'About' attitudes

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Indirect reports

Verbs that embed clauses: "think", "dream", "ask", "wonder", "say", "tell", "discover", "order", ...

(1) Alfonso thinks that Joanna is a spy.

(2) Alfonso told me that Joanna is a spy.

(3) Alfonso fears that Joanna is a spy.

What is the right linguistic/semantic theory of indirect reports, clause-embedding predicates, & embedded clauses?

Indirect reports

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1. Sketch / tutorial on the general problem of embedded clauses from a linguistic point of view. (Isaacs & Rawlins, 2008; Rawlins, 2008a; Frana & Rawlins, 2011; Rawlins, 2013b,a, 2014)

2. Focused case study centered around English 'about'. (Rawlins, 2013a, 2014)

Indirect reports

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Theory of indirect reports: capture human judgments about (at least):

- Truth/falsity in context.

Most of the relevant judgments are 'easy' and can be accessed introspectively.

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    (4)   Kyle wondered whether he was a language expert. (True)

    (5)   Kyle wondered whether he was a linguist. (False)

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- Inferences.

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(4)   * Kyle thought whether he was a language expert.

(5)   Kyle thought about whether he was a language expert.

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(4)   Kyle was wondering whether he is a language expert.
       ∴ Kyle didn't know whether he is a language expert.
       ∴ if Kyle is a language expert, he didn't know that he is a language expert.

Indirect reports

> What is the right linguistic theory of indirect reports, clause-embedding predicates, & embedded clauses?

Theory of indirect reports: capture human judgments about (at least):

- Truth/falsity in context.
- Inferences.
- Felicity/appropriateness in context.

Most of the relevant judgments are 'easy' and can be accessed introspectively.

Indirect reports

> What is the right linguistic theory of indirect reports, clause-embedding predicates, & embedded clauses?

Theory of clause-embedding predicates:

- What does their lexical representation look like? (Part of today's case study.)
- How do they interact compositionally in their syntactic context? (Part of today's case study.)
- How does their lexical representation (+ some version of compositionality) lead to the behavior of indirect reports? (Part of today's case study.)

Indirect reports

What is the right linguistic theory of indirect reports, clause-embedding predicates, & embedded clauses?

- What is the contribution of complementizers and other related grammatical markers? (Part of today's case study.)
- What is the relationship between root and embedded clause types? (Isaacs & Rawlins, 2005, 2008; Rawlins, 2008b; Kramer & Rawlins, 2010; Rawlins, 2010, 2013b; Biezma & Rawlins, 2012)

Indirect reports

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Indirect reports

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(4)   Alfonso *thinks* that Joanna is a spy.

Prime candidate (in linguistics): standard 'textbook' relational account (sometimes associated with Hintikka 1962).

(5)   'think': V, [[___$_{DP}$]   [V   [___$_{CP,+that}$]]]

                       Holder   Content

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(6) $⟦\text{think}⟧ = \lambda p_{\langle st \rangle} . \lambda x_e . \lambda w_s . \forall w' : w' \in \text{Dox}_x(w) \rightarrow p(w')$

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(5) 'think': V, [[___DP] [V [___CP,+that]]]

Holder — Content

'think' relates an individual and a proposition:

In all of Alfonso's 'doxastic alternatives' (worlds/situations compatible with his beliefs), the proposition that Joanna is a spy is true.

The function of an embedding verb is to relate an individual and a proposition (or other abstract entity).

Indirect reports

What is the right linguistic theory of indirect reports & clause-embedding predicates?

(6) Alfonso thinks that Joanna is a spy.

A puzzle: most verbs take multiple types of clausal arguments.

(7) a. Alfonso told me that Joanna is a spy.
    b. Alfonso told me whether Joanna is a spy.
    c. Alfonso told me to find out if Joanna is a spy.

The cross-frame problem
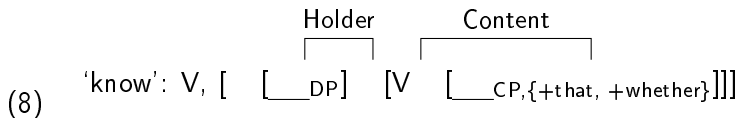
Most embedding Vs take more than one (apparent) argument type.

- E.g. out of a sample of 554 verbs, only 8(!) take only "that"-clauses. (exx "theorize", "rejoin")
- How can the relational account generalize across clause-types?

The cross-frame problem

Semantic roles alone are too coarse. (Despite intuitive generality in many cases.)

(8) 'know': V, [[___$_{DP}$]   [V   [___$_{CP,\{+that,\ +whether\}}$]]]]

      Holder   Content

(Verbnet: 'Topic'. Framenet: 'Content'. Tectogrammatical layer: dependent content clause, can receive more general role?)

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$\overbrace{\hspace{2cm}}^{\text{Holder}}$ $\overbrace{\hspace{3cm}}^{\text{Content}}$

(Verbnet: 'Topic'. Framenet: 'Content'. Tectogrammatical layer: dependent content clause, can receive more general role?)

(9) a. Kyle knows whether he is a speech expert. (True)

b. Kyle knows that he is a speech expert. (False)

The cross-frame problem

- Standard (practical / textbook) approach: polysemy (list multiple lexical entries). E.g. "know that" vs. "know whether".

- Finer grained meta-language than just roles: typically modal logic.

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(10) $[\![\alpha$ knows that $\phi]\!]$: ϕ is true and $[\![\alpha]\!]$'s belief state entails $[\![\phi]\!]$.

(11) $[\![\alpha$ knows whether $\phi]\!]$: for every possible answer p to $[\![$whether $\phi]\!]$, if p is true then $[\![\alpha]\!]$'s belief state entails p.

The cross-frame problem

Is (apparently accidental) polysemy the solution?

- Not explanatory (too fine-grained):
  - Local level: intuition that know-that and know-whether are related.
  - Global level: scarcity of verbs that take only one type of clausal argument.
  - Selectional patterns cluster (White et al., 2014).
- What is the division of labor between semantic / syntactic selection? (Grimshaw 1979 etc.)
- What is the role of complementizers and other grammatical markers?

About 'about'

Strategy in this talk

Examine these problems through the lens of "about"-PPs.

(12) Indirect reports:
Alfonso {asked / wondered / knows / thought / etc.} about
{Mary / whether Mary dances}.

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b. (Scenario: Mary has recently been arrested.)
Alfonso knows about Mary.

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          Alfonso knows about Mary.

"about Mary" tells us something about the 'content' of the knowledge, though not (semantically) what the content is exactly. ("The knowledge has something to do with Mary.")

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Examine the problem through the lens of "about"-PPs.

Further contexts:

(14)   Content nouns:
       Alfonso read a {book / article / story / etc.} about
                              {Mary / what Mary had discovered}.

(15)   Predication:
       {The question / the claim} was about
                              {Mary / why Mary left}.

About 'about'

Strategy in this talk

Examine the problem through the lens of "about"-PPs.

Results (in this talk; see also Rawlins (2013a, 2014)):

- "About"-phrases are modifiers, not arguments.
- They do not receive a Content (or similar) role.
- They characterize the 'content' of an event via event modification.

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- "About"-phrases are modifiers, not arguments.
- They do not receive a Content (or similar) role.
- They characterize the 'content' of an event via event modification.
- Re-evaluation of the relational analysis: clause-embeddeding predicates are neo-Davidsonian properties of eventualities that have 'content'. (Following Kratzer (2006); Moulton (2009); Frana & Rawlins (2011); Rawlins (2013a).)

The function of an embedding verb is to characterize an event, and the event relates an individual (Holder) and some content.

Road map

What could "about"-phrases be doing?

A case for case? A syntactician's null hypothesis.

(16)   Alfonso thought about his cat.
        (n.b. I will refer to 'his cat' etc. as DPs, which you can translate to
        NP if you prefer.)

The pure case analysis. 'About'-phrases may map onto various
semantic roles (potentially including Content).

- Preposition semantically vacuous, idiosyncratically chosen.
  ⤳ content of 'about'-phrase fills some internal argument slot
  in the verb's argument structure.

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- Preposition semantically vacuous, idiosyncratically chosen.
  ↝ content of 'about'-phrase fills some internal argument slot in the verb's argument structure.
- Pesetsky (1982): "about" case-licenses DP arguments when a verb can't.
- Larger class of such prepositions: "of", "on", "at", "into", etc.
- Cf. Ryle (1933); Putnam (1958); Goodman (1961): NL 'about' is too messy/inconsistent for a unified semantics?

A case for case?

Pesetsky (1991): Case-licensing plus (some) semantic contribution.

(17) a. John asked the time.
      b. John asked about the time. (attributes ex. to Abney)

Once again: fine-grained differences between otherwise very similar syntactic contexts. Triggered by 'about'.

Attitude Vs take concealed question DPs directly. Systematic meaning differences:

(18) a. Alfonso asked the capital of Italy.

      b. Alfonso asked about the capital of Italy.

(19) a. Alfonso knows the capital of Italy.

      b. Alfonso knows about the capital of Italy.

(20) a. Alfonso found out the price of milk.

      b. Alfonso found out about the price of milk.

Much more 'free' readings available in context with "about"+DP.

More fine-grained differences

What about "about" vs. other prepositions?

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Kirsner (1972): laundry list of semantic differences between "of" and "about", e.g.:

(21) a. # I heard of George's operation in great detail last night.

b. I heard about George's operation in great detail last night.

A case for case?

> **Preliminary conclusion**
>
> The role of "about" is not just case-licensing. Triggers fine-grained differences not captured by Content role.

What is the contribution of 'about'?

'About' phrases as standard arguments in disguise

The reductionist analysis. "About" has a meaning; reduces the composition of "about" phrase to a known argument slot.

(22)   John told me about who had the winning number. (Boër, 1978)

(23)   John told me that Mary had the winning number.

- E.g. derive a that-clause meaning (proposition) or interrogative clause meaning for "about" phrases.
- Boër: 'about' converts a question to a proposition, semantic type of both arguments the same.
- Coercion to a 'normalized' representation for Content role. Allow Content-type role to generalize to both cases.

The modifier approach

"About" phrases aren't arguments at all, but rather modify an attitude predicate.

- Extremely hard to fit into the relational account. Similar situation to Davidson:

  (24)   John buttered the toast slowly.

- Would push us towards an event semantics for attitude verbs.

The extra argument approach

General possibility: "about" phrases fill an argument slot distinct from the Content role.

- What could this slot be? Effectively, distinct semantic role.
- Kirsner (1972): "about"-PP provides a 'topic'.
  - Framenet: annotate these as Topic, distinct from Content.
  - N.b. not same thing as Verbnet 'Topic', which is broader and includes both cases.

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  - Framenet: annotate these as Topic, distinct from Content.
  - N.b. not same thing as Verbnet 'Topic', which is broader and includes both cases.
- What is the relationship between Topic and Content? (Roles capture difference, but make no predictions about character of difference / similarities.)

Inferring Content from Topic

(25)   (Scenario: Joanna has just quit her job in a very public way.)
Co-worker (speaking to other co-worker): I heard about Joanna.
∴ I heard that Joanna quit. (etc.)

If there are two roles, they are not independent, and need a fine-grained theory of how they relate!

'About'-PPs as *res* arguments

Moulton (2009): "about" provides a *res* argument for a *de re* attitude (Quine 1956; Lewis 1979; Cresswell & von Stechow 1982; Chierchia 1989 a.o.)

'About'-PPs as *res* arguments

Moulton (2009): "about" provides a *res* argument for a *de re* attitude (Quine 1956; Lewis 1979; Cresswell & von Stechow 1982; Chierchia 1989 a.o.)

- Basic idea: beliefs (etc.) are relative to an individual, the *res*, possibly under some 'guise'. Even for declarative complements, there is something sort of like predication. "About"-phrases provide the *res* directly.

- Can be construed as fine-grained interpretation of 'Topic' role.

- Existence of this slot a linguistic prediction of this variety of semantics?

Missing woman unwittingly joins search party looking for herself 🔲

(26)   The woman believed that she was lost.

- False under a *de se* reading (in this scenario).
- True under a reading where the woman believes that a woman, who happens to correspond to her (unbeknownst to her), is missing.
- belief(P)(res)(x)(w): x believes of *res* under some guise that *res* holds property P.
- (Acquaintance relations, etc...)

Res arguments? (Moulton, 2009)

Res arguments account is not obviously wrong.

Some questions that arise:

- What is the *res* argument of e.g. a book?
- Why do interrogatives show up in this position? (Moulton deals only with DP arguments.)
- What is the relationship between *res* argument and content? (Moulton: *res* argument does not tell you about content.)
- What explains the predicative use?
- Multiple *res*?

  (27)   The email was about Mary, but it was also about John's rudeness.

- End result: proposal can be construed of as an implementation of 'res arguments'?

Road map

Fact 1: Optionality

Claim: "about" phrases are always optional (in contexts where they can occur).

Methodological issue: how to assess claims like this on a large scale? Used Davies (2008-) to develop a large-scale (for linguistics) data set.

The verbal data set

- Search for V+about. Filter irrelevant & duplicate results (search results are unstemmed, etc.). Merge with several other verb lists (most notably, Hacquard & Wellwood (2012)).
- Total sample of 654 frames involving 554 unique verbs.

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- Total sample of 654 frames involving 554 unique verbs.
- Code for selectional properties. (Single speaker, introspective. Future work: multiple annotators, crowdsource judgments via MTurk.)
- Annotate for uncertainty. (Largely exclude these cases from discussion…)
- More on this data set shortly.

Optionality in the data set

In this data set, exactly 1 verb requires "about": "bandy about".

- Clearly idiomatic.
- Further potential cases: "see about" has a sense that can't be obviously derived from "see", may be other idiomatic cases.
- Surprising on any sort of argument account.

Fact 2: productivity

How productive is "about"? Examine the distributional properties of "about"-phrases.

Verbs
Content nouns
Predication

Indirect reports

"About" PPs combine with a wide range of verbs (and other embedding predicates). Some (non-exhaustive) examples:

(28) a. John { dreamed / figured out / fretted / panicked / realized / thought / understood / etc. } about Mary.

<div align="right">Mental state</div>

b. John { asked / babbled / bitched / chimed in / contacted me / hinted / gossiped / joked / lied / published / responded / talked / etc.} about Mary.

<div align="right">Communication</div>

c. John { hesitated / read / researched / smiled / etc. } about Mary.

<div align="right">Other</div>

Productivity in verbal contexts

Assessing productivity in the data set:

- 170 verbs that take bare "about" phrases (35%).
- In sample, comparable to "to"-infinitivals (30%), "for-to" infinitivals (39%), and gerundives (40%).

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- Profile does not match that of more plausible case markers: "of" 8%, "on" 15%, "over" 13%. Much higher levels of annotation uncertainty for these.
- What about the other 384? Return shortly. (These numbers general set aside cases where the judgments are uncertain.)

"About" phrase combine with content nouns

Sample of 456 content nouns via Davies (2008-). Representative classes:

(29) a. John read a { book / article / story / blurb / letter / etc. } about Mary.   Media artifact

 b. John heard a { rumor / story / anecdote / tale / lie / etc. } about Mary.   Communication

 c. John brought up a(n) { question / issue / inquiry / opinion / problem } about Mary.   Abstract entity/communication

 d. John knows a { conclusion / fact / thing / misconception / prediction / principle / etc. } about Mary.   Abstract entity

 e. John's {ambivalence / anxiety / complex / despair / frustration / honesty / insight / naivete / sadness / etc. } about Mary surprised everyone.   Mental state

Content nouns

Working definition

A content noun characterizes some (potentially abstract) thing that has 'content'.

Content nouns

> **Working definition**
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> A content noun characterizes some (potentially abstract) thing that has 'content'.

- Term from Moltmann (1989) (see also Vendler (1972); Ginzburg (1995a,b); Moltmann (2003, 2008, 2013); Uegaki (2012) a.o.).
- Oft-discussed examples: fact, question, claim, belief.
- 'Belief' (roughly) characterizes a mental state that has propositional content.
- Combination with content nouns is extremely productive.

Predication

"About" phrases can be used predicatively:

(30)   The book is about Rasputin.

(31)   The question is about how Rasputin died.

(32)   The present debate in Syria is about whether the U.S. should carry out a military air strike on Syria.

(33)   This presentation is about whether the white painted island is a barrier not to be legally crossed, not if the idea of buffered bike lanes is good or bad.

Generalization: subject NPs are headed by *content nouns* (sometimes called 'container' nouns). (Vendler 1972 etc.)

Predication

Null hypothesis for predication

"About"-PPs are or can be coerced to some property type $\langle ?, t \rangle$, where '?' is the type of the subject.

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Side note (Kratzer, 2006; Moulton, 2009): cf. Chomsky (1970); Higgins (1973)

(34)   The excuse was that John had left. (Chomsky)

(35)   The second claim is that selection is a subcase of subcategorization. (Grimshaw)

However:

(36)   *The book was that/how Rasputin died.

Fact 3: over-productivity

Claim: the distribution of "about" phrases in verbal contexts cross-cuts other selectional restrictions.

- Coercion account: expect correlations from (some) frame to distribution of 'about'.
- Focus (for now) on the 170 verbs that take bare "about"-PPs.

Over-productivity

Selection of (any) finite clauses, "that" clauses, interrogatives, bare DPs in Vs that take 'about':

Grp.	Count (+marginal)	Examples	finite reports?	int.s?	DPs?
1:	71 (+2)	ask, find out, tell, know	✓	✓	✓
2:	20 (+4)	inquire, notify X, wonder	✓	✓	x
2b:	4 (+2)	curse, moan, preach	✓	x	✓
3:	62 (+6)	argue, joke, persuade, think	✓	x	x
4:	31 (+3)	lie, talk, meet	x	x	x

Over-productivity

Question

How does the base verb's selectional behavior line up with "about"?

Answer: it is completely cross-cut by distribution of "about"-PPs.

- Strike against any sort of case account.
- Strike against a reductionist account.
- Consistent with "about"-PPs as modifiers.

The coercion account

Consequence of over-productivity: distribution of "about"-PPs cross-cuts any particular potential 'more basic' argument.

- E.g. verbs like "inquire" run up against verbs like "argue":

(37) a. John inquired about Mary.

  b. * John inquired that Mary had left.

  c. John inquired whether Mary had left.

(38) a. John argued about Mary.

  b. John argued that Mary should leave.

  c. * John argued whether Mary should leave.

There is no single argument type that 'about'-phrases can be reduced to; they are too general.

An apparent puzzle for productivity claim

(39)   a.   Alfonso thought about Joanna.

         b. * Alfonso believed about Joanna.

(40)   a.   Alfonso talked about Joanna.

         b. * Alfonso discussed about Joanna.

(41)   a.   Alfonso asked about Joanna.

         b. * Alfonso questioned about Joanna.

What to do with these pairs?

(42)   "about" PP + finite clause

    a. Alfonso believed about Joanna that she was clever.

    b. Alfonso discussed about Joanna that she was clever.

    c. Alfonso questioned about Joanna whether she was clever.

(Argument for Moulton's 2009 res-argument account?)

An apparent puzzle, pt. 2

Can internal argument be interrogative in these cases? Yes, but weight restrictions interfere. Test by extracting argument. (Cf. scope-marking constructions.)

(43) Extraction, embedded DP

    a. What did Alfonso believe about Joanna?

    b. What did Alfonso discuss about Joanna?

    c. What did Alfonso question about Joanna?

(44) Extraction, embedded interrogative

    a. What did Alfonso believe about why Joanna left?

    b. What did Alfonso discuss about why Joanna left?

    c. What did Alfonso question about why Joanna left?

(45) a. Everything that Alfonso believed about Joanna surprised me.

    b. ?? Everything about Joanna that Alfonso believed surprised me.

An apparent puzzle resolved

A large class of verbs takes "about" PPs only in combination with a clause. Why?

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- Generalization: dependent on whether V has intransitive frame in similar sense. (Paul Portner, p.c.)

  (46)   John thought (for a while).

  (47)   * John believed.

An apparent puzzle resolved

A large class of verbs takes "about" PPs only in combination with a clause. Why?

- Generalization: dependent on whether V has intransitive frame in similar sense. (Paul Portner, p.c.)

  (46)   John thought (for a while).

  (47)   * John believed.

- To assess, coded full sample of verbs for whether they take intransitive frame. Discard cases of annotator uncertainty.

- Chi square: highly significant ($p < 0.001$)

	intrans. use	no intrans. use	sums
allows just about-PP	202	8	210
allows about-PP only with clause	24	276	300
sums	226	284	510

Fact 3b: independence of frame

The licensing of "about" in combination or not with clausal arguments derives from independent selectional restrictions of a verb.

- One step beyond optionality (fact 1).
- Extremely hard to explain on any sort of argument account.
- Expected on a modifier account.

Return to productivity in verbal contexts

- 170 verbs take bare "about" phrases. 228 take it only in combination with a clause.

- 77 remaining frames that do not allow "about" at all. (Eliminating cases that couldn't take it in principle...e.g. subject position)

Productivity

"about" is extremely productive in verbal contexts (the vast majority of embedding verbs), and shows up optionally in any available frames.

Summary

Fact 1: "about" phrases are always optional.

Fact 2: "about" phrases are productive and cross-categorial.

Fact 2b: The internal argument is consistent across external contexts.

Fact 3: The distribution of "about" phrases cross-cuts other selectional restrictions. (Over-productivity)

Fact 3b: Co-occurrence with a clausal argument is entirely predicted by whether the predicate itself allows or requires a clausal argument.

'About' PPs as modifiers

Generalizing the facts

"About"-phrases are highly productive / regular.

⤳ compositional, non-idiosyncratic analysis.

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"About"-phrases are independent of base verb's selectional behavior.

⤳ modifier account, not an argument account.

⤳ a very general account that applies to many, many verbs.

Reminder: Textbook analysis

thinker   content

(48)   'think': V, [[___$_{DP}$]   [V   [___$_{CP,+that}$]]]

(49) $[\![\text{think}]\!] = \lambda p_{\langle st \rangle} . \lambda x_e . \lambda w_s . \forall w' : w' \in \text{Dox}_x(w) \rightarrow p(w')$

'Think' relates a Holder and a Content proposition. How to reconcile this with a modifier account?

(50)   (Scenario: Mary has recently been arrested.)
       Alfonso knows about Mary.

"about Mary" tells us something about the 'content' of the knowledge, though not (semantically) what the content is exactly. ("The knowledge has something to do with Mary.")

How to reconcile this with a modifier account?

The neo-Davidsonian approach

Davidson and followers: verbs serve to characterize events/states.

- Events are things that 'happen'. States are things that 'hold'. Cover term: eventuality. (Or situation.)
- Relational content is cast in terms of who or what participates in an event, and how. (Thematic roles, more fine-grained information.)
- Good account of modifiers: provide further, optional information about an event/state.

The neo-Davidsonian approach to attitudes

- Hacquard (2006, 2010): eventualities can have 'content'.

(51)   John said that it rained.

- Such eventualities have a dual life. Event is a communication event, content is what was said.

The neo-Davidsonian approach to attitudes

- Hacquard (2006, 2010): eventualities can have 'content'.

(51)   John said that it rained.

- Such eventualities have a dual life. Event is a communication event, content is what was said.
- Indirect report: characterizes an event with content, & constraints on that content.
- Content arguments (clauses): directly characterize content.
- 'About'-modifiers: indirectly characterize the content.
- Need to generalize beyond eventualities – books, rumours, facts, etc. (Moulton, 2009)

See also Kratzer (1998, 2006); Moulton (2009); Anand & Hacquard (2009); Hacquard (2010); Anand & Hacquard (2013), as well as Moltmann (1989, 2003, 2013) for a somewhat different take.

Aboutness

Conclusion: a modifier account.

- 'About' PPs are distinct from Content arguments.
- 'About' doesn't signal a semantic role per se, but rather signals a modifier of eventualities/things with 'content'.
- Provides information about the 'content' of an event, even though it isn't itself a Content argument.
- Narrows down possibilities for that content, but doesn't fully determine it.

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The role of a clause-embedding verb is to characterize an event with content.

- Multiple ways to fine-grained specification of event properties: A Content argument characterizes content, as does an 'about'-phrase modifier.

Aboutness

How do 'about'-phrases narrow down possibilities for content? (see Rawlins (2013a, 2014))

= what is 'aboutness'? How can you infer contents (to the extent possible) from 'about'-phrases?

Aboutness

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= what is 'aboutness'? How can you infer contents (to the extent possible) from 'about'-phrases?

This is not a trivial problem. Long history of complicated attempts at it in philosophy. (Ryle 1933; Putnam 1958; Goodman 1961; Lewis 1988a,b; Yablo 2012 a.o.)

Lewis's theory of aboutness (modified)

Lewis's insight: A question Q_1 is 'about' a question Q_2 iff answering Q_1, or merely asking Q_1, helps in answering Q_2. An assertion A_1 is about Q_2 iff asserting A_1 helps in answering Q_2.

'contents' can be thought of as mixtures of potentially many questions (ways of dividing the world into distinct possibilities) and assertions (pieces of information).

- Generalize to the worst case: any content can be question-like. Verbs will place constraints on what kind of mixture particular contents are.
- Predicts (as I have argued we should) that any predicate describing a contentful thing can take an 'about'-phrase.
- Elsewhere: formalized in a possible world semantics. See Rawlins (2013a).

An example: 'talk'

Recall:

(52) * Alfonso talked that/whether he was going to the party.

(53) Alfonso talked about the party / whether he was going to the party.

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(52)   * Alfonso talked that/whether he was going to the party.

(53)   Alfonso talked about the party / whether he was going to the party.

Analysis: 'talking' events have content, but no Content argument! (Intransitive 'tell'.)

- Because "about"-phrases can apply to any event with content, they are fine.
- No prediction that all events with content must have a Content argument – exactly what we want.

An example: 'tell'

(54)   Informal semantics for 'tell': characterizes a speech event.
       At least a speaker and one hearer.
       Event's content is 'purely informative' (not question-like).

- "tell that": the embedded clause directly and completely characterizes the informative part of the content.
- "tell about": the 'about'-phrase characterizes a question that the content of the communication event is related to.
- "tell whether": Because the verb constrains the content to be only informative, the question clause has to be coerced into something that is; in this case a 'fact'. (More to say here)

Wrapping up

A further prediction

Coercion prediction

"About" should be good if the event can be coerced into bearing content.

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Coercion prediction

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Verbal examples (also type 4):

(55)   Alfonso laughed about Joanna.

(56)   Alfonso hesitated about how to answer.

A further prediction

Coercion prediction

"About" should be good if the event can be coerced into bearing content.

Verbal examples (also type 4):

(55)   Alfonso laughed about Joanna.

(56)   Alfonso hesitated about how to answer.

Nominal examples:

(57)   The last hour was about 'about'. (temporal predicates)

(58)   Alfonso's complacency/paranoia/unease/happiness about Joanna was misplaced. (emotion predicates)

(59)   Beethoven's 6th symphony is about nature. ('program music')

(60)   The Sleepy's Store just above Spring Street: that's where they had the fight about whether they should get a full- or a queen-size mattress.

Analysis summary

1. "About"-PPs are modifiers, not arguments.
2. Act as neo-Davidsonian modifiers of events with 'content'. (Diagnostic for content?)
3. Distribution is independent of Content arguments.
4. Consequence: attitude predicates must involve a uniform and very general notion of content.
5. Need for find-grained event semantics in addition to coarse-grained roles. (Binary SRL.)

The big picture

Methodological: Project would have been impossible without large-scale (by linguistics standards) data work.

- This is the kind of project where computational resources and linguistic questions can fruitfully meet. (As in the Binary-SRL project!)

Linguistic: Requires an event-based way of viewing semantics.

- Even in a case where the standard view is rigidly relational – attitude verbs.
- Evidence for a uniform and general category of events (and entities) that have content.
- Can't focus on just 'that'-clauses!

Thank you!

Extras

The remaining 77 Vs that do not take 'about'

Summary: extremely heterogeneous. Judgements also highly variable.

- Many that never take finite clauses: e.g. "ban", "finish", "offer"
- A few sub-regularities:
  - Deontic/bouletic verbs ("allow", "deem", "direct", "disallow", "endure", "forbid", "need", "pardon", "prefer", "permit", "require", "want")
  - % Semi-communication verbs ("chirp", "cluck")
  - Some (but not most) observation verbs: "estimate", "glimpse", "smell", "witness"
  - Others: "cause", "count", "resolve"

Residue from transitivity data

Case 1 (no intransitive frame, but about):

(61) a.   Alfonso cautioned/warned about taking on too
           much.
     b. * Alfonso cautioned/warned.

(62) a.   Alfonso regrets about Joanna.
     b. * Alfonso regrets.

Case 2 (intransitive possible, but no about):

(63) a.   I comprehend/gather.
     b. * I comprehend/gather about Mary.

(64) a.   John illustrated.
     b. * John illustrated about Mary.

(very high salience requirement for intransitive frame?)

Quantities of content

(65)   The book is about Rasputin.

- Intuition: it isn't sufficient that Rasputin be briefly discussed in one small part of the book. (Current prediction.)

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- Intuition: it isn't sufficient that Rasputin be briefly discussed in one small part of the book. (Current prediction.)
- Solution: recognize that "about" PPs are pseudo-gradable: modifiable by part/whole adverbs and certain others.
- Content must have a rich part structure. (Cf. Putnam (1958); Goodman (1961); Yablo (2012))

Quantities of content, cont'd

(66) The book is { obliquely / tangentially / sort of / partly / completely / entirely / all } about Rasputin / how Rasputin died.

(67) The book isn't even remotely about Rasputin.

(68) The book is more about the Romanovs than about Rasputin.

Future work: use linguistic behavior of modifiers as probe for this.

Extra meanings for "about"

I ignore the spatial sense, temporal sense, and approximative sense.

(69) Alfonso wandered about.

(70) The train is about to arrive.

(71) John served about fifty sandwiches (Zaroukian 2013 a.o.)

Closer: I also ignore two apparent topic-marking uses.

(72) About John...what are we going to say to Mary?

(73) What about John? What are we going to say to Mary?
       (Rawlins, 2010)

How far can inference to content go?

(74)   # This blackboard is about calculus.

vs.

(75)   The marathon is about breast cancer.

(76)   # Alfonso ran a marathon about breast cancer.

Italian data

Other languages so far lack "about". For example, Italian (Ilaria Frana, p.c.):

Nouns consistently use 'su':

(77) Alfonso ha letto un libro sui   gatti
      Alfonso has read a   book on.the.pl cats

'Alfonso read a book about cats'

(78) La   domanda sui   gatti ha sorpreso Joanna.
      The question on.the.pl cats has surprised Joanna.

'The question about cats surprised Joanna.'

Predication similar (though cleft-like word order preferred):

(79) Il libro era sui gatti.
      The book is on.the.pl cats.

'The book is about cats.'

Italian continued

Verbs vary:

(80) Alfonso ha pensato ai(P+thePL) gatti.
      Alfonso has thought P.the.pl cats.

      'Alfonso thought about cats.'

(81) Alfonso ha chiesto dei(P+thePL) gatti.
      Alfonso has asked P.the.PL cats.

      'Alfonso asked about cats.'

A few more...

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