2. What are mental states?

butterfillS@ceu.hu

'chimpanzees understand ... intentions ... perception and knowledge ... Moreover, they understand how these psychological states work together to produce intentional action' (Call & Tomasello 2008:191)

Subordinate

Dominant

Occluders

'chimpanzees ==understand== … intentions … perception and knowledge … Moreover, they understand how these psychological states work together to produce intentional action' (Call & Tomasello 2008:191)

Subordinate

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'chimpanzees understand … intentions … perception and <mark>knowledge</mark> … Moreover, they understand how these psychological states work together to produce intentional action'
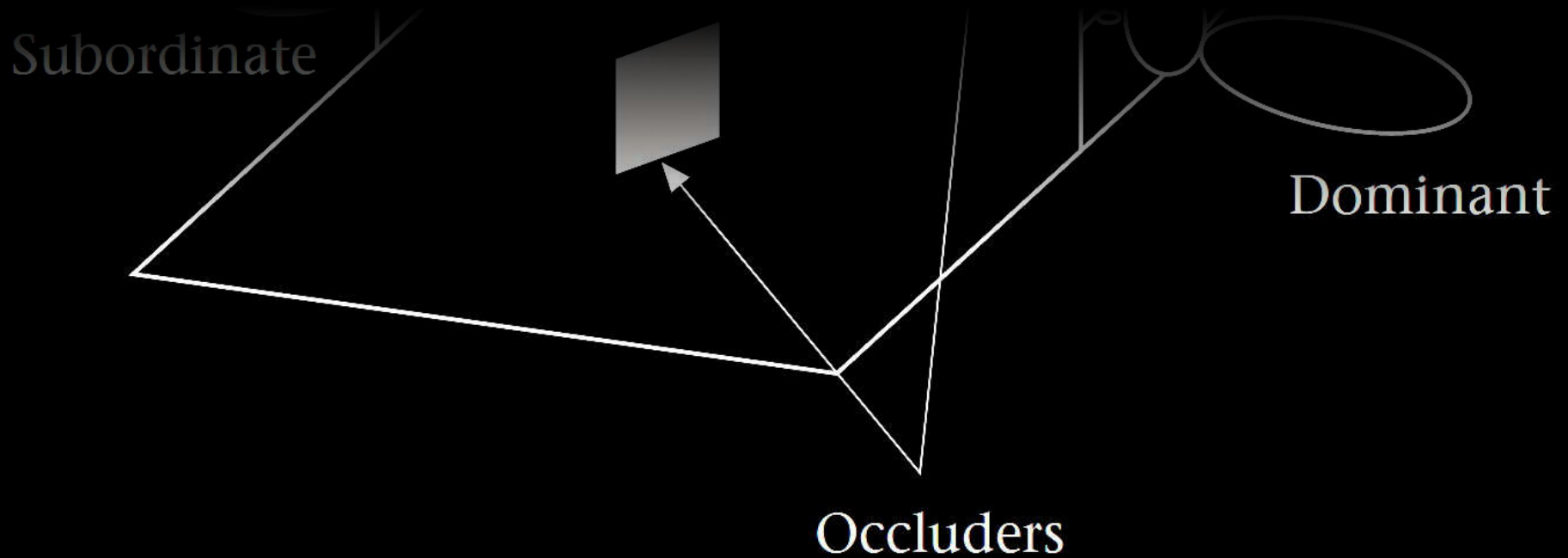(Call & Tomasello 2008:191)

Subordinate

Dominant

Occluders

'chimpanzees understand … intentions … perception and <mark>knowledge</mark> … Moreover, they understand how these psychological states work together to produce intentional action'
(Call & Tomasello 2008:191)

'our fundamental conception of what it is to know that P is itself an explanatory conception […] we think of S's knowledge that P as something that can properly be explained by reference to what S has perceived or remembered or proved or …'
(Cassam 2007: 356)

'chimpanzees understand … intentions … perception and knowledge … Moreover, they understand how these psychological states work together to produce intentional action'
(Call & Tomasello 2008:191)

'from 7 months on … humans automatically compute other's beliefs and seem to hold them in mind as alternative representations of the environment.'
(Kovács et al 2010: 1834)

Henry desires that Ayesha will cycle up Hármashatár hill

Henry desires that Ayesha will cycle up Hármashatár hill

Subject   *Attitude*   *Content*

$$\left\{ \begin{array}{l} \text{Ayesha} \\ \text{Steve} \\ \text{Henry} \\ \text{...} \end{array} \right\}$$ desires that Ayesha will cycle up Hármashatár hill

Subject   *Attitude*   *Content*

$\{$ Ayesha Steve Henry ... $\}$ $\{$ believes desires intends ... $\}$ that   Ayesha will cycle up Hármashatár hill

Subject   *Attitude*   *Content*

$$\left\{ \begin{array}{l} \text{Ayesha} \\ \text{Steve} \\ \text{Henry} \\ \text{...} \end{array} \right\} \left\{ \begin{array}{l} \text{believes} \\ \text{desires} \\ \text{intends} \\ \text{...} \end{array} \right\} \text{that} \left\{ \begin{array}{l} \text{Ayesha will cycle up Hármashatár hill} \\ \text{s/he will cycle up Hármashatár hill} \\ \text{Henry will win the lottery} \\ \text{...} \end{array} \right\}$$

Subject   *Attitude*   *Content*

{ Ayesha
Steve
Henry
… }
, { believes
desires
intends
… }
that { Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
… }

Subject   **Attitude**   *Content*

{ Ayesha
Steve
Henry
...
}
{ believes
desires
intends
...
}
that
{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
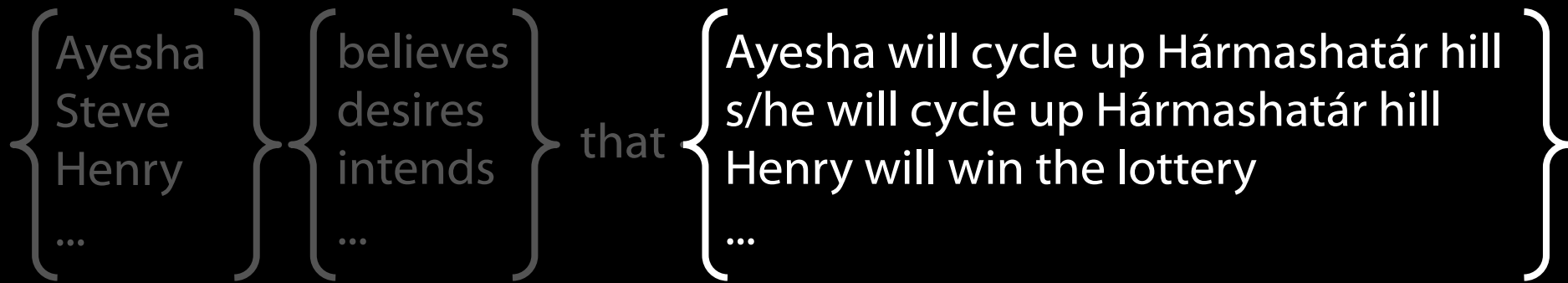Henry will win the lottery
...
}

Subject   *Attitude*   *Content*

'Propositions ... are the sharable objects of the attitudes and the primary bearers of truth and falsity' (McGrath 2012)

{ Ayesha
Steve
Henry
... }
{ believes
desires
intends
... }
that
{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
... }

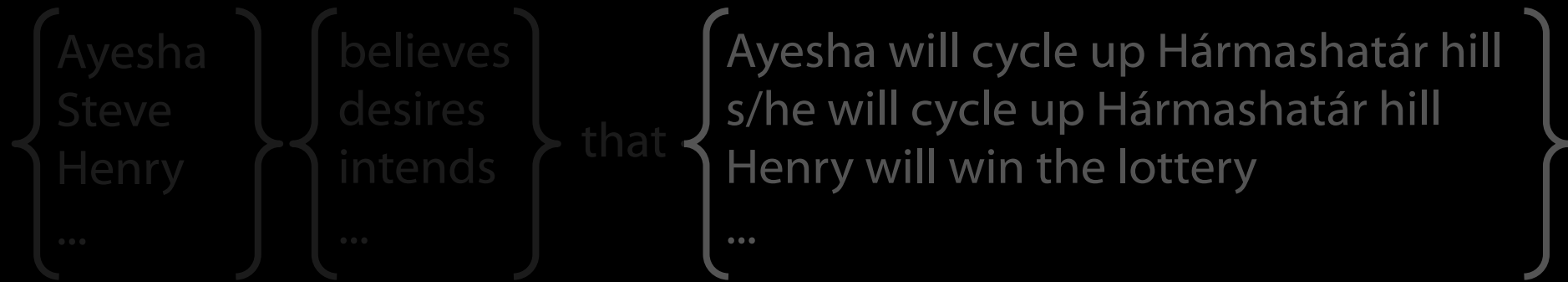*Subject*   *Attitude*   *Content*

'Propositions … are the sharable objects of the attitudes and the primary bearers of truth and falsity' (McGrath 2012)

{ Ayesha
Steve
Henry
… }

{ believes
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… }

that

{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
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Subject   *Attitude*   *Content*

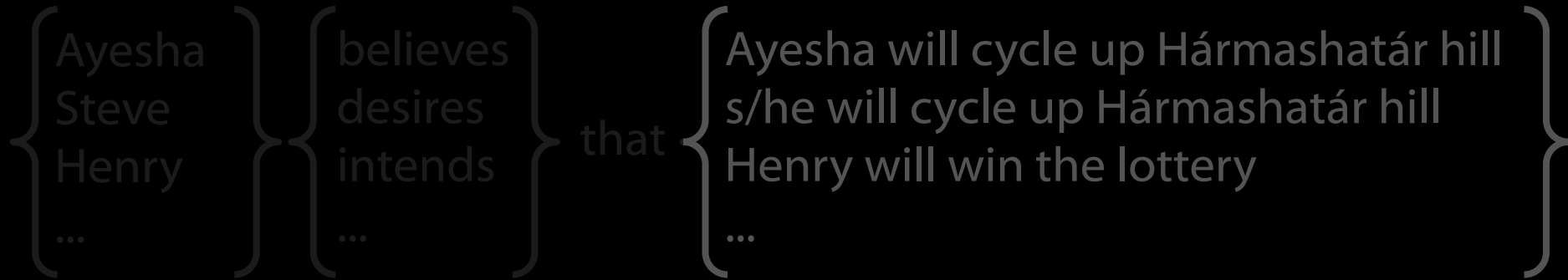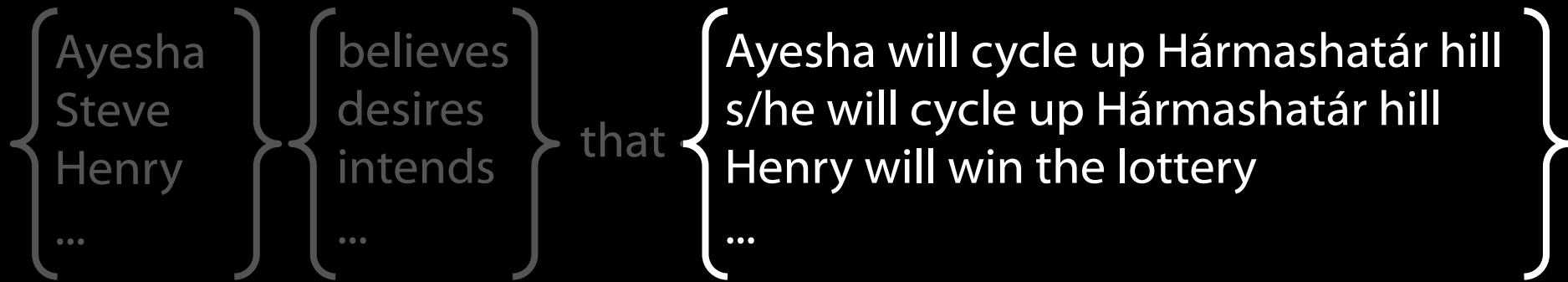'Propositions … are the sharable objects of the attitudes and the primary bearers of truth and falsity' (McGrath 2012)
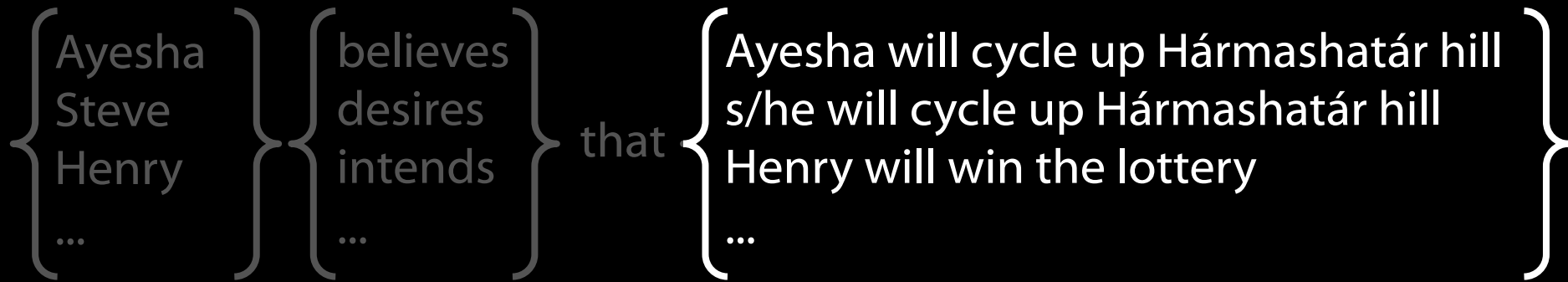
???

Subject	Attitude	Content
Ayesha Steve Henry …	believes desires intends …	that Ayesha will cycle up Hármashatár hill s/he will cycle up Hármashatár hill Henry will win the lottery …

proposition-1 : a set of possible worlds

{ Ayesha
Steve
Henry
... }
{ believes
desires
intends
... }
that
{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
... }

Subject   *Attitude*   *Content*

proposition-1 : a set of ==possible worlds==

{ Ayesha
Steve
Henry
... }
{ believes
desires
intends
... }
that
{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
... }

Subject   *Attitude*   *Content*

proposition-1 : a set of possible worlds

{ Ayesha
Steve
Henry
... }
{ believes
desires
intends
... }
that
{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
... }

Subject   *Attitude*   *Content*

proposition-1 : a set of possible worlds

Ayesha will cycle up Hármashatár hill and $97^2 = 9049$
Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
...

{ Ayesha, Steve, Henry, ... } { believes, desires, intends, ... } that

Subject   *Attitude*   *Content*

proposition-1 : a set of possible worlds
proposition-2 : a (nested) sequence of objects and properties

{ Ayesha
Steve
Henry
... }

{ believes
desires
intends
... }

that

{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
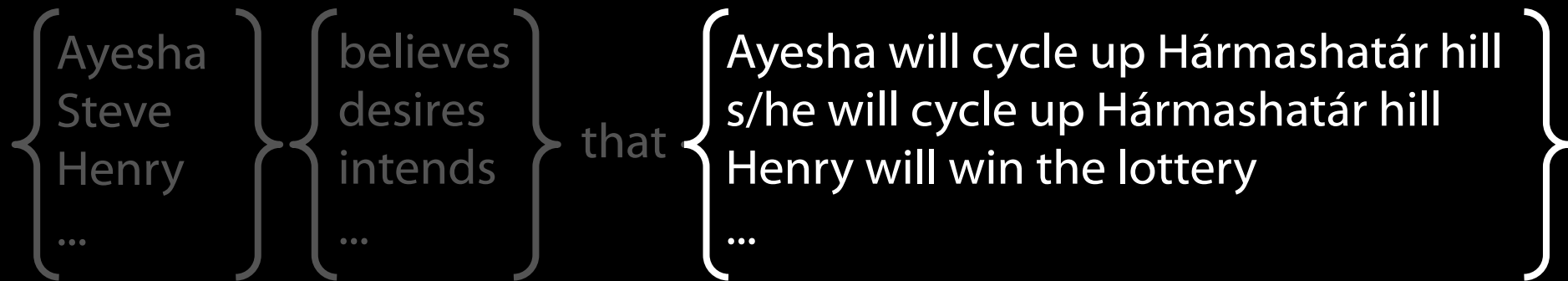Henry will win the lottery
... }

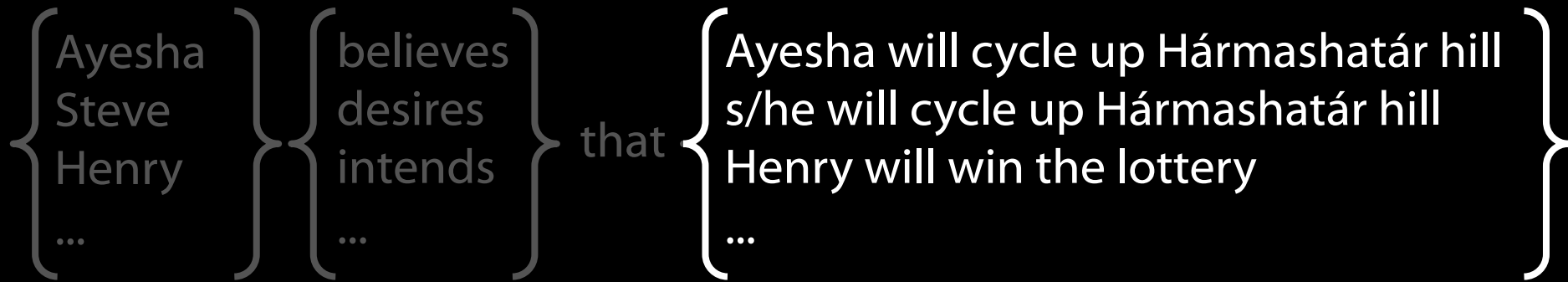*Subject*   *Attitude*   *Content*

proposition-1 : a set of possible worlds
proposition-2 : a (nested) sequence of objects and properties

< < Ayesha , Hármashatár hill >, cycle >

{ Ayesha
Steve
Henry
... }

{ believes
desires
intends
... }

that

{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
... }

Subject   *Attitude*   *Content*
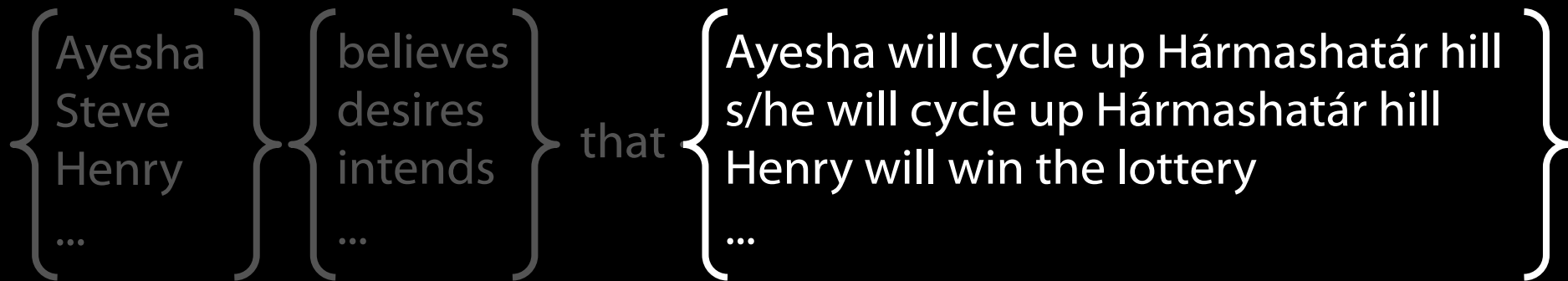
proposition-1 : a set of possible worlds
proposition-2 : a (nested) sequence of objects and properties

< < Ayesha , Hármashatár hill >, cycle >
< < Steve , Hármashatár hill >, cycle >

{ Ayesha
Steve
Henry
... }

{ believes
desires
intends
... }

that

{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
... }

Subject   *Attitude*   *Content*
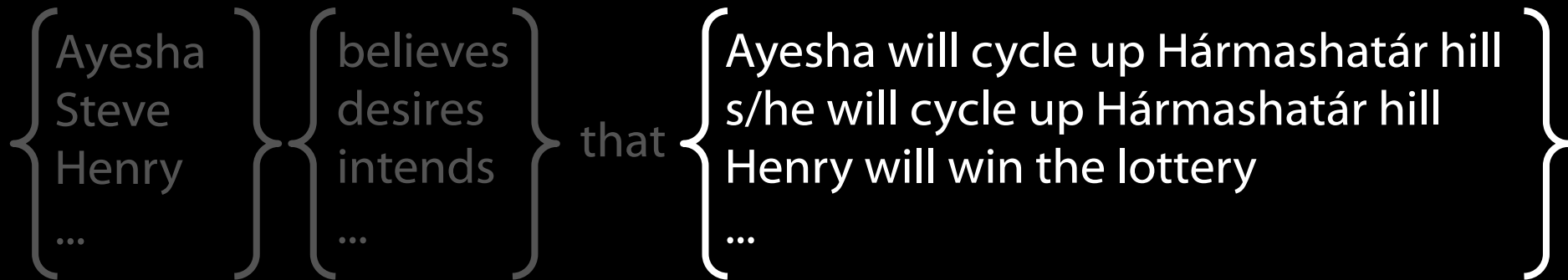
proposition-1 : a set of possible worlds
proposition-2 : a (nested) sequence of objects and properties

< < Ayesha , Hármashatár hill >, cycle >
< < Steve , Hármashatár hill >, cycle >

Why not use sentences?

{ Ayesha
  Steve
  Henry
  ... }

{ believes
  desires
  intends
  ... }

that

{ Ayesha will cycle up Hármashatár hill
  s/he will cycle up Hármashatár hill
  Henry will win the lottery
  ... }

Subject   *Attitude*   *Content*

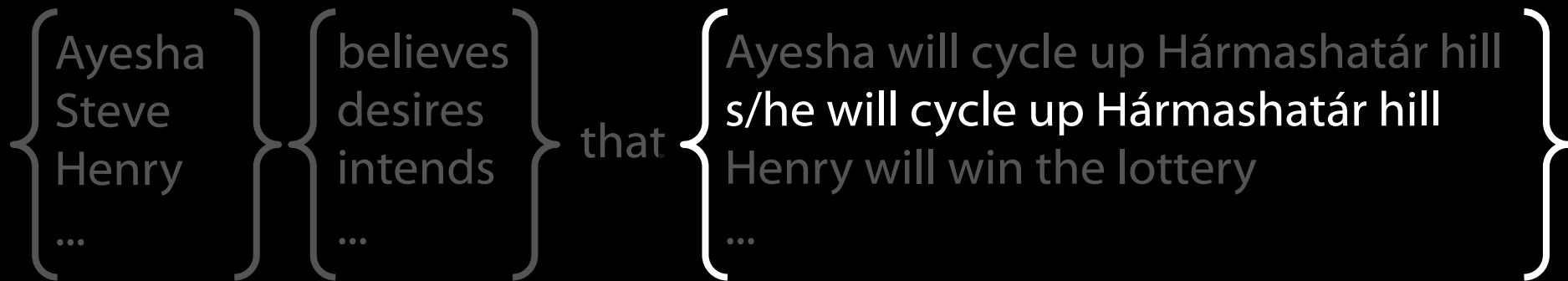proposition-1 : a set of possible worlds
proposition-2 : a (nested) sequence of objects and properties

< < Ayesha , Hármashatár hill >, cycle >
< < Steve , Hármashatár hill >, cycle >

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Steve
Henry
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{ believes
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Henry will win the lottery
... }

Subject   *Attitude*   *Content*
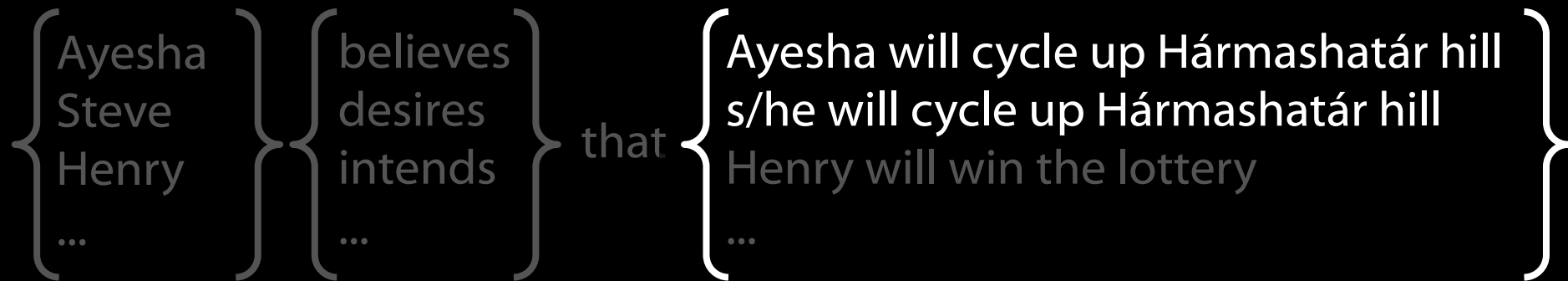
proposition-1 : a set of possible worlds
proposition-2 : a (nested) sequence of objects and properties

< < Ayesha , Hármashatár hill >, cycle >
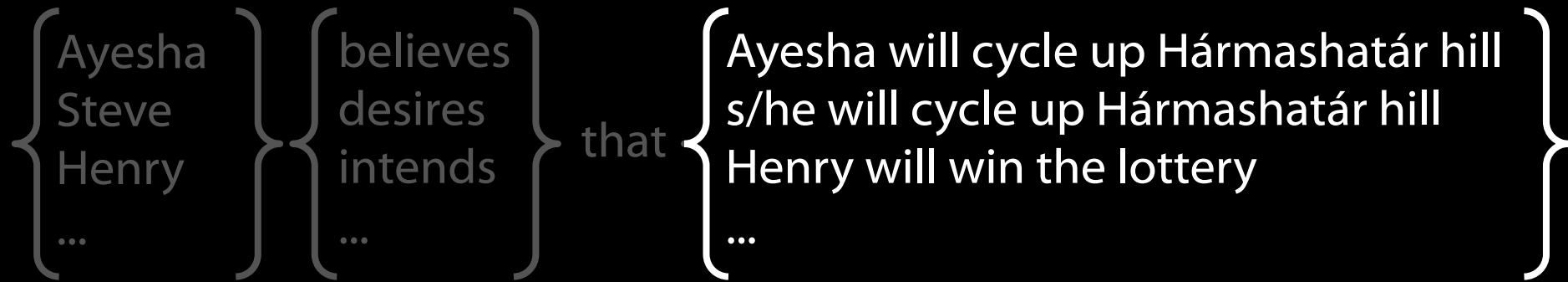< < Steve , Hármashatár hill >, cycle >

Why not use sentences?

{
Ayesha
Steve
Henry
...
}
{
believes
desires
intends
...
}
that
{
Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
...
}

Subject　　　*Attitude*　　　　　　　　　　　　*Content*

proposition-1 : a set of possible worlds
proposition-2 : a (nested) sequence of objects and properties
**proposition-3 : a (nested) sequence of objects and properties
and modes of presentations**

{ Ayesha
Steve
Henry
... }

{ believes
desires
intends
... }

that

{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery

... }

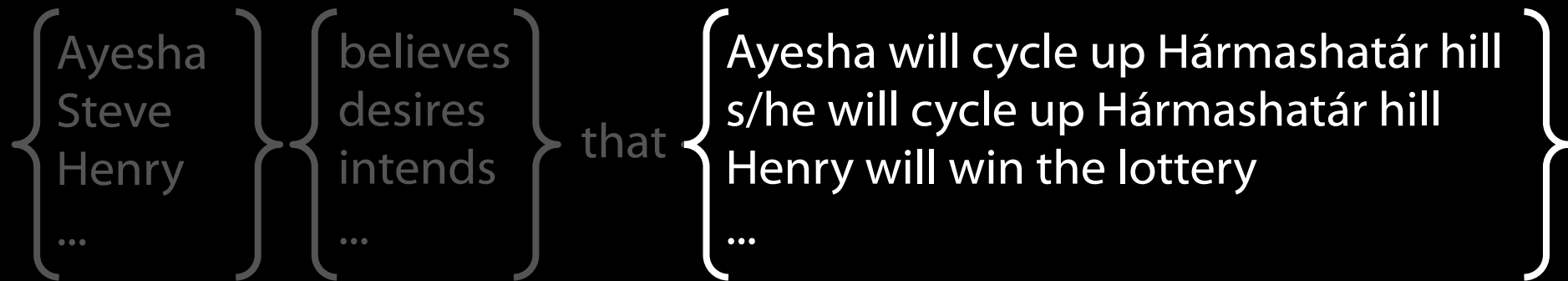*Subject*   *Attitude*   *Content*

proposition-1 : a set of possible worlds
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and modes of presentations

{ Ayesha
Steve
Henry
... }

{ believes
desires
intends
... }

that

{ Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery

... }

Subject   *Attitude*   *Content*

proposition-1 : a set of possible worlds
proposition-2 : a (nested) sequence of objects and properties
proposition-3 : a (nested) sequence of objects and properties
                                          ... and modes of presentations

Ayesha   believes   Ayesha will cycle up Hármashatár hill
Steve   desires   Steve will cycle up Hármashatár hill
Henry   intends   Henry will win the lottery
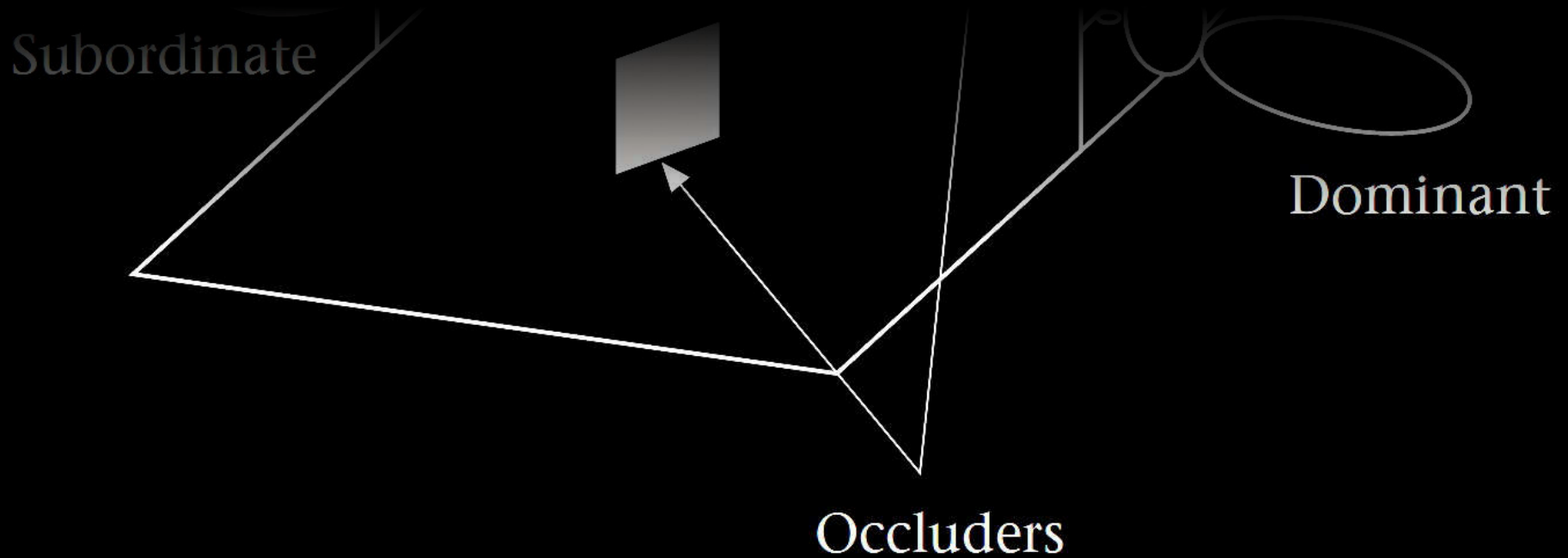...   ...

Subject   *Attitude*   *Content*

'chimpanzees understand … intentions … perception and knowledge … Moreover, they understand how these psychological states work together to produce intentional action' (Call & Tomasello 2008:191)

Subordinate

Dominant

Occluders

'chimpanzees understand … intentions … perception and knowledge … Moreover, they understand how these psychological states work together to produce intentional action'
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'from 7 months on … humans automatically compute other's beliefs and seem to hold them in mind as alternative representations of the environment.'
(Kovács et al 2010: 1834)

Subject	Attitude	Content
Ayesha Steve Henry ...	believes desires intends ...	Ayesha will cycle up Hármashatár hill s/he will cycle up Hármashatár hill Henry will win the lottery ...

that

Subject   **Attitude**   *Content*

'(4) For any p: One ought to believe that p only if p.

'the holding of this norm is one of the defining features of the notion of belief […] That […] is what makes it the state that it is.'
(Boghossian 2003: 37, 38-9)

'(4) For any p: One ought to believe that p only if p.

'the holding of this norm is one of the defining features of the notion of belief [...] That [...] is what makes it the state that it is.'
(Boghossian 2003: 37, 38-9)

'Aside from our purposes in forming beliefs or in using beliefs as guides to action, there is nothing they should or shouldn't be. … [T]he only thing wrong or bad about mistaken judgements, is that, generally speaking, we don't like them. We do our best to avoid them. They do not—most of the time at least—serve our purposes'

(Dretske 2000: 247-8)

'Rational intentions should be agglomerative. If at one and the same time I rationally intend to A and rationally intend to B then it should be both possible and rational for me, at the same time, to intend to A and B.'

(Bratman 1999: 220)

'chimpanzees understand … intentions … perception and knowledge … Moreover, they understand how these psychological states work together to produce intentional action'
(Call & Tomasello 2008:191)

'from 7 months on … humans automatically compute other's beliefs and seem to hold them in mind as alternative representations of the environment.'

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Merely purposive agent
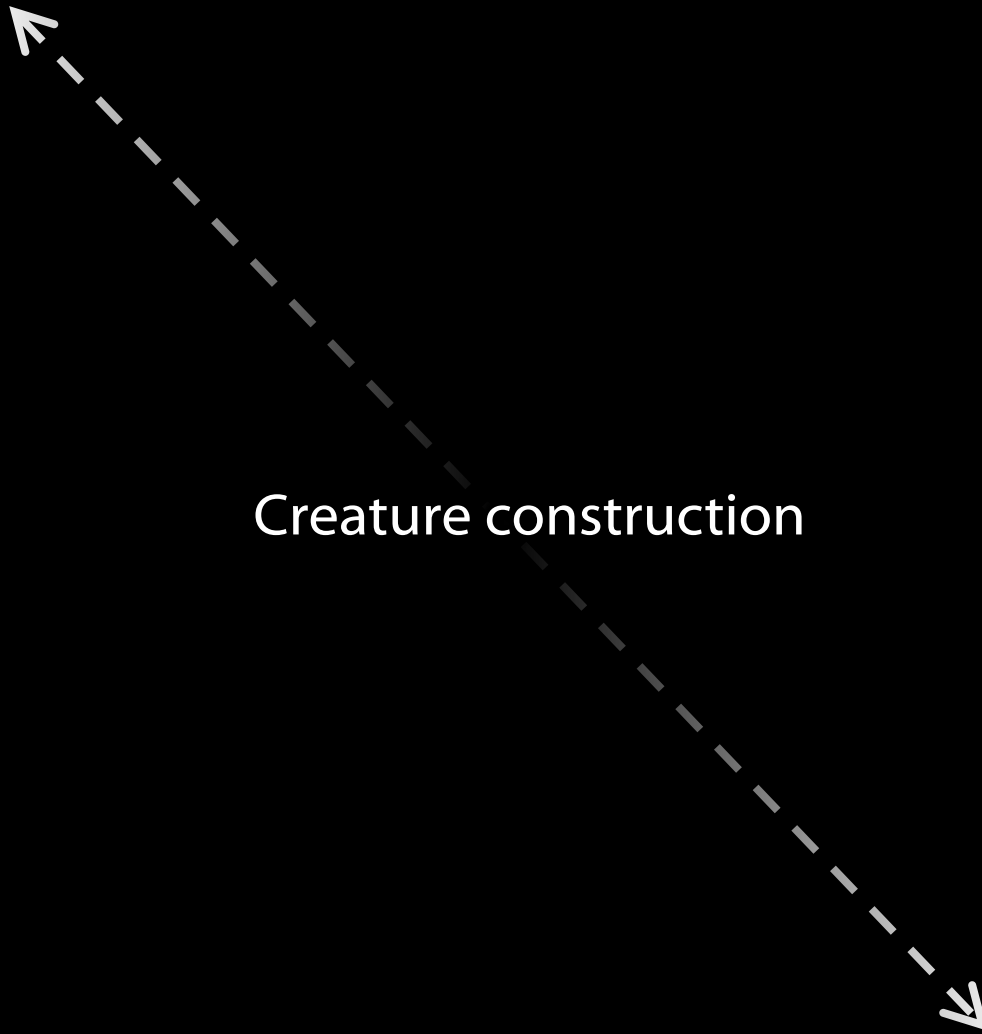
Creature construction

Self-knowing, truth-seeking, embarrassed ... agent

Actions, outcomes & conditions

get exercise and stay dry
get no exercise and stay dry

get exercise and get wet
get no exercise and stay dry

Actions, outcomes & conditions

action		
cycle	get exercise and stay dry	get exercise and get wet
take bus	get no exercise and stay dry	get no exercise and stay dry

Actions, outcomes & conditions

action		
cycle	get exercise and stay dry	get exercise and get wet
take bus	get no exercise and stay dry	get no exercise and stay dry

Actions, outcomes & conditions

action		
cycle	get exercise and **stay dry**	get exercise and **get wet**
take bus	get no exercise and stay dry	get no exercise and stay dry

Actions, outcomes & conditions

action	condition	
	no flooding	flooding
cycle	get exercise and **stay dry**	get exercise and **get wet**
take bus	get no exercise and stay dry	get no exercise and stay dry

Actions, outcomes & conditions

	condition	
action	no flooding	flooding
cycle	get exercise and stay dry	get exercise and get wet
take bus	get no exercise and stay dry	get no exercise and stay dry

Actions, outcomes & conditions

	condition	
action	no flooding	flooding
cycle	get exercise and stay dry	get exercise and get wet
take bus	get no exercise and stay dry	get no exercise and stay dry

	condition	
action	no flooding	flooding
cycle	probability of no flooding if we cycle: 0.3	probability of flooding if we cycle: 0.7
take bus	probability of no flooding if we get the bus: 0.3	probability of flooding if we get the bus: 0.7

Actions, outcomes & conditions

	condition	
action	no flooding	flooding
cycle	get exercise and stay dry	get exercise and get wet
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	condition	
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Actions, outcomes & conditions

	condition	
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action	condition	
	no flooding	flooding
cycle	[get exercise and stay dry] desirability of outcome: 3	[get exercise and get wet] desirability of outcome: -1
take bus	[get no exercise and stay dry] desirability of outcome: 1	[get no exercise and stay dry] desirability of outcome: 1

action	condition	
	no flooding	flooding
cycle	get exercise and stay dry	get exercise and get wet
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action	condition	
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action	condition	
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'Suppose that A and B are [outcomes] between which the agent is not indifferent, and that N is an ethically neutral condition [i.e. the agent is indifferent between N and not N]. Then N has probability 1/2 if and only if the agent is indifferent between the following two gambles.
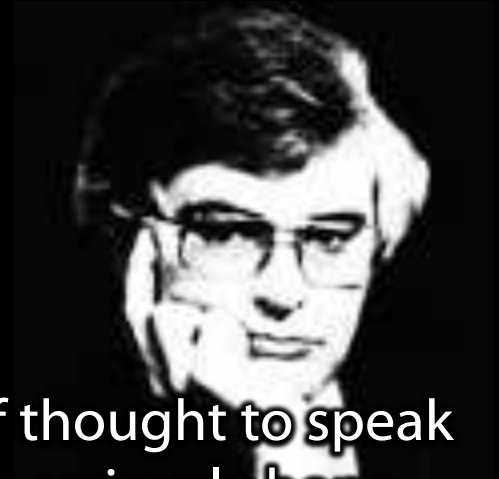
B if N, A if not
A if N, B if not'

(Jeffrey 1983: 47)

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    B if N, A if not
    A if N, B if not'

(Jeffrey 1983: 47)

'modern philosophers ... have no theory of thought to speak of. I do think this is appalling; how can you seriously hope for a good account of belief if you have no account of belief fixation?'
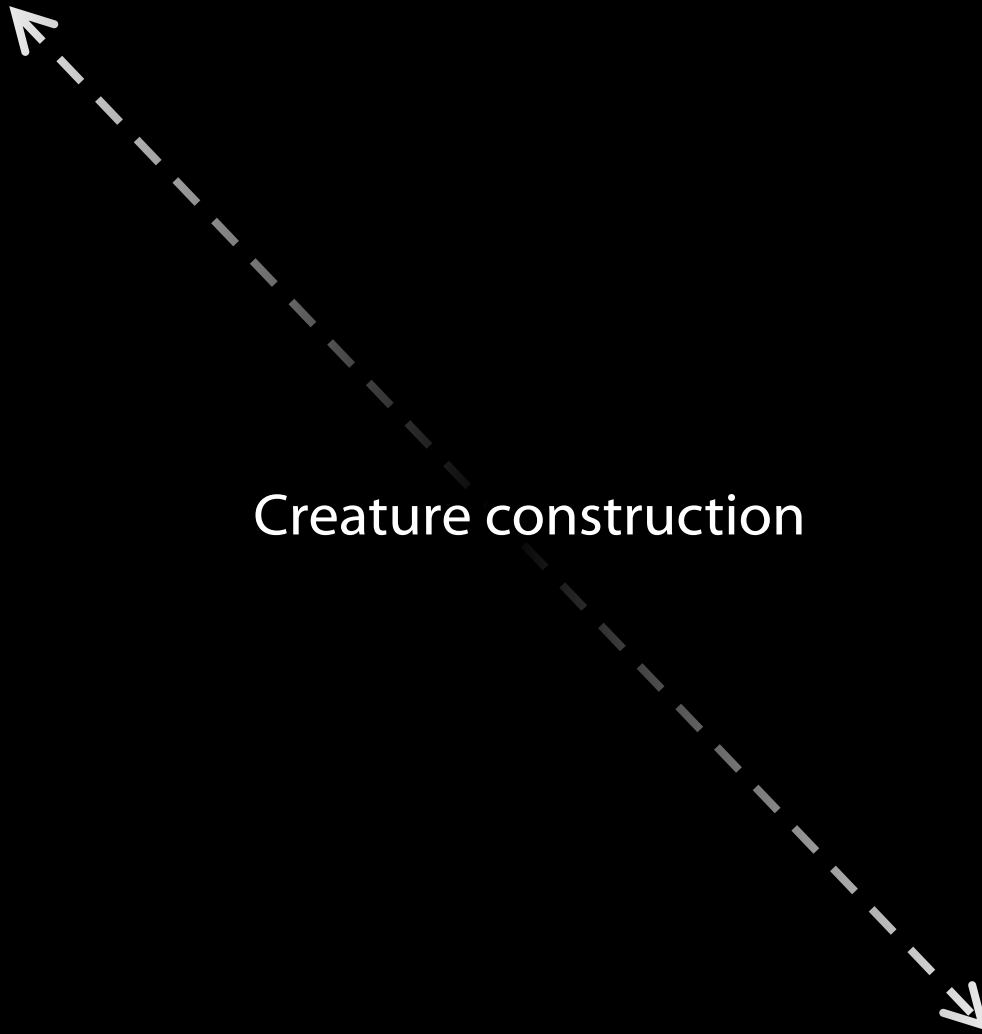
(Fodor 1987: 147)

{ Ayesha
Steve
Henry
... } , { believes
desires
intends
... } that { Ayesha will cycle up Hármashatár hill
s/he will cycle up Hármashatár hill
Henry will win the lottery
... }

Subject   **Attitude**   *Content*

Merely purposive agent

Creature construction

Self-knowing, truth-seeking, embarrassed ... agent

'chimpanzees understand … intentions … perception and knowledge … Moreover, they understand how these psychological states work together to produce intentional action'
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'from 7 months on … humans automatically compute other's beliefs and seem to hold them in mind as alternative representations of the environment.'
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Objectivity
Could there be mindreaders who are able to identify differences in belief despite not understanding what it is for a belief to be true or false?

Self-awareness
Does being a mindreader entail being able, sometimes, to identify one's own mental states and actions?

Evidential basis
What evidence could in principle support the ascription of a particular belief to a given subject, and how does the evidence support the ascription?

Holism
Could there be mindreaders who can identify intentions and knowledge states but not beliefs?

Objectivity
Could there be mindreaders who are able to identify
differences in belief despite not understanding what it
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