Simik, Radek 2011. *Modal existential wh-contructions*. Utrecht: LOT.
https://www.lotpublications.nl/Documents/269_fulltext.pdf

The first comprehensive work on MECs (annotated bibliography in Appendix (chronology, lgs described, type of analysis with short summaries!)).

MECs:

(1) *Czech*
Mám [MEC co číst].
have:1SG what:ACC read:INF
'I have something that I can read.'

(2) Hungarian
Van/Nincs mit olvas-ni/olvas-n-om.
is/isn't.EXST what read-INF/read-INF-1SG
There is something/nothing to read./I have something/nothing to read.

Three essential ingredients:

(i) belong to the class of *wh*-constructions: fronted *wh*-word, only in languages with overt *wh*-movement
(ii) belong to the class of existential constructions: embedded under existential predicates
(iii) belong to the class of modal constructions: modal component in interpretation, main predicate in infinitive or subjunctive

Term introduced by Alexander Grosu (2004).

Accounts of wh-movement (in terms of free relatives/wh-questions) and more recently the existential aspect. Most understudied: modality.

Claims on peripheral and idiomatic nature STRONGLY REJECTED:

(i) no coherent notion of the opposition of core vs. periphery in theory of grammar
(ii) MECs highly productive in many languages, systematic variation along well-definable parameters with compositional meaning

Aim of thesis: to show that there is a single property shared by all MECs from which all the partial properties follow: event-extension analysis, MECs are the event-extension arguments of their predicates.

(2) **Main ingredients of the event-extension analysis of MECs**

(A) All MECs are selected by one and the same lexical predicate, expressing the state of existence. This predicate either appears on its own or corresponds to the result state of more complex predicates.

(B) The MEC is introduced in a different argument position than an internal DP argument in a regular existential sentence. In particular, it functions as what I call an event extension of the existence predicate.

(C) The modal quantification comes from the existence predicate that selects the MEC, not from the MEC itself.

(D) The narrow scope existential construal is an epiphenomenon of an argument-reducing operation on the existence predicate.

Chapter 2
Systematic description of MECs in 15 languages from various language families.

Chapter 3
MECs in relation to other constructions: reduction claims doomed to fail. A weaker reduction claim: MECs are a subtype of the A-bar construction (operator movement).

Chapter 4
MECs constitute a subtype of possibility clauses. The interpretation of MECs is tightly connected to existential predicates such as *be* and *have*. Existential predicates are associated with an inference of possibility. This inference can materialize in syntax as an additional argument slot of the existential predicate. This is where MECs appear. Lack of a pivot as a result of applying an argument-reducing operator to the predicate. Existential predicates as true predicates with genuine argument structure, not just a verbal existential quantifier.

Chapter 5
Wh-movement and the internal syntax of MECs: interrogative or relative *wh*-pronoun/vPor CP? Choice predictable from independent properties of particular languages. Syntactic indeterminacy: operator-variable dependency exploited by a lexical predicate (and not a functional head/quantifier).

Chapter 6
Semantic control and PRO as a lambda operator. Obligatory control, except when the *wh*-word of the MEC is also the subject of the MEC:

(5) *Spanish* (Cintia Widmann, Luis Vicente, p.c.)

a. Tienes con qué escribir?
have:2SG with what write:INF
'Do **you** have anything with which {**you**/**??I**/**??one**} can write?'

b. No tengo quién me ayude.
NEG have:1SG who me:DAT help:SUBJ.3SG
'**I** don't have anyone **who** can help me.'

→ obligatorily controlled PRO is in complementary distribution with wh-subjects, a theory of control under which PRO is construed on a par with wh-subjects, namely as an operator binding the closest argument variable available; control verbs as property-selecting predicates.

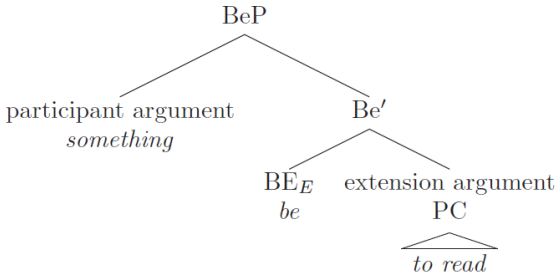
Core proposal: understanding MECs boils down to understanding the nature of the predicate that selects them and the manner in which it selects them. Closely related to the English predicate *be/have/available.*

(7) *Czech*
Je / mám [MEC co číst].
is / have:1SG what read:INF
'There is / I have something to read.']

(8) a. There is something available [PC for me to read].
b. I have something available [PC to read].

PC = possibility clause MEC = possibility clause
Two gaps: a subject and a non-subject one.

Separate argument position for verbs with a possibility inference (availability/MEC-embedding predicates).
(10)



The semantics of BE_E is given in (11). The predicate characterizes a relation between an evaluation world w, a property P (type $\langle s, et\rangle$)—corresponding to the possibility clause, and an individual x—corresponding to the participant argument.[3] The availability component is responsible for introducing an existential modal quantifier, restricted by a circumstantial accessibility relation C, which states that it is possible that the property introduced by the extension argument holds of the variable it introduces.

(11) $\text{BE}_E \rightsquigarrow \lambda w_s \lambda P_{\langle s,et\rangle} \lambda x_e [\mathbf{Exist}(w)(x) \wedge \exists w' \in C(w) : Q(w')(x)]$

If the denotation of the two arguments in (10) is as in (12) (**sp** stands for 'speaker'), the truth conditions of the sentence (9a), i.e. *There is something for me to read*, are given in (13).

(12) for me to read $\rightsquigarrow \lambda w \lambda x [\mathbf{Read}(w)(x)(\mathbf{sp})]$
something $\rightsquigarrow \lambda w \lambda x [\mathbf{Thing}(w)(x)]$

(13) $\lambda w [\mathbf{Exist}(w)(x) \wedge \mathbf{Thing}(w)(x) \wedge \exists w' \in C(w) : \mathbf{Read}(w')(x)(\mathbf{sp})]$

The sentence is true in a world w iff there is some x in w such that x is a thing in w and there is a possibility w' where the circumstances are just like in w and where I read x.

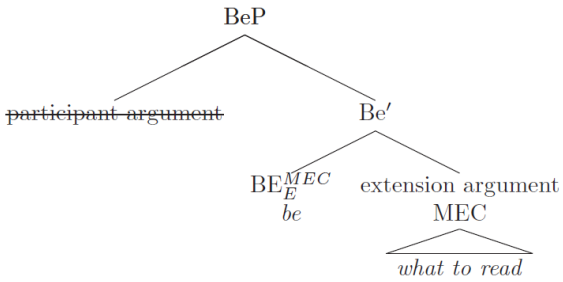
MECs match the semantic and syntactic description of PCs.

Differences:

(i) PCs make use of a covert operator, MECs make use of an overt *wh*-operator

(ii) participant argument position: overt for PCs, covert for MECs

(14)



"[T]he reduction of the participant argument position and the consequent absence of a nominal object creates the false impression that it is the MEC that occupies this position, leading to the misinterpretation of MECs either as embedded questions or as (indefinite) free relative clauses." (p.9)

Reduction of participant argument with the help of an antipassive-like morpheme, also bringing about the existential quantification over the variable that corresponds to the missing participant agreement.

(15) $\mathrm{BE}_E^{MEC} \rightsquigarrow \lambda w_s \lambda Q_{\langle s,et\rangle} \exists x_e [\mathbf{Exist}(w)(x) \wedge \exists w' \in C(w) : Q(w')(x)]$

(16) $\text{what to read} \rightsquigarrow \lambda w \lambda x [\mathbf{Thing}(w)(x) \wedge \mathbf{Read}(w)(x)(\mathbf{sp})]$

(17) $\lambda w \exists x [\mathbf{Exist}(w)(x) \wedge \exists w' \in C(w) : \mathbf{Thing}(w')(x) \wedge \mathbf{Read}(w')(x)(\mathbf{sp})]]$

MECs do not occupy the canonical participant argument position of the matrix verb.

Chapter 2: Universals and the typology of MECs

Distribution: most languages of Europe from different language families, except Germanic (only Yiddish and New York English, why? Germanic modal verbs cannot select for clauses?). Language contact? Continuous geographical distribution.

Necessary structural substrate that enables a language to have MECs: the ability to form *wh*-dependencies by overt *wh*-movement. The distribution of MECs roughly concides with the distribution of free relatives, and possibly embedded *wh*-questions with wh-movement. (confirmed by non-European languages?)

Romance languages

(1) *French* (Hirschbühler 1978:218)
Il n'a pas où mourir.
he NEG:has NEG where die:INF
'He doesn't have a place to die.'

(2) *Spanish* (Plann 1980:142)
Esa familia no tiene de que vivir.
that family NEG has of what live:INF
'That family doesn't have anything to live on.'

Slavic languages

(7) *Czech* (Zubatý 1922:66)
Mám se čím chlubit.
have:1SG REFL what:INSTR brag:INF
'I have something to brag about.'

(8) *Russian* (Chvany 1975:62)
Est' komu éto delat'.
is who:DAT it do:INF
'There is someone to do it/who can do it.'

Finno-Ugric languages

(16) *Hungarian* (Caponigro 2003:89)
Van kivel beszélni.
is who:INSTR talk:INF
'There is someone with whom one could talk.'

(17) *Estonian* (Caponigro 2003:89)
Mul on kelle-ga rääkida kui ma kurb olen.
I:ALL have who-COM talk:INF when I:NOM sad am
'I have somebody to talk to when I'm sad.'

Semitic languages

(21) *Hebrew* (Grosu 1994:138)
Eyn li im mi le-daber.
NEG:is to.me with whom talk:INF
'I do not have (anyone) with whom to talk.'

(22) *Moroccan Arabic* (Caponigro 2003:90)
mən-zfiər fiənd-ɪ mfia mən n-ədw-ɪ məllɪ kan kun hazɪn
from-luck have:1SG with whom 1SG:talk:1SG when was be:1SG sad
'Fortunately, I have somebody I can talk to when I'm sad.'

(23) *Classical Arabic* (Grosu 2004:409)
Laysa li mā af'alu.
is:NEG to.me what do:IND.IMPRF.1SG
'There is nothing I can do.'

Disputable New York English data: *I don't have what to eat.* May be similar to German *Ich habe was zu essen*, or Dutch *Ik heb wat te doen*, not an MEC: the wh-word needs to be formally licensed in the matrix clause:

German

a. *Ich habe über was / worüber zu sprechen.
I have about what / whereabout to speak
'I have something to speak about.'

Syntactic distribution: only licensed in the (apparently) direct object position of a narrow class of verbs.

Cannot appear

- in subject position (refinement: as external arguments, internal ones ok AFTER the matrix predicate)

(32) *Russian* (Aysa Arylova, p.c.; adapted from Pesetsky 1982:154)

a. Bylo kupleno čem zakusit'.
was bought what:INSTR eat.after.drinking.vodka:INF

b. *Čem zakusit' bylo kupleno.
what:INSTR eat.after.drinking.vodka:INF was bought
'Something to eat after drinking vodka was bought.'

(33) *Russian* (Pesetsky 1982:154)
Pojavilos' čem pisat'.
appeared what:INSTR write:INF
'Something to write with appeared.'

- in indirect object and object-of-preposition position

(34) *Czech*

a. *Daruju to auto s kým jet na dovolenou.
give:1SG the car with who go:INF on vacation
'I will give the car to somebody with whom I/one could go on vacation.'

- in predicative position

(35) *Romanian* (Grosu 2004:428)
*Săpunul ăsta este cu ce să te speli pe faţă.
soap.the this is with what SBJ REFL.2SG wash on face
'This piece of soap is something with which to wash your face.'

- cannot modify NPs (visible if the language uses means different from infinitival relatives)

Modification limited but not impossible:

b. *French* (Thomas 2008a:7/8)
Il y a de quoi manger dans le frigo.
it LOC have:3SG of what eat:INF in the fridge
'There is something that one can eat in the fridge.'

c. *Spanish* (Cintia Widmann, p.c.)
En la heladera tengo qué comer.
in the fridge have:1SG what eat:INF
'There is something to eat in the fridge.'

Czech:

b. Mám v ledničce co jíst.
have:1SG in fridge what eat:INF
'There is something that I can eat while sitting in the fridge.'
*'There is something in the fridge that I can eat.'

MECs can appear:

(i) in the argument position of existential verbs *be* and *have* (if they exist in the language)
→ stative MEC-embedders

(ii) in the object position of other predicates (in a proper subset of lgs) → dynamic MEC-embedders: (di)transitive predicates like *find, look for/seek, choose, give, get, take, send, bring, buy, or build* + more marginally unacc preds like *arrive, appear, occur*.

→ verbs whose lexical meaning supports existential quantification over their indefinite internal argument

!Modal verbs like *want* or *need* systematically ruled out.

(iii) capacity of selecting verb to assign structural (ACC) case?

(40) *Russian* (Pesetsky 1982:153)

a. Spekuljant zaxvatil čto prodavat'.
speculator seized what sell:INF

b. *Spekuljant ovladel čto prodavat'.
speculator seized what sell:INF
'The speculator seized something to sell.'

Occasional idiosyncratic specialties: *bír/tud* 'can' in Hungarian as a MEC-embedder:

(41) *Hungarian* (Lipták 2003:3)
Péter tudott mit felvenni az ünnepélyre.
Peter:NOM can:3SG what:ACC put.on:INF the feast.for
'Peter had things to put on for the feast.'

Cross-linguistic variation:

Wh-words:

- bare (for the absolute majority of lgs) or with an affix
- cross-linguistic hierarchy: {what, who, where} >> {when, how} >> why (cf: French/Italian: no direct object, PP paraphrases instead)
- obligatory movement, but not necessarily all the way to the left periphery
- complex *wh*-phrases often not tolerated (*which* NP, *whose* NP (ok with pied-piping e.g. in Spanish: *la foto de quien mirar* – ok if pied-piping generally allowed in emb Qs?), *how many/much* NP)
- multiple *wh*-elements allowed or not (only in multiple *wh*-fronting lgs)

(51) *Czech*

a. Nemáš být na co pyšný.
NEG:have:2SG be on what proud
'There's nothing you could be proud of.'

b. *Nemáš být pyšný na co.
NEG:have:2SG be proud on what
'There's nothing you could be proud of.'

Matching effects: free relatives (licensing from both clauses) vs. MECs (licensing only in the embedded clause:

(48) a. *She will make you however happy your ex married.
b. *She will marry however happy her ex made her.

(49) *Spanish* (Suñer 1983:365)
Briana no encuentra { con quien salir / de quien fiarse}.
Briana NEG finds with whom go.out:INF / of whom trust:INF
'Briana can't find anyone to go out with.'

Polarity sensitivity (negative context for some or all of the MECs).

Grammatical mood: only infinitive, only subjunctive (only if the lg has no infs), or both. Reasons for optionality/lack of subj mood in inf only lgs? Correlation bw mood in MECs vs. clauses embedded under modals (Pancheva-Izvorski (2000:66))? Czech and Russian: same choice of mood under modals: circumstantial, deontic, and epistemic modals such as can, may, must, etc., both languages can only use the infinitive:

b. *Russian* (Aysa Arylova, p.c.)
Ja mogu / dolžna { navestit' tjotju /* čtoby ja
I can / have.to visit:INF aunt / COMP.SBJ I
navestil tjotju}.
visit:PST.PTCP aunt
'I can / have to visit my aunt.'

If we take bouletic modals such as *wish* or *want*, both languages have a choice (sometimes restricted by independent grammatical factors) between infinitive and subjunctive:

b. *Russian* (Aysa Arylova, p.c.)
Ja xoču { navestit' tjotju / čtoby on navestil tjotju}.
I want visit:INF aunt / COMP.SBJ he visit:PST.PTCP aunt
'I want (him) to visit my/his aunt.'

Spanish, Portuguese (+Hungarian): subjunctive obligatory when the wh-word is a subject (84). Consequences for the syntax and semantics of control (5.4.3).

Syntactic transparency: MECS allow for A-bar extraction almost universally (exception: Italian). Transparency of MECs higher than corresponding wh-questions (contingent on matrix V, no transparency with *send*).

Most common: interrogative-like MECs. Other types: restructuring MECs: more transparent, relative-like: less transparent (more types of MECs in one lg).

d. *Hebrew* (Grosu 2004:413)
Al ma eyn lexa im mi ledaber?
on what is:NEG to.you with who talk:INF
'What is such that you have no one with whom to talk about it?'

(92) *Italian* (Ivano Caponigro, p.c.)
*Chi non avevi dove far dormire?
who NEG have:PAST.2SG where let:INF sleep
'Who is such that you don't have a place where you could let him sleep.'

(94) *Czech* (Šimík 2008a:123)

a. Komu nemáš co dát?
who:DAT NEG:have:2SG what:ACC give:INF
'Who is such that you can't give anything to him.'

b. *Komu se ptal co dát?
who:DAT REFL asked what:ACC give:INF
'Who did he ask what to give?'

Sluicing possible in MECs (IP ellipsis fed by *wh*-movement or focus-movement). Exception: Italian, not after Vs like *send*.

(99) *Bulgarian* (Rudin 1986:191)

a. Njama zašto.
NEG:have:IMPRS why
'There's no reason (for what X to happen).'

b. Šte ima koj.
will have:IMPRS who
'There will be someone (to do it).'

Modality: MECs are always modal.
Two types of modality: modal force and modal flavour.

Modal force: invariably existential (possibility rather than necessity).
Modal flavour: the modality expressed by MECs is of the root-type (i.e. it is surely not epistemic), the exact nature of it has been a matter of controversy. Simik: MECs express modality of circumstantial possibility.

Quantification and scope
MECs have the semantics of existentially construed indefinites, not subject to quantificational variability effects.

(109) *Czech*
Vždycky mám s kým mluvit.
always have:1SG with who talk:INF
'All situations/times are such that I have somebody to speak with.'
*'All individuals that I can speak with are such that I have them.'

MECs typically scope very low, cannot outscope matrix negation

(112) a. **Scope of negation** (*Serbo-Croatian*)
Jovan nema što čitati.
Jovan NEG:have:3SG what read:INF
'Jovan doesn't have anything to read.'
*'There is something such that Jovan cannot read it.'

b. **Scope of quantifiers** (*Bulgarian*)
Vseki ima kakvo da čete.
everyone has what SBJ read:3SG
'For everyone there is something that they can read.'
*'There is something particular that everyone can read.'

Even below MEC-internal quantifiers subject to cross-linguistic variation:

(113) *Czech*

a. Mám každému studentovi co říct.
have:1SG every student:DAT what tell

b. ?Mám co říct každému studentovi.
have:1SG what say:INF every student:DAT
'For every student there is something I can tell that student.'
*'There is something such that I can tell it to every student.'

Possible explanation: the quantifier over individuals scopes below the modal quantifier. Thus, the referent is introduced only within a non-actual possible world and cannot be picked up by a pronoun which is evaluated with respect to a different (e.g. the actual) world.

Referential dependency of the MEC-internal subject
Typically occupied by an empty category (119), but see (118).

(118) *Serbo-Croatian* (Jelena Prokić, p.c.)
Imam čime da očistiš ruke.
have:1SG what:INST SBJ clean:2SG hands
'I have something with which you can clean your hands.'

(119) Context: You and me are sitting in an exam and my pen stops writing.
I want to find out whether you have any pen that I could use.

a. *Russian* (Aysa Arylova, p.c.)
Tebe est' čem pisat'?
you:DAT be:IMPRS what:INSTR write:INF

b. *Spanish* (Luis Vicente, p.c.)
Tienes con qué escribir?
have:2SG with what write:INF
'Do you have anything (*for me) to write with?'

How is the referential dependency created bw matrix and embedded subject: raising, control (subject to cross-linguistic variation, Slovenian vs. Spanish).

Chapter 3: The position of MECs among related constructions

Candidate constructions: free relatives (FR), embedded/indirect questions (EQ), headed relatives (HR). MECs cannot be reduced to any of the three (contra earlier accounts).

(1) Boris has [$_{\text{MEC}}$ on who to rely]

a. Jane solved [$_{\text{FR}}$ what troubled us].
b. Mark knows [$_{\text{EQ}}$ who to invite].
c. Paula has [$_{\text{HR}}$ a book to read].

Shared properties:

(i) syntactically dependent
(ii) operator-variable dependency
(iii) *wh*-operator

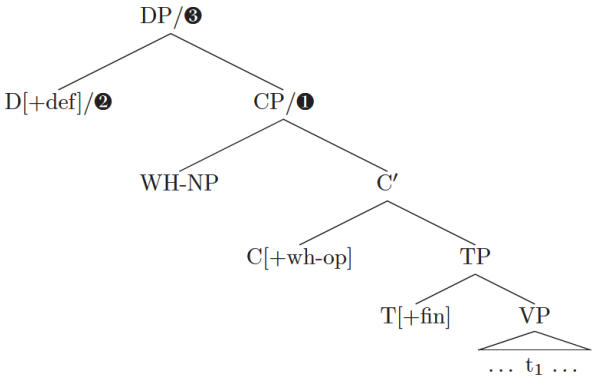
Subtype of a construction: to characterize a construction C' as a subtype of another construction C, some properties may be added to the structural descriptions of C but no properties can be removed from the description of C.

Structural descriptions of the candidate constructions

1. Free relatives

Syntax: CP with *wh*-word in Spec,CP, selected by a covert definite determiner (always finite?)

(14) **Free relative clause**



Semantics: the semantics of plural definite DPs, *wh*-clause as property P (denoted by *wh*-word and C'). When selected by the determiner (essentially Link's 1983 sigma-operator or Partee's 1987 iota-operator ɩ), the wh-clause returns the maximal entity in the set denoted by the property.

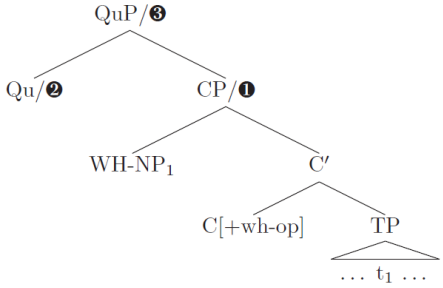
(15) ❶ $\rightsquigarrow \lambda w_s \lambda x_e [P(w)(x)]$
❷ $\rightsquigarrow \lambda w_s \lambda X_{\langle s,et \rangle} [\iota x [X(w)(x)]]$
❸ $\rightsquigarrow \lambda w_s \iota x [P(w)(x)]$

(16) Jane solved [$_{FR}$ what troubled us].
a. [$_{TP}$ Jane T [$_{VP}$ solved [$_{DP}$ D [$_{CP}$ what$_1$ [$_{TP}$ t$_1$ T [$_{VP}$ troubled us]]]]]
b. $\lambda w[\mathbf{Solved}(w)(\iota x[\mathbf{Thing}(w)(x) \wedge \mathbf{Troubled}\ (w)(x)(\mathbf{us})])](\mathbf{j})$

2. Embedded *wh*-questions

Syntax: CPs with a fronted wh-word in SpecCP, plus QuP, a specific kind of ForceP (to avoid free relatives as subtypes of embedded qs + to comply with semantics)

(17) **Embedded wh-question**



Semantics: more controversial than syntax. Groenendijk and Stokhof's (1984) propositional analysis adopted. The CP is selected by the operator Qu, which turns the property into a propositional concept.

(18) ❶ $\rightsquigarrow \lambda w_s \lambda x_e [P(w)(x)]$
❷ $\rightsquigarrow \lambda w_s \lambda X_{\langle s,et \rangle} \lambda w'_s [X(w') = X(w)]$
❸ $\rightsquigarrow \lambda w_s \lambda w'_s [\lambda x [P(w')(x)] = \lambda x [P(w)(x)]]$

(19) Mary knows [EQ who John invited].

a. [TP Mary [VP knows [QuP Qu [CP who$_1$ [TP John [VP invited t_1]]]]]]

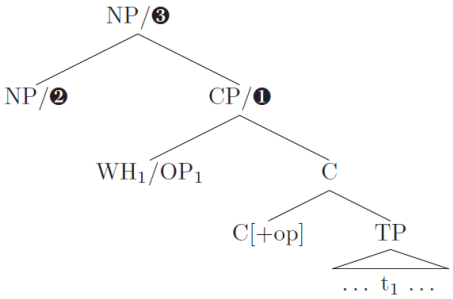
b. $\lambda w[\mathbf{Know}(w)(\lambda w'[\lambda x[\mathbf{Invited}(w')(x)(\mathbf{j})]$
$= \lambda x[\mathbf{Invited}(w)(x)(\mathbf{j})]])(\mathbf{m})]$

Infinitival embedded *wh*-questions (even more similar to MECs): same as (17) with a [-fin] T head. Covert modality presumably licensed by [+wh] C (Bhatt 1999) subject to contextual specification.

3. Headed relatives

Clear core semantics, controversial syntax. Partee (1975) adopted, relative clause as modifying adjunct to the pivot NP. HR a CP with overt (wh) or covert (op) relative operator in Spec,CP.

(22) **Headed relative**



Semantics: both pivot and relative denote a property, combined by the rule of predicate modification.

(23) ❶ $\rightsquigarrow \lambda w_s \lambda x_e[P(w)(x)]$
❷ $\rightsquigarrow \lambda w_s \lambda x_e[Q(w)(x)]$
❸ $\rightsquigarrow \lambda w_s \lambda x_e[P(w)(x) \wedge Q(w)(x)]$

(24) Mary found [HR every book that John lost].

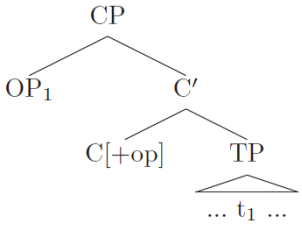
a. [TP Mary [VP found [DP every [NP book [CP OP$_1$ that [TP John [VP lost t_1]]]]]]]

b. $\lambda w \forall x[\mathbf{Book}(w)(x) \wedge \mathbf{Lost}(w)(x)(\mathbf{j}) \rightarrow \mathbf{Found}(w)(x)(\mathbf{m})]$

Infinitival headed relative: [-fin] T, covert modality subject to contextual specification.

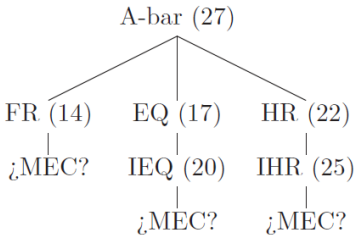
All candidate constructions subtype to A-bar construction, but not subtypes of each other.

(27) **A-bar construction**



Hypothesis space:

(28) **Taxonomy of A-bar constructions (hypotheses)**

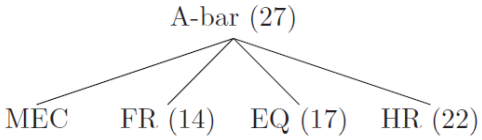


FR vs. MEC: FRs always definite, always highest scope, MECs indefinite with low scope; [+fin] vs. [-fin]. No shared mother construction either that would exclude other candidates.

EQ vs. MEC: IEQ same kind of root modality as MEC. Problem: the Qu projection. No shared mother construction to the exclusion of other candidates.

HR vs. MEC: difference in the presence of the nominal pivot.
IHRs can serve as paraphrases of MECs in languages that lack them.
English structure: *I have somebody to speak with.* HR with very similar semantics.
Do all languages that have MECs also have IHRs? No + MECs cannot be equated with IHRs with always silent nominal heads either.
MECs as HRs? Evidence against NP (islands for extraction, MECs quite transparent).

(64) **Taxonomy of A-bar constructions (Final version)**



Weaker hypotheses (argued for in subsequent chapters):

(i) the MEC can still be a subtype of a yet unrecognized construction (the possibility clause with a particular stative predicate selecting the A-bar construction, MEC also uniquely characterized by material that selects it)

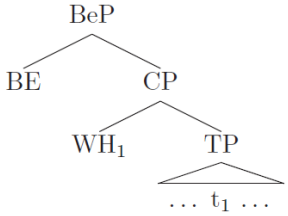
(ii) there can be a subpart of the MEC which is a subtype of one of the candidate constructions (languages might have different strategies of building the A-bar core for different subtypes of the A-bar construction).

Chapter 4: An event-extension analysis of MECs

Accounting for the distribution and modality of MECs

The MEC-specific construction placed on top of the MEC is not a functional head with no non-logical content, but a verbal predicate with its own descriptive content (though quite an impoverished one) as well as its own argument structure.

(1)



The predicate takes the MEC as its "event extension argument", the "participant argument" slot (SpecBeP), normally filled by the object whose existence is predicated is removed from the structure and the variable that corresponds to it is existentially closed by the predicate (see English *available*). The predicate BE can be held responsible for the core MEC properties, including their distribution, modality and mood, and narrow scope existential quantification.

available: relates two individuals by a possessive-like relation and states that it is possible that some event takes place in which one or both of these individuals are involved → the possibility clause, which is an infinitival clause with an operator-variable dependency.

Overlap bw MEC-embedding predicates and predicates that can embed purpose clauses: both classes of predicates are uniquely characterized by involving the same stative predicate that is also found in the predicate *available*. This predicate predicates the existence of some object/individual and at the same time introduces modal quantification over the possibility clause.

The MEC-selecting predicate undergoes a process akin to antipassivization. The consequence of this is the apparent "headlessness" of MECs, as opposed to purpose clauses.

Distribution

Selecting predicates: a proper subset of Szabolcsi's (1986) definiteness effect predicates (imposing an indefiniteness requirement on their internal argument) subject to cross-linguistic variation (Simík's stative and dynamic MEC-embedders). The existential force comes from the embedding predicate, falls out as an epiphenomenon of an argument reduction process (as opposed to assuming that MEC-selecting predicates contain an existential component and MECs are non-quantificational expressions (properties) that are greedy for being existentially quantified over).

Why don't MECs have the distribution of weak indefinite DPs? Existential quantification cannot be the only determinant of the distribution.

Modality

A possibility modal with a circumstantial accessibility relation (Pancheva-Izvorski 2000:27/28)
None of the existing analyses actually reflects the intuition about the tight relation between the individual existence and the possibility.
MEC modality treated on a par with the modality in ordinary (headed) infinitival relative clauses → overgenerates! Infinitival relatives can express bouletic (referring to e.g. desires), deontic (referring to laws or rules) (3a) or ability (3c) modality:

(3) a. I came because I have something to tell you.
'I came because there is something I want/wish/have to tell you.'
b. There's nothing to do against this virus.
'There's nothing we {can/are able to} do against this virus.'

A formalized notion of availability (the possibility for an event to take place as a result of the existence, presence, or possession of some individual/object) is needed. With all its arguments saturated, the predicate *available* conveys a conjunction of two propositions, one expressing a have-like relation and another expressing a modal statement.

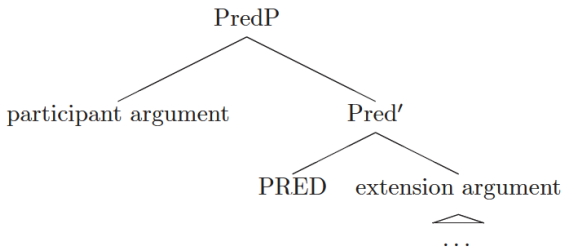
(5) a. The book is available.
b. The book is available to Dave.
c. The book is available to read.
d. The book is available for Dave to read.
e. The book is available to Dave for his children to read.

Only infinitival complements with a gap allowed → an operator is present that binds this gap

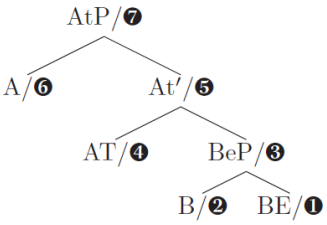
(8) The book$_i$ is available [Op$_{1/i}$ to read t$_{1/i}$ / *it$_i$].

(5e): The *to*-phrase is an argument of *available* and the *for*-phrase is an argument in the possibility clause → in the presence of the possibility clause, *available* is a three-place predicate (possessum, possessor, possibility clause with a gap).

Ramchand's (2008) theory of argument structure: predicates that express complex (possibly dynamic) events are decomposed into atomic two-place predicates, each of which expresses a relation between an individual x and an event predicate E → predicates can introduce only one participant, two or more individuals related only via the events.

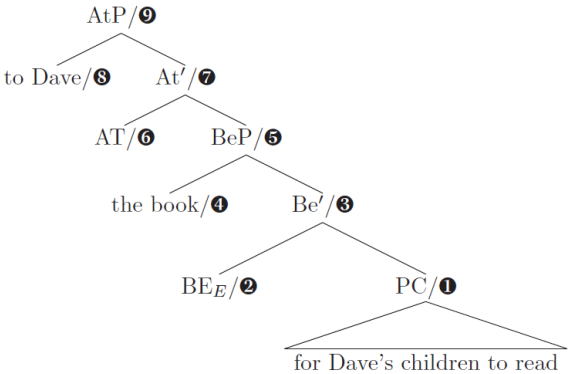


Possession is a complex state with the two atomic predicates AT and BE.



The book is available to Dave for his children to read.

(20)



(i) the possibility clause (PC) is a sort of event extension of the existence state

(ii) the embedded event is not guaranteed to take place in the world of evaluation. It is only possible that it takes place. This means that BE must have access to the world variable with respect to which the PC is evaluated and perform existential quantification over that variable. In other words, the predicate BE must be a modal (origin of modal and existential meaning)

(iii) identification of the gap in PC mediated by an operator at the edge of the PC

Purpose clauses: arguments (or very low adjuncts) of verbal predicates. Presence of the existence predicate in their result state. This existence predicate, corresponding to the predicate BE defined above, is in turn responsible for a **pragmatic inference**, the meaning of which corresponds to the semantics of the possibility clause. Limited distribution overlapping with MECs (with *use* as a mysterious outlier, Faraci (1974): purpose clauses vs. rationale clauses).

Other shared properties: obligatory gap, same sort of modality (pure circumstantial possibility)
→ MEC and purpose clause are both subtypes of the possibility clause.

Ambiguity bw an infinitival relative and a purpose clause reading.

(24) Faraci (1974:7)
Carol bought a rack to hang coats on.
a. Carol bought a rack on which to hand coats.
b. Carol bought a rack so that she can hang coats on it.

Potential problem: MECs do not seem to exhibit the core property of purpose clauses, the purpose meaning. Potential solution: the purpose meaning does not constitute a core property of purpose clauses, it is just a pragmatic implicature (not even necessary), what is asserted is possibility. No agent in (30), finally-gave-in interpretation in (31):

(30) Bach (1982:38)
War and Peace is available to read to the students.

(31) Bach (1982:50)
John bought The Golden Notebook for his children to read.

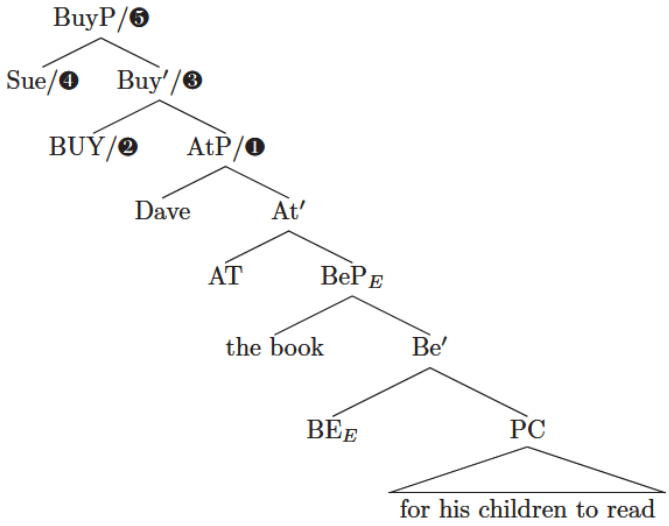
Once BE or have (AT+BE) are explicitly represented in the syntax and semantics of the dynamic predicates, the availability inference comes for free. This pragmatic inference can materialize into entailment by opening up the event extension argument slot of BE filled by a possibility clause.

Informally, the sentence in (44) *Sue bought Dave a book for his children to read* is true if Sue was involved in a buying process which extended to (brought about) the state of Dave having a book, which in turn extends to the possibility of Dave's children reading the book.

Purpose meaning: if the participant's behaviour can be construed as intentional and purposeful. Modal accessibility relation bw the buying process (with the having state) and the potential reading process.

(44) Sue bought Dave the book for his children to read.

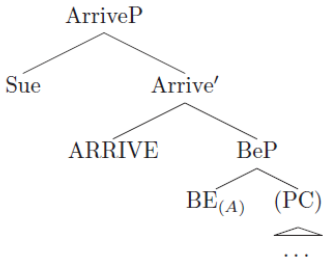
(45)



What if no explicit AT-component? (*Sue bought the book for Dave's children to read*)

1. The AT-predicate is completely missing: some dynamic unaccusative predicates like *appear*: existence w/o spatial attribution/possession. No participant, an event of appearing extending into the existence of some object predicated by BE.
2. Two participants of two adjacent subevents can share reference (property/predicate-analyses of control): *arrive* (participant argument slot of BE unsaturated, its reference identified with the participant argument of ARRIVE)

(54)



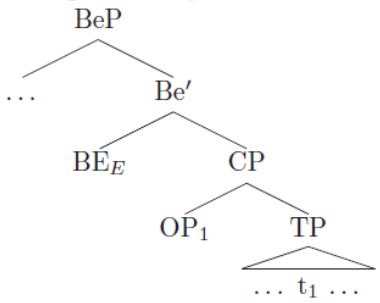
All three types of verbs (stative be/have, dynamic transitive, dynamic unaccuasative) contain a common result state, the existence predicate BE, which can "mutate" into its extended version and accommodate an event extension argument, the possibility clause.

MEC-selecting predicates: same possibility clause but no participant argument + wh-element (free relative appearance). Silent arity-reducing morpheme closely resembling antipassives. All that remains is the existential quantification over the variable that corresponds to the argument → strictly narrow scope (Bok- Bennema (1991): antipassivization standardly accompanied by existential quantification).
Wh-fronting: adjunction analysis supported by the unconstrained semantics of wh-words (can be sisters to expressions of various types).
MECs: exactly the right properties to appear in the event extension slot: gap bound by a wh-operator, can be analysed as properties (relations bw individuals and events) + realized as infinitives or subjunctives, "a dependent mood which is well fit to be selected by predicates with a modal component."

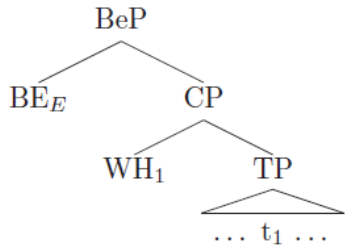
“Sentences containing MECs are, effectively, existential sentences that lack their core component– the nominal pivot. As far as I can see, getting rid of the pivot in theories where it is the main (or even the only) lexical component of existential sentences would be particularly difficult. In a theory like the one proposed here, i.e. a theory where the pivot is “just” an argument of a lexical predicate– the existence predicate–removing the pivot simply reduces to removing an argument.” (p.131)

A new place in the taxonomy of A-bar constructions: the possibility clause, together with purpose clauses.

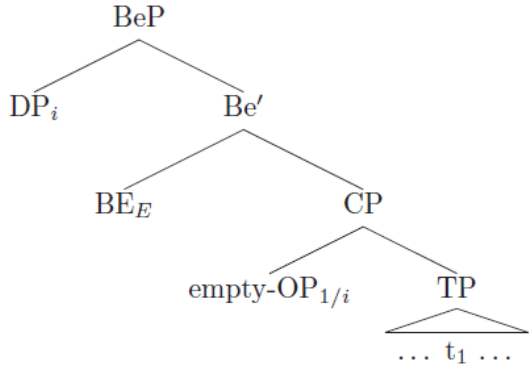
(66) **The possibility clause**



(67) **The modal existential wh-construction**



(68) **The purpose clause**



Chapter 5: The internal syntax of MECs

Categorial status

FR, EQ: selected by functional categories, restricted to being CPs.

MEC: selected by a lexical category, what syntactic material lexical heads select is subject to cross-linguistic variation. MECs come in different sizes, from vP to CP, the only constraint being imposed by wh-movement on which the construction relies.

Wh-movement as adjunction applying freely, targeting any projection. Unconstrained nature has its source in semantics (a lambda operator).

5.1 Internal syntax: state of the art

Two main types of syntactic analyses of MECs:

(i) analyses based on the idea that MECs are (free) relative clauses, adjoined to phonologically empty nominal material (NP/pro);

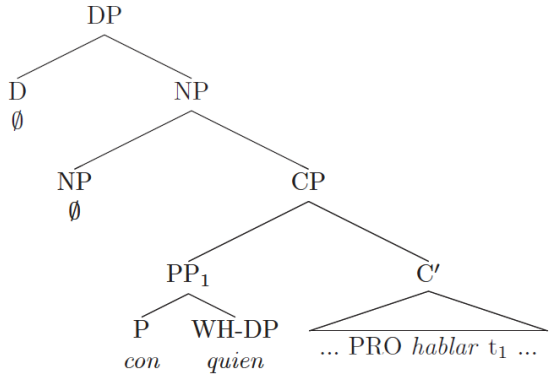
(ii) analyses arguing that there is no nominal material present in the syntax and MECs are simply wh-clauses (CP).

The nominal analysis

MECs are selected by predicates that normally select for nominal phrases rather than clauses + correlations bw MECs and nominal headed inf relatives (indefiniteness, not in subject position) !Correlation only for a subset of headed inf rels, those relativizing the relative-clause internal direct object, restrictions vanish when rel pron embedded in a PP. Across the board in MECs.

(1) *Spanish* (Plann 1980:134/135)
No tiene con quien hablar.
NEG have:3SG with who speak:INF
'She doesn't have anybody to speak with.'

(2) *No tiene*



Counterarguments:

1. The MEC can hardly be seen as a subtype of the infinitival headed relative in a language where the latter does not exist (Russian);
2. MECs lack general nominal characteristics (argument positions, coordination with other NPs, NP-islandhood);
3. The lack of matching effects in MECs is an absolute universal and the high transparency of MECs is a very strong cross-linguistic tendency. Both of these facts suggest the absence of any empty nominal category on top of the MEC (Suner's (1983) *pro*-analysis with a *pro* liberated from any licensing requirements contradicts the most basic condition for empty categories (ECP), better to assume that *pro* is simply not present).

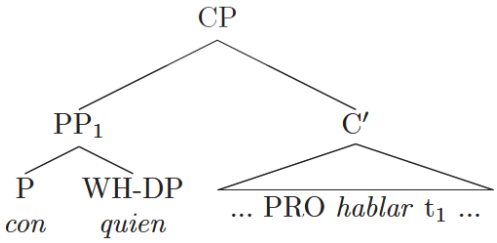
The clausal analysis

By now a well-accepted standard analysis of MECs based on parallels with MECs and embedded questions. Evidence almost entirely negative, collected to argue against the nominal analysis.

Positive evidence based on (10):

(10) **The wh-movement/CP conjecture** (to be proven false)
Overt wh-movement entails the presence of a CP.

(9) *No tiene*



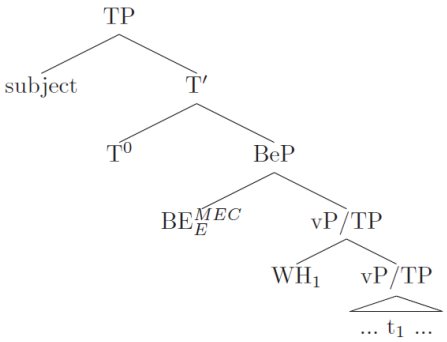
Problem of selection: how is it possible that verbs that normally subcategorize for nominals can subcategorize for CPs, too?

(i) Pesetsky (1982): quantifier raising at LF, trace nominal, satisfying the selectional restrictions;
(ii) lexical ambiguity
(iii) s(emantic)-selection doing away with syntactic subcategorization altogether
(i) Pancheva-Izvorski (2000): MECs are not directly selected by the existential predicate, but rather by a covert modal head.

CP-analysis more adequate, greater explanatory power (despite the lack of clear positive evidence), general format matching the predictions of the event-extension analysis.

The transparency problem: not all MECs are CPs, but all of them are clausal. Some embedders are restructuring predicates → restructuring MECs!

(11)



Transparency phenomena:

(i) some MECs in some languages are transparent for clitic climbing;
(ii) matrix negation in Slovenian triggers genitive of negation on the embedded object;
(iii) in Russian, the wh-word can incorporate into the matrix negative marker.

(12) a. *Serbo-Croatian* (Pancheva-Izvorski 2000:53)
Nemam ga$_1$ [kome dati t$_1$].
NEG:have:1SG it:CL whom give:INF
'I have no one to give it to.'

b. *Czech* (Ceplová 2007:37)
Petr ho$_1$ má [kam pozvat t$_1$].
Petr him:CL has where invite:INF
'Petr has a place where he could invite him.'

(13) a. *Serbo-Croatian* (Šimík 2009a:188)
*Neznam to$_1$ [kome dati t$_1$].
NEG:know:1SG it:CL whom give:INF
'I don't know who to give it to.'

b. *Czech* (Zubatý 1922:66)
*Vím se$_1$ [kam posaditi t$_1$].
know:1SG REFL.CL where seat
'I know where to sit down.'|

Restructuring: two predicates share a single functional structure, which c-commands both of the predicates and consequently appears to belong to the higher one, often called a restructuring verb.

b. **Long A-movement** (*Italian;* Roberts 1997:424)
[Le nuove case]$_1$ si cominceranno a costruire t$_1$
the new houses REFL start:FUT to build
'The new houses will start being built.'

Restructuring across a CP-boundary? Restructuring MECs are not CPs → uniform account not possible
MECs need not be CPs, while wh-questions must be CPs: why, if non-CP wh-dependency is independently available? → wh-questions require the application of a specialized question operator with a predetermined position in the functional sequence of the clause.

Wh-movement
The ultimate constraint on the type of syntactic structure that the MEC-embedding predicate can select is semantic: it has to be of the right type, in particular a type characterizing a relation between individuals and events. Abstraction over the individual variable: mediated by different types of wh-movement in MECs:

(i) interrogative-like wh-movement: most common
(ii) wh-movement to the edge of the vP/VP, exploited in MECs of all languages that allow for short scrambling of indefinite pronouns – strong correlations with restructuring MECs!
(iii) relative operator-like wh-mvt: least common (Lipták (2003) for Hungarian, Simik: also in Italian, and MECs with dynamic predicates)

Short wh-movement in Slavic lgs: multiple interrogatives and scrambling-like mvt of indef pronouns.

(37) *Serbo-Croatian* (Rudin 1988:453/454)

a. Ko$_1$ želite da vam šta$_2$ t$_1$ kupi t$_2$
who:NOM want:2PL SBJ you:DAT what:ACC buy:3SG

b. *Ko$_1$ šta$_2$ želite da vam t$_1$ kupi t$_2$
who what want:2PL SBJ you buy:3SG
'Who do you want to buy you what?'

(38) *Serbo-Croatian* (Progovac 2005b:36)

a. Da li je on ikoga uvredio?
that Q is he anyone insulted

b. ?Da li je on uvredio ikoga?
that Q is he insulted anyone
'Did he hurt anybody's feelings?'

Restructuring MEC Generalization: a lg has restructuring MECs iff it has indef-mvt

Italian: clitic-climbing ok, but not in MECs: wh-mvt must target the left periphery, no short wh-mvt.

If MECs can be smaller than CPs they will be.

Motivation for short wh-movement: an interface requirement, presumably by the principles of accent assignment. All the languages that have short wh-movement are word order flexible and at the same time accent-rigid. ("What is interesting is that this PF-motivated movement is discernible at LF in the form of lambda-abstraction")

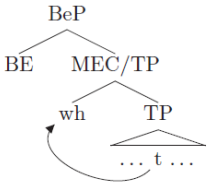
Hungarian: two different landing sites
Interrogative operators move lower than relative ones (Spec,FocP vs. Spec,ForceP above TopP).
→ different types of wh-movements (interrogative vs. relative) can be "mimicked" in MECs, giving rise to different kinds of MECs.

(46) Anikó Lipták (p.c.)

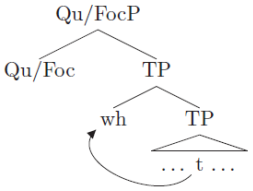
a. Nincs kivel beszéljek.
is:NEG who.with speak:SBJ.1SG

b. Nincs akivel beszéljek.
is:NEG REL:who.with speak:SBJ.1SG
'I don't have anyone to speak to.'

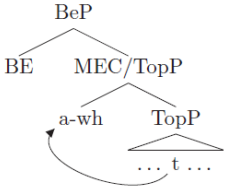
(47) *Wh-MECs*



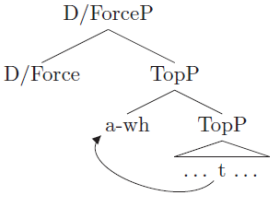
(48) *Interrogatives*



(49) *A-wh-MECs*



(50) *Free relatives*



MECs similar to their originals in terms of syntactic position, but differ in respects pertaining to the selecting operator (present in questions and relatives, missing in MECs). E.g. no definite interpretation for a-wh-MECs.

More relative-clause-like MECs (together with some dynamic MEC-selecting predicates like *send*)
Diagnostics:

- subjunctive mood (in spite of the availability of inf)
- locality: less transparent dynamic predicates
- sluicing: not supported by some dynamic preds

(63) *Serbo-Croatian* (Jelena Prokić, p.c.)

a. Na ovu zabavu$_1$ nisam odabrao koga da pozovem t$_1$.
for that party NEG:be:1SG chose who SBJ invite:1SG
'I didn't choose anyone who I could invite for that party.'

b. *Šta$_1$ si mu poslao čime da popravi t$_1$?
what be:2SG him:DAT sent what:INST SBJ repair:3SG
'What is the thing that you send him such that he can repair something with that thing.'

Italian: MECs opaque for extraction and do not allow sluicing. Italian Qs configurationally like other lgs relatives?

Conclusion: when it comes to wh-movement, MECs behave as syntactic chameleons. They utilize whatever wh-movement strategy is made available in a particular language.

5.4: Raising and control
Czech: long vs. short wh-movement
Different control/raising properties.
A clear correlation between vP-level/restructuring MECs and raising MECs on the one hand, and FinP-level MECs and control MECs: control constituents are bigger

Four basic MEC patterns:

(70) a. **Impersonal MEC**
$[_{\text{BeP}}$ BE $[_{\text{MEC}} \ldots$ PRO$_{arb} \ldots]]$

b. **Raising MEC**
$[_{\text{AgrSP}}$ AgrS$_i$ $[_{\text{BeP}}$ BE $[_{\text{MEC/vP}}$ wh $[_{\text{vP}} \ldots$ subject$_i \ldots]]]]$

c. **Obligatory control MEC**
$[_{\text{AtP}}$ subject$_i$ AT $[_{\text{BeP}}$ BE $[_{\text{MEC/FinP}}$ wh $[_{\text{FinP}} \ldots$ PRO$_i \ldots]]]]$

d. **Finite MEC**
$[_{\text{AtP}}$ subject$_i$ AT $[_{\text{BeP}}$ BE $[_{\text{MEC/FinP}}$ wh $[_{\text{FinP}} \ldots$ subject$_j$/*pro*$_{i/j}$ $\ldots]]]]$

Not enough for Russian: control-like predicate is not (a part of) the matrix predicate, but rather an MEC-internal applicative head.

The cooccurrence of both raising and control MECs within one language correlates with two possible landing sites for wh-movement (vP and FinP). Non-restructuring infinitival MECs in other languages must also be analyzed as obligatory control structures. Subjunctive: neither raising nor control.

Raising vs. control:
weather predicates, lack of thematic restrictions int he matrix clause, active-passive voice switch

Restructuring MECs: raising

Subjunctive MECs and non-restructuring infinitival MECs have the same (control) structure in Czech.

Non-restructuring MECs in other languages: obligatory control.

Finite MEC sin the Balkan sprachbund: subjunctive MECs, no infinitive in the lg; referentially independent MEC subjects. (where both inf and subj: OC: a meaningful correlation? No: disjoint reference ok in Serbo-Croatian)

(105) *Greek* (Ourania Sinopoulou, p.c.)
Den exo ti na foresi i Vassiliki sti jiorti tis.
NEG have:1SG what SBJ wear:3SG the Vasiliki at.the name.day her:GEN
'I don't have anything that Vasiliki could wear on her name-day.'

The wh-subject is the only type of subject capable of replacing a PRO (disjoint reference from matrix subject).

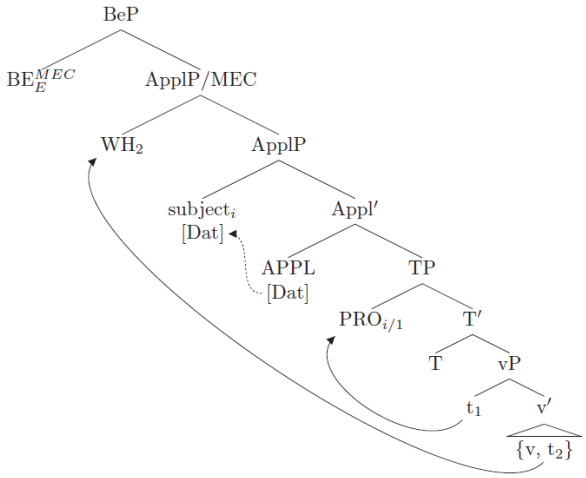
(93) *Czech*
Trautenberg neměl kdo by mu uklidil.
Trautenberg NEG:had who:NOM SBJ.3 him:CL.DAT clean.up
'Trautenberg had nobody who could clean up in his house.'

(95) *Hungarian* (Anikó Lipták, p.c.)
Nekem van ki elmenjen a postára.
I:DAT be:IMPRS who:NOM go:SBJ.3SG the post.office.to
'I have somebody who can go to the post office.'

MEC-internal control: the case of Russian

Properties of both control and raising in Russian MECs: lexical subject generated within the MEC as in raising, but it is the subject of a control predicate. Applicative head analysis assigning dative case (The book is available **for** Dave to read).

(107) MEC-internal control



This Russian-style analysis should apply more generally, to all OC MECs (6.4).

MECs as modal possessive constructions (Livitz 2010):
If DAT is assigned within inf/ApplP, AT+BE est' can independently assign the prepositional dative associated with possessives.

(132) *Russian* (Aysa Arylova, p.c.)
U menja est' čem tebe počinit' velociped.
at me:GEN be:IMPRS what:INST you:DAT repair:INF bike
'I have something with which you can repair the bike.'

Chapter 6: Issues of the syntax-semantics interface
Three basic analyses:
MECs as existential generalized quantifiers with quantifier raising at LF: narrow scope not accounted for.
MECs as properties (incomplete free relative clauses, without a D head) why the ban on predicate position?
MECs as propositions: how to embed predicates other than *be* and *have* (construed as a modal selecting a propositional argument)?
Propositional analysis the most successful (based on a selected set of criteria: narrow scope, No EA position, No PRED position, IA position, multiple wh-words)

Event-extension analysis: non-quantificational property-type. How is it an improvement compared with the property-analysis? How does it solve its problems? Where the property analysis fails:

- ban on predicative position
- ban on certain internal argument positions
- failure to introduce discourse referents
- multiple wh-MECs

Central component: **the MEC is not a run-of-the-mill argument of the matrix verb**.

Distribution:

1. Ban on predicative position: they can only function as event extensions of atomic event predicates.
2. *Look for* (a common MEC-embedder) vs. *want, need* and *resemble*: traditionally all take property-type objects. Truth conditions of *look for* in terms of successful search worlds: extension to find (with BE in the result state). *Want/need*: modals/stative predicates selecting for proposition-type complements instead of event extensions, cannot incorporate the stative predicate BE, no MEC selected. *Resemble*: no existence result state.

Modality:
The source of modal quantification is MEC-external, incorporated in the selecting predicate. Selecting predicates with availability inference leading to the grammaticalization of an argument position. Existential force of modality, just like the force of the availability inference. Circumstantial flavour of modality also follows directly from the availability inference. The event extension approach adds a modal component to the result state of the selecting predicates.

Discourse referent introduction:

(23) *Slovenian* (Marko Hladnik, p.c.)

a. Na srečo sem imel koga$_i$ vprašati.
luckily be:1SG had who ask
'Luckily, I had somebody who I could ask.'

b. #pro$_i$ Dela na univerzi.
he works at university
'He works at the university.'

The property expressed by the MEC is evaluated with respect to the world introduced by the modal (relatively easily accommodated).

Multiple wh-MECs (6.3):
Type mismatch problem (each wh-word raises the arity of the relation by one: <s,<e, vt>> vs. <s, >e,<e, vt>>>.

Event extension analysis achieves the highest level of descriptive adequacy.

Table 6.2: Semantic analyses of MECs

	Quantificational		Non-quantificational		
	Basic	Grosu	Property	Propos.	**Event-ex.**
Narrow scope	*	?	✓	✓	✓
No EA position	?	?	✓	✓	✓
No PRED position	✓	✓	*	✓	✓
IA position	↑	?	↑	↓	✓
Multiple wh-words	*	*	*	✓	*
DR introduction	*	*	*	✓	✓
Modality	↑	↑	↑	↑	✓

Multiple wh-MECs: Poorly understood semantics. Arguments for the symmetric (in terms of scope and force) paraphrases (vs. distributive, relative). Modified lexical entry for the MEC-selecting predicate BE, defined generally so that it can select MECs with any number of wh-words.

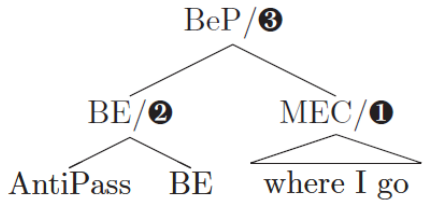
Control in MECs
Three types of empty MEC subjects: trace, PRO, pro.
OC: some atomic event predicates do not select standard event extensions, i.e. expressions of type <s, vt>, but rather event extensions with an unsaturated participant argument position, i.e. expressions of type <s, <e, vt> (relating a world of evaluation with an event and an individual). Such predicates then identify the reference of the missing argument with the reference of their own participant argument.
I will propose that an expression can be of the relevant type (<s, <e, vt>>) not only by virtue of not having its argument position saturated, but also by opening the argument slot at a higher level, by operator movement. The operator responsible for this process corresponds to PRO.
The quirky behavior of wh-subjects: in languages in which MECs exhibit obligatory control wh-subjects are the only types of MEC subjects that can be overt and, at the same time, referentially

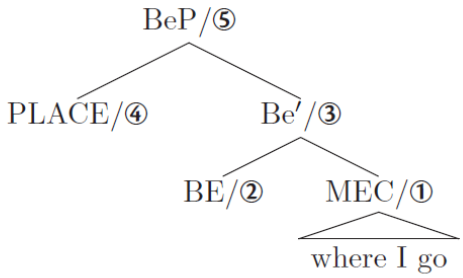
disjoint from the matrix subject. An argument in favor of treating PRO as a lambda and, by extension, treating obligatory control constituents as properties rather than propositions.

(73) **The wh/PRO generalization**
PRO in MECs is in complementary distribution with wh-subjects

PRO and wh-subjects are indistinguishable at LF; no other type of expression (referential expressions, quantifiers) is like PRO or wh-subjects at LF: all other fronted constituents are categorematic.

BE and its participant argument
Argument reduction with antipassive morpheme or empty nominal in the direct object position (evidence from Spanish IHR-like MECs or Czech MECs with weak quantificational determiners, still transparent! → follows from DP in participant arg position of MEC vs. relatives)





(94) *Spanish* (Plann 1980)
a. Ana no tiene ningún abrigo que ponerse.
Ana NEG has any:NCI coat that put.on:REFL
'Ana doesn't have any coat to put on.'
b. *Ana no tiene el abrigo que ponerse.
Ana NEG has the coat that put.on:REFL
'Ana doesn't have the coat to put on.'

b. Un libro (* que leer) ha llegado por correo.
a book that read has arrived by mail
'A book (to read) has arrived by mail.'

(99) *Czech*

a. Máme si toho o literatuře **hodně** co říct.
have:1PL REFL that:GEN about literature a.lot say:INF
'We have so much to speak about when it comes to literature.'

b. Nemáme se tady **moc** na koho obrátit.
NEG:have:1PL REFL here much on who turn:INF
'There aren't many people here that we could turn to.'

No matching effect, no passivization: MEC as the event extension argument, not in the object position. Polarity sensitivity connected to the empty object (indefinite pronoun).

Conclusion

An event-extension analysis of MECs:

(2) $[_{\text{BeP}}\ \text{participant}_i\ [_{\text{Be}'}\ \text{BE}\ [_{\text{MEC(vP/FinP)}}\ \text{wh}_i\ \ldots]]]$

Hypotheses concerning the syntax and semantics of existential predicates, wh-constructions and wh-fronting, and control.

1. Existential quantification in existential constructions should originate in a lexical predicate expressing the state of existence, rather than from a functional head (arg struct manipulations possible).
2. Wh-movement as adjunction. Target position constrained primarily by the designated syntactic position of functional heads exploiting the operator-variable dependency that the wh-movement creates.
3. The behaviour of empty subjects in MECs (only PRO or wh-subject allowed) provides a novel argument in favour of the property analysis (as opposed to the propositional analysis) of obligatory control constituents. 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.

Directions for future research

- Participant argument slot: how exactly does the reduction operation work? Why indefiniteness if no full reduction (vs. purpose clauses)?
- The nature of the wh-operator: why not restricted to being interrogative. Why restrictions on complexity?
- Mood: why overwhelming preference for infinitive?
- Level of cross-linguistic and speaker variation.