Mindreading & Joint Action
3. Tracking, Measuring and Representing Beliefs
butterfillS@ceu.hu

What could someone represent
that would enable her to track,
at least within limits,
others' perceptions, knowledge states and beliefs
including false beliefs?

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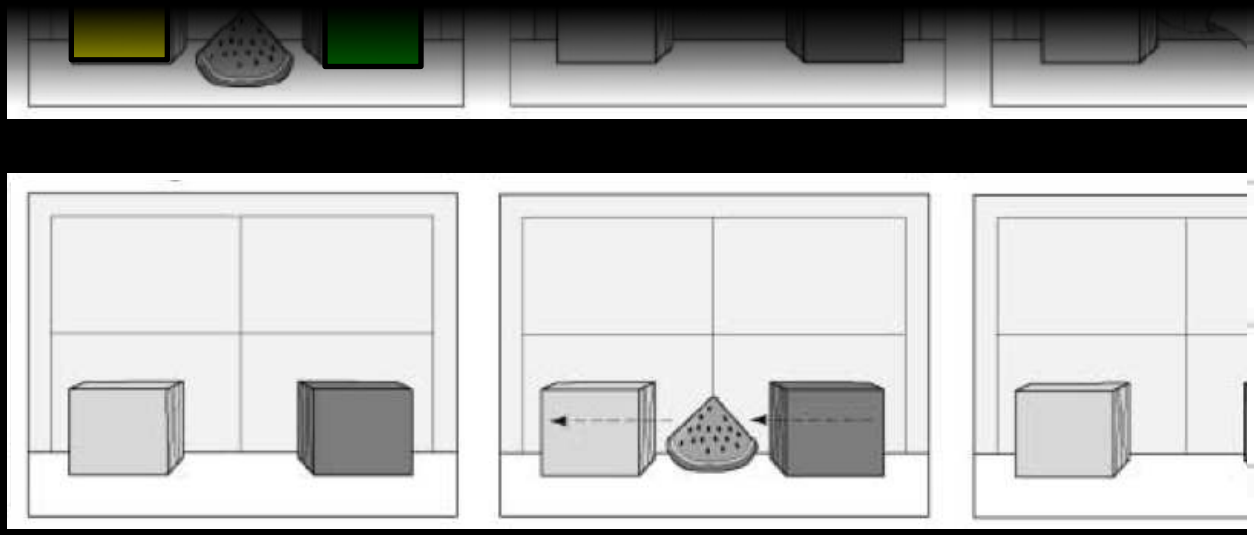

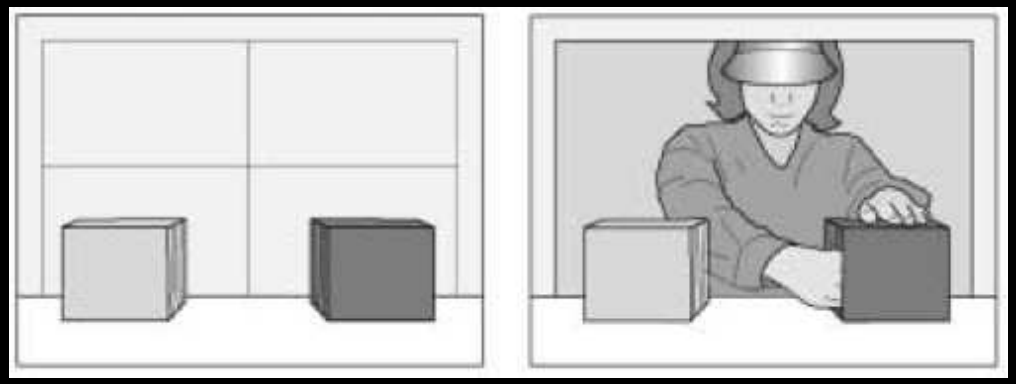

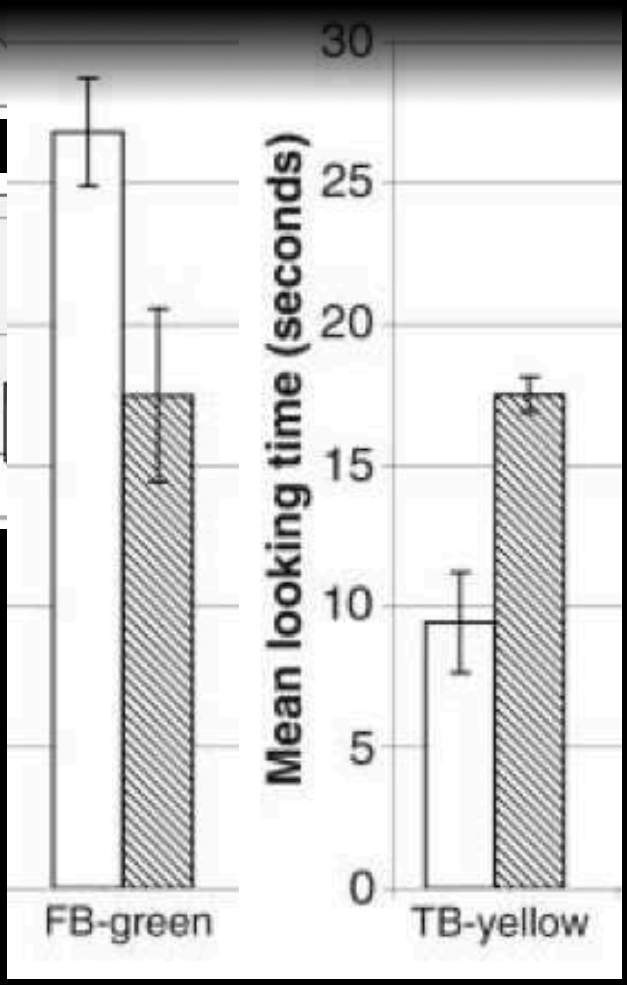

Onishi & Baillargeon (2005)

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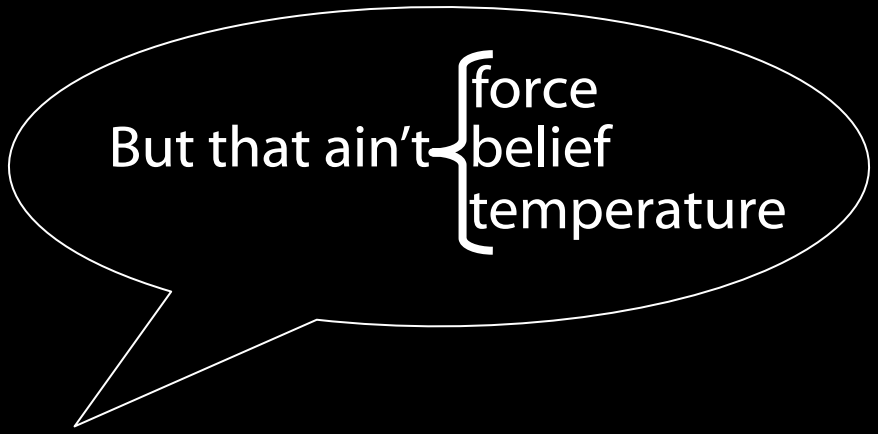

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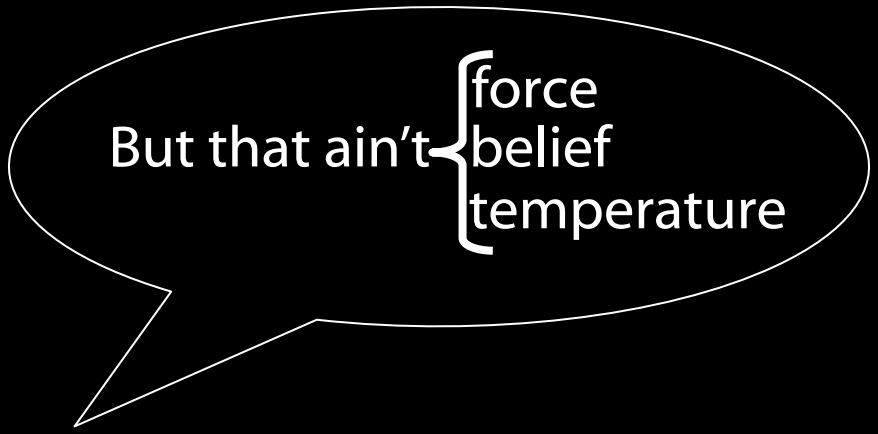

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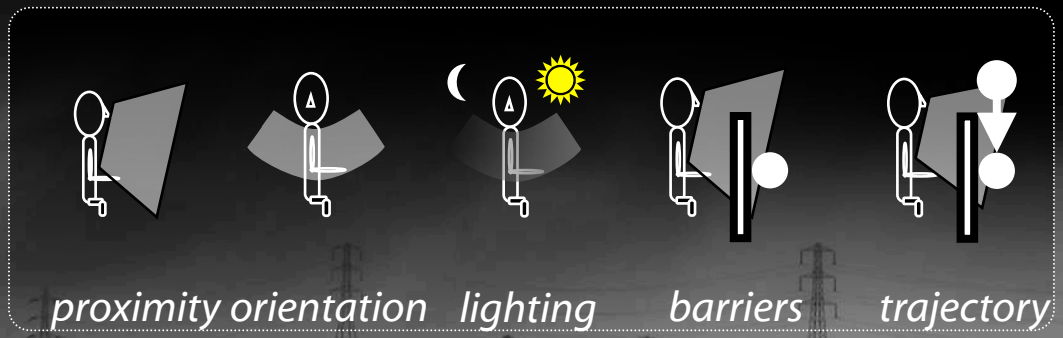

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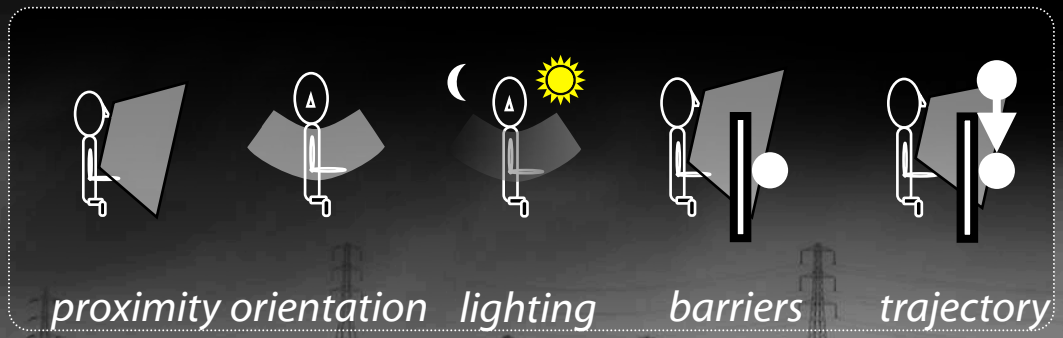

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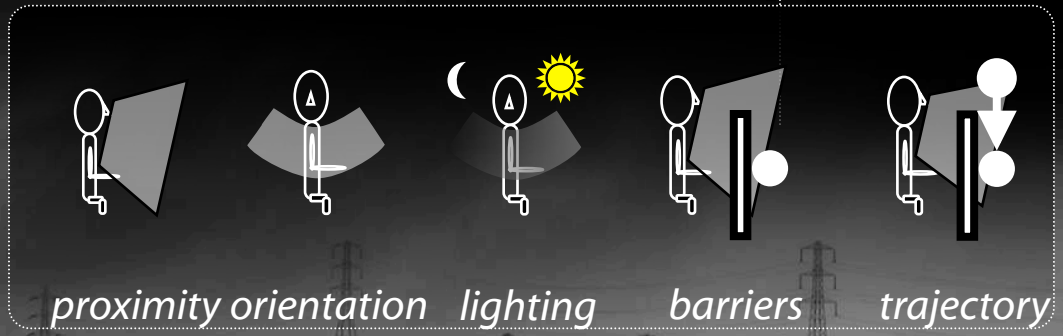

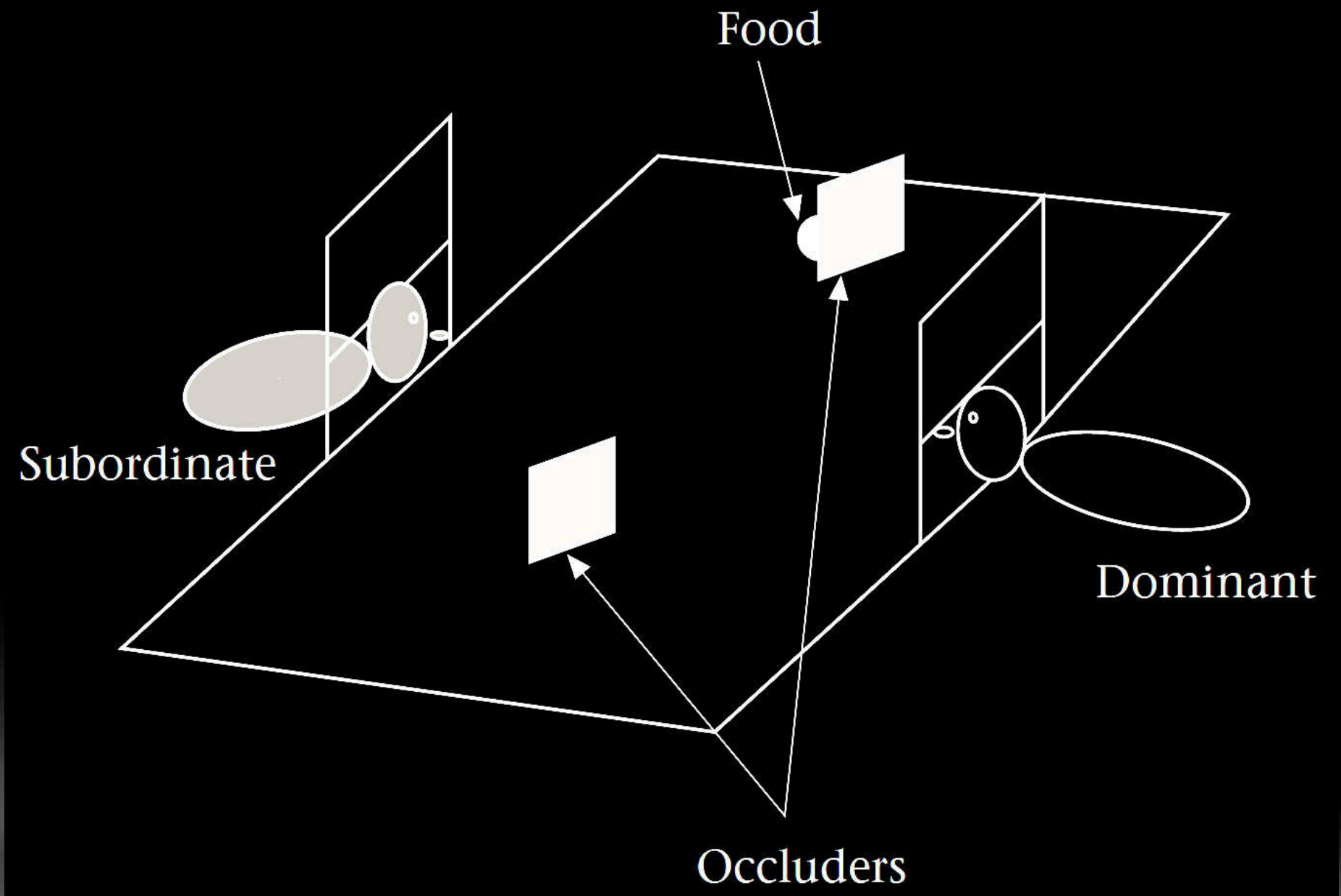
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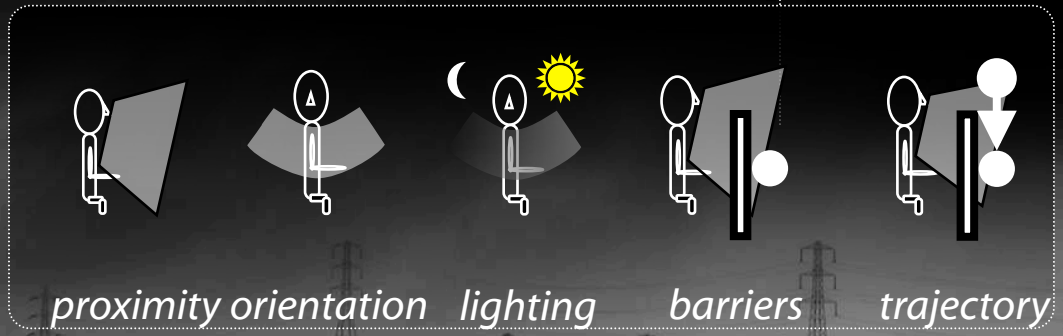

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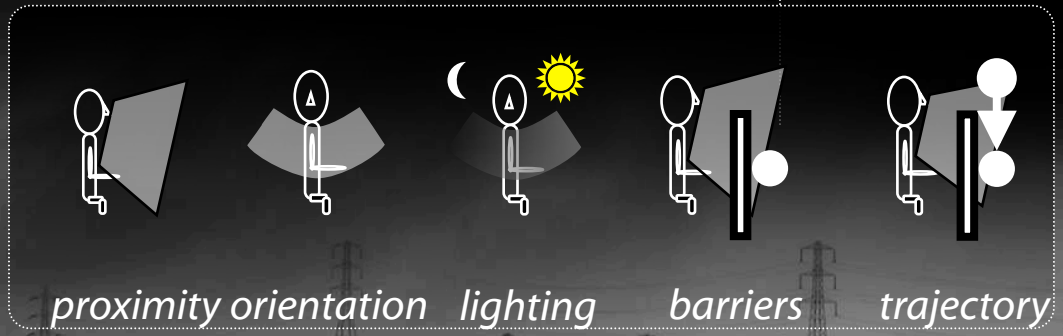

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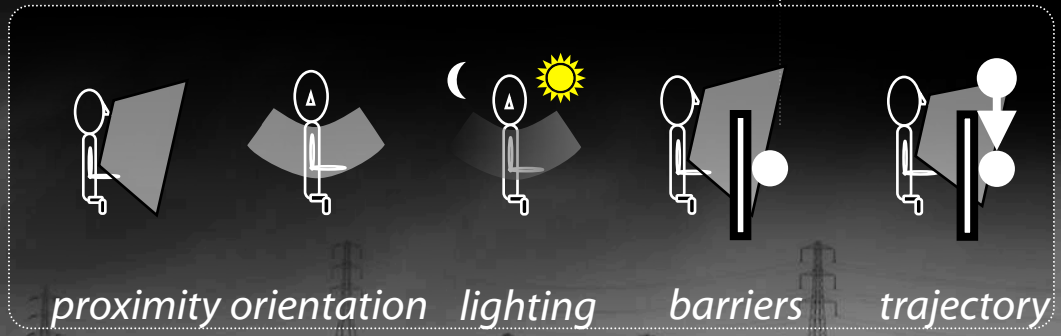

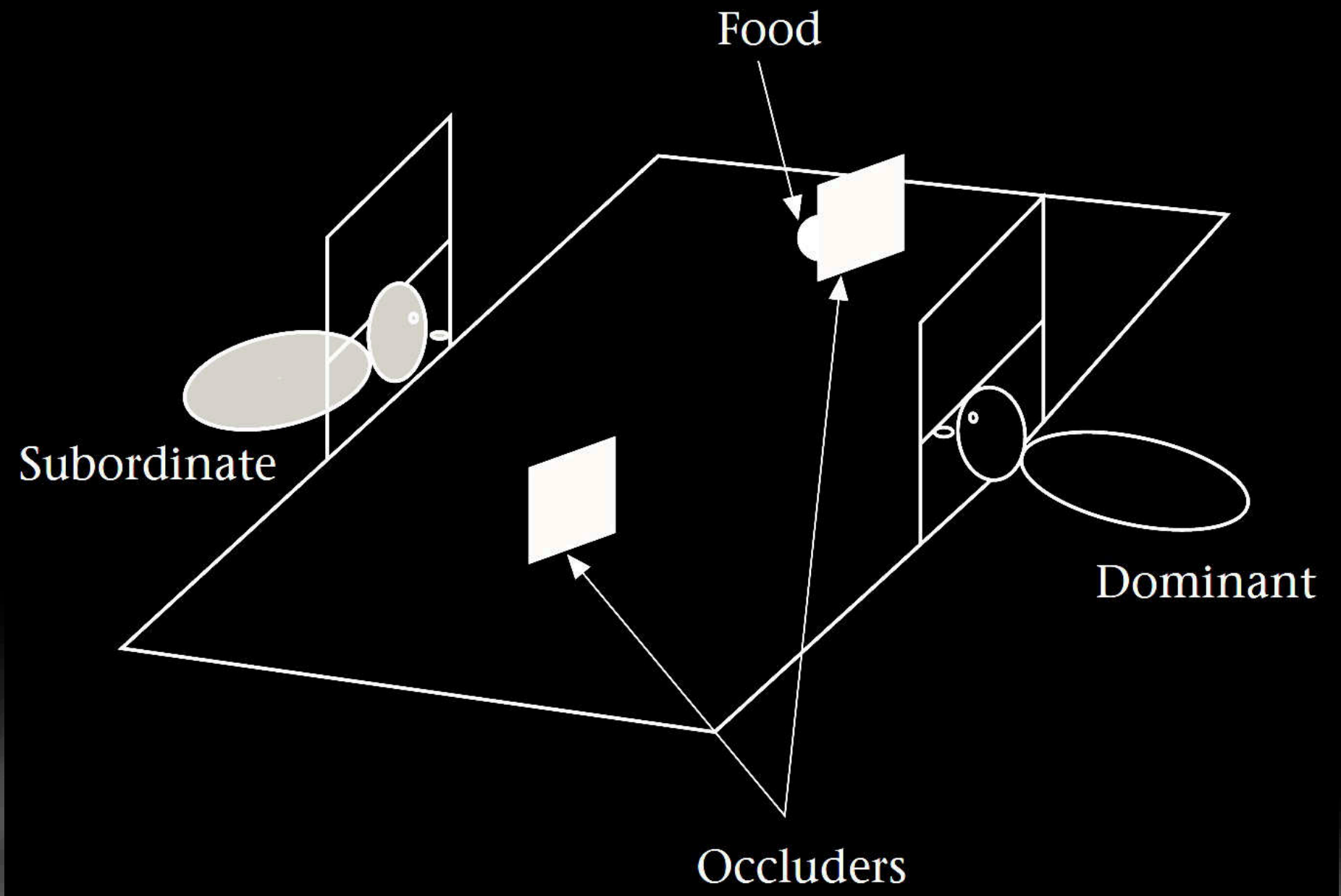
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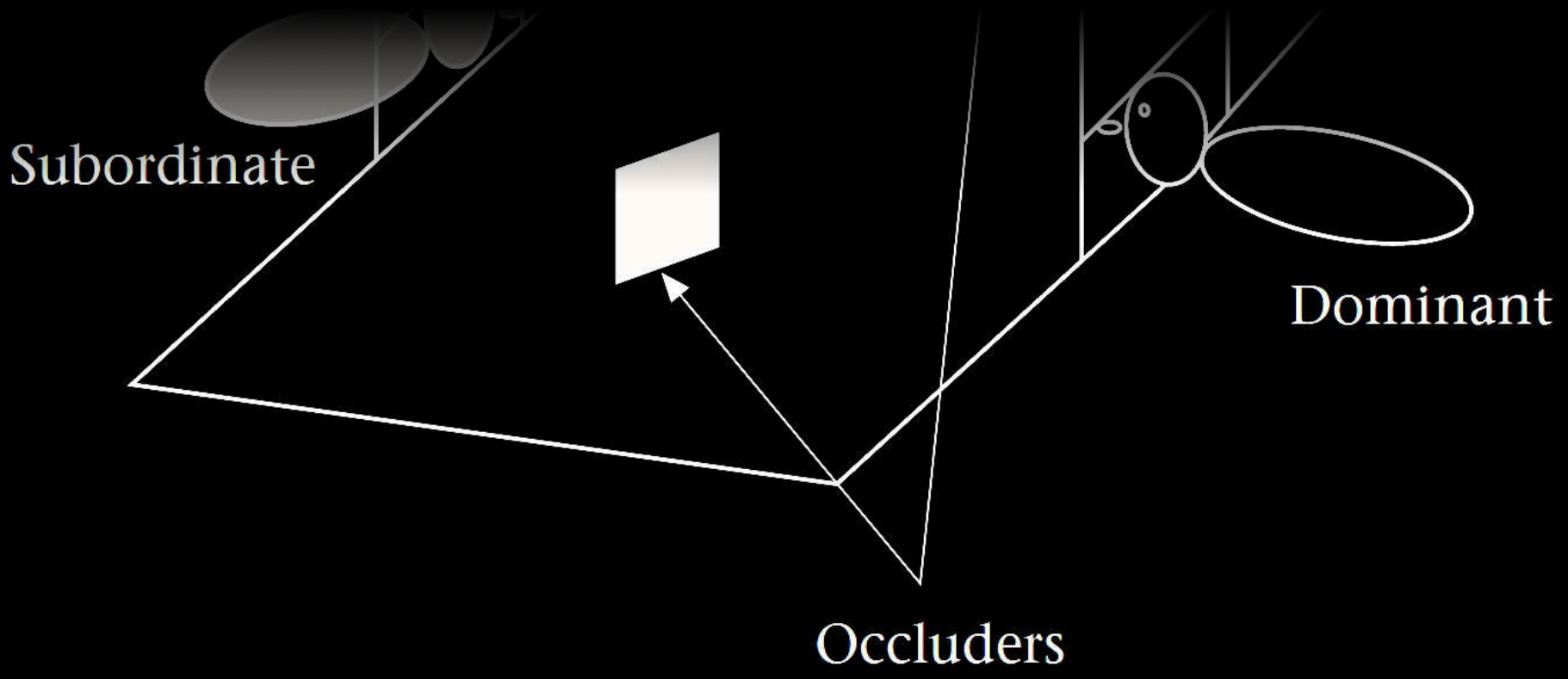

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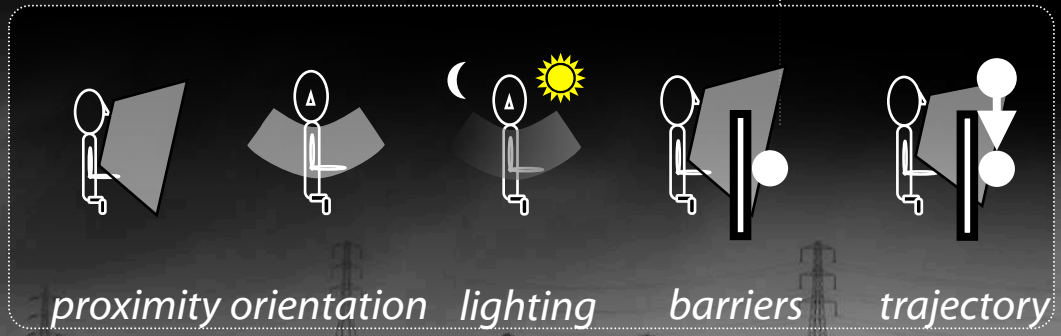

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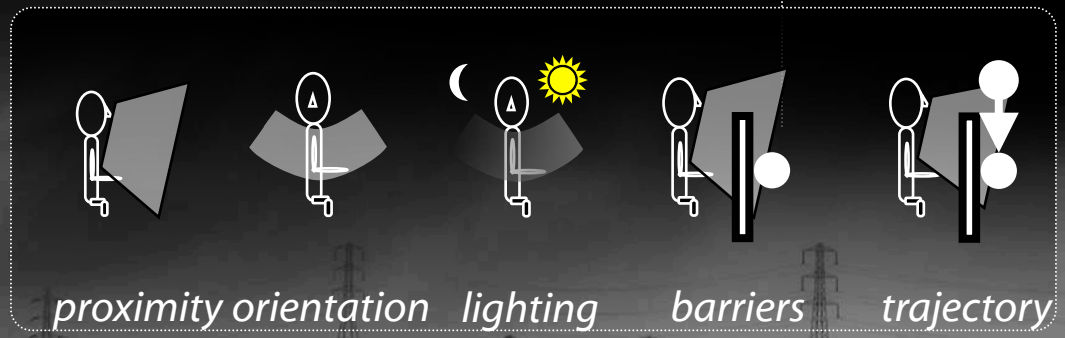

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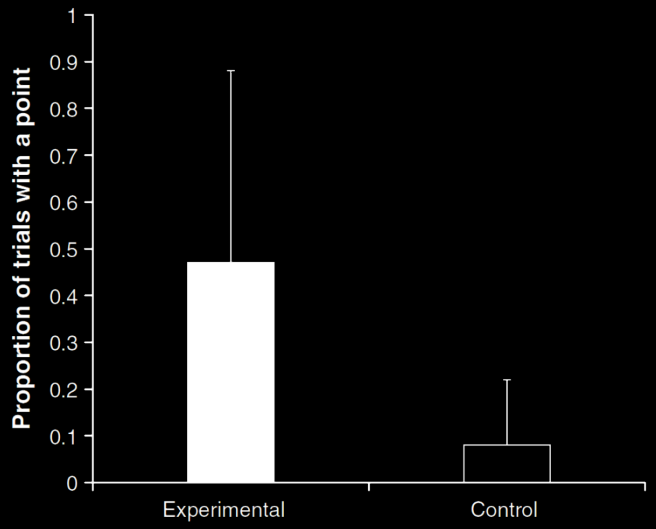

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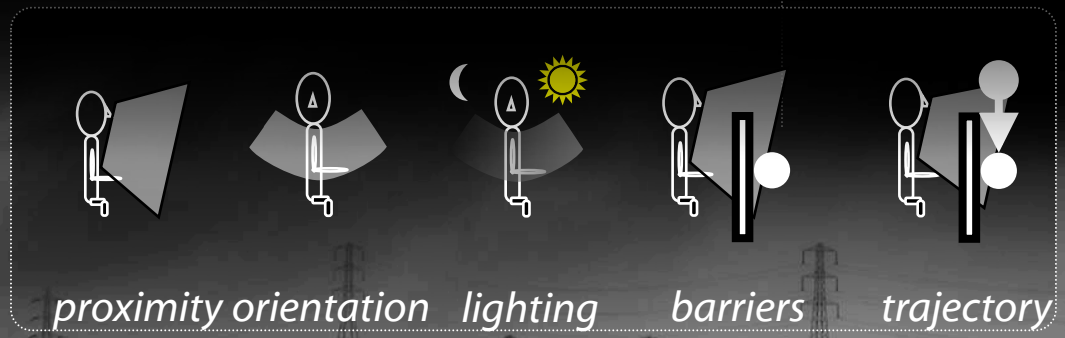

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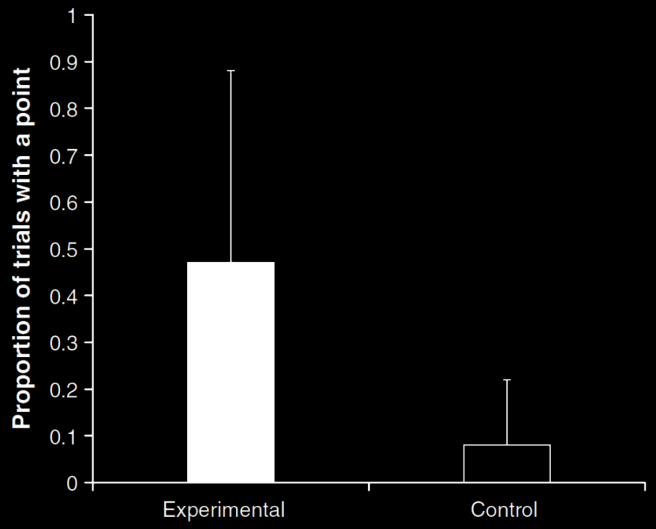

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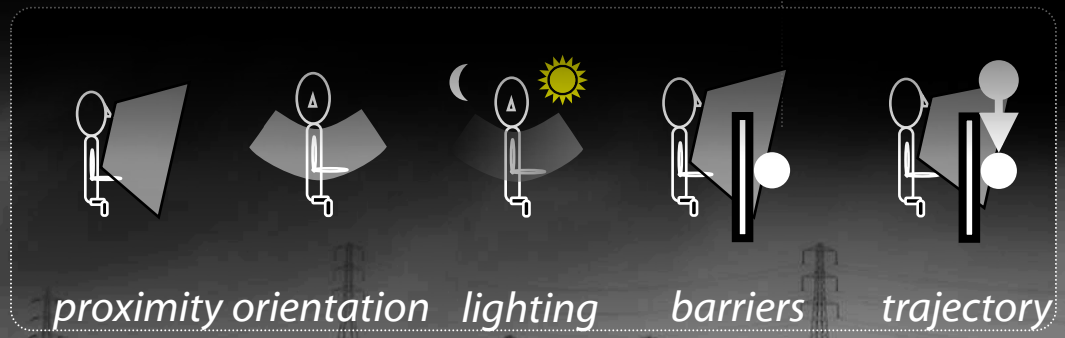

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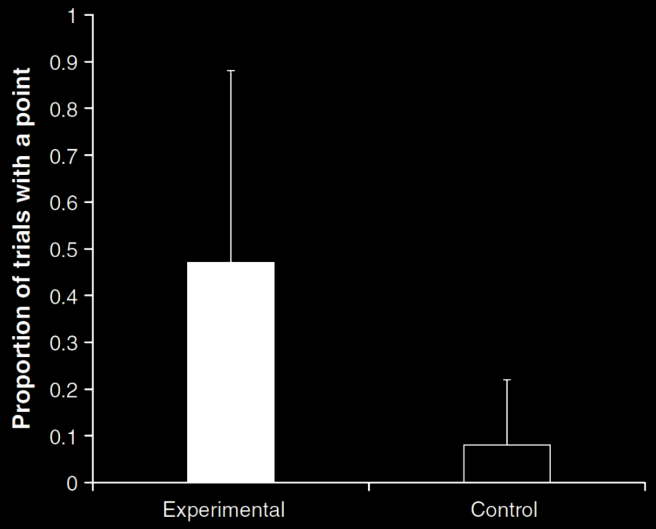

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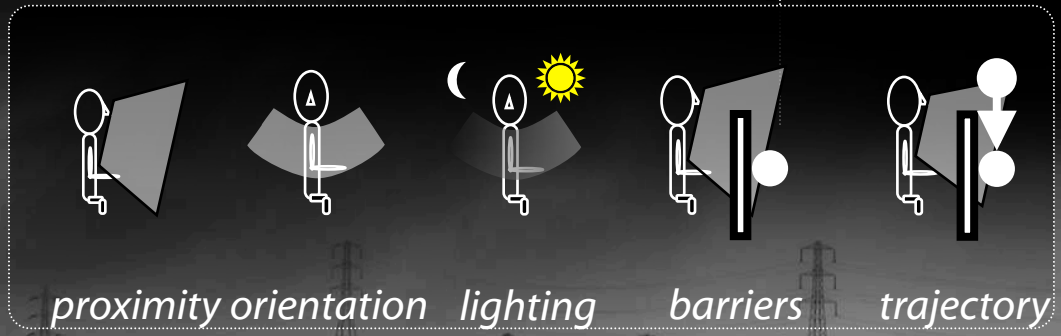

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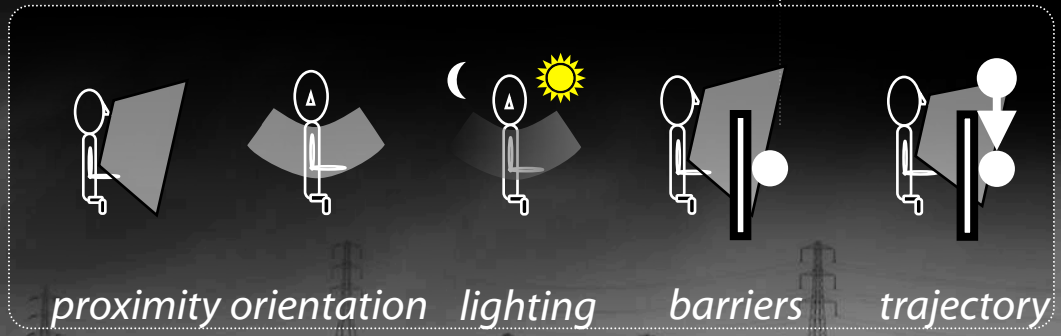

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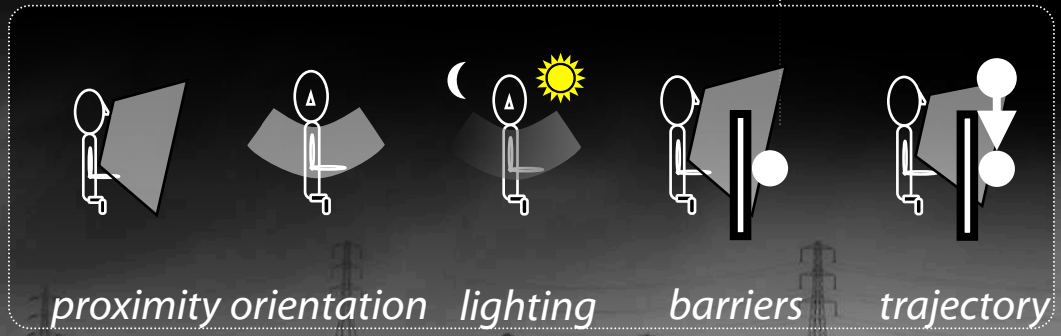
Principle 3: when an agent performs a goal-directed action and the goal specifies an object, the agent will act as if the object were actually in the location she registers it at.



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signature limits

admin

Tim Bayne (University of Oxford)
"Belief and its bedfellows"

Tuesday, 9 October, 2012, 5.30 PM
Zrinyi 14, Room 412

admin

signature limits

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(1) & (2) $\not\Rightarrow$ (3)

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4. Mitch registers <Charly, Baltimore>

5. Mitch registers <Samantha, Baltimore>

(1) & (4) $\Rightarrow$ (5)

	False belief about location	False belief about identity
Subjects represent registration	*pass*	*fail*
Subjects represent beliefs	*pass*	*pass*

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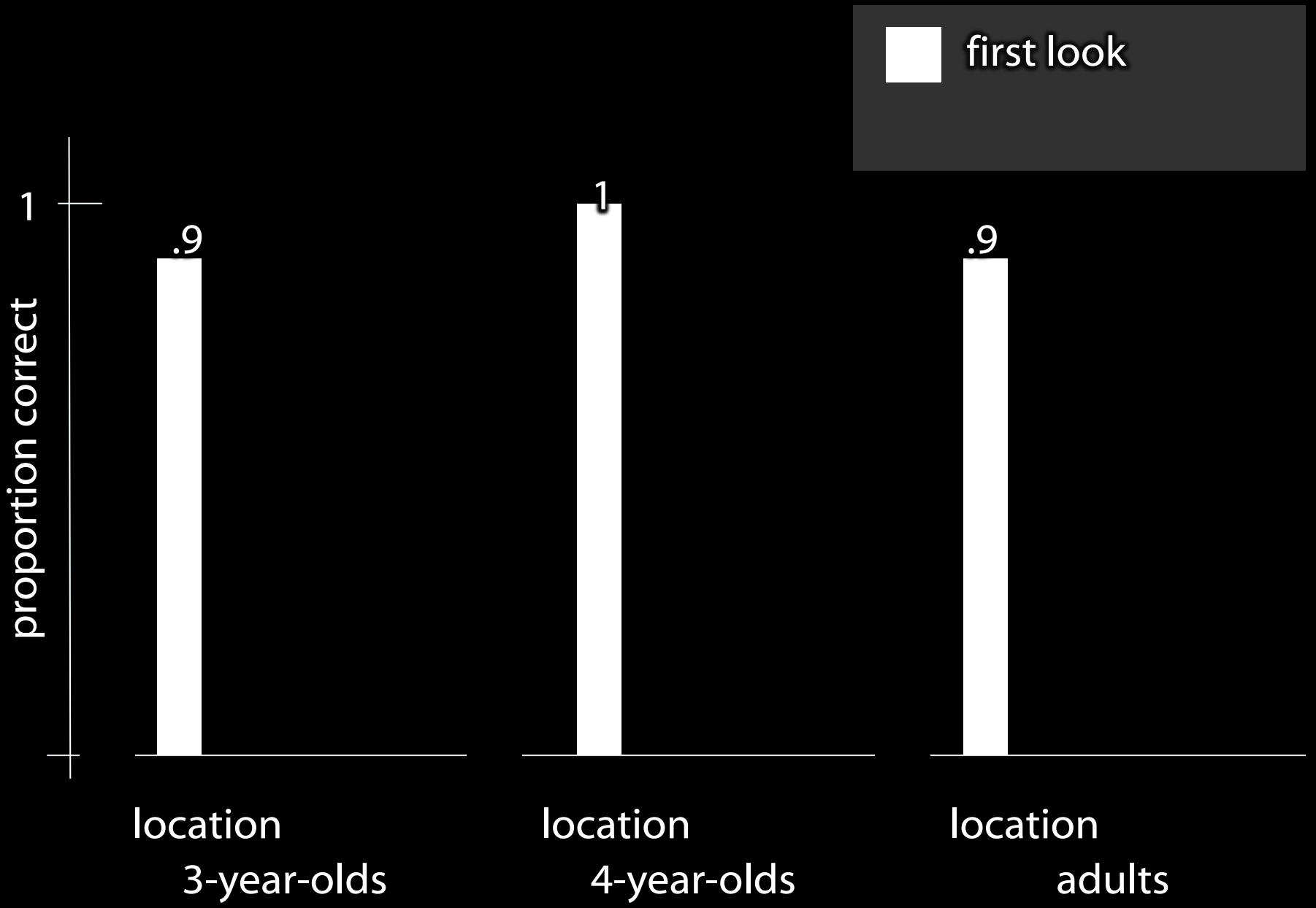

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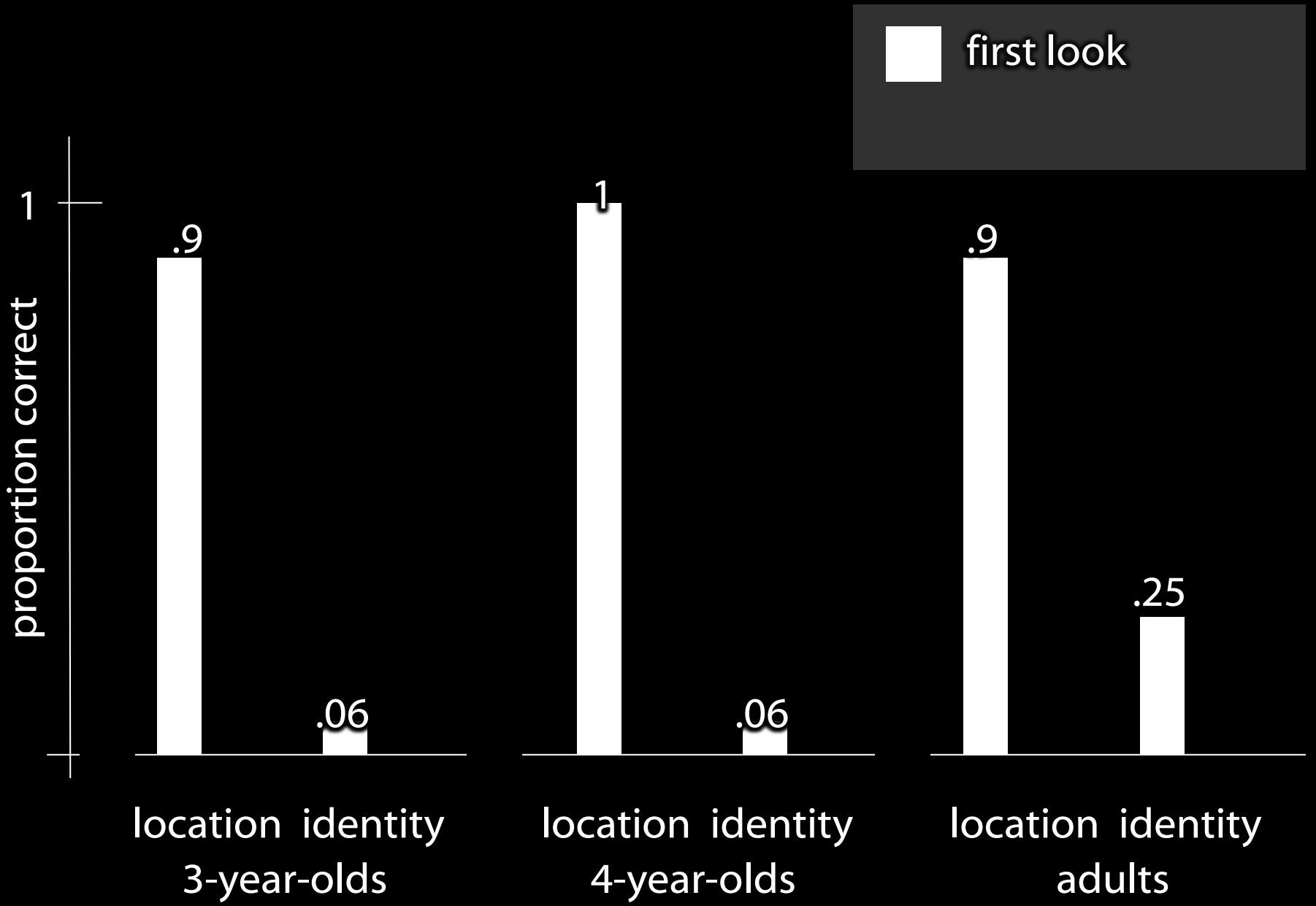

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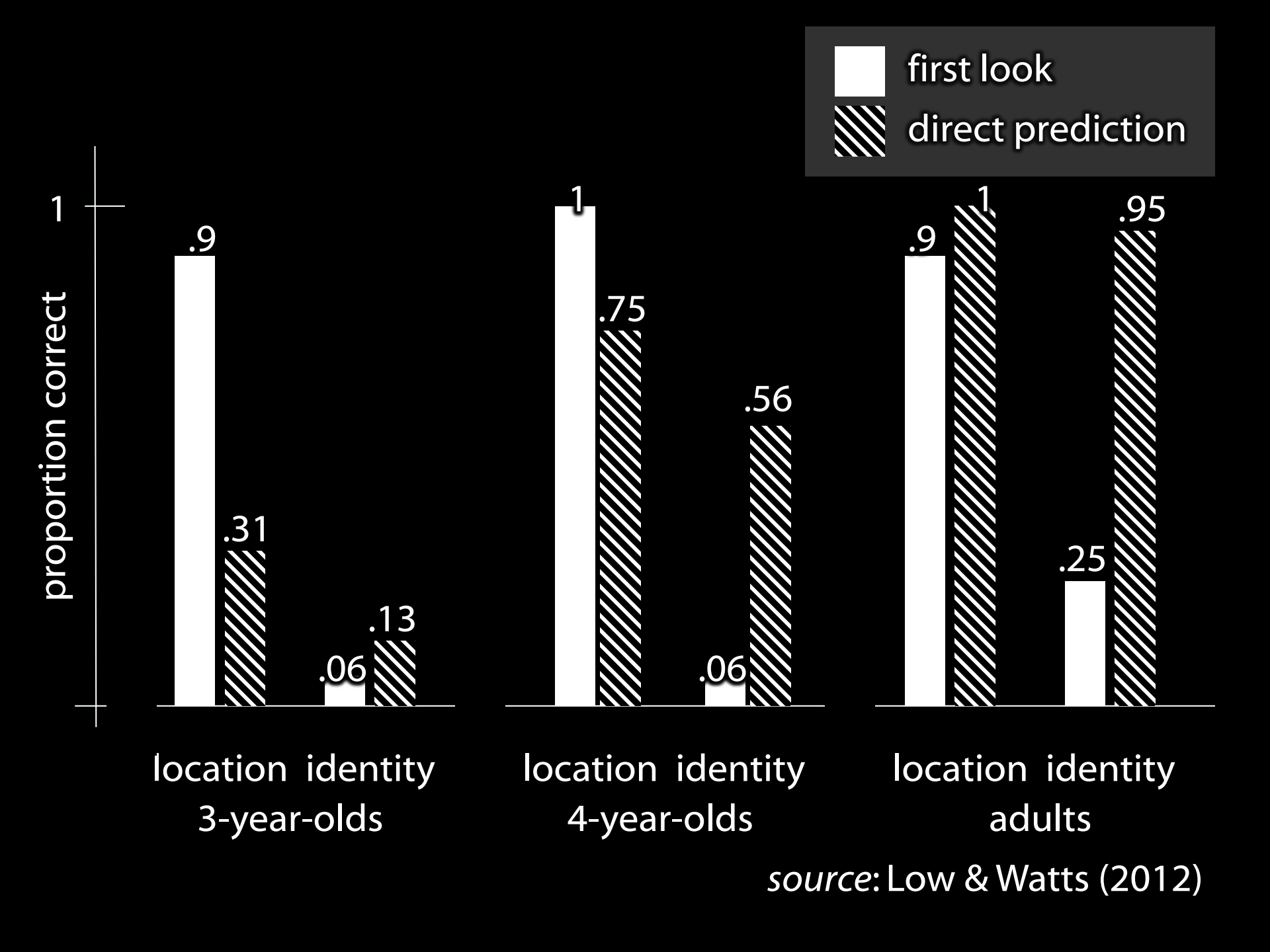

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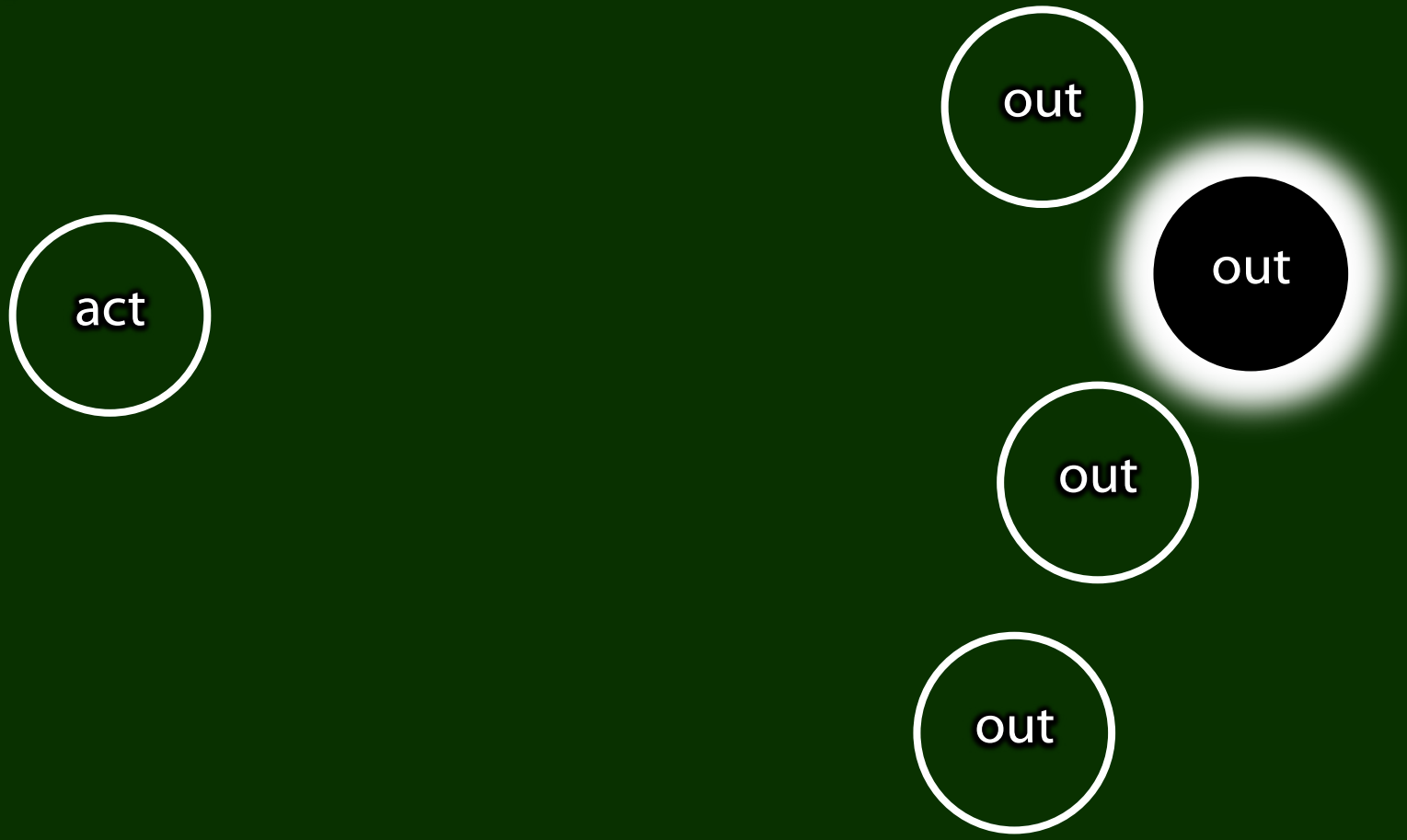
2. These subjects' success on A-tasks is explained by the fact that they **can** represent (false) beliefs *using a simple model in a modular process*

3. These subjects' failure on B-tasks is explained by the fact that they **cannot** represent (false) beliefs *using a sophisticated model in a non-modular process*

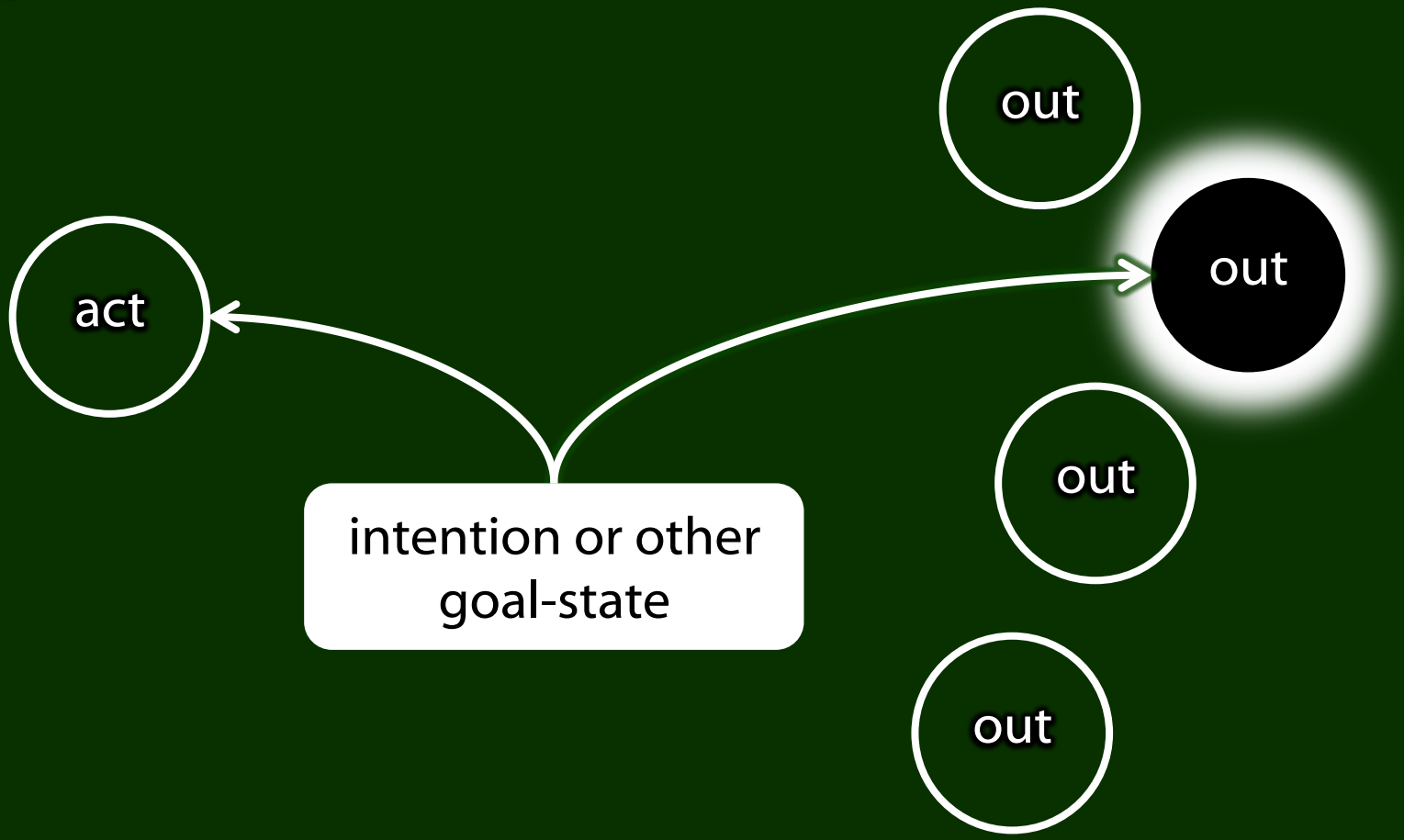
Detour
Goals are not intentions

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

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



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



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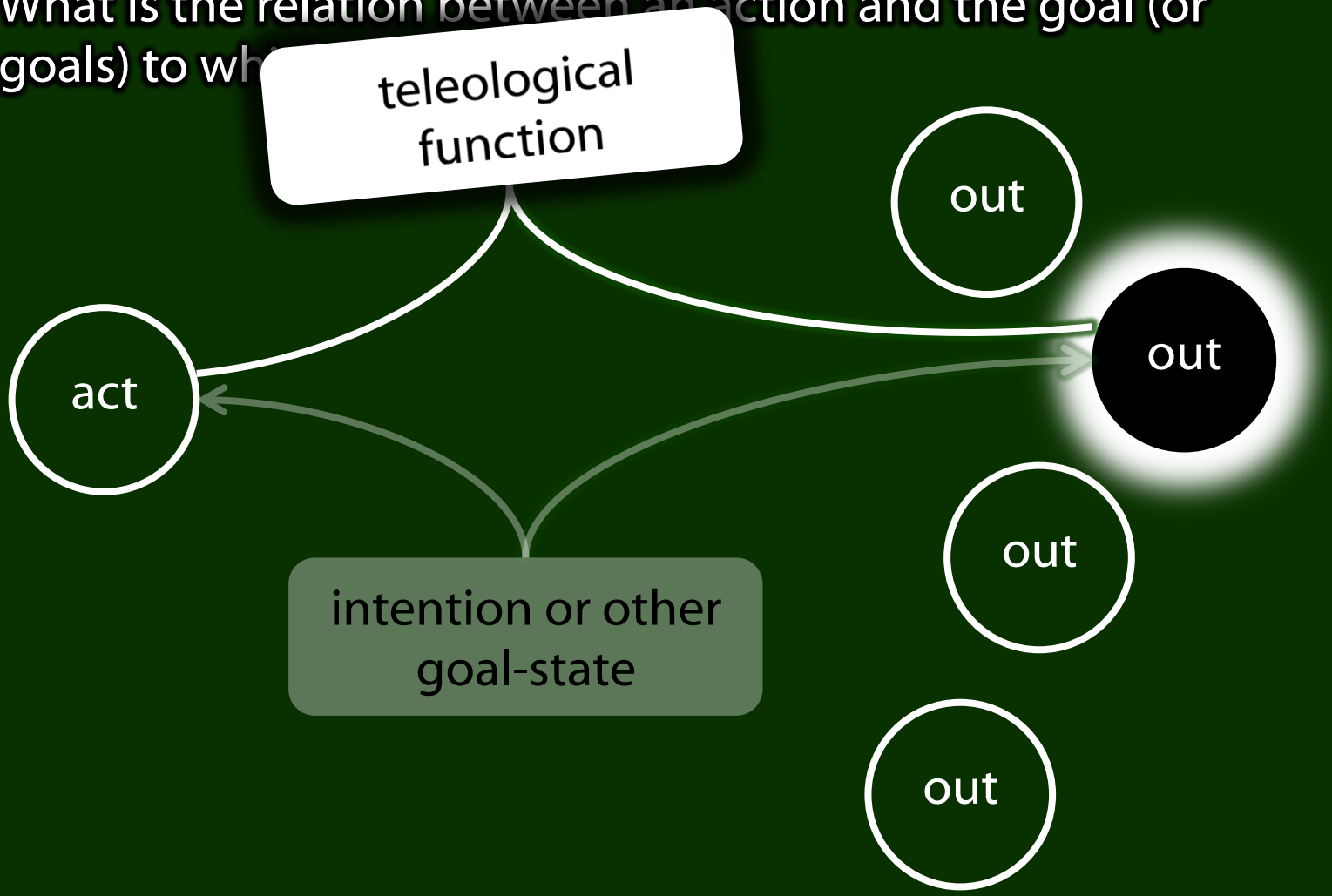
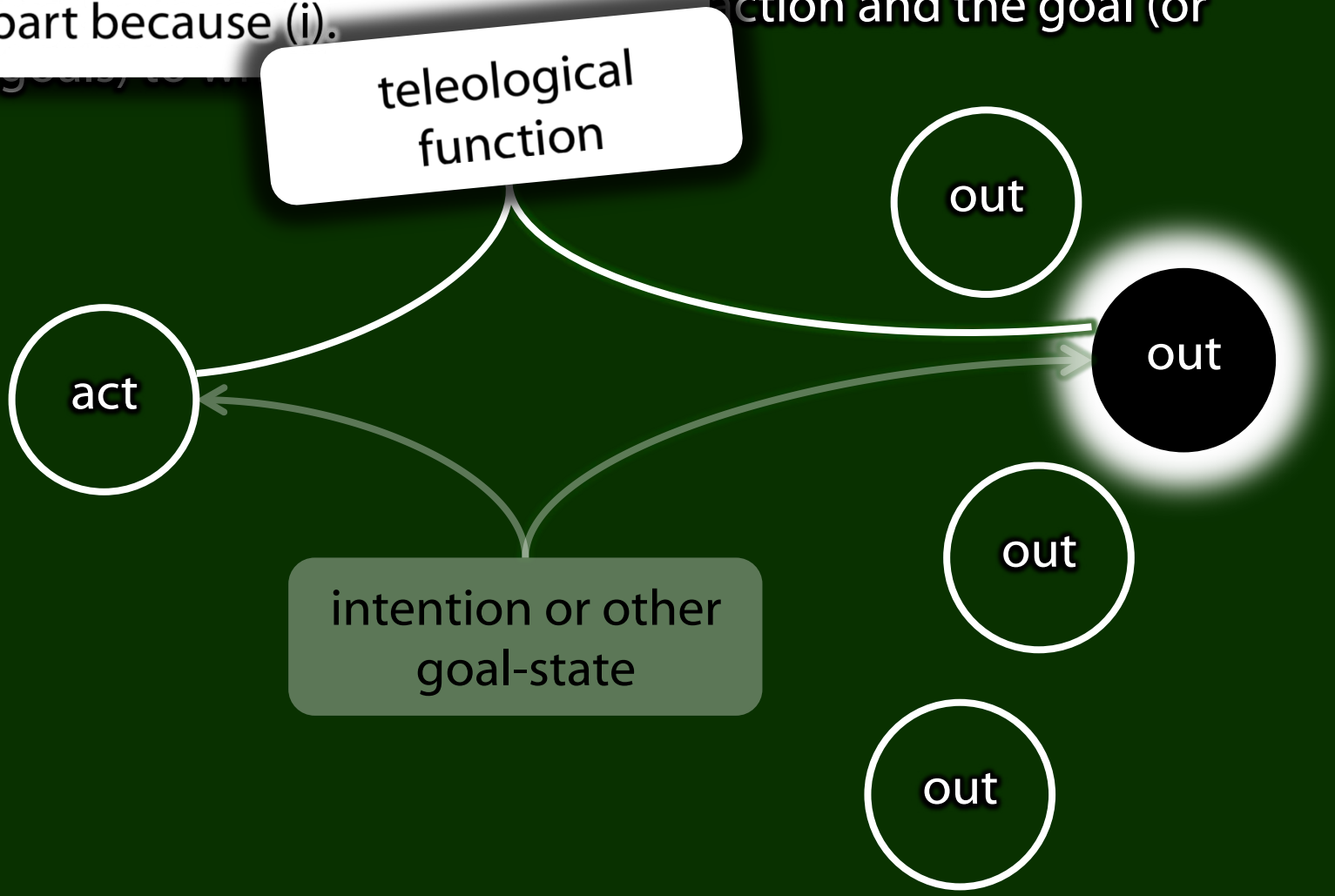


(i) in the past, actions of this type have caused outcomes of this type; (ii) this action happens now in part because (i).

ction and the goal (or



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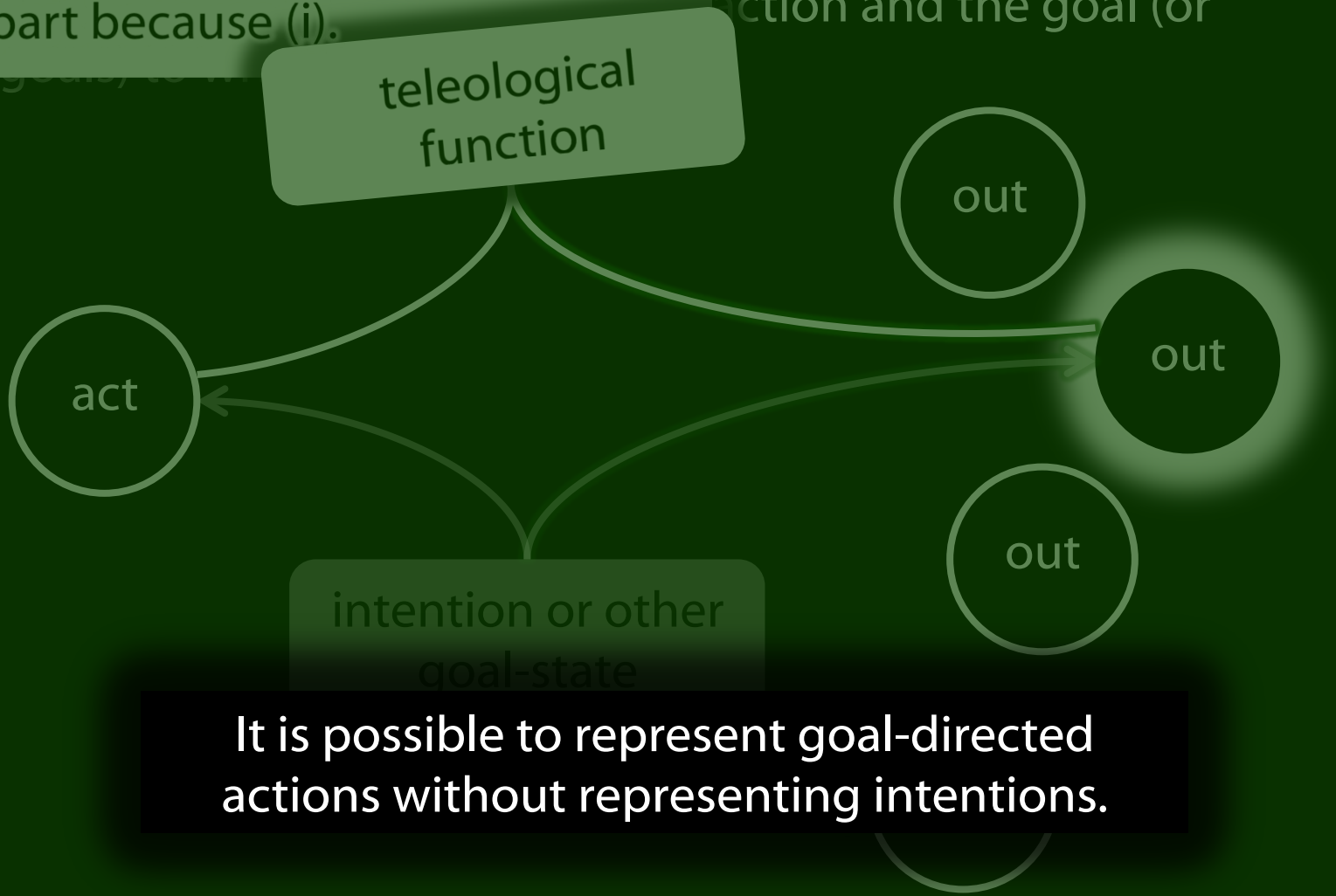
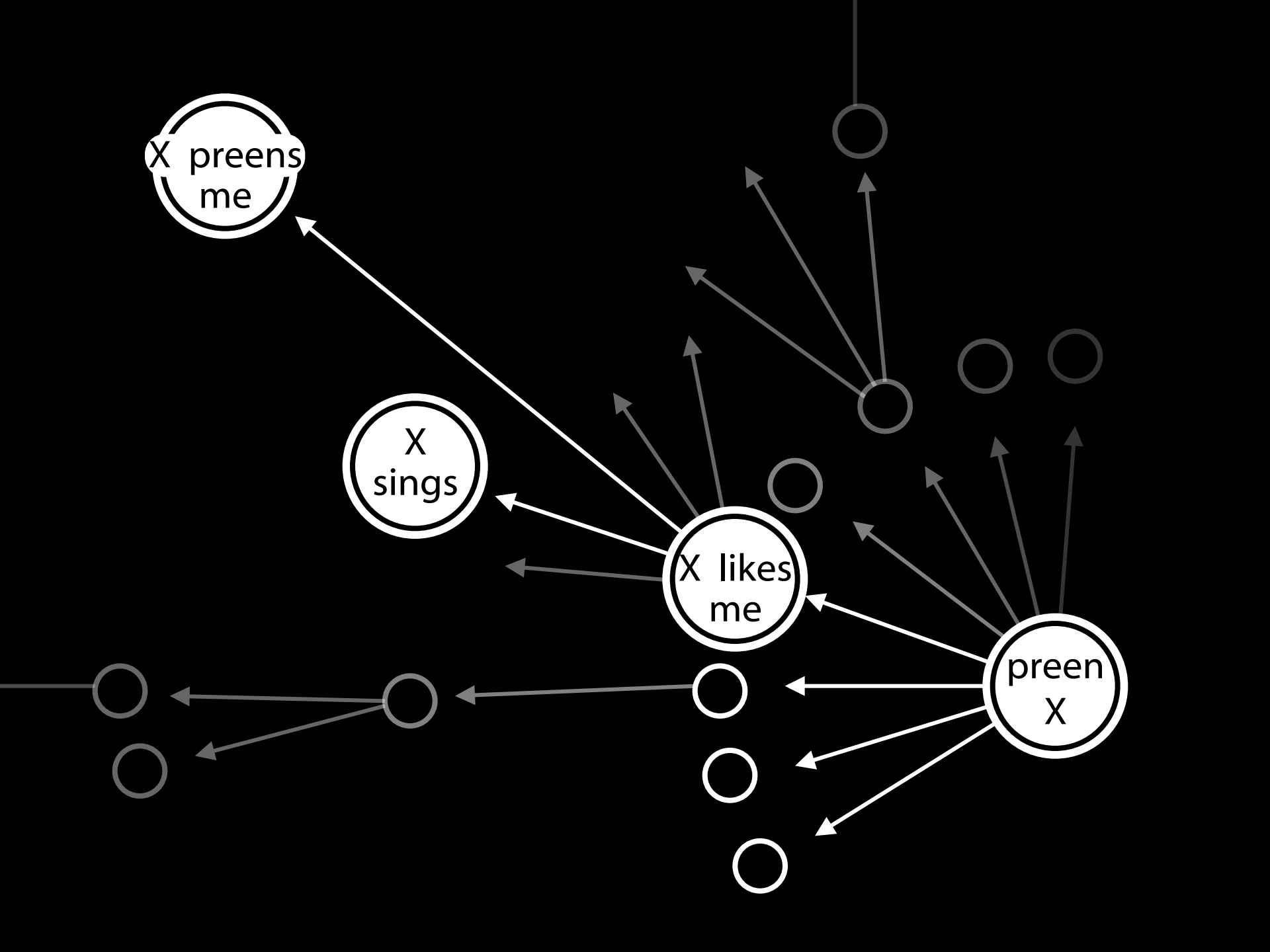
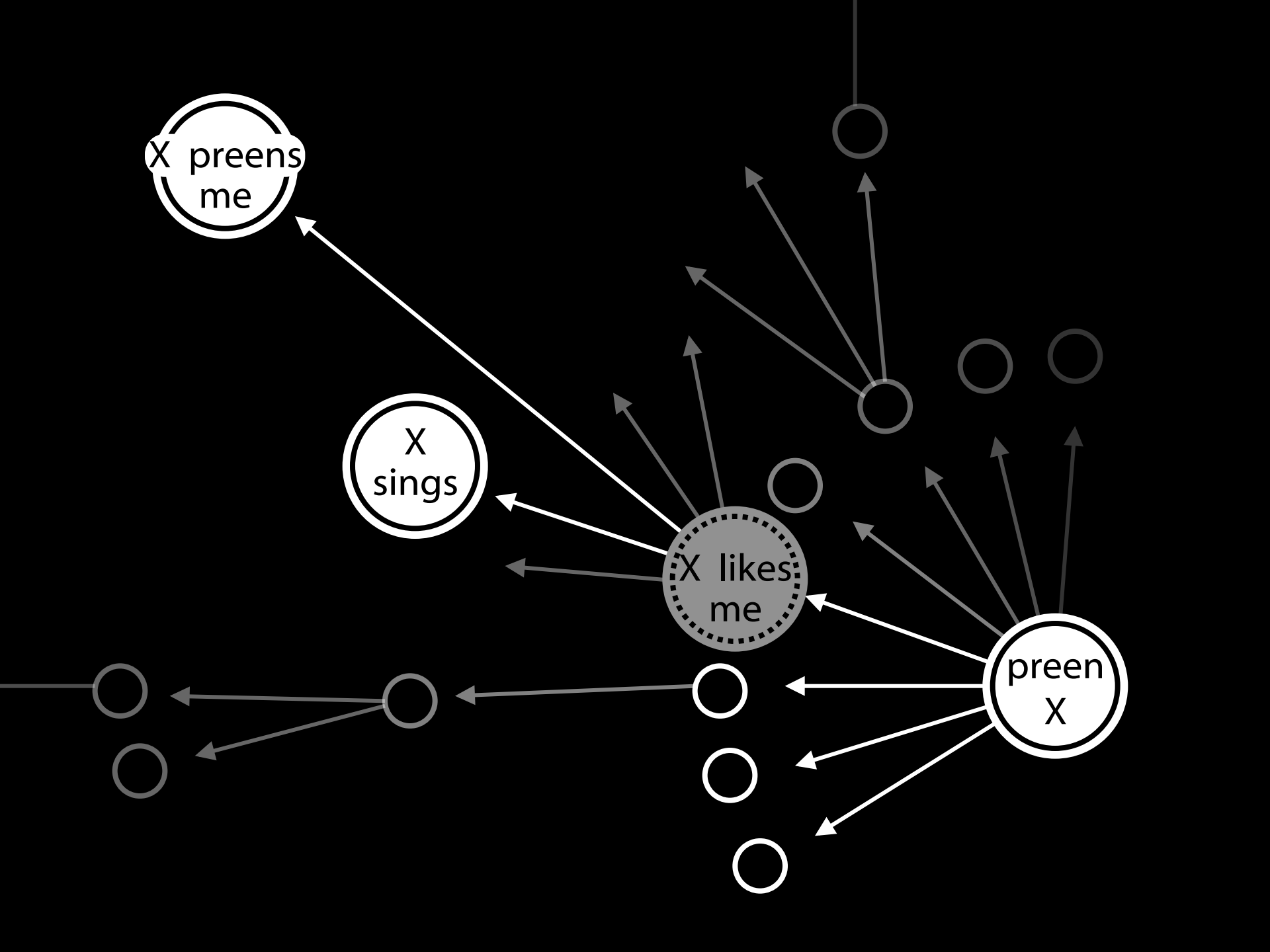


It is possible to represent goal-directed actions without representing intentions.


X preens me
X sings
X likes me
preen X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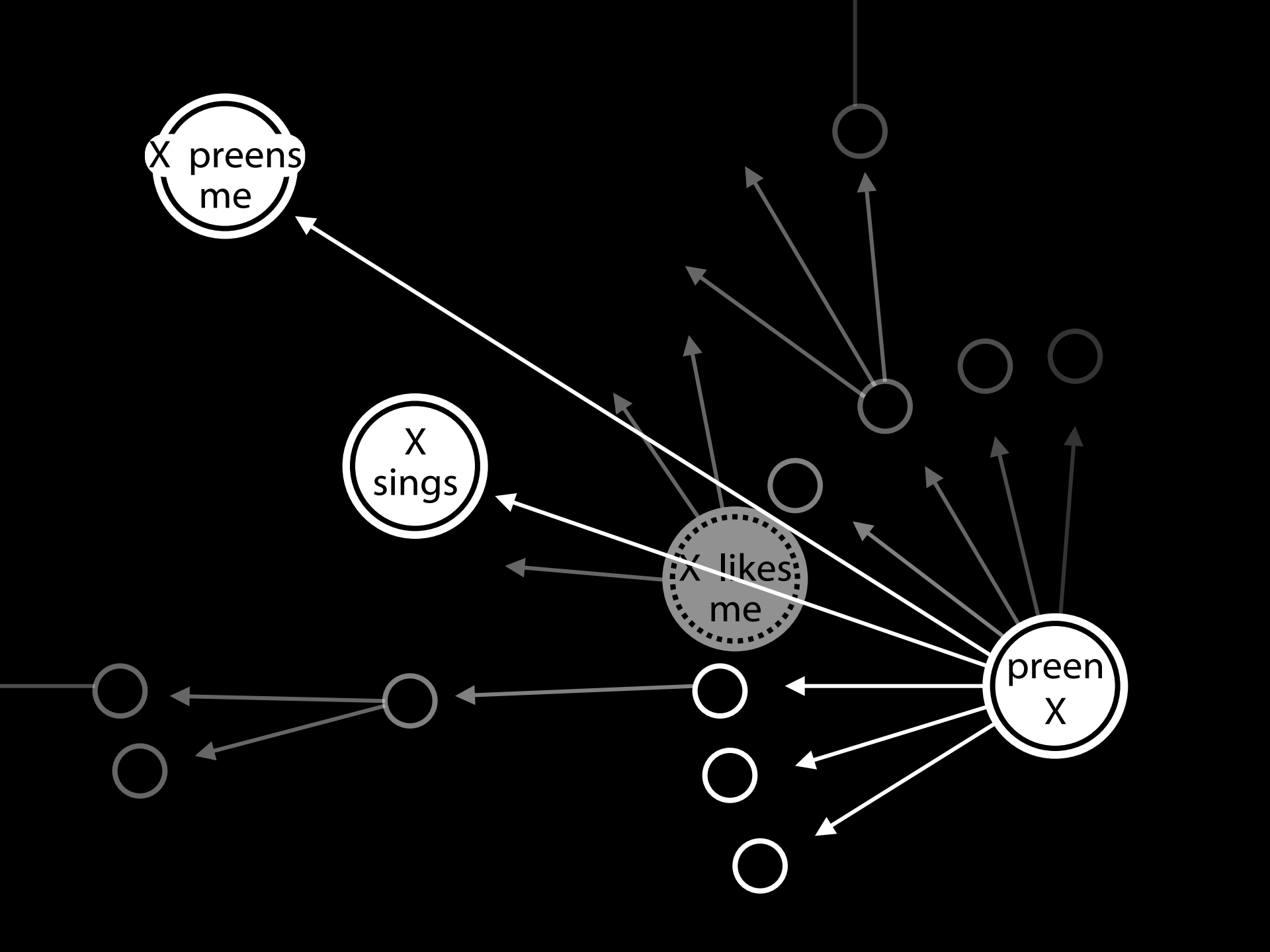
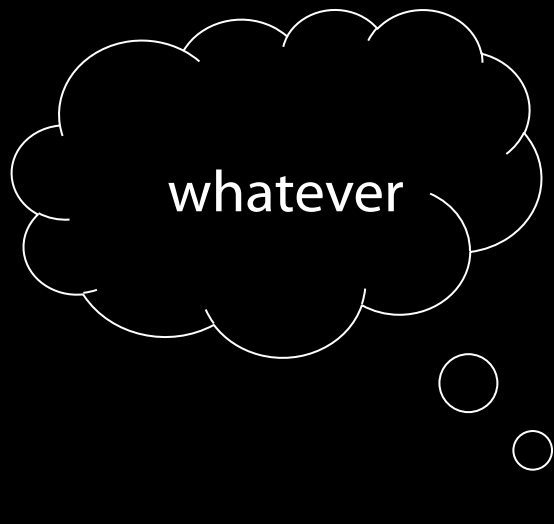

X preens me
X sings
X likes me
preen X

micro

But that ain't
force
belief
temperature


whatever

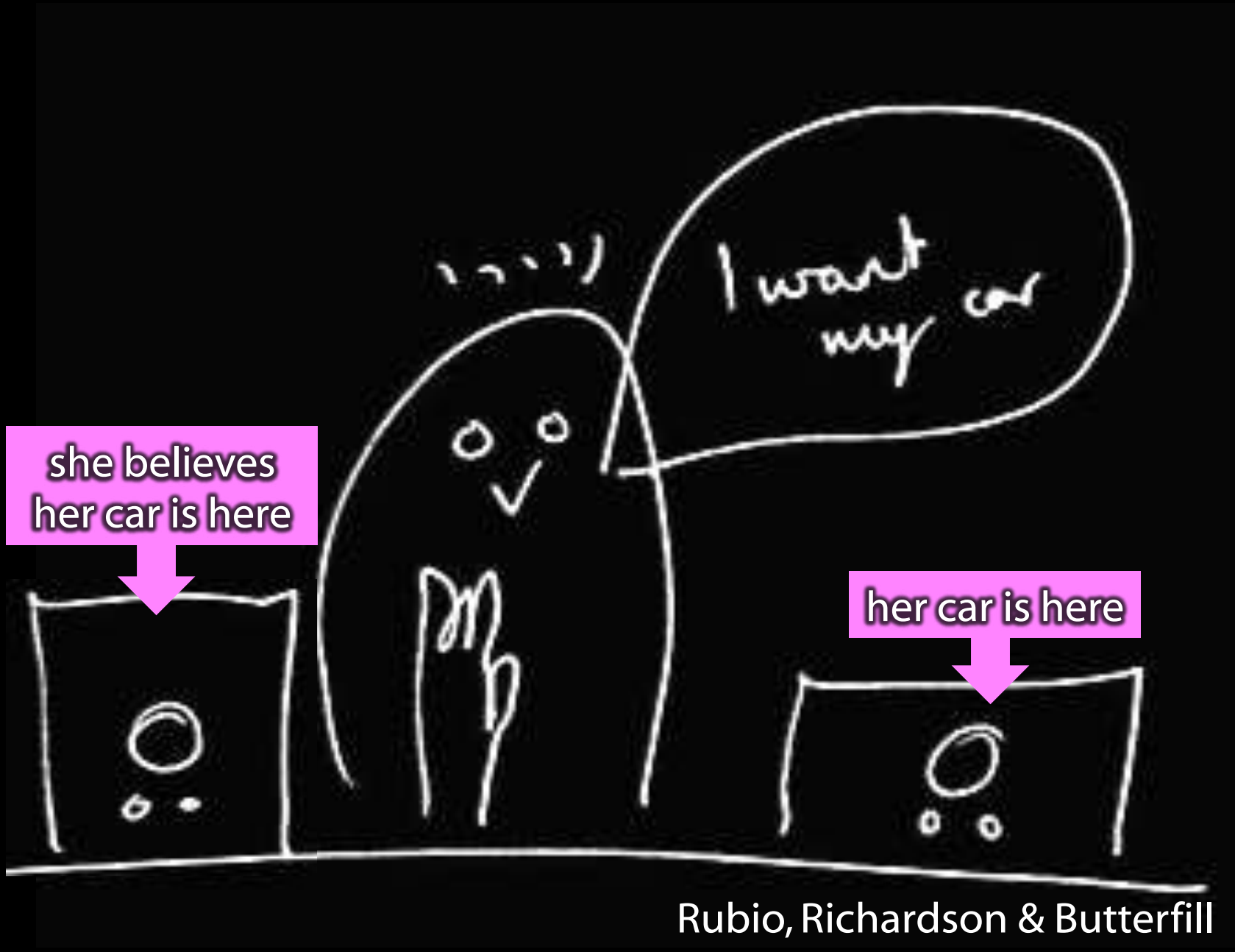
Rubio, Richardson & Butterfill

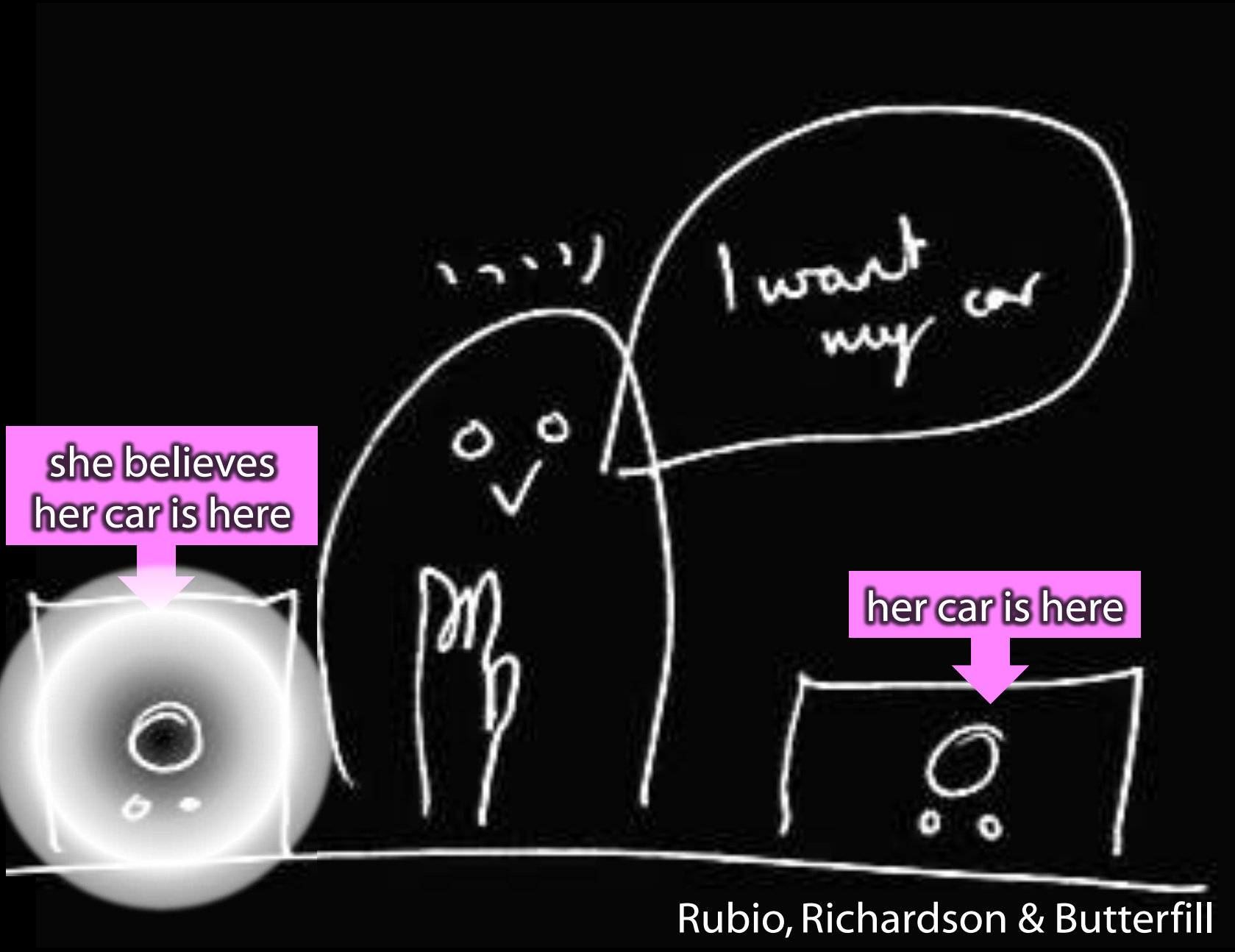
Rubio, Richardson & Butterfill

Rubio, Richardson & Butterfill

Rubio, Richardson & Butterfill

Rubio, Richardson & Butterfill


I want my car
she believes her car is here
her car is here
Rubio, Richardson & Butterfill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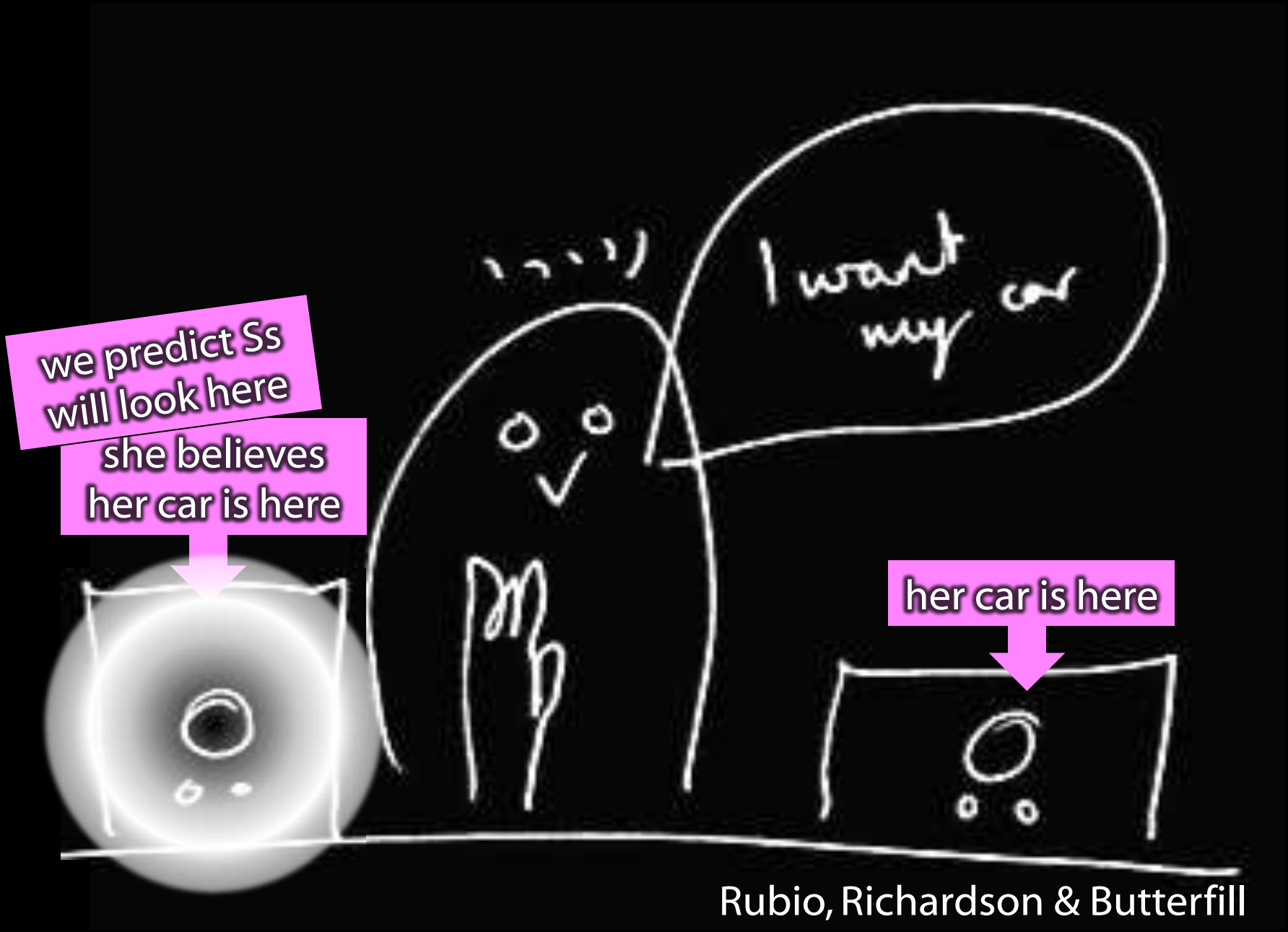
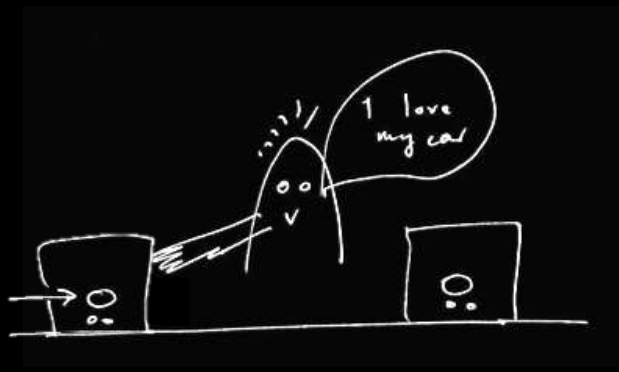
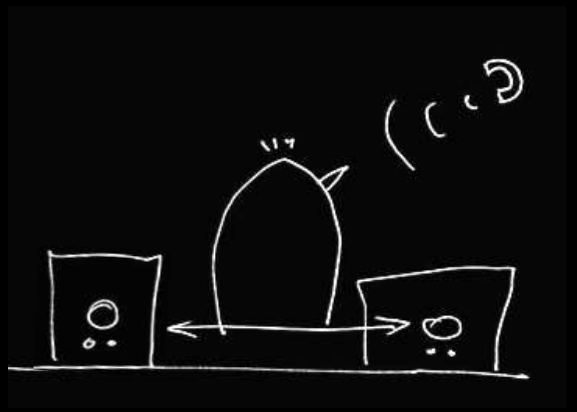
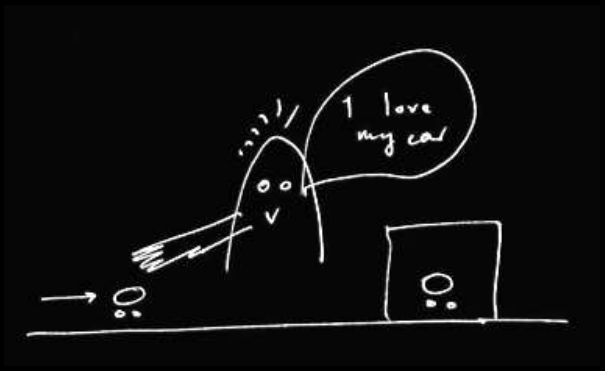
Rubio, Richardson & Butterfill

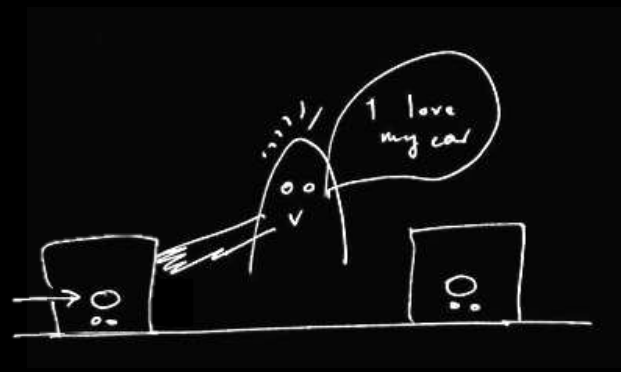

we predict Ss will look here
she believes her car is here
I want my car
her car is here
Rubio, Richardson & Butterfill

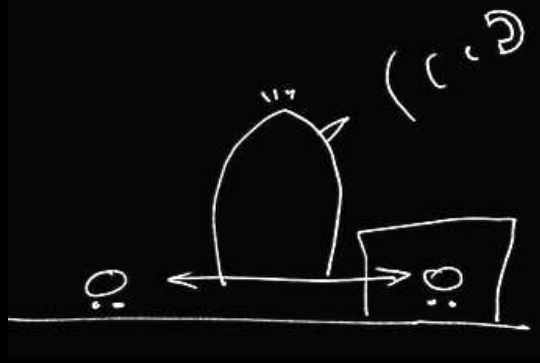


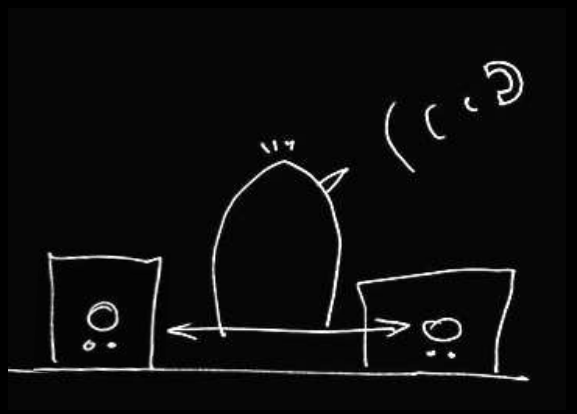


Rubio, Richardson & Butterfill



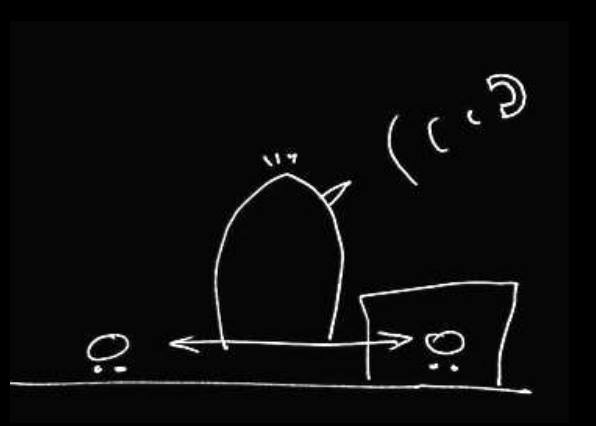






Rubio, Richardson & Butterfill

2



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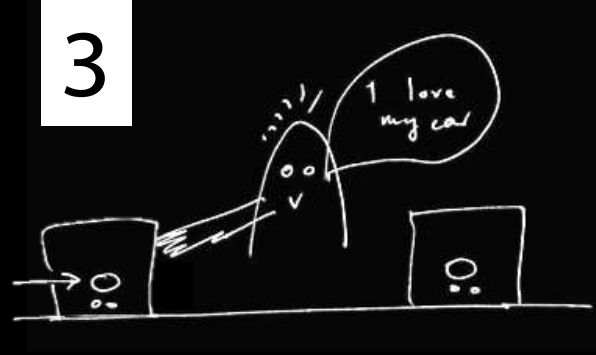
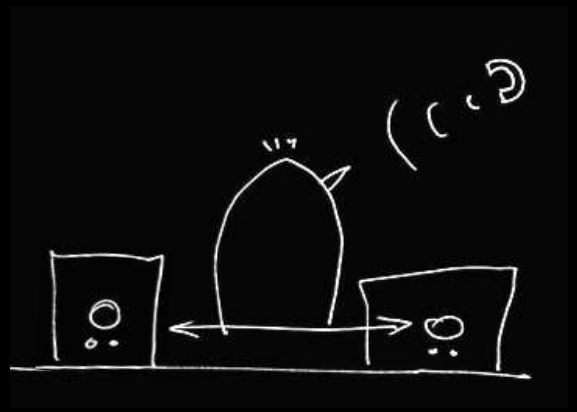
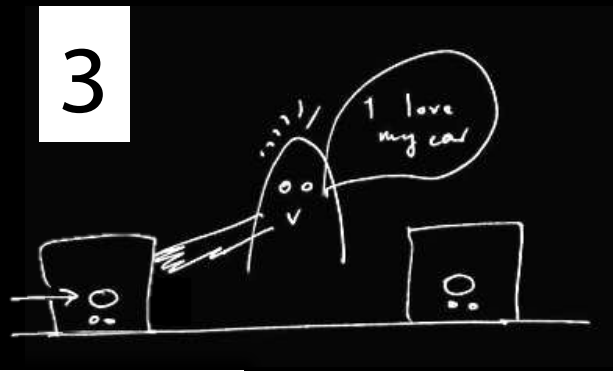




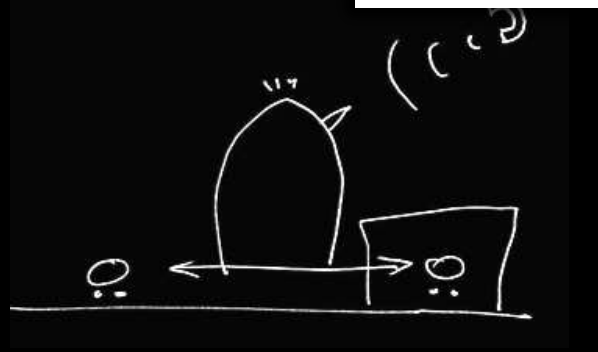
Rubio, Richardson & Butterfill

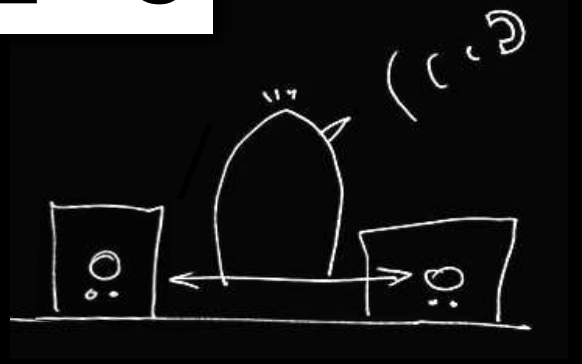
2

3



belief: 2 ≈ 3



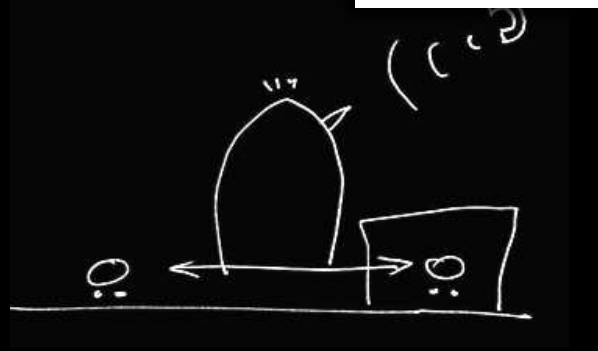


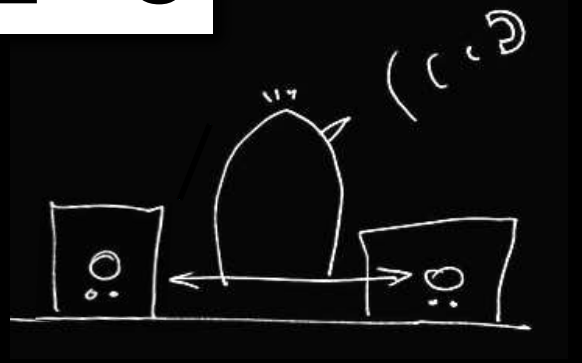
Rubio, Richardson & Butterfill

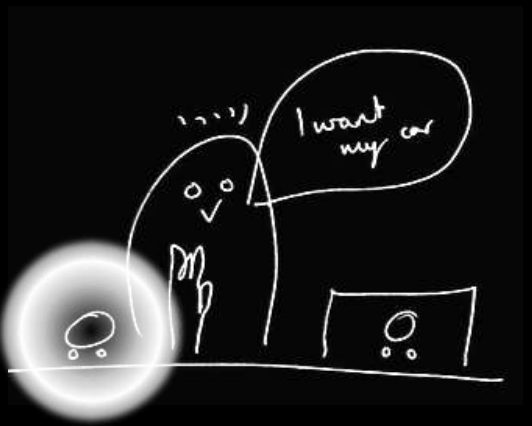
2

3

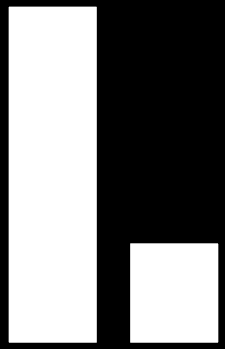
belief: 2 ≈ 3





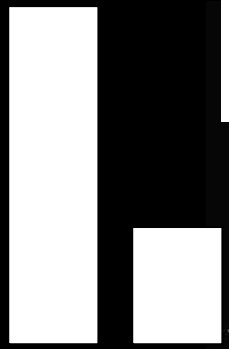


Rubio, Richardson & Butterfill



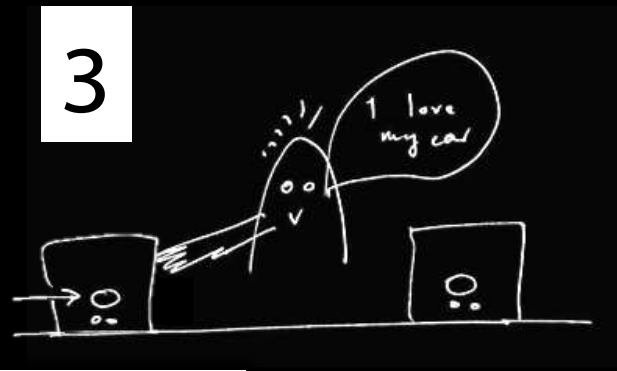
left right

2

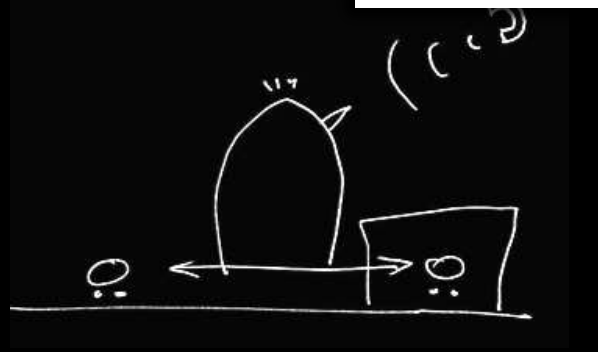


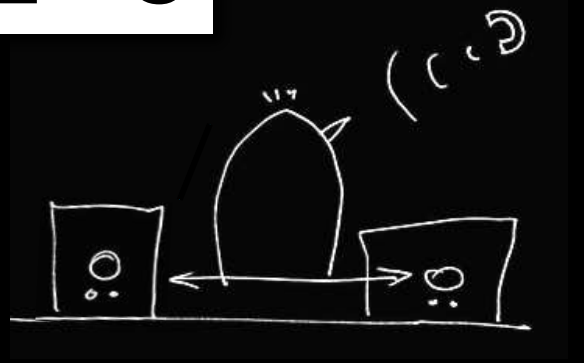
left right

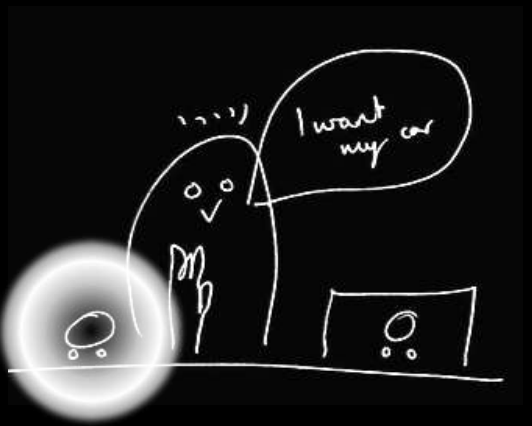
3



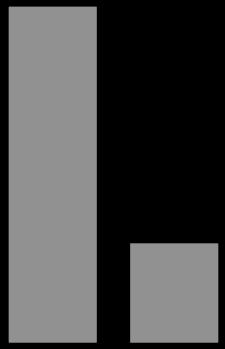
belief: $2 \approx 3$







Rubio, Richardson & Butterfill

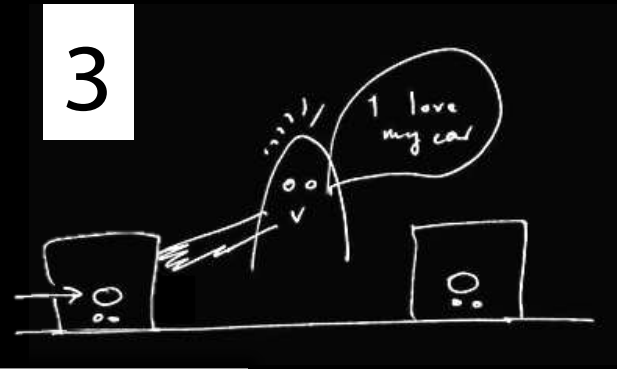


left right

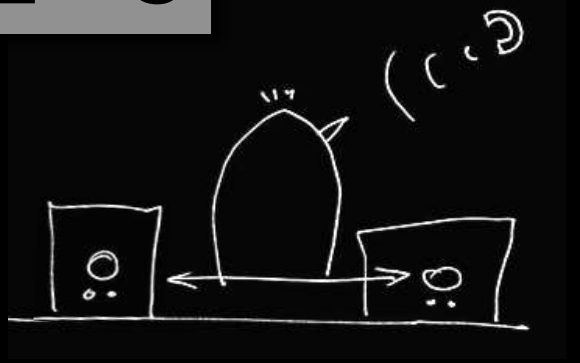
2

left right

3

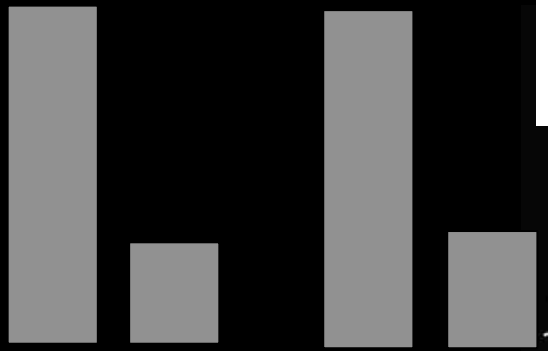


belief: $2 \approx 3$



registration: $2 \not\approx 3$

Rubio, Richardson & Butterfill

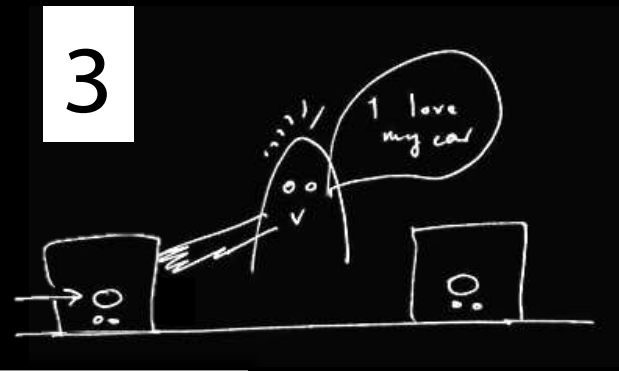


left right

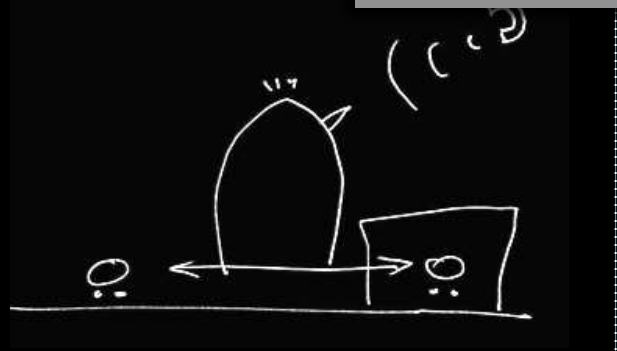
2

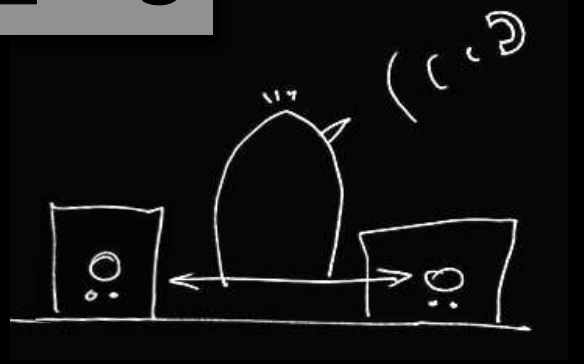
left right

3



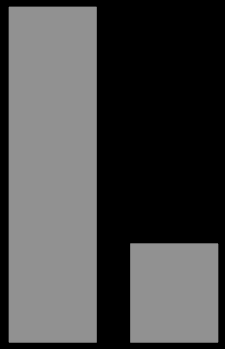
belief: $2 \approx 3$





registration: $2 \not\approx 3$

Rubio, Richardson & Butterfill



left right

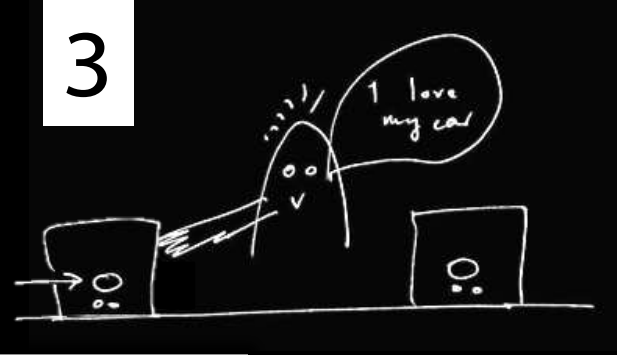
2

left right

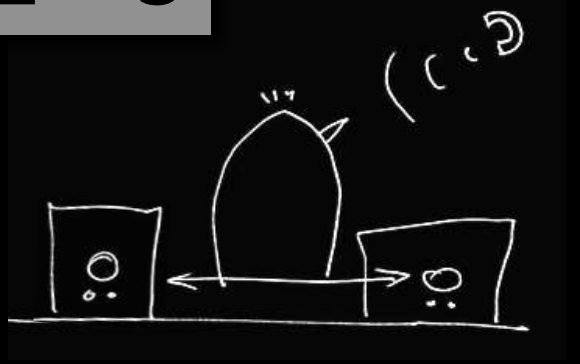
3

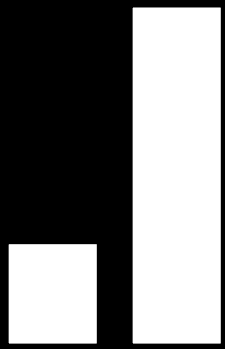
2

3



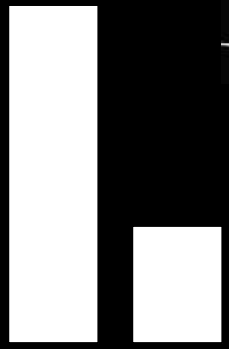
belief: $2 \approx 3$





left right

2

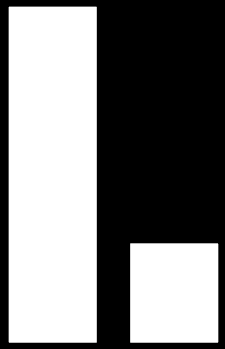


left right

3

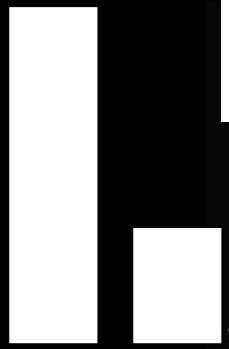
registration: $2 \not\approx 3$

Rubio, Richardson & Butterfill



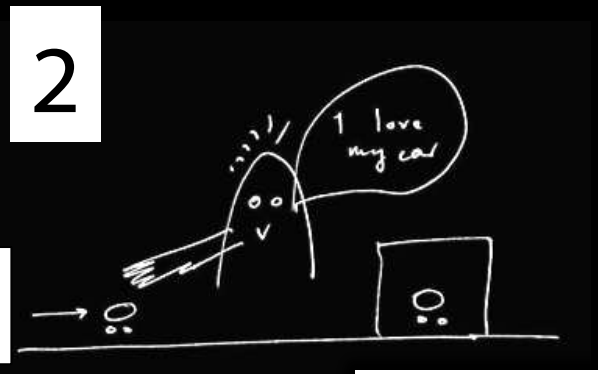
left right

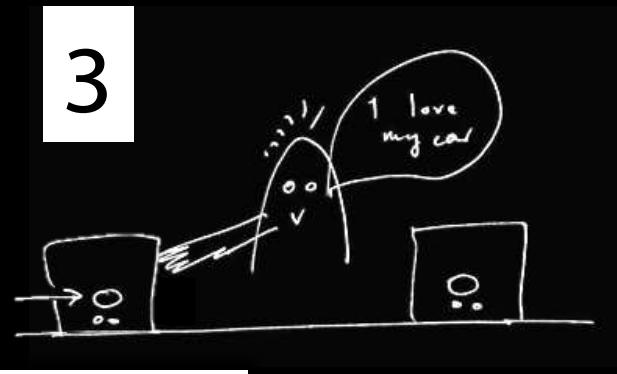
2



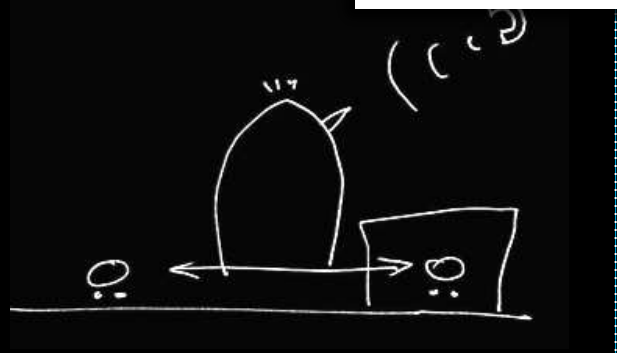
left right

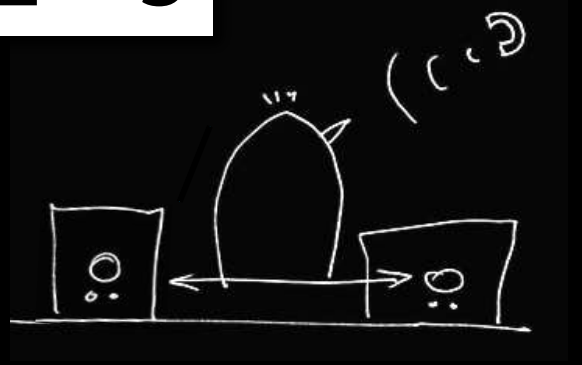
3

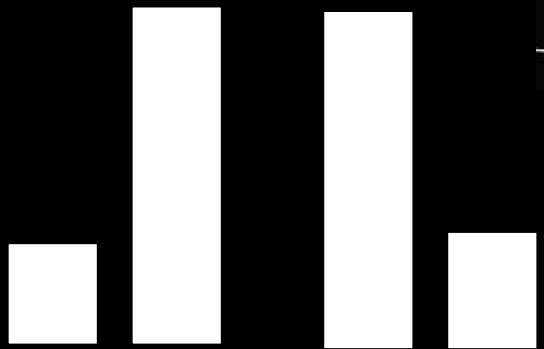




belief: $2 \approx 3$







left right

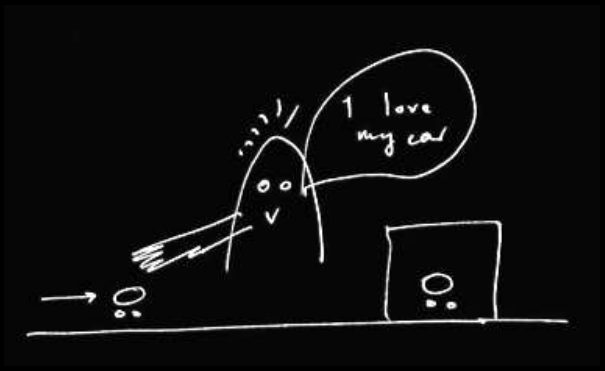
2

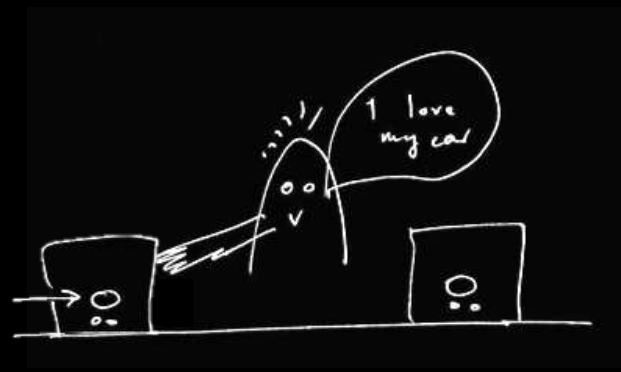
left right

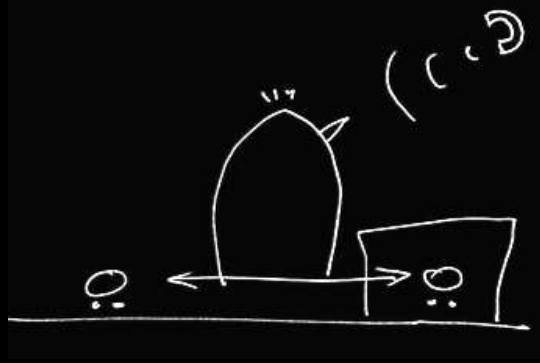
3

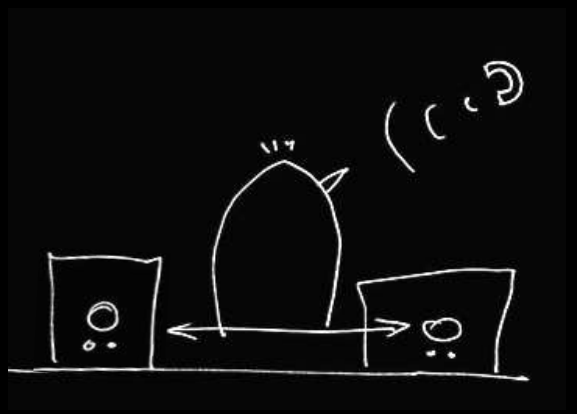
registration: $2 \not\approx 3$

Rubio, Richardson & Butterfill

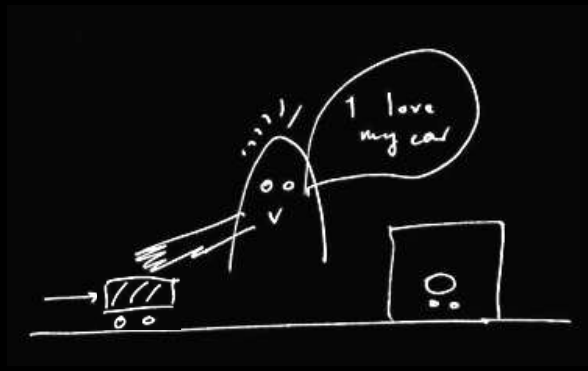


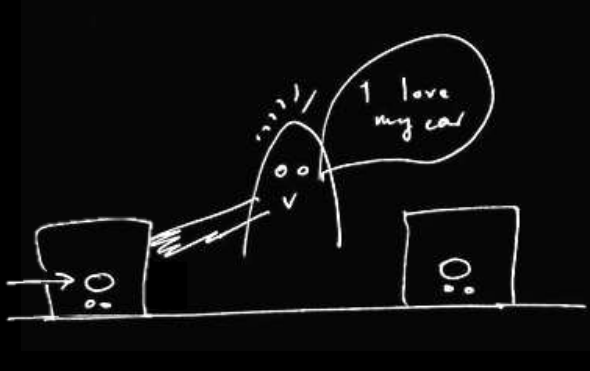


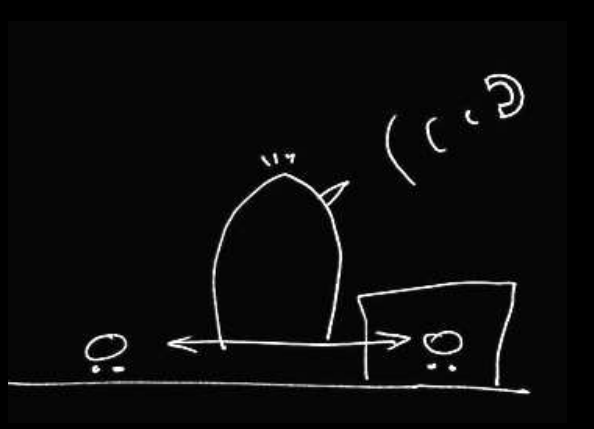


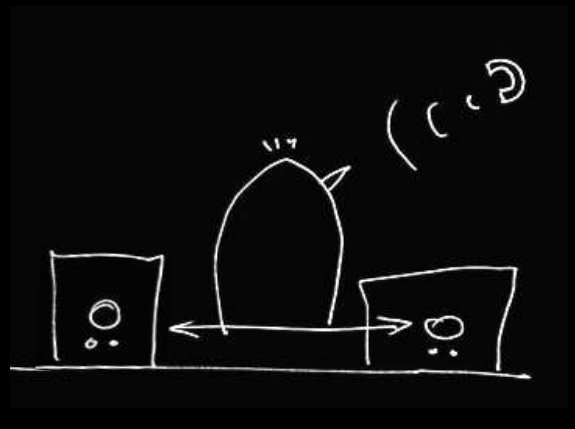


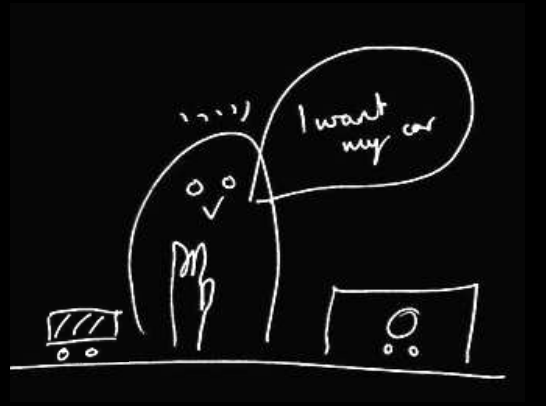
Rubio, Richardson & Butterfill



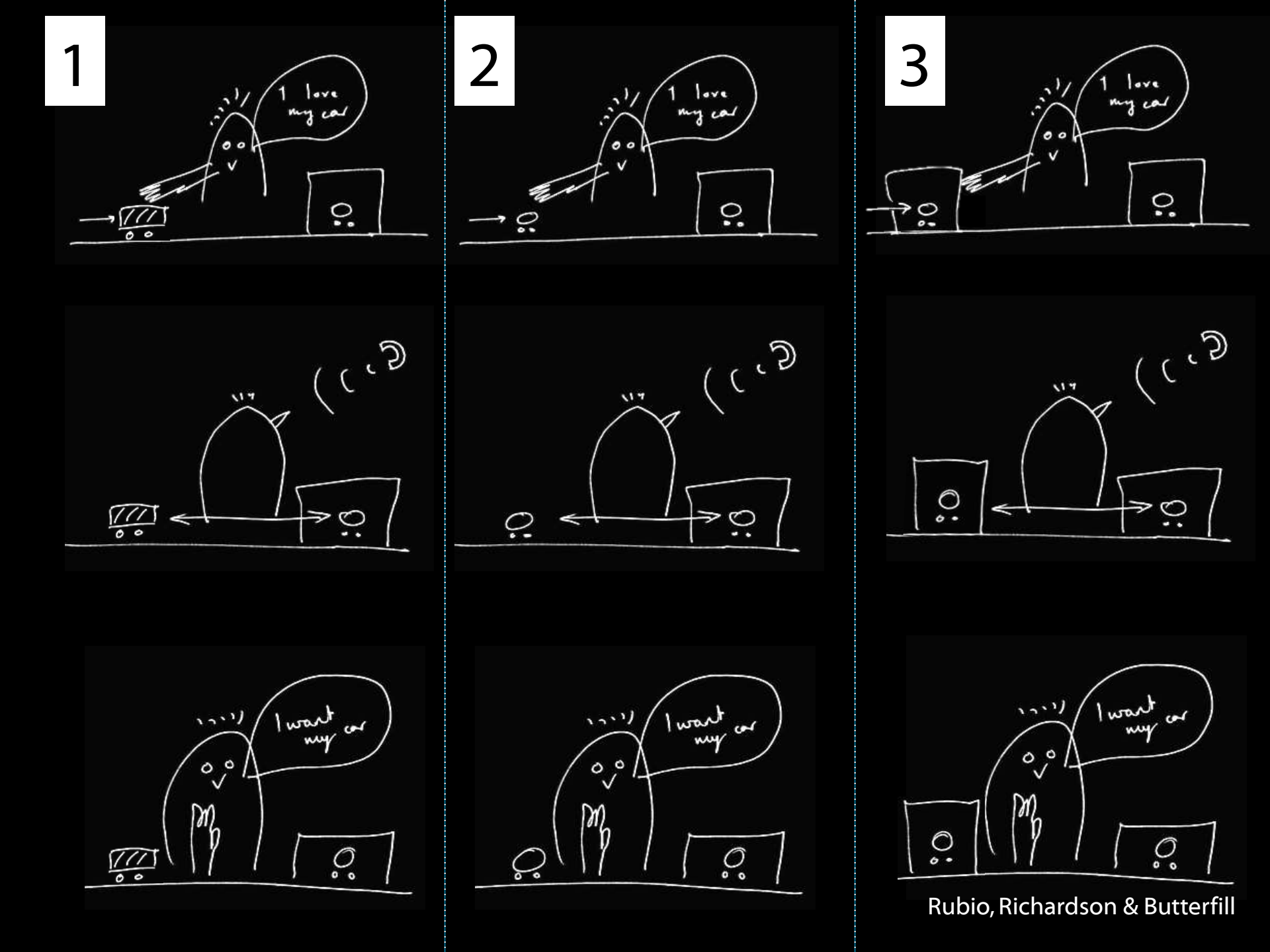




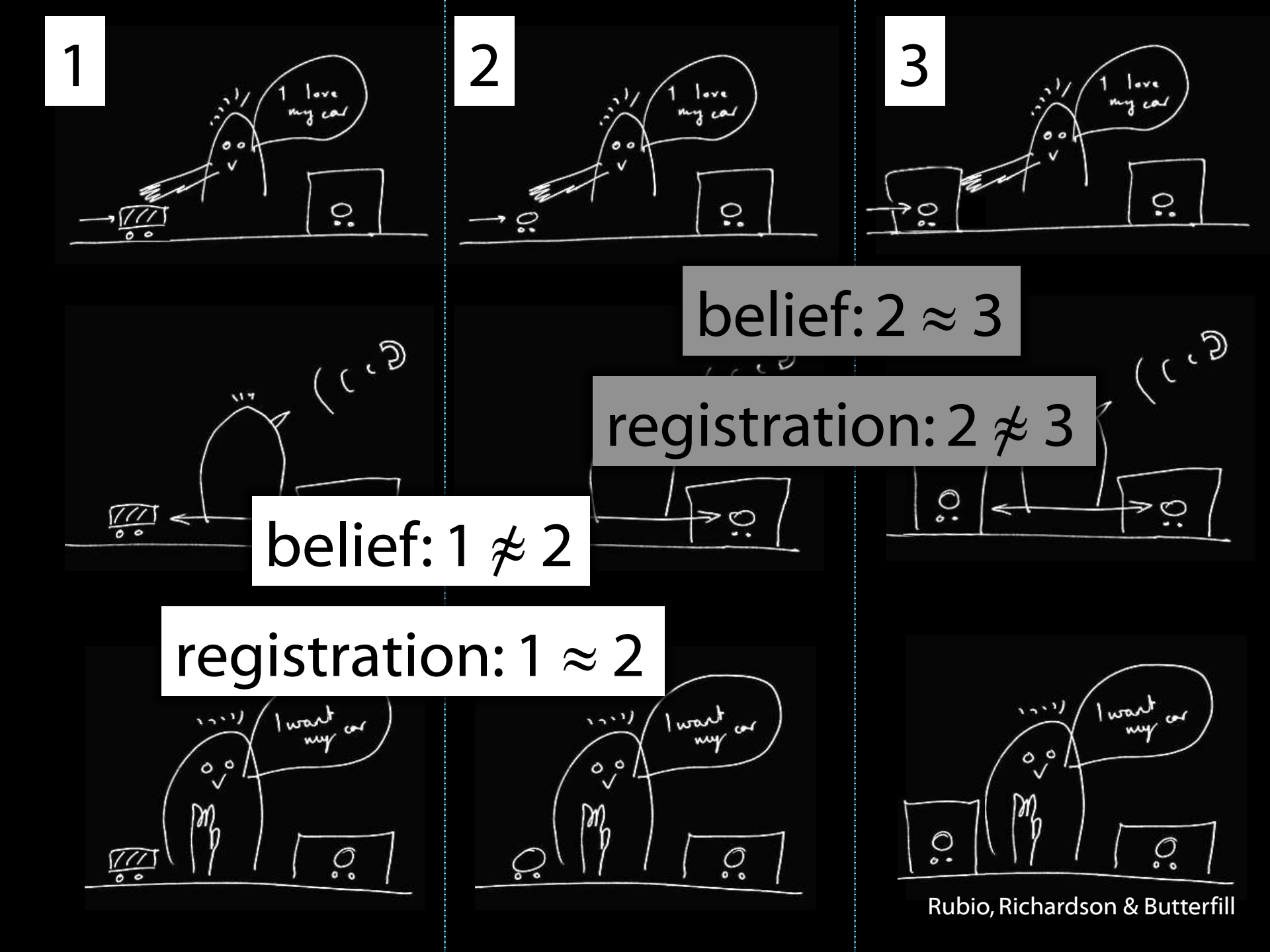


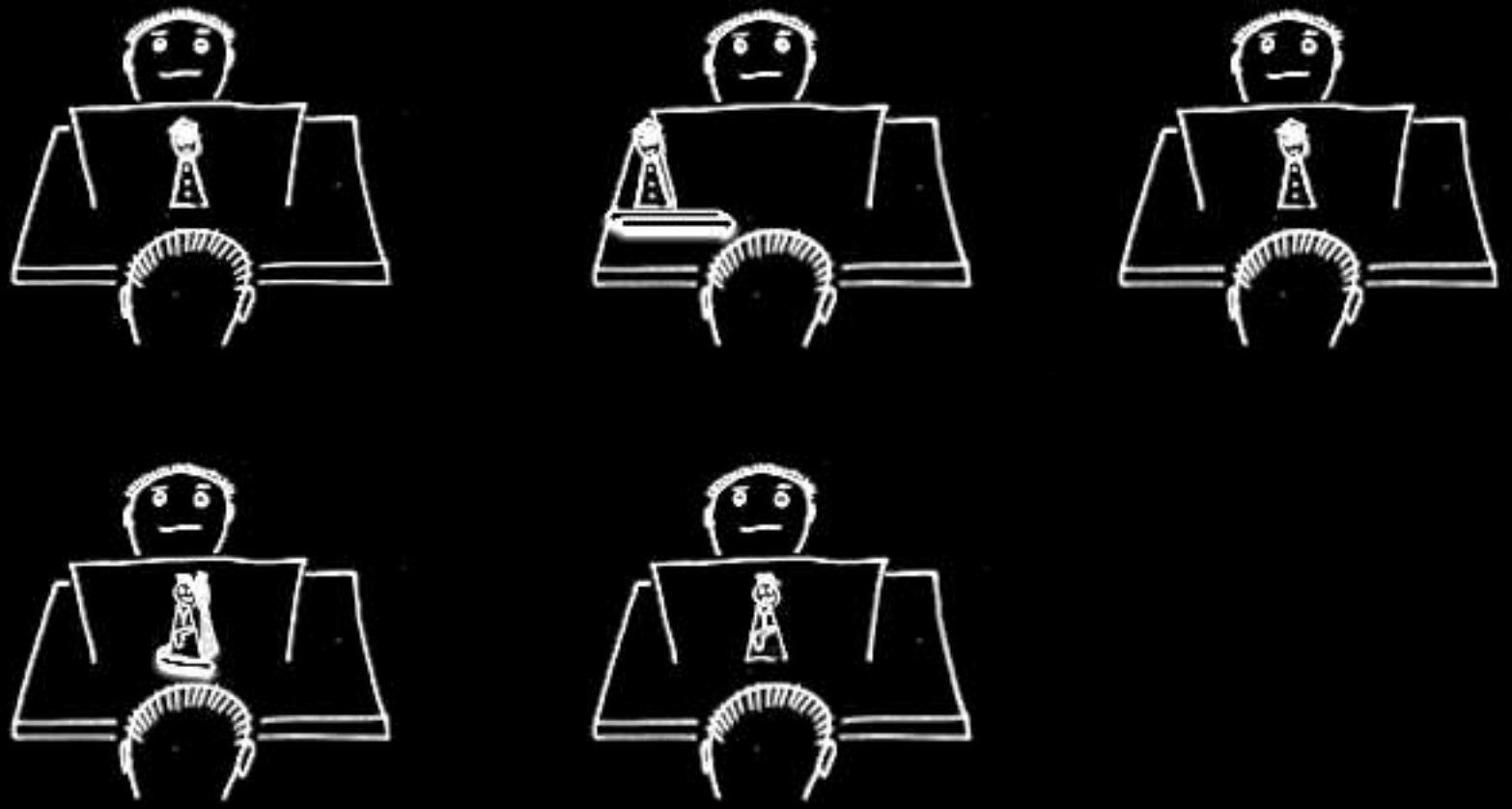


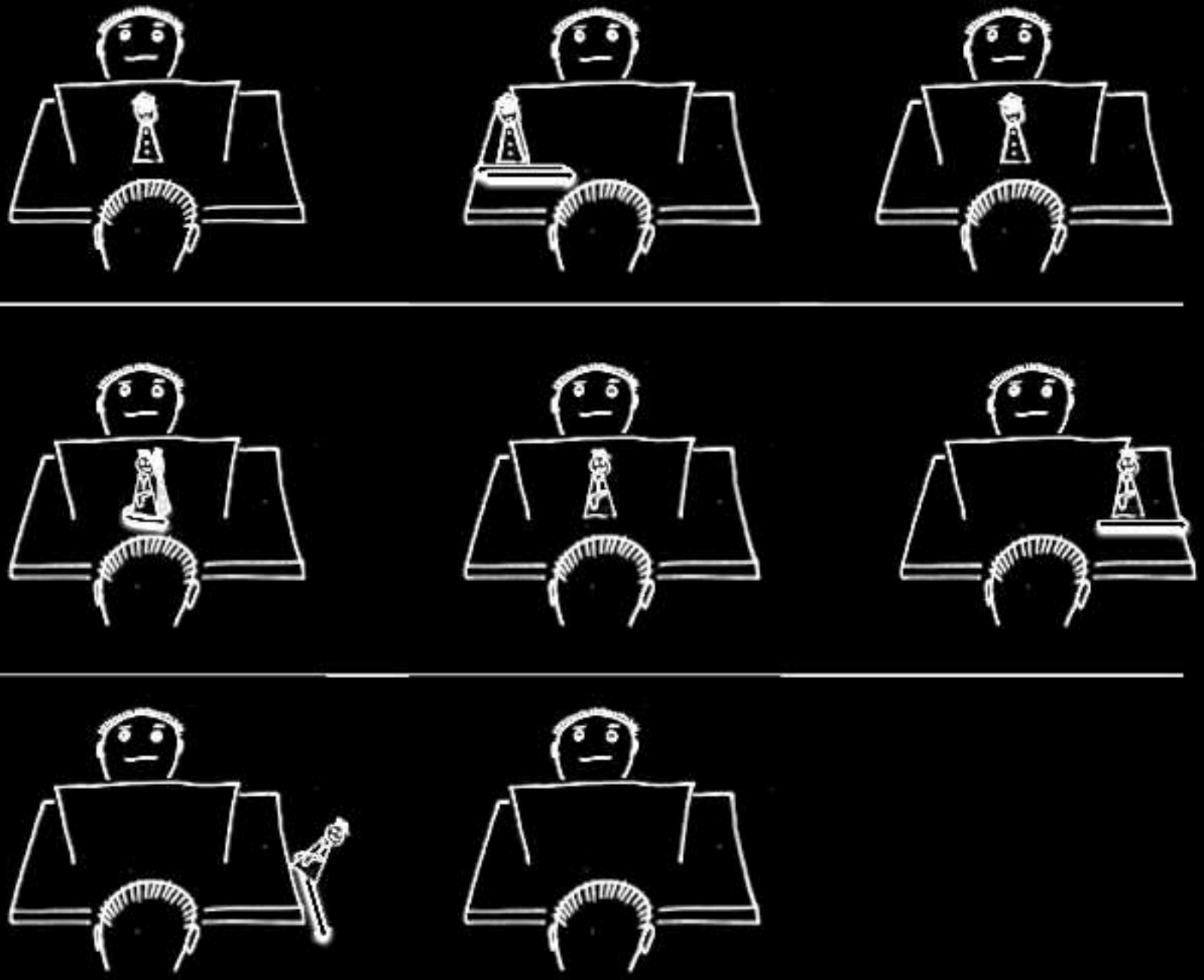
Rubio, Richardson & Butterfill

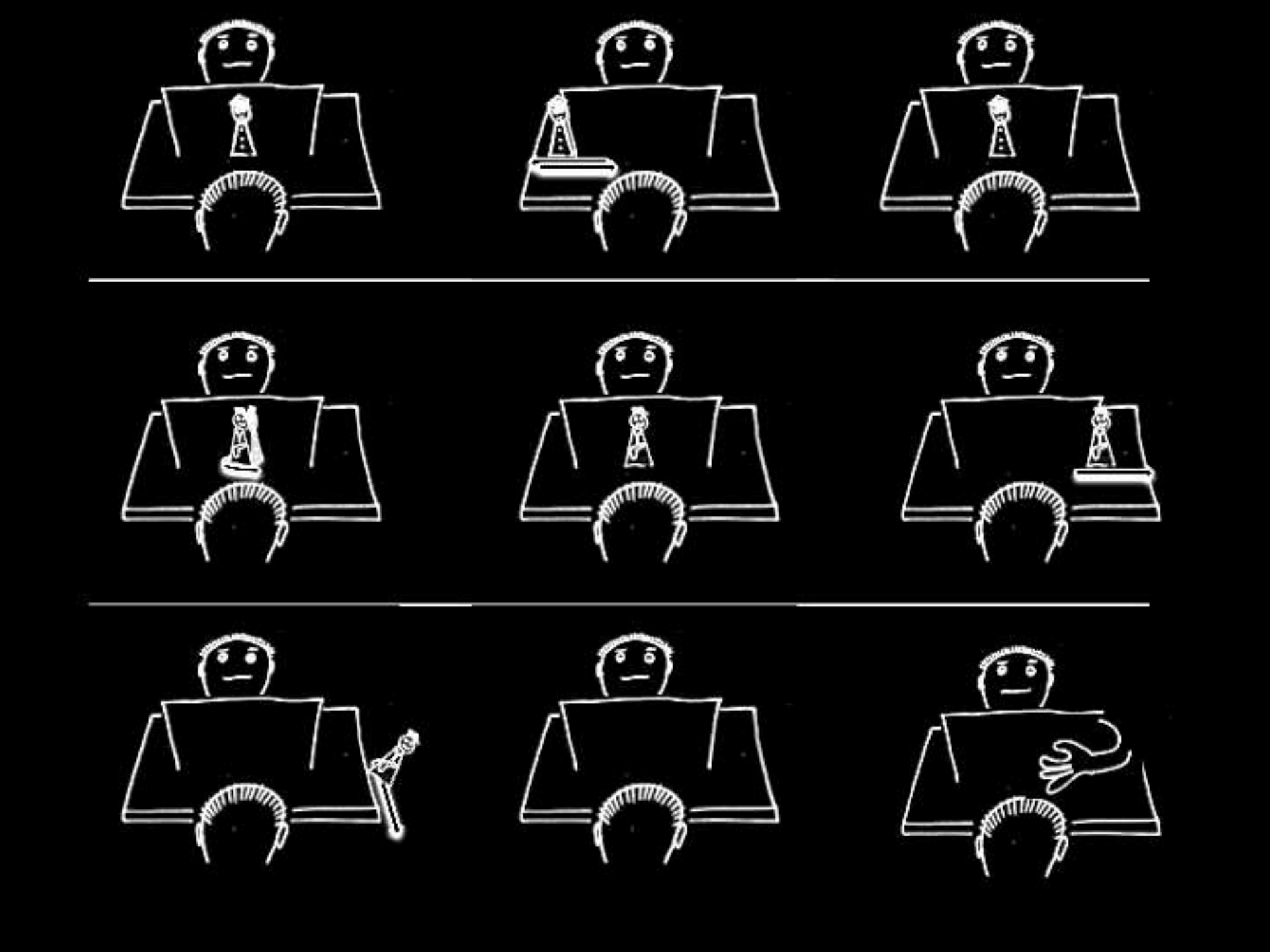


Rubio, Richardson & Butterfill


1
I love my car
2
I love my car
3
I love my car
belief: 2 ≈ 3
registration: 2 ≉ 3
belief: 1 ≉ 2
registration: 1 ≈ 2
I want my car
I want my car
I want my car
Rubio, Richardson & Butterfill







1. There are subjects who can pass A-tasks but cannot pass B-tasks.

2. These subjects' success on A-tasks is explained by the fact that they **can** represent (false) beliefs

3. These subjects' failure on B-tasks is explained by the fact that they **cannot** represent (false) beliefs

1. There are subjects who can pass A-tasks but cannot pass B-tasks.

2. These subjects' success on A-tasks is explained by the fact that they **can** represent (false) beliefs

3. These subjects' failure on B-tasks is explained by the fact that they **cannot** represent (false) beliefs

source: Kessler