0 Introduction

Inquiring is an entirely familiar activity, one most of us engage in it every day. In at least some of those cases our inquiries are successful – we figure out where we put our keys, or which country uses ‘86’ as its country code or whether the restaurant takes credit cards or is cash only. When our inquiries are successful we settle some matter that previously was or felt unsettled to us and we do it in some epistemically happy way. Sometimes we think we’ve hit our target, but unfortunately we’ve missed. In these sorts of cases we settle the issue for ourselves as well, but in a less-than-perfectly-epistemically-happy way. In other cases we fail to settle at all. When we do settle some matter of inquiry – whether well or badly – we shift out of an inquiring mode and into a settled one. In this paper I want to explore both of these modes. I’ll argue for a particular account of inquiry and inquiring and then use that to argue that belief – the traditionalist’s “full”, “flat-out” or “outright” belief – should be thought of as playing a key role in our settling our inquiries. After that I’ll go on to argue that partial or degreed belief cannot play that same role. The upshot then is an account of inquiry and a story about the different roles belief and degrees of belief play there.

†Thanks!
†Please ask if you want to cite it though.
Some others have claimed that full belief has a stability that degreeed belief lacks. Their thought has been that it is part of the nature of belief (or perhaps of rational belief) for it to be resistant to change. My claim about belief’s settledness is not a claim about belief’s receptivity to change, but, as we’ll see, a claim about its relationship to ongoing inquiry. Near the end of the paper, once the view is out, I’ll discuss how we should think about the relationship between stability and settledness.

1 What is inquiry?

Despite its utter familiarity, I think that it’s not all that clear how to conceive of inquiry and inquiring. Getting somewhat clearer on the phenomenon is the task of this first section. Inquiring is often associated with certain kinds of actions, and this can naturally lead one to the thought that inquiring is just itself an action or a series of actions. But I don’t think that this is right. At the centre of any genuine inquiry is a certain kind of mental state or attitude. Mere action is not sufficient for inquiry; or so I’ll argue.

A few (hopefully) straightforward assumptions to start. First, we can think of inquiring as an activity. This isn’t saying much – all I mean is that it’s something that we do. Just how we do it or what it takes to be doing it is largely open at this point. Some of the questions I want to pursue in this first section are about the nature of this activity and what it takes to be engaged in it. Second, an inquiry takes place across some interval of time, \([t_0, t_n]\). The inquiry starts at \(t_0\) proceeds across that interval and then ends at some later time \(t_n\). Third, an inquiry has a distinguished subject at its centre – the inquirer. This distinguished subject need not be a single subject – the FDA and police force can be inquirers too. Although I think all sorts of interesting questions open up in thinking about group inquiry, in this discussion I’ll stay focused on the case in which the inquirer is a single individual.

Even these very basic assumptions give us access to some helpful questions about inquiry though. What needs to happen at \(t_0\) for an inquiry to start? What about \(t_n\) and inquiry’s end? And in virtue of what does our inquirer count as inquiring across the relevant interval of time? I hope to make progress on at
least some of these questions in this section.

A natural thought is that some of the questions from the last paragraph are to be answered with reference to the sorts of actions the subject performs. Could doing certain kinds of actions guarantee that one was inquiring? The claim that performing certain kinds of actions is sufficient to make it the case that one inquiring is the claim that a subject's performing an action of the relevant kind at a time (or across some interval of time) is sufficient for its being the case that that subject is inquiring at that time (or across that interval of time). I don't think that mere action at a time is sufficient to count as inquiring at that time.¹

Let's think about some inquirers. For instance, the detective inquiring into the bank robbery or the reporter inquiring into the company's business practices. Imagine the detective moving from ignorance about who robbed the bank to knowing that it was Rountree, and the reporter moving from ignorance about whether workers are being treated fairly to knowing that they are not. There are many ways of fleshing out these inquiries. In particular, we can imagine easy versions and hard ones. Let's focus on the latter. In the hard versions, these inquiries take a long time and require serious effort; plenty of evidence is gathered, and work is done.² In these cases, our inquirers do a great deal – they perform all sorts of bodily and mental actions.³ They move from place to place, they make calls, look online, knock on doors, search their memories, draw inferences and more. But acting in those ways is not sufficient for inquiring into the things they're inquiring into.

Focus on any one of those actions, call it a. Just doing a is not sufficient for inquiring into the things these inquirers are inquiring into, or inquiring into anything at all for that matter. Say the detective needs to talk to a suspect and

¹Although I'm not going to be able to say as much as I'd like about the claim that performing certain kinds of actions somewhere in the relevant inquiring interval is necessary to count as inquiring over that interval, I think the idea that inquirers needs to perform some bodily action in the service of their inquiries should be dismissed right away. That would leave Descartes' journey to the cogito as something other than an inquiry and perhaps leaves most of us not inquiring into our various philosophical questions. Armchair inquiry – pure mental inquiry – is genuine inquiry.

²Perhaps in easy versions of these cases a simple phone call or Google search does the trick.

³I am making a distinction here between mental and bodily action. It's not essential for what's to come but seems helpful to me nonetheless. I'm thinking of typical mental actions as episodes of reasoning, inference drawing, memory searching, and so on.
drives to his home and knocks on his door. Driving over to that person’s home and knocking at his door are not sufficient to make it that one is inquiring into who robbed the bank across the relevant interval of time (or inquiring at all – sometimes we’re just visiting friends). I take it that this generalizes to most any specific action that our inquirers perform, bodily or mental. Performing some string of these actions is also not sufficient. At the extreme we can imagine an actor preparing for a role and shadowing our inquirers, doing whatever they do, but without any concern for who robbed the bank or anyone’s working conditions.\textsuperscript{4}

What divides true inquirers from those doing many of the same things as them? Our true inquirers are aiming to figure something out, but those others need not be. The detective is trying to figure out who robbed the bank and the reporter whether the working conditions are good. Their actions seem to count as part of their inquiries exactly because they are done in the service of their cognitive or epistemic aims or goals. A true inquirer then is someone with a certain kind of goal or aim, and so at the bottom of any true inquiry is a certain kind of aim- or goal-directed state of mind or attitude. This should come as no surprise – inquiry seems clearly to be an aim or goal-directed activity.

A few key conclusions so far. First, we should not straightforwardly identify inquiring with acting: inquiring over some interval of time is not just a matter of performing some sequence of actions over that interval. Second, we should say that genuine inquirers always have some sort of goal-directed attitude – they must have the aim of resolving some issue or matter, of trying to figure something out. So we can say that one is inquiring into some matter only if one has this sort of “inquiring attitude”. This tells us something about the interval of time over which an inquiry takes place: throughout that entire interval our inquiring subject have an attitude like this. What more can be said about this central inquiring attitude?

\textsuperscript{4}This assumes a certain picture of action individuation. For instance, according to this picture when the detective knocks at my neighbour’s door to interrogate the suspect and I knock at his door to welcome him to the neighbourhood, we are performing the same action (knocking at the door) albeit for different reasons or with different goals. I can imagine a view that made the goals part of the actions performed, although it seems to me to carve things up less well – the detective and I seem to me to perform the same action.
As we’ve just seen, it’s a goal-directed state or attitude and it looks as though the goal is something cognitive or epistemic. Perhaps the most straightforward way to think of this goal-directed “inquiring attitude” at the heart of any inquiry is as a literal desire with epistemic content. Inquiring subjects want to know. I think it’s often fine to describe inquiring subjects as wanting to know, but I don’t think that those descriptions are always true in virtue of those subjects literally having some metacognitive desires. At least some reservations here are largely familiar – very simple creatures inquire and so we should worry about a view that makes the attitudes that are essential to the activity too sophisticated. I also worry about whether we really could think of these as desires in every case – perhaps sometimes we inquire even when we don’t strictly speaking want to know (like the detective investigating how much money her partner stole).

But I also think that there’s another option in the air that’s fairly straightforward as well. If we did try to think of this inquiring attitude as a desire to know, what exactly does the inquiring subject desire to know? The answer, I think, is right on the surface. The detective desires to know who robbed the bank and the reporter whether the working conditions are good. We can say that the inquirer then wants to know Q, where ‘Q’ here should be replaced with an indirect interrogative sentence. Inquirers want to know the answers to the questions expressed by those interrogatives.

So, an inquirer’s “desires” are question focused in this sense. But this opens up a nice way of thinking about the inquiring attitude we’re interested in and one that skirts some of the earlier concerns with the “metacognitive desire” suggestion. Rather than think of this attitude as a desire directed at being in certain kinds of mental states with respect to a question we can just take the attitude to itself be a questioning attitude. In asking questions we are trying to get certain kinds of information and asking is a goal-directed activity whose

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5There is some debate to be had about just what the goal of inquiry is – knowledge, justified belief, understanding, etc. I think there are plenty of interesting questions there, but I’m not going to engage with them here. I’m assuming that the goal is knowledge, but I don’t intend anything of significance to hang on that assumption (and it rarely shows itself); it’s being made mostly for expository convenience.

6For the purposes of this discussion we can think of knowing Q at some world w as a matter of knowing p at w where p is the true answer to Q at w. I’ll say a little bit more about answers to questions in the next section.
aim is epistemic. My suggestion now is to think of the attitude at the centre of inquiry as much like this – as a questioning or “asking” attitude, one directed at the question itself. Inquirers have questions open in thought.

I think many familiar folk-psychological attitudes are questioning attitudes like this: curiosity, wondering, contemplation, deliberation, and more. Some of these are states and some are processes – I’m just going to call them all ‘attitudes’. Notice, these are exactly the sorts of attitudes we expect inquirers to have. They describe the sorts of attitudes that our detective and reporter will plausibly have. The detective is curious about who robbed the bank and wondering about that; she’s contemplating that question and deliberating. These are all goal-directed attitudes and in each case we can, at least in some sense, truly describe the subject with these attitudes as “wanting to know”.\(^7\) The reason the description is apt is because these attitudes all have satisfaction conditions in the same way that desires do – in this case though those satisfaction conditions are distinctively epistemic or cognitive. In what’s to come I’ll call these attitudes Interrogative Attitudes (IAs). I’ve given just a partial list so far, but we can think of the class as a class of inquiring attitudes – goal-directed, questioning, with epistemic satisfaction conditions.

My claim then is that someone inquiring at \(t\) has an IA at \(t\) (although it needn’t be one already one the list). And we can say that one has an IA iff one has a question “open in thought”. Every inquirer has some question open in thought – these are the questions she wishes to answer. This means that if one is to count as inquiring over some interval one must have an IA throughout that interval of time.

My thought about the necessity of the IAs for inquiry is that it captures the sense in which a genuine inquirer has to be in a particular kind of goal-directed state. Perhaps this is another way to think about the force of the claim: every inquirer is trying to figure something out. If some subject is not genuinely trying

\(^7\)Some have thought that curiosity does always involve a desire to know or is even identical to such a desire. See Loewenstein (1994) for some discussion. I’ve already expressed some concerns about this sort of approach. Moreover, there seem to be cases in which subjects are deeply curious but clearly do not want to know. For example, if I present you with a box and tell you that if you find out what’s in the box you’ll die immediately, you may be deeply curious about what’s in the box but also very much not want to know.
to figure Q out, then she's not genuinely inquiring into Q. The IAs can be thought of as ways of trying to figure something out, they are manifestations of that sort of effortful state.

2 Inquiry and belief

I want to now use the main upshot of the previous section to get some insight into a role that belief – the “traditionalist's” full belief, plays in inquiry. I argued that every true inquiry involves a certain kind of inquiring attitude. I called these the interrogative attitudes and pointed out that a number of familiar folk-psychological attitudes fall into the class. My thought now is that we can get some guidance as to some of what belief does in inquiry by looking to how belief interacts with those attitudes. My plan is to focus on the IAs named, thinking of them as representatives of the class. Since attitudes like curiosity and wondering are so familiar, I want to start by looking at some (hopefully) intuitive cases. The focus of these cases will be the quintessential inquirer, British detective Inspector Morse. We'll go through three Morse cases and then use the partial theory of inquiry from the last section to draw some conclusions about them. The main upshot of our Morse cases will be a norm on belief and inquiry. After the cases I will offer some additional evidence for our norm as well. In the next section I'll use the norm to say more about a role belief plays in inquiry, which will mark a distinction between belief and degrees of belief.

On to Inspector Morse. The first Morse case is the normal or typical one. Morse is woken up by his telephone ringing in the early hours of the morning – a doctor in Oxford has been shot through her window while having dinner last night. Morse pulls himself together and heads to the scene of the crime. This is a normal case for Morse and he engages in a perfectly normal inquiry into who killed the doctor. He searches the scene, talks to potential witnesses, and so on. Then he discovers that the doctor was having an affair with the master of Lonsdale College, so he takes his investigation over to the college. And things go as expected there as well: he talks to more people, does more looking around, draws a few inferences, stops at the pub and eventually solves the crime.
I submit: all of the IAs discussed can be used to describe typical-Morse’s mental life. Perhaps not all apply in every version of this typical-Morse case, but it’s very easy to see typical-Morse as wondering about who killed the doctor, curious about who killed her, contemplating it and deliberating about who could have done it, and so on. The IAs are exactly the sorts of attitudes that typical-Morse will have.

The second Morse case is slightly different. Here again, the phone rings in the early hours of the morning, but this time it doesn’t wake Morse up since he’s been up all night. He’s been up washing the blood out of his (beloved) car, scrubbing his flat and washing his clothes and burning or otherwise disposing of any evidence he can since last night he shot the doctor through her window while she was having dinner. Not wanting to be discovered, Morse must carry on as normal. He heads to the scene of the crime. What happens once he’s there? Well, he tries to appear as normal as can be and so effectively does the things that he would do in the normal case: he goes from place to place, asks questions, writes things down, heads to the college and so on.

When it comes to the IAs, this case – let’s call it the knowing-Morse case – is very different from the first. None of the IAs seem to comfortably apply to knowing-Morse. It seems to me extremely difficult to get an interpretation of this Morse’s mental life according to which he’s curious about who murdered the doctor or wondering about who killed her or contemplating that question and so on. Knowing-Morse is not curious about who killed the doctor – he did it and he knows that full well. This is not a question he’s wondering about or contemplating or deliberating.

Now one more Morse case. In this third and last case, the phone rings in the early hours of the morning, again waking Morse up. As he wakes up he thinks with horror, “oh no, what have I done…”, as thoughts of his killing the doctor last night flood his mind. But let's say that these thoughts aren't true memories at all, but only pseudo-memories implanted in his mind by a crafty old nemesis who wants to frame him. Morse’s flat has been set up to confirm his “memories”, with evidence that he did it in plain view. He’s convinced that he killed the doctor, even though in fact his nemesis did.

Again though, Morse wants to cover up his “crimes”. In this case – we can
think of it as the believing-Morse case – we should expect Morse to act exactly as he does in the knowing-Morse case. And again, it seems very difficult to think of believing-Morse as wondering about who committed the crime or curious about who did it, deliberating about that, and so on. He’s convinced that he did it, and so none of those descriptions of his mental life comfortably apply.

What should we conclude from these Morses? As we’ve just seen neither believing-Morse nor knowing-Morse can be comfortably thought of as curious or wondering or deliberating about who killed the doctor. Interestingly, I find no difference in my own intuitions about how strange it is to think of knowing-Morse as curious about who killed the doctor as compared to how strange it is to think of believing-Morse as curious about who killed her. In both cases their conviction that they themselves are the murderer seems to make it that the IAs don’t apply. If the arguments from the last section stand and having an IA is necessary for inquiring, then this means that these Morses also aren’t genuinely inquiring. Is this the right result?

Obviously I think that it is, but I also think the result has some intuitive force in these cases. In both cases we seem to have Morse pretending or “going through the motions”. He’s trying not to raise any suspicions, and so he’s acting as if he’s trying to figure out who killed the doctor. But that’s to say that he’s not genuinely trying to figure that out. And with that there seems to be an important sense in which Morse’s inquiry is mere ersatz inquiry and not genuine. Of course Morse is acting as an inquirer into who killed the doctor. And there’s an inquiry underway into who killed the doctor. And there may even be a clear sense in which Morse is participating in that inquiry – the Thames Valley Police are investigating the murder and Morse is part of that police force. But even with all of this the case, I hope it’s clear enough that there is a key sense in which believing-Morse and knowing-Morse are not genuinely inquiring into who killed the doctor – they simply don’t have the central epistemic aim or goal that we find in inquiry. If one isn’t trying to figure out $Q$ then one isn’t genuinely inquiring into $Q$.

It’s not entirely clear what the upshot of these last two Morse cases should be though. Given the focus of the paper, let’s stay focused on believing-Morse. I’ve said that it’s very hard to see believing-Morse as having any of the IAs I’ve
talked about so far. In general he’s not trying to figure out who killed the doctor, or anything like this – he’s just pretending. That said, I don’t think we want to say that there is no possible case in which someone who believed that Morse killed the doctor also wondered or was curious (etc.) about who killed the doctor (even if that someone is another possible Morse). For instance, someone who believed that Joe murdered the doctor, but momentarily forgot that they had that belief might wonder or be curious about who killed her. In general I think it’s fairly easy to get cases in which one knows or believes the answer to some question at a time and has an IA towards that question at that same time. Specifically, when the known or believed answer is hidden from conscious awareness it’s easy to imagine subjects wondering or curious or contemplating the questions those beliefs answer. Even if I know where my keys are, if that knowledge momentarily escapes my view so that I don’t realize that I have it, I might wonder or be curious about where they are.

When we encounter knowing-Morse and believing-Morse though it’s very hard to think of them as having the familiar IAs. If the combination is possible, why should that be? One important difference is that in these cases Morse doesn’t just believe that he committed the crime, but his conviction is clear to him and so it feels as though it makes no sense to see him as curious or wondering about that question – at best that would make him seem badly confused. So it’s easy enough to find cases in which one believes the answer to Q and is wondering or curious about Q when one’s belief is somehow hidden from view or one is unaware that one has the belief, but trying to imagine a subject fully aware of what she thinks and wondering or curious seems much harder.

But this is a familiar pattern. When we have some set of attitudes A and find that we have trouble making sense of any subject holding all of the attitudes in A at the same time in full awareness, this is typically evidence that holding those attitudes at the same time is a form of incoherence. It’s difficult to imagine subjects believing both of p and ¬p in full awareness or preferring A to B and B to C and C to A in full awareness. It’s much easier though to imagine subjects

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8 See Worsnip (2016) for an argument that this pattern is effectively all there is to incoherence. That is, some set of attitudes A is incoherent iff subjects can’t (or at least can’t easily) hold them all at once in full awareness.
having these combinations of attitudes without being fully aware that they do. We find this sort of pattern of intuitions when the attitudes in question fail to cohere. Given this, I think this is just what we should say about the relevant combination of attitudes in both the knowing-Morse and the believing-Morse cases – these Morses are in incoherent states.

Notice, in the standard cases of incoherence we don't merely say that there's an incoherence in having the attitudes in full awareness, but in having them, full stop. Believing both $p$ and $\neg p$ at the same time is a form of incoherence, whether or not the subject is aware that she has that combination of attitudes. So the fact that it's hard to imagine subjects having some set of attitude at the same time in full awareness seems to be evidence that having those attitudes at once is a form of incoherence, even when awareness is absent. Moreover, although there may be slightly more debate about the normative status of being in an incoherence state, typically we think this is some sort of normative failing – a state, other things equal, that one ought not to be in. I'm happy to say that being in this combination of states is irrational or unreasonable, although some people mean very specific things by these terms that I don't mean to evoke (that said, incoherence and irrationality are often tied quite closely together). Either way, we can say that the state is defective or suboptimal or inappropriate. Following the lead of these standard forms of incoherence, I think this too is what we should say about the relevant combination of attitudes in the knowing-Morse and believing-Morse cases.

With respect to believing-Morse then: while there is a possible Morse who is just like believing-Morse but is curious about who killed the doctor, this is somehow an unreasonable or irrational Morse or at least a Morse in an inappropriate or suboptimal state – one he ought not to be in. Given this, I think that one lesson we learn from these various Morses, and believing-Morse in particular, is that one ought not to believe an answer to a question while having an IA towards that question, and so, by extension, while genuinely inquiring into that question.

More specifically, I want to suggest that the Morse cases make a case for the following norm on inquiry:
Don’t Believe and Inquire (DBI) One ought not to inquire into/have an interrogative attitude towards \( Q \) at \( t \) and believe \( p^Q \) at \( t \).

The expression ‘\( p^Q \)’ says that the proposition \( p \) is a complete answer to the question \( Q \), rather than a merely partial one. For instance, the question, *Who in this cafe is drinking tea?* may be partially answered by the proposition, *The person sitting at the corner table*, but that answer doesn’t fully settle the question – it doesn’t say of everyone in the cafe whether they are drinking tea or not. There are all sorts of questions we can ask about how to distinguish complete from merely partial answers, but rather that drifting too far afield here, I hope that leaving the matter at this intuitive level will suffice. Answers that fully settle the question are complete answers, and ones that don’t completely settle the question but do make some progress towards settling, are merely partial ones.\(^9\)

Crucially, DBI makes a claim about inquiring while believing complete answers to the focal questions; it makes no similar claim about incomplete or merely partial answers. I take it that much of what is going wrong with a subject who believes a complete answer while having the relevant IA is not happening with a subject who believes a merely partial answer. A rough, but intuitive thought: if we believe a complete answer, then there’s nothing further to inquire about, but this is not the case if the only answer we believe is merely partial.

DBI tells us not to have some combination of attitudes at a single time – it’s a “wide-scope” norm. As such, DBI doesn’t allow us to say that a subject shouldn’t believe at a time or shouldn’t inquire at a time full stop, but only issues an injunction against a combination of states or attitudes. Moreover, DBI says nothing about how a subject should resolve her state when she does fail to conform. And even more importantly, it says nothing about whether someone who believes \( p^Q \) at \( t_1 \) should or may inquire into \( Q \) at \( t_2 \) – it says only that one shouldn’t combine interrogative attitudes with particular sorts of answer-beliefs at a single time, and not that one cannot or should not inquire into a question when one previously believed a complete answer to that question.

One might feel as though a norm like DBI restricts a rational subject’s ability

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\(^9\)For a good overview of these and other issues having to do with the semantics of questions and answers, see Groenendijk and Stokhof (1994).
to improve her epistemic standing. It might appear as though it instructs a believer not to inquire further into the questions whose complete answers she believes. But DBI does no such thing. A subject who believes some complete answer to \( Q, p^Q \), at \( t_1 \) may come to have excellent reason to inquire and do so without irrationality at \( t_2 \). All DBI says is that this subject should drop her belief in \( p^Q \) by \( t_2 \) for her inquiry into \( Q \) at that time to count as completely rational. DBI does not say that double-checking and the like are irrational, but only that a fully rational double-checker (on the assumption that there is one) drops her answer belief before she re-opens the relevant question.

The idea that the ideal inquirer comes to her investigation without opinion has an impressive lineage. Sextus argued that only the sceptic could genuinely inquire, and Descartes' first step in his most famous inquiry was to suspend judgment. This idea is not one that legislates when we should or shouldn't engage in inquiry or attempt to improve our epistemic standing, rather it tells us something about how the rest of our mental lives should be arranged if we want to be the best sorts of inquirers.\(^\text{10}\)

The Morse cases make a case for DBI then. What more can be said in its defence? Let me briefly point to a couple of additional promising lines of support. First, I think DBI gives us access to a tidy explanation of some troubling assertions. Assertions of the form, ‘\( p^Q \), but I \( \phi Q \)’ where ‘\( \phi \)’ is replaced with a present-tense interrogative attitude verb or verb phrase, sound dreadful and that fact deserves some explanation. For instance, asserting, ‘Morse killed the doctor, but I wonder who killed the doctor (/whether Morse killed the doctor/ . . . )’ or ‘All four Beatles went to the party, but I’m curious about which Beatles went to the party (/whether all four Beatles went/ . . . )’ or ‘We should turn right here, but I’m deliberating about which way we should turn (/whether we

\(^{10}\)Although ‘confirmation bias’ has been used in the literature to refer to a handful of related phenomena, a central sort of biased behaviour it typically picks out is one according to which subjects are prone to accept evidence that confirms rather than disconfirms their pre-existing beliefs and to ignore or re-interpret disconfirming evidence. It is well established that we are these sorts of biased subjects. For a good overview of some of the different faces of confirmation bias, see Nickerson (1998). If we are biased in this way this might generate an extra consideration in defence of DBI – inquiring while already believing an answer will plausibly make for biased inquiry in the relevant ways and this sort of biased inquiry doesn’t seem to be the best we can do.
Explaining why these assertions sound as bad as they do is of course no easy task. First-person, present-tense assertions about one’s doxastic or epistemic standing are notoriously tricky and can go wrong for a great number of reasons. That said, DBI gives us access to one straightforward explanation: in asserting $p \land \Box Q$ we express a belief we have, and then in reporting our IA towards $Q$ we make clear that we have that sort of attitude as well, but DBI tells us that we ought not to have that combination of attitudes. In making these sorts of

11If one takes the relevant contents here to be sufficiently coarse-grained and allows for shifting “guises” across these assertions, then some might sound less bad, e.g., ‘Superman came to the party, but I wonder whether Clark was there’. If possible, I want to try to avoid these complications here and so throughout we should assume either that contents are much finer-grained and/or that the relevant speakers are or at least should be aware (in some relevant sense) that $p \land \Box Q$ answers $Q$. These sorts of issues are relevant in this discussion generally and to DBI in particular. Is a subject who believes $p \land \Box Q$ and is wondering $Q$, but grasps each of these under different guises doing anything wrong? If Lois believes that Superman was at the party but wonders whether Clark was there is that a rational failure on her part? Again, although I think that these are good questions, I don’t want to focus on them here. With respect to DBI one can also read it as restricted to cases in which subjects are (or should be) aware in the right sorts of ways about what answers what. This is not to say that I don’t think that a subject with an IA towards $Q$ who believes $p \land \Box Q$ but isn’t quite aware that $p \land \Box Q$ completely answers $Q$ isn’t failing rationally, just that I want to leave complications that this sort of ignorance may bring aside.

12Though it’s worth noting that the trouble doesn’t seem restricted to first-person, present-tense assertions. Say we’re planning a surprise party for our colleague John and we want to make sure that he doesn’t know it’s scheduled. I go talk to him and report back: ‘He thinks we’re all going home after work, but he’s wondering (curious) about where we’re going after work’. Again, it’s difficult to make sense of my report (and confusion about what’s going on with John should ensue upon hearing it) – we want at most one of those conjuncts to be true. In general, a natural reading of sentences of the form ‘S thinks/believes $p$ and $S \phi s Q$’ (where again, $\phi$-ing is a matter of having an IA), is a report of a subject in some sort of confused state (at best). Something similar can be said of assertions like, ‘Yesterday I believed that Alice was in court, but I was also wondering where she was’ or ‘Imagine that I believe that Alice is in court today, but I’m also wondering where she is today’. These assertions don’t crash quite as badly as our initial ones did, but they don’t describe fully thriving epistemic subjects.

There are some belief reports and even first-person assertions that come close to the ones being discussed here that don’t come out quite as bad, e.g., ‘I believe Alice left for the day, but let me check’ or ‘He thinks he put it in the car, but he’s going to look’. These sorts of assertions have a number of interesting features, e.g., ‘think’ and ‘believe’ are naturally focused, and seem to be functioning as epistemic hedges. Also notice that the second conjuncts are actions now, and not IA reports. Some have argued that reports like these don’t genuinely report beliefs. For some discussion of these sorts of “parenthetical” uses of ‘believe’ and ‘think’ see Urmson (1952). In general, there is a lot of say about belief reports, some of which might not make for a completely natural fit with some of the discussion in this section. For some interesting discussion, see Hawthorne et al. (forthcoming). I wish I had space to say more about all of this.
utterances we seem to make explicit that we are in an incoherent or conflicted state then which is exactly why they sound so bad – minimally rational subjects resolve these sorts of states when they are aware that they are in them (and uttering seems to be evidence of awareness).

Second, I think we can get even more support for DBI by thinking about our intuitive responses to “high stakes” cases in epistemology. We typically have the intuition that subjects in high stakes cases should double-check – they should inquire further. The doctor should inquire further into the exact details of the operation she's about to perform, Hannah should inquire further into the bank hours when failing to deposit her check on time will have dire consequences, and we should check what the train schedule is again if we desperately need to make it to our destination on time. Many of us also have the intuition that subjects in these sorts of high stakes situations are in somewhat weak epistemic circumstances – e.g., they don’t know and even don’t or at least shouldn’t believe that the bank will be open, that the train goes at 7, or that it's the right arm being removed.13

Why should all of this be? Why should high stakes come with poor epistemic standing? With a couple of assumptions, DBI can give us a nice explanation. First, let's say that the subjects in these high stakes cases shouldn't believe the answers to the relevant questions. Second, let’s assume the following principle: if one ought not to both have an IA towards Q at t and believe pQ at t (this is just DBI) and one ought to have an IA towards Q at t, then one ought not to believe pQ at t. Let's call this principle OIA.

Now, we can argue in defence of DBI as follows: our high stakes cases are ones in which subjects ought to inquire into Q and ought not to believe pQ. But now if we assume OIA, DBI can tell us exactly why the cases have this combination of features – it’s because one ought not to believe and inquire at the same time. Another way to say the same thing: these are cases in which subjects ought to inquire. But once we assume OIA we can use DBI to get us exactly the intuition we want about the subjects’ epistemic standings in the relevant cases – given that they ought not to both believe and inquire, they

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13 For some of the relevant discussion see Hawthorne (2004), Stanley (2005), Weatherson (2005), Ganson (2008).
ought not to believe in these cases. DBI tells us why the epistemic standing of subjects in high stakes cases suffers.\textsuperscript{14}

Those are a couple of further considerations in favour of DBI. This gives DBI a few different sources of support: the Morse cases, that it explains some troubling assertions, and that it can explain our intuitions about subjects in high stakes cases.\textsuperscript{15}

3 Settledness: belief vs. degrees of belief

In the last section I argued that there’s a rational (or similar) conflict in believing \(p^Q\) and having an IA towards \(Q\) at the same time. In this section I want to say more about what I think we should take away from the conclusion that there is such a conflict and then use the result to draw an important distinction between belief and degrees of belief. To preview: the thought that there’s an incoherence in both believing a complete answer to a question and inquiring into that question gives us some insight into a key role that belief plays at the end of inquiry, but as we’ll see it doesn’t look as though credence can play that same role. Making this distinction between belief and degrees of belief will make trouble for those hoping to reduce one of these to the other. But first,

\textsuperscript{14}Nagel (2008)’s discussion of Bank cases is particularly relevant here, I think. Nagel argues that when we read high stakes Bank cases we see the central subjects in deliberating or inquiring modes. Moreover, it isn’t just that we see these sorts of subjects as deliberating, but that we also don’t see them as believing the relevant answers. Further, Nagel argues, when we fix the cases so that the subjects do believe the answers (e.g., the bank will be open), we end up with cases in which those subjects seems irrational. In order to see high stakes subjects as rational once we naturally see them as in a deliberative modes, we also need to see them as not believing the relevant answer to the relevant question. DBI fits very naturally into this story – it can help to explain why when we see rational subjects inquiring we don’t take them to be believers, i.e., fully rational subjects don’t do both of these at once.

\textsuperscript{15}I think that DBI can also explain some common intuitive responses to lottery cases. It’s not hard to get into the following frame of mind: there’s something strange about saying that a subject flat-out believes that her lottery ticket is going to lose – why did she buy it in the first place then? And why not just give it away or throw it out entirely? That she bought it and is (reasonably, we think) waiting to find out the result before throwing it out, seems to indicate that there’s an important sense in which the question of whether her ticket will lose is open for her. Curiosity about whether she’ll win seems appropriate, as does more active inquiry at times (e.g., searching for the results online). But that can give us access to another sort of explanation as to why belief doesn’t seem like quite the right attitude for the ticket holder to have – we see ticket holders as fairly reasonable and having some relevant IAs.
more about belief.

It is often claimed that belief represents a sort of settled opinion, but it's hard to know just what's intended with this sort of talk of “settledness”. I don't think we want to associate belief with anything like an immovable or unchangeable view on some matter – we change our minds often, shifting from belief to belief. I think that the arguments from the last section give us a way to understand one key sense in which belief is a settled opinion.

The interrogative attitudes are inquiring attitudes. Having any such attitude is a way of being in an inquiring or deliberative mode. When one is in such a mode the relevant questions are open or unresolved or unanswered for one – one is, in a sense, asking the question. Presumably some attitudes will count as “closing” attitudes as well – taking up an attitude like this will count as a way of answering or resolving a question or inquiry. Which attitudes are the closing ones? Here is some guidance: the closing or answering attitudes should fail to cohere with the open ones, i.e., they should fail to cohere with the IAs. The thought here is that one shouldn’t be both open and closed with respect to \( Q \) at once. This gives us a sort of test to determine whether some kind of attitude might be a question-settling or question-answering attitude. We can ask: *for some (type of) attitude \( A \) towards a complete answer \( p^Q \) to \( Q \), is a subject who has \( A \) towards \( p^Q \) at \( t \) and an IA towards \( Q \) at \( t \) necessarily in a conflicted or incoherent state?*\(^{16}\) Let’s call this question \((A?)\).

Let’s say that the answer to \((A?)\) is ‘no’ for some type of attitude \( A \). This will mean that there are possible cases in which a subject has \( A \) towards \( p^Q \) and an IA towards \( Q \) but is not in a conflicted or incoherent state. But if \( A \) was an answering attitude, there should be no such case. What if the answer to \((A?)\) is ‘yes’ for some type of attitude \( A \)? Well then we have at least some evidence that \( A \) is an answering or settling attitude. How good this evidence is depends in part upon what other plausible explanations of the conflict or incoherence are available. In the cases at issue here I don’t know quite what those competing explanations would look like and so I’ll take the evidence that a yes answer to \((A?)\) gives us in these cases to be sufficient to justify our thinking that the relevant \( A \) is an answering attitude.

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\(^{16}\)I’m thinking of these attitude types as the folk-psychological ones.
So far though I’ve tried to argue when $A$ is belief, the answer to ($A$?) is a yes. The thought then is that this gives us reason to think that believing a complete answer to $Q$ is a way of answering $Q$. Notice, other attitudes towards complete answers don’t at all conflict in the relevant way with being in an inquiring mode/with having an IA. For instance, there is no conflict in desiring that all of the Beatles go to the party and wondering if they will all go or hoping that they all went and being curious about whether they all went. These don’t look like answering attitudes then in the way that believing a complete answer does.

This gives us a way of understanding the idea that believing is a sort of settled opinion – it’s a settled opinion in virtue of its being a way of settling a question, in virtue of being an answering attitude. And I think that the line of thought so far allows us to say even more about what this amounts to. What is it for some attitude to be a settling or answering attitude in this way? One relevant property – as we’ve just seen – is its failure to cohere with some other attitudes. So we can say more about the sense in which believing means having a settled opinion: a rational subject doesn’t both believe and deliberate – she’s not curious about some relevant range of questions or wondering about them or contemplating them, and so on. And if we think that rational behaviour is the norm then we can say that normally or typically someone with a settled opinion about $p$ at $t$ in the sense at issue here is someone who is not inquiring into questions that have $p$ as a complete possible answer at $t$, where this (at least in part) means something straightforward and familiar now: they are not curious about those questions, they are not wondering about those questions, they are not contemplating those question or deliberating about them, and so on. Having a belief means having a settled opinion since (normally) a $p$-

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17 See Harman (1986) for a related thought about “full acceptance” and the end of inquiry. Also see Hieronymi (2009) for some discussion of the idea that belief is a matter of having settled some question for oneself.

18 Knowing too! In fact reflecting on knowledge’s role as an answering attitude gives us additional reason to move away from the thought that the IAs are literally desires to know (or even necessarily involve such desires). Knowing $Q$ and having an IA towards $Q$ are not rationally compatible. But wanting to know $Q$ while knowing $Q$ need involve no rational failing. Right now I want to know what my home address is, and luckily I do; there’s a lot of knowledge that I have right now that I want to have and wouldn’t want to lose. There’s no irrationality or incoherence here.

19 I should be a bit more careful here. I think that the right thing to say is this: one can have a
believer isn’t also inquiring into questions that have $p$ as a complete answer.

What about credence and settledness? What does our test say there? I don’t think that credence (even very high and maybe even maximally high) interacts in the same sorts of ways with the IAs as belief does, and so I don’t think that having even high credence is a way of having a settled opinion. This result makes some trouble for those hoping to reduce belief to high credence. My claim is that belief has some inquiry-theoretic properties that even very high and maybe even maximally high credence don’t have. In particular, believing while inquiring is a form of incoherence but have even very high credence while inquiring is not.

When I talk about degrees of belief or credences here I mean subjective probabilities: doxastic attitudes whose strengths can be measured with real numbers in the unit interval, and which are normatively bound by the axioms of the probability calculus. Some of what I say here may well apply to other ways of conceiving of or modelling degrees of confidence (I use ‘confidence’ here more neutrally to track a degree doxastic attitude), but I won’t discuss them here.

Merely having some credence in complete answers to a question typically looks perfectly rationally compatible with being in a deliberative mode with respect to that question. I can – and without irrationality – wonder or be curious or deliberate or more actively investigate whether the coin has landed heads if my credence is evenly split across the two possible complete answers to that question, for instance. In general, middling credence in the answers to some question doesn’t seem to rationally conflict with continued inquiry into that question. But I think that there’s reason to think that nearly any (probabilistically coherent) credence distribution over the answers to some question can be rationally compatible with continued deliberation or investigation into that question.

Say that instead of one coin toss there were four. I know the coins were fair and the tosses normal, but I have no evidence as to how the coins landed settled opinion about $p$ by settling on $p$ or settling on $\neg p$. A rational subject who has settled on $p$ is not also asking questions that have $p$ as a possible complete answer, and a rational subject who has settled on $\neg p$ isn’t also asking questions that have $\neg p$ as a possible complete answer.
or which total configuration of heads and tails came up. Call that question $C$. We can also stipulate that I know the chances of each possible outcome or each possible complete answer to $C - 0.0625$ – and my credence in each answer matches those known chances. But let’s also say that I care about the outcome (maybe I made a bet). All of the IAs seem to be perfectly appropriate attitudes for me to have towards $C$ in this case. I have no further information about how the coins landed, and wondering about which outcome was actual, being curious about how they all landed, inquiring further into the matter, and so on all seem perfectly rationally compatible with having the relevant credences in each of those outcomes.

Two things worth noting now. First, if that’s right then this is a case in which having IAs with respect to $Q$ (and inquiring into $Q$ generally) is rationally compatible with having very low credence in answers to $Q$. Second, take the question of whether all the coins landed heads ($C_H$), and again say that my degrees of belief in the two answers to that question match the chances of each possible outcome. As before, I don’t have the sort of evidence that could settle this question for me, and again wondering or being curious (etc.) about $C_H$ seems perfectly acceptable even if my credences in the answers to $C_H$ match the known chances. But this means that my credence in one answer is 0.9375. And so if all of this is right then having IAs about or inquiring into $Q$ when one has very high credence in some complete answer to $Q$ needn’t result in any sort of rational conflict either. And if we keep changing the case by adding to the number of tosses, it looks as though we can get rational inquiry with even higher and even lower credence.\textsuperscript{20}

By thinking about these sorts of coin toss cases I think that we can get all the way to the conclusion that inquiry into $Q$ can be rationally compatible with credences in $Q$’s answers anywhere in $(0, 1)$.\textsuperscript{21} Can we get further than that?

\textsuperscript{20}Again, perhaps we can draw some support from lottery cases. Before you find out the winning numbers some curiosity about whether your ticket will win seems fine even in combination with incredibly low and incredibly high credences in the answers to the that question. So too with wondering about that or more actively investigating it – e.g., searching the internet to find the winning numbers.

\textsuperscript{21}And we can run a series of Morse cases that can get us there as well. In each case we can imagine Morse inquiring into who killed the doctor without any evidence that bears on that question. In the first such case, there are two suspects, in the second three and so on. In each such
I think that if we allow that it’s coherent to contemplate the result of infinitely many coin tosses, then we can. And I think we should think such contemplation coherent. But if there are infinitely many tosses, then the chance of an infinite sequence of heads ($C_\infty$) is 0: for any natural number $n$ the probability of an infinite sequence of heads must be no greater than the probability of a sequence of $n$ tosses, $1/2^n$. This means that the chance of the negation of $C_\infty$ is 1. But isn’t it still appropriate to be curious about the outcome or wonder about whether the infinite sequence of heads will obtain? It’s not only a possible outcome, but an extremely interesting one and it seems to be permissible to contemplate whether that’s the one that will obtain even if one has the credences in $C_\infty$ and its negation that match the known chances. If this is right then there are cases in which the IAs are rationally compatible with even maximal credence.

Here’s a thought about part of what is happening in these cases. When one has little or no evidence with respect to a question (evidence that bears on that questions’ answers), then the IAs and continued inquiry generally seem permissible. But there are cases in which very and even maximally high credence are also permissible in the absence of evidence – when the possibility space is vast enough one’s credence will have to be distributed in ways that leaves the subject with very low credence in some of those possibilities and so very high credence in some others. My argument here shows that those two kinds of cases are not mutually exclusive. That is, there are possible cases in which absent (the right kind of) evidence, both high credence and continued inquiry will be permissible.

I haven’t argued that any case in which one has very high or very low credence in $p^Q$ is a case in which one can also inquire into $Q$ without irrationality, but that some cases are like this. But if we look back to (A?) this tells us that

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21 See Williamson (2007) for some discussion about these sorts of cases and an argument that moving away from standard probability theory by allowing outcomes to get infinitesimal values here will not help to avoid the result that the probability of the an infinite sequence of heads is 0.

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22 See Williamson (2007) for some discussion about these sorts of cases and an argument that moving away from standard probability theory by allowing outcomes to get infinitesimal values here will not help to avoid the result that the probability of the an infinite sequence of heads is 0.
very high and very low credences are not settling or answering attitudes.

This makes for a distinction between belief and degrees of belief: these attitudes – even the ones that seem fairly closely related – have different roles to play in inquiry. One is in rational conflict with continued inquiry, while the other is not and so having one is a way of settling or answering a question, while having the other is not. This gives us a sense in which belief is a settled opinion but mere credence – no matter how high or how low – is not.\(^{23}\)

There has been quite a bit of discussion lately about these two pictures of our doxastic lives – the coarse-grained one from which belief emerges and the more fine-grained credence-theoretic one. One thought has been that the coarse-grained picture can be reduced the fine-grained one. Various difficulties have been thought to afflict the reductionist account and various fixes proposed.\(^{24}\) My thought is that the arguments in this last section make some additional trouble for the reductionist program by showing that belief has some inquiry-theoretic properties that high credence does not. Belief is a settling attitude, it’s a way of closing inquiry and more generally it’s normatively incompatible with the IAs and inquiring; mere high credence lacks these properties.

### 3.1 Settledness vs. stability

One of the central claims in this section is that believing is a way of having a settled opinion. Some have made similar-sounding claims about belief, and so I think it’s worth making the differences between these claims clearer. Some have claimed that belief (or at least a rational belief) is a particularly “stable” sort of attitude, and perhaps more stable than mere credence. We can find versions of a view like this in Lawlor (2013), Holton (2014) and Leitgeb (2014). The claim that some attitude is highly stable is a claim about that attitude’s being unlikely to change in the near future or in some relevant nearby possible worlds (or both). I’m going to try to stay neutral about which of these – modal, temporal – notions of stability is typically intended. The general thought artic-

\(^{23}\)It may be that I have also pointed to a different but related disconnect between belief and high credence as well – the latter can be permissible in the absence of evidence, but we think that believing in the absence of evidence cannot be.

\(^{24}\)See, e.g., Foley (1992) and Sturgeon (2008) for a taste of this debate.
ulated in these discussions is that it is somehow part of the nature of believing or rationally believing that one’s belief “stay put”.

But my claim that belief is a settled opinion (and credence is not), is not a claim about stability in this sense – it’s not a claim about how likely one is to change one’s mind – but a claim about how belief interacts normatively with central inquiring attitudes and the extent to which rational subjects are inquiring while believing. To bring the contrasting views into relief, Holton (2014) claims that a belief in \( p \) is highly stable in virtue of the fact that the believer is resistant to reconsidering the matter of \( p \), or better, questions that have \( p \) as a possible answer. This is an interesting suggestion, and, like the view I’ve argued for here, seems to look at belief through the lens of inquiry. That said, it is importantly distinct from the view I’ve argued for here. My claim that belief is a settled opinion is neutral on whether the believer will or should inquire in the future, it’s just the claim that normally someone who believes \( p \) at \( t \) isn’t inquiring into \( Q \) at \( t \); believers aren’t also wondering or curious. For all I’ve said here settledness may be temporally and modally fragile; it needn’t stay put.

The claim that belief is a particularly stable attitude is a claim about how likely a believer is to change their mind. My claim about believing being a settled opinion is not a claim about doxastic change. That’s not to say that it has no downstream implications for doxastic change. An inquirer is someone who is looking for information or evidence, and presumably someone looking for evidence is more likely to find evidence than someone who is not. If a believer is not typically an inquirer, then she’s not typically looking for information and so is typically less likely than the inquirer to find new evidence. On the assumption that the subjects here are rational and respond to the new evidence, this makes something of a preliminary case for the thought that inquirers are more likely to change their minds than believers. But this doesn’t yet mean that the believer is less likely to change her mind than the non-believer generally. The inquirer may be more likely to change her mind than the non-inquirer, but many non-believers are also not inquiring. For all I’ve said the believer is just as likely to change her views as other non-inquirers, e.g., someone with credences who neither believes nor is inquiring.

While the claim that belief is a particularly stable sort of attitude can sound
like the claim that belief is a settled opinion and might even be equivalent to that claim on some ways of fleshing out “settledness”, I hope that the distinction between settledness in my sense and stability is clear. I don’t know if belief is particularly resistant to change – my claim is about the connection between belief at a time and inquiry at that same time.

4 Concluding remarks

I’ve tried to illuminate some central aspects of inquiring here: some of its nature and normative profile, and in particular its relation to our central doxastic attitudes, belief and degrees of belief. I argued that at the centre of any inquiry is a kind of inquiring or interrogative attitude, many of which are familiar folk-psychological characters. I then argued that belief and degrees of belief seem to interact differently with these inquiring attitudes – believing while having them (and so while inquiring) is normatively problematic while merely combining them with high credence need not be. This seems to indicate that the two kinds of attitudes play different roles in inquiry – I argued that believing is a way of settling a question while merely having high credence is not. That marks an important distinction between the two kinds of attitudes as a result makes trouble for those hoping to reduce one of these to the other. It also gives us a way of understanding a sense in which belief is a kind of settled opinion. This last thing gives believing a sort of pride of place in inquiry as a way of closing or resolving or answering the questions we’re investigating.

Of course this hardly tells us everything we might want to know about the various roles that belief plays in even just our cognitive lives. In particular a looming question now: why settle a question at all? Believing is just one way of ending inquiry. Why should we want to end it that way rather than by just dropping the question? Dropping a question in the right circumstances can leave us with some spread of credences over answers, but in a fairly settled state with respect to the relevant question. This is the state in which one hasn’t answered a question $Q$ but is no longer, or simply not, inquiring into $Q$. Let’s say that one is *at rest* with respect to $Q$ when one is in a state like this. Why should we prefer settling a question to just having some answer-credences and being
at rest? Part of the answer to this question might come with thoughts about the various functional roles that belief plays – perhaps we need to settle in order to act and talk in particular ways. Nothing I've said here commits us one way or another on belief's various other possible functional roles and many have explored some roles it might play for creatures like us in action, assertion and more. But fundamentally our drive to settle is simply part of the activity of inquiring itself: in opening a question we already commit to wanting more than being at rest with respect that question. In opening a question for inquiry we (often deliberately) move ourselves out of a state of rest with the aim of getting somewhere better. We open questions in inquiry with the aim of answering or resolving those questions – with the aim of coming to know or understand something new. This is just part of the nature of the endeavour. Qua inquirers we want to answer the questions we ask, and as such we want to settle those questions. And as I've tried to argue, believing is central to this aim.

\[25\] For instance, on the connection between belief and action guidance see Ross and Schroeder (2014) and on the connection between belief and assertion see Kaplan (1996).
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