**Scope and Orientation in Adverbs**

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**Background**

**Beneficent Adverbs:** class of transitive-like adverbs that encode a beneficiary role

Examples: kindly, selfishly, generously (non-manter reading), considerately

Many adverbs have interpretations that depend on attachment height (Austin, 1956; Jackendoff, 1972; Ernst, 1984, 2002; Gender, 2000, i.a). These distinctions have been attributed to:

- Event/subevent modification (Wyner, 1994)
- Scope relative to other operators (Rawlins, 2008)
- Lexical ambiguities conditioned by context (McConnell-Ginet, 1982, i.a)

Additional height-based distinction:

Beneficent adverbs encode a participant role whose value varies with height

Low-attached: participant supplied by the verb

High-attached: participant supplied by the context/discourse

**Summary of Data**

Beneficent adverb *kindly* encodes a kindness event with two participants:

- An agent that exhibits the kindness
- A beneficiary to whom the kindness is directed

(1) John invited Mary kindly.

(2) Kindly, John invited Mary.

Low: In (1) the *r*<sub>entire</sub> participants are the *r*<sub>initial</sub> participants (*Agent = John, Th/Agent = Mary*)

High: In (2) the agent is shared, but the *r*<sub>entire</sub> beneficiary can be distinct from *r*<sub>initial</sub> theme

E.g. Most guests are John’s friends and he invites Mary to keep his sister company → John’s sister is the *r*<sub>entire</sub> beneficiary

**Proposal**

Adverbs denote properties of events (cf. Parsons, 1990)

Adverbial events are in a containment relation with verbal events

Attachment height determines directionality of containment relation (cf. Wyner, 1994)

Low: Verbal event contains adverbial event

High: Adverbial event contains verbal event

Beneficent adverbs encode a beneficiary participant role, but do not introduce participants

The beneficiary roll is filled by a participant of the immediately containing event

**Directed Beneficence:**

A super-event participant occupying a non-agentive role fills the adverbial beneficiary role

In (2), Ben(*r*<sub>entire</sub>) in the verbal object, this is not necessary:

(3) Kindly, John opened the door.

(4) John opened the door kindly.

Interpretation of (4) requires either:

1. The inference that someone besides John was involved in a sub-event.
2. The personification of the door.

These inferences are two ways of filling kindly’s beneficiary role

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**Analysis**

Sentence level denotations of (1) and (2) (differences underlined):

(5) [\(\ell ]\) = \(\exists x \exists y \exists z (x \in \text{kindly} \wedge \text{Agent}(x, \text{John}) \wedge \text{Ben}(z, x) \wedge \text{invite}(x) \wedge \text{Theme}(y, \text{Mary}) \wedge \text{Agent}(x, \text{John})\)]

(6) [\(\ell \supset \)] = \(\exists x \exists y \exists z (x \in \text{kindly} \wedge \text{Agent}(x, \text{John}) \wedge \text{Ben}(z, x) \wedge \text{invite}(x) \wedge \text{Theme}(y, \text{Mary}) \wedge \text{Agent}(x, \text{John})\)]

Shared agenthood assumption: events in an (linguistic) event/subevent relation, \(\subseteq\), share an agent.

Proposal: Non-agent participant necessarily shared with low-adverbial due to the Event Merology Principle

Corollary: Lexically realized participants of a containing event will be used to satisfy participant requirements of a contained event

**Analysis strategy:** decompose adverb into invariant logical meaning + position specific component

(7) \([\text{kindly}] = \lambda x. \lambda y. \lambda z. (x \in \text{kindly} \wedge \text{Ben}(z, x) \wedge \text{invite}(x) \wedge \text{Theme}(y, \text{Mary}) \wedge \text{Agent}(x, \text{John})\)]

**Low-attached kindly**

Low operator: \([\text{low}]\) = \(\lambda x. \lambda y. \lambda z. (x \in \text{kindly} \wedge \text{Agent}(x, \text{John}) \wedge \text{Ben}(z, x) \wedge \text{invite}(x) \wedge \text{Theme}(y, \text{Mary}) \wedge \text{Agent}(x, \text{John})\)]

**High-attached kindly**

The high operator differs from the low operator in the directionality of the sub-event relation.

High operator: \([\text{high}]\) = \(\lambda x. \lambda y. \lambda z. (x \in \text{kindly} \wedge \text{Agent}(x, \text{John}) \wedge \text{Ben}(z, x) \wedge \text{invite}(x) \wedge \text{Theme}(y, \text{Mary}) \wedge \text{Agent}(x, \text{John})\)]

No prediction of inefficacy for high-adverbial adverbs

(9) Kindly, John stood up

The adverb is not limited to verbal event participants to fill its beneficiary role

It can take participants from the containing context event

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**Conclusions**

Beneficent adverbs like kindly encode a beneficiary role, the source of which varies by attachment height

Low-attached: participant supplied by verb (Event merology principle)

High-attached: participant supplied by context/discourse

Beneficiary role is filled by a non-agent participant of a containing super-event (Directed beneficence)

Other adverbs in the beneficiary class:

-kindly, generously, politely, considerately, graciously, selfishly, respectfully

Non-beneficent agent-oriented adverbs: boldly, wisely, clumsily, stupidly, cautiously

On this analysis the Ben predicate has a modal component, this is a topic of further study.

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**References**


