Modal existential wh-constructions
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In this dissertation, I provided a thorough cross-linguistic investigation of the typology, syntax, and semantics of modal existential wh-constructions (MECs), illustrated in (1).

(1) **Czech**
Mám se na koho spolehnout.
have:1SG reflex on who:ACC rely:INF
‘I have somebody to rely on.’

The main thesis of the dissertation comes in two parts. Firstly, all MECs are selected by one and the same predicate—one that expresses the state of existence (in the physical world, in somebody’s view, etc.). This means that the selecting existence predicate (BE) is to become a part of the definition of MECs. Secondly and somewhat counterintuitively, MECs are not ordinary objects of this predicate. Rather, they function as event extensions of the state denoted by that predicate, i.e. clauses that characterize the possibility for an event to take place brought about by the existence of some individual. Accordingly, I call this analysis of MECs an *event-extension analysis*. The relation between the object of BE (its participant argument) and its MEC extension is mediated by the wh-word in MECs. The syntactic category of the MEC itself is subject to (cross-linguistic and intra-linguistic) variation, ranging from predicative categories (vP) to clausal categories (FinP).

(2) \[ [\text{BeP participant}, [\text{Be'} \text{ BE [MEC(vP/FinP) whi ...]]}] \]

The main prediction of the first claim has to do with the highly limited syntactic distribution of MECs: they are only licensed as extensions of the atomic
existence predicate BE or any complex predicate that involves the existence predicate as its result state. The second claim makes a prediction about the highly limited modal force and flavor of MECs: they can only express the modality of circumstantial possibility. In non-technical terms, the existence of some object infers the possibility (and not necessity) to do something with that object. Moreover, the possibility is restricted primarily by the existence of some object, which is a circumstance of the world (and not, for instance, by somebody’s knowledge or by some law).

I further showed that the nature of MECs, as revealed by the event-extension analysis, provides an important insight into a number of more general aspects of the theory of syntax and semantics. Most notably, I pronounced and supported hypotheses concerning the syntax and semantics of existential predicates, wh-constructions and wh-fronting, and control.

Firstly, I argued that existential quantification in existential constructions should originate in a lexical predicate expressing the state of existence, rather than from a functional head. This hypothesis received support from the assumption that the existential predicate that selects MECs can be subject to argument structure manipulations, such as an argument structure extension and/or reduction, something that is unexpected under the functional treatment of existential heads.

Secondly, I argued that the process of wh-fronting is much freer than typically assumed. Wh-movement is not feature driven (it reduces to adjunction) and its target position is constrained primarily by the designated syntactic position of functional heads exploiting the operator-variable dependency that the wh-movement creates. The syntactic underspecification of wh-fronting correlates with the impoverished semantics of fronted wh-words—they simply map to logical lambda-operators.

Last but not least, the behavior of empty subjects in MECs provides a novel argument in favor of the property analysis (as opposed to the propositional analysis) of obligatory control constituents. The reason is that in MECs, wh-subjects are the only subjects that are capable of replacing the obligatorily controlled PRO. If control constituents map to properties, then PRO can be construed as a lambda-operator, which in turn matches the presently assumed interpretation of wh-words. These assumptions naturally lead to the explanation of the generalization that wh-subjects are in complementary distribution with PRO in MECs.

In the rest of the conclusion, I first provide a chapter-by-chapter summary of the dissertation and then discuss some possible directions for future research.

Chapter-by-chapter summary

1 Introduction  In the introduction, I first provided a heuristic definition of MECs. I defined them as constructions with three main ingredients: (i) they contain a wh-operator-variable dependency, (ii) they involve a modal meaning, and (iii) they are interpreted as weak existential nominals. After providing
an overview of the issues to be discussed and the claims to be made about them, I introduced the core proposal of the thesis: the event-extension analysis. The rest of the introduction was devoted to the description of the theoretical framework in which the investigation would be couched: generative syntax and truth-conditional semantics. Along with describing the framework, I introduced the notational conventions that would be used throughout the thesis. The introduction is concluded with a note on how to read the dissertation.

2 Universals and the typology of MECs The study of MECs has suffered from the insufficiency of descriptive depth and breadth. The second chapter was designed to partly alleviate the insufficiency. I first provided an extensive list of languages in which MECs exist. Apart from the language families for which the existence of MECs had been registered in the mainstream literature, i.e. Romance, Slavic, Finno-Ugric, Semitic, Greek, Albanian, and to a certain extent Germanic, I provided examples from Baltic languages and Basque. The core of the second chapter involved a fairly detailed description of morphological, syntactic, and semantic aspects of MECs in various languages. The data discussed come from the existing literature on MECs as well as from native speakers interviewed by me with the help of a questionnaire and/or by personal communication. The empirical investigation yields a new set of absolute and implicational universals as well as solid tendencies. The universals are: MECs appear in the internal argument position of a subset of verbs whose lexical meaning supports an existential closure of their object (and nowhere else); MECs take narrow scope with respect to other scope-taking elements; MECs’ modality is one of circumstantial possibility; MECs display no matching effects. The tendencies are: MECs tend to use bare (interrogative) wh-words; MECs tend to use wh-pronouns (as opposed to complex wh-phrases); MECs tend to be as syntactically transparent as corresponding interrogatives (or more); MECs tend to allow sluicing; MECs tend to have a subject (typically empty) that is referentially identical to a matrix argument (if there is one). The implicational universals are: If a language allows MECs to be embedded under dynamic predicates, it allows MECs to be embedded under stative predicates; if a language has multiple wh-fronting, it has multiple wh-MECs; if a language has the infinitive mood, it uses it in its MECs (otherwise, it uses the subjunctive or its functional equivalent); if a language disallows its MECs to utilize a wh-word on a particular point in the hierarchy {what, who, where} ≻ {when, how} ≻ why, it disallows any wh-word that appears lower on the hierarchy.

3 The position of MECs among related constructions The previous inquiry into the nature of MECs has often taken a construction-based comparative approach. Consequently, there have been attempts to reduce MECs to some other constructional type, in particular free relative clauses, headed relative clauses, or embedded wh-questions. The goal of the third chapter was to prove that all these reduction attempts are doomed to fail. I took a logical approach to build up this proof, I devised a simple logic of constructions, based on the notion of constructional sub/supertype, defined in structural (syntac-
tic) terms. After providing fairly uncontroversial structural descriptions of the three constructions to which MECs have been assimilated, I showed that none of them can possibly characterize MECs.

4 An event-extension analysis of MECs The fourth chapter was a careful exposition of the core proposal of the thesis—the event-extension analysis. After showing that none of the existing analyses accounts for two crucial properties of MECs—their limited distribution and modality, I turned to characterizing the properties of the predicate *available*, which clearly demonstrates some of the core properties of the existential MEC-selecting predicate. I showed that in its full argument structure potential, it expresses a three-place relation, relating two individuals by a possessive-like relation and an event in which these two individuals can take part. The next part of the chapter extended the discussion to other predicates which can be characterized as involving the same type of argument structure as the predicate *available*—what I called availability (and later MEC-embedding) predicates. These predicates include the existence predicate *be*, the possessive predicate *have*, as well as a small class of other predicate such as *buy, bring, send, arrive*, etc. Like *available*, also these predicates can optionally select for a clausal argument which was called the purpose clause in previous literature (e.g. *I bought a rack to hang coats on*). I continued to argue that both MECs and purpose clauses are to be subsumed under a common kind of clause, which I called the *possibility clause*, as it expresses a possibility which is brought about by the existence of some object. The formal implementation of the proposal was couched in a version of Neo-Davidsonian event semantics, where complex predicates (i.e. predicates expressing relations rather than properties, including stative predicates like the possessive *have*) are to be decomposed into a series of atomic predicates which characterize individuals, coupled with atomic events in which they take part, and possibly other events that they can be extended by, giving rise to complex events. In the case of the existence predicate BE, I argued that whenever it is extended by an MEC, it has an impoverished argument structure, having lost its participant argument (the bearer of the state of existence) by a process akin to antipassivization. The last proposal introduced in this chapter concerned the semantics of fronted wh-words. I argued that they are to be analyzed as syncategorematic expressions, corresponding at LF to logical lambda-operators.

5 The internal syntax of MECs I started the fifth chapter by introducing two overarching hypotheses that are in accordance with the theory of MECs proposed in the previous chapter. One hypothesis was that wh-fronting is not feature-driven and as such can target any syntactic projection, unless it violates some independent constraint of the universal or language-specific grammar. I argued that the only reason why wh-fronting has been considered as feature-driven dwells in the syntax-semantic properties of the operators that exploit the established wh-operator-variable dependency. The other hypothesis had to do with the syntactic placement (or selectional) restrictions imposed on lexical predicates on the one hand and on functional (purely logical) operators on the
other. While the former are fairly flexible in their syntactic selection, the latter are strictly constrained. Since MECs are selected by a lexical predicate (the existence predicate), their syntactic size is predicted to be flexible. The rest of the chapter was devoted to exploring the predictions of these hypotheses. After discussing the state of the art in the study of MECs’ syntax, I showed that MECs’ syntax is non-deterministic, in accordance with the hypotheses. Contrary to previous conclusions, I showed that MECs need not be CPs. If the constraints on movement in a particular language allow for a short wh-movement (wh-movement to the edge of vP), then that language has vP-level MECs. I continued to show that MECs come in more flavors also when it comes to the manner of the referential identification of the MEC subject. There are raising MECs, control MECs, as well as MECs with referentially independent subjects. The syntax of the basic types is illustrated below:

(3)  

a. \[\text{BeP} \quad \text{BE} \quad [\text{vP-MEC} \ldots] \quad \text{raising MEC}\]

b. \[\text{BeP} \quad \text{BE} \quad [\text{CP-MEC} \ldots] \quad \text{obligatory control/non-control MEC}\]

Finally, I discussed the significance of the study of MEC syntax for the syntax of sluicing. I showed that the properties of sluicing in MECs are in some important respects incompatible with fairly standard approaches to sluicing.

6 Issues of the syntax-semantics interface  
The sixth chapter was devoted to fine-tuning the event-extension analysis and to exploring some of its further predictions. I started with evaluating the predictions of previous semantic accounts of MECs (one that treats MECs as a generalized existential quantifier, and two non-quantificational accounts—a property-based account and a propositional account) and comparing them to the predictions of the event-extension account. I showed that my account fares the best. The investigation continued by discussing MECs containing multiple wh-words, which present the only big problem of the event-extension analysis. After establishing the exact truth conditions of multiple wh-MECs, showing that the multiple wh-words are in a symmetric relation, scope-wise and quantificational force-wise, I proposed a novel way of dealing with them without losing the generality of the original account. In particular, I argued that the semantic type of BE’s extension argument, filled by the MEC, can be defined in a flexible way, making it possible to select MECs of various semantic types, corresponding to the varying number of wh-words. The next section was devoted to the discussion of MECs that exhibit obligatory control. The challenge presented by the fact that MECs, just like purpose clauses, are generally two-gap structures, where both gaps need to be referentially identified with a matrix argument, was tackled by the assumption, supported by evidence from Russian, that the control relation is established MEC-internally. This assumption was couched in a general theory of control, under which control constituents are properties, PRO corresponds to an empty operator, and the control relation itself is a lexical property of the control predicate. The final section of the sixth chapter was devoted to discussing an alternative to one of the core proposals. I argued that besides
antipassivizing the MEC-embedding existence predicate, it is also tenable and in many respects desirable to assume that the argument of the existence predicate is actually present, either in a covert and in some languages even overt form.

**Directions for future research**

The goal of this dissertation was to provide a formally solid and empirically well grounded theory of modal existential wh-constructions. Due to the complexity of the matter, it was inevitable that some issues be left open for future research. One class of such issues concerns problems specific for the event-extension analysis. Probably the most pressing question is how exactly the introduction of the event extension argument in the argument structure of BE, accommodating the MEC-embedding, relates to the reduction of the participant argument slot. In the last section of the last chapter, §6.5, I showed the participant argument slot need not always be removed. Nevertheless, even if it is not, the argument position must be filled with an indefinite, retaining the quantifier nature of BE. Why should this be so? Where does the tendency to remove or at least referentially background the participant argument come from? And why are so called purpose clauses—the constructional sisters of MECs (see §4.3.1 and §4.5)—different in this respect? As I see it, finding well-motivated answers to these questions is a prerequisite for a full understanding of the nature of MECs.

The second class of open issues concerns MEC universals, tendencies, and universal implications which have virtually not been touched upon in the present dissertation, apart from registering them in §2.3. Two of these issues concern the wh-operator used in MECs (see §2.2.2). Despite the fact that MECs in the absolute majority of languages make use of interrogative operators, this is not necessarily the case, as witnessed by Hungarian and possibly Italian (see §5.3.2). Finding an answer to this question might tell us more about the difference in the syntactico-semantic nature of interrogative and relative operators. The other wh-related issue is the one of complexity. I noted that the majority of speakers of various languages find complex wh-phrases (i.e. wh-determiners plus NPs versus wh-pronouns) in MECs degraded. The event-extension account provides no clue to why this should be the case. Given that the availability of complex wh-operators in MECs might be context-sensitive, I believe that more empirical evidence is needed. It should also be explored how this MEC-restriction is related to the comparable restriction in free relative clauses. The last issues related to the observed universals concern the MEC grammatical mood (see §2.2.3). Even though the event-extension analysis provides a clear answer to why the mood should be of the dependent kind (i.e. the infinitive or the subjunctive), more reasoning is needed to substantiate the overwhelming preference for the infinitive over any other mood. Another problem is the use of the indicative, accompanied by a different sort of modality than circumstantial possibility. Since the event-extension analysis makes a very strong prediction about the force and flavor of MEC modality (something that I still consider to
be a desirable property of the analysis), generic or habitual MECs, found in Italian and Lithuanian, are predicted not to exist at all. In order to strengthen the present conclusions, these types of indicative MEC-like structures should ideally be shown to be fundamentally different from genuine MECs.

The last class of open issues concerns the high level of cross-linguistic and speaker variation. The variation affects a whole range of properties—the general availability and polarity sensitivity of wh-words, the use of grammatical mood, the type of empty subject, the introduction of discourse referents, the availability of MEC modifiers, and, last but not least, the range of embedding predicates. All these issues need a separate treatment and would ideally require detailed studies of MECs in particular languages. It should be determined to what extent the variation is reducible to general properties of languages and to what extent we are facing lexical idiosyncrasy. I believe that the present account of MECs provides a formal description which is detailed enough in order to enable a meaningful study of a good deal of this variation. For instance, the variation in embedders can be dealt with in terms of the (un)availability of the incorporation of BE as a result state into dynamic predicates. The introduction of discourse referents and MEC modification, on the other hand, might be associated with the availability of empty participant arguments of BE, in line with the discussion in §6.5.