

A one-(complex-)event analysis for German eventive *mit*-modifiers

1 Introduction

Current research on adverbials discusses two central subjects:

- flexibility w.r.t. the semantic combinatorics of adverbials and their target arguments (e.g. Maienborn (2001), Buscher (2013), Strigin (1995))
- syntactic base positions for adverbials (e.g. Frey and Pittner (1998), Pittner (1999), Störzer and Stolterfoht (2013))

Abstract verbs like German *beenden* ‘to end’, *eröffnen* ‘to open’ or *unterbrechen* ‘to interrupt’ occur with prepositional modifiers headed by *mit* ‘with’ and with an event-denoting noun in internal argument position, cf. (1).

- (1) a. Der Anwalt beendete/eröffnete die Verhandlung mit einem Plädoyer.
The lawyer end/open_{pret} the trial with a summation.
- b. Peter unterbrach die Theaterprobe mit einem Hilferuf.
Peter interrupt_{pret} the rehearsal with a cry for help.

These eventive *mit*-Modifiers (EMMs) share properties with instrumentals. Both modifier-types...

- ... are realized by a *mit*-PP in German.
- (2) Max löst den Alarm mit einem Knopf aus.
Max trigger_{pres} the alarm with a button. *verb particle*
- ... participate in the so-called instrument alternation pattern as discussed e.g. by Levin (1993).
- (3) Ein Hilferuf unterbrach die Theaterprobe.
A cry for help interrupt_{pret} the rehearsal.
- (4) Ein Knopf löst den Alarm aus.
A button trigger_{pres} the alarm *verb particle*.

Nevertheless, EMMs cannot be considered as instrumentals, because the restrictions on instrumentals are in conflict with the sortal properties of the internal argument of EMMs, cf. e.g. Maienborn and Schäfer (2011).

What kind of relation holds between the modifier-event and the matrix-event?

Are EMMs and their matrix predicates to be considered as denoting one or two events?

2 Previous analyses of EMMs

2.1 Two-event accounts: EMMs as causes

- Rapp (1997) – and similarly Solstad (2006) – considers EMMs to be the first argument of a causal relation introduced by the matrix predicate. Thus, verbs that can be modified by EMMs have to provide for an empty predicate position x to be filled by a causing event introduced by the EMM, cf. (5).

(5) $[[\text{beleidigen/insult}]] = \text{CAUSE}(x, \text{BECOME/DEV}(\text{PSYCH}(y)))$
(Rapp, 1997, 76)

- The causal relation postulated by Rapp (1997) is correlated with the temporal dissociation of the two events. Yet, as can be seen in (6), this does not (always) hold.

(6) Der Anwalt eröffnete mit seinem Plädoyer zwanzig Minuten lang
The lawyer $\text{open}_{\text{pret}}$ with his summation for twenty minutes
die Verhandlung.
the trial.
→ The duration of the summation was 20 minutes.
→ The duration of the opening was 20 minutes.

- If the interpretation of (1a) was causal, a sentential paraphrase of the EMM should use a causal subjunction, and not a modal one, cf. (7).

(7) Der Anwalt beendete die Verhandlung, *weil / indem er ein
The lawyer end_{pret} the trial $\text{subj}_{\text{causal}}$ / subj_{mod} he a
Plädoyer hielt.
summation $\text{hold}_{\text{pret}}$.

2.2 One-event accounts: the Anscombe-thesis

- One-event accounts of eventive modifiers like *by/indem* are based on an intuition that is captured in the so-called Anscombe-Thesis

Anscombe-Thesis If someone ϕ s by π ing, and F is the act which makes it the case that she ϕ s, and P is the act which makes it the case that she π s, then F is P. (Bennett, 1994, 29)

- Bücking (2014) captures this intuition in an analysis of *by/indem*-sentences as referring to one event conceptualized in two different and independent ways.
- *by/indem* accommodates a dual aspect event (formally, a \bullet type, cf. Asher (2011)) with the constituent types contributed by the matrix-event and the modifier-event.

$$(8) \quad \llbracket \text{by/indem} \rrbracket = \lambda P \lambda Q \lambda x \lambda e : \text{TY}^+(Q) \exists e' : \text{TY}^+(P) \bullet \text{TY}^+(Q). P(e') \wedge \text{highest thematic arg.}'(e') = \text{highest thematic arg.}'(e) \wedge \text{o-elab}'(e, e') \wedge Q(x)(e)$$

(Bücking, 2014, 8, (28))

Dual aspect types as discussed by Asher (2011) have the following central properties:

- They have a dual nature and express two different, but equally valid conceptualizations of one and the same object, cf. a book is both a physical and an informational object, cf. Asher (2011, 131)
- In a predicational context, they provide for a morphism to one of the constituent aspects via the object elaboration relation ‘o-elab (x,y)’, where “x ‘elaborates’ on the sort of object y is.” cf. Asher (2011, 150).
- They come either as lexical typing of nouns with more than one aspect, e.g. *book*, or as ad hoc typing introduced by lexical items that accommodate a complex type, e.g. *as* in *John as a judge is corrupt*, cf. Asher (2011, Ch. 7.5).

My analysis will build on Bücking’s (2014) account of *by/indem*. However, it will be necessary to adapt the account in order to capture the data in section 3.

3 Further descriptive data on EMM-constructions

3.1 EMMs as relatives of *by/indem*

Although *by/indem*-modifiers and EMMs differ categorically, they have common properties.

- Specification of participants: Both types of modifier-events can have linguistically realized participants and in both cases, the subject participates in a control relation.

- (9) a. [Der Nationaltrainer_i] unterbrach die Pressekonferenz, indem
The national team coach interrupt_{Pret} the press conference subj_{modal}
er_i / *der Kapitän den Saal verließ.
he/ the captain the hall leave_{Pret}.
- b. [Der Nationaltrainer_i] unterbrach die Pressekonferenz mit
The national team coach interrupted the press conference with
seinem_{i/*j} Verlassen des Saals.
his leaving the hall.

- Temporal and modal anchoring: In both cases, the matrix verb provides for the anchoring in time and worlds.

- (10) Herr Maier würde seinen Arbeitstag beenden, indem er eine
 Mr. Maier *aux_{subj}* his working day end *subj_{modal}* he an
 Hausarbeit korrigiert.
 assignment correct_{*ind.*}
 → Mr. Maier does not correct the assignment.

3.2 EMMs as dual aspect events

Entities of dual aspect type interact with their linguistic context in a special manner, cf. Asher (2011, 133):

- Entities of dual aspect type can only be individuated by one of their constituent aspects. The aspect quantified over is chosen by the predicational context the dual aspect entity appears in.

- (11) Peter has a bookshelf with four copies of the bible and an edition of Grass's 'Danziger Trilogie'-novels.
- a. Peter read_{*info*} all the books on his shelf. That is, he read four books.
 - b. Peter dusted off_{*phys*} all the books on his shelf. That is, he dusted off five books.
 - c. Peter likes_{*info/phys*} all the books on his shelf. #That is, he likes eight books.

In the event domain, dual aspect entities give rise to a parallel effect.

- (12) Maria beendete das Spiel mit zwei Spielzügen.
 Maria end_{*pret*} the game with two plays.
- a. Dieses Ereignis hat Peter verärgert.
 This event *aux_{Perf}* Peter annoy_{*Perf*}
 - b. Diese zwei Ereignisse haben Peter verärgert.
 These two events *aux_{Perf}* Peter annoy_{*Perf*}
 - c. # Diese drei Ereignisse haben Peter verärgert.
 These three events *aux_{Perf}* Peter annoy_{*Perf*}

The events can be individuated by each of the aspects, cf. (12a) and (12b), but one cannot simultaneously count according to both aspects, cf. (12c).

- Entities of dual aspect type allow for co-predication, i.e. predications over each of the aspects can be linked by a conjunction.

- (13) Peter dusted off_{*phys*} and read_{*info*} his books during his summer holidays.

Dual aspect eventualities show a similar behavior. Conjunct event anaphora following an EMM-construction can refer to both aspects.¹

- (14) Die Artistin hat die Abendvorstellung mit dem Balancieren über
 The performer aux_{perf} the evening show with the balancing on
 das Hochseil eröffnet. Das war wenig feierlich_{open}, da es
 the tightrope open_{Perf}. That be_{Pret} not very festive as it
 nur zentimeterweise_{balance} geschah.
 only centimeter by centimeter happen_{Pret}.

The two constituent types can differ w.r.t. their Aktionsart. This is predicted by the concept of dual aspect entities, as their constituent types do not have to share a common supertype in the type hierarchy.

- (15) a. Peter beendete seine Wanderung mit dem Erreichen des Gipfels.
 Peter end_{Pret} his hike with the reaching of the summit.
 b. Peter unterbrach mit seinem Quatschen den Vortrag einer Mitschülerin.
 Peter interrupted with his chatting the talk of a classmate.
 c. Peter eröffnete die Performance mit dem Stehen auf einem Bein.
 Peter opened the performance with the standing on one leg.

3.3 EMMs as event-internal and event-external modifiers

3.3.1 Semantic evidence

EMMs can have two different interpretations depending on their position relative to the direct object.

- **Causal relation:** When two events are related causally by *denn* ‘because’, there has to be a plausible conceptual interpretation for the causal relation. If the two connected events do not stand in such a plausible relation, an EMM in verb-adjacent position can render the relation plausible, whereas an EMM above the object has no such power.

- (16) a. ?? Maria liegt im Krankenhaus, denn sie hat ihren
 Maria lie_{pres} in the hospital, because she aux_{Perf} her
 Skiurlaub beendet.
 skiing holiday end_{Perf}.

¹I owe the very similar example (1) to an anonymous reviewer.

- (1) Die Artistin hat die Abendvorstellung mit dem Balancieren über das Hochseil eröffnet. ?Das war wenig feierlich, da dies nur zentimeterweise geschah.

To my intuition, it is not possible to use two different types of anaphoric pronouns in this context, because this would amount to reference to two different entities in the preceding discourse. As the constituent types of dual aspect entities are not independent, reference to each of them as an individual entity is impossible.

- b. Maria liegt im Krankenhaus, denn sie ist gestürzt.
 Maria lie_{pres} in the hospital, because she aux_{Perf} fall_{Perf}.
- c. ? Maria liegt im Krankenhaus, denn sie hat mit einem
 Maria lie_{pres} in the hospital, because she aux_{Perf} with a
 Sturz ihren Skiurlaub beendet.
 fall her skiing holiday end_{Perf}.
- d. Maria liegt im Krankenhaus, denn sie hat ihren
 Maria lie_{pres} in the hospital, because she aux_{Perf} her
 Skiurlaub mit einem Sturz beendet.
 skiing holiday with a fall end_{Perf}.

- **Anaphoric accessibility:** *Das geschah* anaphorically refers to the previous main VP-event. The modifier aspect can be accessed easily by a following anaphora, if the modifier appears after the direct object as in (17). However, if the modifier is located above the direct object as in (18), it cannot be accessed by an anaphoric pronoun.

- (17) Die Artistin hat die Abendvorstellung mit dem Balancieren
 The performer aux_{Perf} the evening show with the balancing
 über das Hochseil eröffnet.
 on the tightrope open_{Perf}.
 - a. Das geschah zentimeterweise.
 That happen_{pret} centimeter by centimeter.
 - b. Das geschah sehr feierlich.
 That happen_{pret} very festively.
- (18) Die Artistin hat mit dem Balancieren über das Hochseil
 The performer aux_{Perf} with the balancing on the tightrope
 die Abendvorstellung eröffnet.
 the evening show open_{Perf}.
 - a. ?? Das geschah zentimeterweise.
 That happen_{pret} centimeter by centimeter.
 - b. Das geschah sehr feierlich.
 That happen_{pret} very festively.

There is semantic evidence for two different adjunction sites for EMMs, as two different interpretations arise depending on their position:

- direct object > EMM: the compositionally active variable is of dual aspect type which means, that the lexical verb's concept is manipulated compositionally, resulting in a more complex typing.
- EMM > direct object: the compositionally active variable is of simple (matrix) type; this variable is the only accessible information for VP-level functions.

This is in line with earlier accounts of event-internal and event-external modifiers, e.g. Maienborn (2001) and Maienborn (2003).

- According to Maienborn (2003, 481), the event-internal modifier position is distinguished in so far as the integration of the modifier relies on conceptual knowledge enabling e.g. manner or instrumental interpretations for locatives, cf. (19).²

(19) Der Koch hat das Hähnchen in einer Marihuana-Tunke zubereitet.
 The chef *aux_{Perf}* the chicken in a marihuana sauce prepared.
 (Maienborn, 2003, 478, (9a))

- There are cases where the event-internal locative is synonymous to an EMM in the same position, cf. (20a). This does not hold for the event-external pairs, cf. (20b).

(20) a. Maria hat ihren Vortrag mit der Präsentation von Seite 5
 Maria *aux_{Perf}* her talk with the presentation of page 5
 des Handouts / auf Seite 5 des Handouts eröffnet.
 of the Handout / on Page 5 of the handout opened_{Perf}.
 b. Maria hat mit der Präsentation von Seite 5 des Handouts /
 Maria *aux_{Perf}* with the presentation of page 5 of the handout /
 ?auf Seite 5 des Handouts ihren Vortrag eröffnet.
 on page 5 of the handout her talk open_{Perf}.

Syntactic evidence for two adjunction sites would predict that the integration of the modifier into the meaning constitution will differ depending on its position.

3.4 Syntactic evidence

Frey and Pittner (1998) propose a series of syntactic diagnostics that identify base positions of adverbials.

- Focus projection: In basic word order, putting the main accent on the verb-adjacent constituent leads to an interpretation with wide focus, i.e. the focus feature is projected to sentence-level.

(21) Was ist geschehen? – Ich habe gehört, dass ...
 What happened? – I heard that ...
 a. ... der Artist die Vorstellung mit dem Balancieren über das
 ... the performer the show with the balancing on the
 HOCHseil eröffnet hat.
 tightrope open_{Perf}.

²As a matter of fact, the argument is even stronger in view of the observation that event-internal modifiers can access the conceptual information supplied by the modified verb, whereas in VP-adjunct-position, modifiers can only see the event as a whole, cf. Maienborn et al. (2012).

- b. ... der Artist mit dem Balancieren über das Hochseil die
 ... the performer with the balancing on the tightrope the
 VORstellung eröffnet hat.
 show open_{Perf}.

- Existentially interpreted wh-phrases: Since existentially interpreted wh-phrases resist movement in German, the word order relative to these constituents identifies base positions.

- (22) a. Der Rektor hat was mit einer Rede eröffnet.
 The rector aux_{Perf} wh_{Akk} with a speech open_{Perf}.
 b. Der Rektor hat den Festakt mit was eröffnet.
 The rector aux_{Perf} the ceremony with wh_{Dat} open_{Perf}.
- (23) a. Der Rektor hat mit was den Festakt eröffnet.
 The rector aux_{Perf} with wh_{Dat} the ceremony opened.
 b. Der Rektor hat mit einer Rede was eröffnet.
 The rector aux_{Perf} with a speech wh_{Akk} opened.

- Complex pre-field: constituents of the VP can be moved to the pre-field together, as long as these VP-constituents do not contain a trace.

- (24) a. Mit dem Plädoyer beendet hat der Anwalt
 With the summation end_{Perf} aux_{Perf} the lawyer
 die Verhandlung.
 the trial.
 b. Die Verhandlung beendet hat der Anwalt
 The trial end_{Perf} aux_{Perf} the lawyer
 mit dem Plädoyer.
 with the summation.

There is at least initial syntactic evidence for two different adjunction sites for EMMs:

- (25) a. $[_{VP}[_{V'}[_{DP} \text{ direct object}][[_{VP} \text{ EMM}][[_{V} \text{ matrix verb}]]]]$
 b. $[_{VP}[_{PP} \text{ EMM}][[_{V'}[_{DP} \text{ direct object}][[_{V} \text{ matrix verb}]]]]$

4 Compositional meaning constitution

4.1 Some remarks on Type Composition Logic

- In TCL, the computation of meaning is based on the standard λ -calculus. It is, however, extended by an additional variable π that encodes fine-grained type information about the arguments of a term.

- Type information is to be understood as a presupposition that has to be justified by the incoming argument during the meaning constitution.
- A DP as generalized quantifier is not of type $\langle\langle e, t \rangle, t\rangle$ in TCL, but of type $\langle\langle e \langle \pi, t \rangle \rangle, \langle \pi, t \rangle\rangle$.³

$$(26) \quad \llbracket \text{the show} \rrbracket \\ \lambda P \lambda \pi_1 \exists! s. \text{show}'(s, \pi_1 * \text{ARG}_1^{\text{show}} : \text{EVTY}) \wedge P(\pi_1)(s)$$

4.2 Event-external EMMs

mit_{VP} relates a generalized quantifier to a first-order property.⁴ The preposition contributes to the meaning constitution in three ways:

- It determines the variable e' to be the compositionally active variable of the whole construction.
- It introduces the event variable e of complex type $\text{TY}^+(\Phi) \bullet \text{TY}^+(Q)$, where $\text{TY}^+(\Phi)$ is a function that selects the most specific type information of Φ .
- It relates this variable e to the variables contributed by the internal and the external argument of mit_{VP} via the relation *o-elab*.

$$(27) \quad \llbracket \text{mit}_{VP} \rrbracket = \\ \lambda \Phi \lambda Q \lambda e' \lambda \pi \exists e. Q(\pi * \text{ARG}_1^Q : \text{EVTY})(e') \wedge \text{o-elab}'(e', e, \pi * \text{ARG}_1^Q : \text{TY}^+(\Phi) \bullet \text{TY}^+(Q)) \\ \wedge \Phi(\pi * \text{ARG}_1^\phi : \text{EVTY})(\lambda x \lambda \pi'. \text{o-elab}'(x, e, \pi'))$$

To construct the meaning of (18), mit_{VP} takes (28a) as an internal argument, yielding the formula in (28b).

$$(28) \quad \text{a. } \llbracket \text{the balancing on the tightrope} \rrbracket = \\ \lambda R \lambda \pi_1 \exists! b. \text{BoT}'(b, \pi_1 * \text{ARG}_1^{\text{BoT}} : \text{EVTY}) \wedge R(\pi_1)(b) \\ \text{b. } \llbracket \text{mit}_{VP} \rrbracket (\llbracket \text{the balancing on the tightrope} \rrbracket) = \\ \lambda Q \lambda e' \lambda \pi \exists e. Q(\pi * \text{ARG}_1^Q : \text{EVTY})(e') \wedge \text{o-elab}'(e', e, \pi * \text{ARG}_1^Q : \text{TY}^+(\Phi) \bullet \text{TY}^+(Q)) \\ \wedge \exists! b. \text{BoT}'(b, \pi * \text{ARG}_1^{\text{BoT}} : \text{EVTY}) \wedge \text{o-elab}'(b, e, \pi * \text{ARG}_1^{\text{BoT}} : \text{EVTY})$$

(29a) is a simplified version of the VP-meaning. mit_{VP} takes it as external argument. The result of the functional application of (28b) to (29a) is depicted in (29b).

³This is, in fact, a slight simplification w.r.t. the original DP-type in Asher (2011), as it disregards the polymorphy of the type requirement posed on the individual argument e . For reasons of accounting for subtyping of functional types, the precise type of a DP is $\langle\langle \exists x \sqsubseteq e.x \langle \pi, t \rangle \rangle, \langle \pi, t \rangle\rangle$. As I will not touch the question of functional subtyping in any detail, I will stick to the simpler DP-type variant for ease of presentation.

⁴Note that I simplify the lexical entry for eventive *mit* in both variants insofar as I assume a subjectless VP with only one individual argument left for justification, namely the referential event argument, cf. Kratzer (1996).

- (29) a. $\llbracket \text{end the show} \rrbracket =$
 $\lambda e_1 \lambda \pi_1. \text{EtS}'(e_1, \pi_1 * \text{ARG}_1^{\text{EtS}} : \text{EVTY})$
 b. $\llbracket \text{mit}_V \text{ the balancing on the tightrope} \rrbracket (\llbracket \text{end the show} \rrbracket) =$
 $\lambda e' \lambda \pi \exists e. \text{EtS}'(e', \pi * \text{ARG}_1^{\text{EtS}} : \text{EVTY}) \wedge \text{o-elab}'(e', e, \pi * \text{ARG}_1^Q : \text{TY}^+(\Phi) \bullet \text{TY}^+(Q))$
 $\wedge \exists ! b. \text{BoT}'(b, \pi * \text{ARG}_1^{\text{BoT}} : \text{EVTY}) \wedge \text{o-elab}'(b, e, \pi)$

Binding the presuppositions results in (30).

- (30) $\lambda e' : \text{EVTY} \lambda \pi \exists e : \text{BALANCE} \bullet \text{END-SHOW}. \text{EtS}'(e', \pi) \wedge \underline{\text{o-elab}'(e', e, \pi)} \wedge \exists ! b : \text{EVTY}. \text{BoT}'(b, \pi) \wedge \underline{\text{o-elab}'(b, e, \pi)}$

4.2.1 Event-internal EMMs

mit_V combines a generalized quantifier with a transitive verb. It contributes to the meaning constitution in three ways:

- It determines the variable e to be compositionally active.
- It re-types the referential variable e of the verb to the complex type $\text{TY}^+(\Phi) \bullet \text{TY}^+(\mathfrak{P})$.
- This newly typed variable is related to the internal argument of the preposition via the o-elab -relation.

- (31) $\llbracket \text{mit}_V \rrbracket =$
 $\lambda \Phi \lambda \mathfrak{P} \lambda \Omega \lambda e \lambda \pi. \mathfrak{P}(\pi * \text{ARG}_1^{\mathfrak{P}} : \text{TY}^+(\Phi) \bullet \text{TY}^+(\mathfrak{P}))(e)(\Omega) \wedge \Phi(\pi * \text{ARG}_1^\phi : \text{EVTY})(\lambda x \lambda \pi'. \text{o-elab}'(x, e, \pi'))$

mit_V again takes (28a) as its first argument, which yields (32).

- (32) $\llbracket \text{mit}_V \rrbracket (\llbracket \text{the balancing on the tightrope} \rrbracket) =$
 $\lambda \mathfrak{P} \lambda \Omega \lambda e \lambda \pi. \mathfrak{P}(\pi * \text{ARG}_1^{\mathfrak{P}} : \text{BALANCE} \bullet \text{TY}^+(\mathfrak{P}))(e)(\Omega) \wedge$
 $\exists ! b. \text{BoT}'(b, \pi * \text{ARG}_1^{\text{BoT}} : \text{EVTY}) \wedge \text{o-elab}'(b, e, \pi)$

The second argument of mit_V is the transitive verb in (33a). Functional application results in (33b).

- (33) a. $\llbracket \text{end} \rrbracket = \lambda \Psi \lambda e_1 \lambda \pi_1. \Psi(\pi_1 * \text{ARG}_1^{\text{end}} : \text{EVTY})(\lambda y \lambda \pi_2. \text{end}'(e_1, y, \pi_2))$
 b. $\llbracket \text{mit}_V \text{ the balancing on the tightrope} \rrbracket (\llbracket \text{end} \rrbracket) =$
 $\lambda \Omega \lambda e \lambda \pi. \Omega(\pi * \text{ARG}_1^{\text{end}} : \text{BALANCE} \bullet \text{END})(\lambda y \lambda \pi_2. \text{end}'(e, y, \pi_2)) \wedge$
 $\exists ! b. \text{BoT}'(b, \pi * \text{ARG}_1^{\text{BoT}} : \text{EVTY}) \wedge \text{o-elab}(b, e, \pi)$

(33b) then combines with the DP-entry from (26) as a direct object to result in the logical form (34).

- (34) $\llbracket \text{mit}_V \text{ the balancing on the tightrope end} \rrbracket (\llbracket \text{the show} \rrbracket) =$
 $\lambda e \lambda \pi \exists ! s. \text{show}'(s, \pi * \text{ARG}_1^{\text{show}} : \text{EVTY}) \wedge \text{end}'(e, s, \pi * \text{ARG}_1^{\text{end}} : \text{BALANCE} \bullet \text{END}) \wedge$
 $\exists ! b. \text{BoT}'(b, \pi * \text{ARG}_1^{\text{BoT}} : \text{EVTY}) \wedge \text{o-elab}'(b, e, \pi)$

Binding the presuppositions results in (35).

- (35) $\lambda e : \text{BALANCE} \bullet \text{END} \lambda \pi \exists ! s : \text{EVTY}. \text{show}'(s, \pi) \wedge \text{end}'(e, s, \pi) \wedge \exists ! b : \text{EVTY}. \text{BoT}'(b, \pi) \wedge \underline{\text{o-elab}'(b, e, \pi)}$

5 Conclusion

- EMMs constitute a tool to encode more specific and concrete information on the way an abstract event occurred.
- EMMs and their matrix event descriptions are considered to refer to one event, but to conceptualize this event under two different aspects.
- EMMs accommodate a dual aspect entity with two constituent eventive aspects: the modifier and the matrix event. Linguistically, they display the same properties as lexical dual aspect entities.
- There is semantic and syntactic evidence for the fact that EMMs have (at least) two different adjunction positions w.r.t. to the matrix verbal projection: They can be adjoint at V and VP-level.
 - At V-level, EMMs access the conceptual information provided by the matrix predicate and manipulate the type of the referential argument of the whole construction.
 - At VP-level, EMMs add a specification of the abstract matrix event to an already full-fledged event description, which is the reason why they do not change the conceptual information contributed by the matrix predicate.
- In both positions, the meaning constitution proceeds compositionally. Eventive *mit* relates a generalized quantifier to a V or VP-projection respectively, generating an event variable that is typed as dual aspect entity.

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