14.	• I've been living here for two and a half years, but, dunno, I haven't been out to a lot of places, I've been to Club Tornado a couple of times. But I'm **amúgy** not like such a party animal.
15.	• I've been studying in Debrecen, first in the six-year-programme of Ady Endre Grammar School, and now I'm doing my final year majoring in English BA, **ugye** in this new three-year programme.
16.	• The goal is exactly to provoke surprise. • Yes. Wow, I was really surprised! I was trying to hold myself back. • **Mondjuk** I didn't notice. • I know, because I tried to hold my reaction back.
17.	• Then there was a group or more that I took that decided that, yes, so they didn't want to drive there on the highway, but let's rather through Pilis. Now that was when I, like, almost threw up, and I was the last one to get to the peak. Well, they were trained Germans. 'Cause **amúgy** they were an age group around sixty, but they are sporty like that.
18.	- It was a happy moment when we took him home, it's **ugye** a shar pei, and so he was tiny like that, and very cute.
19.	• Is very delicious. Try it. • But I haven't even seen it. Can you get this in the supermarket? • Yeah, you can, like in Tesco for example. • Aha, aha. • **Mondjuk** It's not cheap.
20.	5. What I can remember is that for instance I was asked the same question, what would upset me, and it was like, well, so it's good to be prepared for this kind of questions, 'cause **amúgy** it can really surprise you. 6. Yes, it did surprise me indeed.
21.	• I'm sure I told you. • Is he at your parents now **ugye** ? • Yes, yes. • If I remember well.

Questionnaire C
Answer sheet

Code	Degree of necessity Omittable, no meaning (1), modifies meaning (2,3) important (4)	Category/ Categories	Comments
1	1 2 3 4		
2	1 2 3 4		
3	1 2 3 4		
4	1 2 3 4		
5	1 2 3 4		
6	1 2 3 4		
7	1 2 3 4		
8	1 2 3 4		
9	1 2 3 4		
10	1 2 3 4		
11	1 2 3 4		
12	1 2 3 4		
13	1 2 3 4		
14	1 2 3 4		
15	1 2 3 4		
16	1 2 3 4		
17	1 2 3 4		
18	1 2 3 4		
19	1 2 3 4		
20	1 2 3 4		
21	1 2 3 4		

HuComTech Corpus

Annotation Guidelines

version 4.0

20 Jan, 2012

Version	***Document history***	***Date***	***Author***
1.0	Initial version (p. 11)	Dec. 29. 2009	*Kinga Pápay*
1.1	comments on initial version (p. 13)	Jan. 4. 2010	*Alexa Bódog, Ágnes Abuczki*
1.2	Additional chapter: Annotating visual characteristics, changes in transcription symbols, number of labels (p. 16)	02/23/10	*Kinga Pápay,* *Szilvia Szeghalmy,* *Ágnes Abuczki*
1.3	Additional chapter: Foreign languages, Contractions. Changes in: file naming, annotation levels, IP labels, discourse labels, transcription rules(acronyms, silence, restarts, noise, idiosyncratic words) (p. 17)	05/07/10	*Kinga Pápay*
1.4	Updated video annotation chapter	05/12/10	*Szilvia Szeghalmy*
2.0	Updated version, additional backchannels, table of audio annotation levels (p. 17)	07/13/10	*Kinga Pápay*
3.0	Additional chapter: New levels of annotation: Multimodal pragmatic annotation (p. 23)	8 April, 2011	*Ágnes Abuczki*
3.1	Review, comments and updating (p. 24)	15 April, 2011	*László Hunyadi, Alexa Bódog*
4.0	Final review	20 Jan, 2012	*Ágnes Abuczki*

1 Levels of annotation in Praat

Annotation process is simultaneous in 2 levels: functional and physical level of the dialogue. The physical level consists of orthographic transcriptions and the physical manifestation of the given prosody. We use altogether 3 functional sublevels and 2 physical transcriptional sublevels (see Figure 1).

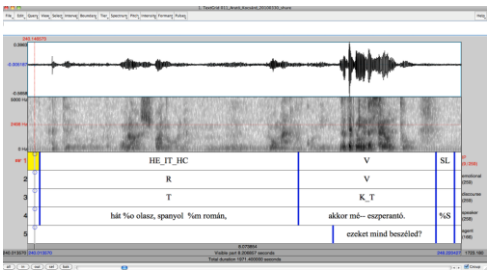

Figure 1: Audio annotation tool and levels

Functional level

Level one is the functional level. The functional level has three sublevels which labels represent the appropriate intonational, emotional and discourse phrase type. These levels are to be annotated only when the speaker (interviewee) speaks. Suggested labels regarding intonational phrase type, emotional and cognitive state type and discourse phrase type are the following:

2 Labels of annotation in Praat

Labels of intonational phrase types

HC = head clause – in case of embeddings or insertions, mark the divided clauses with HC1, HC2

SC = subordinate clause – in case of embeddings or insertions use SC1, SC2

EM = embedding (usually manifests as a subordinate clause embedded in a head clause)

IN = insertion (usually manifests as a head clause embedded in a head clause), e.g. mit tudom én

BC = backchannel

HE = hesitation – use an _ for linking the clause type in which it occurs, e.g. HE_SC

RE = restart – use an _ for linking the clause type in which it occurs, e.g. RE_HC1

IT = iteration – use an _ for linking the clause type in which it occurs, e.g. IT_IN (repetition of a prosodic pattern, e.g. in case of enumerations and some backchannels (for instance: jajaja, igen, igen, igen)

SL = silence – mark it only if it exceeds 250 ms. If it occurs within a clause, use an _ for linking the clause type in which it occurs, e.g. SL_HC

In case of overlapping speech, mark the given clause with a V. Anyway this level is only to be annotated when the speaker speaks, if the agent speaks, it should be left blank.

When the clause is chopped off, use a single dash after the given label (and no spaces between), e.g. HC- or SC-.

Labels of expressed attitudes

Suggested expressed attitudes are the following:

N = neutral

S = sad

H = happy, laughing

P = surprised

R = recalling, thinking

T = tensed

O = other

SL = silence – mark it only if it exceeds 250 ms

In case of overlapping speech, use the label V. Anyway this level is only to be annotated when the speaker speaks, if the agent speaks, it should be left blank.

Labels of discourse units

T = turn-take (the beginning timestamp of this label insidcates the beginning of the utterance)

G = turn-give and/or turn-end/end of speaking/TRP (the final timestamp of this label insidcates the end of the utterance)

K = turn-keep (a seqwuence of utterance-internal clauses)

B = backchannel (at this audio level, only the acoustic realizations of backchannels are markerd, excluding the nonverbal-visual realizations of backchanneling behavious (e.g. nodding)

SL = silence – mark it only if it exceeds 250 ms (silent parts longer than 150 ms wil be annotated by Ágnes Abuczki using a Praat script)

In case of overlapping speech, use the T/G/K/B_T/G/K/B convention's first part for the speaker, second part for the agent. This level is only to be annotated when the speaker speaks, if the agent speaks, it should be left blank.

Transcription levels

We use 2 separate levels for the two participants of the discourse; level four is for the speaker (interviewee) and level five is for the agent (interviewer). In case of a discourse, the speech transcription should alternate between the two levels.

3 Transcription rules

3.1 Orthography and spelling

3.1.1 Capitalization

Capitalization in the transcripts is used to aid human comprehension of the text. Annotators should follow accepted standard written capitalization patterns (proper names, and so on) except that they must not capitalize (non-proper name) words at the beginnings of sentences.

3.1.2 Spelling

Annotators use standard orthography, word segmentation, and word spelling. All files must be spell-checked after transcription is complete. When in doubt about the spelling of a word or name, annotators consult a standard reference, like an online or paper dictionary, world atlas or news website.

3.1.3 Punctuation

Annotators should use standard punctuation for ease of transcription and reading. Acceptable punctuation is limited to periods, question and exclamation marks at the end of a sentence, and commas within a sentence. Transcripts should not contain quotation marks, colons, semicolons, single (stand-alone) dashes, or ellipses in transcribing. Punctuation is written as it normally appears in standard writing.

3.1.4 Accents

All accents should be used that are orthographically required, even in case of capital letters. This is important for the phonetic transcription process, which will be performed automatically based on the orthographic transcription. Using UTF-8 coding is recommended when typing.

Éva
árvíztűrő

3.1.5 Backchannels

Annotators limit their use of backchannels to those that can be found in the list below:

aha
uhum
uh
óh
áh
ejha
húha
üűm (negation)
hm
jaj

juj
csz
ja
jajaja
igen (igen, igen)

And use punctuation marks, e.g. uhum. igen? ja!

3.1.6 Numbers

All numerals are written out as complete words. Hyphenation is used if standard orthography requires it. Examples:

huszonegy
ezerháromszázhatvankilenc
háromezer-nyolcvanhat

Note: *kettő* and *két* are both regarded as standard orthographic forms. If the speaker uses them, the transcription should be the same as uttered by the speaker.

3.1.7. Hyphenated words, compounds and "locutions"

In general, annotators should follow again the Hungarian orthography standards. For instance:

egy-két
Duna-part

Compounds can be tricky! When in doubt, annotators should consult a dictionary (*A magyar helyesírás szabályai*) or talk to their supervisor.

Note: please be careful by using hyphens, because spaces must not be used within hyphenated words.

3.1.8 Abbreviations

In general, abbreviations should be avoided and words should be transcribed exactly as spoken.

3.1.9 Acronyms

Acronyms that are pronounced as a single word should be written in all capital letters, and preceded by the @ symbol, use – without spaces for linking more words:

@AIDS
@MÁV
@ELTE-BTK

3.1.10 Spoken letters

Abbreviations that are normally written as a single word, but are pronounced as a sequence of individual letters should be written in all caps, with each individual letter preceded by a ~ tilde symbol:

~B ~M ~E
~P ~D ~SZ

Similarly, individual letters that are pronounced as such should be written in caps, with each letter preceded by a tilde:

betűzöm, ~K ~O ~V ~Á ~T ~S

3.2 Disfluent speech

3.2.1 Introduction

Regions of disfluent speech are particularly difficult to transcribe. Speakers may stumble over their words, repeat themselves, utter partial words, restart phrases or sentences, and use lots of hesitation sounds. Annotators should take particular care in sections of disfluent speech to transcribe exactly what is spoken, including all of the partial words, repetitions and filled pauses used by the speaker. In some cases segmentation will be required, this will be mentioned in the description of the given subsection.

3.2.2 Filled pauses, hesitation sounds and silence

Filled pauses are non-lexemes (non-words) that speakers employ to indicate hesitation or to maintain control of a conversation while thinking of what to say next. Each language has a limited set of filled pauses that speakers can employ. Annotators use the standardized spellings shown in the examples below for filled pauses. The spelling of filled pauses is not altered to reflect how the speaker pronounces the word (e.g., typing MM for a loud "m" or öööööööööö for a long "o".) Filled pauses are always indicated with %. Filled pauses in Hungarian are defined as (don't leave space between the two characters):

%o
%m

Silences longer than 250 ms should be marked as %s.

Other sorts of filled pauses that do not fit exactly the above categories, should be classified so that they obtain a symbol from the above set which is the closest to the acoustic phenomenon.

Lengthening: put a % before the lengthened vowel/consonant, e.g.:

%és
d%e
%nem
h%át

Remember that if you use % on level 4, then you should also use HE on level 1.

3.2.3 Partial words

When a speaker breaks off in the middle of the word, annotators transcribe as much of the word as can be made out. A double dash -- is used to indicate point at which word was broken off.

persze, telj-- teljesen.
elmegyek vá-- %o --sárolni.

3.2.4 Restarts

Speaker restarts are indicated with <repeated words> signs. Annotators use this convention for cases where a speaker stops short, cutting him/herself off before continuing with the utterance.

a Vajda <Vajda> Péter utcát keresem.
a Vajda Pé-- <a Vajda> Péter utcát keresem.

3.2.5 Mispronounced words

A plus symbol + is used for obviously mispronounced words (not regional or non-standard dialect pronunciation). Annotators should transcribe using the standard spelling and should not try to represent the pronunciation.

+bizonyosan, na, bizonyosan látta a boltot.
ezt a fószert már láttam a +televízióban.

3.3 Noise

3.3.1 Speaker noise

Speaker noise is a noise produced by the speaker itself, usually in connection with mouth movement or air inhalation/exhalation. Therefore, these noises do never overlap the speech. Speaker noises are identified with one of the following five tags (don't leave a space between the two characters):

laugh	*{l}*
cough	*{c}*
sneeze	*{s}*
breath	*{b}*
lipsmack	*{p}*

3.3.2 Instantaneous noise

If there is noticeable intermittent background noise (not speaker and not stationary noise!) present during a span of speech, annotators employ a noise notation. An instantaneous noise, like a short clap, paper rustle, door slamming shut, is quarantined by the [(noise begin) and] (noise end) symbol, which are inserted preceding and following the word during which the noise occurs (they should quarantine the whole part of speech during which the noise occurs). Example:

nem [hallom, amit mond].

For short noises, use an empty [ ], for beep sounds, use [b].

Instantaneous noises should be marked only on level 4.

3.4 Additional markup

3.4.1 Hard-to-understand sections

Sometimes an audio file will contain a section of speech that is difficult or impossible to understand. In these cases, annotators use double parentheses (( )) to mark the region of difficulty. Sometimes it is possible to take a guess about the speaker's words. In these cases, annotators transcribe what they think they hear and surround the stretch of uncertain transcription with double parentheses.

azt mondta ((menjek el))

If an annotator is truly mystified and cannot make a guess what the speaker is saying, (s)he uses empty double parentheses to surround the untranscribed region. For example:

(( ))

3.4.2 Idiosyncratic words and contractions

Occasionally a speaker will make up a new word on the spot. These are not the same as slang words, but rather are words that are unique to the speaker in that conversation. If annotators encounter an idiosyncratic word, they should transcribe it to the best of their ability and mark it with an asterisk (*). For instance,

*Miért mondta azt, hogy *drr?*

**asszem*

**dógozom*

**mér gondolod?*

3.4.3 Foreign languages

Portions of speech in another language are annotated using the [Language: text] convention to indicate the language and to transcribe the words that are spoken in that language. For instance,

itt is van egy [German: Zimmer frei].

láttam a [Hunglish: you tube-on].

If the annotator does not know the name of the language or what is being said, they should use the tag [foreign] in isolation. In this case do not type the foreign word itself.

[foreign] beszélgettünk.

Summary of audio annotation levels and symbols

Table 1: Audio annotation levels

Level 1: Intonational phrases (IP labels)	Level 2: Emotions (emotional labels)	Level 3: Diaogue turns (discourse labels)	Level 4: Transcription of speaker's speech (speaker text)	Level 5: Transcription of agent's speech (agent text)
HC (head clause)	N (neutral)	T (turn-take)	text + symbols	text + symbols
SC (subordinate clause)	S (sad)	G (turn-give)		
EM (embedding)	H (happy, laughing)	K (turn-keep)		
IN (insertion)	P (surprised)	B (backchannel)		
BC (backchannel)	R (recalling, thinking)			
HE (hesitation) + linking, e.g. HE_HC1	T (tensed)			
RE (restart) + linking	O (other)			
IT (iteration) + linking				
SL (silence) + linking	SL (silence)	SL (silence)		
V (overlapping speech)	V (overlapping speech)	Overlapping speech, e.g. K_T		

Table 2: Symbols of audio annotation levels 4 and 5

Condition	Markup	Example	Explanation
Numbers	spelled out	nyolcszázöt	Write out full text, not digits.
Punctuation	comma, question, explanation, period	, ? ! .	Do not use other symbols.
Acronyms	@	@MÁV, @DE-BTK	Letters in caps, no space between
Spelling	~	~B ~M ~E	All with spaced caps
Filled pause, pause	%	%o, %m, %s	Filled pauses limited to these 2 items, and signing each lengthened character
Partial words	--	természe--	Transcribe as much of the word as you hear. No spaces preceding/following the word!
Restart	< >	azt hi-- <azt> hiszem	Use it if speaker stops and restarts
Mispronunciation	+	+pszichológus	Incorrect pronunciation. Note: non-standard, but correct pronunciations are to be accepted!
Speaker noise	{}	{b} {c} {l} {s}	Non-phoneme sounds produced by the speaker. Use only these 5 categories! Mark up only well audible speaker noises.
Instantaneous non-speaker noise	[ ] [b] – for beep sounds	mit [mondasz]?	Short intermittent noise. Mark up only well audible noises.

Semi-intelligible speech	((transcript))	itt van a ((szomszédban))	If you are uncertain about what is said
Unintelligible speech	(( ))	(( ))	If you do not understand what is said
Idiosyncratic words	*	*drrr	Made-up word
Foreign word	[Language: text] [foreign]	[Hunglish: you tube-ról]	For foreign sentences, use only [foreign] and quarantine them by using timestamps.

4 Annotating visual characteristics – video annotation

4.1 Annotation tool

HuComTech uses its own annotation tool, which follows the hierarchical annotation model. The levels, groups, events, their attributes, and some other features of annotation can be described with its xml schema. During the annotation process, the user can only choose one of the predefined labels for the event, or an empty label (see Figure 3). Thus annotators can edit and also delete labels.

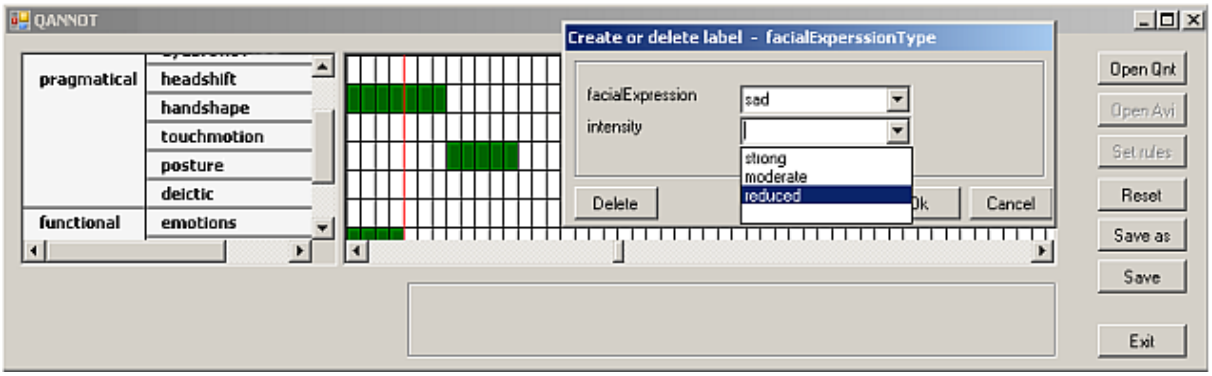

Figure 2: Annotating gestures and facial expressions

4.2 Nonverbal signal labelling categories

Notation:

Label annotating

Label computing

5.2.1 Physical level

facialExpressionType

natural, happy, surprise, sad, *recall, tense*

gazeType

up, down, right-up, left-up, right-down, left-down, right, left, forwards, *blink*

eyebrowsType

up {left, right, both}, *scowl*

headshiftType

raise Chin rises

lower Chin lowers.

raise + turn {left | right} Diagonal movement.

lower + turn {left | right} Diagonal movement.

sideways {left | right} Tilting the head toward one side.

turn {left | right} Rotation of the head. Only head, not the body!

nod It is therefore distinguished from a mere raise-lower sequence by assuming the intention to nod.

shake Therefore distinguished from a mere turn-turn sequence by assuming the intention to shake.

handshapeType

open-flat {left hand | right hand}

half open-flat {left hand | right hand}

open-spread {left hand | right hand}

fist {left hand | right hand}

index-out {left hand | right hand}

thumb-out {left hand | right hand}

crossing fingers

touchmotionType

tap {neck| chin|arm |bust | mouth|forehead|chin|face },

scratch {neck|chin | eye |ear| nose | head | arm | bust}

postureType

normal (upright), lean {foward | back | left | right}, *crossing arms, crossing fingers, holding head*, rotate {left | right}, shoulder up

intensityType

strong, moderate, reduced Amplitude of gesture, intensity of emotion.

computType

velocity Velocity of gestures.

trajectory Trajectory of gestures.

deicticType

addressee Subject points to addressed person.

self Subject points to him/herself usually by putting the hand on his/her chest.

shape Subject draws something in the air.

object Subject points to object.

measure Subject shows measure.

4.2.2 Functional level

emotionType

natural, happy, surprise, sad, recall, tense

emblemType

attention

Index finger held motionless in the air to emphasize the importance of what is said, seen or heard.

block

A gesture of total refusal ("No way!"), blocking suggestions/arguments made or expected ("No matter what, I don't accept/believe/do this."). Usually, palm toward addressee, moving like along a wall in front of the speaker either with palm facing the addressee or with index finger.

doubt Gesture of doubt or partial concession ("You are right, but...").

disagree

Head shaking.

agree

Nod.

doubt-shrug

A gesture indicating doubt ("I wouldn't count on that."), ignorance ("I don't know.") or indifference ("I don't care."). Movement consists of showing the insides of your hands (palm up) and is usually accompanying by a raising of the shoulders (shrug).

finger-ring

A sign where the index finger meets the thumb, other fingers spread out or relaxed, usually signalling fine quality, good taste etc. In a more metaphoric sense it means that the matter is very subtle, that the reasoning is very precise/sharp. Note that the same gesture is used by conductors.

hands-up

Both hands are raised, palms facing front. Literally taken, a gesture of surrender, showing lack of weapons (nothing to hide) and opening up body.

more-or-less

Hand(s) wiggles, palm down, eyes are slits to indicate an effort to estimate something. Verbalization: "more or less", "about/around", "approximately".

number

Fingers indicate a number. One finger (thumb or index finger) indicates number one, two fingers indicate number two etc.

one-hand-other-hand

Verbalization: "on one hand... on the other hand". Usually motioning with hand, fist, finger, arm in one direction, then in the other.

refusal

Verbalization: "no", "really not". Waving hand/palm toward addressee, usually at a low level and with low intensity.

surprise-hands

Signalling some unexpected event.

other

4.2.3 Basic level

start The beginning of the conversation.

finish The end of the conversation.

Table 3: Video annotation scheme

Level	Group	Event	Attribute
Basic	Communication	start, end	begin, end
Physical	Facial expression	natural, happy, surprise, sad, recall, tense	begin, end, intensity
	Gaze	blink, orientation (up, down, left, etc.)	begin, end, intensity
	Eyebrows	up, scowl	begin, end, side
	Head movement	nod, shake, turn, sideways, etc.	begin, end, orientation – optional
	Hand shape	open, half-open, fist, index-out, thumb-out, spread	begin, end, side
	Touch motion	tap, scratch	begin, end, touched part of body
	Posture	upright, lean, rotate, crossing arm, holding head, shoulder up	begin, end, orientation – optional
	Deictic	addressee, self, shape, object, measure	begin, end, side
Functional	Emotions	natural, happy, surprise, sad, recall, tense	begin, end, intensity
	Emblems	attention, agree, disagree, refusal, doubt, numbers, etc.	begin, end

5 Multimodal pragmatic annotation

5.1. Goals of annotation:

the notion of pragmatic annotation (PA): the process of marking up stretches of talk with information about the communicative acts performed

to find the underlying structure of communicative behaviour as well as the visual, acoustic and verbal correlates (in the further audio and video levels of the annotation design) of different communicative acts

the final goal of the pragmatic annotation of the HuComTech corpus is the recognition of communicative acts, and then, in response, the automatic generation of appropriate replies.

to identify and *disambiguate* communicative acts for technological implementation and improvement of dialogue management systems.

5.2. Method of the annotation:

annotation is performed based on both audio and video input

annotators load the video recording into Qannot and both watch and listen to the interaction

all the levels are annotated on the sides of both the interviewer and the interviewee

5.3. Justification:

Basic units of our PA: *communicative acts*. Why are *communicative acts* the basic units of PA?

Speech act theory provides a formal and clean view of communication.

Successful communication depends on the addressee's understanding of the communicative functions of the speaker's utterances in the way intended by the speaker.

Utterances not only encode intentions but also respond to previous utterances and invoke further responses.

Communicative acts can form an adjacency pair. Given one part of the pair, the other is normally predictable.

HCI can be seen as enacting communicative acts (asking, requesting, replying, accepting, etc.)

Definition of communicative act (CA):

regular patterns of utterances in dialogues

multimodal act from different modalities:

visual

verbal

non-verbal acoustic cues

and ostensive behaviour without code using.

5.4. Important remarks:

Cues for CA recognition:

Syntactic cues: e.g. declarative structure and word order is a possible cue for identifying constatives.

Verbal cues: e.g. the use of performative verbs and discourse markers.

Acoustic cues: prosody, including intonation, is another cue for communicative act identity.

Visual cues: Intonation alone is not a guarantee for communicative act identity, visual cues, such as facial expressions, posture and hand gestures must also be taken into account. E.g. head nod is a typical marker of commissives (including agreement), pointing by fingers or by gaze is a typical cue of directives.

5.5. Taxonomy:

Table 4. Taxonomy of multimodal annotation (annotated elements)

Tier names	*Values*	*Corresponding ISO category*	*Perceived cues to our values (one or more of the following patterns observed)*	*Remarks on ISO categories (comparison of our values and ISO categories)*
Communicative act (CA)	constative	information-providing functions	Our constative category involves utterances of answering, confirming, informing, predicting and recalling, usually uttered in declarative sentences as a reply to a previous directive act such as a question or command.	ISO category involves utterances of inform, answer, agreement, disagreement, correction, confirm and disconfirm. In both our and the ISO category, the speaker wants to make the addressee aware of certain information.
	directive	There are two ISO categories covering our directive act: information-seeking functions + directive functions (ISO distinguishes these two act subtypes of the more global directive act type.)	Our directive category involves utterances of asking, requesting and suggesting, usually uttered in imperative or interrogative sentences where the speaker tells the addressee to do something.	HuComTech-scheme involves the same category as ISO directive function, additionally involving the information-seeking functions (questions) of the ISO scheme as well. Our directive function covers and involves both the directive and information-seeking functions odf ISO. Both categories (ours and ISO) basically mean that the speaker tells the addressee to do something.
	commissive	commissive functions	Our directive category involves utterances of agreeing, offering and promising, uttered in declarative sentences. Verbal cues: use of performative verbs (such as promise, invite, and confirm).	Almost the same, ISO commissive function involves promise and offer as extra acts (but excludes the act of agreeing sincs it is annotated as information-providing function in ISO).

	acknowledging	social obligation management functions	Our acknowledging category involves utterances of greeting (e.g. Jó napot kívánok!='Good day') and accepting (e.g. Köszönöm.='Thank you'), uttered in declarative or imperative sentences, sometimes acccompanied by smiling.	Acknowledging is very similar to social obligation management functions, which involves greeting, goodbye, introduction, thanking and apology. Both HuComTech and ISO category covers social acts to be friendly and to acknowledge the presence of the other speaker, e.g. by greeting him/her.
	indirect	none	What is meant is different from what is said in the utterance. The utterance expresses implicit, hidden meanings. E.g. in the question *Can you pass the salt?*, the locution (or literal meaning) and the illocution (or intended meaning) of that utterance are different: it is literally a yes/no question, but it is in fact uttered as a request or polite directive for action.	-
Supporting act (SA)	backchannel	allo-feedback and auto-feedback	Verbal cues: producing short iterative phrases. Visual cues: nodding and/or eye contact. Either nonverbal or verbal cues, or the presence of both.	Same. Auto- and allo-feedback acts are often performed nonverbally, for instance by nodding, by looking at the speaker (indicating attention), by placing a hand behind an ear (‘didn’t hear you"), by raising eyebrows, or by frowning.
	politeness marker	none	Verbal cues: uttering polite phrases (e.g. please, 'légyszi'). Visual cues: producing smiles.	-

	repair	none	Verbal cue: producing reformulation and/or rephrasing, introduced by disocurse markers, such as *vagyis, vagy inkább* (='or rather'), *szóval, tehát* (='so'), or *pontosabban* (='more precisely', 'to be precise'). Visual cue: hand gestures, e.g. raising the hand.	-
Thematic Control: topic management	topic initiation	none	Verbal expressoin of starting a semantically new thematic block (new topic), introduced by verbal markers such as *szerintem* (='I think'), or asking a question about a new topic such as *Mit gondolsz ...-ról/-ről?* ('What do you think about ...?'), sometimes accompanied by posture change.	-
	topic elaboration	none	Continuation of, elaboration on a topic, adding more details to the ongoing topic, further specifiying the topic.	-
	topic change	none	Visual markers: slightly shifting the head or looking aside or posture change. Verbal cues: discourse markers, such as *egyébként* (='by the way'), *amúgy* (='otherwise') or *mellesleg* (='by the way').	-

Information	new information	none	Visual and verbal expressions of hearing and processing new information (e.g. surprised facial expression or verbal cues of receiving and understanding new information such as *Aha*). Definition of new information: relevant information but not given in the context, not shared background knowledge	-

5.6. Additional remarks:

Communicative acts as basic units of pragmatic annotation of the HuComTech corpus were chosen since they construct coherent discourses. Moreover, a communicative act contains stimuli from various modalities (not only from the verbal modality as speech act theory): visual, verbal, non-verbal acoustic and ostensive behavior without code-using). The purpose of the supporting act level of the pragmatic annotation is the distinction of the visual and nonverbal acoustic markers of the above thematic control types. It has been proposed that (semantically) new information – new compared to what has been said previously in the context of the conversation - should also be marked since in my experience, lexically-semantically most prominent information is often accompanied by heavy gesturing. The present hypothesis can be tested with the introduction of the information level of annotation.

XML-scheme of multimodal annotation:

<?xml version="1.0"?>

-<root fpb="8">

-<level name="interviewee">

-<eventgroup name="IEECommunicativeActClass"> -<attribute name="IEEcommunicativeAct"> <value>constative</value>

<value>directive</value>

<value>commissive</value>

<value>acknowledging</value>

<value>indirect</value>

<value>other</value> </attribute> </eventgroup>

-<eventgroup name="IEESupportingActClass"> -<attribute name="IEESupportingAct"> <value>backchannel</value>

<value>politeness_marker</value>

<value>repair</value>

<value>other</value> </attribute> </eventgroup>

-<eventgroup name="IEETopicClass"> -<attribute name="IEETopic"> <value>topic_initiation</value>

<value>topic_elaboration</value>

<value>topic_change</value> </attribute> </eventgroup>

-<eventgroup name="IEEInformationClass"> -<attribute name="IEEInformation">
<value>given</value>

<value>new</value>

</attribute> </eventgroup> </level>

-<level name="interviewer">

-<eventgroup name="IERCommunicativeActClass"> -<attribute
name="IERCommunicativeAct"> <value>constative</value>

<value>directive</value>

<value>commissive</value>

<value>acknowledging</value>

<value>indirect</value>

<value>other</value> </attribute> </eventgroup>

-<eventgroup name="IERSupportingActClass"> -<attribute name="IERSupportingAct">
<value>backchannel</value>

<value>politeness_marker</value>

<value>repair</value>

<value>other</value> </attribute> </eventgroup>

-<eventgroup name="IERTopicClass"> -<attribute name="IERTopic">
<value>topic_initiation</value>

<value>topic_elaboration</value>

<value>topic_change</value>

</attribute> </eventgroup>

-<eventgroup name="IERInformationClass"> -<attribute name="IERInformation">
<value>given</value>

<value>new</value>

</attribute> </eventgroup> </level> </root>

6 Second passing

Second passing is used as a quality control measure to ensure the accuracy of segmentation, transcription (including markup), and speaker identification. After the initial file has been fully segmented and transcribed, a new annotator listens to the entire recording while viewing the corresponding transcript, and makes adjustments to the timestamps or transcription as needed. Second passing entails a mix of manual and programmatic checks on the transcript files. The particular types of checks conducted during second passing are described below.

6.1 Segmentation verification

Second pass annotators verify that each timestamp matches the corresponding transcript or label exactly. Annotators play each timestamp in turn and make sure that the audio, video transcript and labels for that segment are an exact match and make any necessary corrections. Annotators also check that the timestamp has been placed in a suitable location – between phrases, sentences, or breaths – and that the timestamp does not chop off the start or end of any word.

6.2 Transcription verification

During the transcript checking phase of second passing, annotators examine the transcript in detail, checking for accuracy, completeness and the consistent use of transcription conventions. Annotators pay particular attention to a handful of areas that are particularly difficult to transcribe, in particular unintelligible speech sections and areas of speaker disfluency. Any proper names whose spelling could not be verified during the initial transcription process are corrected and standardized within the file. Finally, annotators conduct a spell check on the file.

6.3 Verification of nonverbal signal labelling

Annotators check that the right label category has been choosed and properly timestamped.

7 Querying options

MySQL

ELAN 4.5.1

Appendix 5 Praat script used to get prosodic information

```
form Get Prosodic Information
	sentence input_path input
	sentence target_tier_name A_speaker wordseg
endform

system_nocheck rm -f pros_results.txt
fileappend pros_results.txt Filename'tab$'Tiername'tab$'Label'tab$'Start'tab$'End'tab$'F0 Min'tab$'F0
Max'tab$'F0 Mean'tab$'Intensity Min'tab$'Intensity Max'tab$'Intensity Mean'newline$'

Create Strings as file list... textList 'input_path$'/*.TextGrid
select Strings textList
number_of_inputfiles = Get number of strings
if number_of_inputfiles = 0
	Remove
	exit The directory doesn't contain any Wav file
endif
for f from 1 to number_of_inputfiles
	select Strings textList
	file$ = Get string... f
	Read from file... 'input_path$'/'file$'
	name$ = selected$ ("TextGrid")
	wavfile$ = name$ + ".wav"
	pitchfile$ = name$ + ".Pitch"
	intfile$ = name$ + ".Intensity"
	wavfile_path$ = input_path$ + "/" + wavfile$
	pitchfile_path$ = input_path$ + "/" + pitchfile$
	intfile_path$ = input_path$ + "/" + intfile$

	if fileReadable (pitchfile_path$)
		# Pitch file already generated
	else
		if fileReadable (wavfile_path$)
			Read from file... 'wavfile_path$'
		else
			exit 'wavfile$' doesn't exist
		endif
		To Pitch... 0 60 400
		Write to text file... 'pitchfile_path$'
		plus Sound 'name$'
		Remove
	endif

	if fileReadable (intfile_path$)
		# Intensity file already generated
	else
		if fileReadable (wavfile_path$)
			Read from file... 'wavfile_path$'
		else
			exit 'wavfile$' doesn't exist
		endif
		To Intensity... 100 0 yes
```

```
		Write to text file... 'intfile_path$'
		plus Sound 'name$'
		Remove
	endif

	select TextGrid 'name$'
	tiernum = Get number of tiers
	target_tier = 0
	for t from 1 to tiernum
		tiername$ = Get tier name... t
		if tiername$ = target_tier_name$
			target_tier = t
		endif
	endfor
	if target_tier = 0
		exit Target tier doesn't exist!
	endif
	tiername$ = Get tier name... target_tier
	intnum = Get number of intervals... target_tier

	for i from 1 to intnum
		label$ = Get label of interval... target_tier i
			if label$ != ""
				start = Get start point... target_tier i
				end = Get end point... target_tier i
				Read from file... 'pitchfile_path$'
				f0_mean = Get mean... start end Hertz
				f0_min = Get minimum... start end Hertz Parabolic
				f0_max = Get maximum... start end Hertz Parabolic
				Remove
				Read from file... 'intfile_path$'
				int_mean = Get mean... start end energy
				int_min = Get minimum... start end Parabolic
				int_max = Get maximum... start end Parabolic
				Remove
				fileappend pros_results.txt
'name$''tab$''target_tier_name$''tab$''label$''tab$''start:2''tab$''end:2''tab$''f0_min:2''tab$''f0_max:2''tab
$''f0_mean:2''tab$''int_min:2''tab$''int_max:2''tab$''int_mean:2''newline$'
			endif
		select TextGrid 'name$'
	endfor
endfor
```

Appendix 6 Multimodal features of of the DM segments in Questionnaire C

Filename	Label	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
96 F sp. 364. s	mondjuk	0.34	15.07	1.44	46.34	16.98	1.56	42.77
016fc29_I_shure	amúgy	0.4	undefined	undefined	undefined	23.59	1.87	46.56
020mc25_I_shure	ugye	0.39	8.5	1.09	102.5	18.36	1.53	49.82
85 I agent 450. s	mondjuk	0.21	undefined	undefined	undefined	undefined	undefined	undefined
016fc29_I_shure	amúgy	0.23	1.38	1.01	191.67	9.3	1.19	55.93
006mc22_F_shure	ugye	0.38	21.99	1.21	110.66	18.48	1.49	52.21
006mc22_I_shure	mondjuk	0.32	32.7	1.29	127.75	undefined	1.47	57.31
006mc22_I_shure	amúgy	0.34	12.22	1.08	154.41	27.6	1.93	53.14
018fc19_I_shure	ugye	0.22	12.19	1.05	234.83	19.84	1.52	54.76
114 I agent 10l0. s	mondjuk	0.22	5.66	1.02	229.48	14.74	1.34	54.28
59 I agent 368. s	amúgy	0.23	5.44	1.02	295.08	12.02	1.25	55.39
023fv24_I_shure	ugye	0.17	49.54	1.2	258.74	4.35	1.08	53.78
003mv19_F_shure	mondjuk	0.18	4.72	1.04	114.35	17.27	1.49	49.41
30 I sp 368.s	amúgy	0.21	25.12	1.11	239.52	12.61	1.24	61.55
006mc22_F_shure	ugye	0.18	5.58	1.05	104.11	12.27	1.3	49.16
006mc22_I_shure	mondjuk	0.2	158.93	1.66	315.9	8.33	1.15	60.86
40 I ag 737. s.	amúgy	0.18	7.89	1.04	213.79	5.17	1.11	50.99
016fc29_I_shure	ugye	0.21	undefined	undefined	undefined	undefined	1.46	49.85
007mc24_I_shure	mondjuk	0.58	undefined	undefined	undefined	19.83	1.66	42.43
007mc24_I_shure	amúgy	0.27	2.97	1.02	193.24	undefined	1.2	52.63
016fc29_I_shure	ugye	0.34	undefined	undefined	undefined	7.26	1.16	49.34

Filename	Label	Mode	Median	Manual gest.	Head-shift	Gaze shift	Functions
96 F sp. 364. s	mondjuk	1	2	1 tap	1 up	1 up sideawys	approximation
016fc29_I_shure	amúgy	3	3	0	0	0	comment, additional info, explanation
020mc25_I_shure	ugye	1	1	1	0	0	explanation
85 I agent 450. s	mondjuk	3	3	1	1 up	1 up sideawys	contrast
016fc29_I_shure	amúgy	3	3	1	0	0	non DM , expl, comm
006mc22_F_shure	ugye	1	1	1	1	1	filler, emphasis
006mc22_I_shure	mondjuk	4	3	1	1	1	Comm, contrast
006mc22_I_shure	amúgy	3	3	1	1	1	comment, explan, comtrast
018fc19_I_shure	ugye	1	1	1	0	0	Filler, explanation
114 I agent 10l0. s	mondjuk	3	3				example
59 I agent 368. s	amúgy	1	1				filler
023fv24_I_shure	ugye	1	2	0	0	1	question expecting positive reply
003mv19_F_shure	mondjuk	2	2	0	0	1	example
30 I sp 368.s	amúgy	2	2	0	0	1 look up	explanation, comment
006mc22_F_shure	ugye	1	2	1	0	0	explanation, background
006mc22_I_shure	mondjuk	3	2	0	0	1 sideways	contrast
40 I ag 737. s.	amúgy	4	3				explanation, comment
016fc29_I_shure	ugye	4	3	0	0	0	explanation
007mc24_I_shure	mondjuk	4	4				contrast
007mc24_I_shure	amúgy	1	2				filler
016fc29_I_shure	ugye	4	4				polite question expecting positive reply

Appendix 7 Links to examples

I. *mondjuk*

1. http://youtu.be/sgs7evZwyBw
- Mik az elképzelései a fizetési igényről? Vagy mi az az összeg, amiért elvállalná ezt a munkát?
- Hát, **mondjuk** ilyen kétszázötven-háromszázezer forint havonta.

2. http://youtu.be/XVrncmZgroM
- Itt [Debrecenben] több az élmény meg a látnivaló, nekem legalábbis.
- **Mondjuk** ott [Miskolc körül] meg vannak szép hegyek.

3. http://youtu.be/dhKX-7CfIL0
- Nehéz így az embernek magáról pozitív dolgokat mondani, de **mondjuk** igen, szeretek társaságban lenni, jó a kommunikatív képességem, a problémamegoldó képességem, azt hiszem.

4. http://youtu.be/4nM_O8fL4Rw
- Ezek jók, én is kipróbáltam párat, **mondjuk** a kung-fut csak egy hónapig, de az shaolin kung-fu volt, ott szerintem nem is voltak ilyen fokozatok.

5. http://youtu.be/Fg3raiQGmaI
- Milyen jellegű az a pozíció, amiben nem dolgozna? Ez általában értendő a kérdés. Tehát mi az a munkakör, amit olyan távolállónak érez?
- Bárhonnan?
- Igen.
- Hát **mondjuk** sertéstelepen nem szívesen dolgoznék.

6. http://youtu.be/3jI9UIO4a3g
- Ennek pont az a célja, hogy meglepetést provokáljon ki.
- Uhum. Hú nagyon meglepődtem!Úgyhogy próbáltam visszafogni magam.
- **Mondjuk** nem látszott annyira.
- Tudom próbáltam visszafogni a reakciót.

7. http://youtu.be/0BX9ehPN0uc
- Szerintem jól reagáltál teljesen. Tök jól tudtál beszélni.
- Oké.
- Nem mindenki tud. **Mondjuk** persze mondom az is a célunk, hogy meglepetést okozzunk, tehát nem feltétlenül az, hogy aztán elkezdjetek angolul beszélni.

8. http://youtu.be/w6zaYWzX0SM
- Soho-ban volt a szállás, tehát az egyik legveszélyesebb környékén Londonnak, és két afro-amerikai fiatalember jött oda, és kérdezték, hogy tudnánk-e adni nekik pénzt. Mondom hát persze, hogyne tudnánk, itt van tíz penny. Hát magyar mentalitásból indultam ki, hogy bármit, amit adok, annak örülnek, úgyhogy, **mondjuk** Magyarországon nem szoktam adni igazából. És akkor mondta, hogy hát neki ez nem elég, adjak már neki tíz fontot.

9. http://youtu.be/1OezXLx61TE
- És mi az, amitől **mondjuk** ideges lesz munkahelyen?

10. http://youtu.be/zC8TR_TdYDA
- Futsal [teremfoci] edzés volt az egyetemen belül, és hát odajött hozzám, **mondjuk** elkésett egy kicsit, de odajött hozzám, és hát fogta és mondta, hogy boldog születésnapot, és kezembe nyomta az ajándékot.

11. http://youtu.be/4aw8XuGGhCM
- Finom nagyon. Próbáld ki!
- Hát de nem is láttam. Ezt lehet boltban kapni?
- Aha, lehet boltba, például a Tescoba is akár.
- Aha, aha.
- **Mondjuk** nem olcsó.

12. http://youtu.be/N1hXOzxypk0
- Valahogy a Balaton az hiányzik nekem nagyon, csak innen olyan messze van.
- Hát igen, **mondjuk** a Tisza-part is nagyon jó hely.

13. http://youtu.be/riZLUzhd1l0
- Másrészről, mi a legszomorúbb emléked? Vagy nem leg-, hanem **mondjuk**, ami leginkább megmaradt benned, legelevenebben?
- Hát nem tudom, hogyha sokat gondolkozok, akkor biztos felállítanék egy rangsort de...
- Ó, nem szükséges rangsor
- Nem tudom, legutóbb **mondjuk** amikor nővérem bejelentette, hogy egy év után elválnak.

14. http://youtu.be/7uR6uevWA54
- Úgy kellett megkérdeznem, hogy akkor most hova is kell jönnöm? Egy pont négyes? És akkor az merre is van? És akkor itt elkezdtem keresni, jó, hogy könyvesbolt, de hol van itt a könyvesbolt? Nagyon nehéz volt idetalálni.
- Na **mondjuk** ezzel más is így van. Hát ez tényleg egy kicsit eldugott helyen van.

15. http://youtu.be/GGxhy6RnjFE
- Az iwiw, tehát az iwiw az inkább az anyukámnak a generációja tényleg, tehát, hogy megtalálják egymást a gimnázium, gimnazista osztálytársakat.
- Aha, aha, aha.
- Meg az egyetemi csoporttársakat.
- Aha.
- Nekünk már nem poén, mer végülis mi telefonon elintézzük.
- Hát i-- bár **mondjuk**, amikor indult akkor, akkor így a mi körünkben, jó **mondjuk** én idősebb vagyok, én idősebb vagyok nálad. Ez divat volt amúgy, nálunk volt nagyon népszerű meg -- hogy tehát általános iskolás volt osztálytársakat ugye, akkor már mi is rég láttuk, akkor őket egyből össze lehetett szedni.

II. *amúgy*

1. http://youtu.be/I9NwpCL885Y
- Meg hát ő is, ő is most elég sokat dolgozik, úgyhogy még ha otthon vagyok, akkor se mindig tudunk találkozni.
- De ő Pesten lakik most, nem?
- Igen, igen, igen. **Amúgy** szolnoki, de most má Pestre költöztek.

2. http://youtu.be/InpYDzwuWlo
- Meg hát emlékszem, ott állt az ablakba, és így cigizett, mer **amúgy** nem szokott a lakásba rágyújtani, de akkor annyira ideges volt, hogy muszáj volt neki.

3. http://youtu.be/amQInGR78DM
- Én tervezem egyébként, hogy Pestre költözzek. Tehát a suli az, ami itt [Debrecenben] tart csak. Imádom Pestet **amúgy**.

4. http://youtu.be/OBH9LIf2uCs
- Most sokan fognak rám haragudni szóval, hát, így a zsidó vallásba az nem, az nem tetszik, hogy ők a kiválasztott nép.
- Akkor öööö, te magad **amúgy** vallásos vagy?

5. http://youtu.be/7Q0yVgDfIv0
- Mindegyik arról szól, hogy Chuck Norris milyen kemény meg izé, hogy kiskorába mindenki Superman-es pólót akar, Superman viszont Chuck Norris-osat.
- Hm, ez jó **amúgy** ez is.
- Vannak, vannak ezek között jók.

6. http://youtu.be/KV_zj8y4T7I
- Már két és fél éve itt lakom, de mit tudom én, nem voltam olyan sok helyen, Tornádóba voltam talán párszor. Annyira **amúgy** én nem vagyok ilyen buliember.

7. http://youtu.be/q7VB-cxa2mM
- Akkor nem tudsz most viccet mondani?
- Nem. Egyet se tudok. Hát ilyen megy a nyuszika az erdő szélén, és leesik, tehát ilyen fárasztó viccekben nagyon otthon vagyok, de **amúgy** nem.

8. http://youtu.be/MyHh_CbmqpU
- Amik így eszembe jutottak, hogy tőlem is ezt például kérdezték tőlem, hogy ez hogy mi idegesítene, és ez olyan –, hát szal erre jó fölkészülni, mer **amúgy** eléggé váratlanul tudja érni az embert
- Igen, ez tényleg váratlanul ért.

9. http://youtu.be/e8Dju5tpXlk
- Sajnos értettem angolul, hogy meg akar késelni. Egy kicsit úgy hátrahőköltem, nővérem így kettőt hátrahőkölt, és akko mondtuk, hogy hát de nincs nálunk pénz értse meg. Hát **amúgy** volt hatszáz font meg egy kétszázezer forintos notebook, tehát végülis nem volt nálunk pénz,és akkor ott erősködött, hogy de igen.

10. http://youtu.be/99TQ3xVDjO4
- Hát azelőtt mindig a Balatonon szerveztük, csak pont abba az évben váltottak, mármint Tiszaújvárosba. Végülis annak sokkal a felszerelése, meg a pályák, meg minden, csak hát nem olyan népszerű, mint a Balaton. De **amúgy** könyebb mondjuk ott megszervezni egy ilyet, mert a Balatonon ott hát eleve messzebb vannak a pályák.

11. http://youtu.be/ZrIotWD0Yaw
- Azóta nem is nagyon járok azon a részen, pedig nagyon szeretem a nyugat- magyarországi részt. Mer **amúgy** pesti vagyok, csak itt hát úgy két és fél éve vagyok itt a munka miatt.

12. http://youtu.be/ZGjwBcdgW60
- Aztán volt olyan csoport, vagy több ilyet is vittem, akik úgy döntöttek, hogy igen tehát nem akarnak ott a főúton menni, hanem inkább menjünk a Pilisen keresztül. Na, ott aztán én izé dobtam ki a tacssot majdnem, még én értem föl utoljára. Hát edzett németek voltak. Mer **amúgy** ilyen hatvan év körüli korosztály, de hát ők ilyen sportosak.

13. http://youtu.be/eEX3iwZ-sOo
- Lehet nem tudják kezelni ezt a nagy népszerűséget, mer azér az olyan más, hogyha az ember nem tud kimenni az utcára így naponta.
- **Amúgy** iszonyat lehet, anyumékkal is szoktunk így ezekről beszélni, hogy így minden fotós így azt nézi, hogy éppen milyen ruhába vagyok.

14. http://youtu.be/qe0CYodoysY
- Volt-e már halálfélelmed, vagy halálközeli élményed?
- Hát halálfélelmem már volt **amúgy**. Hogy ültem egy ilyen hát kocsiba Pesten, és akko ott egy pesti ööö szülő vezetett, egy apuka, és akkor olyan szinten vezetett, én megijedtem, vagy nem tudom, így a kocsiba így belesüllyedtem, és ööö mondom úristen mondom, itt meg fogunk halni, így majnem nekimentünk a kocsi--, mer én nem vagyok hozzászokva a pesti közlekedéshez.

15. http://youtu.be/b6tu4tId6aU
- Ú ott nagyon féltem **amúgy**.

- Aha.
- Ott, ott télleg. Ott nem tudom, de úgy majdnem nekimentünk a kocsinak.

III. *Ugye*

1. http://www.youtube.com/watch?v=bn4WmEi07fk
- Addigra úgy képzelem, hogy ha nem sikerül munkát találnom, akkor párhuzamosan elkezdeném fejleszteni a nyelvtudásomat, mer **ugye** még most angolból is hiányosságaim vannak.

2. http://youtu.be/tuOgE6mmrEs
- Különböző világok vannak, ezek tudatállapotok, és mindegyik ilyen világban, **ugye** fokozatosan haladunk felfelé, és a legfelsőbb szinteken az istenek élnek.

3. http://youtu.be/ZLuKY9DAk4w
- Csak otthon hát **ugye** nyugalom kell hozzá, hogy ne zavarják az embert mondjuk egy félóráig.

4. http://www.youtube.com/watch?v=OPSDK81ariU
- Aztán amikor ilyen százharminc-száznyolcvannal mentünk, akkor így elgondolkoztam, hogy lehet most kéne megállni, és nem így hajszolni lényegében így a halált, meg így kockára tenni így az életemet, de végülis **ugye** ott volt az adrenalin, és nagyon felpörgetett, és az úgy jó volt.

5. http://youtu.be/X6HQMjcDS7A
- Japán tudósok felfedezték, hogy a hideg sör rákkeltő hatású. Tudod-e, hogy miért?
- Nem.
- Mert hogyha ráöntöd egy rákra, akkor az -- alvó rákra, akkor az felébred.
- Jaj.
- Na ebbe is belesültem **ugye**. de --
- Nem, ez jó volt szerintem.
- És nagyon rossz vicc.
- Á, nem, nem rossz az.

6. http://youtu.be/Y1glqW3CPLQ
- Eddig Debrecenben tanultam, az Ady Endre Gimnáziumban hatosztályos képzésben, most pedig az egyetemen éppen végzős vagyok az anglisztika szakon, a BA képzésben, **ugye** ebben az új három éves képzésben.

7. http://www.youtube.com/watch?v=t7mEXNMxjAc
- Boldog élmény volt, mikor elhoztuk, **ugye** egy sharpeiről van szó, és hát ilyen kis pici volt, és nagyon aranyos.

8. http://youtu.be/1sd9BirHc9Q
- Ő az, akiről meséltél egyszer a –
- Biztos meséltem.
- Most anyukádéknál van, **ugye?**
- Igen, igen,
- Ha jól emlékszem?

9. http://www.youtube.com/watch?v=B_gTI332tms
- Hát a szomorú élmény az meg szintén ide kapcsolódik amikor el kellett válni tőle. Hát amikor elpusztult szegény, **ugye** a csau-csau, az előző kutya.
- Ja, uhum.
- Az elég rossz volt.

10. http://www.youtube.com/watch?v=q5KbZthmJHc
- Most a legutóbbi, amit hallottam, az is ilyen Chuck Norrisos, hogy nemtom valami filmjéből jelenet, hogy a med-- a medvével, és **ugye** hogy hogy nem is tom, hogy így alszik ott az erdőbe ilyen tábor-- mármint a

medve, vagy vagy nem, Chuck-- Chuck Norris, és akkor **ugye** jön a medve, és így megtámadja, és hát akkor az is így van ilyen komoly küzdelem, aztán végülis a medve így elkezd hátrálni.

11. http://www.youtube.com/watch?v=5PFI4cw2-LI

- Ja igen, és akkor attól ijedtem meg, hogy **ugye** megyek be, és akkor apukám meg ott állt az ajtóban. És akkor attól nagyon megijedtem, mer nem számítottam rá.

12. http://youtu.be/sh6prqtQyGU

- Mosonmagyaróvár még mindig izgat, mer most úgy, hogy csak eszembe jutott, hogy nemtom ismered-e azt a helyet, volt egy étterem, ahol mindig megálltunk, asziszem úgy hívták, hogy Park büfé. Ilyen erdős résznek a közepén volt.
- Egy parkba volt, **ugye**?
- Hát egy park. Vagy hát ilyen erdős.

13. http://youtu.be/ZYXxFoghubI

- Igen, hát a krisnások például arra szoktak hivatkozni, hogy ez **ugye** benne van a izébe Bhagavad-Gítában, hogy ezt és ezt nem szabad.
- Ja, ja, ja.
- És ez **ugye** tényleg egy régi könyv.

14. http://youtu.be/-GgFYpZIvT0

- Úgy érzem, hogy alapvetően tehát kompetens lennék arra, hogy ilyesmit csináljak, plusz **ugye**, ahogy mondtam, érdekel is.

15. http://youtu.be/XGKfsZQWSuo

- Az volt a legjobb szállás, mert az egy ilyen kastélyszállószerűség volt, de nem a városba, hanem egy picit kijjebb tőle.
- Hm.
- De már nem jut eszembe, hogy mi a neve, de például
- Ez a Győr felé, **ugye**?
- Igen, igen.
- Igen, az ott van egy öööö a várostól egy kicsit öööö Győr irányába, egy külön egy ilyen kastély végül is.

Appendix 8 Prosodic features of DM segments

Prosodic features of interviewee's DM segments

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
003mv19_F_shure	mondjuk	100,86	101,04	0,18	4,72	1,04	114,35	17,27	1,49	49,41
003mv19_F_shure	mondjuk	119,72	119,97	0,25	98,99	1,93	161,69	9,31	1,2	51,98
003mv19_F_shure	mondjuk	136,94	137,12	0,18	4,27	1,04	108,93	11,75	1,28	50,25
003mv19_F_shure	mondjuk	152,47	152,75	0,28	11,39	1,11	112,25	12,3	1,29	51,57
003mv19_F_shure	mondjuk	166,64	166,9	0,26	2,29	1,02	117,17	22,54	1,58	55,1
003mv19_F_shure	mondjuk	326,01	326,27	0,26	3,81	1,04	103,04	7,34	1,16	52,44
003mv19_F_shure	mondjuk	365,82	366,12	0,29	8,26	1,08	114,46	18	1,4	58,67
003mv19_F_shure	mondjuk	459,49	459,73	0,23	4,4	1,04	116,81	6,23	1,11	60,41
003mv19_F_shure	mondjuk	461,47	461,82	0,36	29,36	1,28	112,77	13,95	1,31	54,78
003mv19_I_shure	mondjuk	9,89	10,32	0,43	74,18	2,4	116,2	17,31	1,38	58,34
003mv19_I_shure	mondjuk	42,7	42,91	0,21	44,22	1,19	249,87	18,55	1,42	58
003mv19_I_shure	egyébként	70	70,47	0,48	326,52	6,29	180,55	26,33	1,62	63,19
003mv19_I_shure	mondjuk	71,55	71,79	0,25	6,09	1,05	116,02	6,85	1,12	60,61
003mv19_I_shure	mondjuk	139,01	139,32	0,31	82,46	1,56	154,96	24,98	1,55	64,13
003mv19_I_shure	mondjuk	196,48	196,74	0,25	6	1,06	111,42	25,05	1,81	51,63
003mv19_I_shure	mondjuk	283,74	284,01	0,27	119,58	2,13	133,35	11,32	1,25	52,29
003mv19_I_shure	mondjuk	296,98	297,15	0,17	8,96	1,07	123,7	15,42	1,35	57,33
003mv19_I_shure	mondjuk	378,42	378,64	0,22	11,06	1,08	141,87	8,21	1,14	65,28
003mv19_I_shure	mondjuk	436,84	437,19	0,34	0,62	1,01	124,72	29,83	2,1	49,94
003mv19_I_shure	mondjuk	658,63	658,88	0,25	7,84	1,06	130,96	10,96	1,2	64,12
003mv19_I_shure	mondjuk	691,3	691,63	0,32	1,74	1,02	101,44	11,52	1,3	45,7
003mv19_I_shure	mondjuk	969,19	969,49	0,29	4,77	1,04	119,7	28,54	1,94	54,66
003mv19_I_shure	mondjuk	1076,38	1076,62	0,24	9,86	1,09	117,46	11,21	1,23	56,26
003mv19_I_shure	mondjuk	1171,68	1171,96	0,28	8,79	1,07	125,49	12,24	1,25	56,81
003mv19_I_shure	amúgy	1199,19	1199,55	0,35	3,2	1,03	103,04	10,68	1,25	50,38
003mv19_I_shure	mondjuk	1276,62	1276,92	0,3	6,96	1,06	112,35	26,36	1,85	51,13
003mv19_I_shure	amúgy	1286,84	1287,06	0,22	3,95	1,03	119,74	9,44	1,17	61
006mc22_F_shure	ugye	59,01	59,19	0,18	5,58	1,05	104,11	12,27	1,3	49,16
006mc22_F_shure	ugye	70,68	70,88	0,2	undefined	undefined	undefined	13,6	1,33	52,45
006mc22_F_shure	mondjuk	89,28	89,55	0,28	8,07	1,08	111,18	24,76	1,74	52,52
006mc22_F_shure	ugye	169,7	170,08	0,38	21,99	1,21	110,66	18,48	1,49	52,21
006mc22_F_shure	mondjuk	326,83	327,17	0,33	5,97	1,06	109,31	21,14	1,66	47,77

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
006mc22_F_shure	mondjuk	328,82	328,99	0,17	4,72	1,04	111,52	14,93	1,4	48,99
006mc22_F_shure	ugye	414,01	414,36	0,35	11,83	1,1	119,23	8,64	1,16	57,8
006mc22_F_shure	mondjuk	551,98	552,39	0,41	35,73	1,32	127,57	25,45	1,69	57,89
006mc22_F_shure	mondjuk	602,39	602,65	0,26	21,7	1,2	114,22	20,33	1,53	55,84
006mc22_I_shure	ugye	30,6	30,75	0,15	4,76	1,04	130,83	11,36	1,25	52,56
006mc22_I_shure	amúgy	120,82	121,07	0,25	6,87	1,05	129,78	11,9	1,23	57,42
006mc22_I_shure	ugye	324,94	325,14	0,2	undefined	undefined	undefined	18,07	1,54	46,31
006mc22_I_shure	ugye	335,01	335,25	0,25	56,92	1,95	92,94	11,49	1,24	55,28
006mc22_I_shure	ugye	336,81	337	0,19	154,37	2,32	185,15	7,57	1,15	55,63
006mc22_I_shure	ugye	393,45	393,75	0,3	2,68	1,04	61,2	16,67	1,44	50,37
006mc22_I_shure	ugye	628,02	628,29	0,28	11,09	1,1	116,93	27,84	1,85	54,65
006mc22_I_shure	mondjuk	643,4	643,86	0,46	5,64	1,04	132,2	14,11	1,32	53,4
006mc22_I_shure	mondjuk	817,49	817,81	0,32	32,7	1,29	127,75	20,3	1,47	57,31
006mc22_I_shure	ugye	834,49	834,74	0,26	15,94	1,12	140,66	10,94	1,23	55,44
006mc22_I_shure	amúgy	847,56	847,9	0,34	12,22	1,08	154,41	27,6	1,93	53,14
006mc22_I_shure	amúgy	979,01	979,3	0,29	24,25	1,16	162,21	12,56	1,24	59,65
007mc24_I_shure	mondjuk	63,97	64,25	0,28	2,45	1,02	153,77	13,23	1,35	48,43
007mc24_I_shure	mondjuk	165,48	165,77	0,29	5,04	1,04	145,22	13,56	1,35	48,33
007mc24_I_shure	mondjuk	203,86	204,16	0,3	undefined	undefined	undefined	13,32	1,37	46,55
007mc24_I_shure	mondjuk	213,49	213,72	0,23	undefined	undefined	undefined	10,66	1,26	49,51
007mc24_I_shure	mondjuk	216,32	216,52	0,2	0,13	1	143,74	7,85	1,18	49,36
007mc24_I_shure	mondjuk	292,53	293,11	0,58	undefined	undefined	undefined	19,83	1,66	42,43
007mc24_I_shure	mondjuk	436,37	436,75	0,38	14,61	1,1	161,21	12,47	1,29	50,49
007mc24_I_shure	mondjuk	445,18	445,19	0,004	undefined	undefined	undefined	0	1	50,16
007mc24_I_shure	mondjuk	445,19	445,49	0,3	20,06	1,15	143,7	13,44	1,32	50,62
007mc24_I_shure	mondjuk	546,34	546,54	0,2	7,67	1,05	147,39	21,61	1,68	50,14
007mc24_I_shure	mondjuk	643,05	643,47	0,42	9,43	1,06	160,5	22,77	1,7	49,8
007mc24_I_shure	mondjuk	647,19	647,61	0,42	6,65	1,05	147,59	23,98	1,85	45,51
007mc24_I_shure	mondjuk	745,82	746,05	0,24	2,44	1,02	157,95	15,94	1,41	48,94
007mc24_I_shure	mondjuk	918,58	918,74	0,16	undefined	undefined	undefined	9,78	1,24	47,58
007mc24_I_shure	mondjuk	1147,09	1147,3	0,22	undefined	undefined	undefined	14,16	1,38	48,36
007mc24_I_shure	mondjuk	1339,33	1339,58	0,25	undefined	undefined	undefined	3,9	1,09	45,82

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
012mc25_F_shure	mondjuk	473,96	474,4	0,45	101,06	2,04	105,62	23,43	1,56	60,64
012mc25_I_shure	mondjuk	379,34	379,63	0,29	111,67	2	132,1	17,18	1,33	64,39
012mc25_I_shure	amúgy	675,53	675,67	0,14	5,08	1,04	117,99	8,03	1,13	68,96
012mc25_I_shure	amúgy	690,92	691,2	0,28	7,78	1,04	200,93	14,4	1,26	67,44
012mc25_I_shure	mondjuk	754,6	754,83	0,23	33,15	1,18	200,61	20,39	1,45	59,96
012mc25_I_shure	mondjuk	808,52	808,8	0,28	122,83	2,39	158,64	17,14	1,32	67,21
012mc25_I_shure	mondjuk	809,39	809,73	0,34	109,54	2,2	114,22	11,38	1,21	60,92
012mc25_I_shure	mondjuk	867,61	867,9	0,3	4,87	1,05	99,32	14,17	1,25	68,25
012mc25_I_shure	szóval	980,29	980,72	0,43	117,44	2	134,57	17,22	1,33	64,18
013mv22_I_shure	ugye	589,74	589,98	0,24	11,81	1,09	143,01	13,15	1,28	57,17
013mv22_I_shure	amúgy	646,44	646,84	0,4	4,15	1,03	147,3	23	1,55	57,99
013mv22_I_shure	amúgy	647,34	647,64	0,31	3,32	1,02	142,67	17,48	1,42	54,3
016fc29_F_shure	ugye	91,69	91,92	0,24	6,45	1,04	182,03	15,66	1,39	50,25
016fc29_F_shure	szóval	149,19	149,71	0,52	undefined	undefined	undefined	10,86	1,28	47,27
016fc29_F_shure	ugye	308,6	308,83	0,23	undefined	undefined	undefined	13,15	1,4	42,36
016fc29_F_shure	mondjuk	311,57	311,91	0,34	undefined	undefined	undefined	20,24	1,57	50,19
016fc29_F_shure	mondjuk	324,49	324,72	0,23	3,38	1,02	207,64	13,95	1,31	55,08
016fc29_F_shure	mondjuk	327,76	328,03	0,28	undefined	undefined	undefined	12,51	1,3	52,05
016fc29_F_shure	mondjuk	333,01	333,41	0,39	undefined	undefined	undefined	13,35	1,33	51,57
016fc29_F_shure	ugye	359,12	359,39	0,27	undefined	undefined	undefined	23,06	1,7	50,2
016fc29_F_shure	ugye	365,7	365,93	0,23	undefined	undefined	undefined	13,3	1,32	50,17
016fc29_F_shure	ugye	401,84	402,05	0,22	3,11	1,02	195,82	11,14	1,24	53,31
016fc29_F_shure	mondjuk	441,19	441,43	0,23	11,41	1,06	212,52	18,63	1,45	56,73
016fc29_F_shure	mondjuk	445,3	445,59	0,29	undefined	undefined	undefined	7,13	1,16	48,31
016fc29_F_shure	ugye	451,21	451,43	0,22	undefined	undefined	undefined	7,99	1,2	45,21
016fc29_F_shure	ugye	453,93	454,19	0,26	undefined	undefined	undefined	8,73	1,25	40,45
016fc29_F_shure	amúgy	507,16	507,39	0,23	19,1	1,08	243,18	10,64	1,2	59,05
016fc29_F_shure	ugye	538,69	539,04	0,34	undefined	undefined	undefined	23,36	1,87	43,5
016fc29_F_shure	ugye	552,13	552,43	0,3	undefined	undefined	undefined	14,51	1,43	43,48
016fc29_F_shure	mondjuk	559,01	559,22	0,21	undefined	undefined	undefined	10,13	1,23	50,95
016fc29_F_shure	mondjuk	562,46	562,73	0,27	1,26	1,01	186,5	14,68	1,35	52,55
016fc29_F_shure	mondjuk	568,67	568,93	0,26	undefined	undefined	undefined	16,31	1,47	46,14

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
016fc29_F_shure	mondjuk	574,16	574,46	0,3	undefined	undefined	undefined	19,48	1,62	45,57
016fc29_I_shure	ugye	145,71	145,91	0,21	undefined	undefined	undefined	16,65	1,46	49,85
016fc29_I_shure	ugye	184,31	184,5	0,19	undefined	undefined	undefined	13,57	1,32	52,5
016fc29_I_shure	ugye	337,94	338,16	0,23	undefined	undefined	undefined	16	1,45	48,15
016fc29_I_shure	ugye	348,01	348,2	0,19	5,08	1,03	200,99	14,72	1,34	53,69
016fc29_I_shure	mondjuk	405,26	405,48	0,22	22,03	1,1	231,15	13,06	1,26	57,92
016fc29_I_shure	amúgy	473,92	474,32	0,4	undefined	undefined	undefined	23,59	1,87	46,56
016fc29_I_shure	ugye	691,98	692,23	0,25	undefined	undefined	undefined	16,65	1,43	51,65
016fc29_I_shure	mondjuk	745,4	745,7	0,3	undefined	undefined	undefined	13,11	1,36	46,95
016fc29_I_shure	amúgy	758,01	758,24	0,23	1,38	1,01	191,67	9,3	1,19	55,93
016fc29_I_shure	mondjuk	895,64	895,91	0,27	2,86	1,01	203,95	14,35	1,32	56,19
016fc29_I_shure	mondjuk	968,91	969,21	0,3	undefined	undefined	undefined	14,61	1,39	48,69
016fc29_I_shure	mondjuk	971,66	971,91	0,25	1,44	1,01	203,74	10,17	1,21	54,41
016fc29_I_shure	mondjuk	1023,45	1023,73	0,28	undefined	undefined	undefined	13,21	1,4	42,66
016fc29_I_shure	egyébként	1049,79	1050,69	0,9	undefined	undefined	undefined	21,83	1,81	40,96
018fc19_F_shure	szóval	111,03	111,35	0,32	7,85	1,03	230,31	19,28	1,56	49
018fc19_F_shure	ugye	187,1	187,36	0,26	6,98	1,03	208,52	9,41	1,22	50,24
018fc19_F_shure	mondjuk	191,21	191,42	0,21	10,23	1,05	224,57	26,8	1,89	52,44
018fc19_F_shure	szóval	470,57	471,07	0,49	14,69	1,07	222,71	18,09	1,5	50,14
018fc19_I_shure	mondjuk	27,05	27,27	0,22	14,21	1,06	235,62	9,02	1,17	59,21
018fc19_I_shure	mondjuk	200,17	200,55	0,39	15,5	1,06	261,71	16,26	1,38	55,02
018fc19_I_shure	ugye	233,43	233,65	0,22	2,09	1,01	209,66	7,33	1,17	49,39
018fc19_I_shure	mondjuk	259,38	259,61	0,23	5,15	1,02	234,52	19,63	1,48	56,41
018fc19_I_shure	mondjuk	390,26	390,52	0,27	21,46	1,1	227,49	16,44	1,37	56,86
018fc19_I_shure	mondjuk	530,86	531,04	0,18	12,28	1,04	303,59	4,68	1,08	58,18
018fc19_I_shure	mondjuk	553,93	554,14	0,21	25,31	1,11	231,9	14,45	1,31	57,75
018fc19_I_shure	ugye	579,67	579,88	0,22	12,19	1,05	234,83	19,84	1,52	54,76
019fc20_F_shure	ugye	364,11	364,33	0,22	9,99	1,05	193,15	16,63	1,37	58,02
019fc20_I_shure	egyébként	44,09	44,63	0,54	19,72	1,1	203,02	18,04	1,39	58,65
019fc20_I_shure	egyébként	81,38	82,26	0,88	96,33	1,9	134,71	23,9	1,77	49,87
019fc20_I_shure	egyébként	105,51	105,88	0,37	28,59	1,15	199,21	17,32	1,38	57,5
019fc20_I_shure	amúgy	110,01	110,25	0,24	44,59	1,18	275,12	11,62	1,21	64,46

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
019fc20_I_shure	egyébként	207,39	207,84	0,45	8,54	1,04	203,28	15,14	1,36	53,06
019fc20_I_shure	egyébként	219,49	220,19	0,71	8,48	1,05	174,66	25,37	1,75	51,42
019fc20_I_shure	amúgy	336,96	337,29	0,34	2,29	1,01	182,77	10,49	1,21	59,34
019fc20_I_shure	mondjuk	574,36	574,6	0,24	15,65	1,08	195,02	6,46	1,11	62
020mc25_F_shure	szóval	38,38	38,88	0,5	7,96	1,08	103,51	16,56	1,44	49,75
020mc25_F_shure	mondjuk	163,31	163,68	0,38	7,52	1,06	120,18	22,69	1,65	52,74
020mc25_F_shure	szóval	384,49	384,86	0,37	123,17	2,35	125,26	16,92	1,4	54,5
020mc25_F_shure	mondjuk	466,04	466,19	0,15	undefined	undefined	undefined	3,53	1,08	46,7
020mc25_I_shure	ugye	81,64	82,03	0,39	8,5	1,09	102,5	18,36	1,53	49,82
020mc25_I_shure	szóval	93,39	94,13	0,74	99,46	1,68	207,68	21	1,5	56,18
020mc25_I_shure	szóval	97,02	97,48	0,46	undefined	undefined	undefined	16,83	1,47	48,67
020mc25_I_shure	amúgy	127,84	128,16	0,32	undefined	undefined	undefined	8,5	1,2	47,55
020mc25_I_shure	szóval	150,49	151,23	0,74	3,5	1,05	66,56	25,28	1,8	50,1
020mc25_I_shure	mondjuk	243,85	244,13	0,28	undefined	undefined	undefined	13,07	1,34	47,2
020mc25_I_shure	szóval	248,1	248,55	0,45	1,12	1,01	107,82	16,75	1,43	50
020mc25_I_shure	ugye	349,19	349,54	0,34	undefined	undefined	undefined	24,57	1,84	48,71
020mc25_I_shure	mondjuk	398,13	398,36	0,23	0,99	1,01	112,72	16,94	1,44	52,51
020mc25_I_shure	szóval	474,41	474,79	0,38	4,18	1,04	113,59	24,09	1,72	50,62
020mc25_I_shure	mondjuk	480,45	480,72	0,26	undefined	undefined	undefined	6,79	1,15	49,75
020mc25_I_shure	mondjuk	491,45	491,75	0,31	0,61	1,01	117,19	18,91	1,5	49,68
020mc25_I_shure	szóval	557,97	558,22	0,25	9,79	1,08	117,86	14,15	1,33	52,04
020mc25_I_shure	mondjuk	590,38	590,7	0,32	10,13	1,07	153,43	15,37	1,33	56,66
020mc25_I_shure	mondjuk	631,58	631,72	0,13	19,61	1,15	135,97	14,5	1,31	58,07
020mc25_I_shure	mondjuk	740,62	740,83	0,2	13,27	1,09	159,11	13,1	1,27	57,35
020mc25_I_shure	szóval	815,48	816,03	0,55	20,62	1,18	127,64	21,63	1,57	53,48
020mc25_I_shure	szóval	844	844,32	0,32	7,23	1,08	92,12	15,98	1,43	49,54
020mc25_I_shure	szóval	853,51	854,15	0,64	177,79	3,35	175,64	19,51	1,53	51,4
020mc25_I_shure	ugye	888,93	889,18	0,25	0,36	1	106,77	12,79	1,32	49,79
020mc25_I_shure	szóval	911,76	912,06	0,31	9,27	1,08	119,47	16,14	1,41	53,01
020mc25_I_shure	szóval	914,85	915,06	0,22	15	1,13	119,67	15,96	1,38	54,75
020mc25_I_shure	szóval	918,84	919,25	0,4	11,72	1,11	110,35	21,62	1,58	52,99
020mc25_I_shure	szóval	964,63	964,97	0,34	1,87	1,03	61,24	15,29	1,36	53,39

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
020mc25_I_shure	egyébként	968,82	969,22	0,4	8,66	1,03	330,05	14,21	1,36	48,96
020mc25_I_shure	egyébként	1078,48	1078,75	0,27	0,26	1	105,63	14,14	1,38	48,23
020mc25_I_shure	szóval	1079,4	1079,87	0,47	3,9	1,03	114,63	18,84	1,47	51,75
020mc25_I_shure	mondjuk	1081,53	1081,79	0,26	11,66	1,1	124,89	16,88	1,42	52,19
020mc25_I_shure	szóval	1085,26	1085,48	0,22	40,08	1,64	91,5	10,74	1,24	53,18
020mc25_I_shure	egyébként	1088,13	1088,51	0,37	undefined	undefined	undefined	15,2	1,44	44,82
020mc25_I_shure	egyébként	1105,04	1105,51	0,47	13,46	1,12	121,75	19,62	1,51	53,44
020mc25_I_shure	mondjuk	1131,56	1131,77	0,21	0,54	1	116,37	13,38	1,33	50,13
020mc25_I_shure	ugye	1150,43	1150,69	0,26	3,33	1,03	126,93	12,1	1,26	53,74
020mc25_I_shure	mondjuk	1154,26	1154,43	0,17	2,17	1,02	116,67	22,64	1,68	51,23
021fc21_F_shure	mondjuk	123,89	124,19	0,3	8,54	1,05	189,79	9	1,19	55,48
021fc21_F_shure	mondjuk	259,95	260,69	0,74	10,92	1,06	185,62	23,8	1,75	53,35
021fc21_F_shure	mondjuk	575,54	575,8	0,26	8,85	1,05	185,4	10,02	1,24	48,6
021fc21_I_shure	ugye	123,41	123,59	0,18	8,15	1,04	185,42	7,44	1,16	50,79
021fc21_I_shure	mondjuk	188,44	188,75	0,31	17,44	1,08	237,95	17,37	1,37	60,14
021fc21_I_shure	mondjuk	298,89	299,06	0,17	24	1,12	221,95	12,63	1,25	60,75
021fc21_I_shure	mondjuk	351,37	351,63	0,26	42,83	1,21	211,53	4,89	1,1	53,82
021fc21_I_shure	amúgy	430,56	430,92	0,36	50,79	1,27	223,01	15,49	1,32	58,89
021fc21_I_shure	amúgy	530,49	530,74	0,25	21,76	1,1	238,67	12,92	1,24	63,33
021fc21_I_shure	amúgy	530,8	531,1	0,3	37,88	1,17	249,73	11,71	1,21	62,3
021fc21_I_shure	mondjuk	538,23	538,44	0,21	5,85	1,03	207,42	9,7	1,2	53,14
021fc21_I_shure	mondjuk	741,77	742,05	0,28	9,07	1,05	193,46	9,11	1,19	54,01
021fc21_I_shure	mondjuk	846,13	846,44	0,31	4,57	1,02	197,63	11,62	1,25	54,48
021fc21_I_shure	mondjuk	849,32	849,56	0,24	4,62	1,02	196,92	6,83	1,14	53,94
021fc21_I_shure	mondjuk	850	850,23	0,23	5,08	1,03	204,44	5,61	1,11	52,8
021fc21_I_shure	mondjuk	851,03	851,26	0,23	10,16	1,05	196,14	10,22	1,22	52,19
023fv24_I_shure	ugye	243,8	243,97	0,17	49,54	1,2	258,74	4,35	1,08	53,78
030fc21_I_shure	amúgy	373,88	374,09	0,21	25,12	1,11	239,52	12,61	1,24	61,55
030fc21_I_shure	amúgy	611,65	611,88	0,23	37,55	1,18	221,59	13,40	1,28	56,53
030fc21_I_shure	amúgy	861,69	861,89	0,20	38,99	1,13	307,40	14,53	1,31	59,00
030fc21_I_shure	amúgy	1065,31	1065,59	0,28	72,47	1,33	254,86	6,42	1,11	61,17
030fc21_I_shure	mondjuk	1152,00	1152,32	0,32	48,83	1,20	262,80	12,63	1,27	56,36

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
040fv24_F_shure	mondjuk	137,19	137,40	0,21	4,98	1,03	175,42	9,25	1,24	45,07
040fv24_F_shure	ugye	325,90	326,18	0,28	0,00	1,00	96,85	13,20	1,38	44,12
040fv24_F_shure	mondjuk	365,14	365,45	0,31	22,02	1,13	175,78	9,52	1,25	46,40
040fv24_I_shure	ugye	472,93	473,13	0,20	3,91	1,02	187,10	5,97	1,14	45,53
040fv24_I_shure	ugye	615,64	615,92	0,28	undefined	undefined	undefined	13,93	1,41	44,54
040fv24_I_shure	ugye	656,30	656,56	0,26	undefined	undefined	undefined	16,91	1,52	43,84
043fc21_I_shure	ugye	169,47	169,75	0,28	123,91	2,22	124,54	9,23	1,22	48,32
043fc21_I_shure	mondjuk	268,50	268,83	0,33	undefined	undefined	undefined	21,52	1,82	43,08
043fc21_I_shure	mondjuk	741,89	742,17	0,28	19,10	1,09	231,86	17,61	1,43	54,43
043fc21_I_shure	mondjuk	1062,22	1062,51	0,29	23,00	1,09	269,56	15,97	1,36	55,10
043fc21_I_shure	mondjuk	1206,88	1207,22	0,34	undefined	undefined	undefined	18,86	1,63	45,29
057fc30_F_shure	mondjuk	216,42	216,74	0,32	12,30	1,07	188,58	12,10	1,38	39,63
057fc30_F_shure	mondjuk	280,60	280,89	0,29	14,54	1,08	200,40	13,90	1,43	44,49
057fc30_F_shure	ugye	299,73	300,00	0,27	1,28	1,01	172,70	15,04	1,47	42,40
057fc30_F_shure	ugye	333,87	334,12	0,25	7,82	1,04	186,97	9,36	1,25	43,79
057fc30_F_shure	mondjuk	432,35	432,61	0,26	42,81	1,22	228,45	18,43	1,52	49,68
057fc30_F_shure	mondjuk	448,70	449,05	0,35	12,83	1,07	180,29	15,00	1,51	40,07
057fc30_F_shure	mondjuk	598,77	599,07	0,30	undefined	undefined	undefined	10,27	1,37	34,42
057fc30_F_shure	ugye	630,92	631,16	0,24	5,69	1,04	161,25	13,56	1,42	40,59
057fc30_F_shure	mondjuk	686,72	686,96	0,24	6,79	1,04	174,16	12,68	1,41	39,83
057fc30_F_shure	ugye	850,86	851,07	0,21	12,14	1,07	171,32	13,66	1,38	44,91
057fc30_I_shure	mondjuk	7,98	8,26	0,28	6,84	1,03	202,68	12,06	1,38	41,33
057fc30_I_shure	mondjuk	30,84	31,18	0,34	19,17	1,10	208,43	19,78	1,69	44,50
057fc30_I_shure	ugye	77,90	78,11	0,21	13,12	1,07	187,23	26,12	2,09	45,02
059fv19_F_shure	mondjuk	99,18	99,47	0,29	undefined	undefined	undefined	10,96	1,28	46,91
059fv19_F_shure	mondjuk	117,53	117,87	0,34	5,34	1,03	174,62	14,48	1,37	50,89
059fv19_F_shure	mondjuk	121,90	122,23	0,33	3,20	1,02	176,06	25,06	1,91	50,35
059fv19_F_shure	mondjuk	168,10	168,53	0,43	undefined	undefined	undefined	9,10	1,22	48,06
059fv19_F_shure	mondjuk	185,55	185,90	0,35	5,63	1,03	176,28	10,19	1,24	51,15
059fv19_F_shure	mondjuk	193,38	193,75	0,37	86,24	2,01	103,12	13,27	1,34	48,16
059fv19_F_shure	mondjuk	277,96	278,23	0,27	2,14	1,02	96,00	18,34	1,47	52,56
059fv19_F_shure	amúgy	321,32	321,63	0,31	11,03	1,06	174,35	12,31	1,30	51,05

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
059fv19_F_shure	mondjuk	333,16	333,52	0,36	2,97	1,02	180,51	9,39	1,22	49,25
059fv19_F_shure	mondjuk	364,08	364,41	0,33	5,38	1,03	175,34	17,31	1,50	49,54
059fv19_F_shure	mondjuk	375,94	376,32	0,38	3,28	1,02	170,42	21,23	1,67	49,43
059fv19_F_shure	mondjuk	411,40	411,85	0,45	4,52	1,02	188,27	20,40	1,58	51,88
059fv19_I_shure	mondjuk	57,17	57,49	0,32	4,15	1,02	175,57	26,00	1,87	52,27
059fv19_I_shure	mondjuk	145,34	145,60	0,26	undefined	undefined	undefined	18,97	1,53	50,18
059fv19_I_shure	mondjuk	221,59	221,95	0,36	1,03	1,01	180,26	15,70	1,40	50,75
059fv19_I_shure	mondjuk	271,84	272,10	0,26	undefined	undefined	undefined	13,40	1,40	44,48
059fv19_I_shure	mondjuk	275,79	276,10	0,31	6,01	1,03	202,81	18,37	1,46	54,30
059fv19_I_shure	mondjuk	344,66	345,11	0,45	undefined	undefined	undefined	20,19	1,62	49,64
059fv19_I_shure	amúgy	380,02	380,44	0,42	7,65	1,04	200,70	9,18	1,20	52,28
059fv19_I_shure	amúgy	476,96	477,43	0,47	3,65	1,02	186,64	13,95	1,31	53,51
059fv19_I_shure	mondjuk	500,28	500,62	0,34	8,44	1,04	193,44	15,02	1,34	56,31
059fv19_I_shure	mondjuk	502,89	503,20	0,31	1,15	1,01	176,65	15,97	1,40	51,54
059fv19_I_shure	mondjuk	555,08	555,40	0,32	3,71	1,02	184,58	21,60	1,65	50,33
059fv19_I_shure	mondjuk	567,47	567,77	0,30	undefined	undefined	undefined	15,85	1,42	49,33
059fv19_I_shure	mondjuk	608,84	609,20	0,36	undefined	undefined	undefined	19,57	1,59	49,56
059fv19_I_shure	mondjuk	611,26	611,65	0,39	undefined	undefined	undefined	21,88	1,67	51,29
059fv19_I_shure	mondjuk	625,81	626,07	0,26	undefined	undefined	undefined	11,80	1,27	50,91
059fv19_I_shure	amúgy	689,48	689,70	0,22	28,33	1,13	234,15	8,73	1,16	59,55
059fv19_I_shure	amúgy	695,73	696,14	0,41	undefined	undefined	undefined	17,54	1,58	43,44
059fv19_I_shure	amúgy	701,17	701,47	0,30	0,42	1,00	173,59	2,44	1,05	52,62
059fv19_I_shure	mondjuk	702,58	702,97	0,39	undefined	undefined	undefined	18,17	1,55	47,24
059fv19_I_shure	amúgy	721,58	721,96	0,38	undefined	undefined	undefined	10,41	1,23	52,40
059fv19_I_shure	amúgy	758,48	758,90	0,42	undefined	undefined	undefined	6,48	1,14	50,66
059fv19_I_shure	mondjuk	761,80	762,13	0,33	3,45	1,02	191,09	13,54	1,31	53,42
059fv19_I_shure	mondjuk	763,78	764,06	0,28	undefined	undefined	undefined	11,77	1,30	48,51
059fv19_I_shure	mondjuk	770,50	770,93	0,43	19,65	1,10	208,39	20,89	1,51	57,21
059fv19_I_shure	mondjuk	771,29	771,63	0,34	2,35	1,01	196,03	19,22	1,52	52,51
059fv19_I_shure	amúgy	780,53	780,80	0,27	4,98	1,03	195,13	7,60	1,15	53,78
059fv19_I_shure	mondjuk	819,22	819,47	0,25	5,60	1,03	193,30	13,40	1,28	57,87
059fv19_I_shure	amúgy	860,66	861,01	0,35	259,94	3,16	200,94	7,47	1,14	57,23

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
059fv19_l_shure	amúgy	868,65	868,86	0,21	28,04	1,14	212,19	10,53	1,19	62,47
059fv19_l_shure	mondjuk	922,30	922,56	0,26	0,95	1,01	170,59	16,92	1,45	52,09
059fv19_l_shure	mondjuk	1005,22	1005,79	0,57	11,16	1,05	213,70	31,74	2,07	55,64
059fv19_l_shure	mondjuk	1011,37	1011,74	0,37	2,53	1,01	193,47	14,25	1,33	54,81
059fv19_l_shure	mondjuk	1013,66	1014,02	0,36	0,86	1,00	178,74	21,62	1,65	50,42
059fv19_l_shure	mondjuk	1083,94	1084,21	0,27	3,34	1,02	177,13	14,45	1,33	54,30
059fv19_l_shure	mondjuk	1085,66	1086,01	0,35	4,76	1,03	190,12	14,73	1,35	53,20
059fv19_l_shure	mondjuk	1101,42	1101,68	0,26	undefined	undefined	undefined	11,89	1,28	51,45
059fv19_l_shure	amúgy	1108,33	1108,75	0,42	undefined	undefined	undefined	11,84	1,29	50,35
059fv19_l_shure	amúgy	1157,41	1157,86	0,45	undefined	undefined	undefined	18,60	1,60	46,34
059fv19_l_shure	amúgy	1193,34	1193,98	0,64	8,16	1,04	237,45	28,04	1,85	57,67
059fv19_l_shure	amúgy	1196,27	1196,87	0,60	undefined	undefined	undefined	19,67	1,60	49,33
059fv19_l_shure	mondjuk	1279,81	1280,11	0,30	undefined	undefined	undefined	10,78	1,27	48,55
059fv19_l_shure	mondjuk	1286,89	1287,16	0,27	2,42	1,01	176,80	13,38	1,33	50,48
059fv19_l_shure	mondjuk	1288,75	1289,10	0,35	6,33	1,03	191,57	12,86	1,30	52,32
059fv19_l_shure	mondjuk	1293,03	1293,46	0,43	16,37	1,09	184,45	25,24	1,81	52,06
059fv19_l_shure	mondjuk	1302,03	1302,34	0,31	undefined	undefined	undefined	16,26	1,44	49,64
062mv20_l_shure	mondjuk	626,37	626,59	0,22	68,51	2,06	82,99	12,63	1,29	52,88
062mv20_l_shure	amúgy	666,95	667,24	0,29	undefined	undefined	undefined	10,16	1,24	49,69
063fv20_l_shure	mondjuk	513,35	513,63	0,28	9,43	1,04	257,83	31,85	2,22	52,44
063fv20_l_shure	amúgy	732,00	732,20	0,20	21,75	1,09	241,90	15,21	1,34	56,65
063fv20_l_shure	mondjuk	1023,85	1024,33	0,48	2,28	1,01	204,42	25,71	1,85	51,57
063fv20_l_shure	mondjuk	1067,05	1067,34	0,29	8,68	1,04	231,88	23,30	1,64	57,04
063fv20_l_shure	mondjuk	1069,88	1070,13	0,25	7,01	1,03	230,42	17,14	1,39	55,51
063fv20_l_shure	mondjuk	1074,74	1075,12	0,38	0,00	1,00	224,99	14,49	1,34	52,23
067mc21_l_shure	mondjuk	139,65	140,04	0,39	7,09	1,06	127,34	24,01	1,76	50,56
067mc21_l_shure	mondjuk	170,94	171,16	0,22	8,91	1,07	134,20	13,26	1,28	57,40
067mc21_l_shure	mondjuk	407,43	407,80	0,37	undefined	undefined	undefined	22,66	1,75	47,60
067mc21_l_shure	mondjuk	466,21	466,48	0,27	undefined	undefined	undefined	10,91	1,26	49,52
067mc21_l_shure	amúgy	580,38	580,60	0,22	2,91	1,02	132,50	7,75	1,16	54,25
067mc21_l_shure	mondjuk	582,03	582,37	0,34	undefined	undefined	undefined	15,95	1,45	46,68
067mc21_l_shure	amúgy	705,99	706,19	0,20	undefined	undefined	undefined	6,93	1,15	50,12

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
067mc21_I_shure	mondjuk	785,57	785,84	0,27	4,02	1,03	124,69	16,82	1,45	50,50
067mc21_I_shure	amúgy	816,78	817,17	0,39	undefined	undefined	undefined	17,49	1,50	47,52
069mc20_F_shure	ugye	311,03	311,23	0,20	undefined	undefined	undefined	14,53	1,40	49,00
069mc20_I_shure	mondjuk	73,39	73,63	0,24	undefined	undefined	undefined	18,32	1,69	41,28
069mc20_I_shure	mondjuk	199,70	199,92	0,22	50,01	1,45	147,93	7,82	1,16	53,19
069mc20_I_shure	mondjuk	583,05	583,38	0,33	undefined	undefined	undefined	12,90	1,36	44,77
069mc20_I_shure	ugye	769,56	769,74	0,18	undefined	undefined	undefined	9,31	1,26	43,41
069mc20_I_shure	ugye	832,42	832,59	0,17	7,59	1,07	112,50	13,42	1,32	52,68
069mc20_I_shure	mondjuk	895,66	896,04	0,38	undefined	undefined	undefined	13,94	1,40	44,24
069mc20_I_shure	mondjuk	898,48	898,68	0,20	0,19	1,00	113,97	14,28	1,39	47,01
069mc20_I_shure	mondjuk	937,83	938,06	0,23	2,71	1,02	135,12	13,84	1,37	46,96
070fc21_F_shure	mondjuk	196,67	197,04	0,37	0,00	1,00	231,01	18,87	1,66	41,89
070fc21_I_shure	amúgy	10,95	11,23	0,28	16,35	1,08	223,92	12,39	1,30	49,61
070fc21_I_shure	amúgy	338,30	338,63	0,33	4,82	1,02	230,52	13,18	1,35	48,10
070fc21_I_shure	mondjuk	795,94	796,21	0,27	21,68	1,09	244,00	20,38	1,59	50,75
070fc21_I_shure	amúgy	910,90	911,24	0,34	undefined	undefined	undefined	13,07	1,37	47,29
085fc22_F_shure	mondjuk	320,93	321,21	0,28	6,76	1,04	192,32	11,18	1,27	48,62
085fc22_F_shure	mondjuk	366,46	366,84	0,38	undefined	undefined	undefined	15,51	1,51	42,16
085fc22_F_shure	mondjuk	481,06	481,40	0,34	undefined	undefined	undefined	15,18	1,59	36,00
085fc22_I_shure	amúgy	921,58	921,87	0,29	undefined	undefined	undefined	14,02	1,40	46,06
085fc22_I_shure	amúgy	1062,29	1062,59	0,30	undefined	undefined	undefined	9,72	1,27	42,15
096fc19_F_shure	ugye	76,95	77,25	0,30	undefined	undefined	undefined	15,50	1,49	44,55
096fc19_F_shure	mondjuk	138,49	138,86	0,37	undefined	undefined	undefined	19,07	1,63	44,49
096fc19_F_shure	mondjuk	234,66	235,06	0,40	undefined	undefined	undefined	15,20	1,48	42,78
096fc19_F_shure	mondjuk	280,66	281,02	0,36	undefined	undefined	undefined	16,98	1,56	42,77
096fc19_F_shure	mondjuk	299,92	300,32	0,40	undefined	undefined	undefined	22,68	1,75	48,78
096fc19_F_shure	mondjuk	318,69	318,92	0,23	undefined	undefined	undefined	13,20	1,42	40,07
096fc19_F_shure	mondjuk	372,69	373,03	0,34	undefined	undefined	undefined	15,07	1,44	46,34
096fc19_I_shure	mondjuk	331,74	332,01	0,27	86,86	1,75	141,23	15,96	1,33	61,03
096fc19_I_shure	amúgy	605,57	605,83	0,26	undefined	undefined	undefined	7,99	1,21	41,88
096fc19_I_shure	mondjuk	852,46	852,89	0,43	undefined	undefined	undefined	17,18	1,50	45,32
114mv20_F_shure	mondjuk	207,25	207,44	0,19	0,57	1,01	68,87	13,91	1,36	47,75

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
114mv20_F_shure	mondjuk	211,04	211,29	0,25	6,10	1,04	141,56	12,82	1,32	50,05
114mv20_F_shure	mondjuk	307,46	307,77	0,31	27,29	1,17	172,09	23,76	1,72	52,69
114mv20_F_shure	mondjuk	423,60	423,88	0,28	72,72	2,11	116,70	13,76	1,36	49,15
114mv20_F_shure	ugye	425,24	425,51	0,27	6,98	1,06	126,75	19,90	1,56	50,46
114mv20_F_shure	mondjuk	425,87	426,09	0,22	6,98	1,05	143,32	7,10	1,16	50,20
114mv20_F_shure	mondjuk	429,38	429,69	0,31	9,65	1,07	148,62	14,86	1,35	53,03
114mv20_F_shure	mondjuk	502,56	502,76	0,20	7,21	1,05	134,65	14,94	1,40	48,92
114mv20_F_shure	ugye	544,08	544,44	0,36	13,71	1,10	143,50	14,07	1,33	52,62
114mv20_I_shure	ugye	83,69	84,11	0,42	88,66	1,57	204,64	25,70	1,87	49,10
114mv20_I_shure	ugye	124,19	124,42	0,23	1,64	1,02	69,15	10,35	1,25	48,22
114mv20_I_shure	ugye	158,44	158,65	0,21	0,96	1,02	61,96	4,68	1,10	47,71
114mv20_I_shure	mondjuk	165,23	165,50	0,27	5,41	1,04	132,45	11,65	1,30	47,18
114mv20_I_shure	ugye	182,35	182,58	0,23	142,53	3,16	95,31	7,89	1,18	47,65
114mv20_I_shure	amúgy	214,45	214,72	0,27	undefined	undefined	undefined	9,03	1,22	47,44
114mv20_I_shure	ugye	223,92	224,19	0,27	1,74	1,03	62,92	4,26	1,09	49,94
114mv20_I_shure	mondjuk	224,94	225,23	0,29	0,00	1,00	203,98	16,08	1,46	46,58
114mv20_I_shure	ugye	289,57	289,77	0,20	undefined	undefined	undefined	7,53	1,18	46,77
114mv20_I_shure	ugye	308,18	308,49	0,31	undefined	undefined	undefined	7,41	1,20	41,79
114mv20_I_shure	ugye	317,19	317,44	0,25	4,52	1,04	119,66	20,51	1,60	50,90
114mv20_I_shure	ugye	349,76	350,00	0,24	212,55	4,21	223,45	9,29	1,20	51,15
114mv20_I_shure	ugye	357,33	357,52	0,19	undefined	undefined	undefined	11,90	1,33	45,09
114mv20_I_shure	ugye	461,57	461,77	0,20	1,97	1,03	72,64	18,54	1,57	46,72
114mv20_I_shure	ugye	631,04	631,29	0,25	13,99	1,11	135,19	4,90	1,10	51,85
114mv20_I_shure	ugye	663,84	664,07	0,23	0,62	1,00	241,85	16,35	1,46	46,79
114mv20_I_shure	mondjuk	697,18	697,56	0,38	65,72	2,01	83,40	30,18	2,26	48,14
114mv20_I_shure	ugye	704,65	704,91	0,26	11,81	1,09	140,56	13,77	1,32	52,82
114mv20_I_shure	ugye	822,34	822,56	0,22	77,08	2,27	105,05	14,54	1,32	55,67
114mv20_I_shure	ugye	866,98	867,12	0,14	5,85	1,04	140,22	3,50	1,07	53,68
114mv20_I_shure	ugye	901,56	901,77	0,21	235,07	4,09	146,49	9,10	1,20	50,83
114mv20_I_shure	mondjuk	953,00	953,31	0,31	7,92	1,06	133,22	19,92	1,55	51,42
114mv20_I_shure	mondjuk	1018,93	1019,23	0,30	11,84	1,09	132,86	14,08	1,35	51,86
114mv20_I_shure	ugye	1055,15	1055,50	0,35	20,77	1,16	136,32	29,81	2,06	50,65

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
114mv20_I_shure	ugye	1068,78	1068,98	0,20	73,48	2,04	98,09	18,77	1,55	49,50
114mv20_I_shure	amúgy	1089,36	1089,68	0,32	12,69	1,10	138,91	12,62	1,31	50,09
114mv20_I_shure	mondjuk	1192,67	1193,09	0,42	18,35	1,12	157,95	30,90	2,02	57,01
114mv20_I_shure	ugye	1210,48	1210,65	0,17	8,44	1,07	123,62	6,25	1,12	54,74
114mv20_I_shure	ugye	1216,35	1216,54	0,19	14,62	1,11	143,99	20,86	1,57	54,67
114mv20_I_shure	ugye	1315,47	1315,60	0,13	1,01	1,02	64,80	2,96	1,06	51,13
114mv20_I_shure	ugye	1357,16	1357,36	0,20	11,62	1,04	302,21	18,12	1,54	45,70
114mv20_I_shure	mondjuk	1363,46	1363,79	0,33	38,57	1,28	155,40	18,67	1,46	55,09
114mv20_I_shure	ugye	1382,45	1382,77	0,32	9,09	1,07	132,13	31,25	2,12	53,90
114mv20_I_shure	ugye	1404,26	1404,55	0,29	22,58	1,14	166,30	10,36	1,23	51,07
114mv20_I_shure	mondjuk	1405,43	1405,75	0,32	10,51	1,07	147,73	25,72	1,94	48,66
114mv20_I_shure	ugye	1409,52	1409,74	0,22	86,17	2,36	124,78	6,00	1,13	50,50
114mv20_I_shure	ugye	1441,18	1441,33	0,15	5,40	1,04	135,63	4,05	1,08	53,65
114mv20_I_shure	ugye	1481,22	1481,44	0,22	10,54	1,08	139,34	5,56	1,11	53,35
125mc25_F_shure	mondjuk	483,29	483,51	0,22	undefined	undefined	undefined	12,53	1,32	48,84
125mc25_F_shure	mondjuk	495,31	495,66	0,35	undefined	undefined	undefined	17,32	1,53	43,33
125mc25_F_shure	ugye	545,85	545,98	0,13	undefined	undefined	undefined	5,31	1,12	47,53
125mc25_F_shure	mondjuk	662,63	662,84	0,21	undefined	undefined	undefined	9,45	1,27	42,11
125mc25_F_shure	mondjuk	665,52	665,75	0,23	undefined	undefined	undefined	12,81	1,36	45,57
125mc25_F_shure	ugye	681,08	681,21	0,13	0,80	1,01	86,57	7,28	1,15	52,59
125mc25_I_shure	ugye	55,63	55,93	0,30	undefined	undefined	undefined	17,46	1,51	47,40
125mc25_I_shure	ugye	67,12	67,27	0,15	undefined	undefined	undefined	5,46	1,14	43,36
125mc25_I_shure	ugye	81,45	81,63	0,18	undefined	undefined	undefined	7,30	1,18	44,85
125mc25_I_shure	ugye	99,48	99,65	0,17	undefined	undefined	undefined	10,01	1,28	42,71
125mc25_I_shure	ugye	131,46	131,65	0,19	undefined	undefined	undefined	10,07	1,25	46,23
125mc25_I_shure	ugye	154,69	154,83	0,14	10,38	1,13	85,35	4,06	1,08	52,69
125mc25_I_shure	ugye	283,32	283,52	0,20	undefined	undefined	undefined	11,60	1,35	41,46
125mc25_I_shure	ugye	289,15	289,28	0,13	undefined	undefined	undefined	10,58	1,27	45,84
125mc25_I_shure	ugye	470,32	470,59	0,27	undefined	undefined	undefined	12,75	1,40	40,55
125mc25_I_shure	ugye	543,92	544,09	0,17	undefined	undefined	undefined	8,53	1,23	41,82
125mc25_I_shure	ugye	551,40	551,53	0,13	undefined	undefined	undefined	5,86	1,16	40,81
125mc25_I_shure	ugye	583,17	583,39	0,22	undefined	undefined	undefined	13,00	1,37	44,01

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
125mc25_l_shure	ugye	676,78	676,92	0,14	undefined	undefined	undefined	5,34	1,12	47,34
125mc25_l_shure	ugye	725,74	725,95	0,21	undefined	undefined	undefined	10,46	1,27	43,71
125mc25_l_shure	ugye	747,61	747,79	0,18	undefined	undefined	undefined	12,79	1,34	46,42
125mc25_l_shure	ugye	751,38	751,62	0,24	undefined	undefined	undefined	14,04	1,43	42,52
125mc25_l_shure	ugye	754,83	754,99	0,16	undefined	undefined	undefined	5,43	1,13	43,54
125mc25_l_shure	mondjuk	833,44	833,61	0,17	undefined	undefined	undefined	11,53	1,31	45,71
125mc25_l_shure	ugye	881,01	881,17	0,16	undefined	undefined	undefined	11,33	1,29	48,34
125mc25_l_shure	ugye	906,84	907,01	0,17	undefined	undefined	undefined	5,91	1,14	46,12
125mc25_l_shure	ugye	945,29	945,43	0,14	0,00	1,00	68,51	5,70	1,13	47,68
125mc25_l_shure	ugye	990,82	991,00	0,18	undefined	undefined	undefined	11,51	1,29	46,59

Prosodic features of the interviewer's DM segments

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
003mv19_F_shure	mondjuk	293,79	294,25	0,46	7,9	1,04	219,66	11,69	1,26	50,18
003mv19_I_shure	mondjuk	141,24	141,43	0,19	5,07	1,02	222,41	11,93	1,23	59,47
003mv19_I_shure	amúgy	169,36	169,55	0,19	15,33	1,07	212,34	9,35	1,18	59,61
003mv19_I_shure	amúgy	173,09	173,37	0,28	19,98	1,11	197,59	13,9	1,27	58,65
003mv19_I_shure	mondjuk	174,72	175,07	0,35	4,11	1,05	92,15	25,55	1,86	51,56
003mv19_I_shure	ugye	256,14	256,52	0,39	75,72	2,2	112,69	36,44	2,07	64,59
003mv19_I_shure	mondjuk	277,71	278,03	0,32	83,82	1,43	252,1	15,25	1,32	58,01
003mv19_I_shure	mondjuk	302,74	303,04	0,3	38,73	1,17	244,86	19,84	1,45	58,71
003mv19_I_shure	mondjuk	327,61	327,96	0,35	undefined	undefined	undefined	18,4	1,59	44,06
003mv19_I_shure	mondjuk	451,73	451,92	0,19	12,54	1,06	223,75	22,92	1,8	46,79
003mv19_I_shure	amúgy	1007,86	1008,1	0,24	14,54	1,08	191,49	17,26	1,44	53,57
003mv19_I_shure	egyébként	1063,38	1063,57	0,19	99,82	1,41	250,25	18,72	1,42	58,25
006mc22_F_shure	ugye	265,71	266,07	0,36	10,18	1,05	190,11	21,67	1,67	48,03
006mc22_I_shure	mondjuk	20,74	20,94	0,2	158,93	1,66	315,9	8,33	1,15	60,86
006mc22_I_shure	mondjuk	54,69	55,15	0,46	22,84	1,11	222,3	30,22	2,04	53,22
006mc22_I_shure	ugye	403,09	403,33	0,24	0,86	1	193,02	13,16	1,33	49,26
006mc22_I_shure	ugye	420,17	420,45	0,28	1,33	1,01	184,32	10,14	1,24	48,18
006mc22_I_shure	ugye	446	446,2	0,2	8,11	1,04	196,2	7,08	1,15	52,59
006mc22_I_shure	mondjuk	526,44	526,67	0,23	7,89	1,04	202,12	14,46	1,33	54,96
006mc22_I_shure	mondjuk	894,84	895,06	0,22	43,92	1,15	315,19	9,91	1,21	53,48
006mc22_I_shure	mondjuk	923,48	923,65	0,17	2,09	1,01	203,62	9,9	1,21	52,89
006mc22_I_shure	ugye	927,82	928,04	0,22	12,45	1,07	191,49	6,27	1,13	53,44
006mc22_I_shure	mondjuk	955,21	955,45	0,24	14,67	1,07	203,65	7,87	1,16	54,33
006mc22_I_shure	amúgy	975	975,24	0,24	126,73	3,01	131,84	7,36	1,13	59,43
007mc24_F_shure	mondjuk	80,76	81,1	0,35	2,07	1,01	200,31	17,67	1,6	40,78
007mc24_F_shure	mondjuk	146,63	146,85	0,22	3,91	1,02	202,51	13,58	1,37	48,03
007mc24_F_shure	mondjuk	305,63	305,84	0,21	3,15	1,02	196,35	9,09	1,21	49,88
007mc24_F_shure	ugye	538,37	538,67	0,3	1,92	1,02	98,52	17,56	1,54	46,59
007mc24_F_shure	egyébként	576,65	577,62	0,97	28,85	1,14	208,92	23,21	1,78	48,34
007mc24_F_shure	ugye	581,47	581,73	0,26	7,83	1,04	197,7	15,69	1,47	45,53
007mc24_I_shure	amúgy	35,66	35,93	0,27	2,97	1,02	193,24	9,44	1,2	52,63
007mc24_I_shure	amúgy	92,14	92,37	0,23	0,23	1	204,32	4,59	1,1	50,13

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
007mc24_I_shure	amúgy	309,95	310,38	0,44	5,04	1,03	199,47	10,01	1,22	53,52
007mc24_I_shure	mondjuk	311,41	311,77	0,36	undefined	undefined	undefined	6,99	1,18	42,62
007mc24_I_shure	mondjuk	325,96	326,22	0,26	4,71	1,01	383,2	10,31	1,25	47,98
007mc24_I_shure	amúgy	326,95	327,21	0,26	undefined	undefined	undefined	5,04	1,11	47,57
007mc24_I_shure	mondjuk	343,1	343,28	0,18	12,49	1,05	250,19	15,98	1,35	56,81
007mc24_I_shure	amúgy	343,68	343,93	0,25	11,33	1,06	202,08	4,86	1,09	54,55
007mc24_I_shure	mondjuk	347	347,22	0,22	1,22	1,01	193,53	11,62	1,27	51,53
007mc24_I_shure	amúgy	393,09	393,31	0,23	9,56	1,04	242,29	7,81	1,15	56,63
007mc24_I_shure	ugye	420,55	420,75	0,2	2,84	1,02	183,04	6,81	1,15	48,3
007mc24_I_shure	egyébként	612,38	612,81	0,43	175,38	3,49	169,73	20,19	1,48	54,92
007mc24_I_shure	egyébként	1229,41	1230,13	0,72	undefined	undefined	undefined	16,88	1,54	43,76
012mc25_F_shure	mondjuk	194,23	194,54	0,31	141,15	2,71	142,25	25,63	1,56	65,26
012mc25_F_shure	egyébként	264,88	265,4	0,52	184,37	3,76	180,25	15,93	1,3	64,03
012mc25_F_shure	amúgy	399,55	399,86	0,31	17,67	1,09	215,29	9,19	1,13	74,57
012mc25_I_shure	mondjuk	358,07	358,3	0,23	undefined	undefined	undefined	9,27	1,18	58,2
012mc25_I_shure	ugye	483,61	483,78	0,16	undefined	undefined	undefined	13,14	1,27	58,15
012mc25_I_shure	szóval	920,33	920,74	0,41	136,85	2,4	152,77	25,14	1,59	61,7
013mv22_F_shure	mondjuk	147,8	148,2	0,4	undefined	undefined	undefined	14,95	1,43	44,71
013mv22_I_shure	ugye	74,96	75,07	0,11	3,02	1,02	194,22	4,03	1,07	56,52
013mv22_I_shure	mondjuk	301,93	302,11	0,17	undefined	undefined	undefined	10,85	1,27	48,18
013mv22_I_shure	ugye	319,38	319,54	0,17	10,99	1,06	192,62	12,17	1,25	58,12
013mv22_I_shure	mondjuk	492,44	492,7	0,26	undefined	undefined	undefined	8,93	1,2	52,24
013mv22_I_shure	amúgy	673,99	674,3	0,32	44	1,19	236,41	20,22	1,46	61,62
013mv22_I_shure	amúgy	735,59	735,82	0,24	undefined	undefined	undefined	13,44	1,31	53,04
013mv22_I_shure	ugye	776,96	777,11	0,15	undefined	undefined	undefined	6,11	1,14	47,46
016fc29_I_shure	mondjuk	66,92	67,15	0,24	3,41	1,03	117,38	9,54	1,19	56,45
016fc29_I_shure	ugye	158,02	158,35	0,34	undefined	undefined	undefined	7,26	1,16	
016fc29_I_shure	mondjuk	249,81	249,98	0,17	undefined	undefined	undefined	13,6	1,33	50,96
016fc29_I_shure	mondjuk	250,89	251,05	0,16	2,14	1,02	101,84	9,74	1,2	54,04
016fc29_I_shure	ugye	375,42	376,47	1,06	undefined	undefined	undefined	19,63	1,6	45,17
016fc29_I_shure	mondjuk	392,73	393,02	0,29	undefined	undefined	undefined	15,67	1,58	37,44

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
016fc29_I_shure	mondjuk	413,06	413,3	0,24	undefined	undefined	undefined	13,9	1,36	46,22
016fc29_I_shure	mondjuk	488,01	488,22	0,21	undefined	undefined	undefined	11,48	1,29	47,73
016fc29_I_shure	mondjuk	542,46	542,66	0,21	undefined	undefined	undefined	9,64	1,23	48,91
016fc29_I_shure	egyébként	929,37	929,69	0,32	undefined	undefined	undefined	12,27	1,33	45,57
018fc19_F_shure	ugye	537,58	537,77	0,19	undefined	undefined	undefined	12,17	1,32	47,48
018fc19_I_shure	mondjuk	14,5	14,77	0,27	9,94	1,05	213,81	10,22	1,22	53,72
018fc19_I_shure	egyébként	19,36	19,6	0,24	85,76	1,39	234,34	17,54	1,42	54,8
018fc19_I_shure	mondjuk	23,91	24,18	0,27	6,85	1,03	216,29	16,86	1,41	54,79
018fc19_I_shure	ugye	125,81	126,14	0,33	undefined	undefined	undefined	19,88	1,61	47,09
018fc19_I_shure	ugye	133,78	133,98	0,2	undefined	undefined	undefined	10,87	1,28	46,86
018fc19_I_shure	egyébként	345,52	346,04	0,52	12,43	1,06	220,44	16,37	1,41	51,32
018fc19_I_shure	egyébként	615,1	615,48	0,38	31,71	1,15	225,2	28,78	1,88	57,03
018fc19_I_shure	ugye	646,64	646,87	0,23	7,66	1,04	200,56	20,48	1,54	54,02
018fc19_I_shure	ugye	672,96	673,26	0,3	undefined	undefined	undefined	7,78	1,18	49,09
019fc20_I_shure	egyébként	35,64	36,21	0,57	29,64	1,14	227,2	27,37	1,83	54,54
019fc20_I_shure	mondjuk	53,62	53,88	0,26	undefined	undefined	undefined	12,85	1,35	46,9
019fc20_I_shure	ugye	99,58	99,77	0,18	12,03	1,06	207,11	5,58	1,1	58,62
019fc20_I_shure	mondjuk	133,81	134,15	0,35	127,27	2,65	151,38	9,18	1,2	52,46
019fc20_I_shure	egyébként	269,83	270,38	0,54	undefined	undefined	undefined	11,9	1,31	44,93
019fc20_I_shure	ugye	493,23	493,36	0,14	undefined	undefined	undefined	9,11	1,22	46,14
019fc20_I_shure	mondjuk	680,89	681,09	0,19	3,44	1,02	204,42	13,11	1,31	54,38
020mc25_F_shure	ugye	198,06	198,27	0,21	undefined	undefined	undefined	4,76	1,11	45,29
020mc25_F_shure	mondjuk	243,06	243,26	0,2	undefined	undefined	undefined	10,65	1,29	44,98
020mc25_I_shure	mondjuk	8,17	8,39	0,22	29,82	1,14	222,9	19,47	1,47	57,02
020mc25_I_shure	mondjuk	21,87	22,12	0,25	16,25	1,08	216,35	9,52	1,21	51,33
020mc25_I_shure	mondjuk	141,48	141,76	0,28	undefined	undefined	undefined	11,02	1,27	49,97
020mc25_I_shure	ugye	198,76	198,94	0,17	undefined	undefined	undefined	6,61	1,15	48,47
020mc25_I_shure	amúgy	826,05	826,29	0,25	undefined	undefined	undefined	7,43	1,18	45,25
020mc25_I_shure	mondjuk	974,55	974,78	0,24	17,97	1,08	232,38	24,98	1,61	61,18
020mc25_I_shure	amúgy	976,02	976,23	0,21	undefined	undefined	undefined	6,79	1,17	45,2
021fc21_F_shure	mondjuk	385,68	386,13	0,45	7,87	1,04	206,99	23,2	1,88	44,83

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
021fc21_F_shure	ugye	657,36	657,75	0,39	11,2	1,06	179,24	13,69	1,4	43,42
021fc21_F_shure	ugye	664,42	664,65	0,23	undefined	undefined	undefined	8,97	1,24	42,81
021fc21_F_shure	mondjuk	668,2	668,49	0,3	42,46	1,22	218,23	8,82	1,18	52,63
021fc21_F_shure	ugye	670,88	671,03	0,15	19,57	1,12	178,1	6,63	1,14	50,34
021fc21_I_shure	ugye	5,04	5,33	0,29	undefined	undefined	undefined	6,6	1,16	44,74
021fc21_I_shure	ugye	32,77	32,95	0,18	7,74	1,04	208,38	18,42	1,46	55,37
021fc21_I_shure	mondjuk	268,73	268,96	0,23	26,31	1,13	222,03	15,94	1,34	58,37
021fc21_I_shure	mondjuk	314,66	314,96	0,31	20,35	1,08	253,58	13,03	1,28	56,94
021fc21_I_shure	mondjuk	317,97	318,27	0,29	14,52	1,07	206,6	10,19	1,21	54,95
021fc21_I_shure	ugye	326,17	326,37	0,2	undefined	undefined	undefined	18,79	1,57	45,17
021fc21_I_shure	ugye	331,32	331,45	0,13	undefined	undefined	undefined	5,13	1,15	38,43
021fc21_I_shure	mondjuk	436,44	436,78	0,33	undefined	undefined	undefined	15,64	1,47	44,2
021fc21_I_shure	mondjuk	679,23	679,43	0,2	2,3	1,01	198,39	12,19	1,3	48,89
021fc21_I_shure	mondjuk	840,46	840,64	0,18	3,09	1,03	101,91	6,08	1,12	54,01
021fc21_I_shure	ugye	868,48	868,69	0,21	0,46	1	108,89	11,26	1,27	48,06
021fc21_I_shure	ugye	872,9	873,16	0,26	undefined	undefined	undefined	13,92	1,41	44,14
021fc21_I_shure	ugye	897,98	898,07	0,09	0	1	204,64	8,55	1,2	48,31
023fv24_F_shure	mondjuk	65,18	65,44	0,26	undefined	undefined	undefined	7,1	1,21	37,4
023fv24_I_shure	mondjuk	109,42	109,8	0,39	26,46	1,12	225,78	12,24	1,31	48,51
023fv24_I_shure	mondjuk	119,88	120,25	0,37	34,53	1,16	233,17	29	1,92	55,04
030fc21_F_shure	ugye	167,56	167,75	0,19	5,10	1,03	183,48	5,31	1,12	48,77
030fc21_F_shure	mondjuk	171,59	171,99	0,40	1,18	1,01	102,57	10,66	1,30	42,56
030fc21_F_shure	mondjuk	482,14	482,47	0,33	0,00	1,00	237,40	12,42	1,38	41,27
030fc21_I_shure	ugye	54,00	54,15	0,15	11,76	1,06	197,61	3,97	1,07	55,40
030fc21_I_shure	mondjuk	57,74	58,07	0,33	26,54	1,14	206,11	14,07	1,35	50,61
030fc21_I_shure	mondjuk	68,35	68,60	0,25	14,66	1,07	220,48	13,54	1,31	53,34
030fc21_I_shure	ugye	144,16	144,33	0,17	undefined	undefined	undefined	13,27	1,36	47,59
030fc21_I_shure	mondjuk	203,48	203,74	0,26	9,50	1,04	228,23	20,53	1,47	60,87
030fc21_I_shure	ugye	212,53	212,75	0,22	109,53	2,12	189,02	9,68	1,20	53,76
030fc21_I_shure	mondjuk	262,19	262,48	0,29	9,83	1,05	203,81	17,33	1,46	50,98
030fc21_I_shure	mondjuk	361,50	361,65	0,15	3,41	1,02	220,34	14,35	1,34	51,82

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
030fc21_I_shure	amúgy	363,86	364,21	0,35	10,97	1,06	197,05	21,25	1,65	48,78
030fc21_I_shure	mondjuk	365,81	366,03	0,22	5,66	1,03	204,84	13,52	1,32	54,13
030fc21_I_shure	mondjuk	745,74	746,06	0,32	undefined	undefined	undefined	12,52	1,34	45,19
030fc21_I_shure	mondjuk	822,18	822,44	0,26	35,60	1,16	223,36	25,29	1,93	46,89
030fc21_I_shure	mondjuk	928,19	928,42	0,23	11,41	1,05	220,46	9,34	1,20	52,66
030fc21_I_shure	ugye	949,80	949,96	0,16	undefined	undefined	undefined	3,87	1,10	41,46
030fc21_I_shure	mondjuk	1122,20	1122,41	0,21	13,83	1,06	225,36	25,54	1,73	56,80
030fc21_I_shure	amúgy	1131,48	1131,68	0,20	8,64	1,04	210,54	3,85	1,08	51,22
030fc21_I_shure	mondjuk	1134,64	1134,93	0,29	undefined	undefined	undefined	5,24	1,13	44,71
040fv24_F_shure	ugye	303,10	303,32	0,22	19,65	1,10	215,05	27,75	1,86	55,18
040fv24_I_shure	ugye	47,02	47,31	0,29	0,55	1,01	109,21	12,91	1,36	45,50
040fv24_I_shure	mondjuk	106,12	106,39	0,27	6,35	1,03	210,95	7,21	1,15	51,98
040fv24_I_shure	mondjuk	106,51	106,74	0,23	2,87	1,01	206,69	10,67	1,24	51,45
040fv24_I_shure	mondjuk	125,06	125,35	0,29	8,14	1,04	234,55	12,88	1,32	52,11
040fv24_I_shure	ugye	233,94	234,27	0,33	197,19	4,26	149,88	15,65	1,36	54,07
040fv24_I_shure	amúgy	246,63	246,88	0,25	10,28	1,05	203,03	20,31	1,59	50,22
040fv24_I_shure	mondjuk	269,10	269,38	0,28	undefined	undefined	undefined	10,39	1,28	42,87
040fv24_I_shure	ugye	345,47	345,70	0,23	6,75	1,03	196,16	12,78	1,32	49,98
040fv24_I_shure	ugye	351,81	352,03	0,22	4,39	1,02	203,38	14,57	1,38	49,69
040fv24_I_shure	ugye	580,61	580,82	0,21	6,05	1,03	208,09	10,40	1,25	49,16
040fv24_I_shure	ugye	610,15	610,64	0,49	2,79	1,02	182,12	20,63	1,72	43,48
040fv24_I_shure	ugye	680,37	680,58	0,21	6,02	1,03	193,05	10,88	1,28	47,28
040fv24_I_shure	ugye	699,78	699,91	0,13	undefined	undefined	undefined	7,33	1,18	44,54
040fv24_I_shure	ugye	722,63	722,79	0,16	3,95	1,02	179,97	8,03	1,18	48,76
040fv24_I_shure	amúgy	754,24	754,42	0,18	7,89	1,04	213,79	5,17	1,11	50,99
040fv24_I_shure	ugye	814,03	814,27	0,24	4,94	1,03	172,24	11,91	1,31	46,12
040fv24_I_shure	mondjuk	846,56	846,89	0,33	39,11	1,19	230,40	20,12	1,50	55,93
040fv24_I_shure	mondjuk	971,62	971,94	0,32	9,10	1,04	247,94	16,48	1,41	52,77
040fv24_I_shure	mondjuk	974,13	974,44	0,31	6,45	1,03	225,20	16,85	1,44	50,95
040fv24_I_shure	amúgy	988,68	988,98	0,30	112,32	2,30	181,77	17,14	1,48	50,22
043fc21_I_shure	mondjuk	12,87	13,44	0,57	7,02	1,03	212,31	23,72	1,73	51,81

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
043fc21_I_shure	mondjuk	26,10	26,48	0,38	8,27	1,04	200,07	20,33	1,60	50,02
043fc21_I_shure	mondjuk	82,88	83,06	0,18	4,04	1,02	217,88	10,38	1,22	55,26
043fc21_I_shure	mondjuk	99,51	99,63	0,12	21,93	1,10	215,14	3,08	1,06	53,29
043fc21_I_shure	mondjuk	126,42	126,59	0,17	1,57	1,01	194,46	16,19	1,42	49,99
043fc21_I_shure	mondjuk	228,83	229,09	0,26	undefined	undefined	undefined	13,25	1,38	45,23
043fc21_I_shure	mondjuk	294,56	294,85	0,29	18,46	1,09	224,00	31,68	2,17	54,19
043fc21_I_shure	mondjuk	300,16	300,54	0,38	6,94	1,03	207,61	26,40	1,88	52,30
043fc21_I_shure	ugye	320,40	320,77	0,37	undefined	undefined	undefined	22,30	1,77	44,41
043fc21_I_shure	mondjuk	649,25	649,59	0,34	undefined	undefined	undefined	12,63	1,39	40,59
043fc21_I_shure	mondjuk	671,71	672,04	0,33	5,90	1,03	227,58	19,90	1,56	49,83
043fc21_I_shure	mondjuk	675,17	675,41	0,24	11,53	1,05	252,91	15,54	1,36	55,62
043fc21_I_shure	mondjuk	698,15	698,35	0,20	13,14	1,06	210,05	8,54	1,17	57,57
043fc21_I_shure	mondjuk	782,51	782,68	0,17	46,34	1,16	309,12	7,91	1,15	57,71
043fc21_I_shure	ugye	964,70	965,01	0,31	undefined	undefined	undefined	3,15	1,07	48,67
057fc30_F_shure	ugye	767,97	768,15	0,18	undefined	undefined	undefined	12,75	1,47	35,49
057fc30_F_shure	mondjuk	793,17	793,47	0,30	9,05	1,04	226,25	17,43	1,65	39,99
057fc30_F_shure	mondjuk	795,67	795,93	0,26	undefined	undefined	undefined	7,86	1,29	32,22
057fc30_I_shure	mondjuk	10,49	10,75	0,26	41,37	1,18	241,25	25,79	2,01	46,98
059fv19_F_shure	mondjuk	180,25	180,56	0,31	undefined	undefined	undefined	13,27	1,46	36,44
059fv19_I_shure	mondjuk	66,24	66,49	0,25	undefined	undefined	undefined	17,06	1,49	48,17
059fv19_I_shure	mondjuk	73,83	74,13	0,30	3,09	1,02	205,06	31,32	2,05	53,83
059fv19_I_shure	ugye	208,15	208,35	0,20	undefined	undefined	undefined	12,31	1,29	49,53
059fv19_I_shure	mondjuk	246,28	246,57	0,29	undefined	undefined	undefined	12,11	1,27	53,03
059fv19_I_shure	ugye	440,06	440,29	0,23	5,44	1,02	295,08	12,02	1,25	55,39
059fv19_I_shure	mondjuk	455,57	455,82	0,25	3,29	1,02	203,96	11,08	1,24	55,46
059fv19_I_shure	mondjuk	466,25	466,55	0,30	undefined	undefined	undefined	20,84	1,64	49,13
059fv19_I_shure	mondjuk	478,08	478,40	0,32	undefined	undefined	undefined	14,72	1,46	42,95
059fv19_I_shure	mondjuk	524,43	524,74	0,31	18,57	1,08	225,40	12,52	1,26	57,64
059fv19_I_shure	mondjuk	881,43	881,75	0,32	20,97	1,10	225,83	29,28	1,86	57,90
062mv20_I_shure	mondjuk	7,25	7,53	0,28	0,94	1,00	212,47	16,14	1,40	51,14
062mv20_I_shure	amúgy	72,46	72,68	0,22	undefined	undefined	undefined	13,60	1,34	50,22

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
062mv20_I_shure	amúgy	101,16	101,38	0,22	undefined	undefined	undefined	10,29	1,24	47,80
062mv20_I_shure	ugye	186,99	187,30	0,31	undefined	undefined	undefined	10,92	1,33	42,09
062mv20_I_shure	ugye	221,06	221,24	0,18	2,48	1,01	218,96	21,93	1,62	52,12
062mv20_I_shure	mondjuk	436,67	436,92	0,25	undefined	undefined	undefined	13,50	1,34	48,60
062mv20_I_shure	mondjuk	449,27	449,68	0,41	undefined	undefined	undefined	18,87	1,58	47,20
062mv20_I_shure	mondjuk	488,85	489,18	0,33	undefined	undefined	undefined	17,68	1,54	44,93
062mv20_I_shure	mondjuk	591,15	591,47	0,32	undefined	undefined	undefined	8,08	1,19	46,15
063fv20_F_shure	mondjuk	279,34	279,59	0,25	undefined	undefined	undefined	13,06	1,37	43,77
063fv20_I_shure	ugye	132,43	132,70	0,27	3,98	1,02	203,69	15,63	1,35	55,99
063fv20_I_shure	mondjuk	335,02	335,24	0,22	7,81	1,04	213,14	15,19	1,34	54,41
063fv20_I_shure	ugye	385,24	385,45	0,21	undefined	undefined	undefined	3,01	1,06	48,42
063fv20_I_shure	ugye	388,91	389,10	0,19	undefined	undefined	undefined	9,70	1,22	47,31
063fv20_I_shure	amúgy	406,26	406,63	0,37	0,00	1,00	219,10	14,44	1,36	50,02
063fv20_I_shure	mondjuk	420,01	420,41	0,40	undefined	undefined	undefined	18,38	1,54	47,60
063fv20_I_shure	mondjuk	475,29	475,49	0,20	6,64	1,03	226,04	13,05	1,27	57,26
063fv20_I_shure	amúgy	518,28	518,61	0,33	17,31	1,08	233,46	7,42	1,15	53,07
063fv20_I_shure	mondjuk	571,54	571,69	0,15	14,22	1,06	226,49	12,09	1,27	54,39
063fv20_I_shure	mondjuk	575,05	575,28	0,23	undefined	undefined	undefined	19,31	1,66	42,84
063fv20_I_shure	mondjuk	853,92	854,17	0,25	undefined	undefined	undefined	13,15	1,38	42,09
063fv20_I_shure	mondjuk	967,55	967,72	0,17	15,51	1,05	313,66	9,63	1,18	57,94
063fv20_I_shure	mondjuk	969,31	969,52	0,21	undefined	undefined	undefined	7,25	1,18	44,00
067mc21_F_shure	mondjuk	303,76	304,01	0,25	undefined	undefined	undefined	13,81	1,38	45,88
067mc21_I_shure	mondjuk	70,22	70,43	0,21	undefined	undefined	undefined	13,14	1,32	51,74
067mc21_I_shure	mondjuk	130,14	130,48	0,34	undefined	undefined	undefined	11,39	1,33	41,56
067mc21_I_shure	ugye	257,65	257,80	0,15	1,30	1,01	207,09	3,84	1,08	53,09
067mc21_I_shure	mondjuk	277,47	277,87	0,40	undefined	undefined	undefined	17,41	1,50	47,56
067mc21_I_shure	mondjuk	358,07	358,37	0,30	undefined	undefined	undefined	7,33	1,16	51,86
067mc21_I_shure	ugye	469,73	469,96	0,23	18,07	1,08	230,72	22,53	1,56	58,78
067mc21_I_shure	ugye	481,12	481,32	0,20	9,32	1,05	199,03	15,68	1,37	54,48
067mc21_I_shure	amúgy	522,46	522,69	0,23	17,44	1,08	228,82	12,12	1,26	56,76
069mc20_I_shure	mondjuk	15,00	15,29	0,29	10,54	1,04	282,78	14,89	1,42	47,46

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
069mc20_I_shure	mondjuk	19,17	19,37	0,20	11,82	1,06	220,01	13,88	1,32	51,94
069mc20_I_shure	mondjuk	220,66	220,94	0,28	7,11	1,04	196,96	10,86	1,27	47,50
069mc20_I_shure	ugye	250,98	251,17	0,19	4,80	1,02	229,53	6,50	1,14	50,28
069mc20_I_shure	mondjuk	252,64	252,84	0,20	undefined	undefined	undefined	19,44	1,62	46,60
069mc20_I_shure	ugye	484,73	484,90	0,17	10,54	1,05	206,91	10,81	1,24	52,74
069mc20_I_shure	ugye	512,29	512,46	0,17	11,19	1,05	255,14	9,12	1,20	51,40
069mc20_I_shure	mondjuk	518,12	518,36	0,24	109,68	2,06	166,61	12,69	1,32	49,31
069mc20_I_shure	amúgy	746,79	746,99	0,20	118,86	2,11	164,08	9,85	1,20	55,32
069mc20_I_shure	mondjuk	766,91	767,13	0,22	2,77	1,01	209,55	26,28	2,06	47,82
069mc20_I_shure	ugye	871,25	871,41	0,16	5,93	1,03	204,12	2,84	1,06	50,18
069mc20_I_shure	mondjuk	896,42	896,71	0,29	undefined	undefined	undefined	14,85	1,46	44,73
069mc20_I_shure	mondjuk	954,57	954,86	0,29	0,63	1,00	216,65	15,16	1,42	46,85
069mc20_I_shure	amúgy	961,62	961,88	0,26	54,98	1,30	226,62	11,54	1,25	55,28
069mc20_I_shure	mondjuk	1014,04	1014,29	0,25	undefined	undefined	undefined	8,21	1,20	47,07
069mc20_I_shure	amúgy	1048,73	1049,05	0,32	undefined	undefined	undefined	4,79	1,11	47,54
070fc21_F_shure	ugye	300,64	300,93	0,29	45,15	1,24	206,99	11,90	1,30	47,51
070fc21_F_shure	ugye	353,46	353,72	0,26	15,62	1,08	203,18	12,12	1,30	49,29
070fc21_I_shure	mondjuk	50,09	50,40	0,31	2,84	1,01	206,65	14,09	1,38	46,71
070fc21_I_shure	ugye	61,17	61,41	0,24	9,91	1,05	203,92	11,56	1,30	47,53
070fc21_I_shure	ugye	137,53	137,93	0,40	undefined	undefined	undefined	17,65	1,68	38,51
070fc21_I_shure	mondjuk	182,36	182,79	0,43	24,26	1,11	235,46	24,50	1,86	48,85
070fc21_I_shure	mondjuk	186,42	186,68	0,26	36,33	1,18	204,24	20,93	1,68	48,45
070fc21_I_shure	amúgy	193,51	193,73	0,22	7,82	1,04	225,49	5,82	1,12	53,03
070fc21_I_shure	mondjuk	342,64	342,94	0,30	33,88	1,15	240,63	18,14	1,43	55,71
070fc21_I_shure	ugye	525,79	526,09	0,30	undefined	undefined	undefined	12,18	1,35	43,86
070fc21_I_shure	ugye	561,60	561,90	0,30	undefined	undefined	undefined	7,28	1,19	43,87
070fc21_I_shure	mondjuk	780,54	780,84	0,30	undefined	undefined	undefined	10,86	1,30	44,92
070fc21_I_shure	mondjuk	784,97	785,14	0,17	2,89	1,01	212,79	22,95	1,87	46,27
096fc19_F_shure	mondjuk	63,38	63,57	0,19	undefined	undefined	undefined	6,88	1,18	43,07
096fc19_F_shure	mondjuk	65,22	65,38	0,16	undefined	undefined	undefined	8,34	1,26	38,06
096fc19_F_shure	mondjuk	106,12	106,51	0,39	undefined	undefined	undefined	14,79	1,48	43,24

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
096fc19_F_shure	mondjuk	107,32	107,50	0,18	undefined	undefined	undefined	11,91	1,37	41,43
096fc19_F_shure	mondjuk	111,00	111,19	0,19	undefined	undefined	undefined	6,18	1,17	40,99
096fc19_F_shure	mondjuk	117,82	118,07	0,25	undefined	undefined	undefined	10,43	1,33	39,94
096fc19_F_shure	mondjuk	146,20	146,33	0,13	undefined	undefined	undefined	9,26	1,23	45,78
096fc19_F_shure	mondjuk	147,62	147,79	0,17	undefined	undefined	undefined	10,86	1,37	37,63
096fc19_F_shure	mondjuk	148,20	148,41	0,21	undefined	undefined	undefined	5,77	1,17	37,74
096fc19_F_shure	mondjuk	326,03	326,23	0,20	undefined	undefined	undefined	11,24	1,36	38,83
096fc19_I_shure	mondjuk	31,67	31,96	0,29	1,39	1,01	121,94	11,09	1,25	51,27
096fc19_I_shure	mondjuk	99,56	99,83	0,27	undefined	undefined	undefined	9,64	1,28	41,54
096fc19_I_shure	ugye	170,51	170,74	0,23	134,68	2,39	181,30	4,09	1,08	54,59
096fc19_I_shure	mondjuk	228,63	228,79	0,16	10,78	1,09	114,72	27,21	1,96	48,63
096fc19_I_shure	mondjuk	243,47	243,64	0,17	9,23	1,08	114,82	10,07	1,23	51,54
096fc19_I_shure	mondjuk	330,29	330,55	0,26	undefined	undefined	undefined	13,75	1,38	45,64
096fc19_I_shure	ugye	524,61	524,89	0,28	undefined	undefined	undefined	11,17	1,37	39,03
096fc19_I_shure	mondjuk	532,56	532,80	0,24	undefined	undefined	undefined	15,20	1,44	46,60
096fc19_I_shure	ugye	536,85	537,09	0,24	undefined	undefined	undefined	7,00	1,18	43,79
096fc19_I_shure	mondjuk	596,29	596,63	0,34	undefined	undefined	undefined	21,72	1,80	43,71
096fc19_I_shure	ugye	616,83	617,01	0,18	undefined	undefined	undefined	6,83	1,19	39,52
096fc19_I_shure	mondjuk	619,38	619,67	0,29	undefined	undefined	undefined	21,75	1,91	41,12
096fc19_I_shure	ugye	711,70	711,93	0,23	undefined	undefined	undefined	4,32	1,10	44,20
096fc19_I_shure	mondjuk	724,65	724,77	0,12	0,73	1,01	127,90	8,79	1,19	51,74
096fc19_I_shure	ugye	728,16	728,40	0,24	5,82	1,06	101,06	11,31	1,25	52,66
096fc19_I_shure	mondjuk	728,63	728,90	0,27	0,31	1,00	111,13	13,92	1,38	44,02
096fc19_I_shure	mondjuk	786,13	786,29	0,16	undefined	undefined	undefined	10,93	1,28	45,17
096fc19_I_shure	mondjuk	808,11	808,41	0,30	8,17	1,07	125,39	22,03	1,73	48,38
096fc19_I_shure	mondjuk	812,86	813,13	0,27	undefined	undefined	undefined	13,02	1,39	42,37
096fc19_I_shure	mondjuk	815,73	815,93	0,20	undefined	undefined	undefined	9,05	1,27	40,55
096fc19_I_shure	mondjuk	844,56	844,72	0,16	2,58	1,02	134,45	10,09	1,21	52,14
096fc19_I_shure	mondjuk	846,32	846,66	0,34	undefined	undefined	undefined	11,87	1,34	42,91
096fc19_I_shure	mondjuk	932,81	933,01	0,20	undefined	undefined	undefined	12,67	1,38	43,06
096fc19_I_shure	mondjuk	934,70	935,01	0,31	undefined	undefined	undefined	11,56	1,41	35,52

Filename	Label	Start (m,s)	End (m,s)	Duration (m)	F0 Range (Hz)	F0 Quotient	F0 Mean (Hz)	Intensity Range (dB)	Intensity Quotient	Intensity Mean (dB)
096fc19_I_shure	ugye	957,74	957,99	0,25	2,10	1,02	105,36	18,40	1,51	50,10
096fc19_I_shure	mondjuk	965,62	965,80	0,18	3,43	1,03	105,14	11,80	1,29	48,44
096fc19_I_shure	mondjuk	1034,74	1034,95	0,21	2,32	1,02	118,92	12,62	1,32	47,88
096fc19_I_shure	mondjuk	1053,46	1053,72	0,26	undefined	undefined	undefined	18,60	1,70	41,10
114mv20_F_shure	ugye	250,63	250,86	0,23	undefined	undefined	undefined	11,04	1,32	43,00
114mv20_I_shure	mondjuk	172,97	173,26	0,29	22,55	1,09	258,73	29,02	2,08	50,27
114mv20_I_shure	mondjuk	235,52	235,80	0,28	0,08	1,00	77,53	11,65	1,31	45,54
114mv20_I_shure	mondjuk	478,29	478,52	0,23	12,44	1,06	227,73	25,64	1,89	50,11
114mv20_I_shure	mondjuk	486,99	487,27	0,28	46,06	1,23	222,58	16,38	1,48	47,25
114mv20_I_shure	mondjuk	713,14	713,51	0,37	4,53	1,02	206,44	25,05	1,93	46,84
114mv20_I_shure	mondjuk	1093,00	1093,22	0,22	5,66	1,02	229,48	14,74	1,34	54,28
114mv20_I_shure	mondjuk	1180,51	1180,90	0,39	undefined	undefined	undefined	15,98	1,51	44,31
114mv20_I_shure	mondjuk	1399,43	1399,83	0,40	undefined	undefined	undefined	10,63	1,37	34,87
125mc25_F_shure	mondjuk	370,50	370,87	0,37	undefined	undefined	undefined	14,53	1,44	43,12
125mc25_F_shure	mondjuk	515,20	515,48	0,28	undefined	undefined	undefined	10,64	1,31	39,52
125mc25_I_shure	mondjuk	45,13	45,43	0,30	9,04	1,04	254,59	19,99	1,48	58,29
125mc25_I_shure	ugye	159,46	159,72	0,26	120,96	2,14	152,05	13,17	1,31	52,76
125mc25_I_shure	mondjuk	506,62	506,97	0,35	1,75	1,01	184,13	19,91	1,60	48,44
125mc25_I_shure	mondjuk	1003,05	1003,51	0,46	undefined	undefined	undefined	20,56	1,71	43,07