The macro-event property in the motion domain and beyond: New perspectives

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SYNOPSIS

▸ Cold open: the typology of motion macro-event descriptions

▸ The syntax of macro-event descriptions

▸ The cognitive motivation behind the Macro-event property

▸ Macro-event synthesis

▸ Back to motion

▸ Summary

COLD OPEN: THE TYPOLOGY OF MOTION MACRO–EVENT DESCRIPTIONS

▸ the Macro-event property (MEP)

  ▸ Bohnemeyer (2003); Bohnemeyer et al (2007, 2010); Bohnemeyer & Van Valin (2017)

  ▸ the aim: operationalize typologists' intuitions about constructions that describe "single events"

"(…) true SVC structures and covert coordination structures seem to feel different to native speakers. The covert coordination tends to be perceived as a sequence of distinct events, whereas the SVC is **perceived as a single event** (…)" (Baker 1989: 547; emphasis JB)

"An SVC consists of more than one verb, but the SVC is conceived of as **describing a single action**." (Dixon 2006: 339; emphasis JB)

"Although two or more verbs are present, the sentence is i**nterpreted as referring to a single action** rather than a series of related actions. Although the action may involve several different motions there is no possibility of a temporal break between these and they cannot be performed, for example, with different purposes in mind." (Sebba 1987: 112; emphasis JB)

▸ the proposal (Bohnemeyer 2003; Bohnemeyer et al 2007, 2010; Bohnemeyer & Van Valin 2017)

  ▸ the Macro-event property (MEP)

    ▸ a property of event description constructions

      ▸ that blocks access to subevents for temporal modification

"**Macro-event property (MEP):** "A construction C that encodes a (Neo-)Davidsonian event description $\exists e.P(e)$ ('There is an event e of type/property P') has the MEP iff C has no constituent C′ that describes a proper subevent $e′$ of e such that C′ is compatible with time-positional modifiers that locate the runtime of $e′$, but not that of the larger event e." (Bohnemeyer & Van Valin 2017: 147)

▸ examples

(1.1) a.   No MEP construction; distinct time adverbials fine
     Floyd left Nijmegen at 11:00am. He passed through
     Moers at noon and reached Düsseldorf at 12:30pm.

   b.   MEP construction; distinct time adverbials anomalous
     #Floyd went from Nijmegen at 11:00am
     to Düsseldorf at 12:30pm via Moers at noon.

   c.   MEP construction; acceptable: single adverbial denoting interval
     that encompasses all subevents
     On Wednesday, Floyd went
     from Nijmegen to Düsseldorf via Moers.

▸ the MEP in the motion domain: Bohnemeyer et al (2007)

   ▸ a study of 18 languages from 16 genera

     ▸ based on a production task involving descriptions of animated video clips plus a questionnaire study

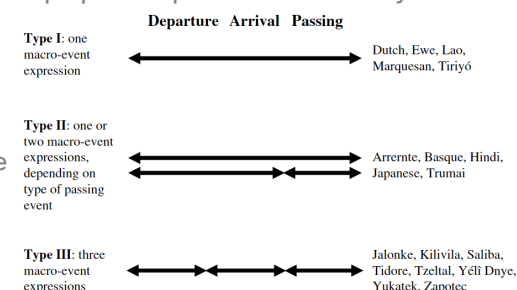   ▸ findings I: 3 types in terms of motion sub-events conflatable in a single macro-event description

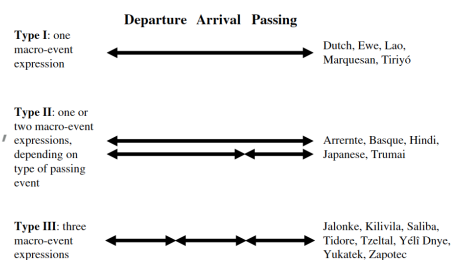**Figure 1.** *The three segmentation types* (Bohnemeyer et al. 2007: 517)

▸ the MEP in the motion domain: Bohnemeyer et al (2007) (cont.)

   ▸ findings II: type membership is predicted by framing type

     ▸ but the predictive classification is more fine-grained than the S/V distinction

     ▸ Type I: S-framed or serializing

     ▸ Type II: V-framed but 'double-marking'

     ▸ Type III: 'radical' V-framing

▸ the MEP in the motion domain: Bohnemeyer et al (2007) (cont.)

   ▸ Type I: S-framed or serializing
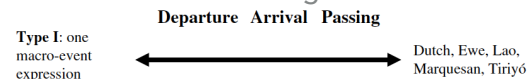
(1.2) a. Monoclausal MEP construction, subevent timing barred
Lao
     Man^2 lèèn^1 (qòòk^5) caak^5 hùan^2 taam^3 thaang^2 hòòt^4 kòòn^4-hiin^3.
     [3   run   exit   from house]$_{VP}$ [follow path]$_{VP}$ [reach CL-rock]$_{VP}$
     'He ran (exited) from the house, followed the path, reached the rock.'

   b. Multiclausal non-MEP construction, subevent timing fine

     Man^2 nùng^1 moong^2 lèèn^1 (qòòk^5) caak^5 hùan^2 taam^3 thaang^2–
     [[3   one   hour   run   exit   from house]$_{VP}$ [follow path]$_{VP}$]$_S$
     sòòng^3 moong^2 hòòt^4 kòòn^4-hiin^3.
     [[two   hour   reach CL-rock]$_{VP}$]$_S$
     'At one he ran, exited from the house, followed the path, (and) at two he
     reached the rock.'   (Lao)

▸ the MEP in the motion domain: Bohnemeyer et al (2007) (cont.)

　　▸ Type II: V-framed, but double-marking

Type II: one or two macro-event expressions, depending on type of passing event

Departure　Arrival　Passing

Arrernte, Basque, Hindi, Japanese, Trumai
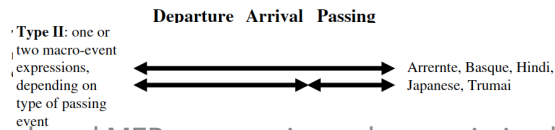
(1.3) a. Monoclausal MEP construction, subevent timing barred

JPN　　　　(Kinoo)　ki-no　　tokoro-kara ie-made　　it-ta.
　　　　　　yesterday tree-GEN place-ABL　house-until go-PAST
　　　　　　'[One] went from the tree to the house (yesterday).'

　　　 b. Non-MEP converb construction, subevent timing fine

(San-ji-ni)　　　ki-no　tokoro-o　shuppatsu-shi-te, (yo-ji-ni)
three-o'clock-DAT tree-GEN place-ACC departure-do-CON　four-o'clock-DAT
kawa-o　watat-te, (go-ji-ni)　　　ie-ni　　tsui-ta.
river-ACC cross-CON　five-o'clock-DAT house-DAT arrive-PAST
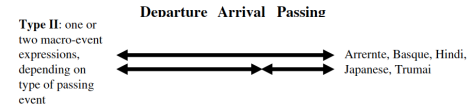'Leaving the tree (at three), crossing the river (at four), [one] arrived at the house (at five).'　　　　　　　　　　　(Japanese)

▸ the MEP in the motion domain: Bohnemeyer et al (2007) (cont.)

　　▸ Type II: V-framed, but double-marking (cont.)

Type II: one or two macro-event expressions, depending on type of passing event

Departure　Arrival　Passing

Arrernte, Basque, Hindi, Japanese, Trumai

　　　　▸ integrating route paths into a macro-event expression is subject to the 'coextensiveness constraint' (Matsumoto 1996: 269)
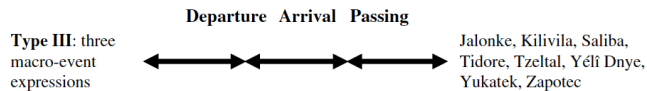
(1.4) a. Monoclausal MEP construction, route path integration

JPN　a. #Jon-wa　Bei Burijji-o　Paro Aruto-kara Baakurei-ni　watat-ta.
　　　　John-TOP Bay Bridge-ACC Palo Alto-ABL　Berkeley-DAT cross-PAST
　　　　'John crossed the Bay Bridge from Palo Alto to Berkeley.'　(Japanese)
　　　b.　Jon-wa　Bei Burijji-o　San Furanshisuko-kara Ookurando-ni
　　　　John-TOP Bay Bridge-ACC San Francisco-ABL　Oakland-DAT
　　　　watat-ta.
　　　　cross-PAST
　　　　'John crossed the Bay Bridge from San Francisco to Oakland.'

Figure 2. *Bay semantics*

▸ the MEP in the motion domain: Bohnemeyer et al (2007) (cont.)

　　▸ Type III: radical V-framing: no path expression outside the verb root

Departure　Arrival　Passing

Type III: three macro-event expressions

Jalonke, Kilivila, Saliba, Tidore, Tzeltal, Yélî Dnye, Yukatek, Zapotec

(1.5)　　Non-MEP construction with explicit temporal sequencing

YUC　Ba'l＝e',　　be'òora＝a'　t-inw＝il-ah＝e',
　　　[thing＝TOP] [now＝D1]　[PRV-A.1＝see-CMP(B.3SG)＝TOP]
　　　　hun-p'éel chan áasul ba'l
　　　　[one-CL.IN　DIM　blue　thing]
　　　　'But, now, I saw it, a little blue thing'

k-u＝p'áat-al　　　　t-u＝xùul　　le＝tu'x　　h-luk'
IMPF-A.3＝await.ACAUS-INC LOC-A.3＝end DEF＝where PRV-leave(B.3SG)
　　'stayed at the end where it left'

le＝chan　ba'l　chak＝o',　　k-u＝bin　　u＝balak'＝e',
DEF＝DIM thing red(B.3SG)＝D2] [IMPF-A.3＝go A.3＝roll＝TOP]
　　k-u＝ts'o'k-ol＝e',
　　[IMPF-A.3＝end-INC＝TOP]
　　'the little thing that's red, it went rolling, **and then**'
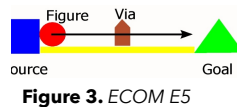
Figure　Via

Source　Goal

Figure 3. *ECOM E5*

▸ the MEP in the motion domain: Bohnemeyer et al (2007) (cont.)

　　▸ Type III: radical V-framing: no path expression outside the verb root

Departure　Arrival　Passing

Type III: three macro-event expressions

Jalonke, Kilivila, Saliba, Tidore, Tzeltal, Yélî Dnye, Yukatek, Zapotec
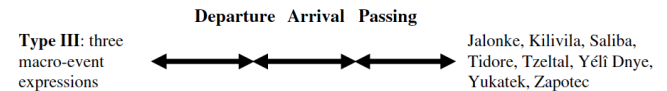
(1.5)　　Non-MEP construction with explicit temporal sequencing
　　　　　　　　　　　　　　　　　　　　　　　　　　(cont.)

YUC　k-u＝máan　　　y＝iknal hun-p'éel chan ba'l　chak　　xan＝e',
　　　[IMPF-A.3＝pass A.3＝at one-CL.IN DIM　thing red(B.3SG) also＝TOP]
　　　　'it passes by a little thing that's also red'

k-u＝ts'o'k-ol-e',　　　k-u＝k'uch-ul　　y＝iknal le＝triàangulo
[IMPF-A.3＝end-INC-TOP] [IMPF-A.3＝arrive-INC A.3＝at　DEF＝triangle
　　áasul＝o.'
　　blue(B.3SG)＝D2]
　　'**and then** it arrives at the blue[27] triangle.'
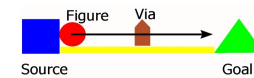
Figure　Via

Source　Goal

Figure 3. *ECOM E5*

▸ the MEP in the motion domain: Bohnemeyer et al (2007) (cont.)

   ▸ findings III: apparent universal constraints
     on macro-event expressions

      ▸ the **Argument Uniqueness Constraint (AUC)**

        ▸ no semantic role assigned more than once
          per MEP expression

          ▸ Bohnemeyer & Van Valin (2017) restrict this to roles
            not tied to causally related subevents

            ▸ so one can assign agent/effector twice in an MEP
              expression

              ▸ as long as one is treated as causer
                and the other as causee

▸ the MEP in the motion domain: Bohnemeyer et al (2007) (cont.)

   ▸ findings III: apparent universal constraints
     on macro-event expressions (cont.)

      ▸ the **Referential Uniqueness Constraint (RUC)**

        ▸ multiple references to the same individual/place
          in the same MEP expression are dispreferred

          ▸ unless they are explicitly flagged (reflexives)

      ▸ the **Macro-event Linking Principle**

        ▸ the semantic roles assigned by an MEP expression
          are constrained by the semantic relations

          ▸ the expression entails to hold
            among the subevents

▸ the MEP in the motion domain: Bohnemeyer et al (2007) (cont.)

   ▸ findings III: apparent universal constraints
     on macro-event expressions (cont.)

      ▸ the **Unique Vector Constraint** (Bohnemeyer 2003)

        ▸ an MEP expression cannot denote more than one
          direction vector (in spoken languages!)

(1.6) *F is moving away from A
    and toward B*
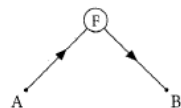
(1.7) *F is moving away from A
    and **then** toward B*

Figure 4. *An illustration of the UVC: two vector
specifications without event segmentation
if the vectors are collinear (1.6), but requiring
syntactically explicit segmentation if not (1.7)*

SYNOPSIS

THE SYNTAX OF MACRO-EVENT EXPRESSIONS

▸ Bohnemeyer & Van Valin (2017): the Core-MEP Hypothesis

"**Core-MEP Hypothesis:** Across languages:
i. Single-core constructions necessarily have the MEP.
ii. Multi-core constructions have the MEP only in case their cores are in cosuborbinate linkage; they lack the MEP otherwise." (Bohnemeyer & Van Valin 2017: 158)

▸ Illustration I: an MEP construction ('core cosubordination')

```
                    SENTENCE
                      |
                    CLAUSE
                      |
            CORE ←           PERIPHERY
           /    \                 |
      CORE   CLM → CORE
      /  \        /    \
    RP   NUC    NUC    RP         ADV
          |      |      |          |
        PRED   PRED              
          |      |
          V      V
       Chris  went  to  see  Pat  today
```
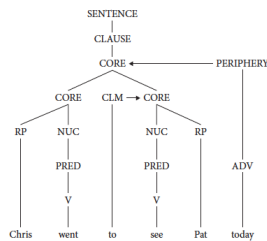
Figure 5. *Core cosubordinations have the MEP (Bohnemeyer & Van Valin 2017: 167)*

▸ Illustration II: a non-MEP construction ('core coordination')

```
                        SENTENCE
                           |
                         CLAUSE
              /                          \
     CORE ←  PERIPHERY       CLM → CORE ←  PERIPHERY
     /  |  \        |                |  \        |
   RP  NUC  RP                     NUC  RP
        |            |              |         |
       PRED         PP            PRED       PP
        |            |             |          |
        V                          V
   Tom persuaded Sally  on Monday   to  visit her sister  on Frday
```
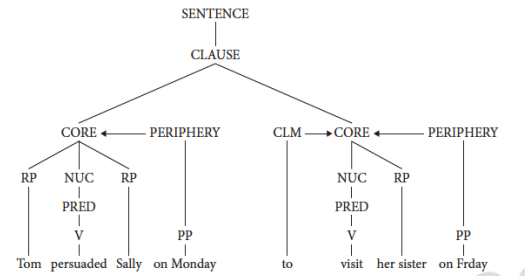
Figure 6. *Core coordinations lack the MEP (Bohnemeyer & Van Valin 2017: 159)*

▸ Bohnemeyer & Van Valin support this analysis with evidence from

▸ English infinitival complement constructions

▸ Ewe serial verb constructions

▸ Japanese converb constructions

▸ bonus: a possible explanation for the pervasive occurrence of control in core cosubordinations

▸ via the Referential Uniqueness Constraint

```
                    SENTENCE
                       |
                     CLAUSE
                       |
                      CORE
                   /        \
             CORE       CLM → CORE
            /    \             |
          RP    NUC           NUC
           |     |             |
                PRED          PRED
                 |             |
                 V             V
        Sally   tried    to   walk
          |       |             |
      PSA:NOM  ACTIVE:      ACTIVE:
                 3sg           inf

      Actor
```
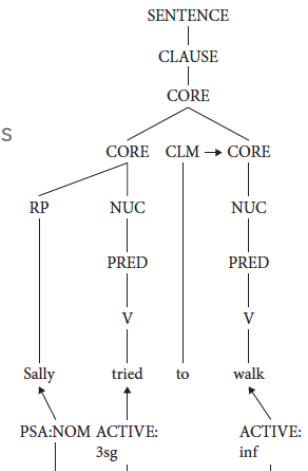
Figure 7. *Obligatory control in core cosubordinations (Bohnemeyer & Van Valin 2017: 191)*

$$\textbf{do}' \text{ (Sally}_i, \quad [\textbf{try}' \text{ (Sally}_i, [\textbf{do}' \text{ (y}_i, [\textbf{walk}' \text{ (y}_i)])])]$$

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THE COGNITIVE MOTIVATION BEHIND THE MACRO-EVENT PROPERTY

▸ as we were working on the later stages
of Bohnemeyer & Van Valin (2017)

  ▸ Van drew my attention to the patterns outlined below

▸ at this point, I had become so used to fending off all attempts
at tying the MEP to conceptual "macro-events"

  ▸ that I had lost track of the question what kinds of events
  actually get described by macro-event expressions

▸ therefore, I think it appropriate
to name the following hypothesis in Van's honor

Van Valin's Conjecture: For a conceptual event representation to be expressible by a macro-event construction, the event representation must have a certain mereological structure: in particular, its subevents must be contiguous or overlapping.

▸ the MEP and the **Interclausal Relations Hierarchy** (IRH)

Nuclear-juncture causatives; e.g., resultatives; French *faire* causative

Causative [1]
Phase
Manner
Motion
Position
Means
Psych-action

Closest:
facets of a single event or action

+ MEP

Core-juncture causatives; e.g., English periphrastic causative with *force*

Purposive
Jussive
Causative [2]
Direct perception
Indirect perception
Propositional attitude
Cognition
Indirect discourse
Direct discourse
Circumstances
Reason
Conditional
Concessive
Simultaneous actions
Sequential actions
Situation–situation: unspecified

Loosest:
distinct events or actions

− MEP

Figure 8. *The Interclausal Relations Hierarchy (Van Valin 2005: 208) and the MEP*

▸ MEP candidate events; Type A

  ▸ matrix refers to a subevent of the complement event
  or vice versa

(4.1) a. *Sally began to compose her 3rd symphony*
     b. *On Tuesday, Sally began to compose a symphony #on Friday*
     c. *On Tuesday, Sally began to compose a symphony* ??*within a week*
       Weird: the onset of the composition event
          fell within a weeklong interval starting Tuesday?
       Out: S. started the composition event on Tuesday
         and completed it within a week

‣ MEP candidate events; Type A (cont.)

   ‣ a twist: the Means construction (Bellingham ms.)

(4.2) *Floyd broke the internet on Tuesday*
       by posting a picture of his cat on Monday

   ‣ the Means construction specifies the cause of the breaking event in (4.2), which is encoded by *break* itself

   ‣ however, this overlap is arguably not part of the construction meaning

(4.3) *Sally won the lottery by buying all the tickets*

(4.4) *Floyd got lost by following his navigation app*

‣ MEP candidate events; Type B

   ‣ matrix and complement events overlap or are necessarily contiguous

(4.5) a. *Floyd sang himself hoarse*
     b. #*On Monday, Floyd sang himself hoarse on Tuesday*
(4.6) a. *Sally made Floyd switch his voter registration*
     b. #*On Monday, Sally made Floyd switch his voter registration on Tuesday*
     c. *On Monday, Sally caused Floyd to switch his voter registration on Tuesday*

(4.7) $[\![\text{make}_{\text{CAUS}}]\!] = \lambda e_1.\lambda e_2.\lambda x.\lambda y.\lambda P.\text{AGENT}(e_1)(x) \wedge \text{PATIENT}(e_1)(y)$
$\wedge \text{AGENT}(e_2)(y) \wedge P(e_2) \wedge \text{CAUSE}(e_2)(e_1) \wedge \tau(e_2) \subseteq \tau(e_1)$

‣ MEP candidate events; Type C

   ‣ psych action I: realization dependence - agent (fails to) effect(s) realization of the complement action

(4.8) *On Monday, Floyd tried to sell his car #on Tuesday*

(4.9) *On Monday, Floyd managed to sell his car #on Tuesday*

(4.10) *On Monday, Floyd failed to sell his car #on Tuesday*

(4.11) $[\![\text{try}]\!] = \lambda e_1.\lambda e_2.\lambda x.\lambda P.\text{AGENT}(e_1)(x) \wedge \text{OUTCOME}(e_2)(e_1) \wedge P(e_2)$
   ‣ the semantics of OUTCOME would have to be such that it entails
      ‣ (i) intensionality of $P(e_2)$ and (ii) contiguity b/w e_1, e_2

‣ MEP candidate events; Type C (cont.)

   ‣ psych action II: realization independence - agent (?) entertains merely a representation of the realization

(4.12) *On Monday, Sally decided to sell her car on Tuesday*

(4.13) *On Monday, Sally wanted to sell her car on Tuesday*

(4.14) *On Monday, Sally planned to sell her car on Tuesday*

   ‣ psych action in the sense of Van Valin (2005) does not appear to be a homogenous class vis-à-vis the MEP

‣ what about non-MEP interclausal relations?

Events involving representations of other events

Relations b/w propositions or speech acts

Causative [1]
Phase
Manner
Motion
Position
Means
Psych-action
Purposive
Jussive
Causative [2]
Direct perception
Indirect perception
Propositional attitude
Cognition
Indirect discourse
Direct discourse
Circumstances
Reason
Conditional
Concessive
Simultaneous actions
Sequential actions
Situation–situation: unspecified

Closest:
facets of a single event or action

+ MEP

– MEP

Loosest:
distinct events or actions

Figure 9. *The Interclausal Relations Hierarchy (Van Valin 2005: 208) and the MEP*

‣ at the edge of the MEP:
events containing representations of other events

Table 4.1. *Whole lotta representation goin' on*

Example	Complement represents	Matrix represents	Realization dependence?	Realization dependence *on chicken event*?
Sally drew a picture of the chicken crossing the road	Picture	Drawing event	Yes (on the picture)	No
Sally said "The chicken crossed the road"	Utterance	Speech act	Yes	No
Sally said that the chicken had crossed the road	Utterance-content hybrid		Yes	No
Sally thought "The chicken crossed the road"	Internal speech	Thought event	Yes	No
Sally thought that the chicken had crossed the road	Proposition		Yes	No
Sally saw the chicken cross(ing) the road	Event	Perception event	Yes?	No?
Sally saw that the chicken had crossed the road	Proposition	Inference	Yes	No? (But realization is presupposed

‣ at the edge of the MEP:
events containing representations of other events (cont.)

(4.15)   *Sally saw the magician saw Floyd in half*

(4.16) a. *On Tuesday, Sally saw
the magician saw Floyd in half* ?*on Monday*

b. *On Tuesday, Sally saw
the magician saw Floyd in half on Monday on TV*

‣ ('direct') event perception constructions give the appearance of having the MEP

 ‣ however the perception does not actually entail realization of the stimulus event

 ‣ and the perception is necessarily temporally coextensive, not with the perceived event itself, but merely with its percept

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MACRO-EVENT SYNTHESIS

‣ if Van Valin's Conjecture is correct

  ‣ the interclausal relation plays a greater role in determining whether a given event description has the MEP

    ‣ than Bohnemeyer et al (2007, 2010) assumed

‣ the question then arises

  ‣ whether the MEP can be derived purely from the semantics of the interclausal relation alone

    ‣ or whether the MEP is a construction meaning that is motivated by the interclausal relation

      ‣ but does not follow from it alone

(5.1)a. No MEP construction; distinct time adverbials fine
Floyd left Nijmegen at 11:00am. He passed through Moers at noon and reached Düsseldorf at 12:30pm.

b. MEP construction; distinct time adverbials anomalous
#Floyd went from Nijmegen at 11:00am to Düsseldorf at 12:30pm via Moers at noon.

c. MEP construction; acceptable: single adverbial denoting interval that encompasses all subevents
On Wednesday, Floyd went from Nijmegen to Düsseldorf via Moers.

‣ in (5.1b), the time adverbials can be argued to be incompatible with the path PPs since these have the wrong semantic type

  ‣ time adverbials combine only with eventive expressions

(5.2) a. *On Tuesday, Sally began to compose a symphony.*
  She completed it within a week
  b. *On Tuesday, Sally began to compose a symphony ??within a week*

  ‣ it "makes sense" that combining the time frame adverbial with the phase verb leads to strange, unintended interpretations

    ‣ but why does the adverbial not attach to the complement?
    ‣ semantics alone cannot explain this, as shown below

(5.2) b'. *compose a symphony:*
  $\lambda e.\exists y.\lambda x.$compose'$(e)$ & agent'$(e)(x)$ & theme'$(e)(y)$ & symphony'(y)
  compose a symphony within a week:
  $\lambda e.\exists y.\lambda x.$compose'$(e)$ & agent'$(e)(x)$ & theme'$(e)(y)$ & symphony'(y)
    & duration'$(e) \leq 1$ week
  begin to compose a symphony within a week:
  $\lambda e_1.\lambda e_2.\exists y.\lambda x.$onset'$(e_1)(e_2)$ & compose'(e_2) & agent'$(e_2)(x)$ & theme'$(e_2)(y)$
    & symphony'(y) & duration'$(e_2) \leq 1$ week

(5.2) a. *On Tuesday, Sally began to compose a symphony.*
  She completed it within a week
  b. *On Tuesday, Sally began to compose a symphony ??within a week*

‣ the semantic incompatibility of the time frame adverbial in (5.2b) must be related to the syntactic structure of the sentence

‣ RRG postulates that cosubordination involves fusion of the matrix and complement cores

  ‣ resulting in a single superordinate core with a single periphery - so all modifiers are shared

Figure 10. *Syntactic analysis and semantic anomaly of (5.2b)*

‣ interim conclusion

  ‣ it does seem that the macro-event property
    is a construction meaning

    ‣ that is motived by the interclausal relation
      but is not compositionally derivable from it alone

‣ the semantic effect of the Macro-event property
  can also be viewed as a cognitive operation

  ‣ Talmy (2000: Vol. I: Chapter 1) proposes a typology of the
    processes used by natural language grammars

    ‣ to guide the hearer's attention
      to the states of affairs under discussion

Factors governing the distribution of attention over a referent scene

Strength of attention   Pattern of attention   Mapping of attention
                                                             (profiling as in Frame Semantic

Salience Foregrounding/   Focus   Window   Level
          Backgrounding

Figure 11. *Talmy's (2000: Vol. I:*
76-77) typology of attention direction   Synthesis   Exemplarity   Baseline   Particularity
mechanisms and the MEP

‣ Talmy (p. c.): the Macro-event property
  operates on the synthesis level

  ‣ synthesis operations involve the *bounding* or *portion*
    excerpting of an entity or entities

  ‣ two 'levels of synthesis': **componential** and **Gestalt**

(5.3)   Gestalt   Componential
        a. *a cluster*   *of*   *trees*
        b. *a drop/puddle*   *of*   *water*

  ‣ the Macro-event property imposes
    a particular temporal Gestalt on the referent scene

‣ it is characteristic of Gestalt synthesis that it changes
  affordances/privileges for predication and modification

(5.4) a. *That cluster of trees is small*
      b. *The trees in that cluster are small*
(5.5) a. *The bricks in the pyramid came crushing together*
         / #in upon itself
      b. *The pyramid of bricks came crushing in upon itself*
         / #together (Talmy 2000: Vol. 1: 78)

(5.6) a. *The cluster of trees had a diameter of 100m*
      b. *The trees had a diameter of 100m*

‣ **macro-event synthesis** has two effects
  on temporal modifiers

    ‣ it blocks subevent modifiers

    ‣ it enables macro-event modifiers

(5.7)a. *Floyd left Nijmegen at 11:00am. He passed through*
    Moers at noon and reached Düsseldorf at 12:30pm
    b. *#Floyd went from Nijmegen at 11:00am*
     to Düsseldorf at 12:30pm via Moers at noon.
(5.8)a. *In 90 minutes, Floyd left Nijmegen. He passed through*
    Moers and reached Düsseldorf
    b. *In 90 minutes, Floyd went from Nijmegen to Düsseldorf*
    via Moers [(5.8a) and (5.8b) are not synonymous]
    c. *Floyd left Nijmegen. He passed through Moers and reached*
    Düsseldorf in 90 minutes [underspecified]

‣ a working definition

Macro-event synthesis is a cognitive process by which subevent representations are merged into an overarching temporal Gestalt in such a fashion as to make the Gestalt - the macro-event - accessible to temporal modification while rendering the subevents inaccessible to temporal modification.

‣ macro-event synthesis is a process that allows compact holistic/global reference to a scene

‣ by barring the application of this process to interclausal relations that should allow subevent modification

    ‣ languages grammaticalize the distinction

      ‣ between temporally dependent and temporally independent interclausal relations (Noonan 1985)

        ‣ e.g., it is in the "nature" of mental representations that they are temporally independent

          ‣ from their content

(5.9) *On Monday, Sally planned to sell her car on Tuesday*

SYNOPSIS

‣ Cold open: the typology of motion macro-event descriptions

‣ The syntax of macro-event descriptions

‣ Aside: motion in Role & Reference Grammar

‣ The cognitive motivation behind the Macro-event property

‣ Macro-event synthesis

‣ Back to motion

‣ Summary

BACK TO MOTION

▸ at a low level, the typology of motion integration boils down to crosslinguistic differences

  ▸ in how much path information can be incorporated in a single macro-event expression

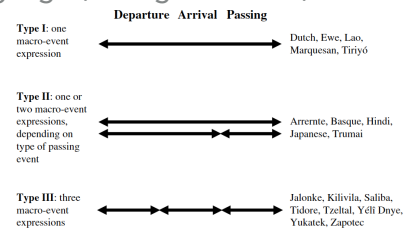   ▸ which in many languages, though not in all, means in a single clause

	Departure	Arrival	Passing	
Type I: one macro-event expression				Dutch, Ewe, Lao, Marquesan, Tiriyó
Type II: one or two macro-event expressions, depending on type of passing event				Arrernte, Basque, Hindi, Japanese, Trumai
Type III: three macro-event expressions				Jalonke, Kilivila, Saliba, Tidore, Tzeltal, Yélî Dnye, Yukatek, Zapotec

Figure 1. *The three segmentation types* (Bohnemeyer et al. 2007: 517)

▸ at a higher level, the typology is evidence of crosslinguistic differences in the scope of the application

  ▸ of the operation of macro-event synthesis

▸ Bohnemeyer et al (2010) extend this to causal chains

  ▸ in a small study comparing speakers of Ewe, Japanese, Lao, and Yucatec

    ▸ Japanese speakers emerged as differing from the speakers of the other languages

      ▸ in that they dispreferred the use of single macro-event descriptions for causal chains

        ▸ whose causers are not prototypical agents

▸ what remains very much an open question is

  ▸ whether these linguistic differences are accompanied by any difference in nonverbal cognition

    ▸ to my knowledge, this has not been empirically tested

SYNOPSIS

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SUMMARY

▸ the macro-event property is a property of construction
   that blocks temporal modifiers from accessing subevents

▸ it was first postulated in Bohnemeyer et al. (2007)

   ▸ in a bid to operationalize the typology of constructions
      that represent a scene as a "single event"

▸ in the motion domain, the ability to integrate atomic location
   change events into molecular multi-ground motion events

   ▸ correlates with two typological properties:

      ▸ the extent to which path information is expressed
         outside the verb root

      ▸ the availability of serialization constructions

         ▸ that combine multiple location change VPs
            into a single motion macro-event description

▸ syntactically, macro-event constructions consist,
   in Role & Reference Grammar terms,

   ▸ either of a single verbal core

   ▸ or of two or more cores joined in cosubordinate nexus

▸ cosubordination involves the fusion of daughter cores
   into a single mother core

   ▸ in such a fashion
      that operator projects and peripheries are shared

   ▸ this can be seen as the syntactic mechanism
      that blocks access of modifiers and operators to subevents

▸ only certain types of interclausal relations are eligible
   for macro-event encoding

   ▸ these are interclausal relations that necessarily involve
      overlapping or contiguous subevents

- cognitively, the macro-event property
  is the result of a bounding operation
  - that imposes a temporal Gestalt on a scene
  - it is an operation that falls under the Synthesis level
    - of Talmy's (2000) typology of attention distribution
      mechanisms in grammar

- the macro-event property is a construction meaning
  - that cannot generally be compositionally derived
    from the meanings of the constituents alone
    - although semantic anomaly as the result of a type
      mismatch can account for the simplest cases
  - it can be viewed as the grammaticalization
    - of the distinction between time-dependent and time-
      independent interclausal relations

- it remains an open question
  - whether the linguistic distinction between macro-event
    expressions and non-macro-event expressions
    - correlates with differences in non-verbal cognition
  - in particular, do speakers of languages that lack macro-
    event expressions for a given type of scene/scenario
    - conceptualize and mentally process this type of scene
      as more loosely integrated
      - compared to speakers of languages that afford
        frequent macro-event encoding of that scene type?

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THANKS!