Kelly 2008: Biased Assimilation

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I. Biased Assimilation

"Belief polarization", in Kelly's terminology.

What happens when people with different opinions are both presented with mixed evidence?

Biased Assimilation: People are inclined to interpret mixed evidence in a way that favors their prior beliefs.

Avgs; only under certain conditions (non-obvious evidence, strong priors); can be hard to measure effects...

Example: we disagree over *Deterrent*; both presented with two studies, one favoring and one disfavoring.

Deterrent = capital punishment has a deterrent effect

S_1: States A and B are next to each other; A has capital punishment, B does not; A has lower murder rate.

S_2: States C and D are next to each other; C has capital punishment, D does not; they have the *same* murder rate.

Result? I increase my confidence in Deterrent; you decrease yours.

Q1: Is the process by which this happens rational?
Q2: Is it still rational if we come to know what this process is?

II. Psychological story

Is this "Kripkean dogmatism"?

"If *Deterrent* is true, then evidence against it is misleading. Deterrent is true. So I'll ignore the misleading counter-evidence."

Clearly unreasonable. Even if justified in believing Deterrent *beforehand*, once counter-evidence appears, must consider it.

But this is *not* what people do.

Instead, they engage in **selective scrutiny**.

Searching for *potential explanations* of data.

III. Normative story

Kelly argues that most people are *unaware* of this general tendency for selective scrutiny. Now *three* questions:

Q1.a: Is selective scrutiny reasonable?
Q1.b: *If* we selectively scrutinize the evidence, is the resulting polarization rational?
Q2: Does the polarization remain reasonable once we become *aware* of this process?

Kelly: Yes, Yes, No.

Q1.a: Is selective scrutiny reasonable?

Kelly says this is a question about *practical* rationality.

Time- and resource-constraints.

Analogy: science is *anomaly-driven*.

Likewise, says Kelly, with investigation generally. Unreasonable to demand equal scrutiny for surprising vs. unsurprising bits of evidence.

Q1.b: Is resulting polarization rational?

Key Epistemological Fact: How confident you should be of a hypothesis depends on the available alternatives.

- These alternative explanations are part of your "broad evidence".

So given that you have an alternative for S_1 and not S_2, you are rational to lower confidence in Deterrent. Vice versa for me.

Commutativity: The order in which you receive evidence shouldn't which beliefs you form.

Does Kelly's proposal violate commutativity? If you first get evidence e_1 that convinces you of q, and then you are presented with e_2 you'll explain it away and maintain belief.

Notice: Bayesians don't really satisfy commutativity—and they shouldn't.

Case 1: Me: "I'm hungry. Also, I'm thirsty." What's your credence in 'Kevin told me he was hungry before he told me he was thirsty'.
Case 2: Me: "I'm thirsty. Also, I'm hungry." What's your credence in 'Kevin told me he was hungry before he told me he was thirsty'?

Generically: given that we're *aware* of the order evidence came in, (1) we can never[1] get the exact same evidence in different orders, and (2) these differences can reasonably affect what we can believe.

Kelly: Order effects what *other* pieces of evidence you gather, and so affects what total evidence you end up with.
If get S_1 first, end up with $S_1 \wedge S_2 \wedge$ *explanation-of-S_2*.
If get S_2 first, end up with $S_1 \wedge S_2 \wedge$ *explanation-of-S_1*

So if you're unaware of the selective scrutiny effect (it's not part of your broad evidence), then you end up with different total (broad) evidence, which point in different directions, in the two cases.

Q2: How should learning about this process affect our beliefs?

But if you're *aware* of this process of selective scrutiny, you should realize it's no accident that you ended up with the alternative-explanations you did. Now in the two cases you end up with:

- $S_1 \wedge S_2 \wedge$ *explanation-of-S_2* $\wedge$ *selectively-scrutinized-S_2*
- $S_1 \wedge S_2 \wedge$ *explanation-of-S_1* $\wedge$ *selectively-scrutinized-S_1*

And *this* should lead to the same credence, he says.

Margin notes:

E.g. design vs. natural selection.

Vs. "narrow evidence" ≈ "data"

Standardly said to be true for Bayesians who condition. If $P_{e_1} = P(\cdot|e_1)$ and $P_{e_2} = P(\cdot|e_2)$, then $P_{e_1}(q|e_2) = P(q|e_1 \& e_2) = P_{e2}(q|e_1)$.

But if you first get e_2, vice versa!

What's your credence in 'Kevin's more hungry than he is thirsty'?

What's your credence in 'Kevin's more thirsty than he is hungry'?

[1] without memory loss or introspection failures