

Fragile Epistemic States and Rational Epistemic Akrasia

Sebastian Liu

1 Evidence, Coherence, and Epistemic Akrasia

Being rational is hard.

Question: What are the demands of rationality? Two compelling suggestions (among potentially many others!):

(EVIDENTIALISM) You ought to conform your beliefs to your evidence.¹

- Believe p when your evidence adequately supports p .
- Don't believe p when you lack any evidence for p .

(COHERENCE) You ought not have incoherent combinations of beliefs.

- Don't simultaneously believe p and believe $\neg p$.
- Avoid believing that p is likely if you believe that $\neg p$ is likely.

Of course, it's often difficult to determine what your evidence supports when your evidence is complex or scarce, and so it's often difficult to abide by EVIDENTIALISM. And, it's often difficult to ensure that your beliefs are devoid of contradictions and probabilistically consistent when you have a sufficiently large number of beliefs, and so it's often difficult to abide by COHERENCE. Being rational is hard.²

But it get worse. The putative requirements of EVIDENTIALISM and COHERENCE appear to conflict.

Observation: In certain instances (examples to come) in which you're either uncertain about what your evidence is or uncertain about what your evidence supports, your evidence will license believing both p and that p is unlikely on your evidence. When you have such a combination of beliefs, you're *epistemically akratic* and you violate:

(ANTI-AKRASIA) You ought not: believe p while believing that p is unlikely on your evidence.³

The problem: ANTI-AKRASIA plausibly follows from COHERENCE. Provided that (i) there are cases in which your evidence licenses believing p and that p is unlikely on your evidence, and (ii) akratic beliefs are incoherent, it follows that (iii) EVIDENTIALISM and ANTI-AKRASIA conflict, and so (iv) EVIDENTIALISM and COHERENCE conflict. Being rational isn't just hard, it's sometimes impossible.

¹ Those sympathetic to EVIDENTIALISM include Clifford 1897, Conee and Feldman 1985, Williamson 2000, Adler 2002, Kelly 2003, Feldman 2005, Shah 2006, White 2007, Greco 2014a, Horowitz and Sliwa 2015, Salow 2019, and Lasonen-Aarnio 2020.

² There are arguably *other* requirements of rationality as well: for instance, rationality may require you to maximize expected value, or avoid being Dutch-booked, or have complete preferences. These candidate requirements may also conflict with EVIDENTIALISM or COHERENCE, but I'll be setting these issues aside.

³ See, for instance, Elga 2005, Feldman 2005, Kolodny 2005, Christensen 2010a, Huemer 2011, Smithies 2012, Greco 2014a, Horowitz 2014, White 2014, Horowitz and Sliwa 2015, Titelbaum 2015, Littlejohn 2018, Worsnip 2018, Rinard 2019, Salow 2019, and Lasonen-Aarnio 2020. There are also several related coherence principles that we can discuss in Q&A.

Aim of this paper: Resolve the alleged conflict between EVIDENTIALISM and COHERENCE.

Thesis: ANTI-AKRASIA isn't a genuine requirement of rationality.⁴ But something close to it is:

(ANTI-AKRASIA*) You ought not believe that your evidence permits you to believe both p and that p is unlikely on your evidence.⁵

Claim: ANTI-AKRASIA* is consistent with EVIDENTIALISM and explains why violations of ANTI-AKRASIA appear irrational.

⁴ That is, I'll deny (iv) by denying (ii).

⁵ Equivalently, ANTI-AKRASIA* states that you ought not believe that your evidence permits you to violate ANTI-AKRASIA.

2 Failures of Access and Self-Misleading Evidence

2.1 Failures of Access

Question: Does your evidence always entail what your evidence is?

I think: No. That is, sometimes, you can have evidence without having evidence that you have that evidence.⁶ Such cases involve a *failure of access*. Example:

(UNCONFIDENT-STUDENT) You are a student taking an exam, and you're asked to produce the date that William the Conqueror landed in England. You've learned many facts about William the Conqueror from class and from reading your textbook, including this specific date. But while the correct answer, 1066, comes to your mind, because of your dispositions, you think that your answer is very likely just a guess out of desperation. Due to the pressure and stress you're experiencing, you don't remember learning that William the Conqueror landed in England in 1066. You recognize that as far as you can tell, you have no evidence for this answer, for as far as you can tell, you are just guessing.⁷

⁶ These are examples where 'positive access' fails. There may also be failures of 'negative access', in which you can lack evidence without having evidence that you lack that evidence.

Let w be the proposition that William the Conqueror landed in England in 1066. UNCONFIDENT-STUDENT is supposed to be an example in which although w is part of your evidence, you're not in a position to know that w is part of your evidence.

What *should* you believe about w ?

1. On the one hand, you have strong evidence that William the Conqueror landed in 1066 – you have properly learned the relevant date, can reliably recall it, and arguably even know it.
2. On the other hand, you lack evidence that your evidence supports that William the Conqueror landed in 1066 – you have no recollection of learning the date and as far as you can tell, you have no evidence for your answer.⁸

⁷ This case comes from Radford 1966. Examples like this are often taken to be counterexamples to KK, the thesis that knowledge entails knowledge of knowledge. If evidence is equated with knowledge, failures of (positive) access just are failures of KK, and failures of (negative) access are just failures of $K \rightarrow K$. See also, for instance, Feldman 2005 and Worsnip 2018 for discussion about how these kinds of cases relate to epistemic akrasia.

⁸ Is the fact this date comes to your mind some evidence? I don't think so. But we can discuss this in Q&A.

So: EVIDENTIALISM requires you to believe w while believing that w is unlikely on your evidence. But this violates ANTI-AKRASIA.

2.2 *Self-Misleading Evidence*

Question: Does your evidence always entail what your evidence supports?

I think: No. That is, sometimes, what your evidence supports and what your evidence supports about what it supports can come apart. Such cases involve *self-misleading evidence*. Example:

(HYPOXIA) You're piloting a small aircraft and you're currently several dozen miles from your intended destination. The fuel gauge looks dangerously close to empty. You wonder whether you will need to make an emergency landing, so you perform a series of intricate calculations based on the information provided by the flight instruments. You conclude that you have enough fuel after all.

You then receive a message from ground control informing you that the plane's current altitude makes you highly susceptible to hypoxia. If you are suffering from hypoxia, then although you will not be able to tell, your reasoning abilities will be severely impaired.

Unknown to you, you are lucky – you have not been affected by hypoxia and you have in fact perfectly evaluated the evidence from the flight system.⁹

Let f be the proposition that you have enough fuel. HYPOXIA is supposed to be an example in which your evidence supports f , but is also self-misleading, because it supports that your evidence doesn't support f .

What *should* you believe about whether you have enough fuel?¹⁰

1. On the one hand, the evidence afforded to you by your flight instruments – evidence about your aircraft's current mileage, altitude, and speed – suggests that you have enough fuel and that you don't need to make an emergency landing.
2. On the other hand, the evidence you receive from ground control – the warning about your susceptibility to hypoxia – suggests thinking that your evidence likely doesn't support your conclusion that you have enough fuel.

So: EVIDENTIALISM requires you to believe f while believing that f is unlikely on your evidence. But (again) this violates ANTI-AKRASIA.

Upshot: EVIDENTIALISM and ANTI-AKRASIA conflict in cases involving failures of access and self-misleading evidence.

⁹ This case is widely discussed. See for example Christensen 2010b, Elga 2013, Schechter 2013, Lasonen-Aarnio 2014, and Schoenfield 2015.

¹⁰ Notice, there's not assumption about the nature of evidence here.

2.3 *The Conflict More Generally*

Two kinds of uncertainty (?):¹¹

- Failures of access: uncertainty about what your evidence is.
- Self-misleading evidence: uncertainty about what your evidence supports.

Remark: It's possible to reject UNCONFIDENT-STUDENT as an example of access failure, and HYPOXIA as an example of self-misleading evidence. But that won't be enough. Typically any example in which you're unsure what your evidence is or what your evidence supports will be sufficient.

Remark: The conflict between EVIDENTIALISM and ANTI-AKRASIA doesn't depend on any particular conception of evidence. But I'll be assuming a broadly externalist conception of evidence: your evidence consists of some set of true propositions which can include propositions about the external world.¹²

Question: How should we resolve the conflict between EVIDENTIALISM and ANTI-AKRASIA?

Three obvious options:

1. Reject EVIDENTIALISM.
2. Reject ANTI-AKRASIA.
3. Conclude that the demands of rationality conflict.

None of these options is particularly attractive.¹³ Maintaining that epistemic akrasia can be rational appears particularly egregious!

3 *Some Challenges of Rejecting ANTI-AKRASIA*

ANTI-AKRASIA enjoys significant intuitive appeal. Just imagine yourself believing both p and that p is unlikely on your evidence:¹⁴

Irrationality in the clearest sense occurs when a person's attitude fails to conform to his or her own judgments: when, for example, a person continues to believe something... even though he or she judges there to be good reason for rejecting it... (Scanlon 1998, p.25)

If you doubt that [ANTI-AKRASIA] is a norm, you can make its plausibility vivid by imagining an argument with an opponent who violates it. You marshal your best evidence for your view. Your opponent agrees that you've presented strong evidence for your view... But no matter how much evidence you present, or how strong it is, he gains no confidence in your view... your opponent is being unreasonable. (Elga 2005, p.116)

¹¹ This is the standard picture which I'll later be challenging!

¹² This assumption about evidence makes the task more difficult. Externalist accounts of evidence are thought to be problematic precisely because they license akratic beliefs. See especially Silins 2005, White 2014, and Salow 2019.

¹³ There are more options that I won't discuss here (but do ask in Q&A if you're interested). See, among others, Elga 2013, Horowitz 2014, Titelbaum 2015, Littlejohn 2018, Neta 2018, Worsnip 2018, and Salow 2019.

¹⁴ See also for instance Feldman 2005, Smithies 2012, Elga 2013, Greco 2014a, Horowitz 2014, Horowitz and Sliwa 2015, and Worsnip 2018.

Challenge: Explain the intuitive irrationality of epistemic akrasia.¹⁵

Any explanation should also say something about why:

1. *Asserting* conjunctions of the form ‘ p , although p is unlikely on my evidence’ and ‘while my evidence likely does not support p , p ’ appears infelicitous.
2. *Acting* on akratic beliefs – for instance, betting on p while also betting on the proposition that you’re likely to lose your bet on p – appears objectionable.¹⁶
3. *Reasoning* from ‘my evidence likely does not support p , but p is true’ to either ‘I lack access to the fact that I have evidence for p ’ or ‘my evidence is self-misleading’ appears impermissible.

4 Failures of Access and Unknowability

4.1 The Structure of Failures of Access

Motivating question: What is the structure of your epistemic state in cases like UNCONFIDENT-STUDENT?

Let F be the general factive relation such that whenever you stand in F to a proposition p , that proposition is part of your evidence.¹⁷ Failures of access in cases like UNCONFIDENT-STUDENT then correspond to the epistemic state $Fp \wedge \neg FFp$, since if p is part of your evidence, then Fp , and if you lack evidence that your evidence includes p , then $\neg FFp$.

Definition: An epistemic state is *fragile* just in case it is knowable that it is impossible for you to have conclusive evidence or know that you are in such a state.¹⁸

Observation: Failures of access are fragile epistemic states. Suppose your evidence includes both Fp and $\neg FFp$. Since p is part of your evidence if and only if Fp , it follows that FFp and $F\neg FFp$. But given the factivity of evidence, $F\neg FFp$ entails $\neg FFp$, so FFp and $\neg FFp$. Contradiction; you can’t have conclusive evidence (and similarly, you can’t know) that you’re in a particular case of access failure. By this argument this fact is knowable.¹⁹

4.2 A Constraint on Belief

Claim: It’s impermissible for you to believe that you’re in a particular fragile epistemic state.²⁰

The norm:

¹⁵ Some efforts on this front: Coates 2012, Wedgwood 2012, Williamson 2014, Weatherson 2019, and Lasonen-Aarnio 2020.

¹⁶ This is closely related to practical akrasia.

¹⁷ Recall, your evidence is assumed to consist of some set of true propositions. F can be any factive relation, for instance, knowledge, or what you’re in a position to know.

¹⁸ There are a range of situations that give rise to fragile epistemic states which we can discuss in Q&A.

¹⁹ Since knowability is a more familiar concept than the possibility of having conclusive evidence, I’ll focus on that. But the arguments are fully general.

²⁰ Compare: It’s permissible for you to believe that you’re in *some* fragile epistemic state. Surely that’s fine.

(KNOWABILITY-BELIEF-NORM) You ought not: believe p if p is knowably unknowable.²¹

Two arguments for KNOWABILITY-BELIEF-NORM:

1. Moorean conjunctions.

KNOWABILITY-BELIEF-NORM can be derived from:

(K-BELIEF-NORM) You ought: believe p only if you know p .²²

Why K-BELIEF-NORM? Belief is something like the inner analogue of assertion, and it's infelicitous to assert:

- (a) p and I don't believe p
- (b) I don't know p , but p
- (c) p , although my evidence leaves p open
- (d) I lack justification to believe p , but p

The natural explanation of infelicity of (a) - (d) is that such assertions violate:

(K-ASSERTION-NORM) You ought: assert p only if you know p .²³

So: KNOWABILITY-BELIEF-NORM follows from K-BELIEF-NORM. K-BELIEF-NORM is plausible because K-ASSERTION-NORM is plausible. It explains why it's infelicitous to assert (a) - (d).²⁴

2. Lottery propositions.

Consider a finite lottery with n tickets. Is it permissible for you to believe, of some arbitrary ticket, t_i , that t_i will lose? It seems not, if beliefs are closed under conjunction.²⁵ If you believe t_i will lose, and t_j will lose, then, iterating, you'll believe that all the tickets will lose, while also believing that some ticket will win – contradiction.

Proposal: Belief requires credence 1.²⁶

But if belief requires credence 1, and credence 1 is subjective certainty, KNOWABILITY-BELIEF-NORM follows if you shouldn't be subjectively certain in propositions you know are unknowable.

So: KNOWABILITY-BELIEF-NORM follows on conceptions of belief according to which belief requires credence 1. You shouldn't be subjectively certain in knowably unknowable propositions.

Upshot: You should never believe that you're in a particular fragile epistemic state.

²¹ On some accounts of belief, such as the one offered by Stalnaker 2006, you believe p just in case you don't know that you don't know p , so KNOWABILITY-BELIEF-NORM is trivially satisfied.

²² For endorsement, see, among others, Unger 1975, Williamson 2000, Adler 2002, Sutton 2005, Bird 2007, and Huemer 2007.

²³ Advocates include Unger 1975, Williamson 2000, DeRose 2002, and Hawthorne 2004.

²⁴ Note: KNOWABILITY-BELIEF-NORM doesn't *depend* on K-BELIEF-NORM. Indeed, the infelicity of (a) - (d) can be explained by the analogue of KNOWABILITY-BELIEF-NORM for assertion.

²⁵ That is, if you believe p , and you believe q , then you believe p and q .

²⁶ See for example, Clarke 2013, Greco 2015, and Dodd 2017. Compare: Hawthorne, Rothschild, and Spectre 2016. The relevant notion of belief is 'outright' or 'full' belief. I'm using 'credence 1' and 'maximal credence' interchangeably. These may come apart in light of issues concerning the 'regularity' axiom of probability theory.

4.3 *The Appearance of Irrationality*

Recall: ANTI-AKRASIA* states that you ought not believe that your evidence permits you to believe both p and that p is unlikely on your evidence.

But if it's impermissible for you to believe that you're in a particular fragile epistemic state, and failures of access are fragile epistemic states, it must be impermissible for you to believe that your evidence supports believing akratically. This is exactly what ANTI-AKRASIA* forbids!

Question: Why should accepting ANTI-AKRASIA* bear on the question of whether epistemic akrasia can be rational? ANTI-AKRASIA* prohibits a certain kind of belief about what your evidence supports, while ANTI-AKRASIA prohibits a certain combination of beliefs.

Answer: The considerations that motivate ANTI-AKRASIA – the intuitive irrationality of epistemic akrasia, and the apparent impermissibility of asserting, acting on, and reasoning from akratic beliefs – can be captured by ANTI-AKRASIA*. ANTI-AKRASIA does no explanatory work if appealing to ANTI-AKRASIA* is sufficient. The goal is to defend that epistemic akrasia will always *appear* irrational without requiring that epistemic akrasia always *be* irrational.

Observation: Fragile epistemic states are unstable under reflection. Asserting, acting on, or reasoning from some belief tends to make the fact that you have that belief salient. But:

1. Typically when your beliefs respect your evidence, it's unproblematic for you to have the additional belief that your beliefs respect your evidence.
2. When you have akratic beliefs in cases of access failure it's impermissible for you to have this additional belief.²⁷ Once you recognize that you're epistemically akratic, what should you think about your akratic beliefs? If you maintain that your akratic beliefs are rational because they are supported by your evidence, then you would be violating ANTI-AKRASIA*. In these circumstances, it is only natural for you to think that your beliefs are *not* supported by your evidence, even when they *are*.²⁸

So: ANTI-AKRASIA* predicts that violations of ANTI-AKRASIA will tend to appear irrational. Once the two are properly distinguished, there's no need to appeal to ANTI-AKRASIA to explain why asserting, acting on, and reasoning from akratic beliefs seem irrational.

Summary: On my view, it isn't the combination of believing p and

²⁷ Regardless of whether those beliefs are supported by your evidence!

²⁸ For now, restricted to cases of access failure. Even if you suspend judgment about whether your beliefs are supported by your evidence, you'll still think that you're irrational.

that the evidence likely does not support p that is problematic. What is problematic is the belief – which tends to accompany your akratic beliefs when they are made salient – that your combination of beliefs is rational.

5 *Misleading Evidence and Failures of Access*

Motivating question: What are the differences in cases like *HYPOXIA* and *UNCONFIDENT-STUDENT*?

Tempting answer: *HYPOXIA* is a case in which you're misled about what your evidence supports, while *UNCONFIDENT-STUDENT* is a case in which you're misled about what your evidence is:²⁹

[when you have misleading evidence] you are akratic because you are uncertain (or have a false belief) about what E , your evidence, supports. . . [when you have a failure of access] you are akratic because (in part) you are uncertain about what your evidence is. . . So while the two akratic states look similar, they come about through different kinds of uncertainty. (Horowitz 2014, pp.737-738)

On one hand, there is the possibility that one might be misled about which items are part of one's body of evidence. . . In this case, one is misled about what one's evidence is. On the other hand, there is the possibility that one is misled not about what one's evidence is, but about the *evidential support relations* that hold between particular items in one's body of evidence and potential doxastic attitudes. (Worsnip 2018, p.19)

Claim: It's a mistake to classify cases in which you're uncertain about what your evidence is and cases in which you're uncertain about what your evidence supports as being distinct.

Why? Because sometimes uncertainty about what your evidence is, is the reason you are uncertain what your evidence supports.³⁰

Idea: *HYPOXIA* is *also* a case in which you're uncertain which propositions are part of your evidence. Consider:

(*HYPOXIA**) You're piloting a small aircraft and you're currently several dozen miles from your intended destination. The fuel gauge looks dangerously close to empty. You wonder whether you will need to make an emergency landing, so you perform a series of intricate calculations based on the information provided by the flight instruments. You conclude that you have enough fuel after all.

You then recall from your training that at certain altitudes pilots become susceptible to hypoxia. If you are hypoxic, then although you will not be able to tell, your reasoning abilities will be severely impaired. Because you cannot recall exactly which altitudes are dangerous, you contact ground control to ask. You are informed that your

²⁹ In addition to those quoted below, others, including Elga (2013, p.132), Titelbaum (2015, p.262), Salow (2019, p.402), and Lasonen-Aarnio (2020, p.609) also seem to think that there is a divide between cases of misleading evidence and cases of access failure.

³⁰ Suppose you're unsure whether p is part of your evidence. Suppose further that you know that if p is part of your evidence, your evidence would strongly support q (because, say, p entails q), and that if p is not part of your evidence, your evidence would strongly support $\neg q$. Then uncertainty about what your evidence is directly bears on uncertainty about what your evidence supports.

current altitude is safe, and that you are almost certainly not hypoxic.

In fact you're not hypoxic – you've evaluated the evidence from the flight system perfectly.

Question: Is the proposition that you have enough fuel part of your evidence in HYPOXIA*?

I think: Yes!³¹ If your evidence includes propositions like that you are 300 miles from your destination, or that the aircraft is flying at 150 miles per hour, it would be odd to disqualify the proposition that you have enough fuel from being included as part of your evidence.³²

Observation: HYPOXIA and HYPOXIA* differ not in whether you're hypoxic, but whether ground control informs you that you're susceptible to hypoxia. In HYPOXIA, you have reason to think that your faculties have been impaired and in HYPOXIA*, you don't. Prior to receiving the warning from ground control, it's plausible to think that the proposition that you have enough fuel is part of your evidence in both cases.

Suggestion: The hypoxia warning functions by *limiting your access to your evidence*. Once you have sufficient reason to suspect that you are hypoxic, propositions like that you have enough fuel are no longer accessible to you, though are still part of your evidence.³³

Upshot: Examples like HYPOXIA are not just ones in which you're unsure what your evidence *supports* but also ones in which you're unsure what your evidence *is*.³⁴

So: Insofar as ANTI-AKRASIA* explains why epistemic akrasia appears irrational in cases like UNCONFIDENT-STUDENT, it also explains why epistemic akrasia appears irrational in cases like HYPOXIA.

Speculation: ANTI-AKRASIA appears tempting because it's tempting to think that whenever you're rational, it's also permissible for you to believe that you're rational. But this is a mistake.³⁵

Challenge: If you still endorse ANTI-AKRASIA, you should say what is irrational about epistemic akrasia that is left unexplained by ANTI-AKRASIA*.

6 More on Fragile Epistemic States

The question of whether epistemic akrasia can be rational may seem somewhat niche. But it's relevant to a range of debates, including:³⁶

1. Internalism versus externalism about rationality.

³¹ After all, your fuel calculations are impeccable, and your perceptual and computational faculties are functioning reliably.

³² Consider: Suppose ground control asks you why you did not make an emergency landing. In normal circumstances, it is natural and acceptable for you to reply that you had made a calculation and concluded on that basis that you had enough fuel to safely continue flying. It would seem strange to object that your actions were somehow dangerous, or that you lacked good evidence for your conclusion.

³³ This is a competing picture to ones according to which the hypoxia warning is a defeater.

³⁴ On my account, it can be rational for you to believe both that you have enough fuel and also that this is unlikely on your evidence, but you're prohibited from believing that your evidence permits having this combination of beliefs on pain of violating ANTI-AKRASIA*.

³⁵ Indeed, I see little motivation for this view if you reject the access principles. But we can discuss this in Q&A.

³⁶ Let me know which of these, if any, you'd like to talk about in Q&A!

- (a) Standard challenge from internalists: Iteration principles capture the intuitive judgments about rationality.³⁷
- (b) My response: This confuses the rationality of being in some state with the rationality of believing that it's permissible to be in that state.
2. The epistemic significance of peer disagreement.
- (a) Standard positions: Equal weight, steadfast, total evidence.³⁸
- (b) My position: A version of the total evidence view.
3. The role of higher-order evidence.
- (a) Standard view: Higher-order evidence is evidence about what your lower-order evidence supports.³⁹
- (b) My view: Higher-order evidence (also) functions to limit your access to your evidence.
4. Knowledge iteration.
- (a) Standard argument: Assertions of the form ' p , but I do not know whether I know p ' are infelicitous and accepting both KK and a knowledge norm of assertion explains why.⁴⁰
- (b) My explanation: The epistemic state $Kp \wedge K\neg KKp$ is fragile, so the infelicity of asserting ' p , but I do not know whether I know p ' can be explained as arising not from the assertion itself, but rather from the corresponding belief about your epistemic state that tends to follow when you assert propositions of this form.⁴¹

³⁷ See especially Smithies 2012.

³⁸ See especially Kelly 2005, Christensen 2007, Elga 2007, and Hawthorne and Srinivasan 2013.

³⁹ See especially Christensen 2010a.

⁴⁰ See especially McHugh 2010, Cohen and Comesaña 2013, Greco 2015, and Das and Salow 2018.

⁴¹ Compare, for example, Sosa 2009 and Benton 2013.

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