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A production study on the choice of Hungarian demonstratives[*]

Abstract

In the case of languages which make a two-way distinction between demonstrative terms the choice between spatial demonstratives has traditionally been assumed to depend on the referent's physical proximity to the speaker. However, recently this egocentric and speaker-anchored view has been challenged, and the addressee's role in demonstrative reference has been emphasized (Peeters & Özyürek 2016). This paper reports the results of a production study on the use of Hungarian demonstrative determiners. It is argued that though the traditional view cannot be rejected, it is not satisfactory in itself, i.e. besides relative distance from the speaker the establishment or lack of joint attention between speaker and hearer to the referent and the presence or absence of a pointing gesture are also decisive factors.
Keywords: demonstrative, distance, joint attention, pointing gesture

1   Introduction

Demonstratives are widely used in everyday conversations and are considered to be universal across languages. Most languages, just like Hungarian, employ two types of demonstratives, which are traditionally called proximal (*ez, ezek* "this, these") and distal demonstratives (*az, azok* "that, those"). From a syntactic point of view, Hungarian demonstratives either occur as independent pronouns (full DPs) or they serve as the head of a DP situated in [Spec, DP] (É. Kiss 2003). In the second case a definite article is inserted between the demonstrative and the head noun: *ez a narancs* "this the orange = this orange", and both the demonstrative and the head are marked for case: *ez-t a narancs-ot* "this-ACC the orange-ACC = this orange". This paper deals only with the latter use of demonstratives in Hungarian.

From a pragmatic perspective it was first assumed that the choice of demonstratives in two-term systems (proximal vs. distal) is determined by relative distance from the speaker, i.e. proximal demonstratives are used when the speaker refers to entities that are close, while distal demonstratives are used to refer to entities that are not so close to the speaker. However, recently this traditional view has been challenged by a number of studies (see for example Piwek et al. 2008, Enfield 2009, Jarbou 2010, Stevens & Zhang 2013, Peeters et al. 2014). As Peeters and Özyürek (2016) point out, demonstratives are often used in everyday situations to

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establish joint attention between the speaker, the hearer and the entity being referred to, which means that the use of demonstratives cannot be adequately described without taking into account the speaker's beliefs about the hearer's knowledge of the intended referent. Observational studies, for example Enfield's (2009) work on Lao, have also supported this view and stated that the referent is very often in the focus of the speaker and hearer's joint attention. Enfield (2009) also emphasized the importance of non-verbal cues, such as gestures, gaze direction and body posture in everyday interactions. In a similar fashion, Clark and Bangerter (2004) describe referring as a participatory process, where "speakers may initiate the process of referring, but they count on the active participation of their addressees" (Clark & Bangerter 2004: 45). Moreover, they also point out that deictic references often require acts of indicating, the prototypical example being the use of pointing gestures. A crucial feature of the use of deictic expressions is then to help the addressee in identifying the location of the referent in the speaker and hearer's joint focus of attention (see also Clark 1996, Diessel 2012). Hence, it can be argued that the traditional, egocentric view, where only the speaker and distance-marking are considered to be crucial, is too simple, and cannot adequately describe the use of demonstratives in everyday interactions across languages.

This paper presents the results of a production study, which was aimed at exploring the role of the traditional factor and the role of two potential factors – joint attention and pointing – on the choice of Hungarian demonstratives in given scenarios. More specifically, the factors investigated are the following:
- the relative distance between the speaker and the object being referred to;
- the establishment or the lack of a joint focus of attention;
- the presence or absence of a pointing gesture on the part of the speaker.

The structure of the paper is as follows. Section 2 provides a brief overview of the pertinent literature on the use of Hungarian demonstratives and puts into perspective the production study described here. Section 3 presents a detailed account of the experiment carried out and also discusses the findings, while Section 4 contains a summary.

2   Theoretical background

In general, the interpretation of deictic terms obviously depends heavily on contextual clues. The use of demonstratives serves as the prototypical example, since demonstratives provide a direct link between language and the real world when they refer to the extra-linguistic physical context. This type of demonstrative use is labelled as exophoric (Levinson 2004) and is illustrated below:

(1) Tegnap   vettem ez-t   a   könyv-et.
     yesterday bought this-ACC   the   book-ACC
     "I bought this book yesterday."

The utterance of (1) above would usually be accompanied by a pointing gesture, and therefore it would be described as an exophoric gestural use. It is this type of use that we will focus on throughout this paper.

As mentioned above, two-way demonstrative systems – the most typical ones across languages that can be found for example in English, Hungarian and Vietnamese (Diessel 1999) –, have traditionally been described as speaker-anchored and egocentric (Peeters &

Özyürek 2016). This means that the selection of proximal vs. distal demonstratives is customarily explained by the relative distance of the entities being referred to from the location of the speaker, without taking into account the addressee's location or his or her knowledge about the intended referent. However, it is easy to show that the traditional view cannot capture all aspects of demonstrative usage, consider the examples below:

(2)　This planet is smaller than that planet. (Talmy 2000: 25)

(3)　Dentist: Does this one hurt?
　　　Patient: Yes, it's that one. (Scott 2013: 58)

In the case of (2), the objects being referred to are obviously not at all close to the speaker, while in the case of (3) the patient's use of the distal demonstrative cannot be explained on the basis of physical proximity to the speaker.

On top of that, as it was briefly mentioned above, the findings of recent observational or experimental studies have also questioned the traditional account. For instance, Enfield (2009) concluded after analysing video recordings of natural interactions in Lao – a language with a two-term demonstrative system – that neither of the two demonstratives of Lao encodes information about relative distance from the speaker, and he argued that other factors, such as the location of the hearer with respect to the intended referent and the visibility of the entity being referred to (either to the speaker or to the hearer) are important, too. Jarbou (2010) observed naturally occurring speech in Jordanian Arabic and inferred that the selection of demonstratives is a dynamic, interactive process governed by "the speaker's perceptions about the addressee's ability to identify perceptible features of a referent in context" (Jarbou 2010: 3095).

Experimental work on the factors influencing demonstrative choice has also questioned the traditional view. However, before turning to these it is important to note that there are also experiments which, at least partially, support the physical proximity view. In the studies in question, as it will be discussed below, it is argued that relative distance from the speaker indeed plays an important role, however, there are other factors to be considered or there is an interaction between various factors, and therefore it is concluded that relative distance from the speaker is only one of these decisive factors.

For instance, Coventry et al. (2014) state that while there is a mapping between peripersonal vs. extrapersonal place and the selection of demonstratives in English, other factors, such as ownership, visibility and familiarity are also important and conclude that "demonstrative choice in English is affected by more than a single parameter" (Coventry et al. 2014: 63). Piwek et al. (2008) tested Dutch[1] demonstratives in a controlled dialogue game setting and argued that a dynamic and action-oriented approach would be more adequate to describe the proximal-distal opposition, namely they claimed that "the difference between the two lies in what the speaker is doing, i.e., the force/intensity with which s/he directs the attention of the addressee" (Piwek et al. 2008: 715). In a similar fashion, Stevens and Zhang (2013) found in an event-related potential study that the traditional speaker-anchored view of English spatial demonstratives is too simple and emphasized the significance of shared gaze between speaker and hearer. More specifically, they showed that when the hearer was obviously not looking at the intended referent, i.e. when the interlocutors did not have a

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[1]　Dutch is another language with a two-term demonstrative system.

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shared focus of attention, then the use of demonstratives is aimed at manipulating the addressee's focus and establishing a joint focus of attention.

Peeters et al.'s (2014) experiment explored how speakers refer to given entities in their immediate physical environment in Dutch. They used a so called controlled elicitation task, where participants saw different visual stimuli that elicited the production of referring expressions: demonstratives or NPs with (in)definite articles. Three variables were tested in their study:

- joint attention between the interlocutors to an intended referent in line with the previous experimental work described above;
- physical proximity[2];
- the presence or absence of a pointing gesture.

The most important finding of Peeters et al.'s (2014) experiment is that establishing joint attention may be an important factor in the selection of Dutch demonstratives, since participants more often used distal demonstratives when the entity being referred to was in the interlocutors' joint focus of attention. This implies that the speaker takes into consideration the addressee's visual attention when s/he selects a distal demonstrative term, while the use of proximal demonstratives was not affected by the presence or absence of joint visual attention. It is interesting to note here that Jarbou's (2010) observational study on Jordanian Arabic found just the opposite, i.e. Jordanian Arabic speakers used proximal demonstratives when the speaker believed that the referent had high perceptibility as perceived by the hearer. Regarding distance, Peeters et al. (2014) found that participants opted for the proximal demonstrative when the entity being referred to was close to the speaker, whereas the distal term was preferred when the referent was located close to the addressee, at middle distance from both interlocutors, or relatively far from speaker and addressee. The third factor, the presence of a pointing gesture by the speaker influenced the use of both demonstrative terms, i.e. both terms were produced more often when there was an accompanying pointing gesture. The authors argue that the function of a pointing gesture therefore may be to demarcate the search space for the addressee. Moreover, they also emphasize the importance of testing the effect of more than one factor within the same experiment, since the selection of demonstratives might be the result of a subtle interplay between various contextual factors.

This paper reports the results of an experiment that was motivated by Peeters et al.'s (2014) work on Dutch. I adopted and somewhat simplified Peeters et al.'s (2014) method to examine whether distance, joint attention and the presence or absence of a manual pointing gesture influence the selection of demonstratives in Hungarian and to detect possible interactions of these factors.

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[2] Despite of those theoretical considerations that state that the traditional view is too simplistic, many people have strong intuitions about distance being an important factor in the selection of demonstratives (see for example Stevens and Zhang 2013).

3 Present study

3.1 Previous experimental work on Hungarian demonstratives

As outlined above, Hungarian has a two-term demonstrative system, *ez, ezek* "this, these" are associated with the traditional notion of 'near the speaker', while *az, azok* "that, those" describe the notion of 'far from the speaker'.[3] Both of these terms can be used as independent pronouns or as demonstrative determiners. The latter case is called determiner doubling by Egedi (2015), since a definite article is inserted between the demonstrative term and the head noun: *ez az asztal* "this.NOM the table.NOM = this table", *ez-ek-et az asztal-ok-at* "these.PL.ACC the tables.PL.ACC = these tables". As shown by the examples, the demonstrative agrees in case and number with the head noun.

Regarding the choice of demonstratives in Hungarian, Laczkó (2008) points out in a functional-cognitive framework that the traditional factor, physical proximity to the speaker, plays a crucial role. This theoretical assumption was supported by the results of Tóth et al.'s (2014) experimental work, which proved that in neutral contexts distance is indeed decisive, i.e. when referring to entities that were close to the speaker, participants preferred proximal demonstratives, while distal demonstratives were used to refer to entities being far from the speaker. The other factor explored in Tóth et al.'s (2014) study in neutral contexts was accessibility, a factor which also questions the purely egocentric view of demonstratives, since it takes into account the addressee's perspective in the given speech situation. The working definition used in the experiment is given below (Tóth et al. 2014: 614):

> (i) an entity is associated with *low accessibility* if, according to the speaker's assessment, the addressee is invited to consider it to be new or unexpected, i.e., an effort is required on the part of the addressee to identify the referent;

> (ii) an entity is associated with *high accessibility* if it is already known to the addressee, i.e., it is in the focus of the joint attention of the speaker and the addressee.

The results of the experiment ruled out accessibility as an essential factor in neutral contexts both in Hungarian and Dutch. However, as the authors note, accessibility is not a well-defined notion and experimental findings on the role of accessibility are controversial. For example, while Piwek et al.'s (2008) aforementioned study concludes that accessibility is a crucial factor in Dutch, Tóth et al. (2014) found just the opposite. Regarding Piwek et al.'s (2008) work, Peeters et al. (2014) note that since the distance between the speaker and the entity being referred to was not operationalized clearly, it might be the case that physical proximity and accessibility (i.e. the notion of focus of attention) somehow interacted. Along the same lines, the working definition of accessibility in Tóth et al.'s (2014) study did not include explicitly the hearer's visual focus of attention, and the possible interaction between distance and accessibility was not investigated, either. The experiment reported below is aimed at addressing these problems, and at getting a more complete picture on the selection of Hungarian demonstratives.

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[3] It has to be noted here that there are other demonstrative determiners in Hungarian, but they are either not used in an exophoric way or are assumed to have a reinforcing role. For a detailed analysis on the history and emergence of demonstrative determiners see Egedi 2015.

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3.2   Overview

As mentioned above, the traditional, speaker-anchored view on the selection of Hungarian demonstratives is prevalent in the literature and empirical evidence has also reinforced this theoretical assumption. However, cross-linguistic data on languages with a two-term demonstrative system show that other factors also affect the choice of demonstratives (see for example Piwek et al. (2008) on Dutch, Stevens & Zhang (2013) on English). Tóth et al. (2014) showed that in Hungarian contrastive contexts, distance as an independent factor is outperformed by some other competing factor, and distance alone cannot explain the choice of demonstratives. Therefore, it is important not only to reinforce the role of this factor, but to explore the possible interaction of distance and other potential factors. Hence, the study reported here will again try to pin down what kind of influence relative distance from the speaker has on the selection of demonstrative terms.

The second factor to be examined is that of joint attention. As outlined above, in face-to-face conversations the speaker's choice of the demonstrative term might be influenced by the fact whether at the moment of production the referent is already in the focus of the speaker and hearer's joint attention or joint attention is still to be created. It is important to emphasize here that situations when the speaker and the hearer are face to face are more complex and require more processing effort on the part of the participants than situations where the speaker and the hearer are located side by side and share the same perspective of their physical surroundings (for more details on how this affects the creation of joint attention see Laczkó 2008 and Laczkó & Tátrai 2012). The different positioning of the interlocutors also influences how relative distance is perceived by the speaker and the hearer. Tóth et al.'s (2014) study explored the simpler setting; therefore it is crucial to examine the role of distance and its interaction with the presence or absence of joint visual attention in the more complex scenario.

The third factor corresponds to the use of manual pointing gestures. It was mentioned above that the use of a demonstrative term in an act of referring is typically accompanied by a pointing gesture (exophoric use). However, as Peeters et al. (2014) point out, Piwek et al.'s (2008) study reported that Dutch participants in the controlled dialogue game always used a pointing gesture with proximal demonstratives, but the use of distal demonstratives was not always accompanied by a manual pointing gesture. In Tóth et al.'s (2014) previous work on Hungarian a pointing gesture by the speaker was always present, which means that the role of pointing and its interaction with other factors in the selection of Hungarian demonstrative terms have not been explored before.

3.3   Materials and methods

The production study reported here is based on Peeters et al.'s (2014) design. Participants had to look at visual scenes depicting a face-to-face conversational setting between a speaker and a hearer, and there was also an intended referent (an object) present in each setting. In the photos a speech balloon next to the speaker introduced the target item, and participants had to imagine what they would say in the given situation if they were the speaker. Target items were Hungarian utterances including a gap, for example *Tegnap vettem …. a virágot* "I bought … flower yesterday", and participants had to select the more appropriate demonstrative term (*ez* "this" or *az* "that") in a multiple choice online test. Figure 1 shows an example of a visual scene.

There were altogether 32 target utterances, which contained the verbs *vesz* "buy", *talál* "find", *süt* "bake", *köt* "knit", and the objects being referred to were the following: an orange, a potted flower, a piece of cake, a milk loaf, a wallet, a bunch of keys, a doll, and a piece of doll clothes. The questionnaire also contained 16 fillers *Tegnap hímeztem ... terítőt* "I embroidered … tablecloth yesterday", where participants had to select either the definite or the indefinite article. The position of the speaker was counterbalanced, i.e. in half of the pictures the speaker (and the speech balloon) appeared on the left-hand side, while in the other half the speaker was on the right-hand side. Test items were presented in a uniform random order for the participants, while the answers appeared in a unique random order for each participant throughout the test.

101 native speakers of Hungarian completed the online questionnaire; however, 13 of these were discarded, since participants consistently selected either only the proximal demonstrative, or just one distal demonstrative altogether. This suggests that perhaps they did not understand the task, and accordingly, did not adopt the speaker's perspective.[4] It is also possible that participants went through the test items too quickly, without making a real effort, which is an obvious disadvantage of this method. These participants also selected the same answer throughout the fillers. Table 1 shows the gender and age of the remaining participants.

Gender	Number	Average age	Age range
Male	19	28	18-67
Female	59	26	19-60
Total	88	27	18-67

Table 1 Participants

As outlined above, three variables were manipulated in the visual scenes: DISTANCE, JOINT VISUAL ATTENTION and POINTING. Each of these had two levels, as described below. First, adopting Kemmerer's (1999) view on distance, the object being referred to by the speaker was either close to the speaker or far from the speaker. In the former case objects were located within arm's reach of the speaker, within peripersonal space. Everything else outside this domain is extrapersonal from the speaker's point of view, i.e. objects not within arm's reach were considered to be far from the speaker. Second, following Peeters et al.'s design (2014), there was either joint visual attention or no joint visual attention between the speaker, the hearer and the entity being referred to. In the latter case, while the speaker was looking at the object, the hearer was looking at the picture on the wall. Third, the speaker was either pointing to the entity being referred to or there was no pointing gesture present on the part of the speaker. Figure 1 is an example of the close, no joint attention, pointing condition.

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[4] This assumption might explain the fact that the participants in question selected the proximal demonstrative consistently. If they indeed relied on their own perspective, then all of the entities being referred to were close to them on the screen, even when the objects actually were far from the speaker.

Figure 1 A visual scene from the online questionnaire

3.4 Results

The overall results for the individual conditions in the case of both types of demonstratives are shown in Table 2. A repeated measure ANOVA was carried out on the proportion of proximal and distal demonstratives in order to analyse the results. There was a main effect of DISTANCE for both demonstratives (proximal: $F(1, 87) = 299.76$, $p < 0.001$, $\eta^2 = 0.775$; distal: $F(1, 87) = 289.27$, $p < 0.001$, $\eta^2 = 0.769$); which means that proximal demonstratives were preferred when the entity being referred to was close to the speaker in the visual scene, while distal demonstratives were used more often when the object was far from the speaker. Figure 1 shows how the mean proportions for both terms were affected by DISTANCE if we ignore all other factors. Error bars represent the standard error of the mean.

| Conditions	Proximal demonstratives		Distal demonstratives	
	Mean proportion	SD	Mean proportion	SD
close, joint attention, pointing	96.59	15.71	3.41	15.71
close, joint attention, no pointing	79.26	24.92	20.74	24.92
close, no joint attention, pointing	95.45	14.94	4.55	14.94
close, no joint attention, no pointing	72.16	28.97	27.84	28.97
far, joint attention, pointing	53.69	33.80	46.31	33.52
far, joint attention, no pointing	37.50	31.71	62.50	31.71
far, no joint attention, pointing	41.19	31.49	58.81	32.43
far, no joint attention, no pointing	24.15	31.36	75.85	31.36

Table 2 Results
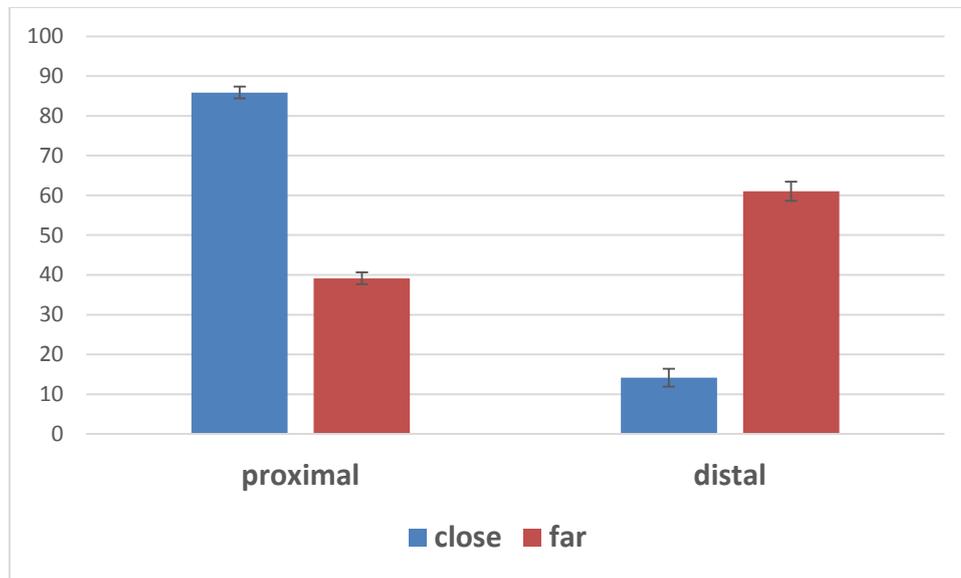
Figure 2 Mean proportions of the use of proximal and distal terms as affected by the two levels of DISTANCE

There was also a main effect of JOINT VISUAL ATTENTION in both cases (proximal: $F(1, 87) = 13.63$, $p < 0.001$, $\eta^2 = 0.135$, distal: $F(1, 87) = 15.468$, $p < 0.001$, $\eta^2 = 0.151$); i.e. participants selected proximal demonstratives significantly more times when the speaker and the hearer were both looking at the entity being referred to (66.8%) than when there was no joint attention (58.2%), but just the opposite holds for the distal term, since participants selected distal demonstratives more often when there was no joint visual attention (41.8%) than when there was (33.3%). However, the effect size shows that this effect is not as substantive as that of DISTANCE. The main effect of JOINT VISUAL ATTENTION is represented in Figure 3.
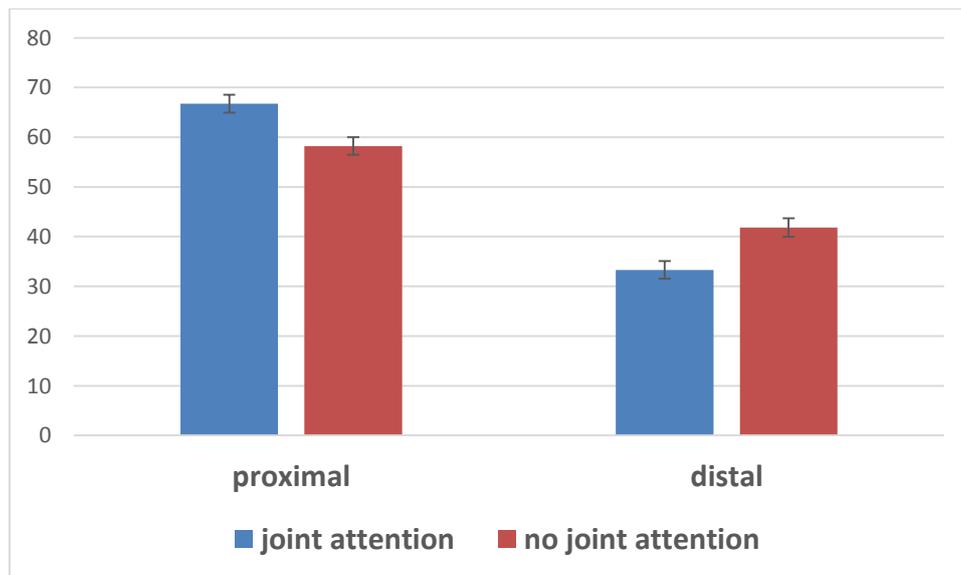

Figure 3 Mean proportions of the use of proximal and distal terms as affected by the two levels of JOINT VISUAL ATTENTION

The third factor, POINTING, also had a main effect in both cases (proximal: $F(1, 87) = 45.4$, $p < 0.001$, $\eta^2 = 0.343$, distal: $F(1, 87) = 55.788$, $p < 0.001$, $\eta^2 = 0.391$). This means that proximal demonstratives were chosen more often when there was a pointing gesture on the part of the speaker (71.7%) than when there was no accompanying pointing gesture (53.3%), and again just the opposite is true for the distal term, as shown in Figure 4.
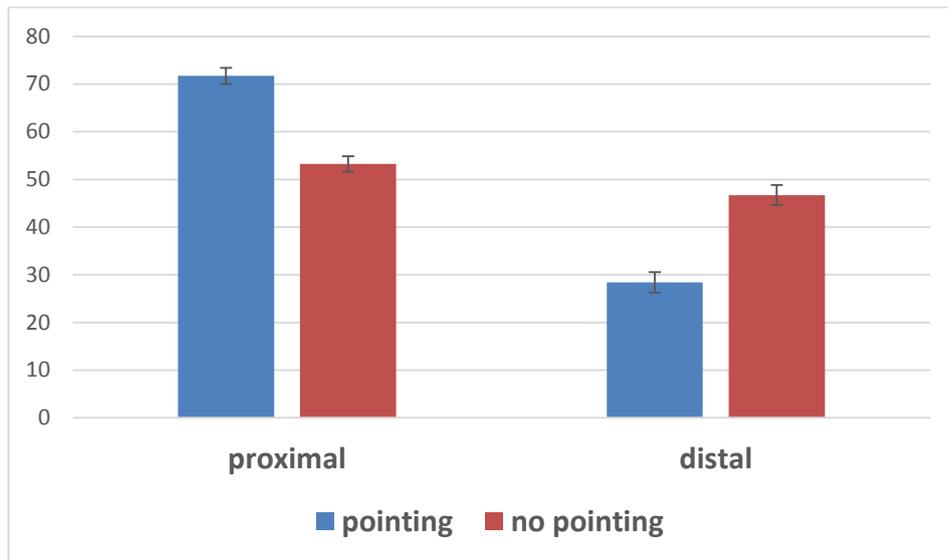

Figure 4 Mean proportions of use of proximal and distal terms as affected by the two levels of POINTING

Finally, a significant interaction of DISTANCE and JOINT VISUAL ATTENTION was also detected for both demonstratives (proximal: $F(1, 87) = 9.589$, $p < 0.01$, $\eta^2 = 0.099$, distal: $F(1, 87) = 9.128$, $p < 0.01$, $\eta^2 = 0.095$). However, this interaction is relatively weak, since it is responsible only for 9.9 and 9.5 per cent of the overall variation, respectively. The interactions are represented in Figure 5 and Figure 6.
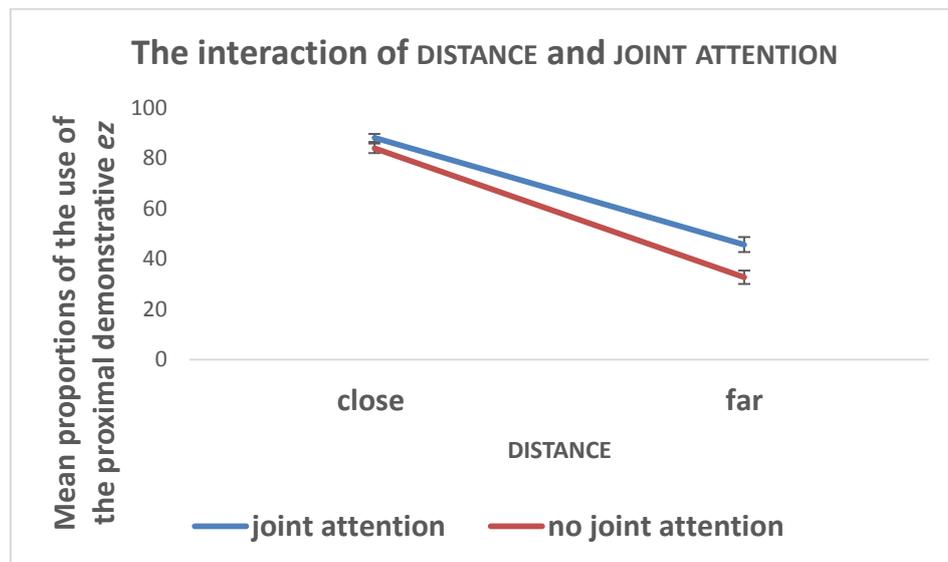

Figure 5 The interaction of DISTANCE and JOINT ATTENTION in the case of the proximal demonstrative ez
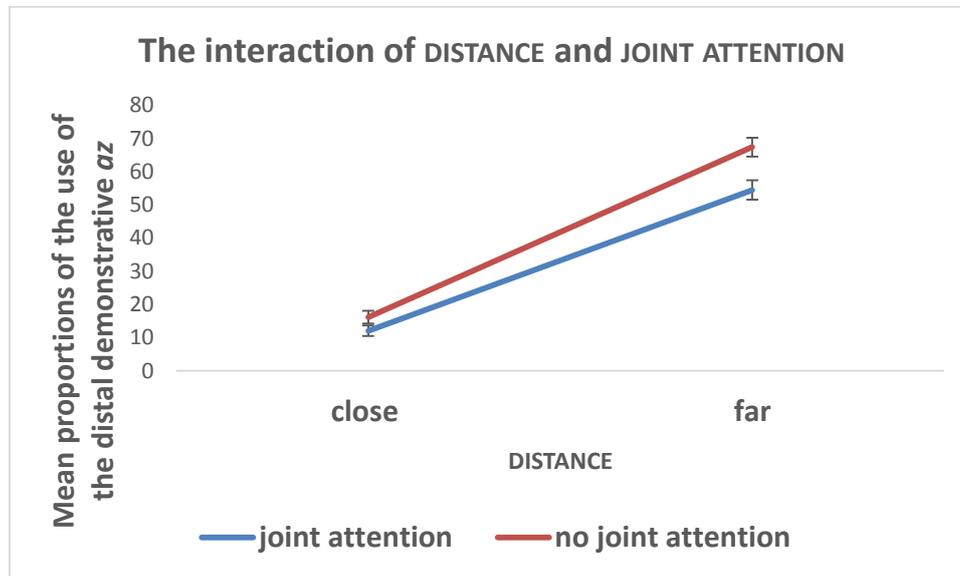
Figure 6 The interaction of DISTANCE and JOINT ATTENTION in the case of the distal demonstrative az

3.5 Discussion

As mentioned before, the use of demonstrative pronouns and demonstrative determiners has been considered from a novel perspective recently in the pertinent literature. The choice between demonstrative terms is no longer described as a speaker-anchored, egocentric, and addressee-blind phenomenon, instead, demonstrative reference is viewed as a joint action between the speaker and the hearer (cf. Peeters & Özyürek 2016). The experiment presented above tested the role of the traditional, speaker-anchored factor of relative distance and that of two novel factors: joint visual attention between the speaker and the hearer to a visible referent and the use of a pointing gesture in the selection of Hungarian demonstrative determiners in a production task. Besides exploring the effects of these factors, their potential interactions were also tackled.

The results obtained support the traditional view, i.e. DISTANCE had a strong influence on the choice of both demonstrative determiners (see Figure 2). This means that when the entities being referred to were close to the speaker (within arm's reach), then in more than 80 per cent of the cases participants selected the proximal term. There was also a significant difference between the close and far conditions in the case of the distal demonstrative, i.e. when the object was located far, i.e. out of arm's reach from the speaker, the distal demonstrative was preferred. Hence, the results confirm that relative distance from the speaker is a decisive factor in the choice of Hungarian demonstratives. These findings are also in line with previous experimental findings on the use of Hungarian demonstrative terms (see Tóth et al. 2014).

However, based on these results only we should not jump to the conclusion that relative distance on its own can explain and motivate the use of demonstrative terms. First, it has to be noted here that from a methodological point of view, Stevens and Zhang's (2013) experiment collected two types of data: behavioural data in the form of acceptability judgements and EEG data. The analysis relying only on the acceptability judgements confirmed the importance of relative distance in English, however the ERP results suggested that "the role of distance from the speaker is trumped by a more basic requirement of joint attention" (Stevens & Zhang

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2013: 41). Hence, besides collecting novel type of data about demonstratives, Stevens and Zhang (2013) also showed that the method itself might influence the outcome of an experiment. Therefore, the conclusion about the role of relative distance warrants special reservations.

Second, in the experiment presented above the proximal term was also quite often selected in the far condition, in almost 40 per cent of the cases. As it was mentioned above, this finding might stem from a methodological flaw, i.e. if participants did not take the speaker's perspective, this could influence the results. Considering the overall proportions of the two demonstratives regarding distance, the proximal term has a larger overall proportion, which implies that there is no clear-cut near-far, proximal-distal opposition, other factors might also play an important role and may interact with DISTANCE. This assumption will be discussed below.

Turning to the second factor, JOINT VISUAL ATTENTION, it also had a main effect in both cases, proximal terms were more often selected when there was a joint visual attention to the object being referred to between the speaker and the hearer, while distal terms were preferred when there was a lack of joint visual attention. Moreover, a weak interaction of DISTANCE and JOINT VISUAL ATTENTION was also detected, which seems to indicate that the proximal demonstrative is used when on the one hand, the entity being referred to is close to the speaker and on the other hand, when a triadic joint attention has already been established (see Figure 5). In turn, as illustrated by Figure 6, distal demonstratives are used when the object is far and there is no joint focus of attention. Similar results have been found for Jordanian Arabic by Jarbou (2010), who showed in an observational study that proximal demonstratives are used when the object being referred to is highly perceptible to the hearer as perceived by the speaker. However, at the same time the results contradict Piwek et al.'s (2008) and Peeters et al.'s (2014) experimental findings on Dutch, who found that distal demonstratives in Dutch are preferred when there is joint attention between the speaker and addressee to the object.

The method applied in the present experiment has its limitations, though. It could be argued that distal demonstratives are used to direct the addressee's attention to the object that is not yet in the joint attention of the speaker and the hearer. However, to prove this, more sophisticated experimental designs should be used together with data collected via the observation of naturally occurring speech. Nevertheless, the weak interaction found here signals that it is crucial to examine the interplay of several factors when we try to describe the use of demonstratives.

The last factor tested is POINTING, namely, the study reported here also addressed the question whether the presence/absence of an accompanying pointing gesture on the part of the speaker has an effect on demonstrative choice or not. This factor also had a main effect. Participants used proximal demonstratives significantly more often in the presence of a manual pointing gesture, while distal demonstratives were selected more in the absence of a pointing gesture. Stevens and Zhang (2013) argue that the use of spatial demonstratives requires an accompanying pointing gesture in English. The limited possibilities allowed by the use of an online questionnaire only show that pointing is important and needs to be taken into consideration when we tackle demonstrative choice. Further studies are required to explore the relation between the selection of demonstratives and pointing.

4   Conclusion

In this paper the results of a production study on the use of Hungarian demonstrative determiners were presented. Participants had to select either the proximal or the demonstrative determiner depending on whether the object being referred to was close to or far from the speaker, whether there was joint visual focus of attention between the speaker and the addressee to the referent, and whether there was an accompanying manual pointing gesture present on the part of the speaker. The findings indicate that each of these factors influence the use of demonstrative determiners in Hungarian, and are comparable with similar findings for English (Stevens & Zhang 2013), Dutch (Peeters et al. 2014) and Jordanian Arabic (Jarbou 2010). Further research is needed to explore the interplay of these factors in a more subtle manner. However, even at this point of research it can be concluded that demonstrative reference in Hungarian is a joint action, and the use of demonstratives cannot be described adequately from a solely speaker-anchored perspective.

References

Clark, Herbert H. (1996): *Using language*. Cambridge: Cambridge University Press.

Clark, Herbert. H. & Bangerter, Adrian (2004): Changing conceptions of reference. In: Noveck, I. & Sperber, D. (eds.): *Experimental Pragmatics*. Basingstoke, England: Palgrave Macmillan, 25–49.

Coventry, Kenny R., Griffiths, Debra & Hamilton, Colin J. (2014): Spatial demonstratives and perceptual space: Describing and remembering object location. *Cognitive Psychology* 69: 46–70.

Diessel, Holger (1999): *Demonstratives. Form, Function and Grammaticalization*. Amsterdam: John Benjamins.

Diessel, Holger (2012): Deixis and demonstratives. In Maienborn, Claudia, von Heusinger, Klaus & Portner, Paul (eds.): *An International Handbok of Natural Language Meaning. Vol. 3*. Berlin: Mouton de Gruyter, 2407–2431.

Egedi, Barbara (2015): Változó struktúrák, versengő stratégiák: a mutató névmási módosítók esete. *Általános Nyelvészeti Tanulmányok* 27: 107–132.

Enfield, Nick J. (2009): *The Anatomy of Meaning. Speech, Gesture, and Composite Utterances*. Cambridge: Cambridge University Press.

É. Kiss, Katalin (2003): Mondattan. In: É. Kiss, Katalin, Kiefer, Ferenc & Siptár, Péter (szerk.): *Új magyar nyelvtan*. Budapest: Osiris, 17–186.

Jarbou, Samir Omar (2010): Accessibility vs. physical proximity: an analysis of deictic demonstrative practice in spoken Jordanian Arabic. *Journal of Pragmatics* 42: 3078–3097.

Kemmerer, David (1999): *Near* and *far* in language and perception. *Cognition* 73: 35–63.

Laczkó, Krisztina (2008): A mutató névmási deixisről. *Általános Nyelvészeti Tanulmányok* 22: 309–47.

Laczkó, Krisztina & Tátrai, Szilárd (2012): "Személyek és/vagy dolgok. A harmadik személyű és a mutate névmási deixis a magyarban." In: Tolcsvai Nagy, Gábor & Tátrai, Szilárd (szerk.): *Konstrukció és jelentés. Tanulmányok a magyar nyelv funkcionális kognitív leírására*. Budapest: ELTE, 231–258.

Levinson, Stephen C. (2004): Deixis and Pragmatics. In: Horn, Laurence & Ward, Gregory (eds.): *The Handbook of Pragmatics*. Oxford: Blackwell, 97–121.

Peeters, David, Azar, Zeynep & Özyürek, Asli (2014): The interplay between joint attention, physical proximity, and pointing gesture in demonstrative choice. In: Bello, Paul, Guarini, Marcello, McShane, Marjorie & Scassellati, Brian (eds.): *Proceedings of the 36th Annual Meeting of the Cognitive Science Society. Cognitive Science Meets Artificial Intelligence: Human and Artificial Agents in Interactive Contexts*. Austin, TX: Cognitive Science Society, 1144–1149.

Peeters, David & Özyürek, Asli (2016): This and That Revisited: A Social and Multimodal Approach to Spatial Demonstratives. *Frontiers in Psychology* 7. Article 222: 1–4.

Piwek, Paul, Beun, Robbert-Jan & Cremers, Anita (2008): 'Proximal' and 'distal' in Language and Cognition: Evidence from Deictic Demonstratives in Dutch. *Journal of Pragmatics* 40: 694–718.

Scott, Kate (2013): This and that: A procedural analysis. *Lingua* 131: 49–65.

Talmy, Leonard (2000): *Toward a Cognitive Semantics. Vol. 1. Concept Structuring Systems*. Massachusetts: The MIT Press.

Stevens, J. & Zhang, Y. (2013): Relative distance and gaze in the use of entity-referring spatial demonstratives: An event-related potential study. *Journal of Neurolinguistics* 26: 31–45.

Tóth, Enikő, Csatár, Péter, & Banga, Arina (2014): Exploring Hungarian and Dutch gestural demonstratives. In: Veselovská, Ludmila & Janebová, Markéta (eds.): *Complex Visibles Out There. Proceedings of the Olomouc Linguistics Colloquium 2014: Language Use and Linguistic Structure*. Olomouc: Palacký University, 607–625.

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