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Scope and Orientation in Adverbs

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Background

Beneficient Adverbs: class of transitive-like adverbs that encode a beneficiary role
Examples: kindly, selfishly, generously (non-manner reading), considerately

Many adverbs have interpretations that depend on attachment height (Austin, 1956; Jackendoff, 1972; Ernst, 1984, 2002; Geuder, 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:

Beneficient 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

Beneficient 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 e_{kind} participants are the e_{invite} participants ($Ag = John$, $Th/Ben = Mary$)

High: In (2) the agent is shared, but the e_{kind} beneficiary can be distinct from e_{invite} theme

E.g. Most guests are John's friends and he invites Mary to keep his sister company → John's sister is the e_{kind} 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

Beneficient 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), $Ben(e_{kind})$ is 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

Analysis

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

(5) $[\![(1)]\!] = \exists e_v. \exists e'_v. \underline{e' \subseteq e} \wedge kind(e') \wedge Agent(e', John) \wedge \underline{Ben(e', Mary)} \wedge invite(e) \wedge Theme(e, Mary) \wedge Agent(e, John)$

(6) $[\![(2)]\!] = \exists e_v. \exists e'_v. \underline{\exists x_e.} \, \underline{e' \supseteq e} \wedge kind(e') \wedge Agent(e', John) \wedge \underline{Ben(e', x)} \wedge invite(e) \wedge Theme(e, Mary) \wedge Agent(e, John)$

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

Proposal: Non-agent participant necessarily shared with low-attached adverbs due to the Event Mereology 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 lexical meaning + position specific component

(7) $[\![kindly]\!] = \lambda x_e. \lambda e_v. kind(e) \wedge Ben(e, x)$.
$Ben(e, x)$ decomposes into two terms, $Participant(e, x)$ and something like $[\forall w'$ s.t. $w' @ R w'$ and w' has a good outcome for x, e occurs in $w']$.

Event mereology principle: participants of a subevent are necessarily participants of a containing (super)event

Low-attached *kindly*

Low operator: $[\![low]\!] = \lambda P_{\langle e, vt \rangle}. \lambda e_v. \exists e'_v. \exists x_e. e' \subseteq e \wedge P(e', x)$

denotation when low attached: $[\![low\text{-}kindly]\!] = \lambda e_v. \exists e'_v. \exists x_e. e' \subseteq e \wedge kind(e') \wedge Ben(e', x) \wedge Participant(e, x) \wedge NonAgent(e, x)$.

The *Participant* term comes from the Event Mereology Principle.

The *NonAgent* term is contributed by the Directed Beneficence property of beneficent adjectives.

Prediction:
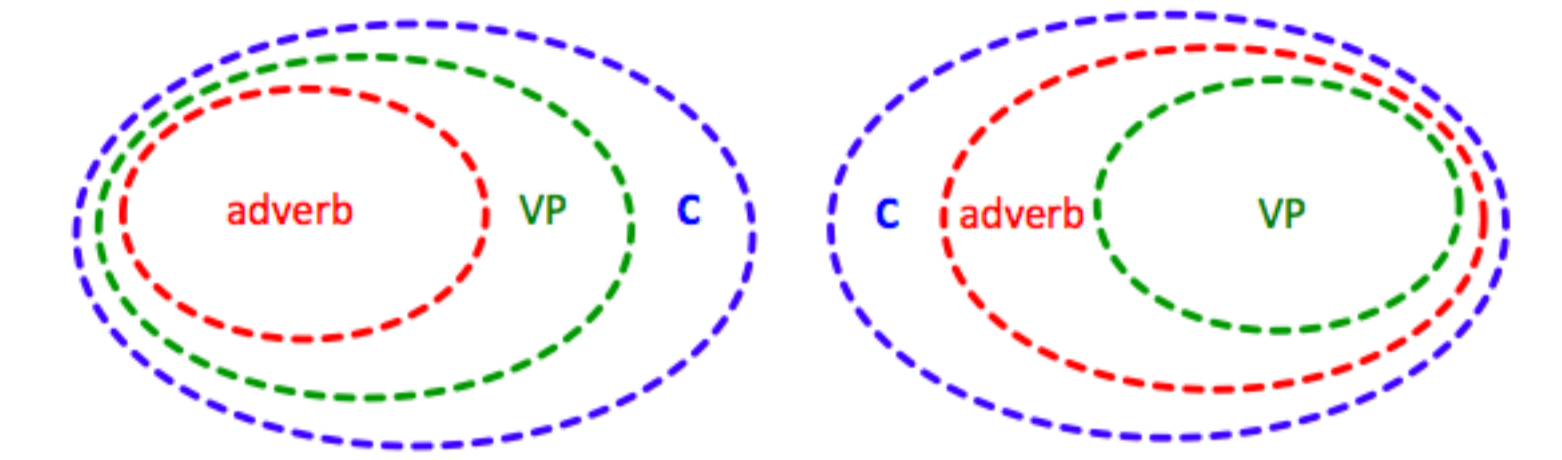Infelicity with verbs describing strictly single-participant events

(8)   #John stood up kindly.

verb and verbphrase denotations

$[\![invite]\!] = \lambda x_e. \lambda e_v. invite(e) \wedge Th(e, x)$.

$[\![invite \, Mary]\!] = \lambda e_v. invite(e) \wedge Th(e, M)$.

VP composes with high-kindly or low-kindly via event identification

High-attached *kindly*

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

High operator: $[\![high]\!] = \lambda P_{\langle e, vt \rangle}. \lambda e_v. \exists e'_v. \exists x_e. e' \supseteq e \wedge P(e', x)$.
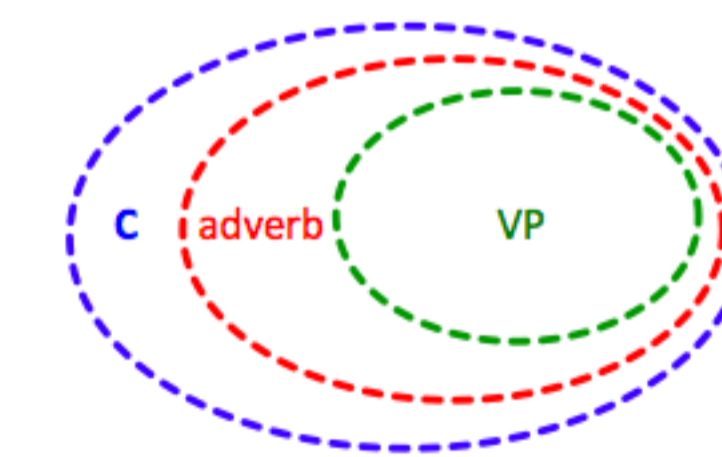
denotation when high-attached: $[\![high\text{-}kindly]\!] = \lambda e_v. \exists e'_v. \exists x_e. e' \supseteq e \wedge kind(e') \wedge Ben(e', x)$.

No prediction of infelicity for high-attached 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

Conclusions

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

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

High-attached: participant supplied by context/discourse

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

Other adverbs in the beneficent 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.
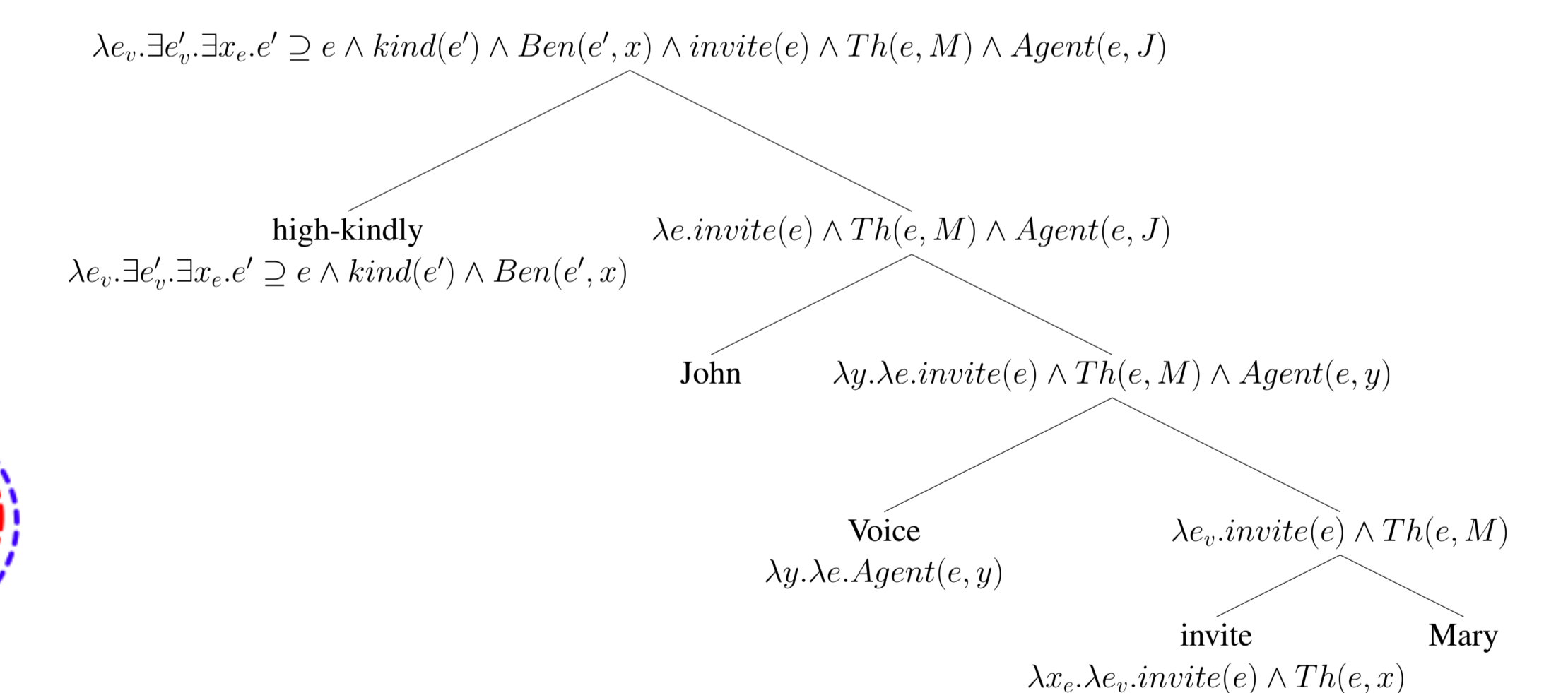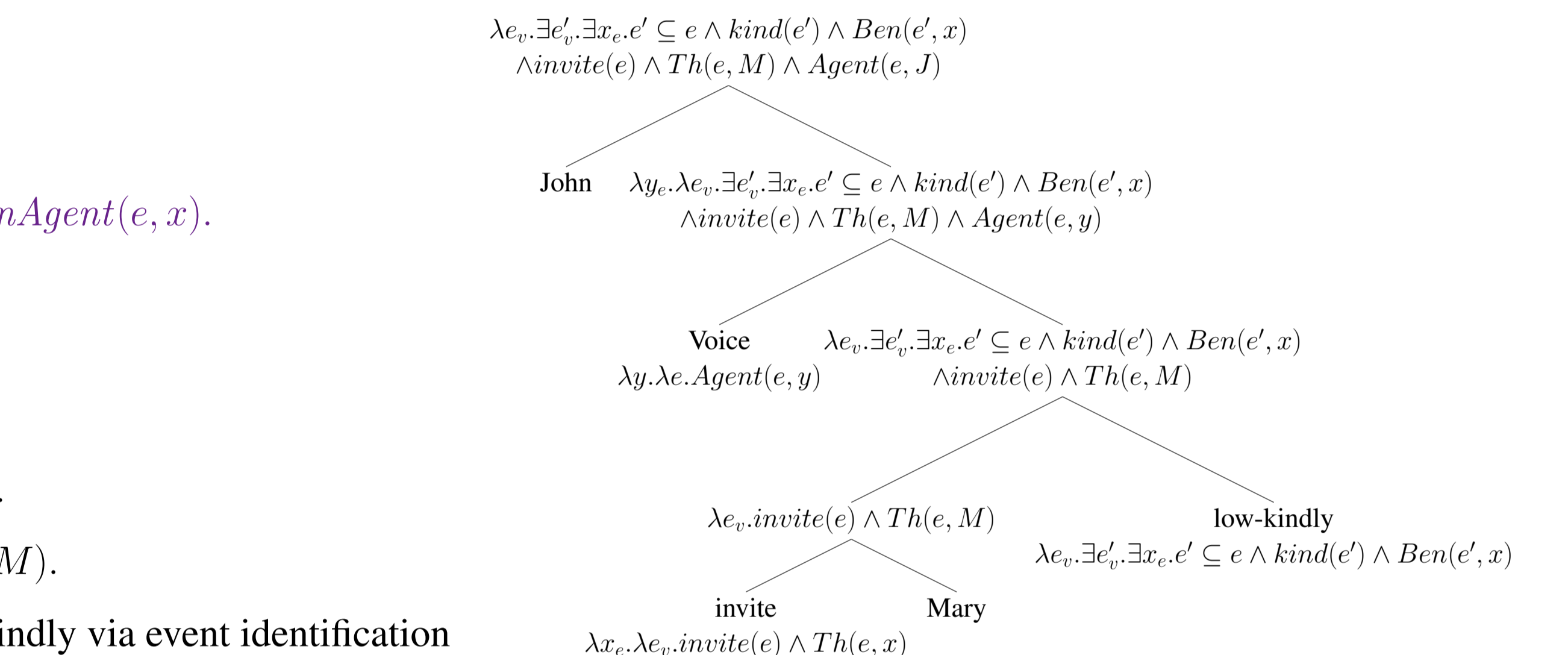
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