Updating for Externalists

J. Dmitri Gallow

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Princeton University

Please interrupt when I stop making sense

Internalism & Externalism

Internalism

Necessarily, if *c*, then you have access to the fact that *c*

Externalism

Possibly, *c*, but you don't have access to the fact that *c*.

Internalism & Externalism

Internalism

Necessarily, if you are cold, then you know that you are cold.

Externalism

Possibly, you are cold, but you don't know that you are cold.

Internalism & Externalism

Internalism

Necessarily, if you know that *p*, then you know that you know that *p*.

Externalism

Possibly, you know that *p*, but you don't know that you know that *p*.

Internalism & Externalism

Internalism

Necessarily, if your total evidence is *e*, then your evidence tells you that your total evidence is *e*.

Externalism

Possibly, you total evidence is *e*, but your evidence doesn't tell you that your total evidence is *e*.

Externalism

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  - allows that your evidence doesn't say whether you're rational.

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  - bears on debates about epistemic *akrasia* and peer disagreement

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Externalism

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- Prominent externalists:
  - epistemic *akrasia* can be rational
  - you should not *conciliate* with a disagreeing peer

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- My goal: develop a general theory of learning for externalists
  - ▷ I'll assume: it is rational to aim at *accurate* doxastic states
  - ▷ This theory will give the externalist different answers to questions about epistemic akrasia and peer disagreement.

Table of contents

Externalism

Internalism & Externalism

Internalism

If e is your total evidence, then your evidence must tell you that e is your total evidence.

$$\Box(\mathbf{T}e \rightarrow \mathbf{ET}e)$$

Externalism

You may have the total evidence e without your evidence telling you that e is your total evidence.

$$\Diamond(\mathbf{T}e \wedge \neg\mathbf{ET}e)$$

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Internalism

Positive Access

If your evidence tells you that e, then your evidence must tell you that it tells you that e

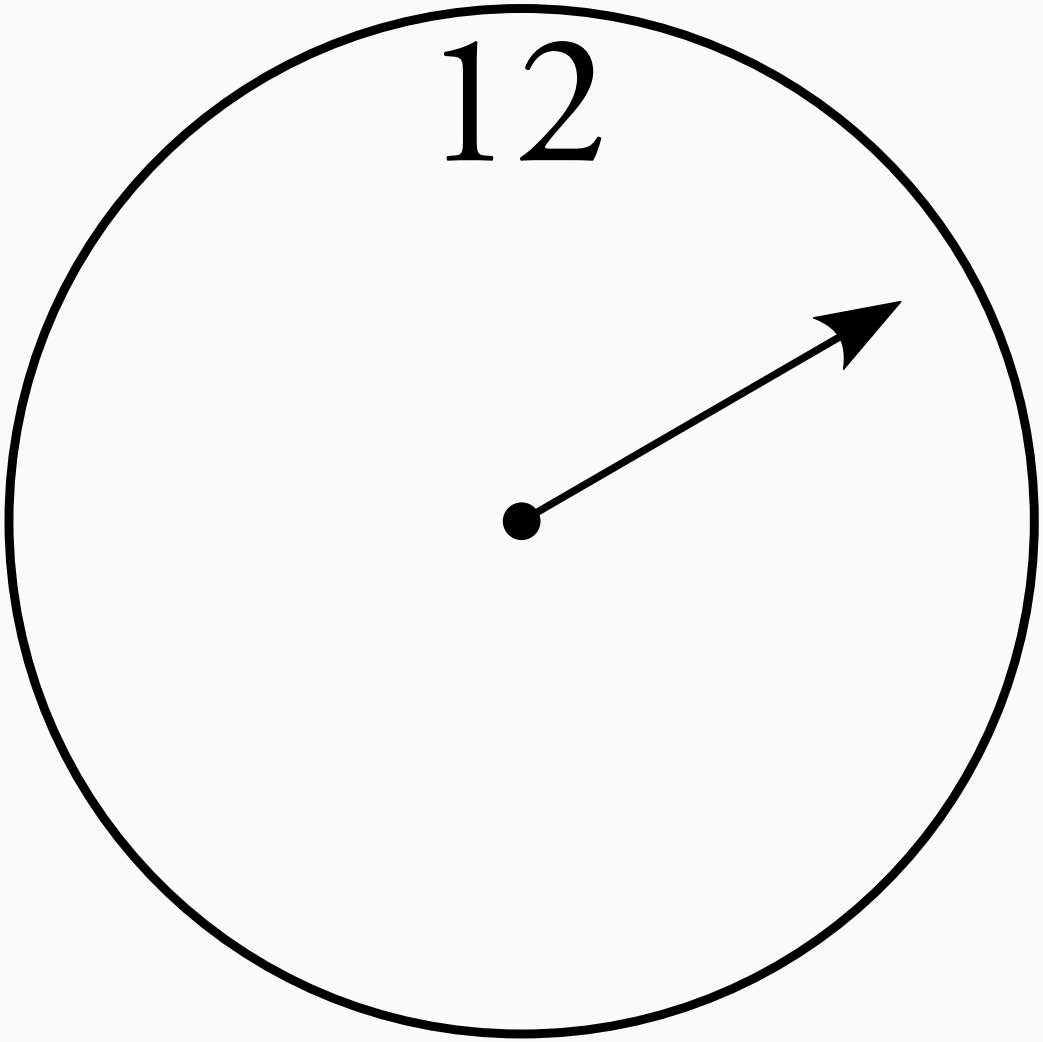
$$\Box(\mathbf{E}e \rightarrow \mathbf{EE}e)$$

Negative Access

If your evidence doesn't tell you that e, then your evidence must tell you that it hasn't told you that e

$$\Box(\neg\mathbf{E}e \rightarrow \mathbf{E}\neg\mathbf{E}e)$$

Williamson against Positive Access



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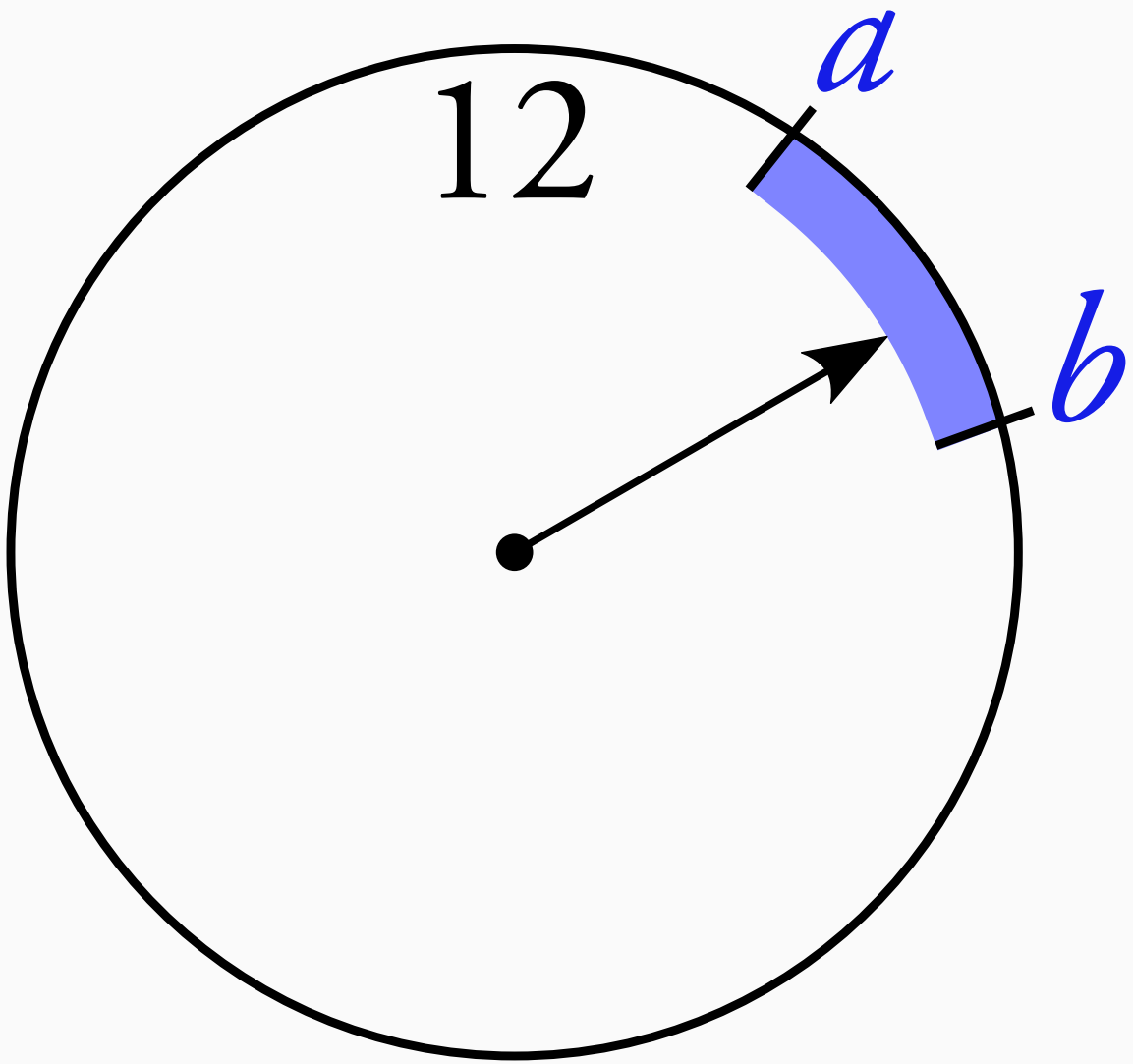

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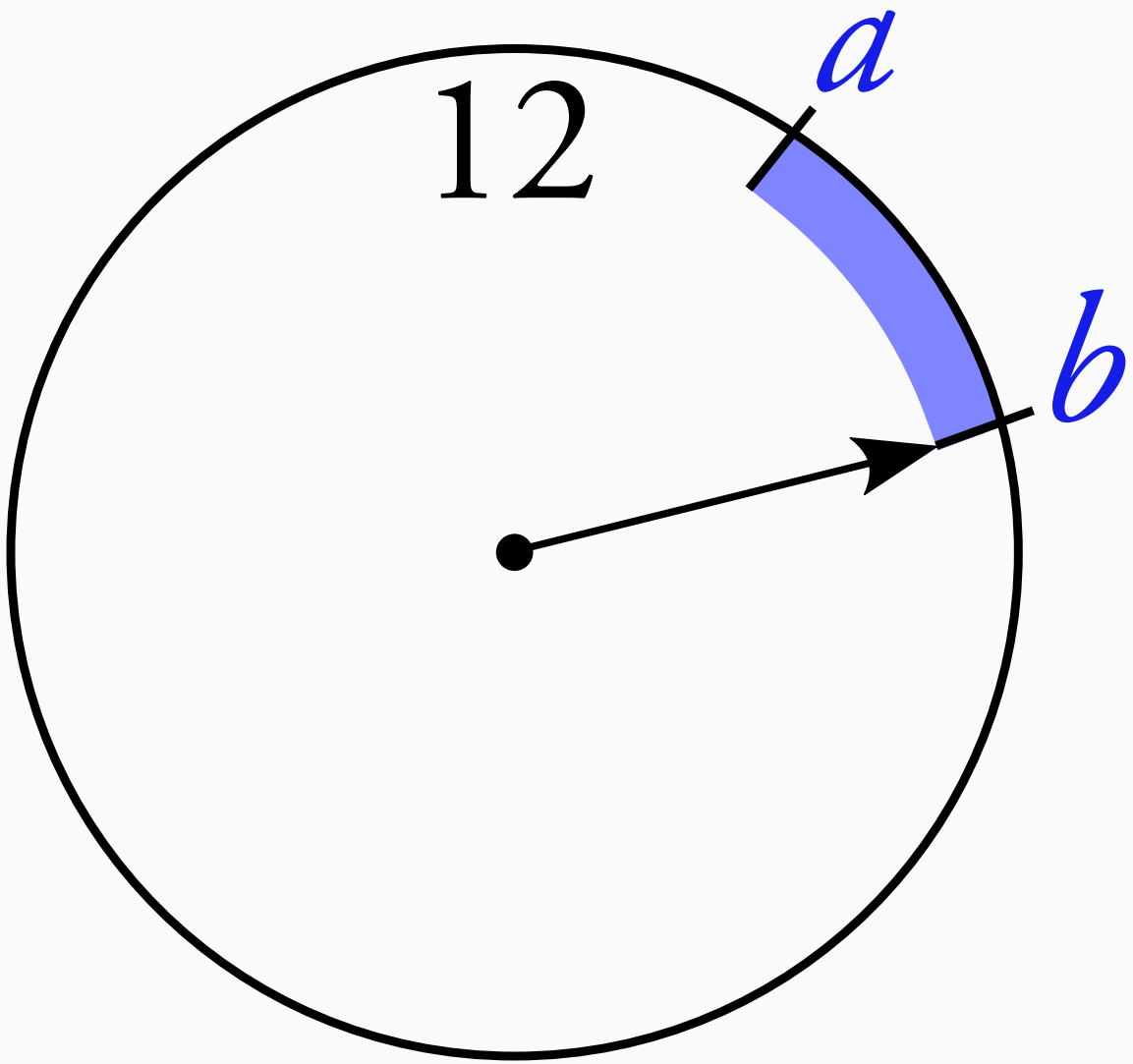

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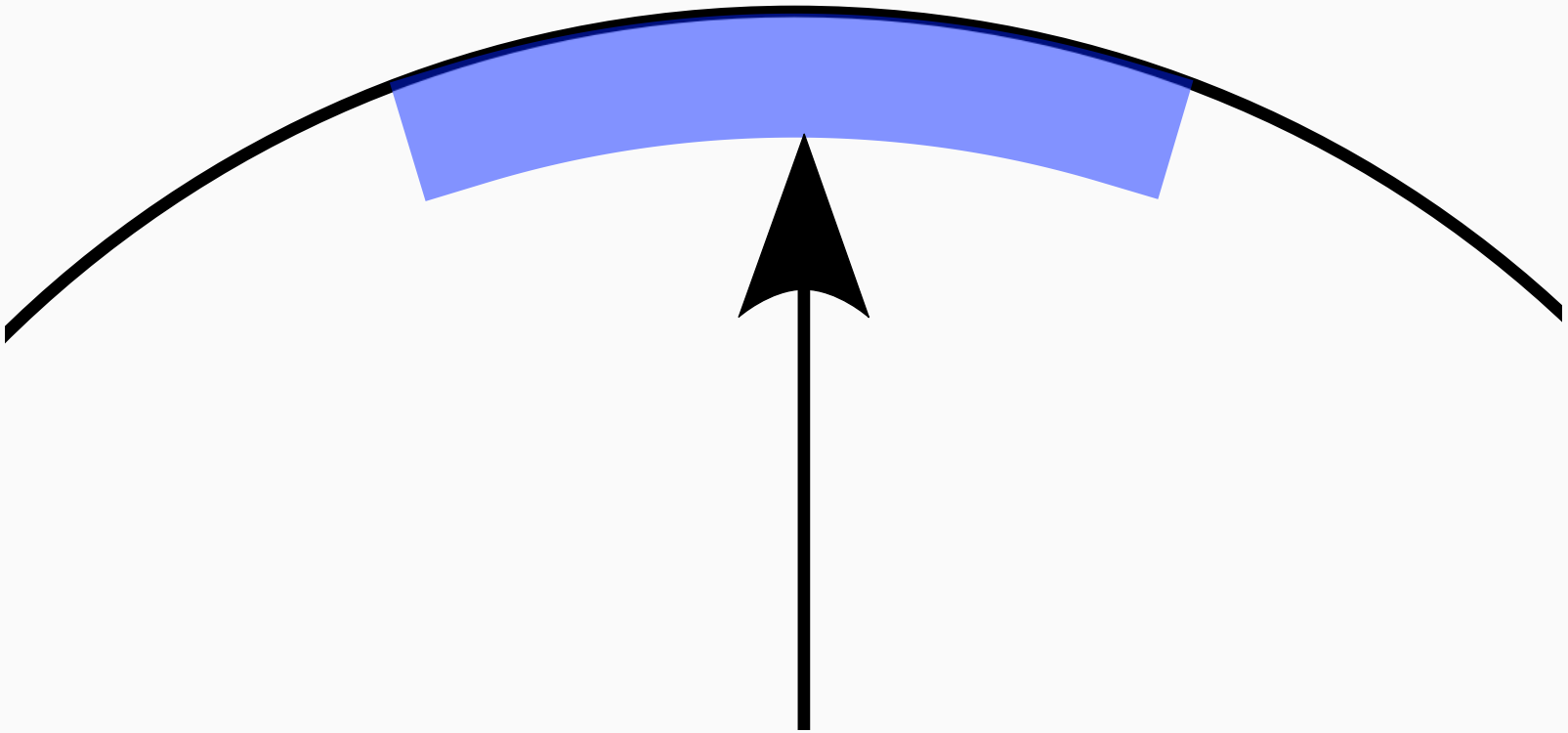

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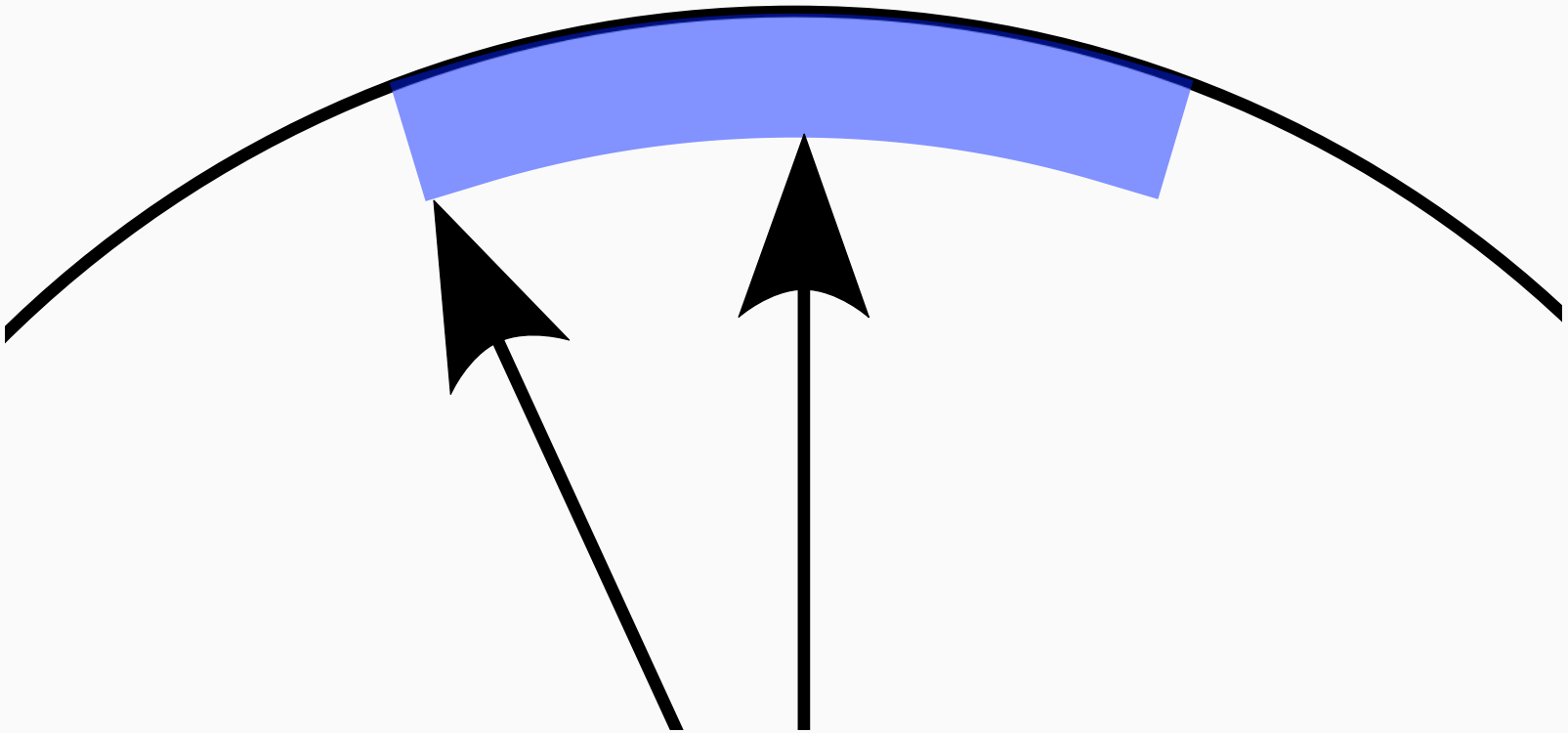

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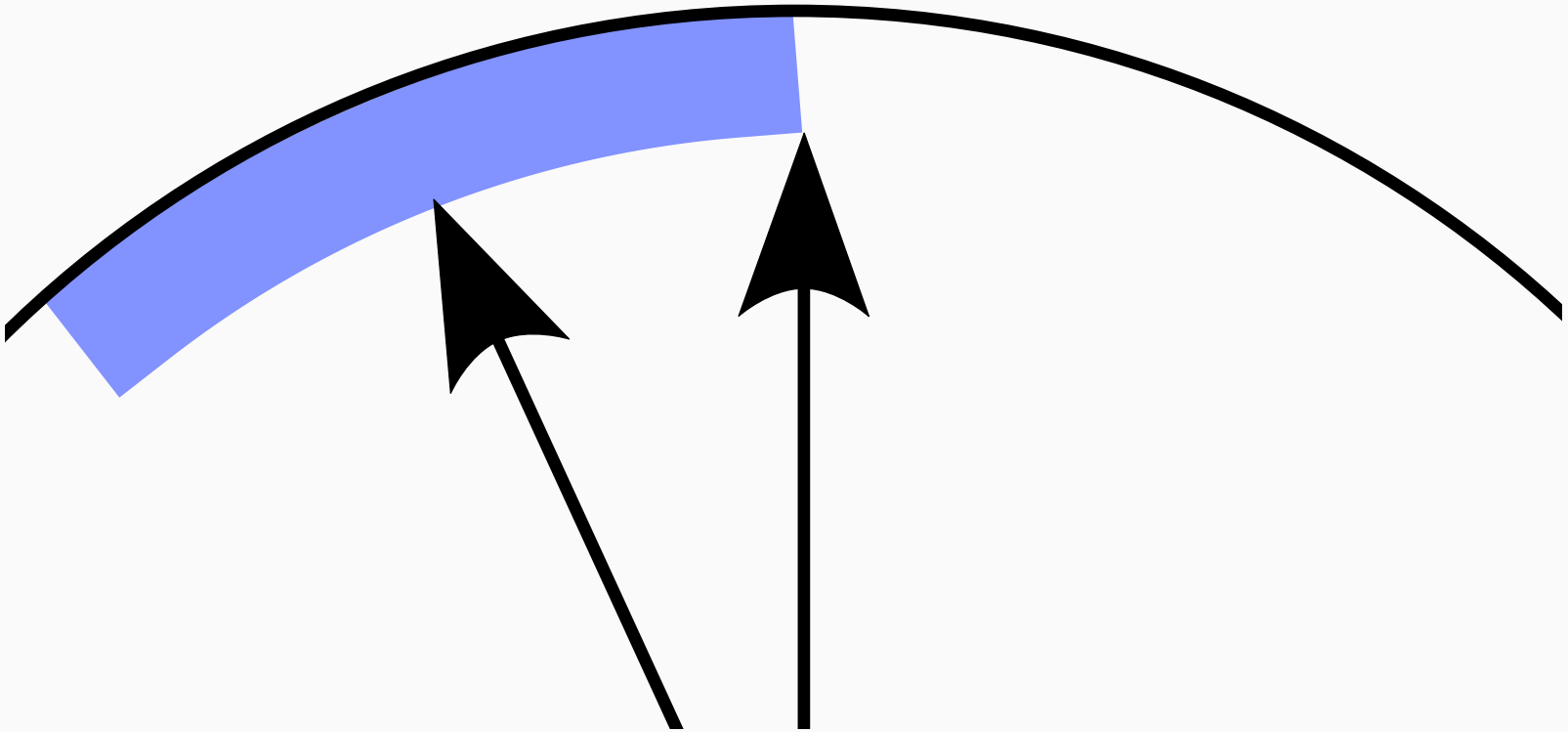

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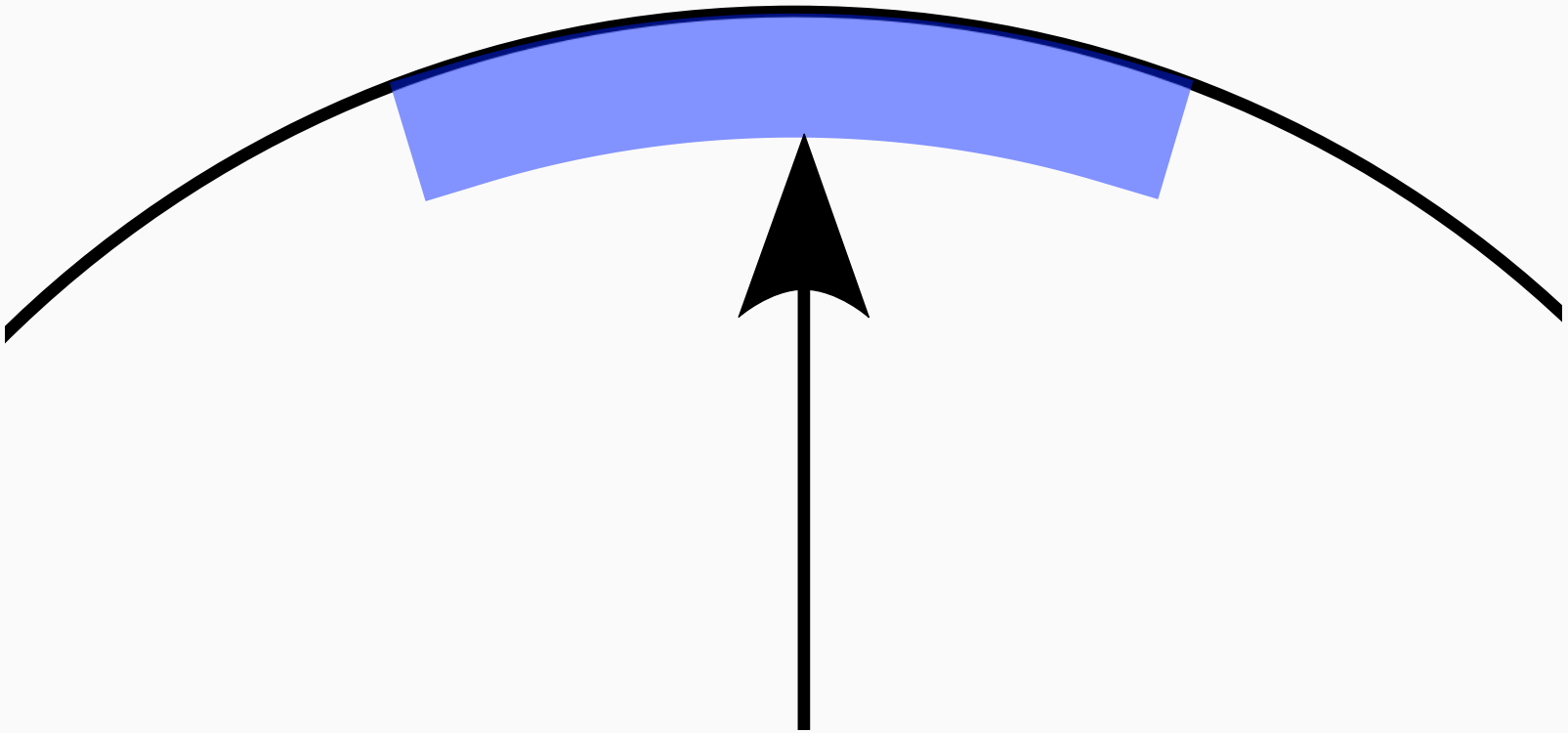

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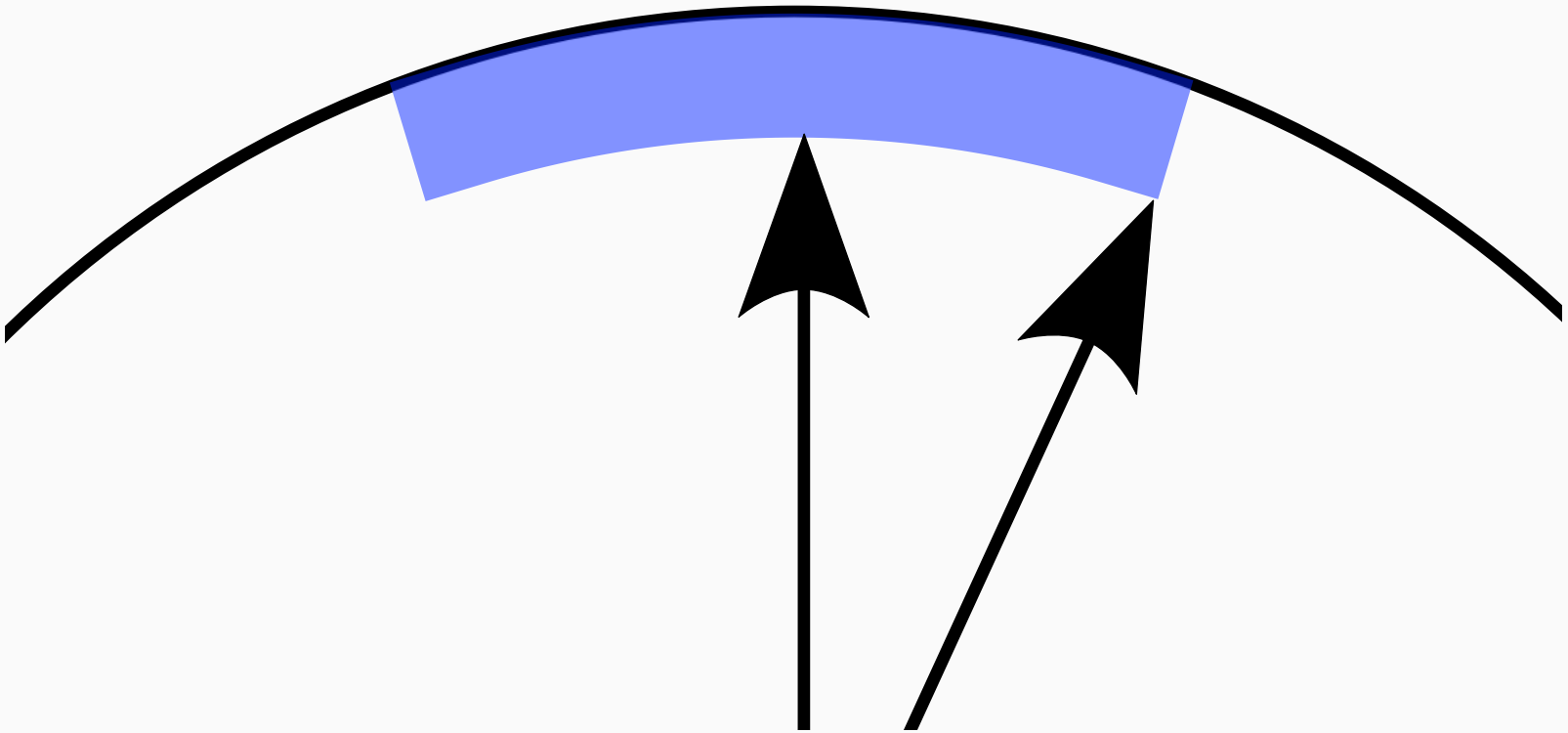

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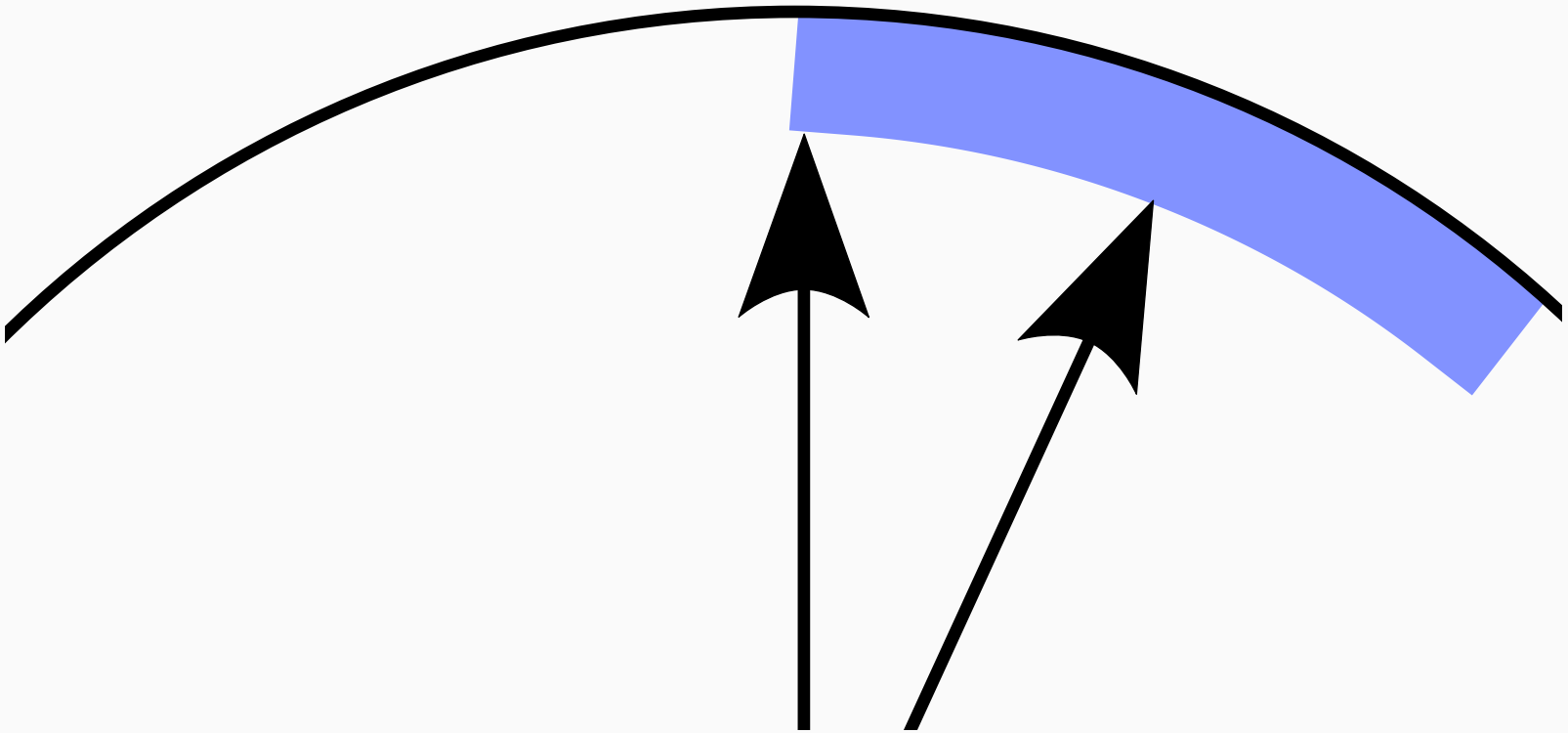

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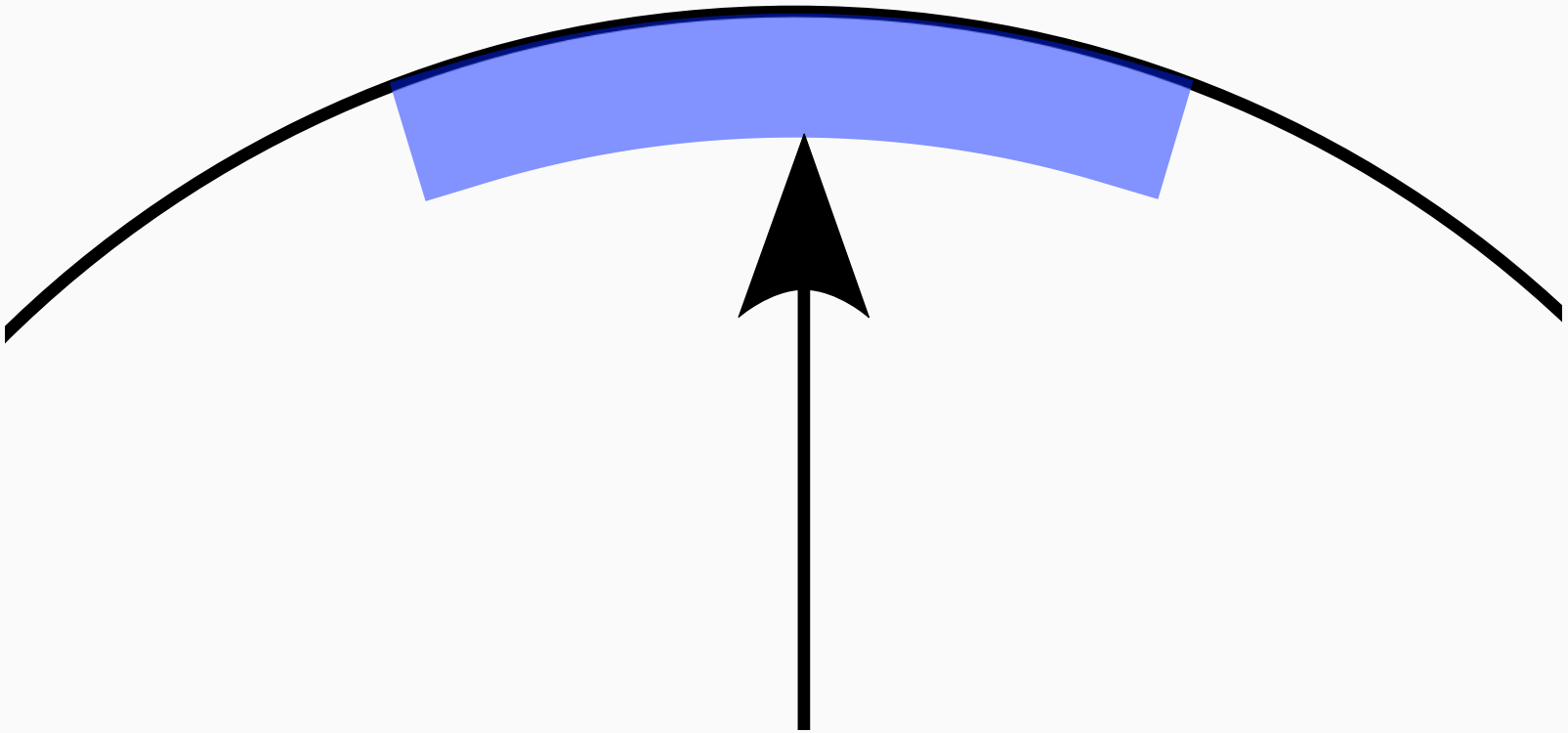

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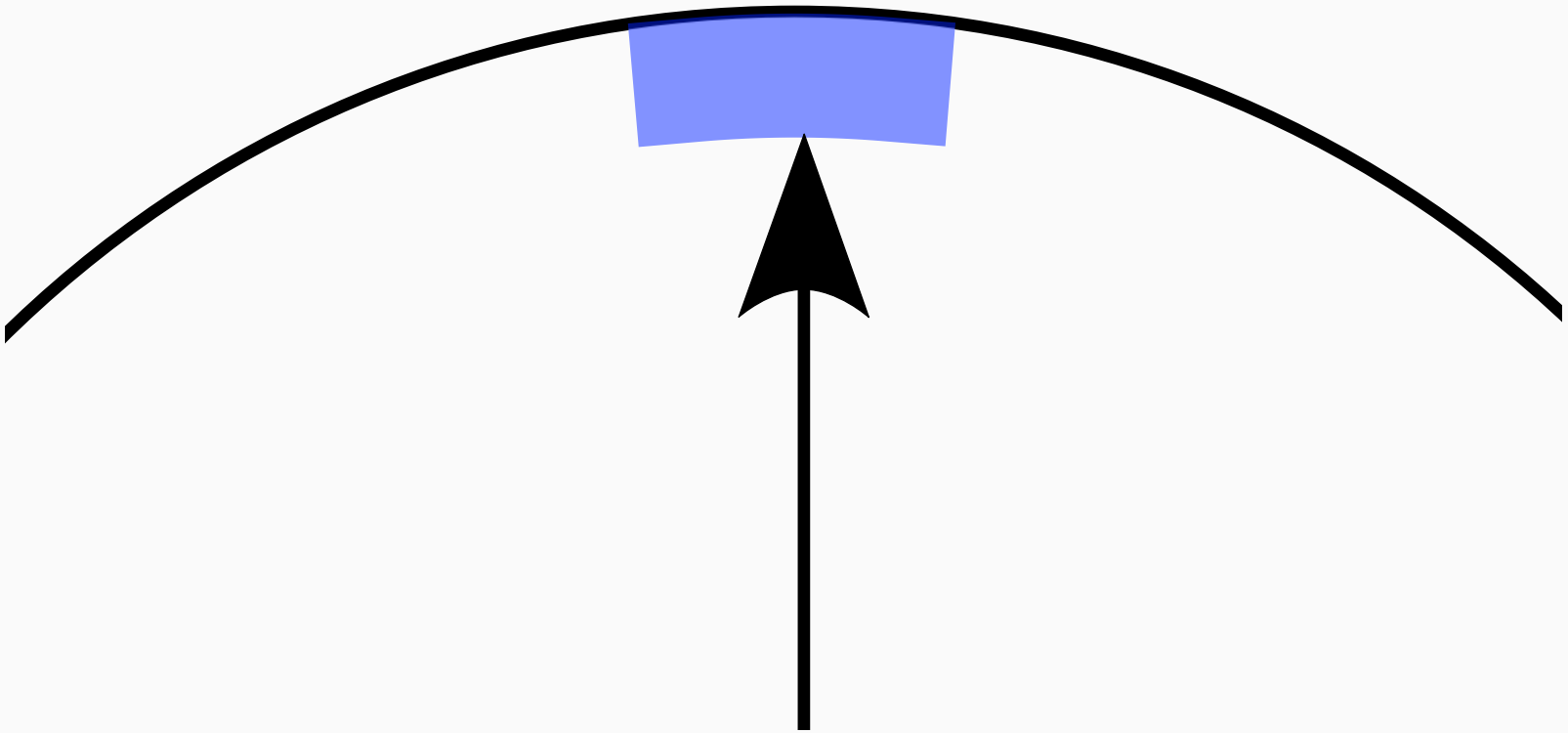

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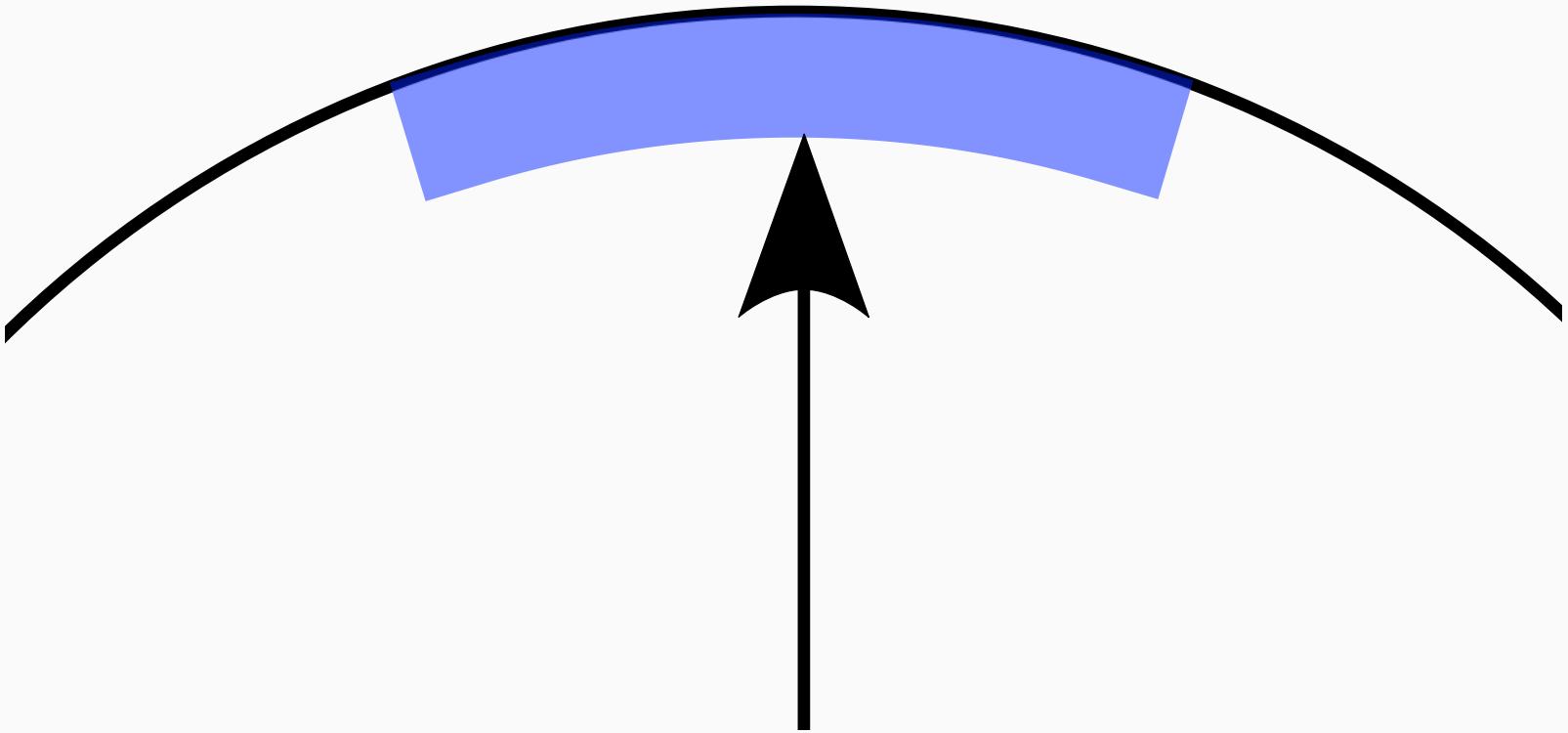

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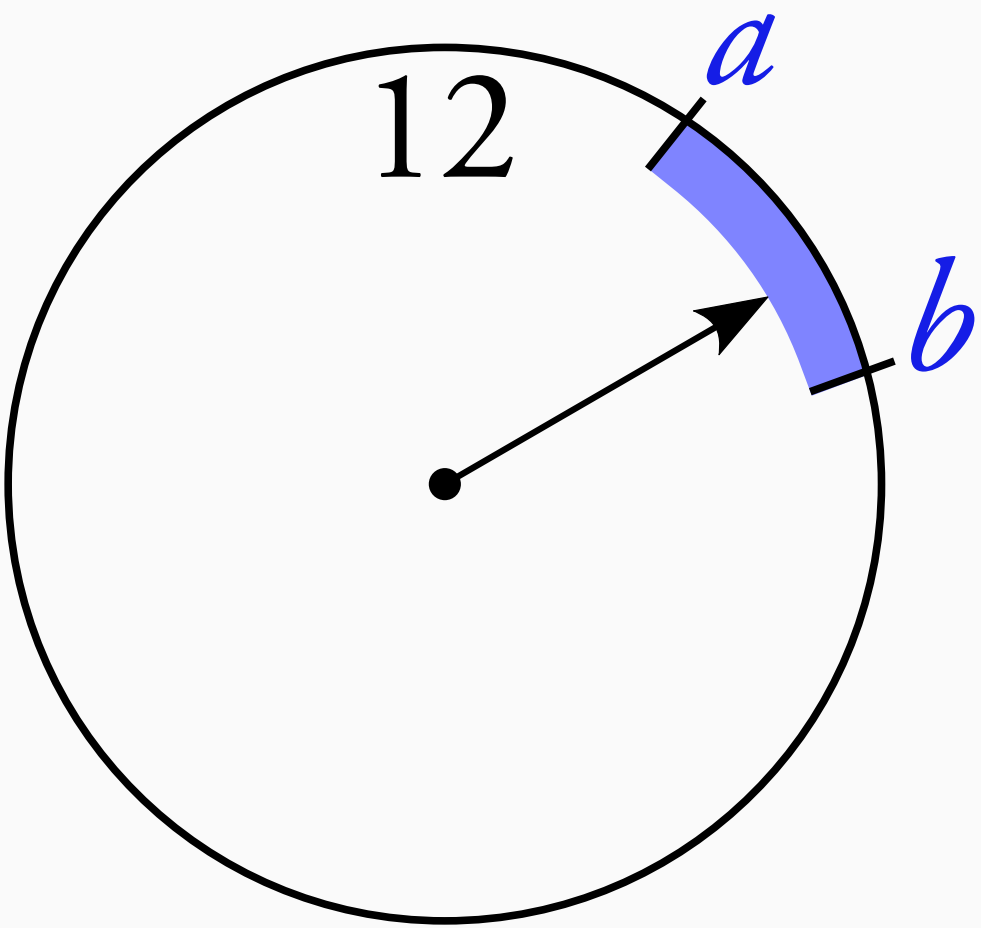

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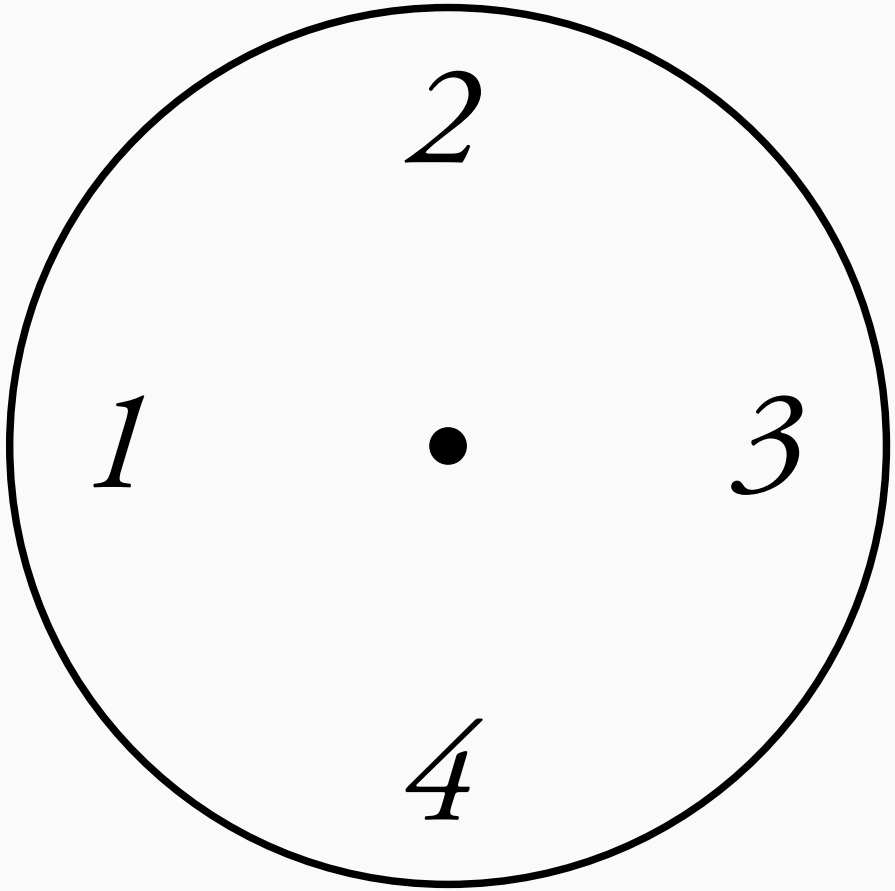

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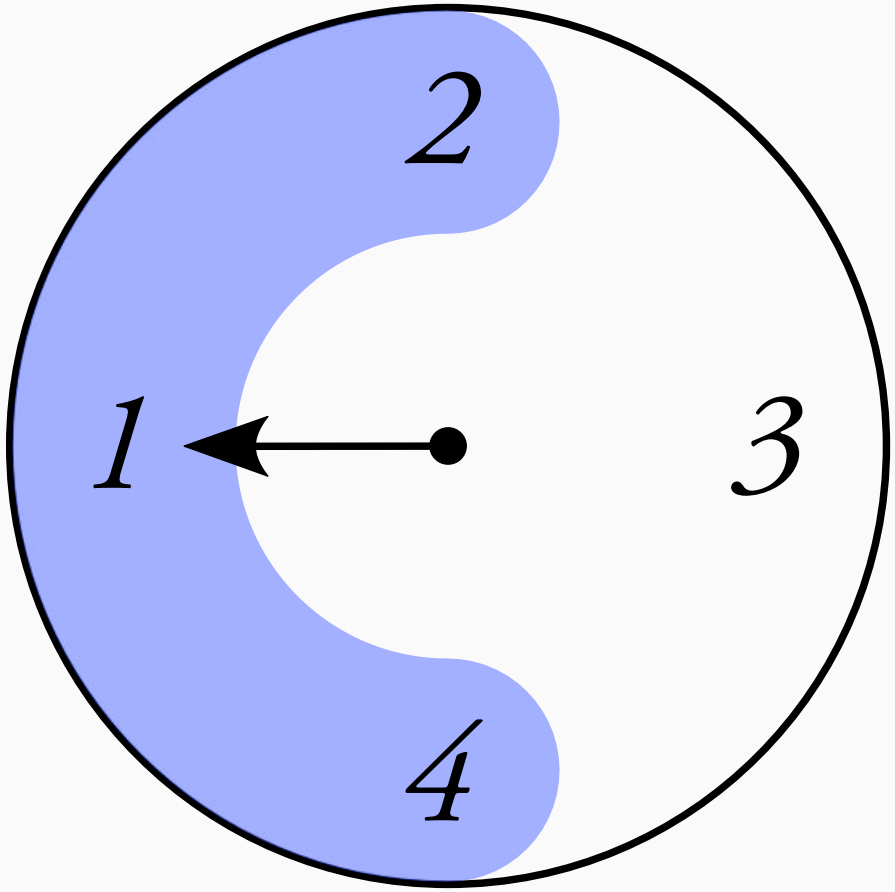

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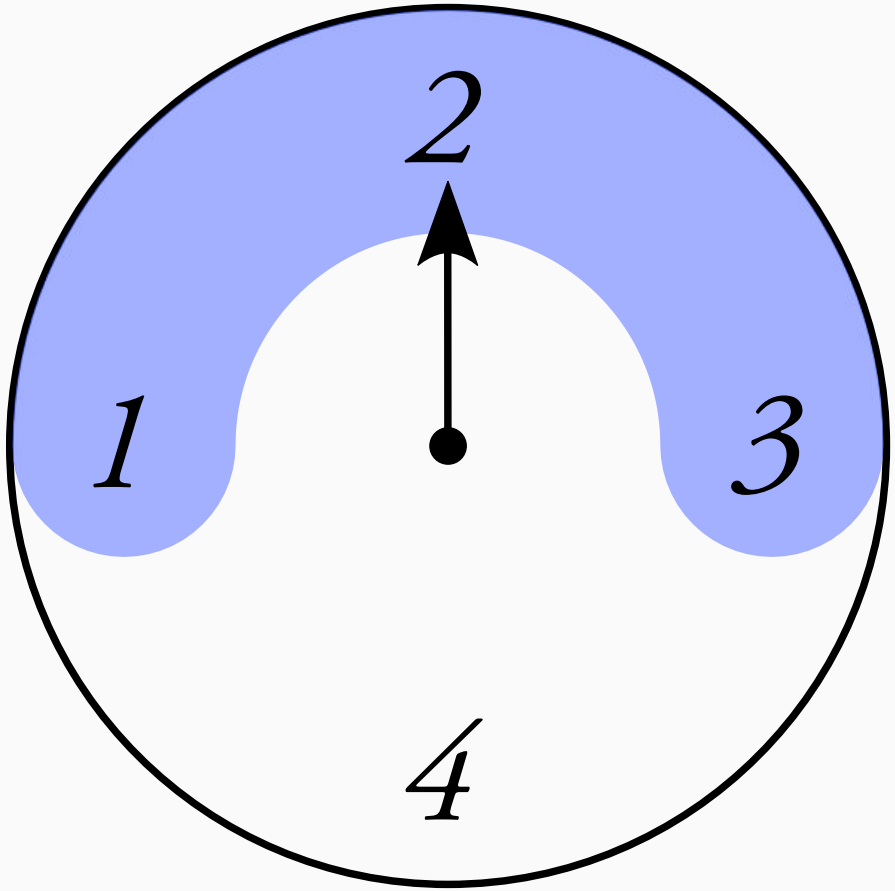

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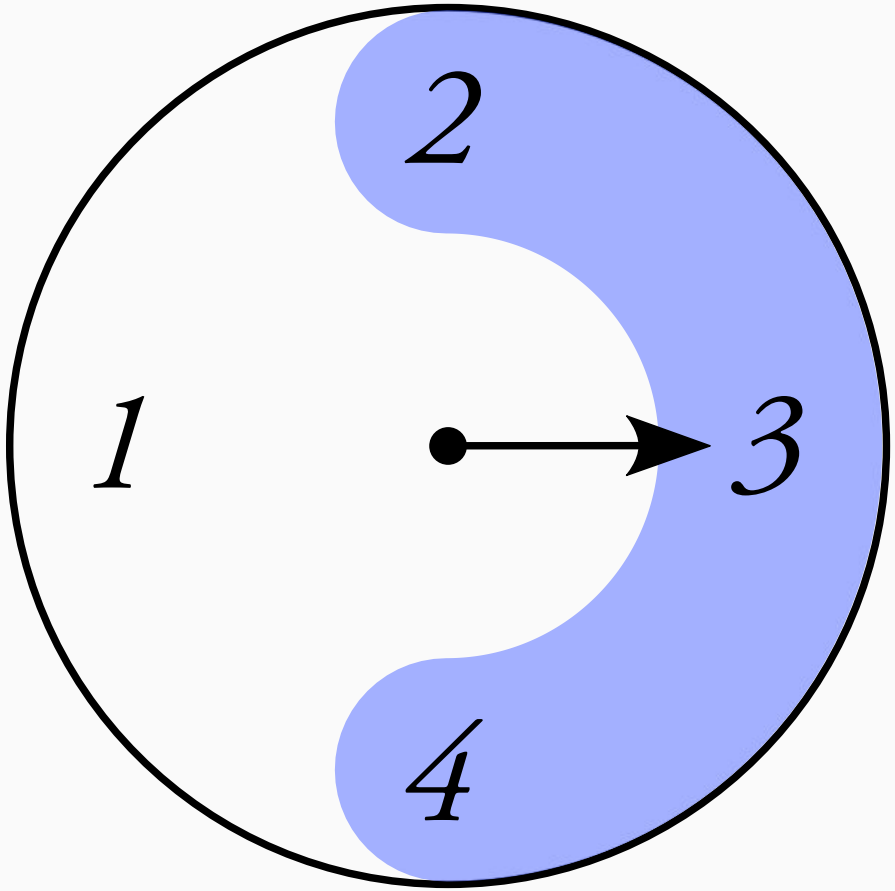

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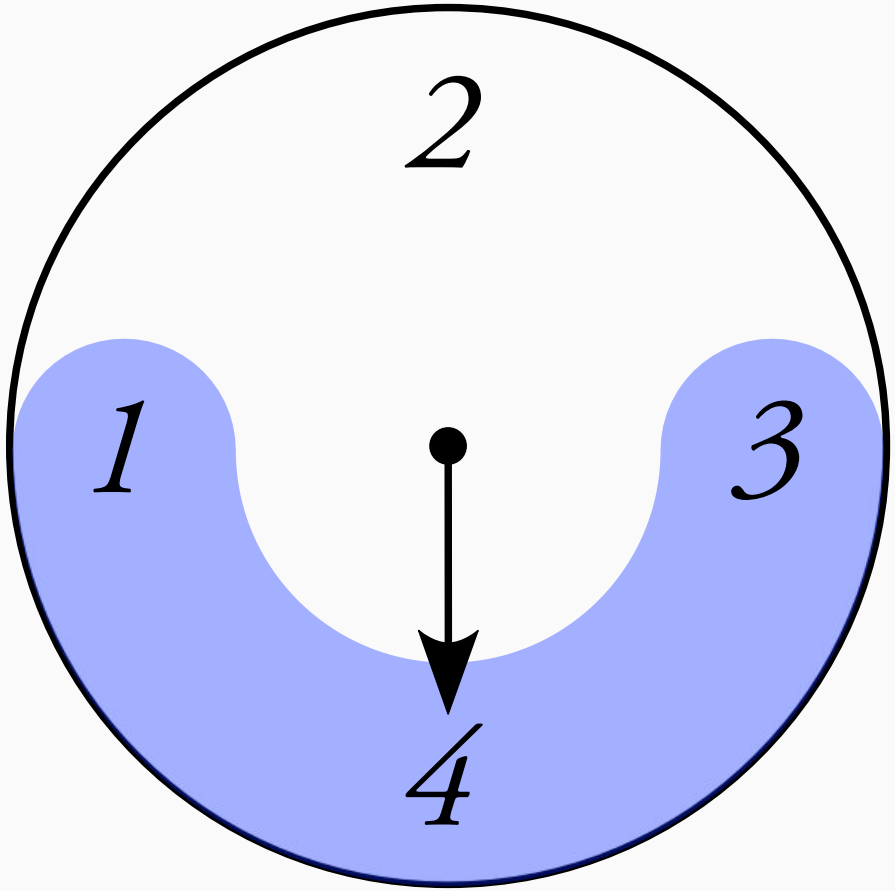

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- You have opinions about how likely various propositions are.
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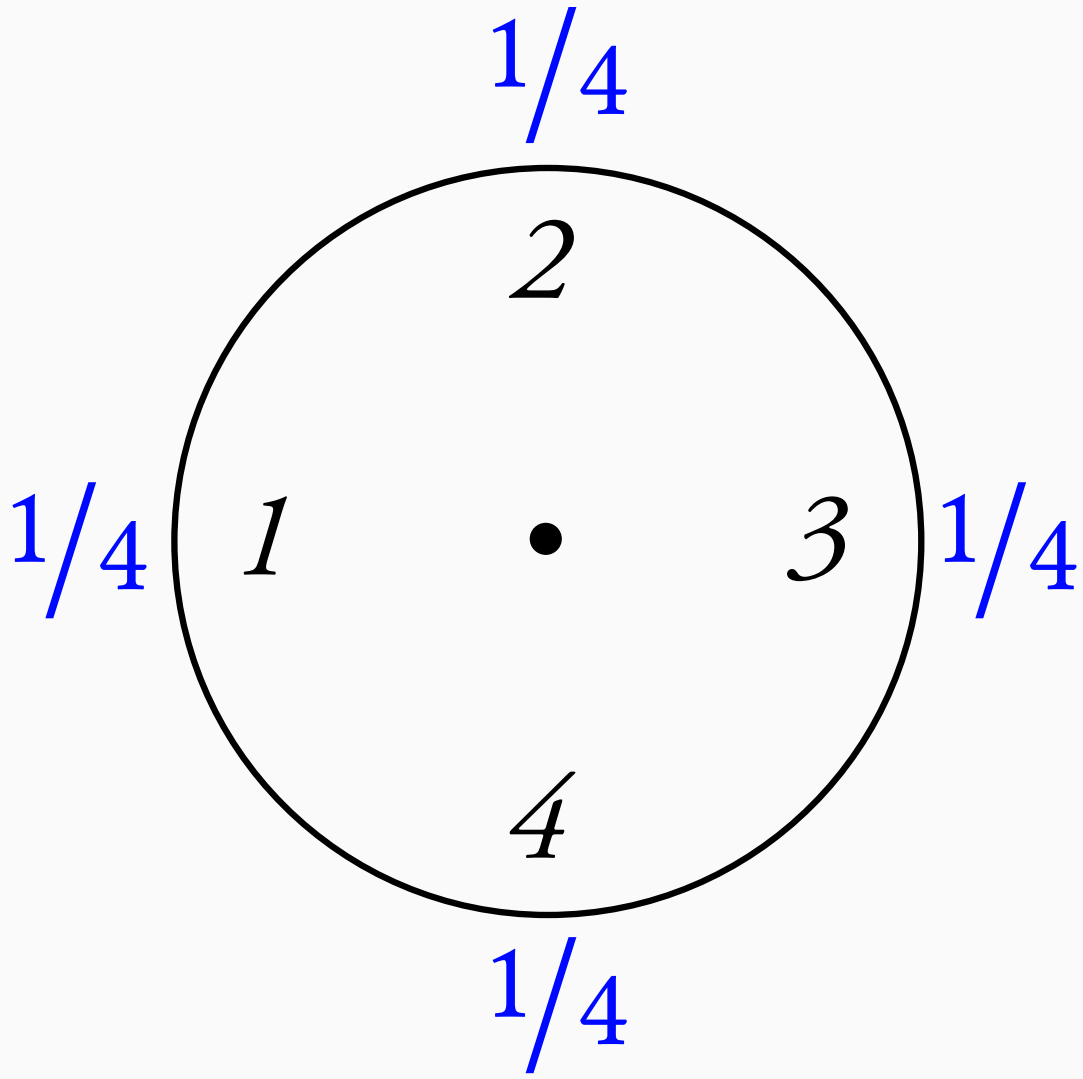

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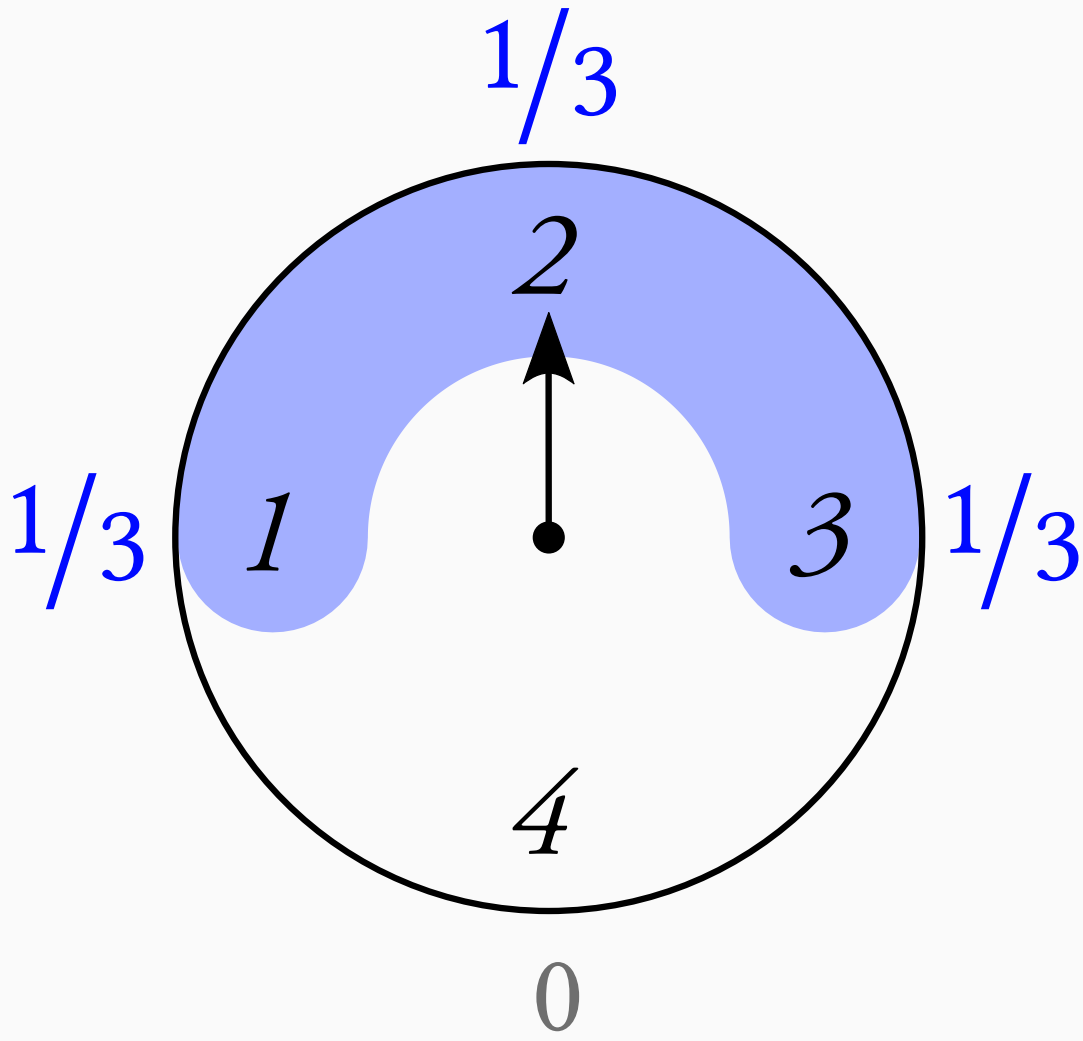

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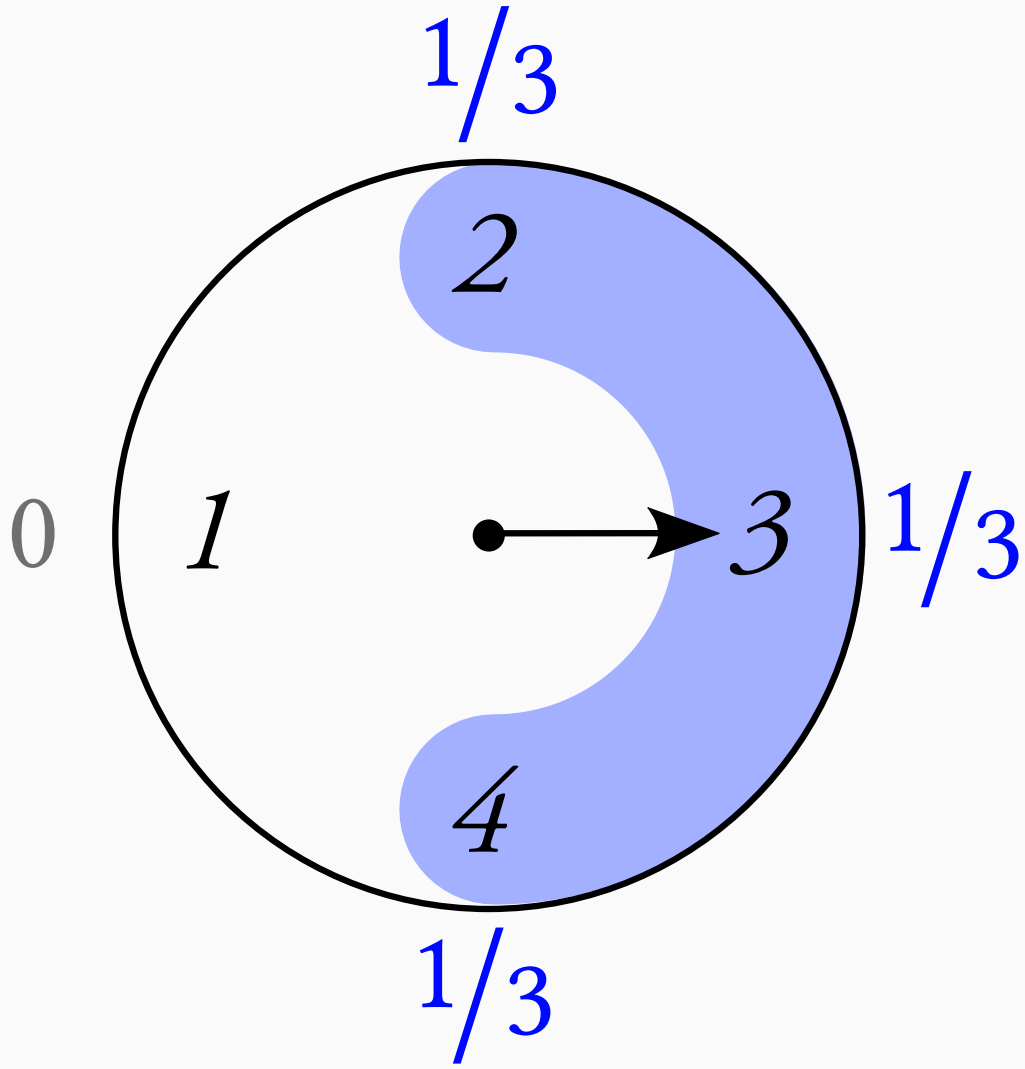

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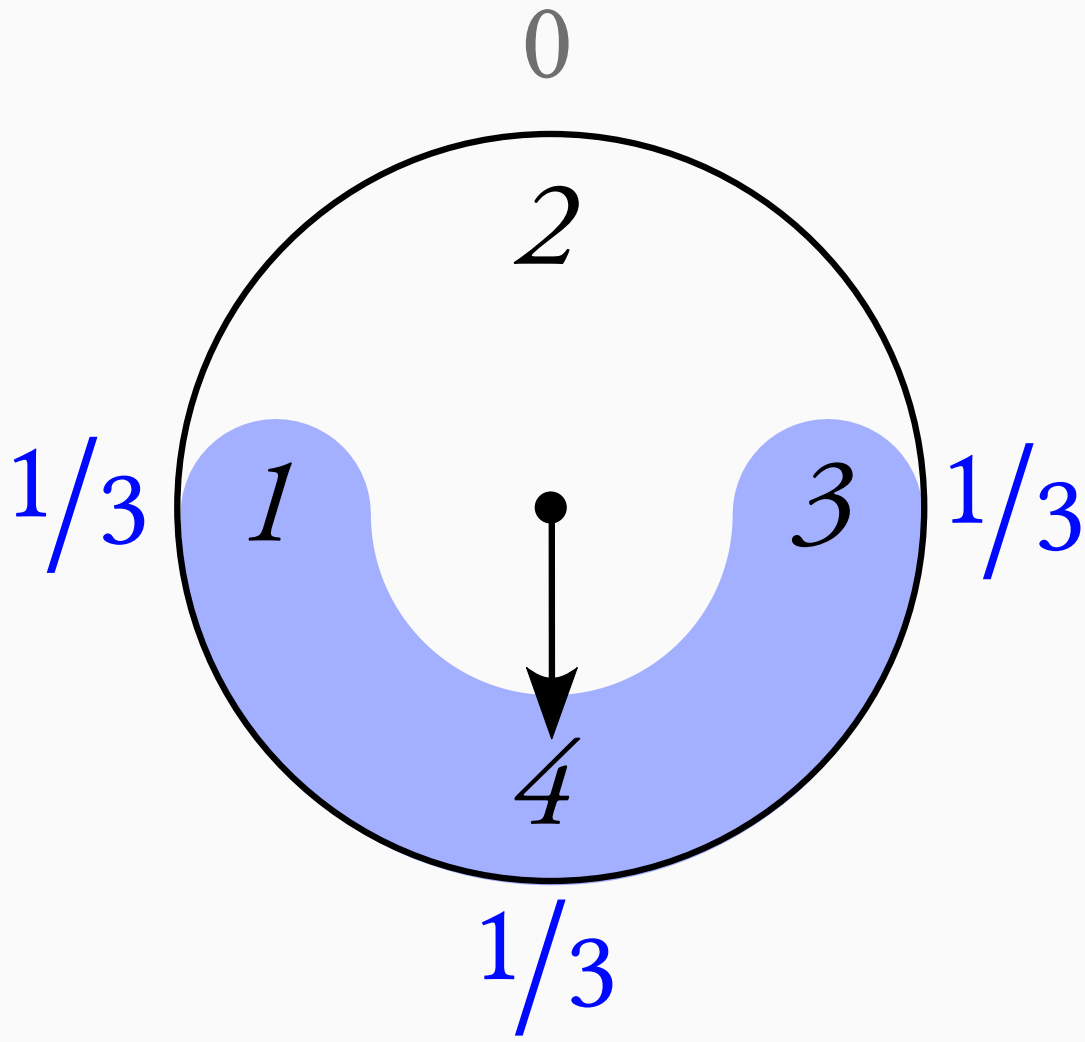

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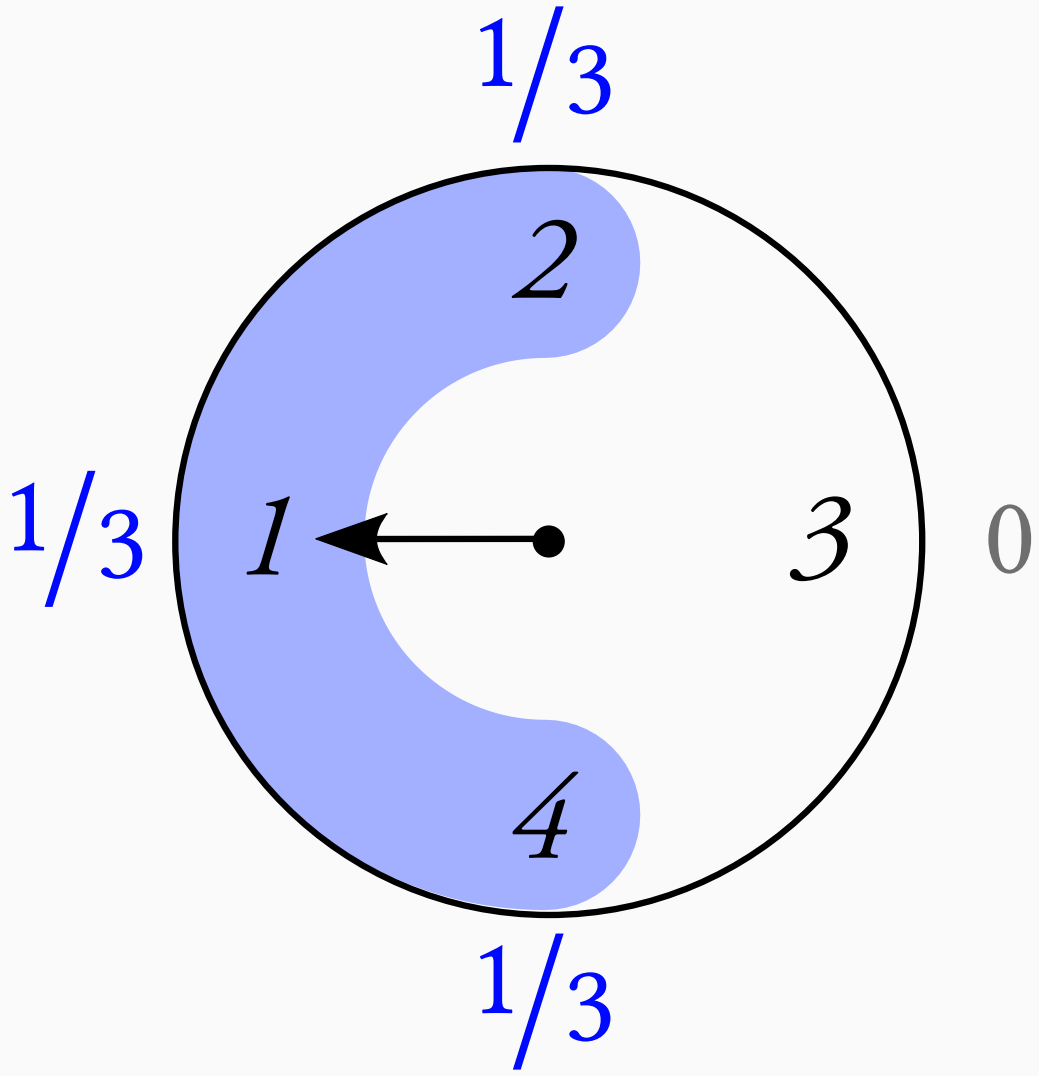

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Be disposed to respond to the total evidence e by adopting your current credence function, C, *conditioned upon* e.

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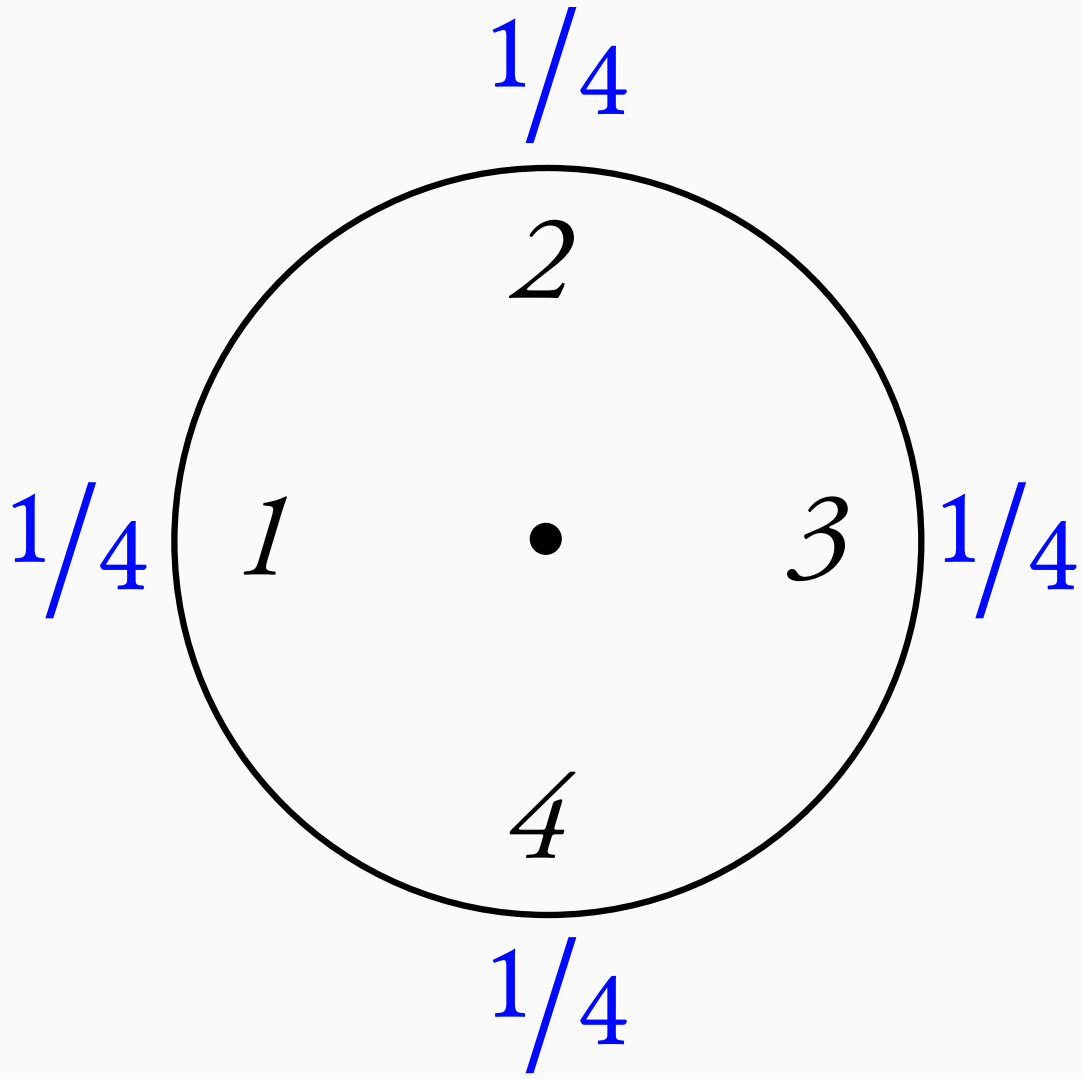

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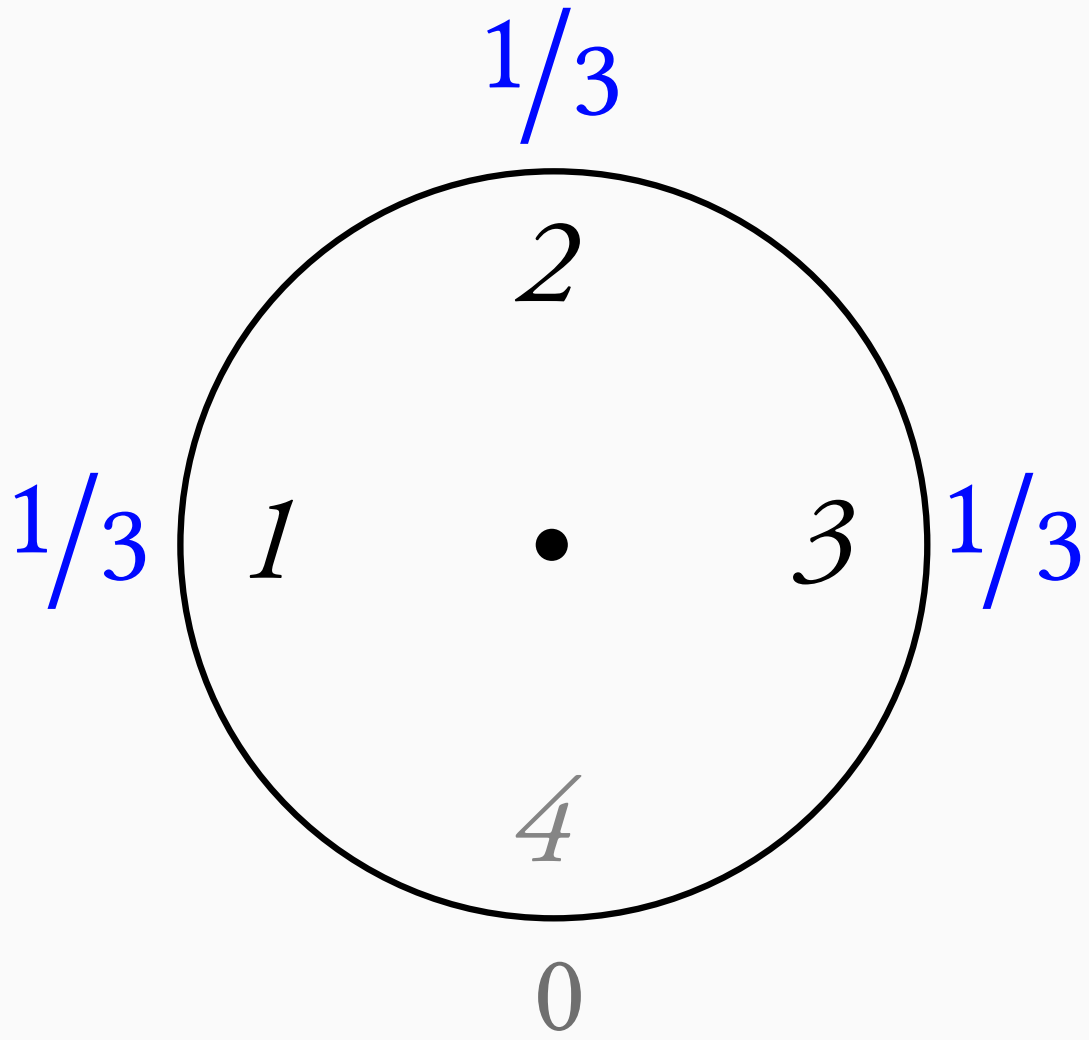

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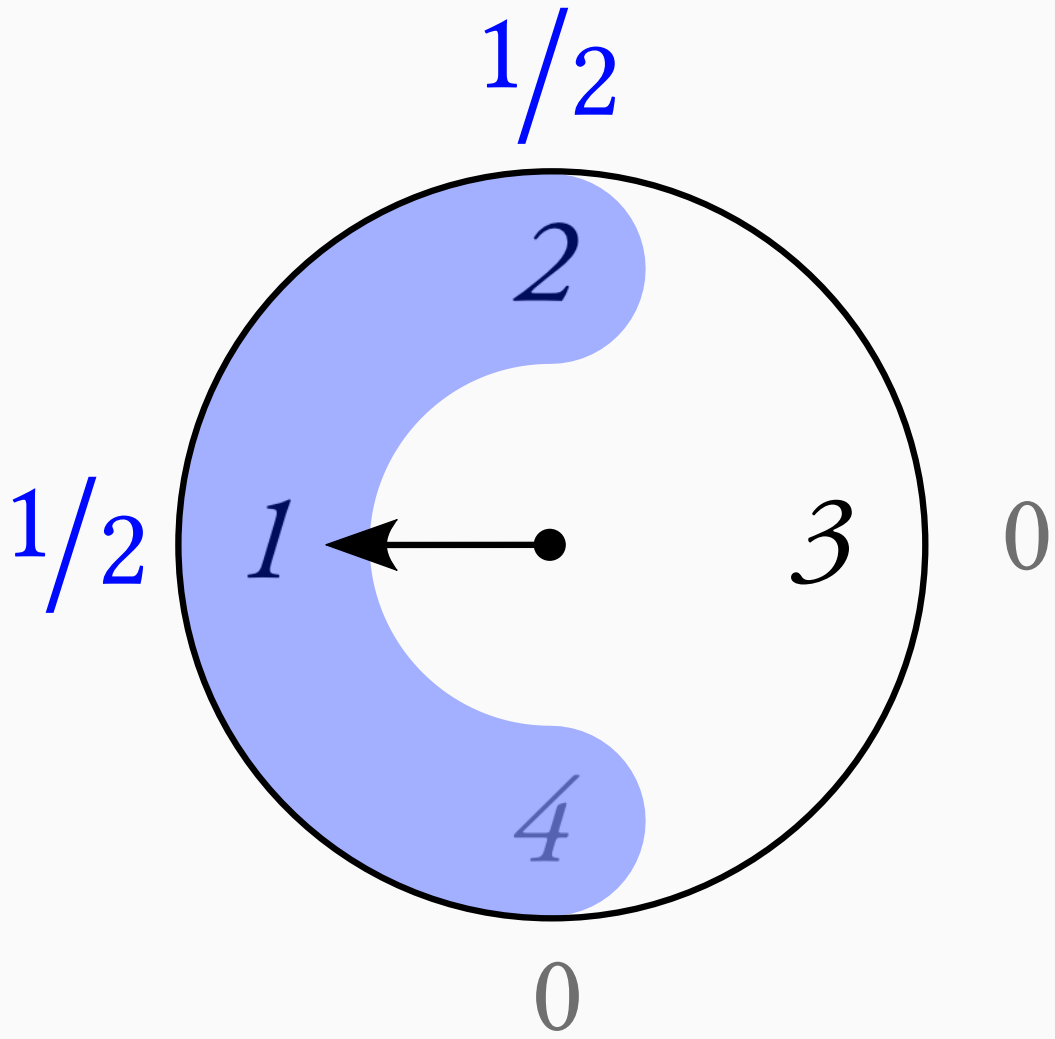

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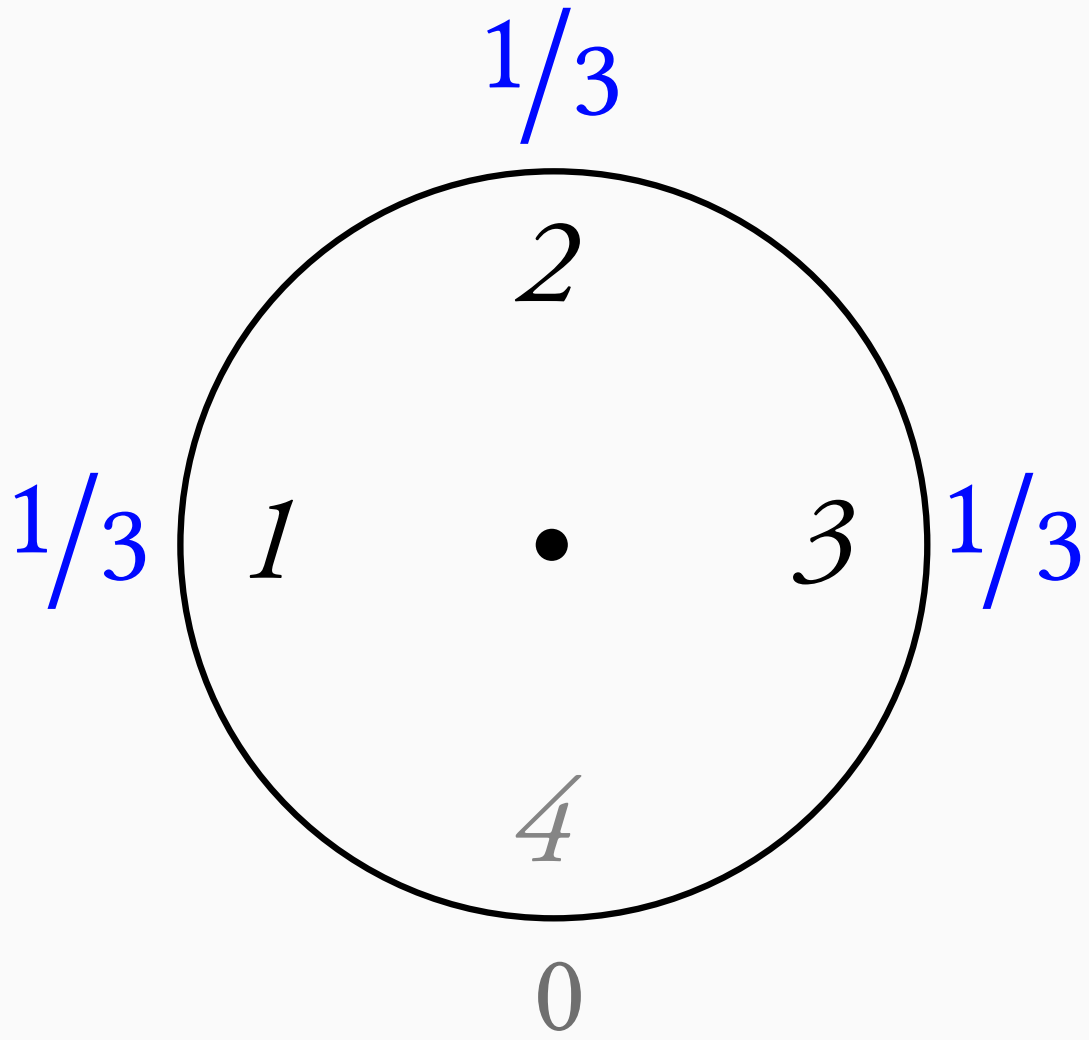

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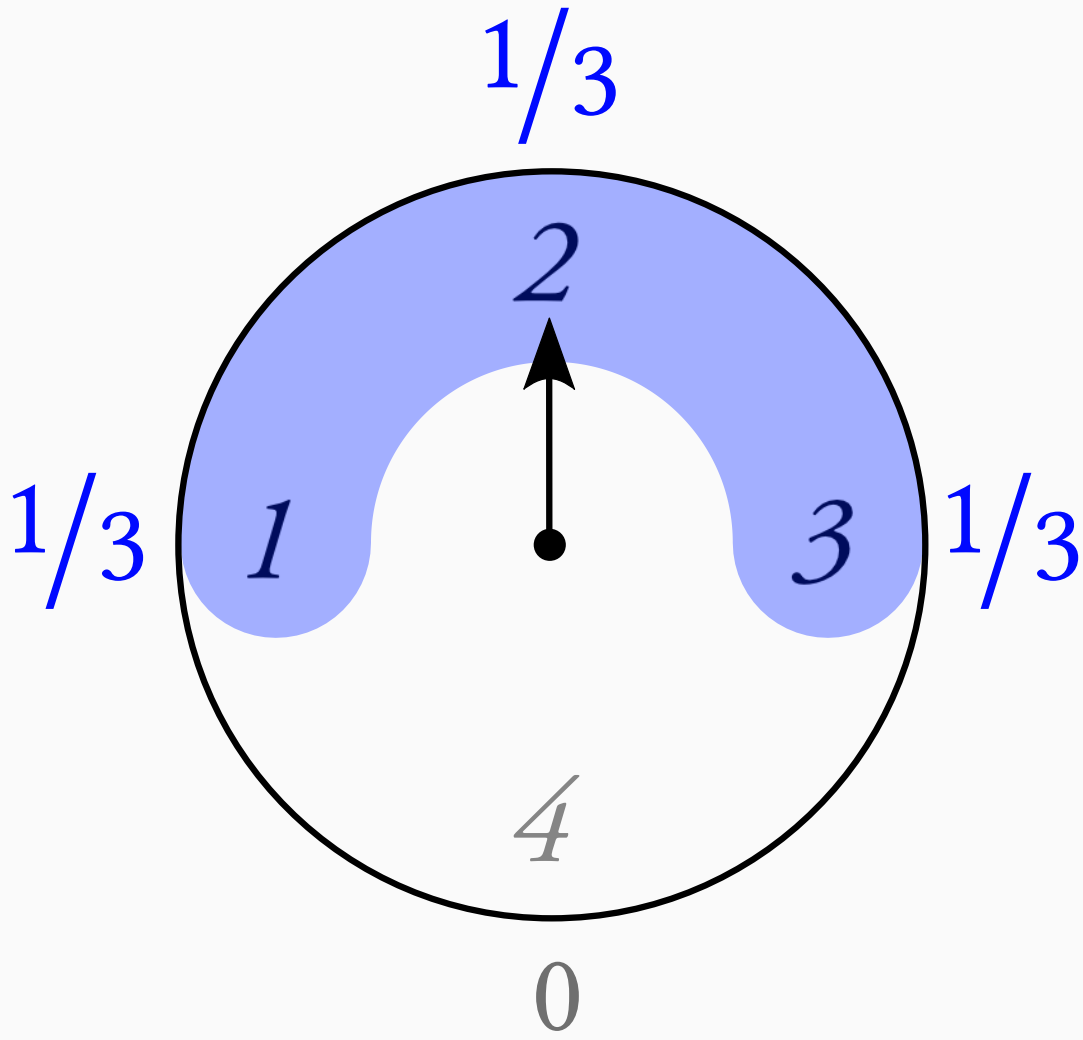

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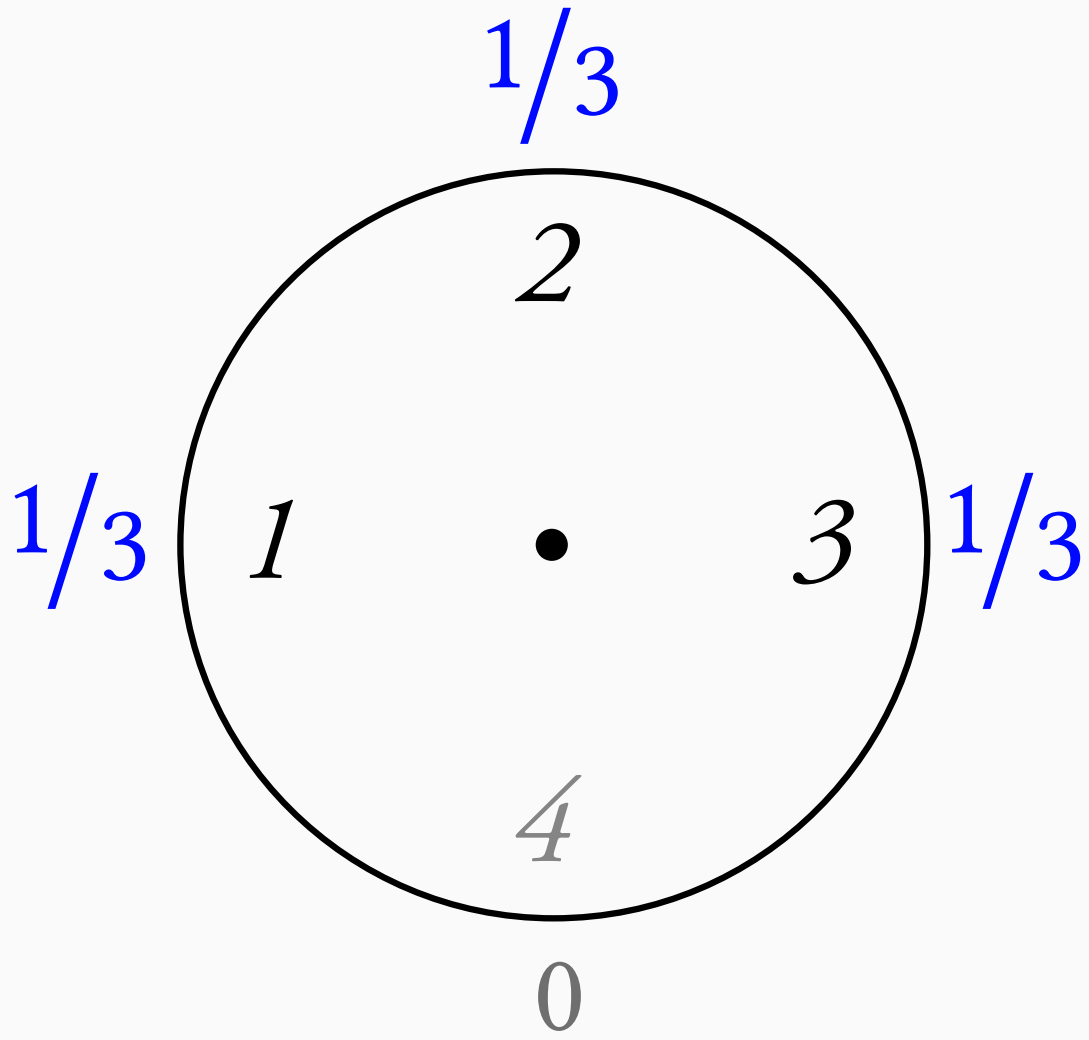

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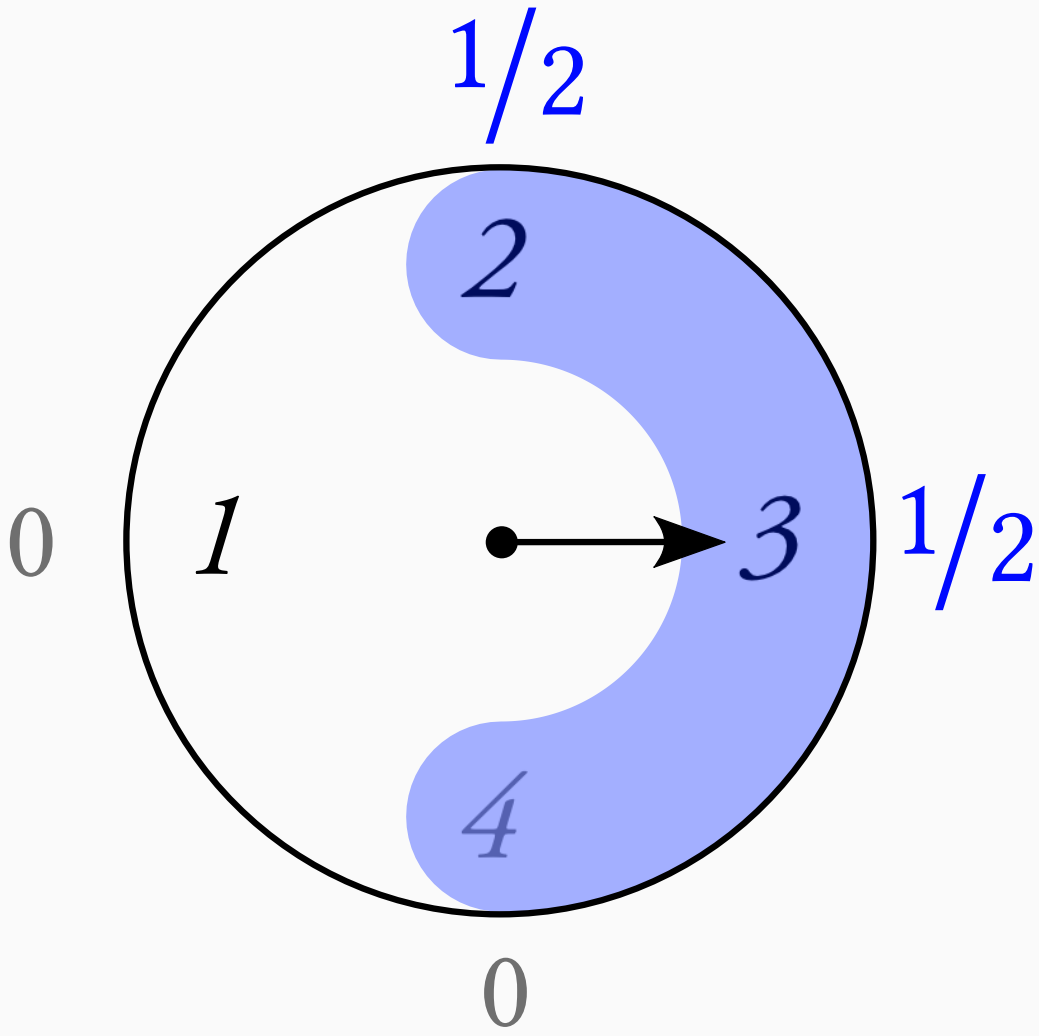

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- Have a friend who knows the truth about p place the clock hand at 2 iff p.
- Take a quick glimpse, and CONDI says: it will be rational for you to become more confident that p, so long as $\neg p$.

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If you are disposed to raise your credence that p in response to some potential evidence, then you must also be disposed to lower your credence that p in response to some potential evidence.

No Biased Inquiry

If externalism commits us to cases like this, then:

- Externalism
- Conditionalization
- No Biased Inquiry

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Reflection

Reflection

You shouldn't expect your new credence that p to be higher or lower than your current credence that p.

$$\sum_e D_e(p) \cdot C(\mathbf{U}e) = C(p)$$

$\ulcorner \mathbf{U}e \urcorner \stackrel{\text{def}}{=}$ you have *updated* your credences to D_e

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Accuracy

Learning & Accuracy

- Take some well-behaved measure of the accuracy of a credence function at some possible world.
- Then: we may ask about the *expected accuracy* of your learning dispositions (from *C*'s perspective).
- Assumption: learning dispositions are *rational* if they maximize expected accuracy.

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- Greaves & Wallace: assuming internalism, CONDI maximizes expected accuracy.
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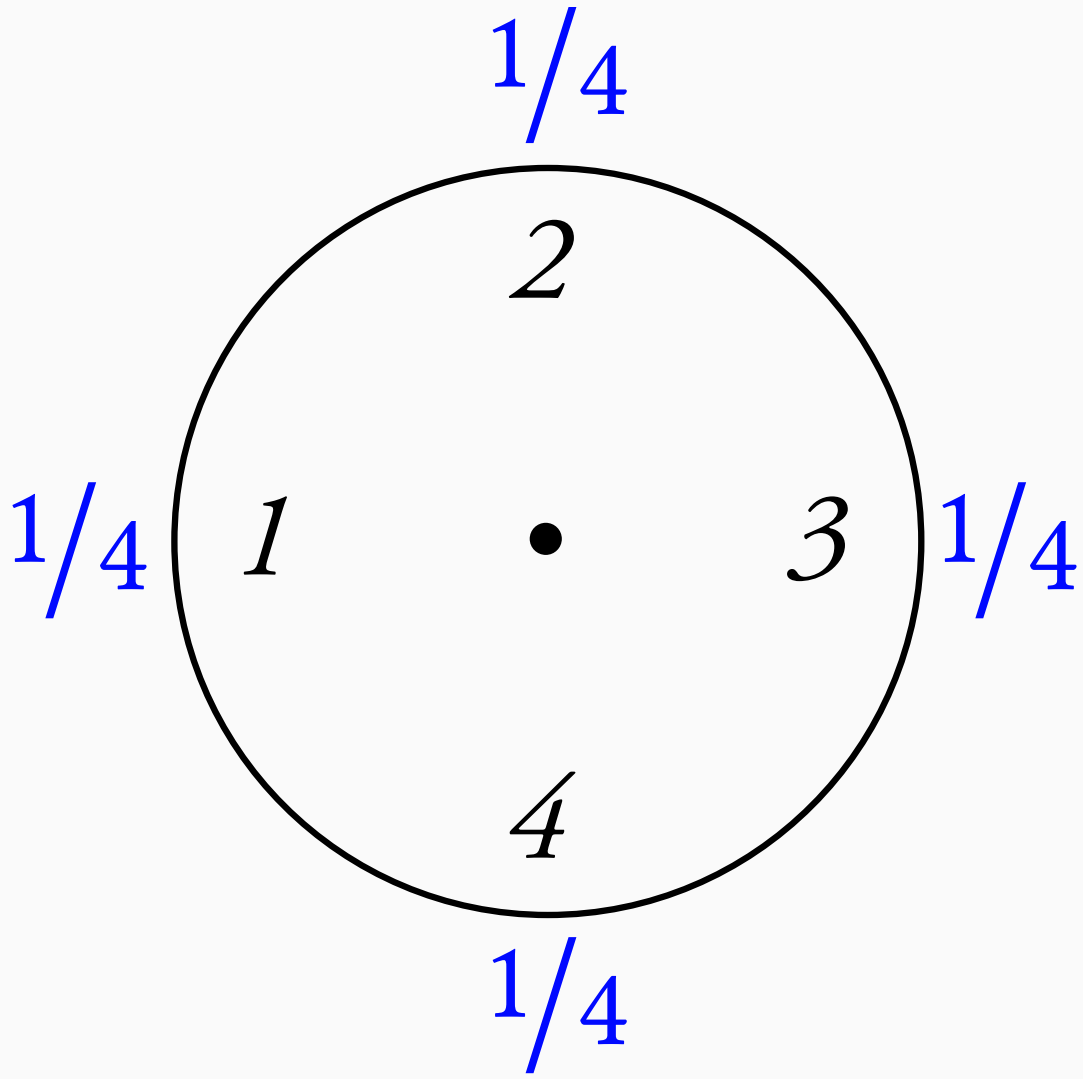

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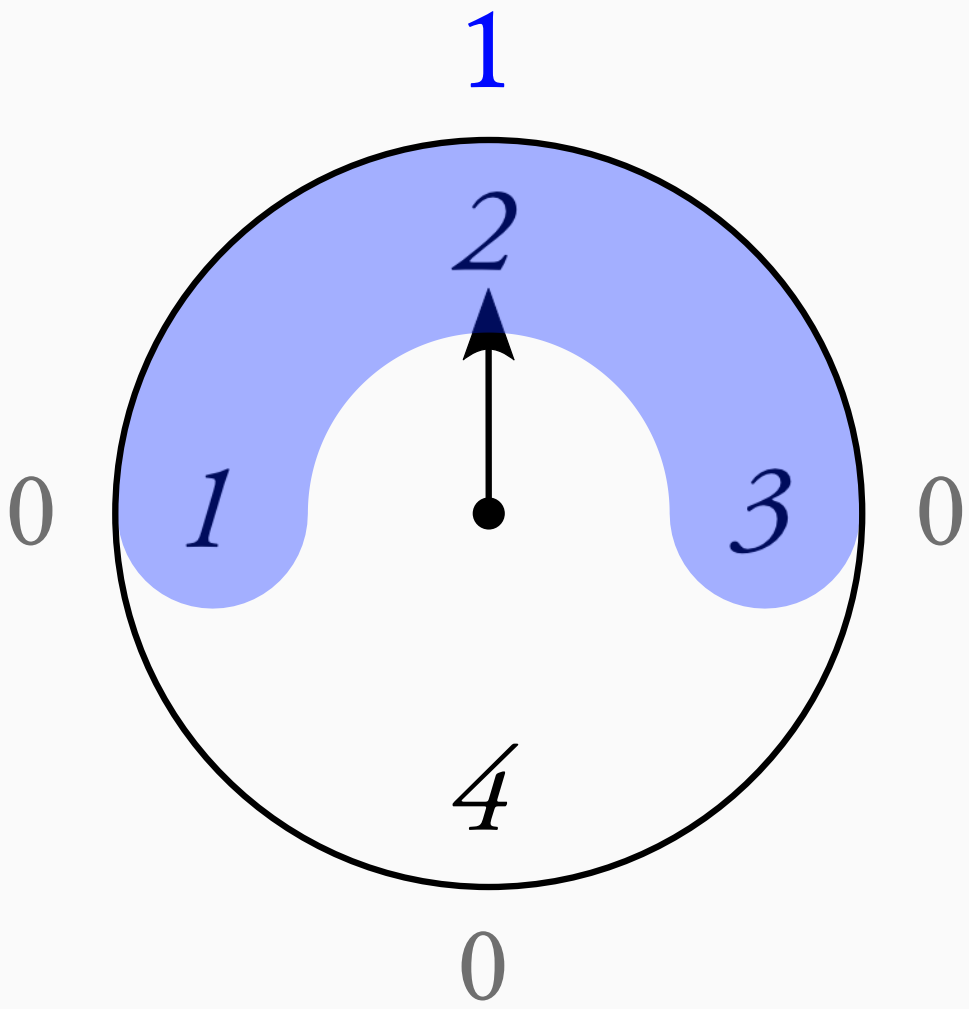

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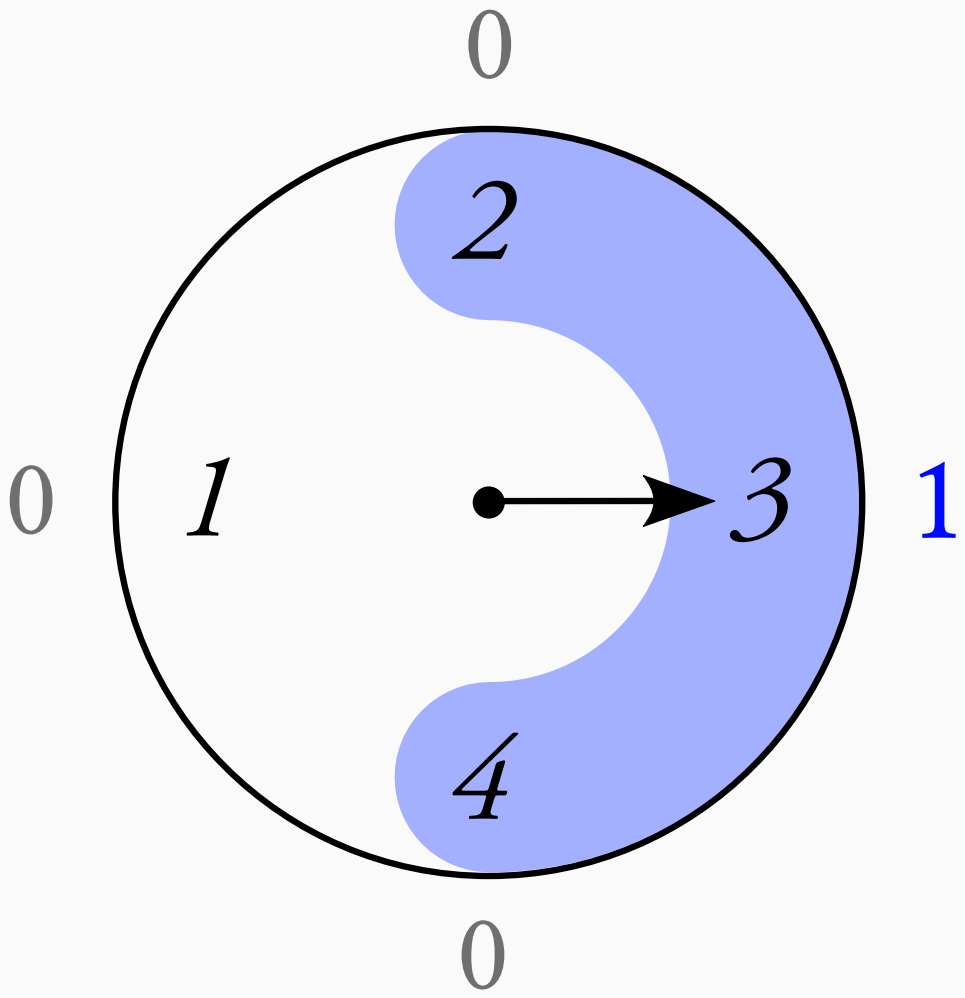

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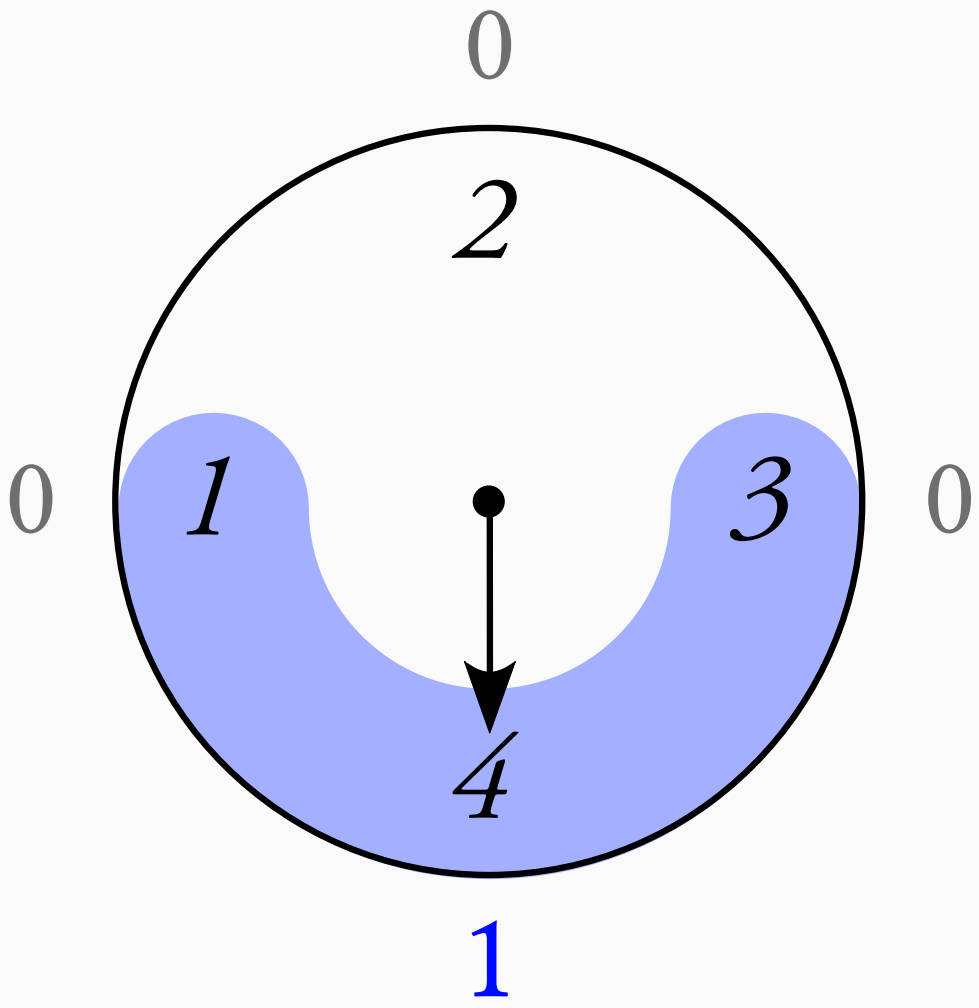

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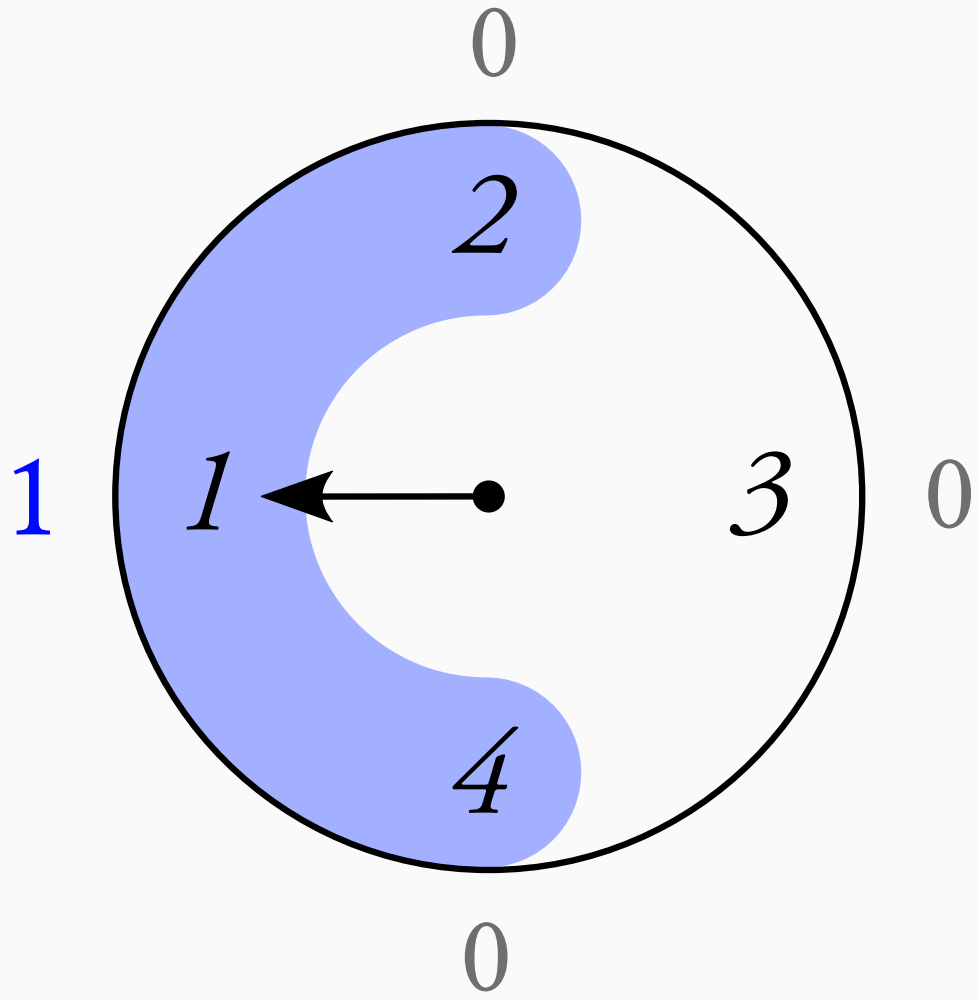

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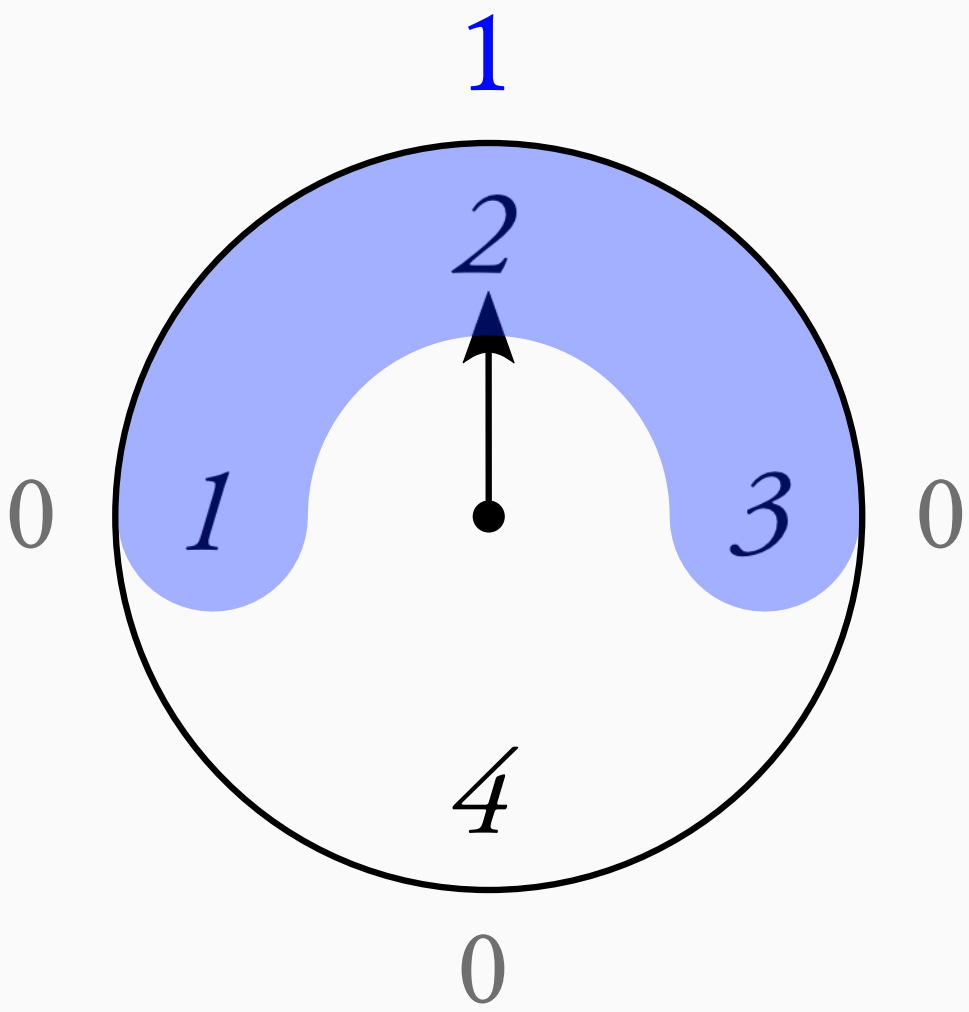

CONDI* & Certainty Externalism

Externalism

Your total evidence may be e without your evidence telling you that your total evidence is e.

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Certainty Externalism

Your total evidence may be *e* without it being rational for you to be certain that your total evidence is *e*.

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- CONDI* is inconsistent with certainty externalism
- So: it does not permit uncertainty about what your evidence says
- This is an externalist-unfriendly learning norm

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- But an externalist should think that you *can* be rationally uncertain about what your evidence says
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$$D : \underbrace{\mathbf{T}e}_{\text{stimulus}} \mapsto \underbrace{D_e}_{\text{response}}$$

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‘Misfiring’ Learning Dispositions

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1/4	1/4	1/4	1/4

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	1(T¬3)	2(T¬4)	3(T¬1)	4(T¬2)
U¬3	8/40	1/40	0	1/40
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$\ulcorner \mathbf{U}e \urcorner \stackrel{\text{def}}{=}$ you have *updated* your credences to D_e

Externalist Conditionalization

- If our measure of accuracy is well-behaved, then the (potentially misfiring) learning dispositions with maximal expected accuracy conform to **Externalist Conditionalization**.

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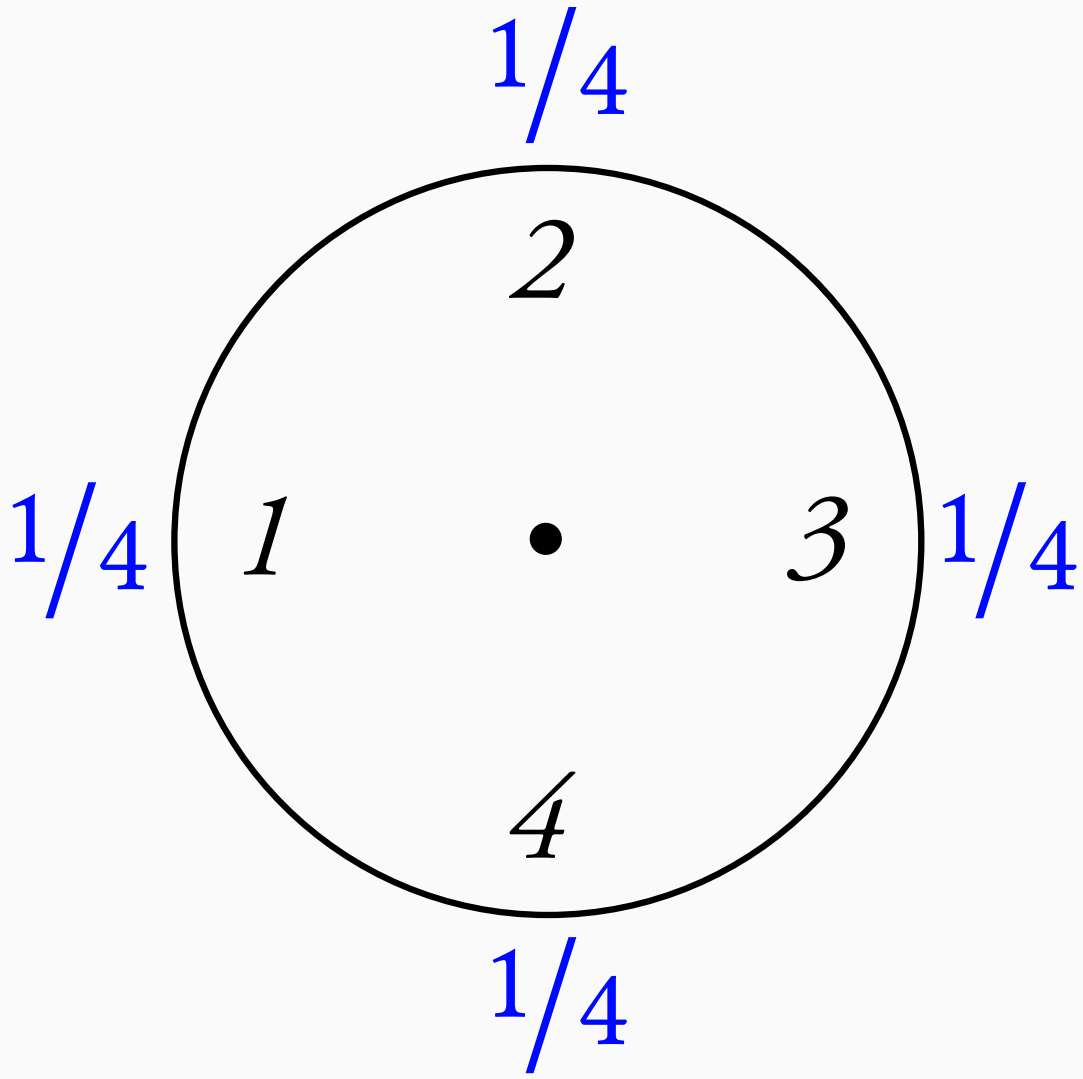

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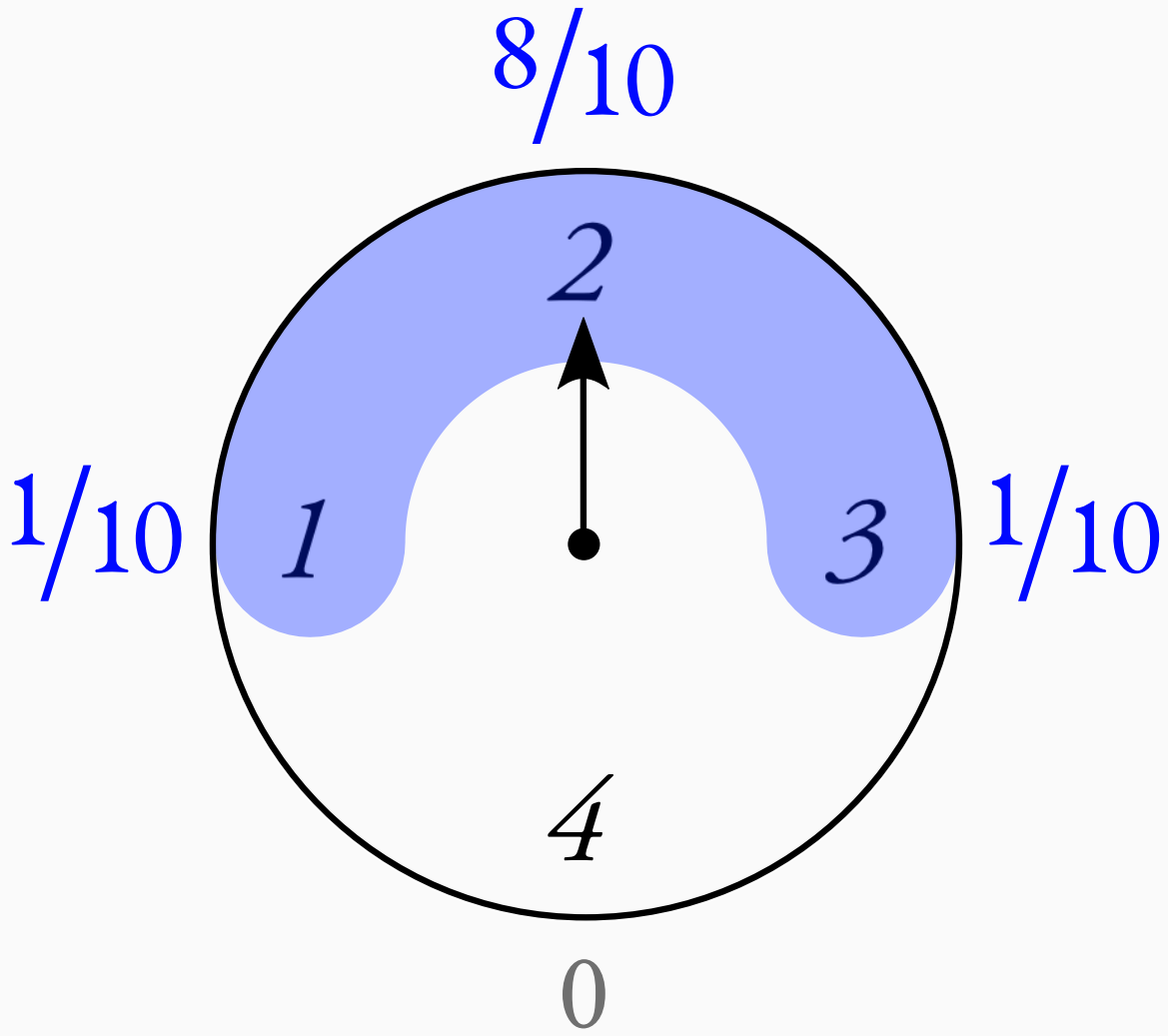

EXCONDI and Certainty Externalism

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- You think it's 20% likely that your evidence was ¬1 or ¬3, instead
- So: EXCONDI says you should be uncertain about what your total evidence is

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Be disposed to respond to the total evidence e by changing your credence in $\mathbf{T}f$ to $C(\mathbf{T}f \mid \mathbf{U}e)$, and holding fixed your credence in each proposition conditional on $\mathbf{T}f$ (for every f which might be your evidence).

$$D_e(p) = \sum_f C(p \mid \mathbf{T}f) \cdot C(\mathbf{T}f \mid \mathbf{U}e) \qquad \text{(EXCONDI)}$$

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Applications

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- your evidence, e, supports believing it will rain
- *new evidence*, e^*: your belief that it will rain was likely irrational
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Conditional on D_f being the rational credences for you to hold, your credences should agree with D_f.

$$D_e(p \mid D_f \text{ is rational }) = D_f(p)$$

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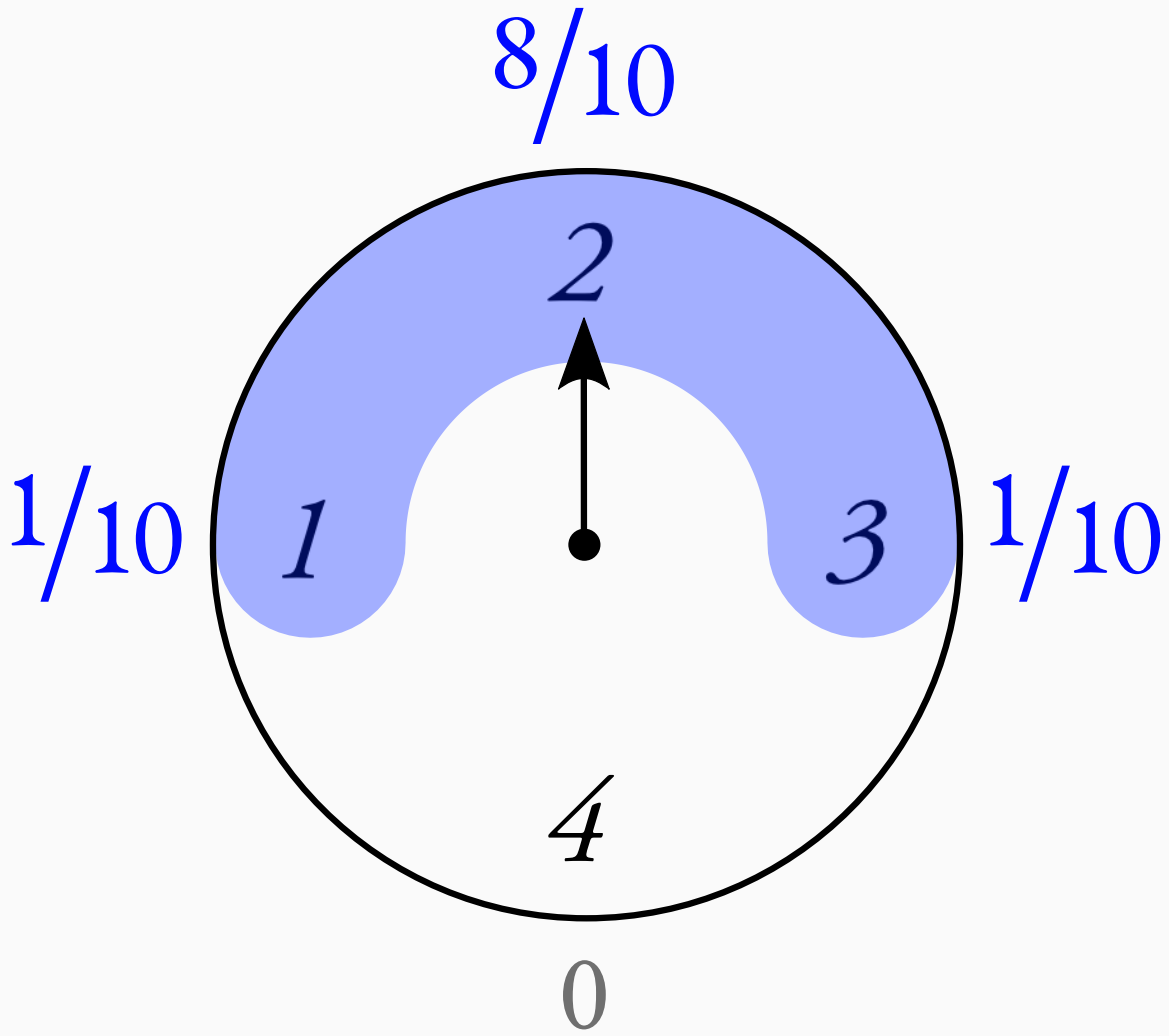

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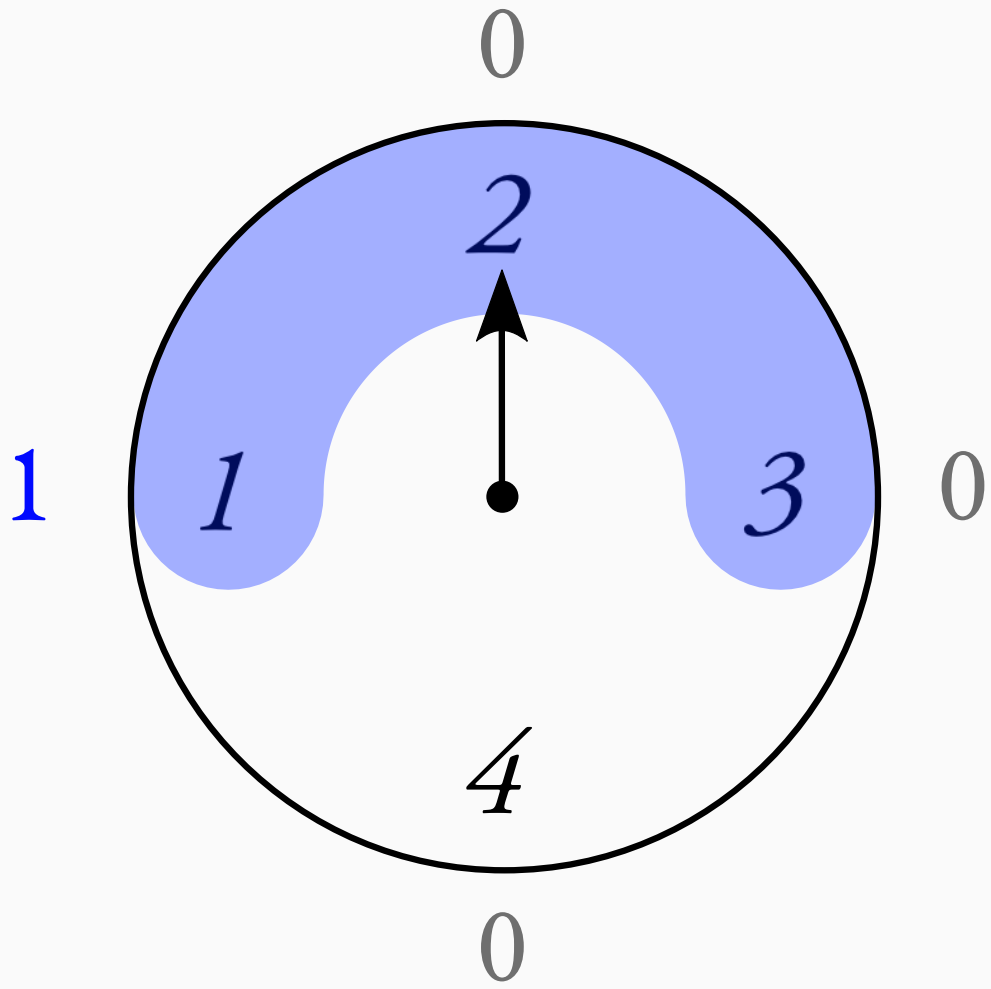

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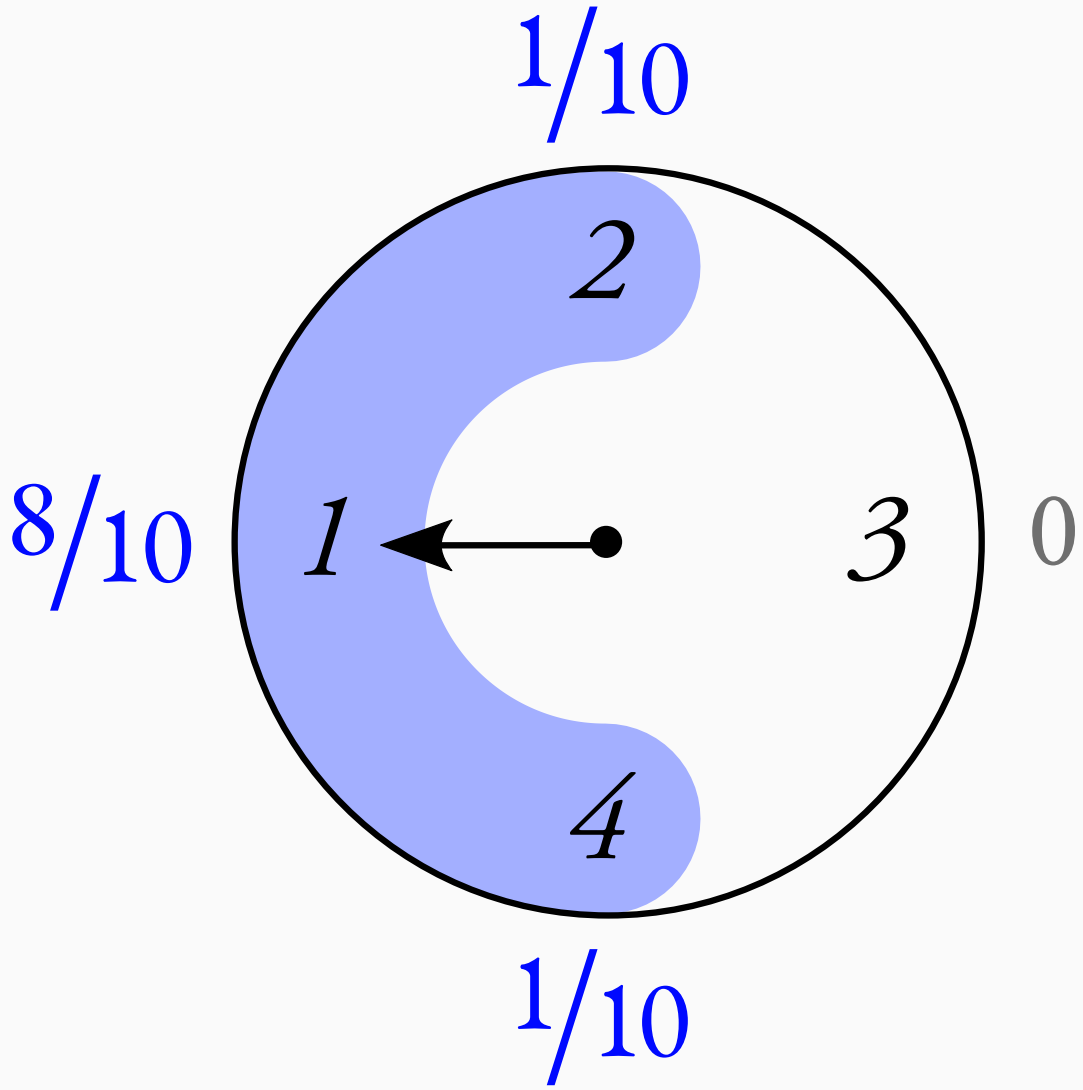

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New Rational Reflection

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- Lasonen-Aarnio rejects New Rational Reflection.
  - ▷ She presents a counterexample.
  - ▷ But: it relies upon CONDI
- EXCONDI will always satisfy New Rational Reflection.

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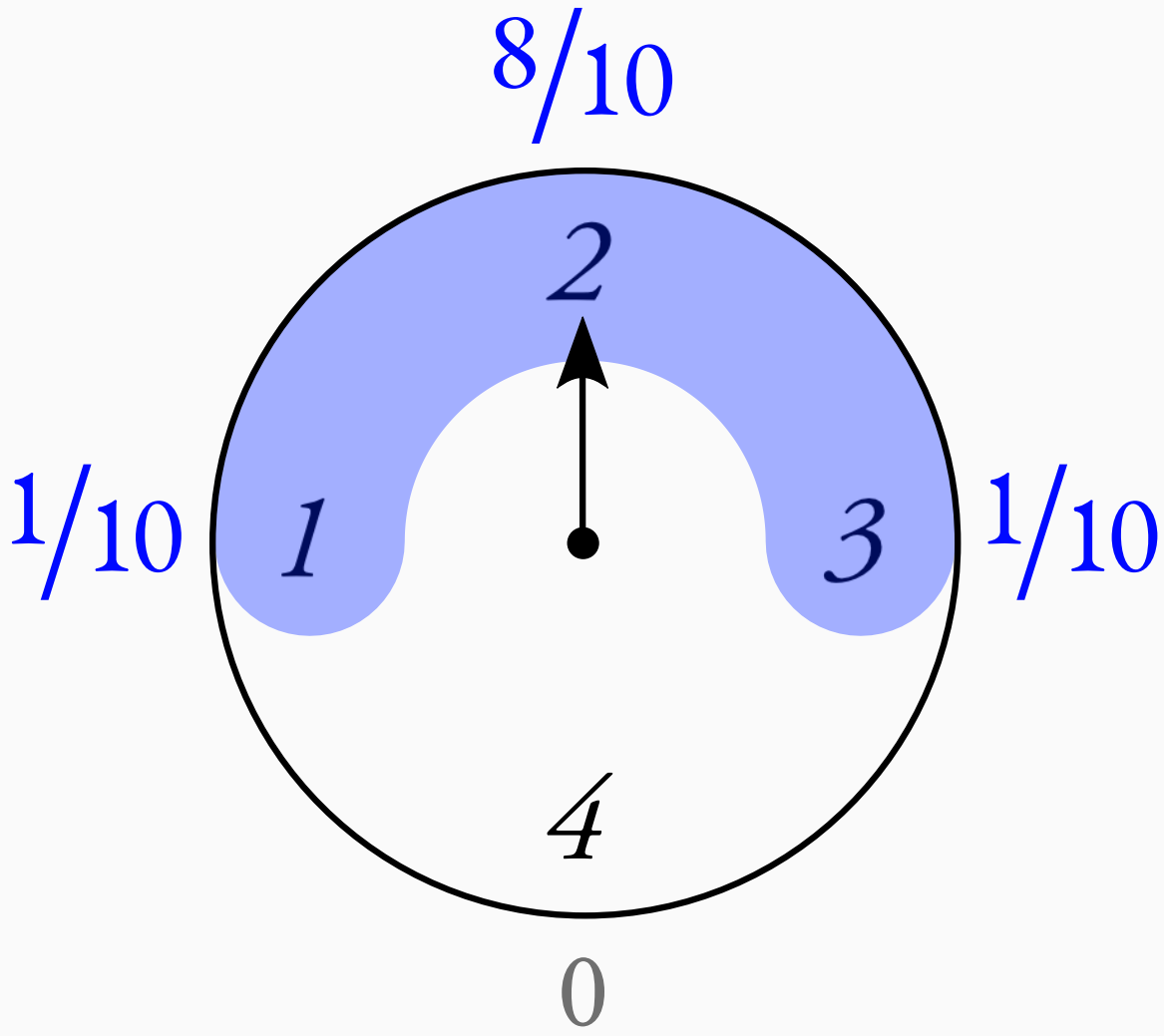

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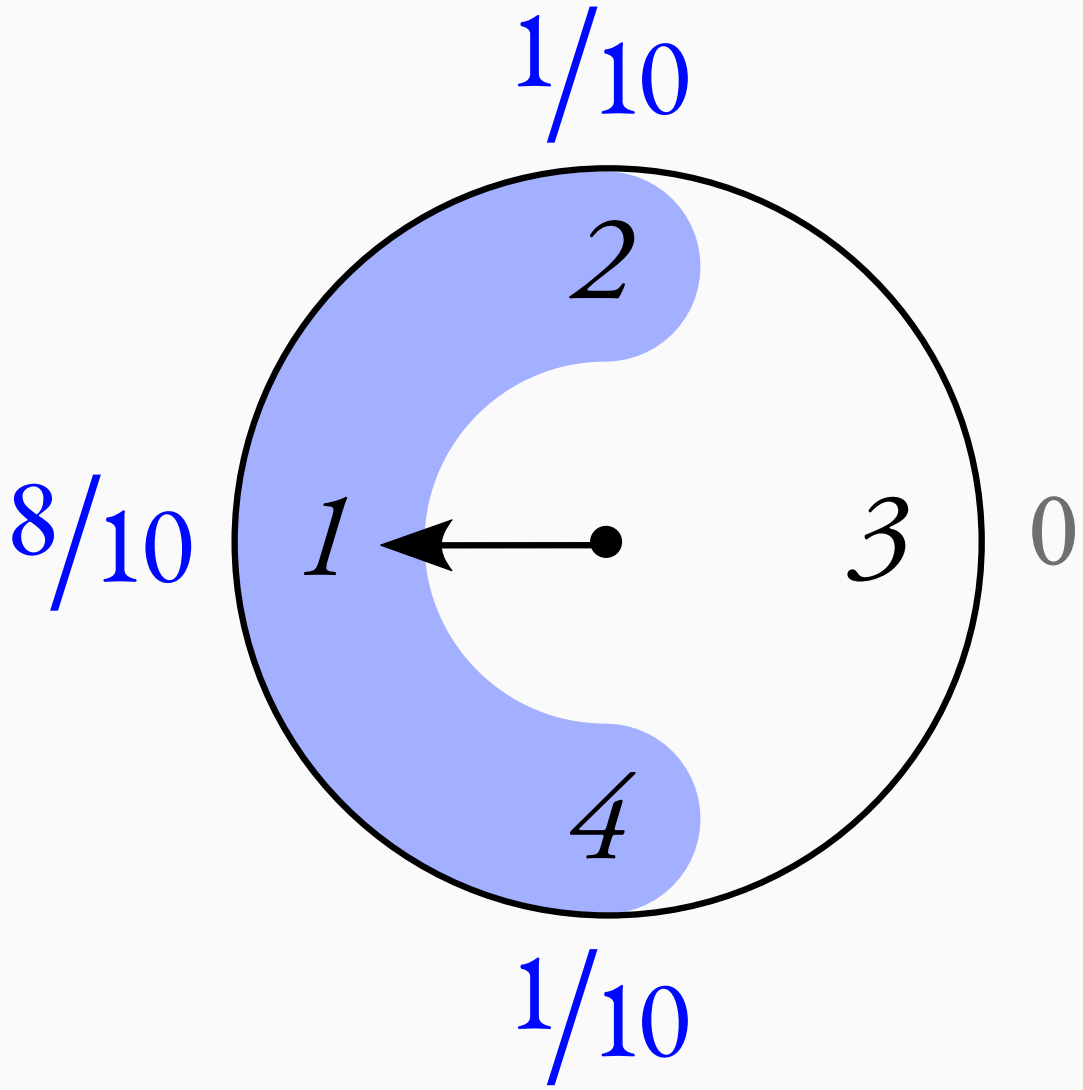

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