

## 7. Kelly 2008: Is Confirmation Bias Reasonable?

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### I. Confirmation Bias

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

"Belief polarization", in Kelly's terminology.

Think politics!

**Confirmation Bias:** People are inclined to interpret mixed evidence in a way that favors their prior beliefs.

aka "biased assimilation" of evidence

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

*Deterrent* = capital punishment has a deterrent effect

S<sub>1</sub>: States A and B are next to each other; A has capital punishment, B does not; A has lower murder rate.

S<sub>2</sub>: 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.

Q<sub>1</sub>: Is the process by which this happens reasonable, or irrational?

Q<sub>2</sub>: How should learning about this process affect *our* beliefs?

### 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

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

Q<sub>1.a</sub>: Is selective scrutiny reasonable?

Q<sub>1.b</sub>: If we selectively scrutinize the evidence, is the resulting polarization rational?

Q<sub>2</sub>: Does the polarization remain reasonable once we become *aware* of this process?

Kelly: Yes, Yes, No.  
McWilliams: Yes, No, No.

Q<sub>1.a</sub>: Is selective scrutiny reasonable?

Question about *practical* rationality.

Time- and resource-constraints.

Analogy: science is *anomaly-driven*.

Likewise, say Kelly, with investigation generally.

**Q1.b: Is resulting polarization rational?**

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

E.g. design vs. natural selection.

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.

Discuss!

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