

Doktori (PhD) értekezés tézisei

More than just future

On the non-temporal functions of future markers in Hungarian

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I. Introduction and main objectives of the dissertation

The main goal of the dissertation is to add to the growing body of research that establishes a connection between markers of epistemicity/inferentiality and futurity, and to show that future-referring morphemes can indeed have various functions that make them similar to epistemic inferential modals. When we talk about the future, we can base our claims on present knowledge and our intentions. The evidence we base our claims on can vary in source and strength, but talking about the future frequently involves making predictions or making inferences. In the dissertation, it is argued that there are many different functions that epistemic modals/adverbs and future-referring morphemes share. Throughout the dissertation, we collected evidence for the existence of these functions by studying the use of various Hungarian future-referring morphemes. The main focus is on three morphemes: *fog* ‘will’, *majd* ‘later’, and *kellesz* ‘must.fut’ (that is used to express future necessity in certain dialects of Hungarian). Besides that, the dissertation also presents works on the Hungarian futurate, and the proximity marker use of *most* ‘now’. The use of these structures is relatively underresearched, and none of them has got substantial attention in the literature before. It is especially true for the stigmatised, dialectal future-referring morpheme, *kellesz*.

Besides presenting introspective data, the dissertation also includes the results of a pilot questionnaire study on the use of *fog* and the Hungarian futurate, the results of a corpus study on the diachronic use of *majd*, a corpus and a questionnaire study on the use/acceptability of *kellesz* with various temporal perspective and orientation combinations, and based on their results, a production study with follow-up interviews on the use of *kellesz* preceded by an additional corpus study.

II. Theoretical background

In *Chapter 3*, we present a critical overview of the literature on modality, and its interaction with time and temporal operators. If we would like to answer the question whether future-referring morphemes are modal or temporal operators, it is important to discuss how we interpret modality. The chapter starts with an overview of the Kratzerian view on modality (1981, 1991). Her main idea is that modals are not ambiguous, but they are relative to two conversational backgrounds: the *modal base* and the *ordering source* (Kratzer (1981)). The focus is on two kinds of *modal bases*: the epistemic and the metaphysical one. The chapter also includes some important notions and definitions: Condoravdi's (2002) AT-relation, which defines what it means for a state or an event to be AT a specific time. In order to better

understand the notion of the metaphysical background, we define *settledness*, the *historical equivalence relation*, and the *diversity condition* (Thomason (1984)). It is crucial to discuss all these notions early on, because the majority of the analyses that we present and discuss later on are based on them. The question whether the Hungarian future-referring morpheme *fog* has similar properties to modals is impossible to answer without fully understanding what properties modals have. Furthermore, if we think of future-referring morphemes as modals, it is also important to discuss the nature of their conversational backgrounds (*modal bases* and *ordering sources*). In order to provide a more diverse picture of the literature, we proceed with the discussion of the *representationalist approach*. We consider it important to discuss the view of “non-traditional” approaches, too. “*Due to representationalism, the temporal structure of sentences can be described by temporal referents*” (Farkas–Ohnmacht (2012:356)). The question whether the use of the Hungarian *fog* strictly designates that the event is in its preeventual phase is interesting (briefly discussed in Szeteli et al (2023)). Another exciting question to consider is whether the choice of the speaker between the futurate and *fog* depends only on his/her judgement on which phase the event is in currently. All the questions that we propose in this chapter are addressed in the dissertation. Since our (rather formal) analyses of *fog* and the Hungarian futurate are based on previous analyses of the English futurate and *will* and we compare the structures through the whole dissertation, we find it particularly important to discuss them early on. Therefore, this chapter ends with a summary of the existing views on the English futurate and *will*. Copley (2009) distinguishes two different categories of the ways of referring to the future in English, the *futures* and *futurates*. Her distinction is based on the question whether future-time reference is overtly marked (by *will* or *going to*) or not (the future referring use of the non-past). It is argued in the literature that the use of the futurate is connected to certainty, settledness, planned, scheduled, or decided events (see e.g. Leech (1971), Kaufmann (2005), Copley (2009, 2014)). Copley (2009) hypothesises that there is a cross-linguistic connection between decidedness/settledness and the use of the *futurate*. The *future*, in contrast to the *futurate*, can (also) be used when the speaker inferred the truth of the proposition, or when the speaker expresses a genuine prediction. The question is twofold; first, it is interesting whether *will* (and other overt markers of futurity) should be analysed as modals, second, it is also a question whether future-time reference always includes a modal marker (overtly or covertly). In this chapter, we argue for the correctness of those analyses that claim that *will* is a modal auxiliary. Since we base our analysis of *fog* on Condoravdi (2002)’s analysis of *will*, we find it very important to discuss our view on *will* early on. At the end of the chapter, we argue that the English (plain) futurates presuppose the presence of a null necessity modal.

This null necessity modal is so strong that it does not have an ordering source. As opposed to it, the English *will* is a modal that has both a non-restricted modal base and an ordering source. By using *will*, one can make a genuine prediction, because it has an ordering source, therefore, it is much weaker than the futurate (Kaufmann (2005)).

Chapter 4 starts with a short introduction and the summary of the existing literature on the Hungarian futurate and *fog*. Besides summarizing other papers on *fog*, we discuss Palfy-Muhoray (2013, 2016)'s arguments in detail, since she is the only author who worked on the truth conditional meaning of *fog* in detail and gave a formal semantic analysis of it. According to her, *fog* is a modal whose modal base must be restricted to a metaphysical one. She argues that the obligatorily future-referring nature of *fog* can be derived from its restricted modal base, since a modal with a metaphysical modal base can only satisfy the diversity condition with future-time reference. She further argues that when choosing between the futurate and *fog*, the temporal ambiguity of the sentence matters. Namely, in the case of dynamic predicates, the speakers prefer the futurate whenever the sentence is temporally unambiguous (contains a telic predicate, or a temporal adverb referring to the future), and they prefer *fog* when it is ambiguous.

III. Claims and Analysis

In *chapter 4*, we propose that the Hungarian future auxiliary *fog* is indeed a modal. As opposed to Palfy-Muhoray (2013, 2016)'s findings, in the case of *fog*, we argue for the availability of both the epistemic and the metaphysical modal bases. We present both introspective and questionnaire data to show that speakers prefer *fog* to the futurate in temporally unambiguous sentences if they do not have strong evidence that entails the proposition. If *fog*'s modal base is not restricted, its obligatorily future-oriented nature cannot follow from the properties of its modal base only. Therefore, it is suggested that its contribution is twofold, being both modal and temporal. A formal analysis of *fog* is presented based on Condoravdi (2002)'s analysis of the English *will*.

$$(1) \llbracket \text{fog} \rrbracket = \lambda P \lambda t \lambda w. \forall w' [w' \in \text{Best}(\text{MB})(\text{OS})(w)(t) \rightarrow \text{AT}(P, (t, \infty), w')]$$

$\text{Best}(\text{MB})(\text{OS})(w)(t)$ represents the set of worlds in the modal base in our world w at t that are ranked as the most ideal ones given the ordering source OS . $\text{Fog}(P)$ is true in w at t iff P holds some time after t in all the best worlds w' in the modal base (MB) according to the ordering (OS).

In this chapter, empirical data are presented and the following claims are made. First, the use of the futurate is marginal if the speaker infers the truth of the proposition from contextually known facts, while *fog* is natural and acceptable. Second, *fog* can be used to express a genuine prediction, while the futurate is marginal in this use. Third, whenever speakers have strong and direct evidence that entails the truth of the proposition (the truth of the proposition is settled/decided) and the sentence is temporally unambiguous, the futurate is strongly preferred to *fog*, since the use of *fog* in such sentences might imply that *P* is inferred, which they want to avoid. To account for these claims, we argue that the Hungarian futurate posits a null necessity modal, which is so strong that it does not have an ordering source. Therefore, it can only be used if the truth of the proposition is settled either objectively, or subjectively (against the speaker's beliefs). If we do not restrict the modal base of *fog* and assume that it has an ordering source, it can easily be explained why *fog* is preferred in various contexts, regardless of any other properties of the sentence (the predicate type, the use of temporal frame adverbs). Moreover, this can explain the relative frequency of the use of *fog* with telic predicates in temporally unambiguous sentences (observed by Palfy-Muhoray (2013)). If we assume that the use of *fog* is compatible with any kind of reasoning while the use of the futurate is not, we expect *fog* to appear in sentences with any kind of predicates or in sentences with future-referring temporal adverbs, which is the case. To strengthen these claims, we conducted a pilot questionnaire study. The methodology and the summary of the results can be found in section V. and VI. respectively.

The chapter continues with the discussion of the *majd*-future. It is argued that *majd* is not a temporal adverb. All the properties that set *majd* and other future-referring temporal adverbs apart are listed. The most notable ones are the following: *majd* can be used with stative predicates to refer to the future (just like *fog*), and it can be used together with other future-referring temporal adverbs (in the same clause). *Tudok franciául* 'I speak French' can never have a future-referring use, while *Majd tudok franciául* 'I speak French (later)' has a future-referring use, and it is possible to say e.g. *majd holnap* 'MAJD tomorrow', *majd egy hét múlva* 'MAJD one week from now'. In these cases, the event-time is specified by *holnap* and *egy hét múlva*, respectively, and *majd* is only responsible for the delaying effect. The results of a corpus study which was conducted in order to determine the diachronic development of *majd* are discussed. The methodology and the main results of this study are summarised in section V. and VI. respectively. Based on the results of the corpus study, it is argued that *majd* became an *adverbial particle having various pragmatic functions* from an adverb referring to the proximal

future. A key component of this process was that *it lost its proximal meaning component which gradually turned into a distal one*. One evidence for this might be the existence of the double *majd* (*majd P, majd Q*) that was fairly frequently used to mean ‘now *P* and then/later *Q*’ in very late middle Hungarian, and in early modern Hungarian, but which has completely disappeared, and does not exist in present day Hungarian. In modern Hungarian, *majd* can never refer to the proximal future since a very important component of its meaning is the ‘NOT NOW’-component (Sherwood (2006)). It can be shown by the fact that it is frequently contrasted to an adverb referring to the proximal future (when it is negated). However, *majd* – as opposed to the proximity marker *most* – can only refer to the distal future, because *the future component is always semantically active in its meaning*. If something is distal in time, it is *uncertain* (it might happen, or it might not).

Based on the results and the empirical data presented, a semantic analysis of *majd* is given. It is argued that a so-called *distal* component is present in *majd*’s meaning. This *distal* component is written as follows: for every world (w_1) that is an epistemic alternative world of our world (w_0), (it is true that) that world is either distal (in time) from w_0 or *P* (the proposition) is not true in it.¹ In other words, *P* is either true in a distal temporal continuation of our world or not true at all. It is further claimed that the pragmatic functions of *majd* developed from this component. If something might not even happen, it implies that it is uncertain, possibly, but not necessarily happens, and it is associated with a lesser degree of the speaker's commitment. It is further argued that several functions of *majd* (expressing uncertainty, possibility, but not necessity) have a lot in common with epistemic-inferential adverbs.

After discussing *majd*, we turn to its comparison to the Hungarian proximity marker *most*. It is shown that the Hungarian *most*, under very specific circumstances (when it directly precedes the focused verb), can mark relative proximity, which gives the sentence the additional meaning that the speaker sees the time of the eventuality as proximal to the reference time (in non-embedded contexts, the utterance time). It is argued that the proximity marker *most* defines an interval, the proximity-range, if the event time is within this range, the event is considered to be proximal. If we restrict this range to the future-part of it only, the complement of this interval is the *majd*-range. Since the proximity that *most* expresses is relative (and therefore determined by the significance and the frequency of the event expressed by the predicate in the speaker's life), what is considered to be distal is relative, too. It means that the absolute temporal

¹ This distal component is the logical negation of Halm (2020)’s proximity component.

difference between the utterance time and the event time can vary greatly, depending on the context. For example, it is different in the case of an 'eating' event and in the case of a 'getting married' event. The former is very frequent and insignificant, while the latter is infrequent and significant. Therefore, *majd eszek* 'MAJD eat.NPST.1SG can mean that 'I will eat something in 1-2 hours', while *majd férjhez megyek* 'MAJD husband.to go.nsp.1sg' can mean that 'I will get married someday in the near future (definitely not this year, or in the upcoming year(s)), or not at all'. Similarly, *most megyek férjhez jövőre* 'PROX husband.to go.NPST.1SG next.year' means that 'I will get married next year', so a year is not too long to use the proximity marker *most*.

The last sub-section of this chapter is dedicated to the discussion of adverbs that are similar in meaning to *most* and *majd*. These adverbs are *éppen* 'just', *idővel* 'in time', *később* 'later', and *egyszer* 'once'. It is argued that even though they can express a meaning similar to *most* and *majd*, they are fundamentally different. Namely, they cannot co-occur with any other temporal adverb expressing the event time in the same clause, but they can co-occur with *most* and *majd*. When they do, the proximity marker *éppen most* 'just now' has the same properties as *most*. The same is true in the case of *majd* and *majd később/idővel/egyszer*. Namely, they can all be contrasted to *most*, they all can be used in future-referring sentences containing a stative predicate, they can all be used as a one-word answer, none can be used in the context of a promise, and they all possess the pragmatic function that *majd* does in preverbal position.

Chapter 5 is dedicated to the discussion of *kell* 'must.fut'. The use of the structure is restricted to the Northern Eastern Hungarian (NEH) and Subcarpathian ones (Kótyuk (1995), Lakatos & Tukácsné (1997), Beregszászi & Csernicskó (2007)). Apart from describing its grammatical features, the focus is on its meaning and the uses of it. Using the results of our previous studies and a subsequent corpus study, it is hypothesized that besides the temporal factors, the use of *kell* can have different pragmatic functions: uncertainty and delay. In Virovec (2019), we argued that the use of *kell* indicates that something is not necessary at present, but will be necessary in the future. From that work, the results of both a corpus and a questionnaire study are presented. The methodology and the results are presented in section V. and VI. In Virovec (2022), we supplemented our previous findings, and argued that the choice of the speaker, *besides the temporal factor*, is affected by the strength of the evidence defined in the context, the proximity of the event time to the utterance time, the level of uncertainty defined in the context, and the commitment of the speaker. These hypotheses were based on the results of a preliminary corpus study. To strengthen these claims, we conducted a production

study followed by interviews with our regular consultants (*kellesz*-users from the NEH dialect). The methodology and the results are summarised in the designated sections.

When giving the formal analysis of the structure, the most important element is to correctly identify its meaning aspects. The two most prominent meaning aspects of *kellesz* are the following: it either emphasizes that *the scope proposition is not necessary at present*, it will (only) be necessary in the future, or that *the speaker does not know for sure that P is necessary*, because its necessity has been inferred from indirect evidence / the speaker has second thoughts. We further argue that the latter meaning aspect developed from the ‘original’ truth-conditional meaning of *kellesz* via pragmaticalization. As a result of partial pragmatic fission, two different structures developed (*kellesz₁* and *kellesz₂*), leading to ambiguity between the two. *Kellesz₁* only has a truth-conditional meaning, while in the case of *kellesz₂*, the truth-conditional meaning is substituted by a use-conditional one. These use-conditions are the following: there is uncertainty in the context, and the pre-jacent event is not imminent, it is rather distal in time.

Chapter 6 is about a special effect, the ‘*politeness effect*’, which epistemic-inferential adverbs and future-referring morphemes share. According to Kugler (2010), some epistemic adverbs that express a lower degree of possibility tend to be used to mitigate the illocutionary force of a request, while those which express a higher degree of possibility tend to strengthen it. The modal force of epistemic adverbs does not represent a scale of discrete points, but they represent various degrees of likelihood (Kugler (2010:83)). This is similar in the case of future-referring morphemes. The uncertainty which is associated with their use depends on how distal the future-time (interval) they refer to is. Namely, if a morpheme cannot be used to refer to the immediate future and is associated with a very high degree of uncertainty, it is more likely to be used to make an utterance politer. There are two Hungarian morphemes, *majd* ‘sometime in the future, but not now’ and *kellesz₂* ‘must.fut’, which are fairly often used to mitigate the illocutionary force of a request. It is argued that both share the *distal* meaning component (defined above). The consultants of the *kellesz*-using dialect argue that ‘*if you use kellesz, it does not need to happen at all*’. Similarly, in certain uses of it, *majd* can express that the event will happen sometime in the distal future or never. When working on *the non-temporal functions of future-referring morphemes*, these (rather pragmatic) functions cannot be ignored, and could be a new area of investigating the similarities between epistemicity/inferentiality and future-time reference.

IV. Methodology of the studies

1. *Pilot questionnaire study (comparison of fog and the Hungarian futurate)*

The study was conducted in the form of a Google Questionnaire. There were 3 “types” of situations. They were the following: 1. strong evidence was defined in the context that indicated the truth of *P* (*Type 1*), 2. the scope proposition could only be inferred from evidence defined in the context (*Type 2*, inferential), 3. a general rule (defined in the context) entailed a specific conclusion (*Type 3*, prediction reading). The questionnaire contained four test situations from each type. In each situation, the speakers had to evaluate three target sentences (one containing the non-past, one containing *fog*, and one containing the future-referring epistemic use of *kell* ‘must’). In any one item the speakers saw the description of the situation and the three target sentences all at once. The sentences were presented in a pseudorandomized order, but the order was the same for all the participants. After evaluating all three sentences on a scale of 1 to 6, they could move forward to the next item. Their task was to evaluate how appropriate the sentences were in the given situation. They were instructed to read each situation carefully. In addition to the test sentences, there were six distractor items, and two control items.

2. *The corpus study on the diachronic development of majd*

We worked on three different periods: Middle Hungarian (1526-1772), Early Modern Hungarian (1772-1920), Modern Hungarian (1920-1990).

- Middle Hungarian: 400 randomly selected hits from The Old and Middle Hungarian corpus of informal language use (OMHC) were examined and categorised.
- Early Modern Hungarian: 200 random hits were categorised from the Hungarian Historical Corpus (HHC).
- Modern Hungarian: 200 random hits were categorized from the Hungarian Historical Corpus (HHC).

3. *Pilot questionnaire study on the effect of the temporal structure on the use of kellesz in two different dialects*

The study in the Subcarpathian dialect was conducted in the form of an online questionnaire (Google). In Szabolcs-Szatmár-Bereg County, paper-based questionnaires were used. The participants saw situations, their task was to evaluate the sentences according to how acceptable they are in the given situations, and how well they express the desired meaning. The task of the speakers was to evaluate the sentences (one with *kell*, one with *kellesz* and one with *fog kelleni*) on a scale of 1 to 5. There were control situations to be able to exclude those who do not read

the situations. The variables were distributed as follows: Out of 10 situations, 1 had a present orientation (besides having present temporal perspective). 1 out of 10 situations tested the availability of the past reference time. Out of the remaining 8 (Subcarpathia: 6) situations, the perspective was present in 4 (Supcarpathia: 3) cases (but the orientation was future), and in 4 (Subcarpathia: 3) cases, both the temporal perspective and the orientation were future. In the SZSZB region, we also tested the effect of the telicity of the predicates on the speaker's choice (dynamic/telic, dynamic/atelic, static, main verb).

4. *A production study (and the follow-up interviews) on the use of kellesz*

The study was conducted online or in person. We set down with the participants one by one. We recorded the whole experiment and transcribed it. We read out situations and the participants had to say a sentence in the given situation containing a 'form of' *kell*. They were given an example with a gap, but they were asked to modify the sentence in a way that sounded most natural to them (they could say more than one answer). They were also instructed to imagine a situation in which they talk to their friends and pay careful attention to the given situation. In the second round, during the interviews, they saw their answers, but this time they were grouped according to the variables we used. During the follow-up interviews, the participants were asked to comment on their original choice, and to explain which elements of the situation allow the use of *kellesz/kell* (or their own choice if it was different), and if they could accept the use of *kellesz/kell* in that particular situation or the situation needs to be modified to make the use of *kellesz/kell* felicitous.

V. Results

1. *The pilot questionnaire study on the use of fog and the Hungarian futurate*

- The acceptability of the futurate strongly depends on the evidence type the speaker has. Whenever the speaker has strong evidence that P is true and the sentence is not temporally ambiguous, the futurate is the most acceptable alternative. (Type 1 situations)
- *Fog* proved to be consistently more acceptable than the futurate if the proposition is inferred, regardless of the temporal unambiguity of the sentence (Type 2 situations), however, the future-referring use of the epistemic *kell* proved to be the most acceptable in this use.
- The presence or absence of a temporal adverb referring to the future matters for the choice between *fog* and the futurate (Type 3 situations). The specific roles of different time adverbials (especially those referring to the distal future) need to be further investigated, because their role seems to go beyond just being possible disambiguators.

2. *The corpus study on the use of majd*

- In the Middle-Hungarian period, the approximator use was dominant (up to 51% of all examples, temporal-use 18%). The temporal use was different, by using *majd*, the speakers very often referred to the proximal future. *Majd* was used in the context of asking for help, to make a promise, as a synonym of *hamar* ‘soon’, together with *éppen* ‘just’ forming *éppen majd* ‘just now’. In most cases, the delaying function was absent, *majd* referred to the proximal future.
- During the Early-Modern Hungarian period, the ‘later in the future’ meaning became prominent. The data suggest that *majd* started to lose its *proximal* meaning component and this process was complete at the end of the period. The *majd...*, *majd...* ‘now...,then...’ use was relatively frequent, then variations appeared, most frequently *most...*, *majd...* (In these structures, the two events are ordered, the event time of the first precedes the event time of the second.) Its approximator use became less frequent compared to the earlier periods. At the end of the period, the pragmatic functions (uncertainty, delay) appeared, and speakers started to use *majd* to mitigate the illocutionary force of a request.
- In this period, the use of *majdnem* ‘almost’ became much more frequent than the approximator use of *majd* ‘almost’ (18% and 7% of all the utterances, respectively). The delaying effect became more prominent, and the *proximal* component from the “original” (Middle Hungarian) meaning of *majd* disappeared and became just the opposite. From this *distal* (in time) component other pragmatic functions developed. If something is *distal* in time (delayed), you would expect that to be uncertain. There are utterances where the *distal/delayed* component is inactive as far as the evaluation of the event is concerned, the use of *majd* is there to indicate indirectness, to be politer.

3. *Pilot questionnaire study on the effect of the temporal structure on the use of kellesz in two different dialects:*

The results of the study provided preliminary evidence for the claim that *kellesz* is unacceptable if both the temporal perspective and the orientation are present, *kell* is more acceptable than *kellesz* in contexts where the temporal perspective (TP) is present, but with a future temporal perspective *kellesz* is preferred to *kell* in the *kellesz*-using dialects. The telicity of the predicate had no statistically significant effect on the acceptability of the structure. This can be explained by the fact that it only has an effect on the temporal orientation, but not on the temporal perspective.

4. The production study (followed-by interviews) on the use of *kellesz*

- The summary of the results of the production study

Kellesz (as an auxiliary verb) was used by 85 percent of the speakers when it was predicted that something will be necessary in the future. *Kellesz* was used by 81 percent and 70 percent of the speakers in the case of those contexts in which the necessity of the scope proposition was inferred. In the second case, native speakers argued that because of the stronger evidence that was indicated in the context, *kell* is more acceptable than in the first case, in which 81 percent of them used *kellesz* and none used *kell*. 81 and 62 percent of the participants used *kellesz* when the necessity of the scope proposition could be postponed. They agreed that the use of *kellesz* indicates that you are not fully committed and you might reconsider your decision, and this uncertainty requires the use of a 'weaker' alternative, *kellesz*. 42 percent of the speakers used *kellesz* when the speaker had direct evidence that something will be necessary in the future. During the interview they claimed that *kellesz* can be equally acceptable. They argued that because of the strength of the evidence and the certainty of the speaker, *kell* is as good as *kellesz* even if the perspective time is future. 31 percent of the speakers used *kellesz* when the TP was present, but the TO was future and the speaker had direct evidence that something is necessary at present. When both the TP and the TO were present, only 1 speaker (8 percent) used *kellesz*.

- The expressions the use of the structures were associated with during the follow-up interviews

The use of *kell* was most frequently associated with the following: definite, necessary at present (now), important, urgent, the speaker is sure, certainty in the context, clear-cut, factual, strong, concrete, and fixed.

The use of *kellesz* was most frequently associated with the following: necessary sometime in the future, not so important/urgent, can be postponed, the speaker is not fully committed, indefinite, weaker, only a plan/thought, not concrete, uncertainty in the context, presupposition, assumption, inference, there is a condition in the context, only an opinion.

VI. Conclusion

Through the dissertation, we show that referring to the past and to the future are fundamentally different. Hungarian is a language that has a binary tense system, in which only the past is morphologically marked, therefore, the non-past can be used to refer to the future. Whenever we express future-time reference overtly by a marker (e.g. by using *fog*, *majd*, or *kellesz*),

besides indicating that the event time is in the future, we can also express uncertainty, delay, or lessen our commitment to our statement. Most of these functions are very closely related to the functions of modals. One other interesting connection that is shown in the dissertation is that, in Hungarian, inferential-epistemic adverbs like *talán* ‘perhaps’ or *esetleg* ‘possibly’ and *majd* ‘later’ or *kellesz* ‘must.fut’ are all used to mitigate the force of a request, and make it politer. The connection between markers of futurity and epistemicity should be further researched, but as it is shown in this dissertation, besides the similarities in their semantics, their pragmatic features also provide an interesting area for future studies.

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List of publications related to the dissertation

Hungarian scientific articles in Hungarian journals (2)

1. **Virovec, V.:** Mi is az a kellesz?: Egy empirikus kutatás eredményei.
Argumentum (Debr.). 18, 236-259, 2022. EISSN: 1787-3606.
DOI: <http://dx.doi.org/10.34103/ARGUMENTUM/2022/13>
2. **Virovec, V.:** A kellesz, mint a kell jövő ideje.
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Foreign language scientific articles in Hungarian journals (1)

3. **Virovec, V.:** Expressing Proximity in Hungarian: The case of most 'now' and éppen 'just'.
Argumentum (Debr.). 17, 16-41, 2021. EISSN: 1787-3606.
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Foreign language scientific articles in international journals (1)

4. **Virovec, V.:** The modal analysis of the Hungarian future auxiliary fog "will, be going to".
Journal of Uralic Linguistics. Közlésre elfogadva, 1-33, 2024. ISSN: 2772-3720.





List of other publications

Hungarian scientific articles in Hungarian journals (3)

5. **Virovec, V.**, Sándor, L. K.: Az -e kérdő partikula használatáról múlt idejű feltételes módú igealakot tartalmazó beágyazott mellékmondatokban.
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