

Skepticism & Contextualism

November 6th, 2018

A Modal Logic for Knowledge

Symbolization

- Represent

S is in a position to know that ϕ

with

$$\mathcal{K}_S\phi$$

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Closure

For any propositions ϕ and ψ ,

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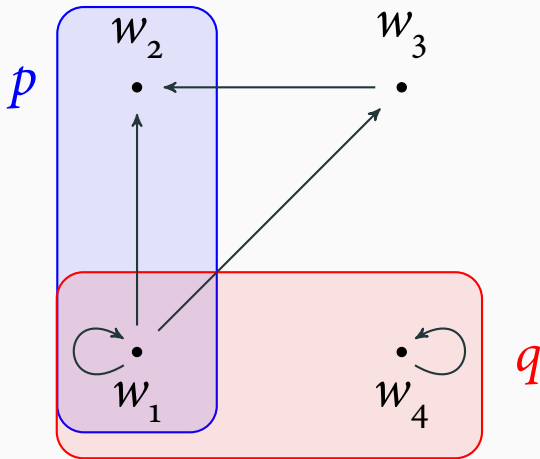
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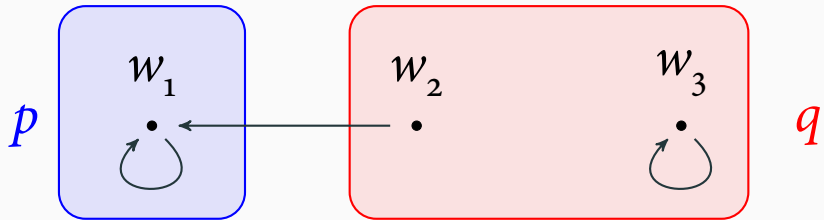
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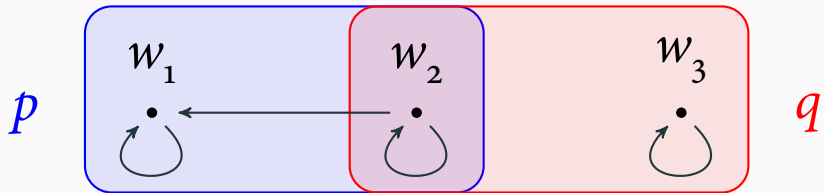
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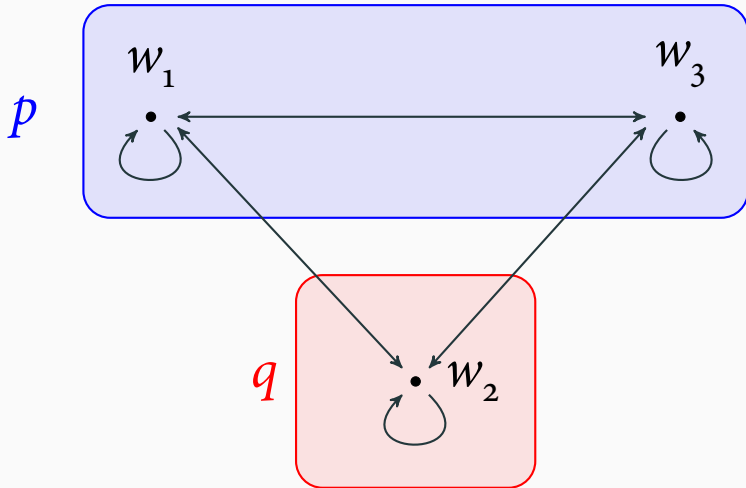
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- For any sentence ϕ , $\llbracket \neg \phi \rrbracket^w = 1$ iff $\llbracket \phi \rrbracket^w = 0$.
- For any sentences ϕ, ψ , $\llbracket \phi \rightarrow \psi \rrbracket^w = 1$ iff $\llbracket \phi \rrbracket^w = 0$ or $\llbracket \psi \rrbracket^w = 1$.

- For any sentence ϕ ,
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Propositions

- For any sentence ϕ ,

$$\langle \phi \rangle \stackrel{\text{def}}{=} \{w \in \mathcal{W} \mid \llbracket \phi \rrbracket^w = 1\}$$

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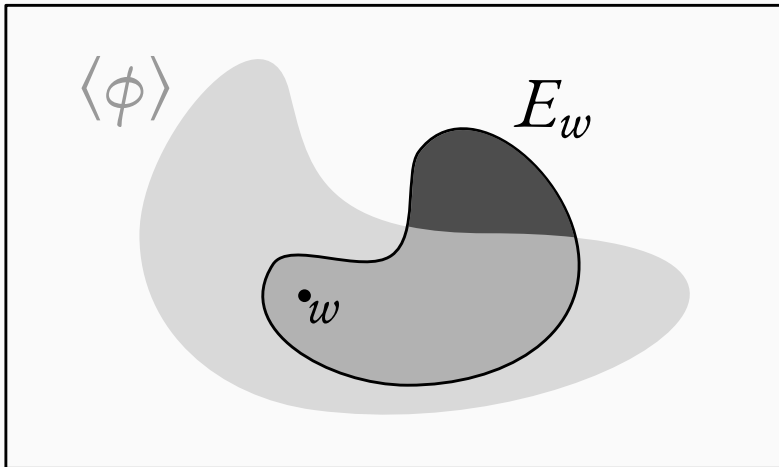
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- We should think of the worlds \mathcal{W} as *centered* possibilities to allow for knowledge *de se*
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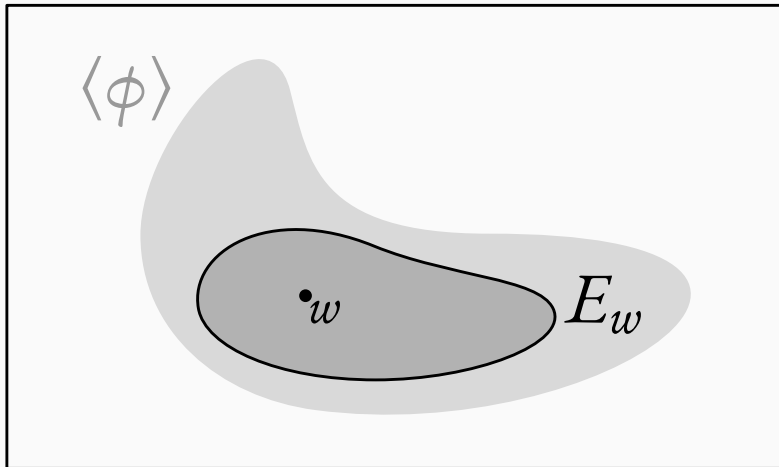
- Let $E_w \stackrel{\text{def}}{=} \{w^* \in \mathcal{W} \mid Rww^*\}$.

Semantics for \mathcal{K}

- Let $E_w \stackrel{\text{def}}{=} \{w^* \in \mathcal{W} \mid Rww^*\}$.
- Then, for any sentence ϕ ,

$$\llbracket \mathcal{K}\phi \rrbracket^w = 1 \quad \text{iff} \quad E_w \subseteq \langle \phi \rangle$$

\mathcal{W} 

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Reflexivity

For any w , Rww

[For any w , $w \in E_w$]

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Symmetry

For any w, w^* , if Rww^* , then Rw^*w .

[For any w, w^* , if $w^* \in E_w$, then $w \in E_{w^*}$]

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Transitivity

For any w, w^*, w^{**} , if Rww^* and Rw^*w^{**} , then Rww^{**} .

[For any w, w^*, w^{**} , if $w^* \in E_w$ and $w^{**} \in E_{w^*}$, then $w^{**} \in E_w$]

Factivity

$$\mathcal{K}\phi \rightarrow \phi$$

[(T)]

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$$\mathcal{K}\phi \rightarrow \mathcal{K}\mathcal{K}\phi \qquad \qquad \qquad [(S4)]$$

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Negative Introspection

$$\neg\mathcal{K}\phi \rightarrow \mathcal{K}\neg\mathcal{K}\phi \qquad \qquad \qquad [(S5)]$$

A Skeptical Argument

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- C1. *S* does not know that they have hands.

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- Deny P1
- Deny P2

A Skeptical Argument

P1. $\mathcal{K}p \rightarrow \mathcal{K}\neg s$

P2. $\neg \mathcal{K}\neg s$

C1. $\neg \mathcal{K}p$

- Deny P1
- Deny P2
- Accept C1

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 - Assertion

- P3. A handless brain-in-a-vat, being stimulated to have experiences indistinguishable from the experiences of S, doesn't know that they have hands.

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- C2. S doesn't know that they have hands.

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C3. At w , S's evidence does not rule out w_s .

P8. S knows that ϕ only if S's evidence rules out all $\neg\phi$ possibilities.

C4. S doesn't know that they're not a handless brain-in-a-vat.

Deny P1?

$$\mathcal{K}p \wedge \neg \mathcal{K}\neg s$$

Closure

For any propositions ϕ and ψ ,

$$[\mathcal{K}\phi \wedge \mathcal{K}(\phi \text{ entails } \psi)] \rightarrow \mathcal{K}\psi$$

A Contextualist Modal Logic for Knowledge

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- \mathcal{C} is a *set of contextually relevant worlds*.

- For any atomic sentence α , $\llbracket \alpha \rrbracket^{\mathcal{C}, w} = 1$ iff $w \in V(\alpha)$.

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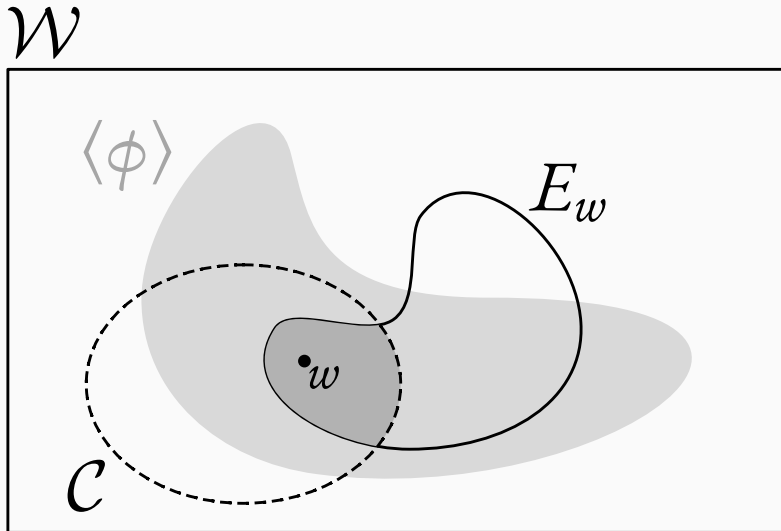
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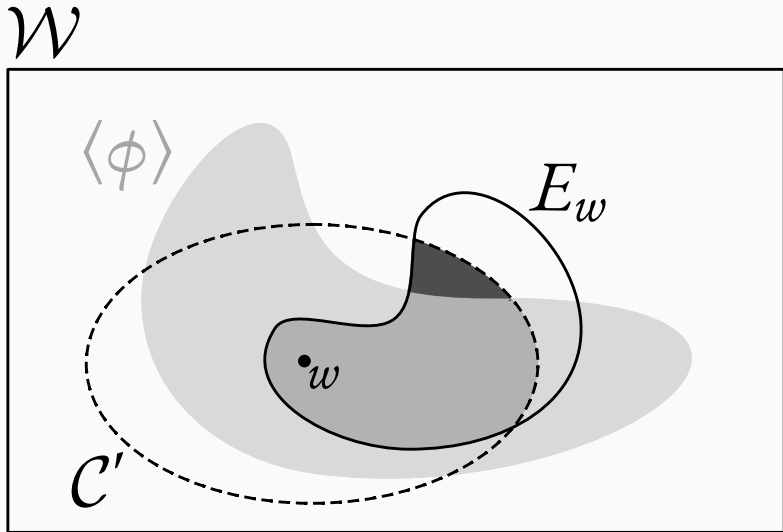
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Lewis's Contextualism

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- Lewis characterizes \mathcal{C} by way of a series of *rules* about which possibilities may and may not be properly ignored.

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Rule of Resemblance

Do not ignore worlds that saliently resemble worlds you have already not ignored—those worlds must be included in \mathcal{C} .

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Rule of Method

So long as doing so doesn't violate the preceeding rules, possibilities in which inductive inference or inference to the best explanation fail may be properly ignored—they may be excluded from \mathcal{C} .

Rule of Conservativism

If it is common knowledge in our linguistic community that we standardly *do* ignore possibilities, then these possibilities may be ignored—they may be excluded from \mathcal{C} .

Rule of Attention

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A possibility which is not being ignored is not being properly ignored.