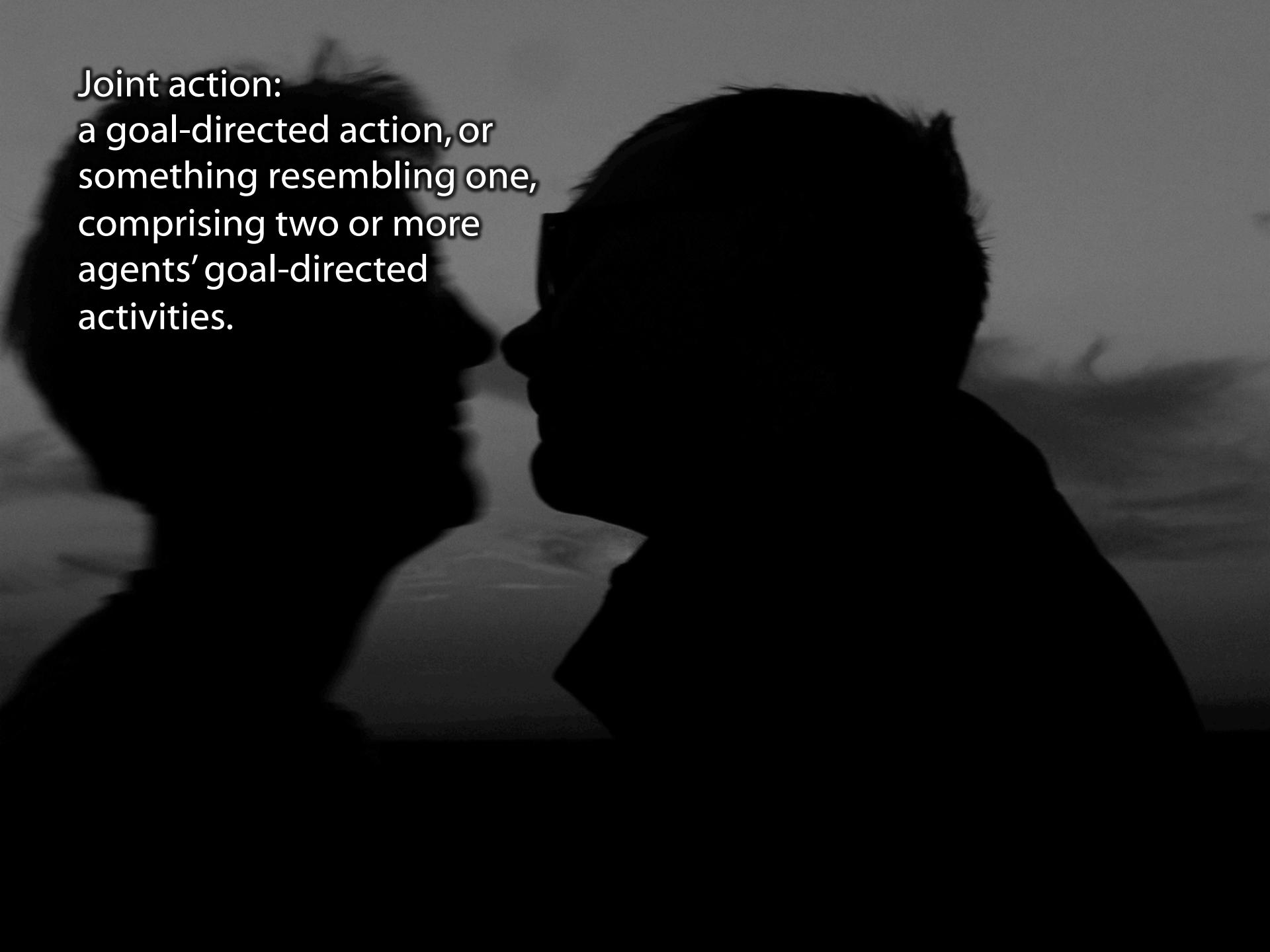




Joint Action

conceptual tools for scientific research

s.butterfill@warwick.ac.uk



Joint action:
a goal-directed action, or
something resembling one,
comprising two or more
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tidying up the toys together

(Behne et al 2005)

cooperatively pulling
handles in sequence to
make a dog-puppet sing

(Brownell et al 2006)

bouncing a ball on a large
trampoline together

(Tomasello & Carpenter 2007)

pretending to row a boat
together

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“perception, action, and cognition
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(Sebanz & Knoblich 2008)



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"regular participation in cooperative,
cultural interactions during ontogeny
leads children to construct uniquely
powerful forms of cognitive
representation."

(Moll & Tomasello 2007)

"perception, action, and cognition
are grounded in social interaction"

(Sebanz & Knoblich 2008)



first
part



'I take a collective action to involve a collective [shared] intention.'

(Gilbert 2006, p. 5)

'The sine qua non of collaborative action is a joint goal [shared intention] and a joint commitment'

(Tomasello 2008, p. 181)

'the key property of joint action lies in its internal component [...] in the participants' having a "collective" or "shared" intention.'

(Alonso 2009, pp. 444-5)

'Shared intentionality is the foundation upon which joint action is built.'

(Carpenter 2009, p. 381)

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A black and white photograph of Michael Bratman, a middle-aged man with dark hair and glasses, wearing a plaid shirt. He is looking slightly to his left with a thoughtful expression.

Substantial account

We have a shared intention
that we J =

“1. (a) I intend that we J and
(b) you intend that we J

“2. I intend that we J in
accordance with and
because of la, lb, and
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“3. 1 and 2 are common
knowledge between us”

(Bratman 1993:View 4)



Intentions about intentions



Substantial account

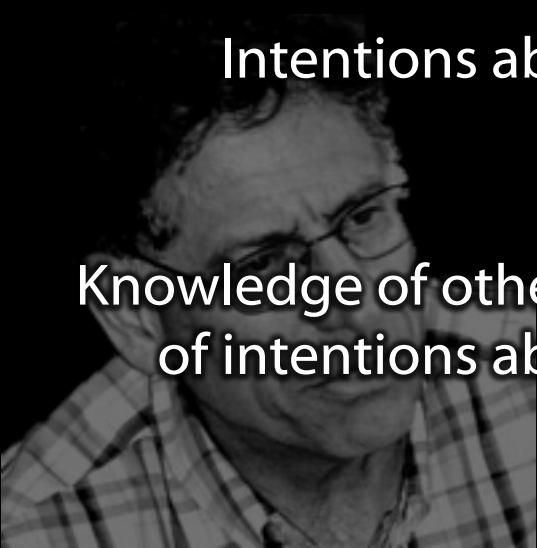
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Knowledge of others' knowledge
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joint action without shared intention

case
studies

awareness of joint-ness

at least one of the agents knows that they are not acting individually; she or they have 'a conception of themselves as contributors to a collective end.'

awareness of others' agency

at least one of the agents is aware of one or more of the others as an intentional agent.

awareness of others' states or commitments

at least one of the agents who are F-ing is aware of, or has individuating beliefs about, some of the others' intentions, beliefs or commitments concerning F.

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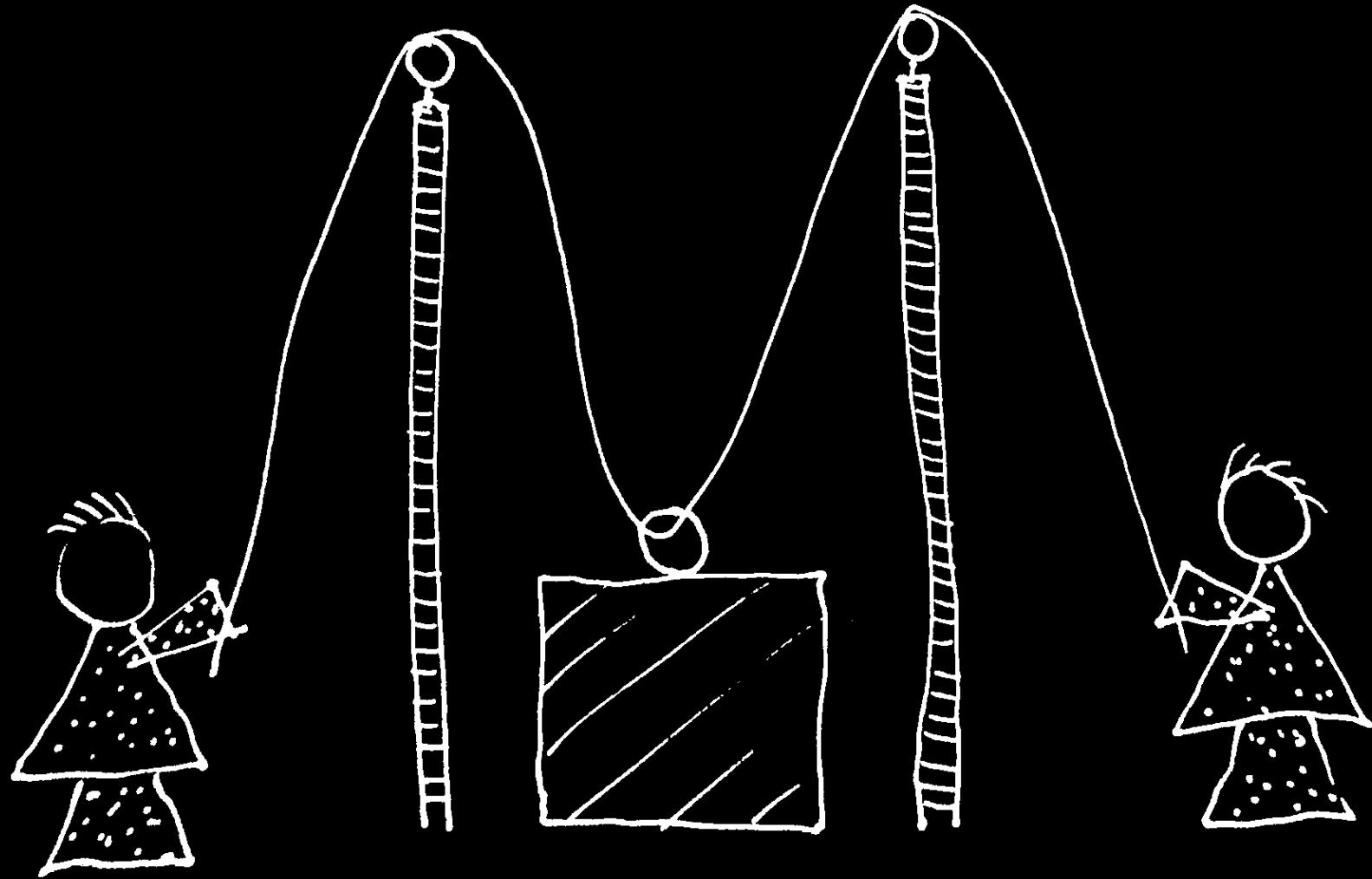
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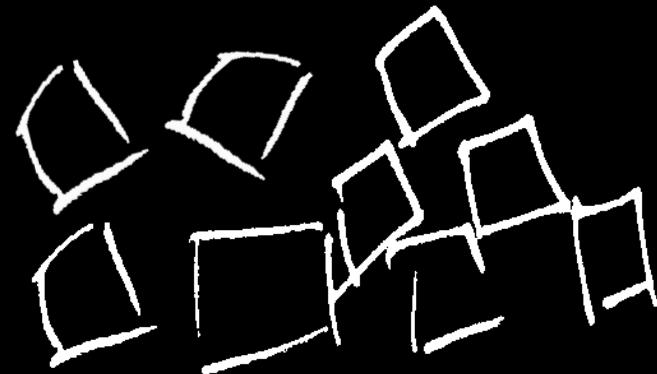
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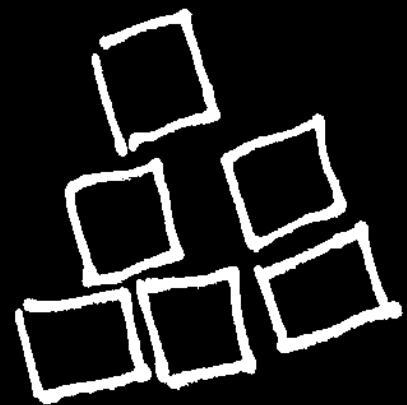
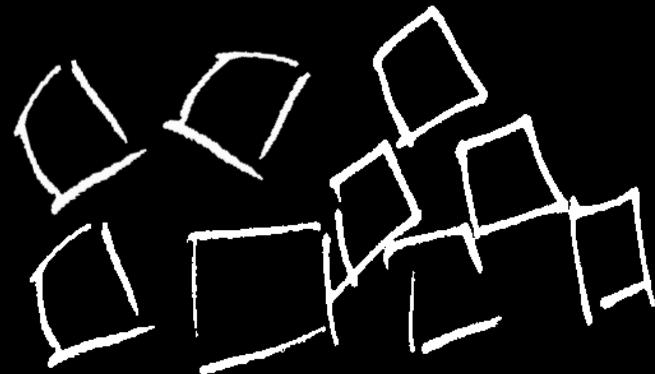
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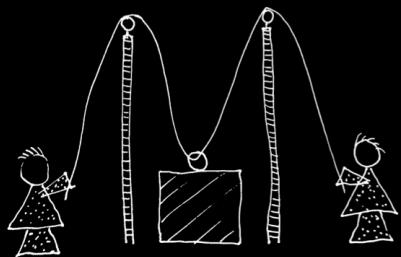


cf. Vesper et al (Neural Networks 2010)

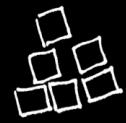








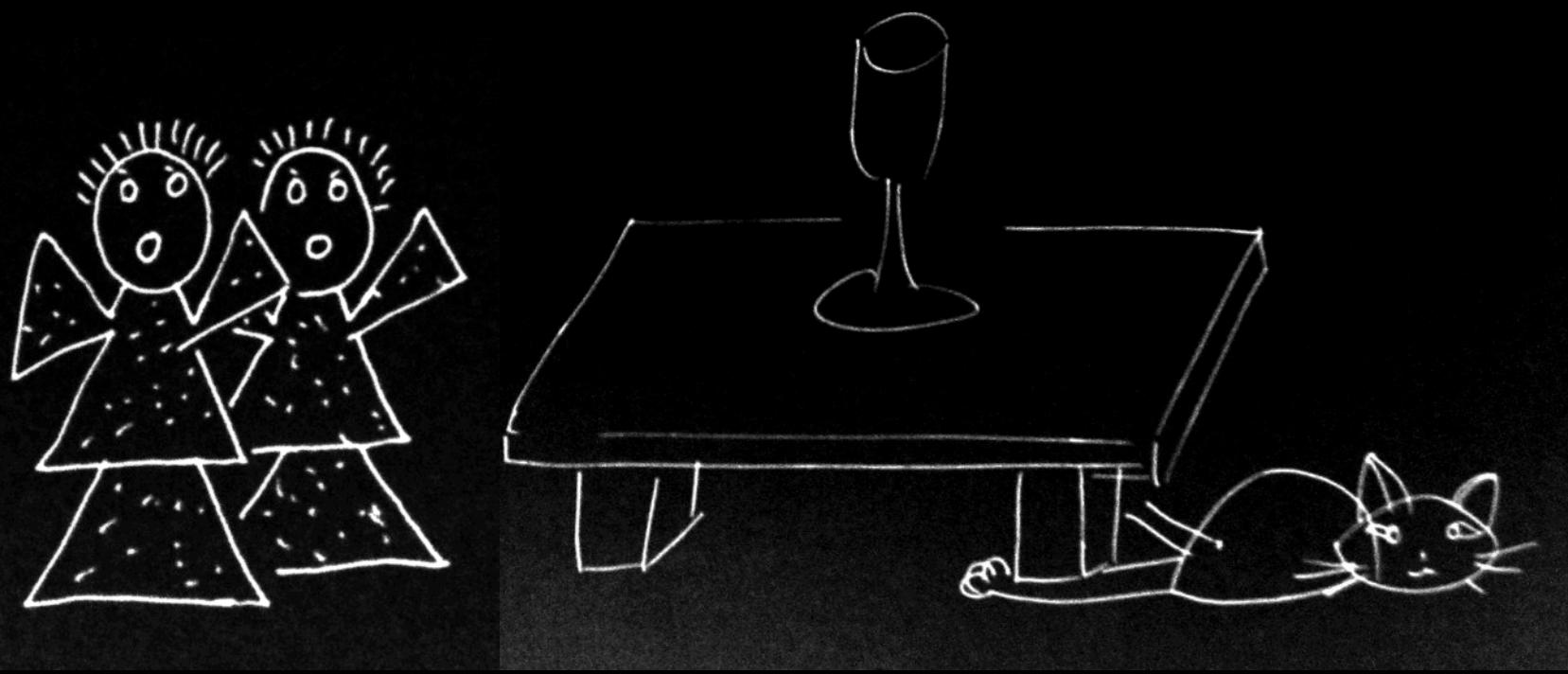
cf. Vesper et al (forthcoming)



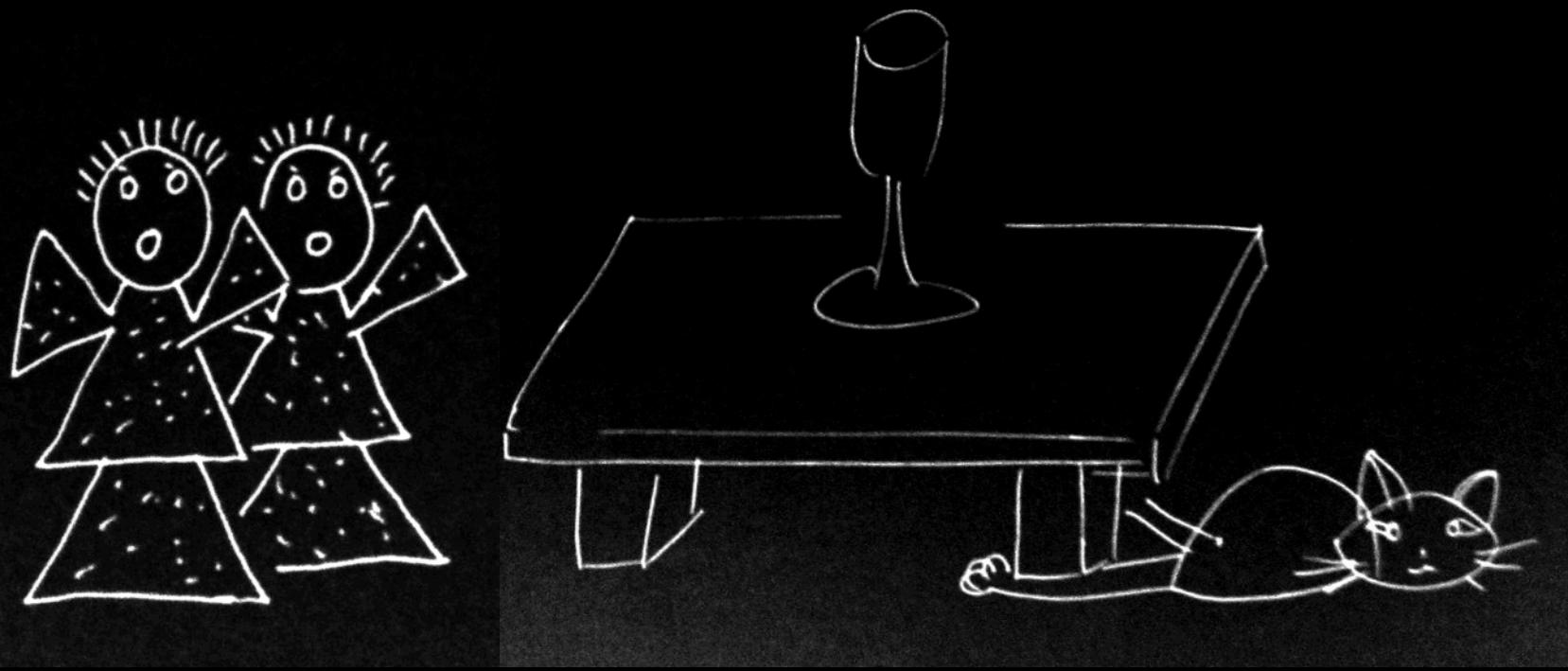
second
part

What is the relation between a joint action and the goal (or goals) to which it is directed?

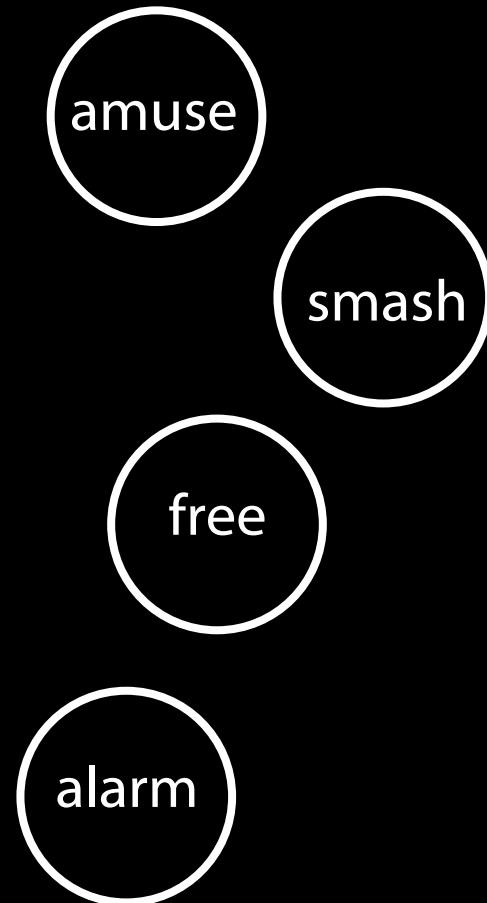
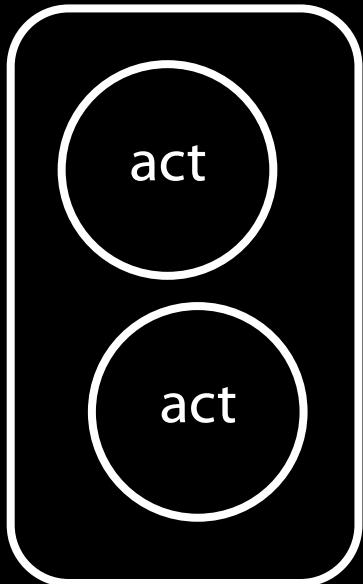
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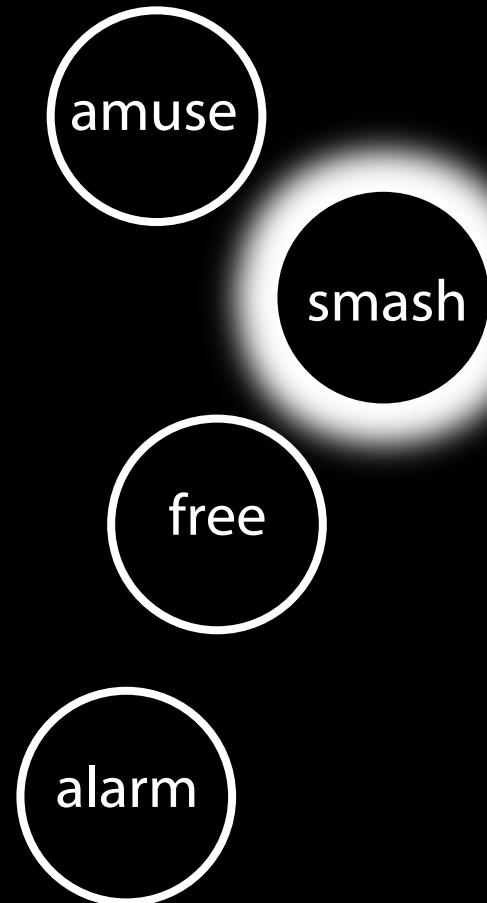
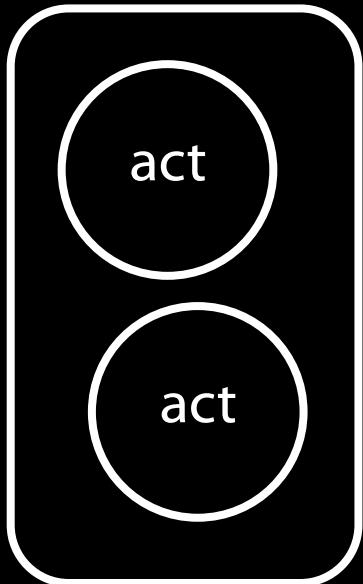
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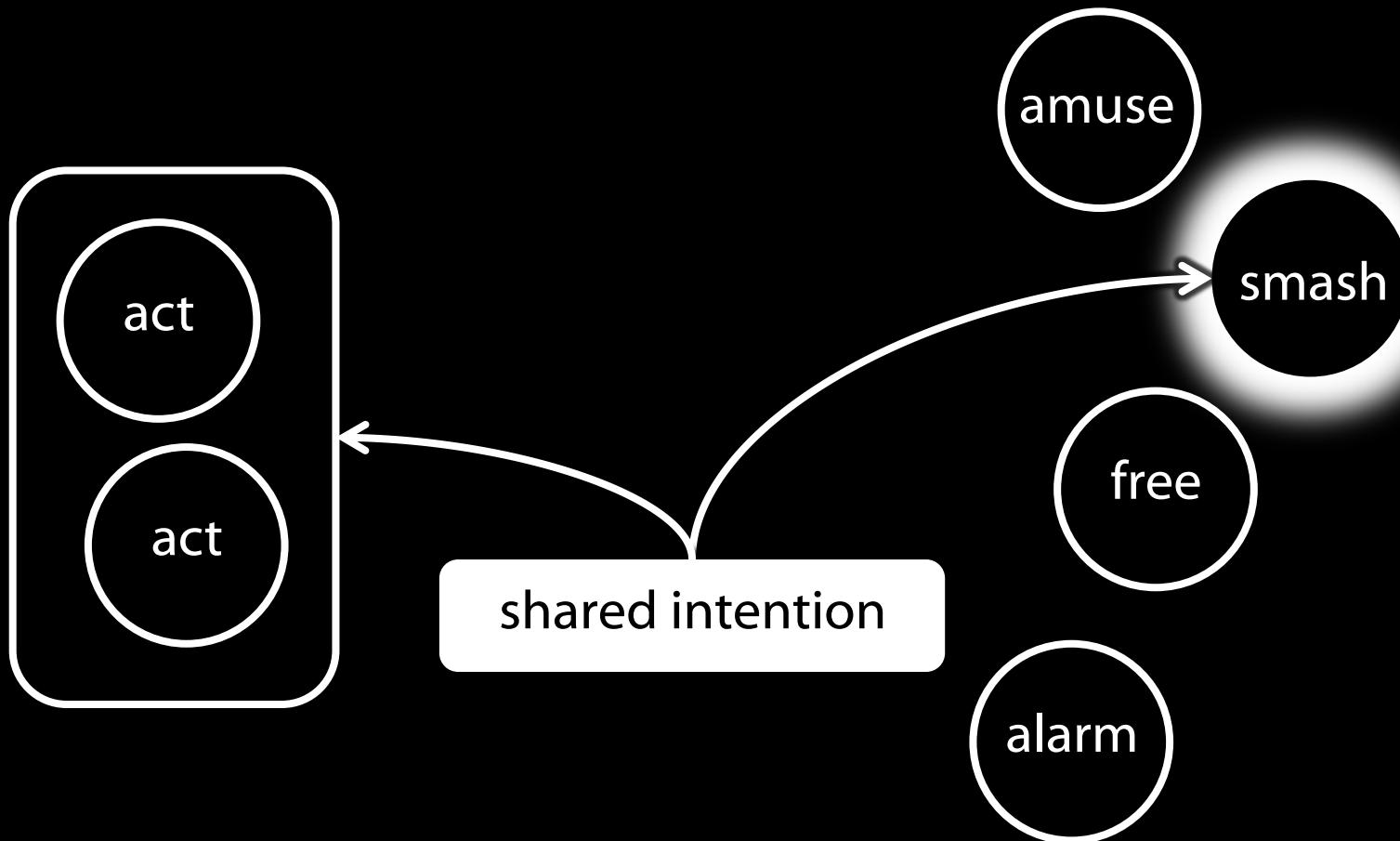
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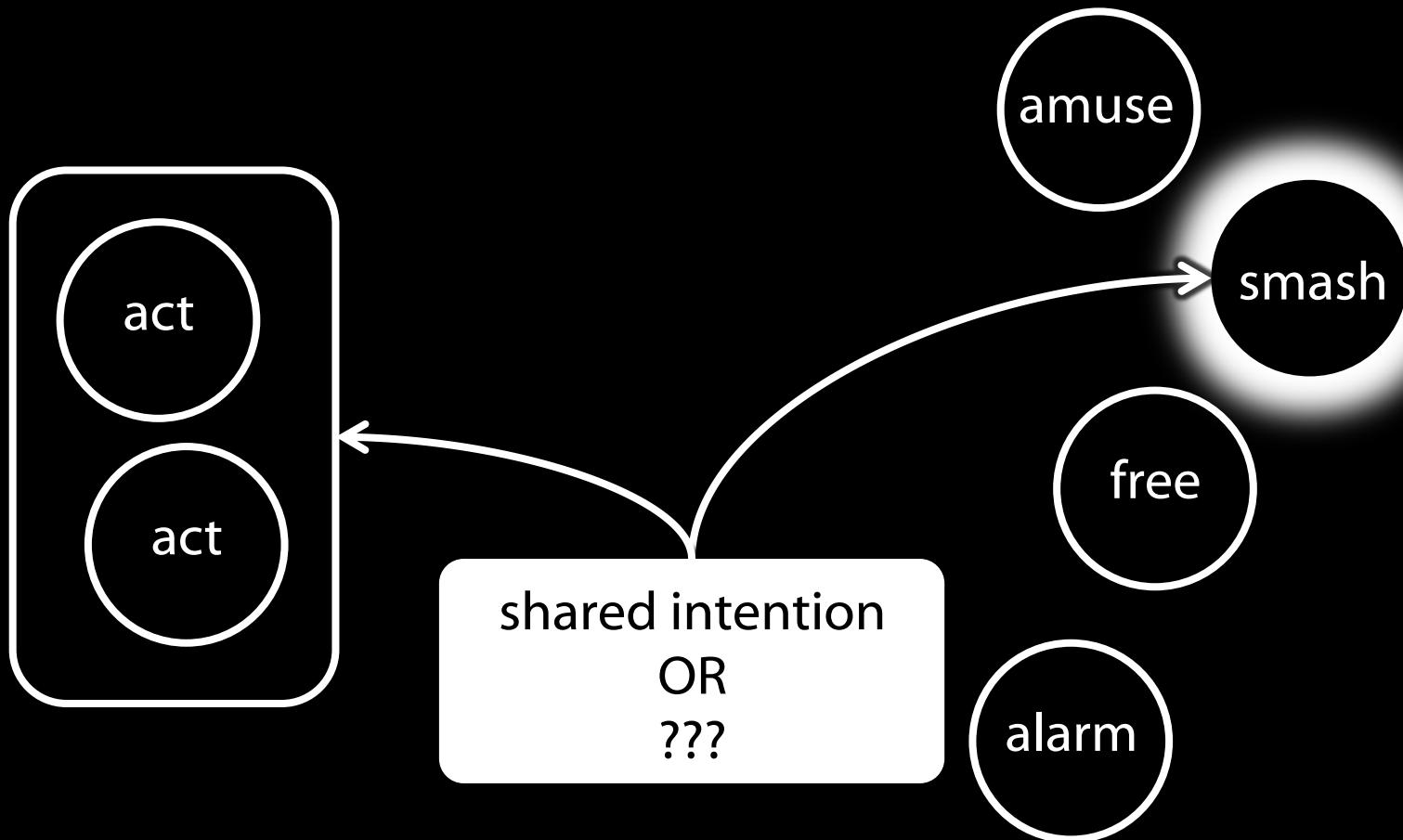
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- (a) it is a distributive goal;
- (b) the agents' activities are coordinated; and
- (c) this type of outcome would normally be facilitated by this type of coordination.

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- (a) it is a distributive goal;
- (b) the agents' activities are coordinated; and
- (c) this type of outcome would normally be facilitated by this type of coordination.

Each agent expects each of the other agents to perform activities directed to the goal.

Each agent expects the goal to occur as a common effect of all their goal-directed actions.

A black and white photograph of Michael Bratman, a middle-aged man with dark hair and glasses, wearing a plaid shirt. He is looking slightly to his left with a thoughtful expression.

Substantial account

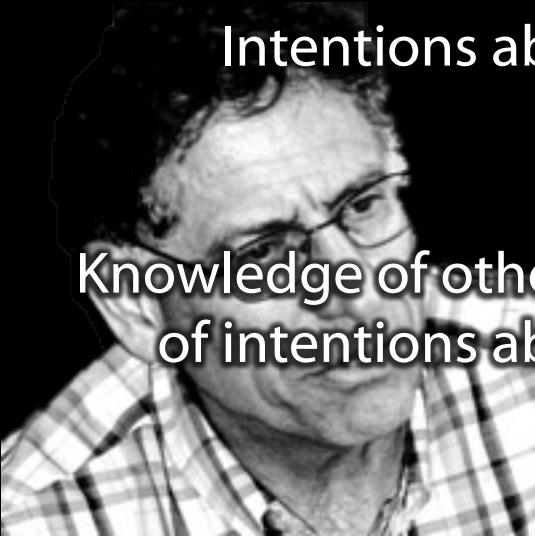
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(Bratman 1993:View 4)



Intentions about intentions

Knowledge of others' knowledge
of intentions about intentions



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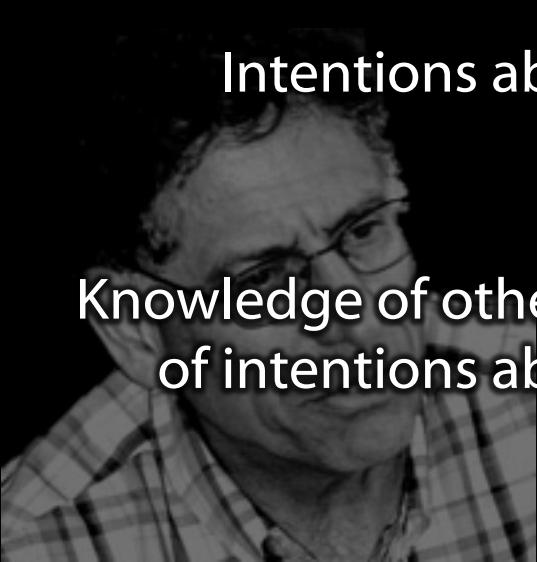
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“philosophers ... postulate complex intentional structures that often seem to be beyond human cognitive ability in real-time social interactions.”

(Knoblich & Sebanz 2008:2022)

(a) coordinate activities, (b)
coordinate planning and (c)
structure bargaining

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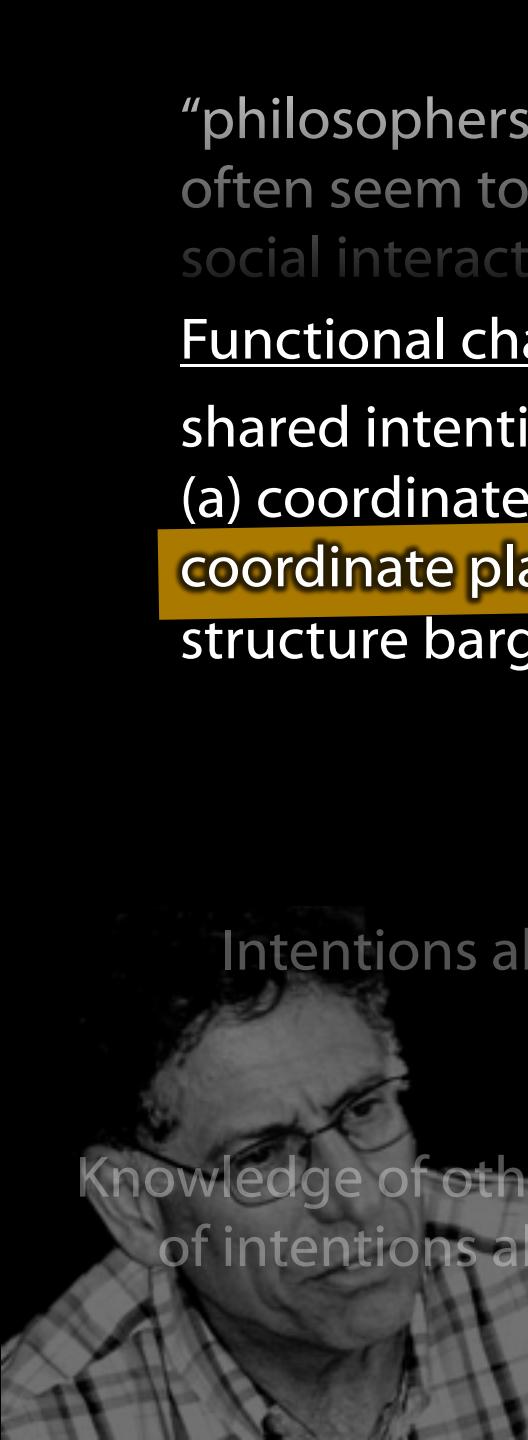
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Functional characterisation

shared intention serves to

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'Ayesha and Beatrice
between them lifted the
table'





'Ayesha and Beatrice
between them lifted the
table'

'Left Leg and Right Leg
between them supported
the table'

'Ayesha and Beatrice
between them lifted the
table intentionally'



'Ayesha and Beatrice
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