Objects with unergatives

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1 Introduction

"Unergative verbs" are those that typically appear only with an external argument, and that typically name an activity. "Unergative verbs" sometimes appear with objects:

(1)   a. John <u>sang</u> **himself** hoarse.   "Resultative" (e.g. Kratzer, 2005)
      b. Mary <u>waltzed</u> **John** around the room.   To be discussed

(1a) is a canonical example of a "resultative" (e.g. Kratzer 2005). (1a)-(1b) have been argued to have the same syntactic structure (Folli and Harley, 2006; Ramchand, 2008). (1b) is the focus of this talk.

Analysis of (1a) in particular has implicated different perspectives on the division of labor between lexical information and syntax in the derivation of argument structure (e.g. Ramchand, 2008; Marantz, 2013).

P1 Verbs are privileged: Verbs have selectional properties, or project structure, that determine their distribution and the distribution of NP arguments.

P2 Structure is privileged: Verbs and the NP arguments they appear with are interpreted in relation to the structural context in which they occur.

What does variation in the phrasal syntax of (1a)-(1b) add to P1 vs. P2?

Q1 The object: How are the objects in (1) licensed and interpreted?

Q2 The verb: How do properties of verbs or roots relate to particular structures? (cp. Irwin (*This workshop*), Haselbach (*This workshop*))

(1b) points to frameworks that adopt P2.

2 The analysis: Event modification vs. entity modification

Framework in which syntax builds a limited set of structures that are interpreted regular semantic ways (Ramchand, 2008, a.m.o.).

Unergative configurations are those in which VoiceP has a filled specifier, and v does not have a complement. The root usually names an activity.

(2)   Unergative configuration: *Mary sang/waltzed* (Tense projections not shown)

VoiceP
NP
Mary
Voice'
Voice
vP
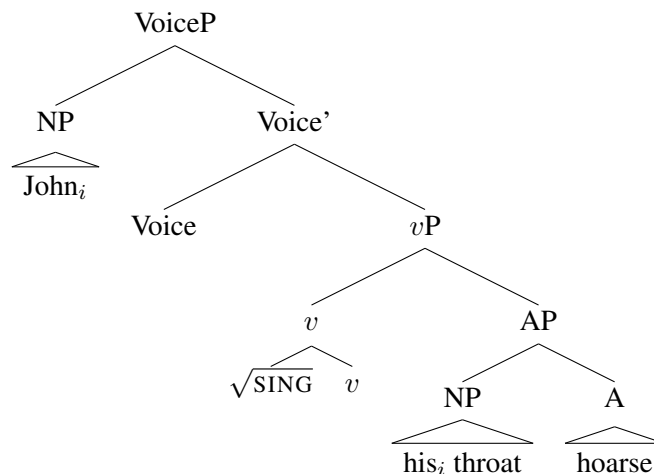$\sqrt{\text{WALTZ}}/\sqrt{\text{SING}}$ v
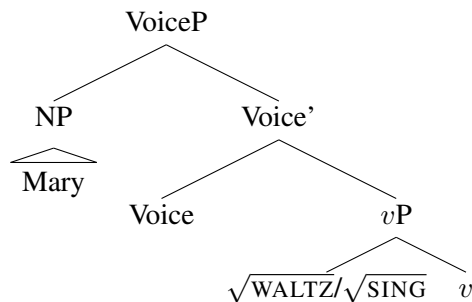
The syntactic structure, and the roots that appear in them, are interpreted at the interfaces Marantz (2013).

2.1 Proposal: Two structures

The sentences in (1a-b) vary with respect to the merge position of (i) the object, and (ii) the non-verbal XP, in relation to (2).
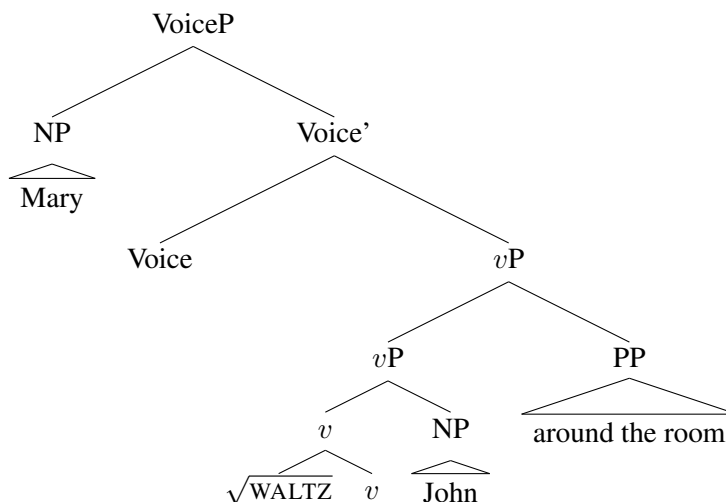
(1a) has Structure 1. XP is vP internal. XP describes a property of the internal argument NP.

(3)   **Structure 1, Participant modification:** *John sang his throat hoarse.*

```
                         VoiceP
                        /      \
                      NP        Voice'
                      /          /    \
                  John_i     Voice      vP
                                       /    \
                                      v      AP
                                     /  \    /  \
                              √SING   v  NP    A
                                       his_i throat  hoarse
```

(1b) has Structure 2. XP is a vP adjunct. XP modifies vP.

(4)   **Structure 2, Event (vP) modification:** *Mary waltzed John around the room.*

```
                      VoiceP
                     /      \
                   NP        Voice'
                   /          /    \
                 Mary     Voice      vP
                                    /    \
                                  vP       PP
                                 /  \    around the room
                                v    NP
                               / \   John
                         √WALTZ  v
```

2.2   *The interpretation of the two structures*

Structure 1 has the structure of a secondary resultative predicate.[1] The structure is interpreted as describing an event of change, where the object is holder of the state resulting from that change (see especially Ramchand, 2008)

XP in structure 1 may be of categories besides AP. Where PP modifies NP, it describes the trajectory of the internal argument NP (which holds Talmy's 'Figure' relation (Talmy, 1985; Svenonius, 2003); cf. Irwin (*This workshop*))

(5)   Mary pushed *the ball* into a drawer.   *The ball is in the drawer*

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[1] So Structure 1 could involve a complex predicate. The point will be that both NP and XP merge in a sisterhood relation to v.

In Structure 2, the NP object bears no direct syntactic or semantic relation to the eventuality denoted by PP.

The vP adjunct PP is interpreted as a predicate of an event, describing the trajectory or route over which the event described by the whole vP takes place.

Cf. a related proposal about the nature of locative PP modifiers (Maienborn, 2001):

(6) a. Eva signed the contract *in Argentina*.
An event (*signed the contract*) occupies a spatial region that is part of Argentina

   b. Mary tickled John *along his arm*.
Along his arm describes the whole event *(Mary) tickled John*

(7) a. Eva signed the contract *on the last page*.   Internal locative
   b. *In Argentina*, Eva is still very popular.   Topicalized locative

2.3 Syntactic evidence for vP adjunction

The Participant Modifier in Structure 1 (i.e. the secondary predicate resultative XP) is internal to vP (Simpson, 1983; Levin and Hovav, 1995).

In structure 2, V and NP form a constituent that excludes the adjunct PP[2]

(8) *do-so*

   a. *Mary broke the chocolate into pieces, and John did so into chips.

   b. Mary waltzed John around the ballroom, and Sarah did so around the garden.

(9) *Though-movement*

   a. *Break the chocolate though Mary did into pieces (in the kitchen), ...

   b. Waltz John though Mary did around the ballroom, ...

(10) *V-fronting*

   a. *Mary thought she would break the chocolate into pieces - and break the chocolate she did into pieces.

   b. Mary thought she would waltz John around the ballroom - and waltz him she did around the ballroom.

(11) *PP clefting* (Based on Ettlinger (2008))

   a. ??It was into pieces that Mary broke the chocolate.

   b. It was out of the ballroom that Mary danced John.

(12) *Relative order of adverbs*[3] (Based on Williams 2005)

   a. Mary (quickly) broke the chocolate (*quickly/ *last night) into pieces.

   b. Mary waltzed John daintily/for hours around the room.

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[2]See Appendix for data against a role for PP semantics, the approach pursued in related work Ettlinger (2008); Matushansky et al. (2012) (This work investigates a slightly different/ non-unergative data set).

[3]Some speakers seem to prefer a contrastive interpretation for the adverb with *waltz*. Contrast does not improve a post-VP adverb in the resultative: *John broke the chocolate quickly into pieces, and not into chunks.*

2.4 Evidence from event interpretation: Events of change

Manner event accessibility: With Participant Modification (Structure 1), it is not possible to isolate the event described by the primary/manner predicate with an event modifier - only the complex event of change:[4]

(13)   a. Al (quickly) pounded the cutlet flat (slowly).
           = Pounding-flat happens quickly or slowly
           *Al made the cutlet flat slowly by pounding it quickly

                                                                (Williams (2005), *pace* Kratzer (2005))

       b. Al (quickly) broke Mary out of prison (slowly).
           = break-out-of-jail happens quickly or slowly, but not both

Manner modification is possible with Event Modification (Structure 2),[5] e.g. the hopping is rapid but progress is slow:[6]

(14)   a. The teacher rapidly hopped the kindergarteners slowly across the bridge.
       b. The coach swam the students dangerously across the churning river.

"Temporal simultaneity": An (apparent) restriction is temporal identity between the event of motion and its Path (Folli and Harley, 2006); (cf. Rappaport Hovav and Levin, 2001): a state described by a resultative secondary predicate need not occur temporally simultaneously with the event described by the primary predicate:

(15)   On Tuesday, John sang his throat hoarse.
       Intended: where the hoarseness only took effect on Wednesday

In contrast, it is argued that in directed motion structures, no part of the motion event (i.e. waltzing) can be temporally distinguished or separated from the Path (i.e. around-the-room) of that event

(16)   Last night Mary waltzed John around the room,
       ???*Intended: Where Mary and John didn't make it around the room until dawn.*

Temporal simultaneity of the PP event with the vP event is consistent with the PP being an adjoined predicate modifier of vP.

Summary

- The strings in (1a)-(1b) are syntactically ambiguous between a Participant Modification structure and an Event Modification structure.

- There are two transitive configurations (= structures where v has a complement) that roots like $\sqrt{\text{SING}}$ and $\sqrt{\text{DANCE}}$ can appear in

- The interaction between vP, NP, and PP in Structures 1 vs. 2 depends on the integration of PP in the clausal spine (supporting architectures in which argument/event structure interpretation is read off syntax)

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[4](13a) is only non-contradictory if the slow event of pounding flat begins quickly, so that quickly is inceptive. Under this reading, both adverbs describe the event of causation, and not their manner (Williams, 2005).

[5]An unexpected property is that it seems that with 'accompanied action', the adverb naturally only modifies one of the participant's manner: e.g. Mary waltzed John merrily around the room.

[6]*Pace* Williams (2005: 152), who seems to suggest that the adverb can appear in this intermediary position in motion structures, but that the adverb must still describe the entire complex event, in the same way as in resultatives. This may be conflating temporal simultaneity with event (in)isolability (see below).

3   Evidence for the transitive, and against "resultative accounts"

(17)   The previous account: *Mary waltzed John around the room* (Folli and Harley, 2006)
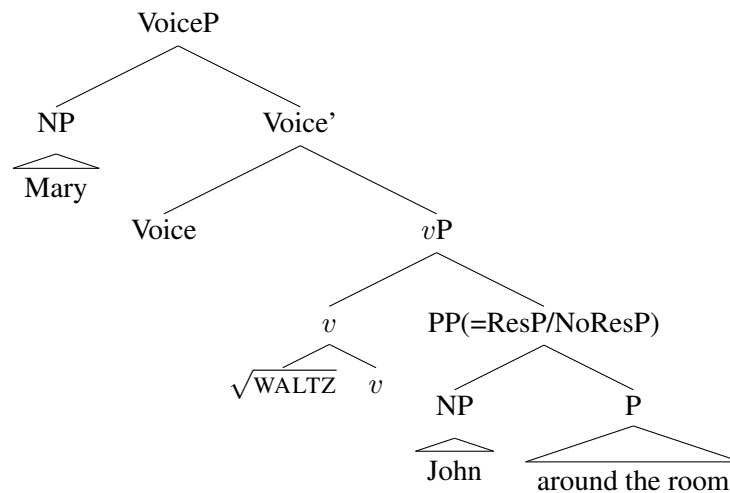
3.1   'Unselected objects' appear in transitive structures without a PP

(18)   *Conventionalisations/ world knowledge*   (cp. Ramchand 2008: 117)

    a.   The jockey jumped the horse.

    b.   The general marched the soldiers.

(19)   *Nominalizations*

    a.   the marching of soldiers to their tents (by the colonel)

    b.   the dancing of ballerinas across the stage by the assistant director

    c.   *the singing of his throat hoarse by John

(20)   *Passives*

    a.   The soldiers were marched back to their tents before nightfall by the general.

    b.   Mary was waltzed around the room by John.

    c.   *His throat was sung hoarse by John.

(21)   *Intensifying, frequency adverbial modifiers; negation*

    a.   Coach swam the team intensely today.

    b.   The choreographer diligently pirouetted the ballerinas at the last rehearsal.

    c.   The coach vaulted and cartwheeled the gymnasts for hours.

    d.   Coach decided not to row the new novices until next week.

    e.   Coach swims the first team more often than the second team.

(22)   John sang his throat hoarse.

    a.   *John did not sing his throat.

    b.   *John sings his throat intensely/often/regularly.

    c.   *John sang his throat more than Mary sang hers.

The relevant modifiers have interpretations linked to telicity and affectedness. One possibility is that these aid the contextual interpretation of the objects as undergoers. But the XP should not structurally license a syntactic argument.

Whatever the correct account, the data supports an analysis where *waltz* appears in transitive configurations; and does not depend on an eventuality-denoting PP introducing the object NP.

3.2   Not causatives

The clauses do not exhibit syntactic or semantic properties associated with (linguistically encoded) causal relations or causer NPs.

(23)   *Natural force causer NP subjects*

   a.   *The wind marched the soldiers to their tents.
   b.   *The tornado walked Mary along the river all afternoon.

(24)   *Natural force causer NP subjects*   (Folli and Harley, 2004)

   a.   The wind dried the clothes.
   b.   The sun melted the ice.

Properties of the NP arguments (Inanimate objects; authoritative subjects, based on world knowledge) contextually condition the 'Causer' (or accompanied action) interpretations.

(25)   a.   The boy jumped the action figure across the table.
       b.   John waltzed the puppet across the stage.   (Based on Folli and Harley 2006: 125)

(26)   a.   The choreographer/??The elephant waltzed the ballerinas.
       b.   The jockey/??The panda jumped the horse.

(27)   a.   The elephant dried the clothes.
       b.   The panda melted the ice.

The structures are atelic, and do not describe a result state Goldberg and Jackendoff (2004); Folli and Harley (2006); Beavers (2012):

(28)   a.   John sang himself hoarse ?? for hours.
       b.   Mary waltzed John around the room for hours.

4   Object interpretation

The "unselected" objects of manner-of-motion unergative verbs are interpreted as agentive. Two interpretations: *Accompanied motion* and *Caused motion* (Cruse, 1973). Most intuitive argument interpretations:

(29)   a.   John$_{Agent}$ waltzed Matilda$_{Agent}$ around the room.   (Folli and Harley, 2006)
       b.   The coach$_{Causer}$ jogged the students$_{Agent}$ around the yard.

This is not a property of all "unselected" objects of unergative verbs that appear with a PP (i.e. it cannot be lexically specified of the PP), nor of all motion verbs (Folli and Harley, 2006): [7]

(30) a. The critics$_{Agent}$ laughed the actors$_{Theme}$ off stage.
      b. Mary$_{Agent}$ rolled the ball$_{Theme}$ down the hill.
      c. The wise men$_{Theme}$ followed the star$_{Theme}$ to Bethlehem.

What are 'Agents'/'Themes' (or thematic relations generally)? (Van Valin and Wilkins, 1996; Kratzer, 2003)

A. Objectively defined (collections of) semantic properties associated with participant roles (Dowty, 1991)

B. Abstract, semantic participant roles that play a part in syntax/semantics (DeLancey, 1991)

4.1 Is the object really an Agent?

Apparently agentive NP objects cannot be modified by Agent-modifying adverbs:

(31) with-*PP Instrument ('by means of')

      a. Mary$_A$ waltzed John$_B$ around the room with careful instructions$_{A/*B}$.
      b. The jockey$_A$ jumped the toy horse$_B$ around the room with the remote control$_{A/*B}$.

(32) *Manner adverb modification*

      a. Mary$_A$ waltzed John$_B$ patiently$_{A/*B}$ around the room.
      b. The jockey$_A$ jumped the horse$_B$ around the room carefully$_{A/*B}$.

(33) *Control of Reason/Rationale Clause PRO*

      a. Mary$_A$ waltzed John$_B$ around the room [PRO$_{A/*B}$ to please the teacher]
      b. The jockey$_A$ jumped the horse$_B$ around the room [PRO$_{A/*B}$ in order to impress the bystanders]

(34) *Compare the "Theme subject" of follow*

      a. The wise men$_A$ followed the star$_B$ to Bethlehem with a sextant.
      b. Wisely/ deliberately, the men$_A$ followed the star$_B$ to Bethlehem.
      c. The wise men$_A$ followed the star$_B$ to Bethlehem [PRO$_{A/*B}$ in order to meet the shepherds]

4.2 Themehood

The animate, volitional, sentient, NP object of *waltz* can be targeted by diagnostics of Themehood.

(35) *What happened?*

      a. What happened to John was Mary waltzed him around the room.
      b. What happened to the horse was the jockey jumped her into a ditch.

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[7]Properties of the NP matter: Inanimate NP objects are not interpreted as agentive:

(1) a. Mary danced the spaghetti into the pot.
     b. Mary waltzed the stilton around the room.

(36)   *Entailment of a change (not necessarily of location)*

  a. Mary waltzed John around the room, ?? but he didn't move.

  b. The jockey jumped the horse into a ditch, ?? but its leg hit the fence and it didn't make it.

(37)   Non-Attained Result sense of *almost*

  a. Mary almost waltzed John around the whole room.

  b. The jockey almost jumped the horse into a ditch.

(38)   Coincidence of a resulting state of the object with a specified time in the *have*-perfect

  a. Mary had waltzed John around the room at 2pm.

  b. The jockey had jumped the horse into a ditch at 2pm.

"Theme subjects" do not pass diagnostics of Themehood.

(39)   a. The wise men followed the star to Bethlehem, but they ended up in Allentown due to unexpected cloud cover.

  b. The wise men almost followed the star to Bethlehem. ($\neq$ The wise men almost reached Bethlehem)

  c. ??The wise men had followed the star to Bethlehem at 2pm.

The *waltz* object is construed as an agent, but its 'true' thematic relation (=identified by adverbial modifiers) is a 'Theme'.

4.3   More "agentive objects"

Comparative resultatives: In *Mary drank John under the table*, John has to be construed as a sentient and volitional 'agent' of drinking, at least at the time the drinking was going on.

Despite the volitional interpretation of the object, the object is not picked out by tests of Agency, but is picked out by Theme diagnostics:

(40)   a. Mary$_A$ drank John$_B$ under the table with a headstart$_{A/*B}$.

  b. Mary$_A$ drank John$_B$ under the table in a clumsy way$_{A/*B}$.

  c. Mary$_A$ drank John$_B$ under the table patiently/carefully$_{A/*B}$.

  d. Mary$_A$ drank John$_B$ under the table [PRO$_{A/*B}$ in order to impress the bystanders]

(41)   a. What happened to John was Mary drank him under the table.

  b. Mary almost drank John under the table.
   Mary did something that caused John to almost be in an end state

  c. Mary had drunk John under the table at 10pm.
   John is in an end state at 10pm

Out-prefixation, e.g. Apple outsold Microsoft last year Marantz (2009)

The object is not picked out by Agent diagnostics, but is picked out by Theme diagnostics:

(42)   a. Apple$_A$ outsold Microsoft$_B$ with a new sales strategy$_{A/*B}$.

    b. Apple$_A$ (patiently/carefully$_{A/*B}$) outsold Microsoft$_B$ (patiently/carefully$_{A/*B}$).

    c. Apple$_A$ outsold Microsoft$_B$ [PRO$_{A/*B}$ in order to attract investors]

(43)   a. What happened to Microsoft was Apple outsold them.

    b. Apple almost outsold Microsoft.
Apple sold enough so that Microsoft was almost in the state of having fewer sales than Apple

    c. Apple had outsold Microsoft at the point their board met.
Microsoft is in a state of being outsold at the point of a board meeting

Summary

- (Carefully identified) adverbial modifiers distinguish "true" thematic roles/relations (=syntactically/semantically relevant) from "pseudo" thematic roles/relations (=conceptual/ world knowledge?)

- The lexical entry of *waltz* (vs. e.g. *sing*) does not specify information relevant to the *syntactic or semantic components* that its object holds an agentive role in the event described by the verb

- "True" thematic roles/relations correspond to the structure in which the NP argument appears

- The true/pseudo distinction supports a substantive but abstract role in the grammar for thematic roles/relations (DeLancey, 1991) (*pace* Dowty, 1991)

5   Conclusions

- Q1: Objects with "unergative verbs" can be introduced in more than one syntactic configuration, and need not be syntactically/semantically introduced with PP. The formal components of grammar only recognize the semantic role held by NP arguments that corresponds to its position in syntax.

- Q2: Findings consistent with views in which roots are interpreted in the structures in which they appear, such that there is only a weak correspondence between properties of the root/verb and syntax.

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Appendix: Relating roots to structures

The data support models in which the root is interpreted in the structure in which it appears (P2), rather than frameworks in which properties of roots/ verbs restrict distribution (P1).

(44) $\sqrt{\text{SING}}$ and $\sqrt{\text{BURP}}$ appear in event modification configurations (Structure 2)

    a. The choir sang the congregation along the river.

    b. John burped Mary around the room.

(45)   *Manner-of-motion roots appear in Structure 1, e.g. the* way-*construction*

    a. John pirouetted his way to the top.

    b. Mary cartwheeled her way to stardom.

(46) $\sqrt{\text{RUN}}$ *appears in the participant modification configuration (with an idiosyncratic interpretation):*

    a. *John ran me to the store, and Mary did so to the pharmacy.

    b. *Run me though John did to the store, ...

    c. *John thought he would run me to the store - run me he did to the store.

    d. *It was to the store John ran me.

    e. *To the store John ran me.

    f. *John ran me last night to the store.

The semantics of PP is not deterministic of structure (nb. past work argues for a Path vs. property-denoting XP distinction, where Paths=adjuncts, Properties=complements (Ettlinger, 2008; Matushansky et al., 2012); or where directional items are not possible as secondary resultatives (Kratzer, 2005; Mateu, 2005; Williams, 2005, a.o.))

(47)   *Path PPs appear as V complements:* (see also the *way*-construction)

    a. The critic laughed the actor off the stage.

    b. Mary took the ball from John.

(48)   *Property PPs appear as vP adjuncts:*

    a. John darkened his hair to a stunning shade of black.   (Based on Embick 2004: 382 (62))

    b. Mary brought the story to its gruelling end.

(49)   a. John darkened his hair to black, and Bill did so to chestnut brown.   (ibid. (63))

    b. Darken his hair though John did to a stunning shade of black, ... etc.

Leaving analysis to future work, the *darken* XP seems to describe an 'extent' for the eventuality described by vP.