Ontological nature of events

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1 Sources

- Davidson: "The Logical Form of Action Sentences"
- Parsons: *Events in the Semantics of English*

2 Example

Brutus stabbed Caesar

$$\downarrow$$

$$\exists e[stabbing(e) \wedge agent(e, b) \wedge theme(e, c) \wedge culminated(e)]$$

'There is an event such that it is a stabbing, its agent is Brutus, its theme is Caesar, and the event already culminated'.

3 Problem

- Empirically convincing, mainly from the linguistic perspective,
- but it hides a technical question:
- events are treated as first order entities.

4 Traditional representation

Brutus stabbed Caesar

$\downarrow$

$P[stab(b, c)]$

'There was a stabbing of Caesar by Brutus'

5 Second order

Quantification of an event:

$$\exists X[stabbing(X) \wedge X(b, c) \wedge culminated(X)]$$

'there is a stabbing relation going from Brutus to Caesar

and it already culminated'

6 Question

- Why the first logical form, and not the latter?
- Methodological answer: for Davidson everything should be first order

7 Controversy

- Logical form of *everything runs*?
  - $\forall x[\exists e[running(e) \wedge agent(e, x)]]$
  - $\forall e[running(e) \wedge \exists x[agent(e, x)]]$?
- First formula
  - there are things that could not run (at least the runnings don't)
- Second formula
  - there are things that could not be a running (at least the runners don't)
  - universal quantification of the envents, not of individuals?!
- Anyway, both are false

8 First order approximation

$$\exists e[stabbing(e) \wedge agent(e, b) \wedge theme(e, c) \wedge culminated(e)]$$

as first order approximation of

$$\exists X[stabbing(X) \wedge X(b, c) \wedge culminated(X)]$$

8.1 Abbreviation

$$\exists e[event(e) \wedge stabbing(e) \wedge agent(e, b) \wedge theme(e, c) \wedge culminated(e)]$$

9 Back to the controversy

- *Everything runs*:
  - $\forall x[individual(x) \rightarrow \exists e[running(e) \wedge agent(e, x)]]$
  - $\forall e[event(e) \rightarrow [running(e) \wedge \exists x[agent(e, x)]]]$
- Compatible representation
- but we have no explanation for universal quantification of events yet

10 Conclusion

- Event: first or second order entity?
- How to decide: which are the formal and empirical criteria?
- As first order approximation is there any lost comparing to the linguistic expression?