

Problem Space

1

Nature of Geo-Collaboration

- spatially distributed
- interaction with geographical space

Needs for coordination

- distributed
- inter-dependent

Challenges in coordination

- high complexity
- high contingency
- spatially dependent

This Research

Overall framework

- dependency based
- coordination by awareness
- event driven

Q1: Spatial dependencies

- types
- implications
- lifecycle

Q2: Event notification

- strategies
- comparison

Q3: Event interpretation

- cognitive process
- visual aids

Design & Development

- dependency model
- event notification
- visualization

Knowledge Space

2

Theories

- coordination and dependencies
- awareness
- spatial behavior

Models

- activity models
- dependency models
- spatial models

Methods

- awareness mechanisms
- event processing
- geo-visualization techniques

Methodologies

- knowledge acquisition
- scenario-based design
- design evaluation methods

Theories and models

- spatial dependencies

Methods

- dependency-based event notification
- visual support for event interpretation

Overall objective
Motivate

Existing knowledge
Ground

Application

Contribute

New knowledge
Contribute

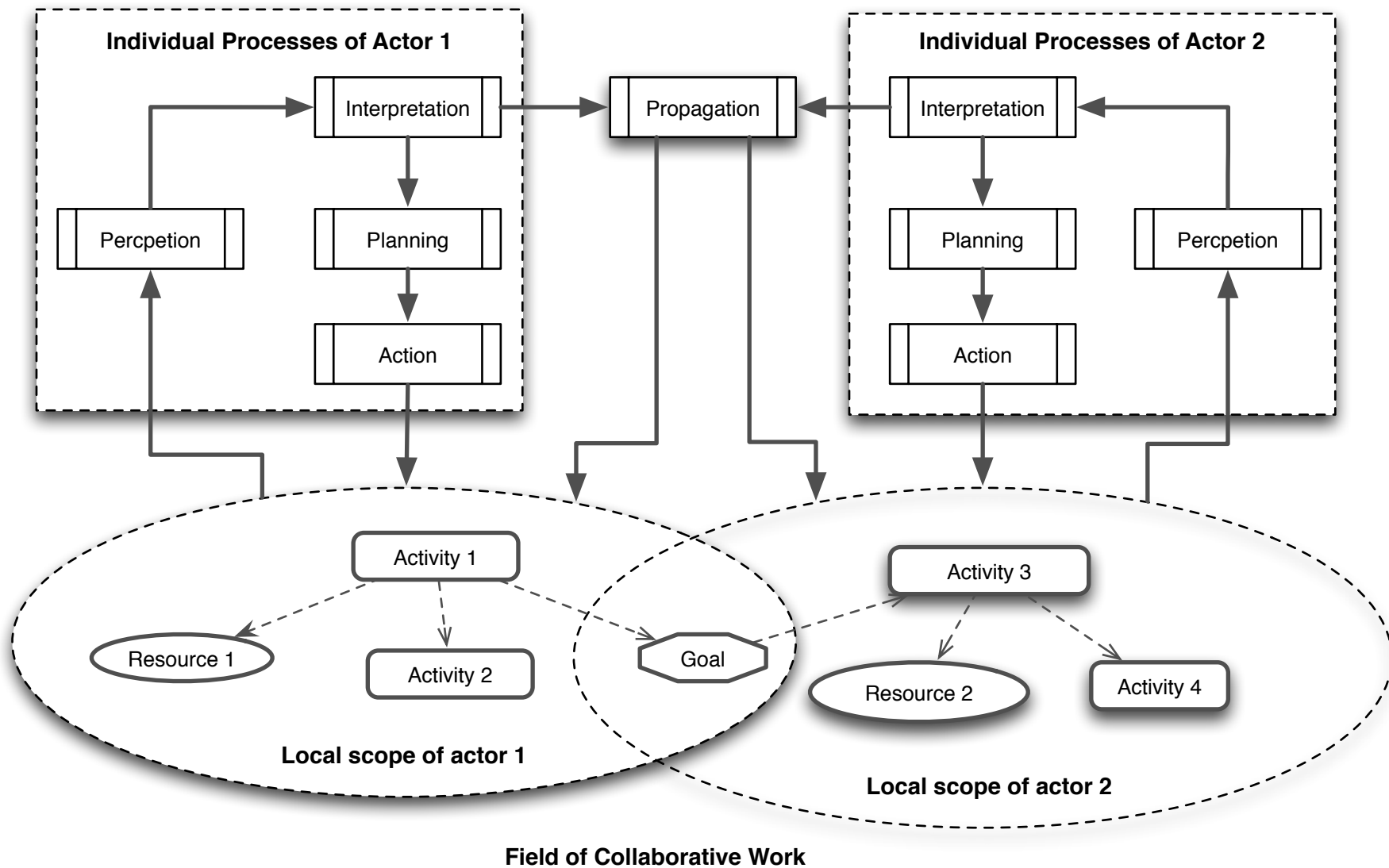
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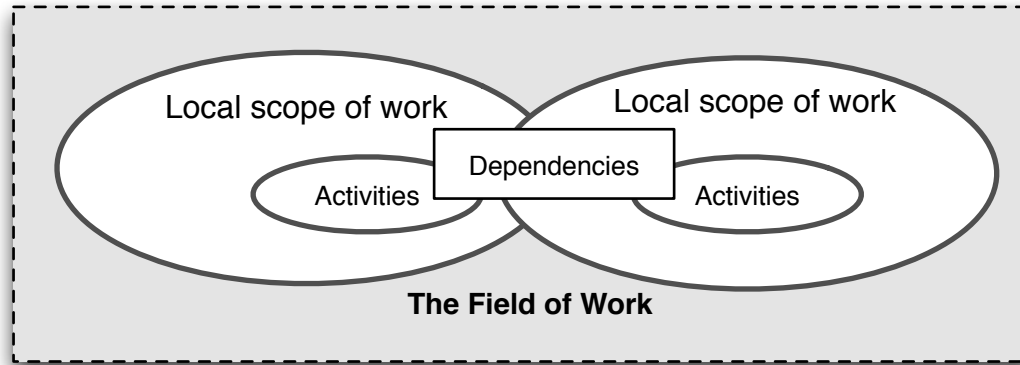
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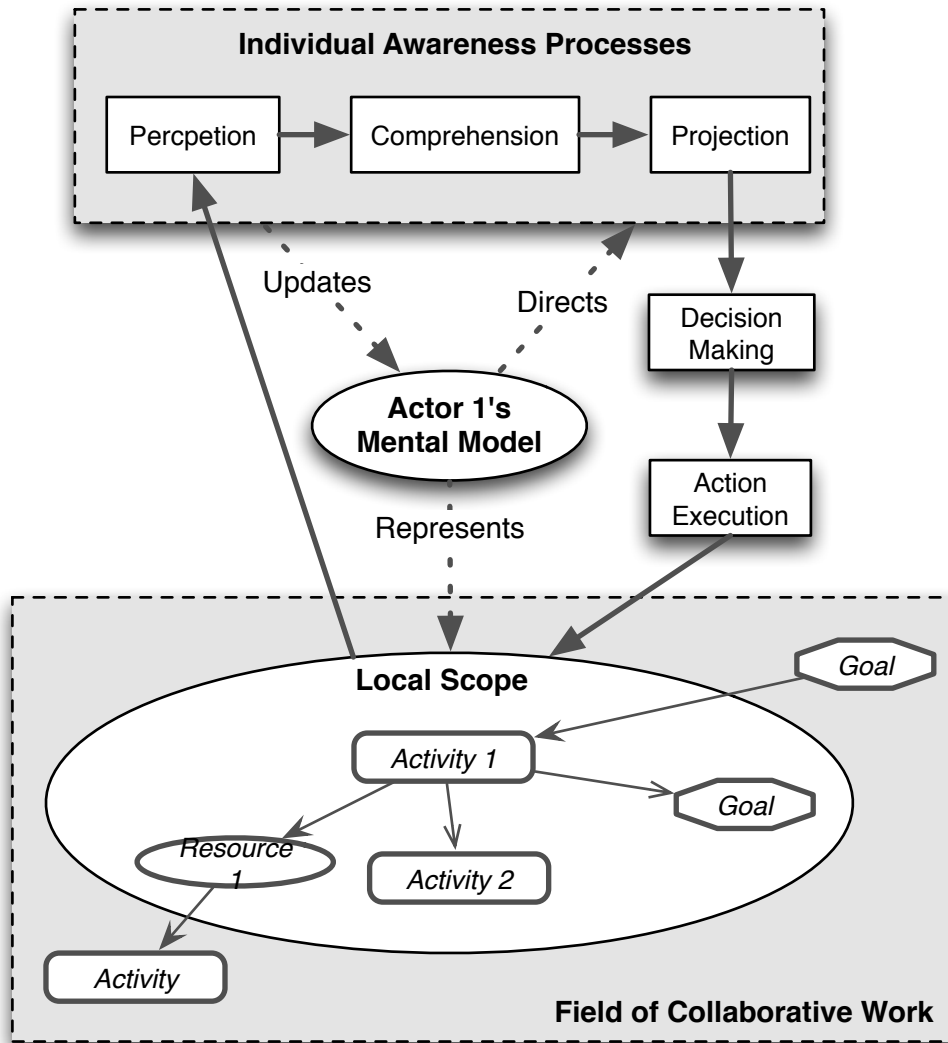
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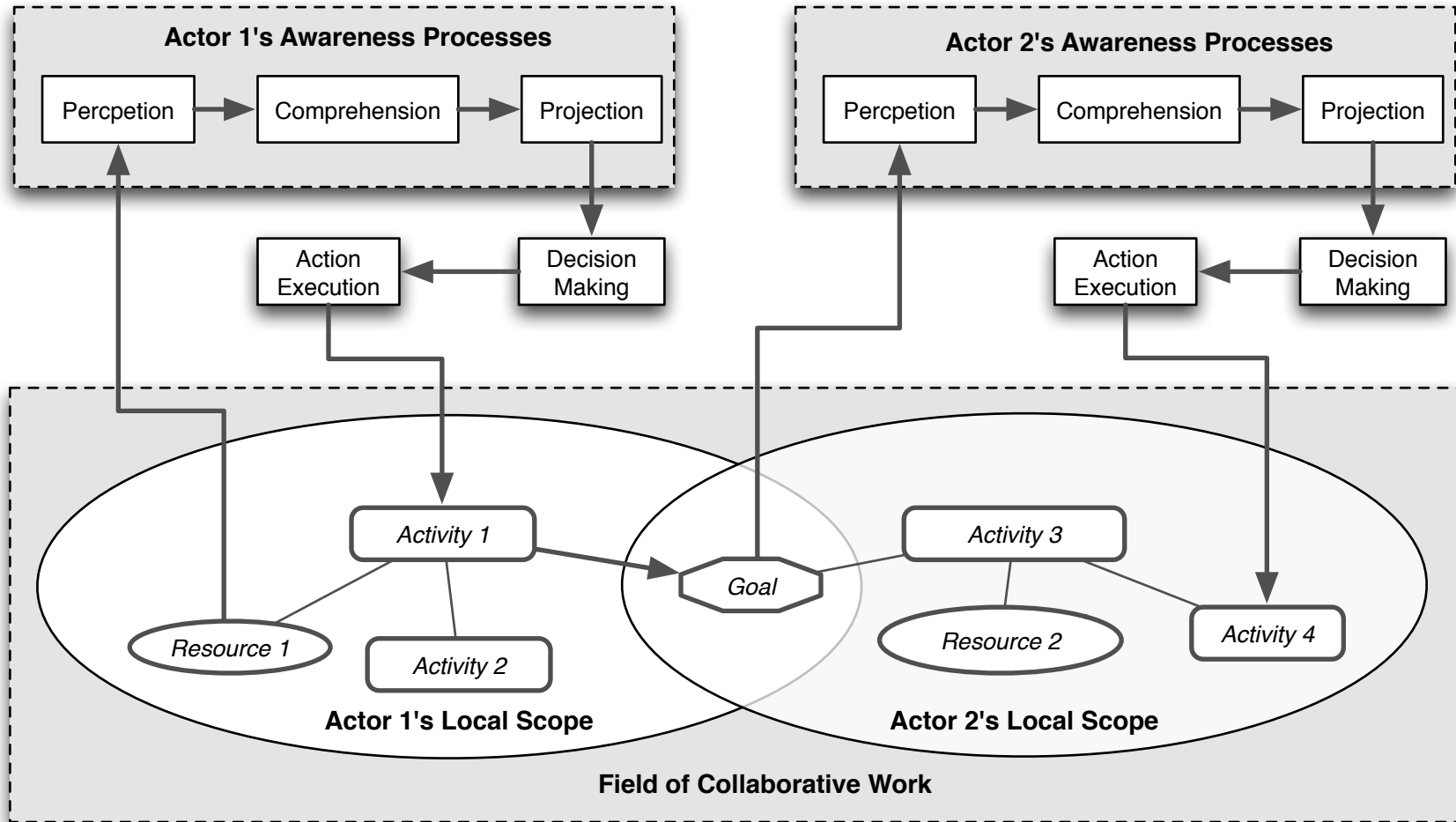
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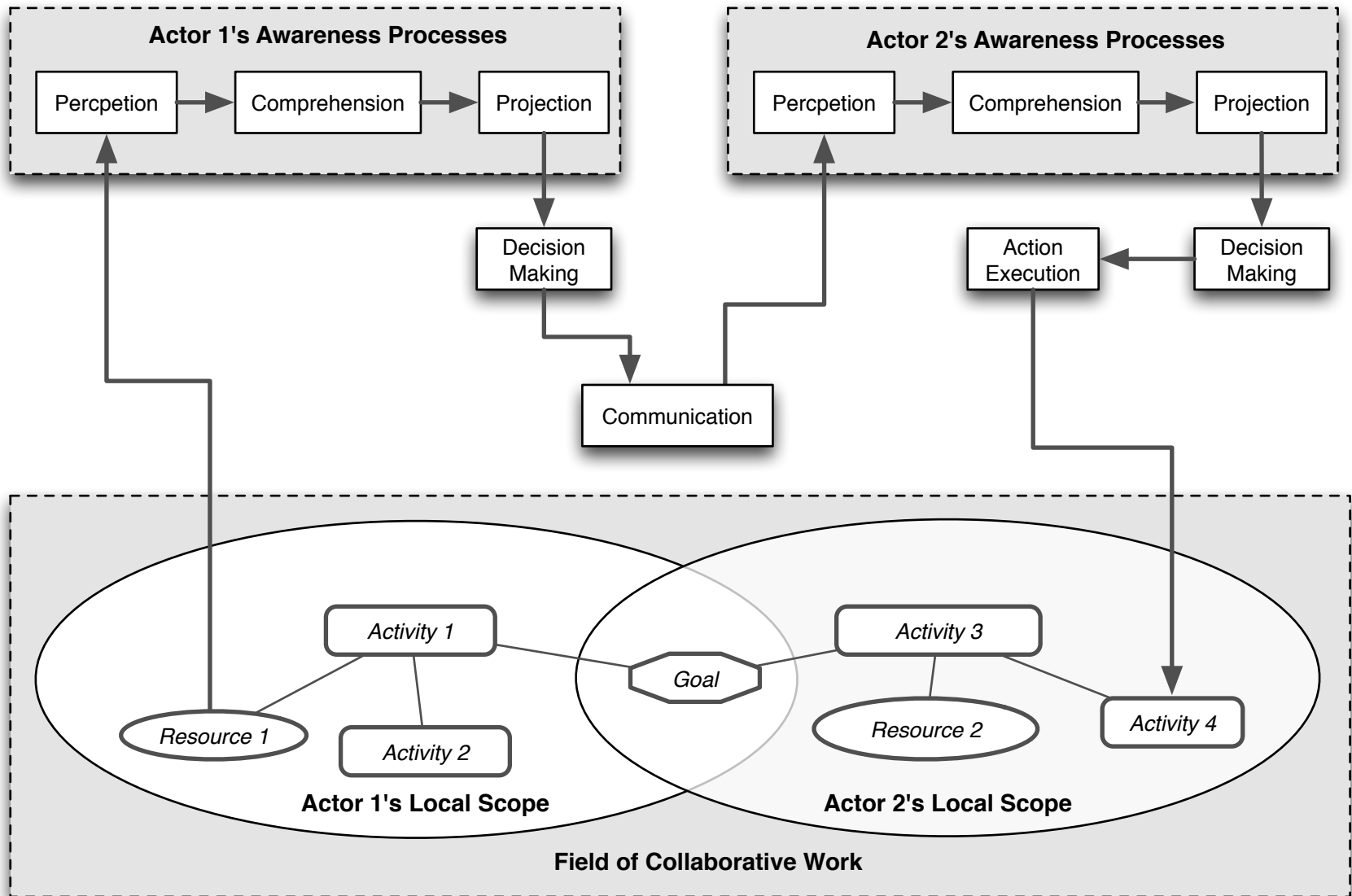
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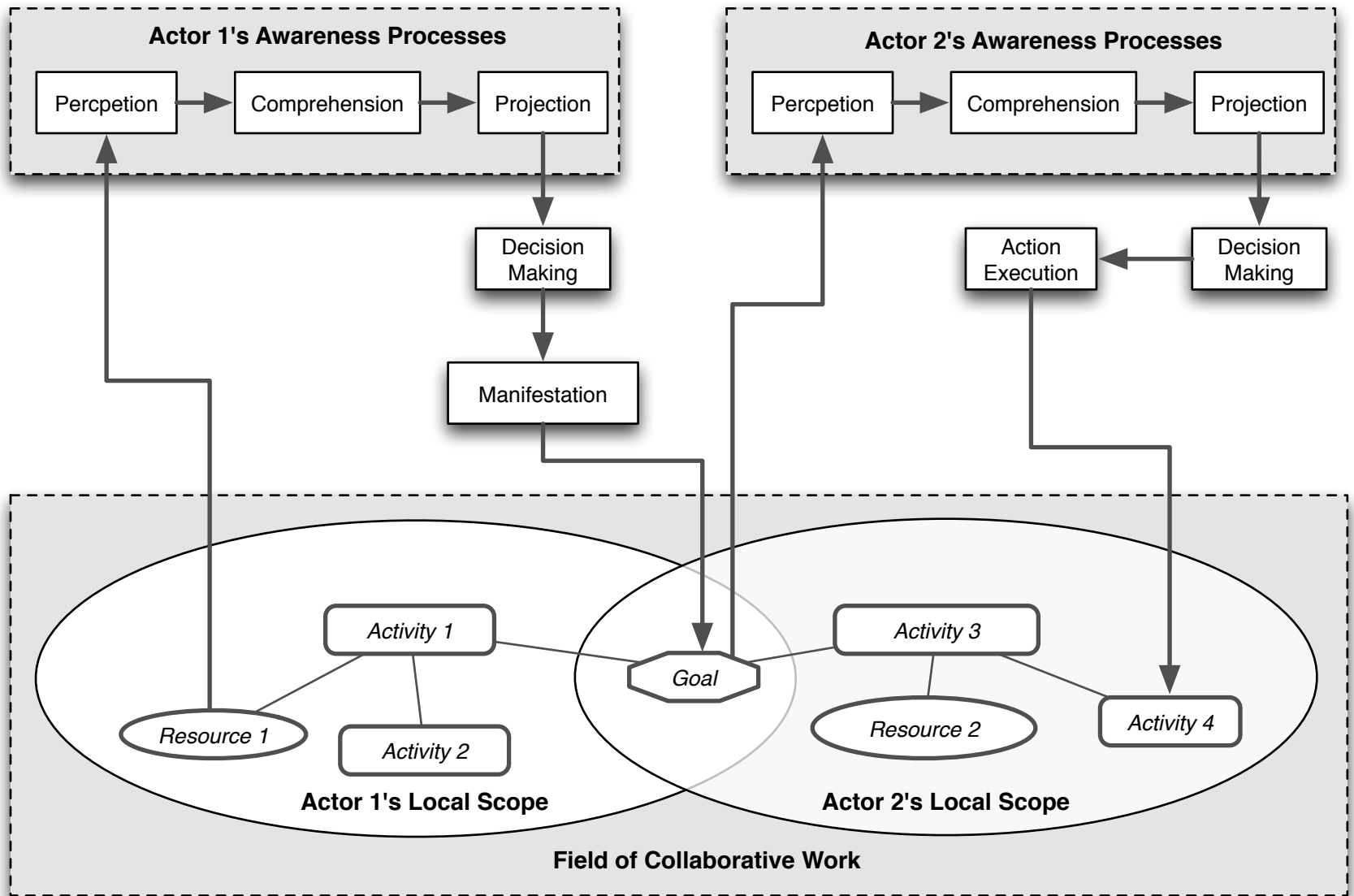


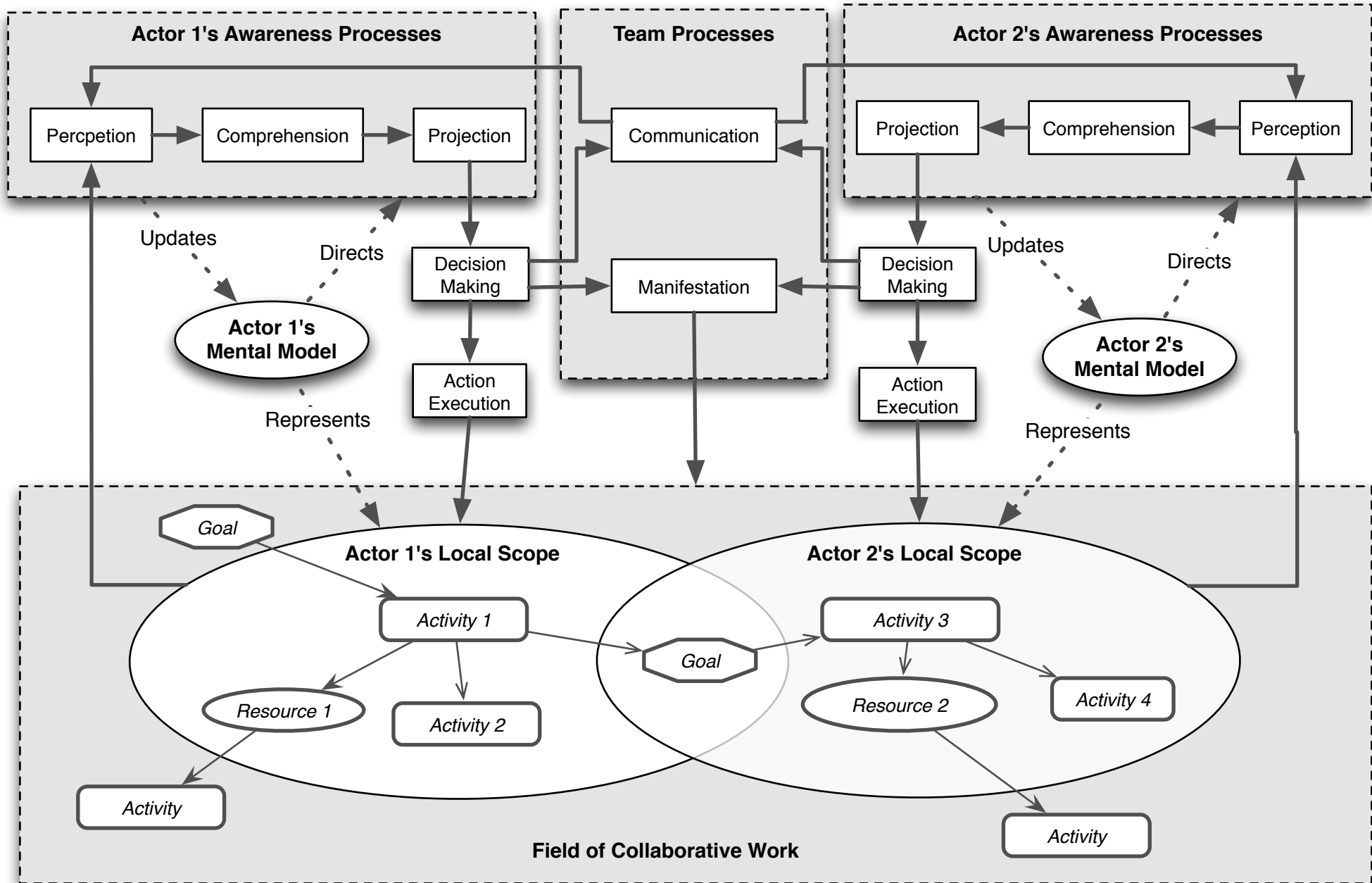


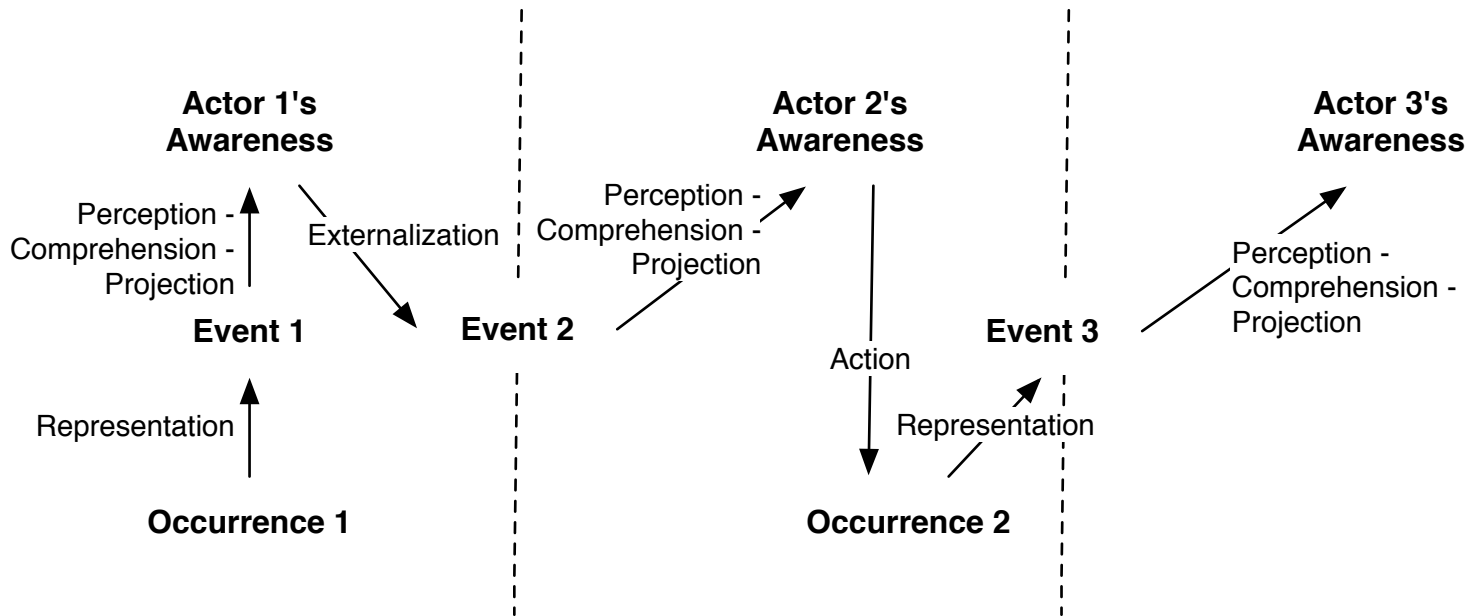
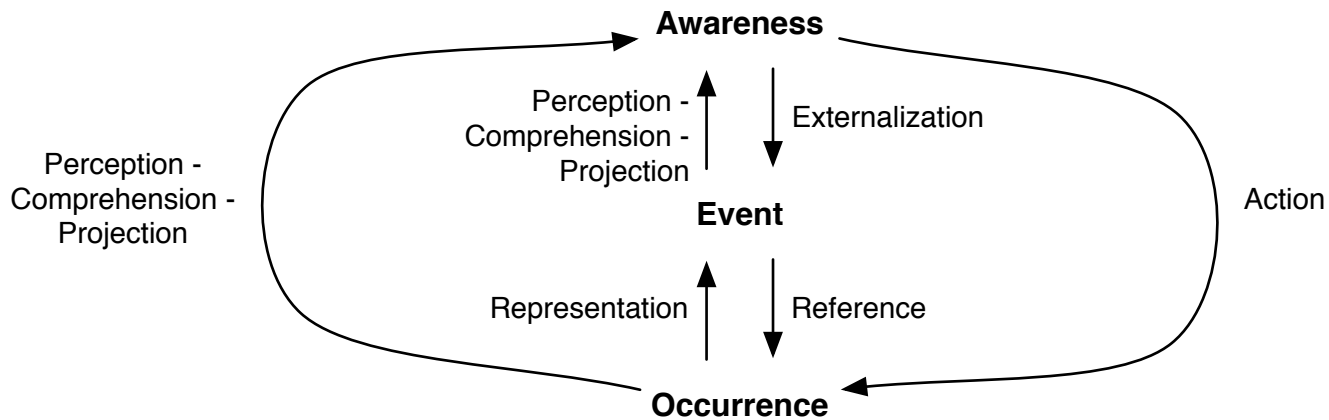


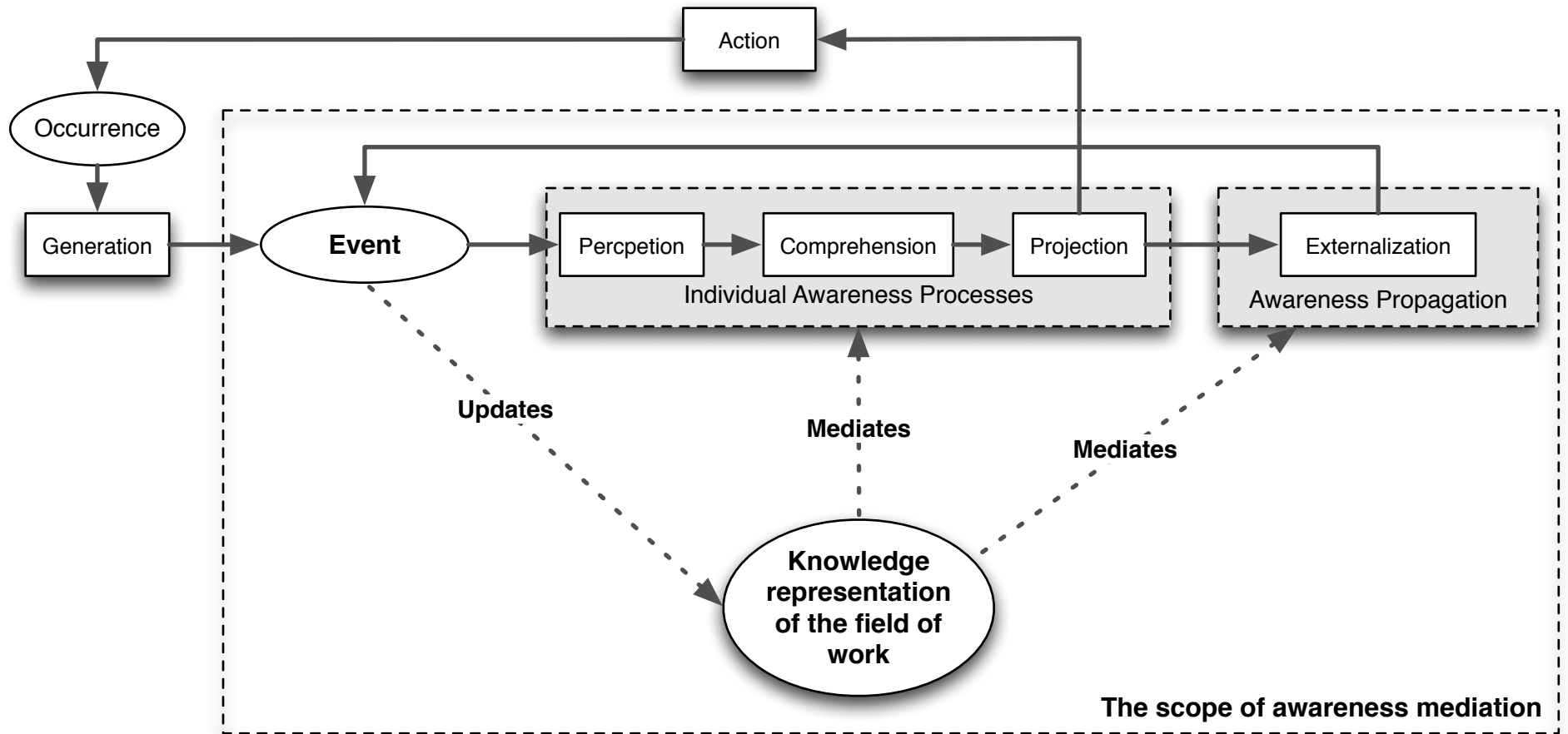


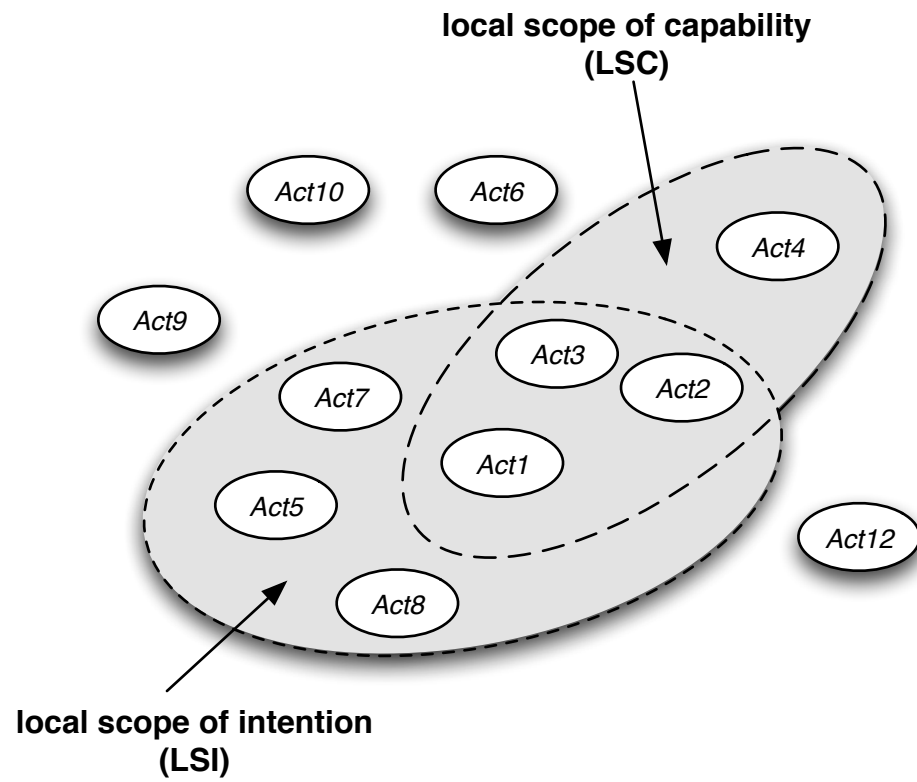


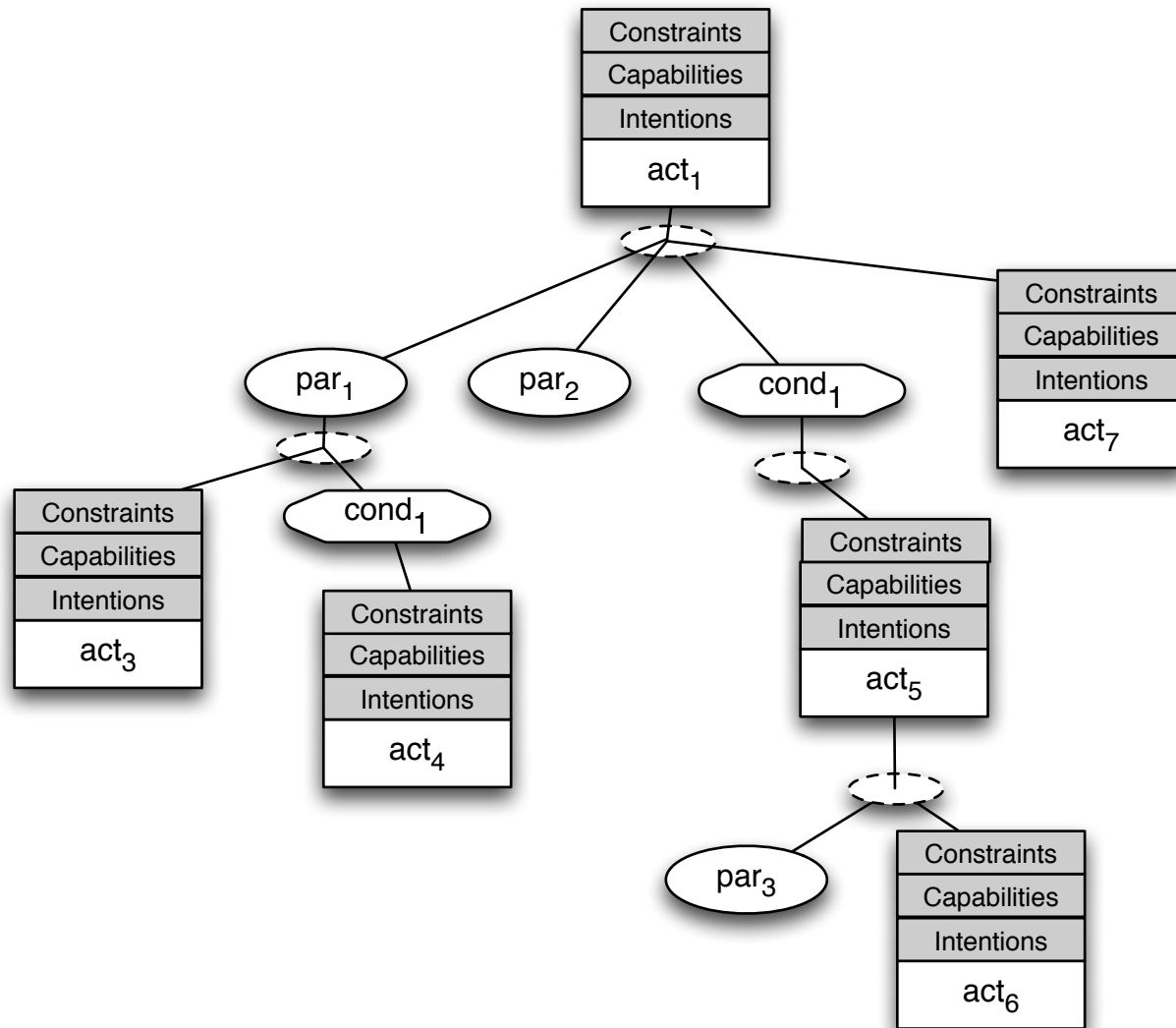


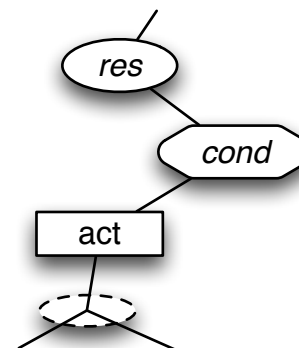
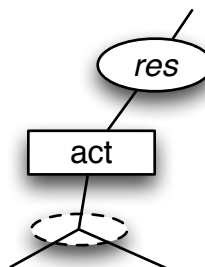
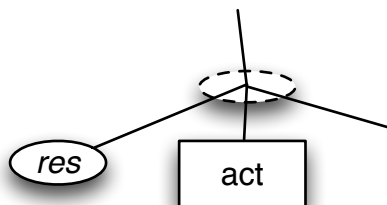
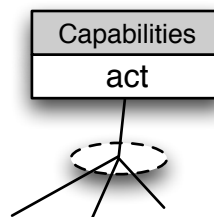
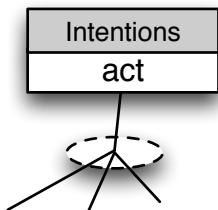
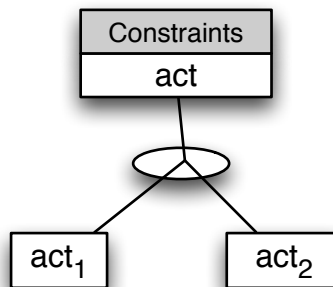
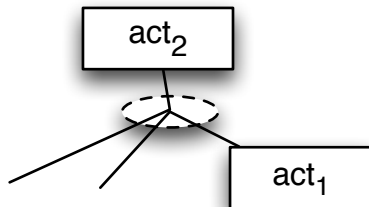


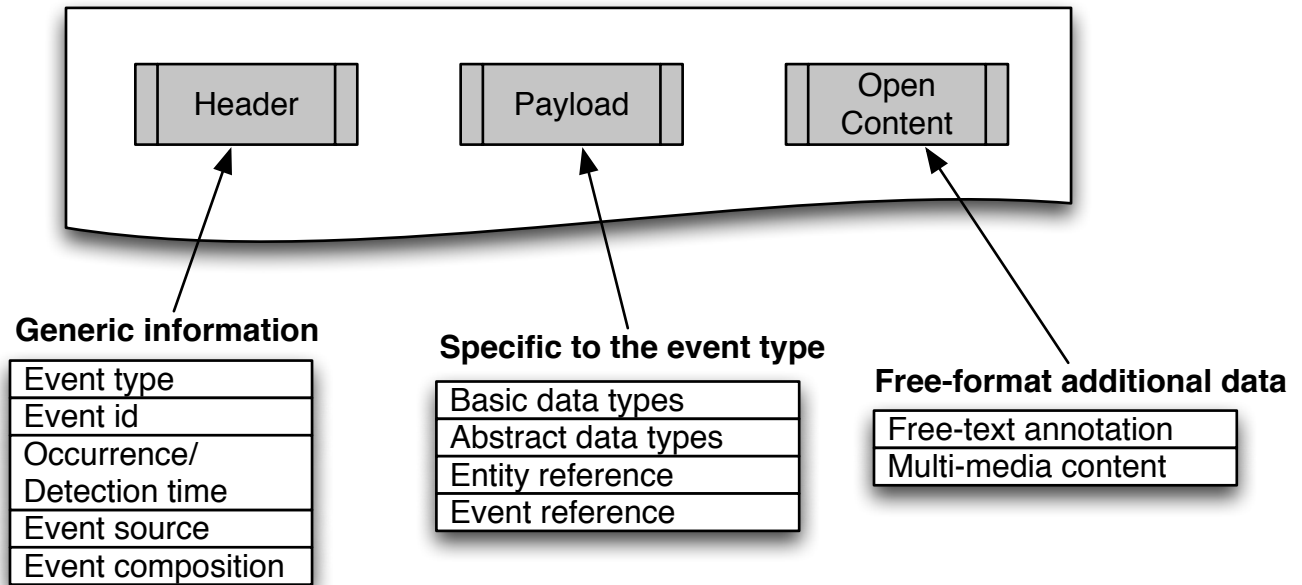


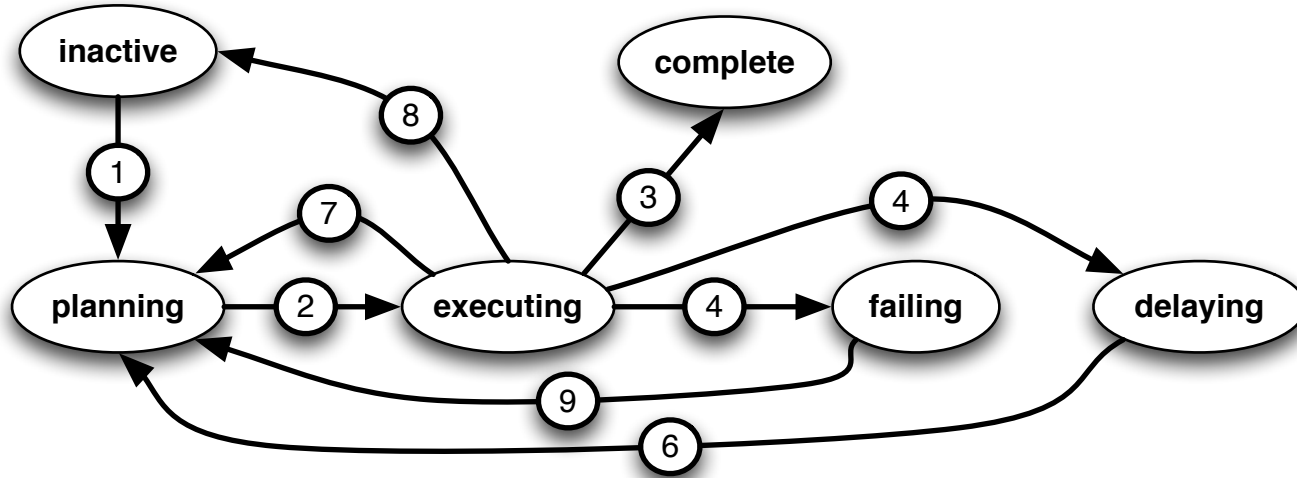












External Event

Entity Event

Relation Event

State Change

Value Comparison

Existential Change over Time

Existential Change over Space

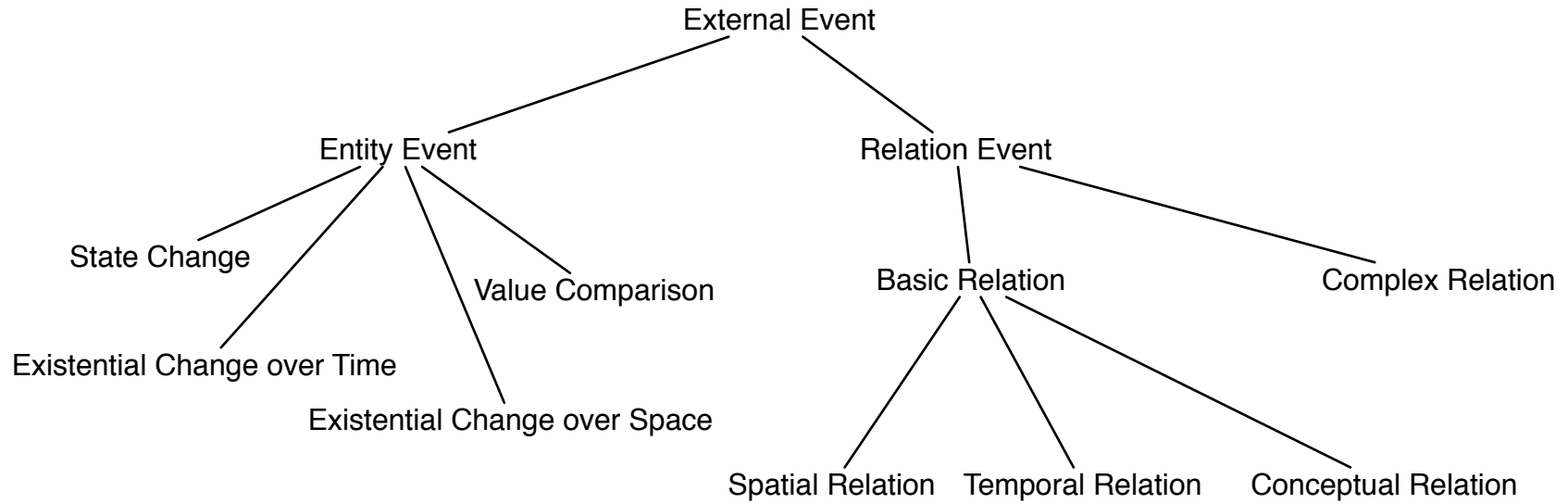
Basic Relation

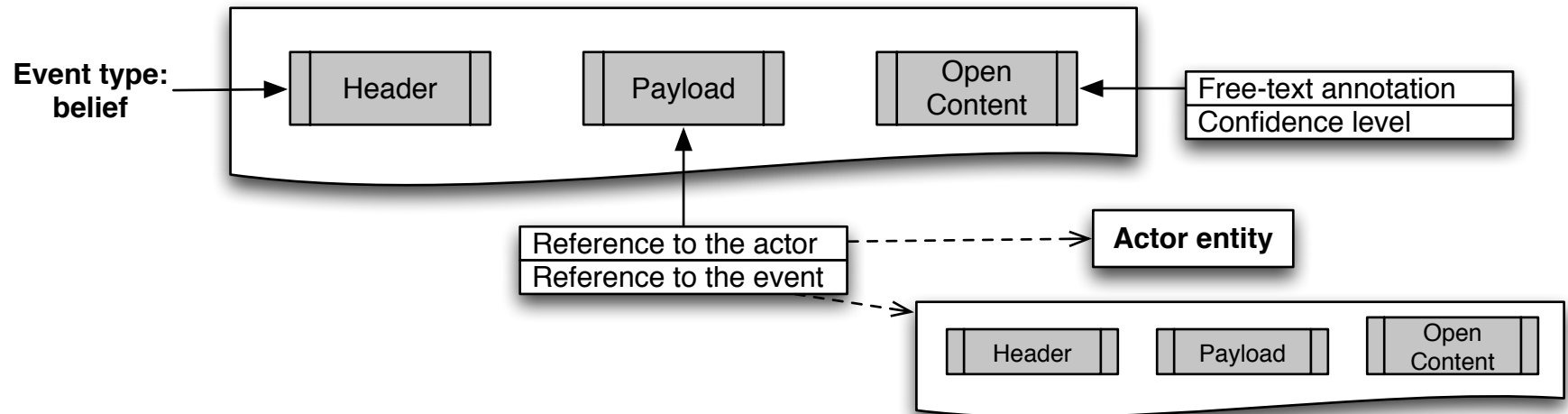
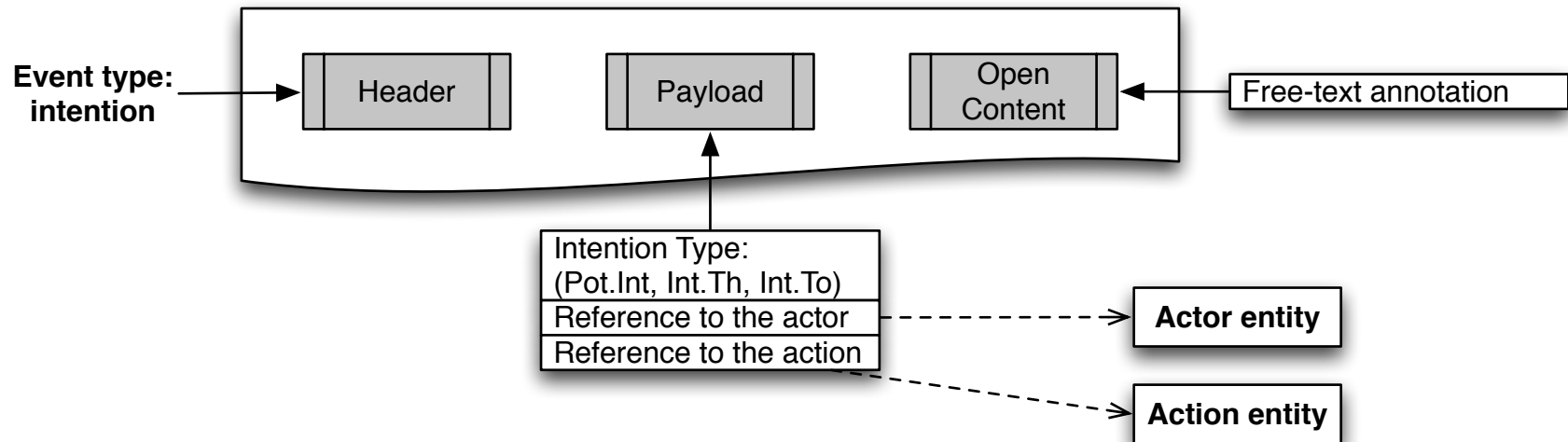
Complex Relation

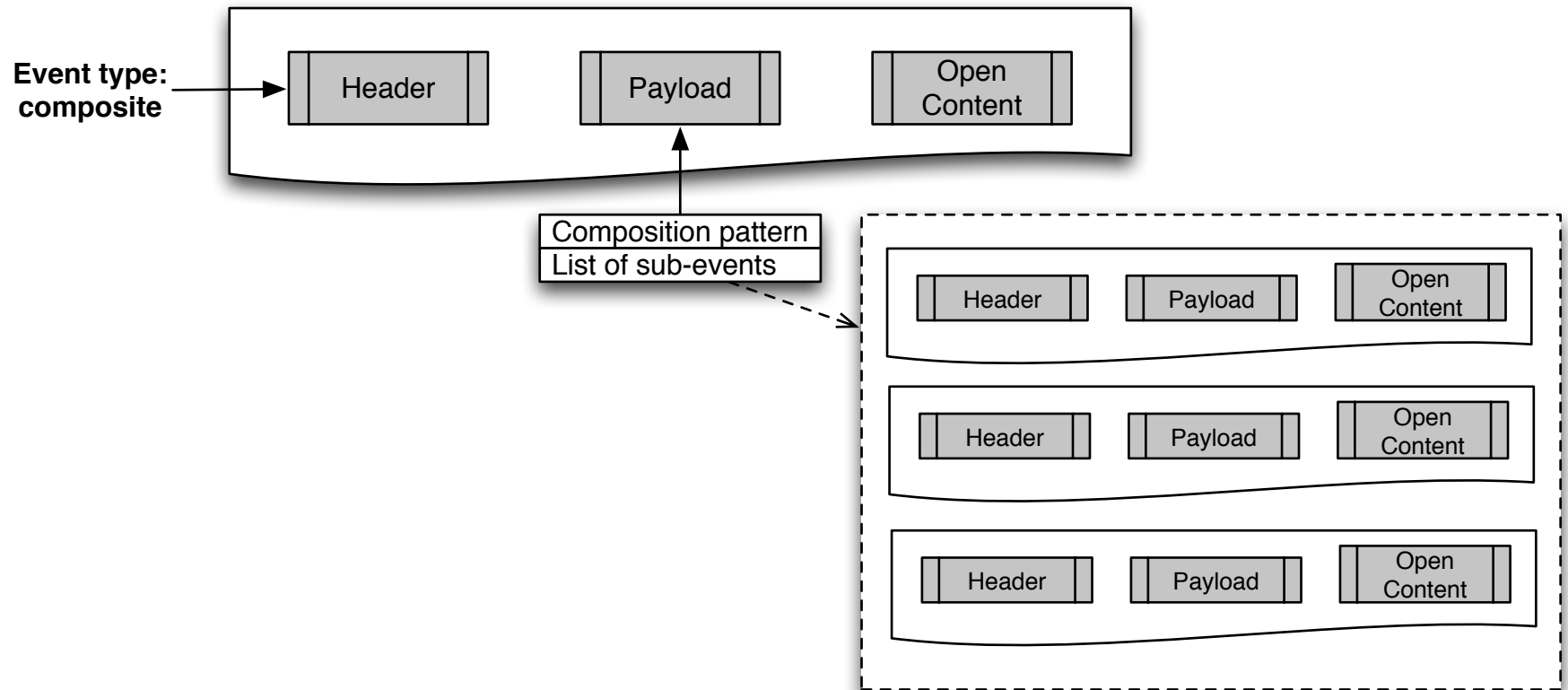
Spatial Relation

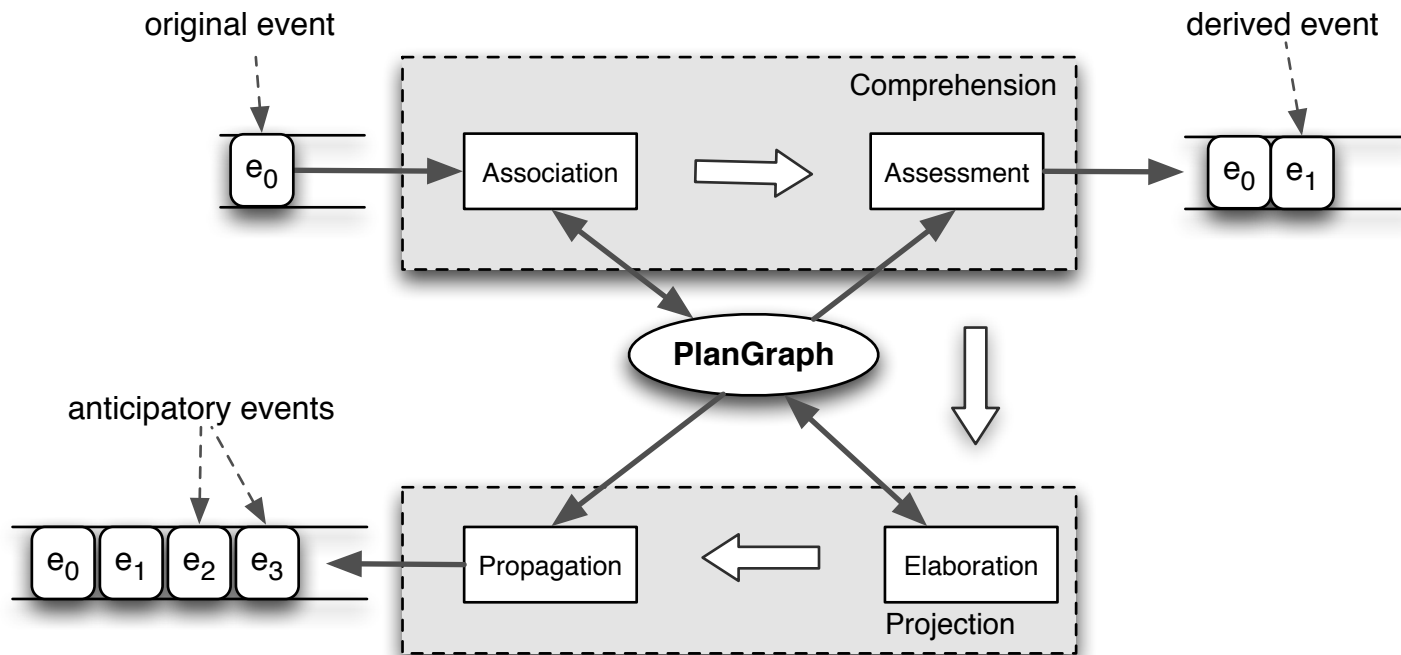
Temporal Relation

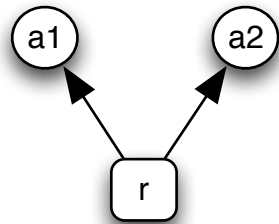
Conceptual Relation



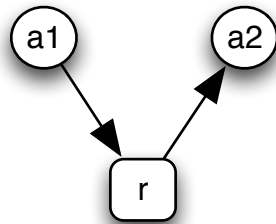




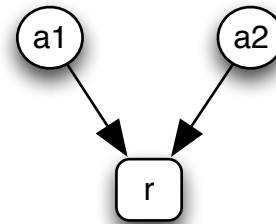




Shared Resource



**Producer/
Consumer**



Common Object

Actions

Resrouces

