



Wisdom, Open-Mindedness, and KK-Failure

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Abstract

Wise agents are characteristically open-minded. In this paper, I discuss why that is the case. Central to my argument is the notion that open-mindedness is an inquiring attitude. A standard thought about inquiring attitudes is that they entail ignorance—if S is inquiring into a question q , then S doesn't know its answer p^q . This, however, doesn't sit well with some of our intuitions about open-mindedness; for, as I shall show, there are instances of open-mindedness where S knows that p^q and yet is justified in inquiring into q . I explain that such instances are best explained in terms of KK-failure, i.e. failing to know that one knows, and more specifically a sort of KK-failure that emerges out of S 's sensitivity to unawareness. I argue that a wise agent too is in a similar state of KK-failure in relation to the body of knowledge that makes her wise, and it's precisely because of this that a wise agent remains characteristically open-minded.

Keywords Practical wisdom · Open-mindedness · Inquiry · Certainty · KK-principle

Despite disagreements in nitty-gritty, a general consensus among philosophers is that knowledge of living well is necessary for practical wisdom (wisdom, henceforth) (e.g. Grimm, 2015; Kekes, 1983, 2020; Nozick, 1989; Whitcomb, 2011; Nath, forthcoming). Let's call this total body of knowledge of living well, whatever precisely it may be, W . I argue that a wise agent is someone who is always in a state of KK-failure, i.e. failure to know what one knows, in relation to W . I motivate this view by observing that open-mindedness is characteristic of wisdom. Towards this, I argue for the following principle:

(*Non-Luminosity*): For the total body of knowledge of living well, W , that's necessary for an agent S to be wise, S is wise only if S doesn't know that she possesses W .

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Now, that wisdom involves ignorance, hasn't gone totally unnoticed among philosophers. For instance, Tiberius (2016: 114) remarks that wise agents are 'epistemically decentred', i.e. wise agents recognise their epistemic limits—that they don't know everything and/or that everything they believe may not be true. This kind of ignorance, however, is different from that of *Non-Luminosity*. Whereas Tiberius' epistemic decentricity relies on the agent's various *first-order* ignorance, the point that *Non-Luminosity* makes is that even though a wise agent may possess the kind of first-order knowledge that makes her wise, she has a *higher-order* ignorance about that body of knowledge. In other words, wisdom is characterised by KK-failure.

The paper is organised as follows. In §1, I discuss open-mindedness as a characteristic virtue of wisdom. In §2, I argue that open-mindedness is an inquiring attitude. In §3, I observe that, whereas inquiring attitudes entail ignorance, there are cases of open-mindedness where it's rationally permissible for the agent to inquire despite knowing. I then argue that such instances are best explained in terms of KK-failure and describe how such a kind of KK-failure emerges out of a certain kind of unawareness and sensitivity on the agent's part. In §4, I discuss how this whole discussion bears upon wisdom's relationship to open-mindedness.

1 Wisdom and Open-Mindedness

Cognitive psychologists have observed that there is an intimate relationship between wisdom and open-mindedness. Thus, research based on data from tasks performed by subjects to measure their psychological functioning observes that open-mindedness is an important factor both of wisdom-related personality and performances in general (Staudinger et al., 2005). In fact, some such studies take it to be the most important predictor of wisdom-related personality among adults (e.g. Staudinger et al. 1998). Kunzmann and Baltes (2003) observe that people who demonstrate a higher manifestation of the fivefold wisdom-related knowledge developed in the Berlin Wisdom Paradigm¹ (rich factual knowledge, rich procedural knowledge, lifespan contextualism, value relativism, and recognition and management of uncertainty) also score high on open-mindedness, thus indicating a strong association of the latter with the former. Ardel's (2003) 'three-dimensional wisdom scale' (3D-WS) asks people to rate items in terms of how they feel in three broad categories—cognitive, affective, and reflective. A number of items that correspond to open-mindedness, e.g. looking at everybody's side in a disagreement before making a decision, looking at all sides of a presented problem, and ease or difficulty in looking at things from others' perspectives, demonstrated a positive correlation with the reflective dimension of 3D-WS. Webster designed what he calls a 'self-assessment wisdom scale' (SAWS) where wisdom is measured in terms of five critical components—life experiences, reflectiveness, emotional regulation, open-mindedness, and humour. In SAWS, open-mindedness scores particularly high, featuring prototypical

¹ So called because the researchers associated with the project were affiliated to the Max Planck Institute for Human Development in Berlin.

instances like curiosity about other religious and philosophical beliefs, appreciating the societal value of controversial works of art, amiable engagement with people whose views strongly differ from one's own, and reading books that challenge the reader to think differently (Webster, 2007: 173).

Thus, what such psychological studies reveal is that open-mindedness is a trait that is characteristic of wise agents. Such facts from cognitive psychology could be said to provide grounds for philosophical intuitions concerning the matter. There's a long-standing tradition since Aristotle which says that wisdom is constituted by all other moral and intellectual virtues, including open-mindedness² (cf., Zagzebski, 1996: 217–230, Tiberius & Swartwood, 2011: 287–8, Ryan, 2021). And it does seem very intuitive that wise agents are those who are characteristically open-minded. Wisdom is manifested in the way an agent deals with complex important problems and nontrivial situations of life. Those problems are such that there's no singular set of rules governing decision-making, the easy application of which will solve them, determining the ways to live well. The factors governing them are varied and interact in complex ways, thus demanding an evaluation of alternate views, information, biases, and potential solution strategies on the agent's part, given various physical and psychological constraints they can be under. The mark of a wise agent is in remaining open to those possibilities and exploring them before making any sustained decisions about the problems. Such openness, as the psychological literature observes, could be manifested in terms of looking at various aspects of the problem at hand, giving a fair hearing to views that differ from one's own, engaging with ideas that challenge one to think differently, etc. In other words, wisdom is characterised by a certain level of cognitive flexibility and open-mindedness when confronted with challenging and unfamiliar situations which cannot be achieved if one isn't disposed to think about them that way. In contrast, it's difficult to attribute wisdom to someone whose general attitude towards life is very dogmatic, especially in the face of evidence. For instance, think of someone who believes that, when encountering a certain problem *C*, one should resort to solving it only using method *M* and not seek any other potential solving method. That person acts by that thought

² Thus, the sort of open-mindedness relevant for our discussion vis-à-vis wisdom is the virtue of open-mindedness. Now, open-mindedness manifests in non-virtuous forms as well. They typically involve cases that obstruct an agent from achieving certain epistemic goods like knowledge and understanding. Obvious examples include openness to believing self-contradictory propositions. Others include cases of known fake news, extremist beliefs, conspiracy theories, etc. where it isn't rational for one to remain open to changing one's minds even when arguments are in their favour and one cannot find any response to those arguments as, inter alia, they obstruct the achievement of epistemic goods (e.g. Fantl 2018; Kelly 2011; Sorensen 1988, Peters et al. forthcoming). Beyond this, other constitutive virtues of wisdom may also impose rational constraints on open-mindedness. Thus, Ryan (2021: 183–4) argues that if someone rationally (as against blindly) trusts their spouse, then it wouldn't be wise for them to remain open to evidence against every testimony of theirs as that could ruin the relationship. Seen in the context of living well, these cases will obstruct one's attaining the epistemic goals relevant to living well. Accordingly, wisdom incorporates only virtuous forms of open-mindedness where agents are open to believing or gathering evidence for/against things bearing on living well which are, or might become, rational for them to believe or gather evidence for/against leading to somehow achieving the goals of living well. The details of how precisely this wisdom-relevant open-mindedness should be fleshed out is a matter that I shall not pursue here (for an attempt at this, see Ryan 2021: 180–4).

and even advises others to do the same when encountering C , even when evidence clearly demonstrates that many have failed to solve C precisely for not availing themselves of any other method but M . It's hard to see how someone demonstrating such behaviour could rightly be called wise.³ What this demonstrates is that the psychological emphasis on a strong correlation between wisdom and open-mindedness is consistent with our philosophical intuition that wise agents are characteristically open-minded. This, of course, leaves open questions like what explains such a strong correlation between both or what it is in the structure of wisdom that makes a wise agent open-minded. This is what I shall embark to answer in the rest of the paper.

2 Open-Mindedness as an Inquiring Attitude

The contemporary discussion on inquiring attitudes is largely generated by the works of Friedman (e.g. 2013, 2019, [forthcoming](#)). According to her, having an inquiring attitude (e.g. wondering and being curious) is having an attitude towards a question such that one puts that question in their 'research agenda' ([forthcoming](#)). When an agent S has a question q in her research agenda, then S is asking q (and not merely, say, entertaining q , or understanding q , etc.), which requires that S takes q to be not settled for S . To say that q isn't settled for S is to say that S doesn't know the complete answer p^q to q , such that if S knows that p^q , then q is settled for S .⁴ In other words, inquiring attitudes entail ignorance. But S 's being in an inquiring attitude towards q also means that S has a cognitive goal to try to answer, settle, or close q by collecting evidence towards it, deliberating about it, etc. such that they come to know p^q (Friedman, 2019: 299). I argue that when someone is open-minded about a certain subject matter, *inter alia*, they are in an inquiring attitude towards the questions pertaining to the subject matter.

Typically, when we're open-minded about a subject matter, Σ , we're in a certain epistemically impoverished state relative to Σ such that the questions pertaining to Σ aren't settled for us. Thus, when I'm open-minded towards other cultures, questions like what food people from other cultures eat, what religious traditions they follow, etc. aren't settled for me. Philosophers (e.g. Zagzebski, 1996; Riggs, 2010; Carter & Gordon, 2014) observe that being open-minded means that, *inter alia*, the agent desires to or is motivated to have cognitive contact with reality by engaging seriously

³ Also, when social psychologists ask subjects to nominate wisdom exemplars, they observe that the subjects typically draw on a range of historical, cultural, religious, and political figures who demonstrate a number of common characteristics that invariably include open-mindedness (e.g. Jason et al., 2001, Weststrate et al. 2016). Thus, the intuition that open-mindedness is characteristic of wisdom is held not merely among academic wisdom researchers but also among lay people ranging across culture, age groups, professional backgrounds, etc.

⁴ Even though partial answers may make some progress towards settling questions, they don't fully settle them. For example, a partial answer to the question 'Who were Jesus' disciples?' could be 'Peter and John'. However, that doesn't completely answer the question as it doesn't say of the ten others who were also Jesus' disciples. Questions are fully settled only when agents figure out their complete answers (Friedman 2019: 303). For brevity's sake, henceforth, I shall use 'answer(s)' to mean complete answer(s).

with alternative options.⁵ This desire to have cognitive contact with reality could also be explained, partly, in terms of the agent's desire to settle the answer to the relevant questions. Thus, when I'm open-minded towards other cultures, I also seek answers to questions such as what food they eat, which religious traditions they follow, etc. Now, it's fair to think that someone desiring to have cognitive contact with reality will also be sensitive to evidence pertaining to the relevant questions by either actively gathering evidence or being disposed to gather it when the situation arises, such that the evidence is gathered with the aim of learning answers to the relevant questions.⁶ Moreover, open-mindedness is a state of mind that disposes the agent to form and/or revise their beliefs on the basis of an impartial assessment of such evidence (e.g. Dewey, 1933: 30; Arpaly, 2011; Hare, 2003: 76; Baehr, 2011; cf Kwong, 2016). Open-minded people can either move beyond or set aside, at least temporarily, their doxastic commitments and be fair in terms of giving a fair hearing to alternative beliefs or arguments, and/or interpreting and assessing the relevant evidence in order to answer the questions in their research agenda, and given that typically open-minded agents are rational agents, it shouldn't be surprising that they revise their beliefs when they learn that the answer to a question is different from what they had initially thought.

Thus, remaining open-minded about a subject matter demands that questions relevant to the subject matter remain on the agent's research agenda. Accordingly, to remain open-minded towards other cultures, *inter alia*, I should also maintain the cognitive goal of answering questions like what food habits people from other cultures have, which religious traditions they follow, etc., and shouldn't continue to impartially assess evidence pertaining to other cultures while dropping the question(s) entirely from my research agenda. But this may mean that I'm not actively gathering evidence at all times. At any given moment, my research agenda plausibly contains multiple unsettled questions with my epistemic goal of answering them. However, given my physical and psychological limitations, I'll be in a position to actively consider only one or some of them at a certain time. Thus, for me to remain open-minded towards other cultures, such questions should merely feature on the list of questions in my research agenda that I'm disposed to actively consider at some point if the situation arises. This, I believe, is consistent with the kind of inquiring attitude that open-mindedness is, which I discuss below.

Philosophers (e.g. Audi, 1994) distinguish between occurrent and dispositional doxastic attitudes. Thus, one can have an occurrent belief that *p* which can be constituted by a judgment that *p* and the agent is actively thinking of *p*. However, one can also have a dispositional belief that *p* such that when the agent is in that state, the belief is in her

⁵ An important discussion is on how to distinguish open-mindedness from similar intellectual virtues like intellectual humility and curiosity—they all share the motivation to have cognitive contact with reality. This is no place to delve deep into such discussions. However, one way to think of such distinctions is in terms of their characteristic motivations: whereas the characteristic motivation of open-mindedness could be thought of as being sensitive to alternate options, that of intellectual humility could be thought of as being sensitive to epistemic limitations (e.g. Whitcomb et al., 2017), and that of curiosity could be thought of as caring non-instrumentally about epistemic goods (e.g. Ross 2020). I have more to say on the distinction between open-mindedness and intellectual humility in footnote 16.

⁶ This mirrors Battaly's view when she observes that a central characteristic of close-mindedness—a failure to engage seriously with alternative options—is a failure to gather evidence relative to the relevant subject matter (2018).

mind but isn't manifested via any conscious mental state. Similarly, one can also distinguish between occurrent and dispositional inquiring attitudes. Some inquiring attitudes are occurrent such that the agent must be actively thinking about the relevant question for her to be in that inquiring attitude. Wondering is a typical occurrent inquiring attitude. Hugo is wondering who committed the murder only if he's actively thinking about who committed the murder. At times when he's not thinking about who committed the murder, it'd be odd to say that he's wondering about who committed the murder. However, some inquiring attitudes are dispositional such that the agent doesn't have to be actively thinking about the relevant question to be in that inquiring attitude. Open-mindedness is a dispositional inquiring attitude.⁷ Suppose that Hugo truthfully tells me in class that he's open-minded about whether God exists. Now suppose that we both go to the pub after that discussion and we both meet our respective friends and become busy chatting with them over drinks separately. Suppose further that my friends and I also start discussing God's existence with most of us having strong views about the issue, and I point to Hugo telling my friends, 'He, however, is open-minded about whether God exists'. At that point in time, however, Hugo is talking to his friends about football with the thought of whether God exists totally absent from his mind. Given this, he's no longer actively thinking about whether God exists, and yet it'd be perfectly correct for me to refer to him saying that he's open-minded about God's existence at that time. This is precisely because open-mindedness is a dispositional inquiring attitude such that Hugo doesn't have to be actively thinking about whether God exists while being open-minded about it.

3 Knowledge, Certainty, and Awareness

3.1 Open-Mindedness and Knowledge

We noted earlier that inquiring attitudes entail ignorance. This is also the standard view among epistemologists—if you're inquiring into a question q , then you do

⁷ It needs to be borne in mind that, as I noted earlier, I'm dealing with the virtue of open-mindedness. As observed, not all forms of open-mindedness are virtuous. Similarly, not all inquiring attitudes are virtues (e.g. suspension of judgment is taken by some to be an inquiring attitude (e.g. Friedman 2017); it, however, is not a typical intellectual virtue). That open-mindedness is an inquiring attitude applies to both the virtuous and non-virtuous forms of open-mindedness. Thus, one will be inquiring into whether God exists when one is open-minded about whether God exists—a virtuous form of open-mindedness. Similarly, one would also be inquiring into whether $1=0$ when they're open-minded about it—a non-virtuous form of open-mindedness. There, of course, is more to be said of how precisely open-mindedness being an inquiring attitude relates to the virtue of open-mindedness than could be accomplished here. However, broadly, as an intellectual virtue, open-mindedness values, various epistemic goods like knowledge, understanding, etc.—which would not be the case for its non-virtuous form, i.e. remaining open-minded without valuing such epistemic goods—and that the structure of open-mindedness is partly constitutive of inquiring attitudes, helps achieve those valuable epistemic goods through at least two ways that I discuss here: a motivation to have cognitive contact with reality and impartial assessment of relevant evidence. For a discussion on how intellectual virtues in general relates to inquiry—which may, in addition to cognitive states, also involve affective and meta-cognitive states—see Pritchard (2020). Cf. Ross (2020) for a similar discussion on curiosity, which is also taken as a paradigmatic intellectual virtue, as well as a paradigmatic inquiring attitude.

not know its answer p^q . This has been argued to explain why linguistic constructions where the question and the knowledge of the answer to the question appear together—i.e. sentences of the form ‘I know p^q , but q ?’—sound unnatural (Whitcomb, 2010: 674; Friedman, 2017: 309–10; Willard-Kyle, 2021: 46–55), why asking a question typically amounts to admitting that one is ignorant of its answer(s) (Whitcomb, 2017: 150), and why the conditions under which agents are released from commitments subject to inquiry are satisfied only under knowledge (Kelp, 2014).⁸ Accordingly, if open-mindedness is an inquiring attitude then it also entails ignorance such that when I’m open-minded towards other cultures, I’m ignorant about what food people from various cultures eat, which religious traditions they follow, etc. Take, however, the following example:

(*Vaccine*): Mira is a scientist who led a team that has developed a certain vaccine against an infectious disease. She sent their data to some of her colleagues for independent review. This included Richard who happens to be the most eminent scientist in that area of vaccine development, and who himself is leading a team developing a similar vaccine against that disease. Whereas all her other colleagues have replied back to her affirming the vaccine’s safety and efficacy, Richard hasn’t. However, in a recent news interview when Richard was asked to comment on the new vaccine Mira and her team have developed, Richard said, ‘I’ve gone through their data, and I’m not convinced that the vaccine will work’. He, however, doesn’t say why he remains unconvinced. One of Mira’s colleagues shows her the interview and asks her what she thinks. Now, Mira has known Richard for quite a while and even though she knows that he’s very trustworthy and reliable when it comes to his scientific judgments, she’s also well aware that he remains very busy, and so, occasionally, he tends to miss a few things sent to him for review. Mira answers: ‘Look, all the other scientists and their teams I’ve sent our data to, including yours, have replied positively. So, I do believe that our vaccine works. Richard, of course, is the most respected scientist in this area and what he says needs to be taken very seriously. But he’s also a very busy person. He’s yet to reply to my emails regarding the vaccine data, and nor has he said anything about why he thinks the vaccine doesn’t work in the interview. But, of course, if Richard can provide with any convincing counterevidence against the vaccine, I’m open to changing my mind. We’re, after all, in the business of saving people’s lives’. Richard is in fact wrong—he missed some crucial points owing to him being busy—and Mira’s vaccine actually works.

At least seen in certain ways, *Vaccine* seems like a genuine case of open-mindedness. Mira may think that given that precious lives are at stake, she really wants to figure out whether the vaccine works. Given this, Richard’s testimony gives her a

⁸ Under the ‘New View’ of ignorance—which says that being ignorant that p is to lack true belief that p (e.g. Brogaard 2016; Peels 2010)—inquiring attitudes may not entail ignorance as long as the agent truly believes the answer to the relevant question. Here, I assume the ‘Standard View’ of ignorance which says that to be ignorant that p is to lack knowledge that p (e.g. Goldman and Olsson 2009; Le Morvan 2013).

pro tanto reason to remain open-minded such that she's willing to impartially assess any counterevidence that he could provide and even change her mind if warranted, as she rationally believes that doing so may help her achieve the goal of figuring out whether the vaccine really works and save many lives.

Vaccine, however, generates two important questions—(i) does Mira know that the vaccine is safe and effective, and (ii) if she does, then is it rational for her to remain open-minded about whether the vaccine is safe and effective while at the same time possessing the knowledge that it's safe and effective? Let's discuss the first question. Mira has formed the belief that the vaccine is safe and effective by reviewing all the available first-order scientific evidence in a reliable manner. For instance, Mira herself is an expert in the area of vaccine development. Given her expertise, she might have gone through the works of other scientists in that area very carefully, doing *in vitro* and *in vivo* assessments numerous times, testing the vaccine on various groups of people over multiple phases, etc., and assessing all the available evidence from them in a robust and systematic manner using her expert scientific skills. She had also sent her data to her colleagues working in similar areas, who might have run their own tests to replicate her findings. Since they confirm her conclusions, it provides Mira with very strong higher-order evidence affirming her case. Beyond this, even Richard's testimony is misleading. This precludes Mira's conclusion from being false and, thus, lets her belief be true. Accordingly, (assuming fallibilism) not only is it fair to say that Mira *knows* that the vaccine is safe and effective, but also, it's hard to imagine how she cannot know in such circumstances.

Let's now focus on the second question. My answer is that it's a rational response on Mira's part to remain open-minded upon learning Richard's testimony (despite it being misleading) even though she knows that the vaccine is safe and effective. In *Vaccine*, Richard doesn't agree with her research conclusions. Richard, who is very trustworthy and is the most eminent expert in the field, provides testimony against Mira's conclusion, which for her generates sufficiently strong countervailing higher-order evidence. This produces certain epistemic reasons for Mira to be disposed to revise her beliefs, which, in this case, is manifested in terms of her keeping an open mind about whether the vaccine is safe and effective. Doing otherwise would be odd and would make her an epistemically irresponsible person. Thus, consider Mira dogmatically clinging to her belief that the vaccine works upon seeing Richard's interview:

Colleague [shows Mira Richard's interview clip]: So, what do you think? Richard says that he doesn't think that the vaccine works.

Mira: I don't really care what Richard says. Me and my team have worked on it for months and I'm certain that we haven't missed anything. Plus, I've shown my findings to you and others as well – you all seem to agree with me. Besides, Richard hasn't even said anything about why he doesn't think my vaccine works – he didn't say anything about it in the interview, nor has he replied to my emails. Plus, if you know him personally, you'll know that he's an extremely busy person and so, occasionally he misses a thing or two that's been sent to him.

Colleague: Perhaps, but he's still the most prominent scientist in this area, and not to mention he's himself currently working on a vaccine similar to yours. It might not be a bad idea to send him an email again asking why he thinks your vaccine doesn't work.

Mira: Once again, I don't care! My vaccine works!

What would the colleague's reaction to this be? It'd perhaps be one of disbelief, and even a sense of distrust towards her as a professional and also her attitude on the vaccine's safety and efficacy. Her response reeks of bias towards her own work, something that's not becoming of an epistemically responsible agent, and more so when it's a matter of life and death for thousands of people—perhaps in this case, she'd even be morally irresponsible. In other words, Mira will be epistemically (and even morally in this case) blameworthy if she refuses to remain open to changing her mind after learning Richard's testimony even though it's misleading.⁹

3.2 Open-Mindedness and Certainty

The above scenario, however, generates an oddity—since open-mindedness is an inquiring attitude, and inquiring attitudes entail ignorance, one cannot be in a position of both knowing that p and not knowing that p at the same time. Thus, Mira cannot both know that the vaccine works and not know that it works at the same time. To explain away this oddity, one has to give up one of these—(i) that *Vaccine* is a genuine case of open-mindedness, (ii) that Mira knows that the vaccine is safe and effective, (iii) that open-mindedness is an inquiring attitude, or (iv) that inquiring attitudes always entail ignorance. I've already defended (i)–(iii). Accordingly, I shall argue against (iv), thus allowing Mira to comfortably remain in a state of both

⁹ Here, it might be suggested that the intuition that Mira knows (given her reliable belief-forming processes and peer confirmation) could be sustained only on externalism (for an externalist discussion of defeat in general, see Lasonen-Aarnio 2010). On internalism, however, her continued inquiry on hearing Richard's testimony might indicate that her confidence is insufficient, thus undermining knowledge. I shall remain ambivalent on the question of internalism and externalism here. But even under the assumption of internalism, her knowledge isn't defeated. We already observed that Mira has strong independent grounds for holding on to her belief that the vaccine works. Although Richard's testimony gives her some counterevidence against holding her belief, there is no reason to think that it entirely undermines her reasons for holding it; for he hasn't provided her with any argument or evidence as to why he thinks her scientific conclusions are wrong. Accordingly, at this point in time she doesn't have access to any counterevidence from Richard against which she can compare her own evidence for her conclusions and figure out where (if) her research has gone wrong. Perhaps, had Richard provided some counterarguments or counterevidence (irrespective of their quality), Mira would have had some reason to abandon her belief in her scientific conclusions, provided she was at least convinced by his counterevidence. However, in its absence, even though Richard is an authoritative figure in the area, it would again be epistemically irresponsible of Mira to abandon her belief in her scientific conclusions. And even though Richard's authority makes it epistemically possible for her that she's wrong (and thus her remaining open to changing her mind), if Mira abandons her belief merely at an unsupported statement of Richard, then she either has very low confidence in her scientific abilities or she is fickle-minded, both of which ex hypothesis she isn't, given her expertise in this area. Thus, once again, Mira's knowledge isn't defeated upon learning Richard's testimony, and so, irrespective of whether we espouse externalism or internalism, the answer to the question of defeat here is 'no'.

knowing and remaining open-mindedness at the same time in *Vaccine*. Towards this, I argue that the reason why Mira's further inquiry makes sense is that here her inquiry entails uncertainty—Mira has left her inquiry open because she's seeking not just knowledge but also some kind of certainty regarding whether the vaccine works, which she's yet to achieve. Therefore, what explains the seeming oddity of knowledge coinciding with open-mindedness is certainty.¹⁰ This shouldn't be surprising as it seems to be perfectly natural for a rational agent to desire certainty regarding something, especially when it's a matter as important as that of life and death.

But before addressing how precisely certainty explains this oddity, let's discuss the kind of certainty that's relevant to us. Towards this, it'll be helpful to draw on the commonly made distinction between *evidential certainty* and *psychological certainty* (e.g. Beddor, 2020; Stanley, 2008). An agent is evidentially certain that p if she has evidence that gives her the highest degree of justification to believe that p . However, this form of certainty isn't what's relevant for us, for Mira, having formed the belief that the vaccine is safe and effective by reviewing all the available scientific evidence in a reliable manner, provides her with a high level of evidential justification that the vaccine works. What she lacks, however, is psychological certainty. Psychological certainty is typically taken as an all-or-nothing form of certainty such that an agent S is psychologically certain that p just in case S has the highest degree of confidence that p . Taking a cue from Stalnaker (2006), one way of thinking about this highest degree of certainty that p is to say that S achieves this state only when she justifiably believes that she knows that p .¹¹ This seems like a perfectly plausible view given how some of our common intuitions about psychological certainty are captured by the agent's justified belief that she knows. Thus, consider an unconfident examinee (Radford, 1966):

(*Nice Teacher*): Sara is about to take her history exam. Before the exam, the teacher announces: 'One of the questions you'll be asked is, 'When did Queen Elizabeth die?' You now have five minutes to review your materials before the test begins'. On hearing the question, it immediately occurs to her that the answer is 1603. In fact, she has read it in her textbook a couple of weeks back while preparing for the exam. Although she's quite confident about the answer, at this point, she cannot remember whether she has read it in her textbook or not, and so now she's not absolutely certain if 1603 is the correct answer. Her textbook is right in front of her, and accordingly decides to consult it.¹²

In cases like this, we say that, even though the agent feels like they could be mistaken about the answer, the agent knows the answer to the question but doesn't know that she knows it, i.e. she's in a state of KK-failure vis-à-vis the answer. Even though

¹⁰ Non-entailment of ignorance from inquiry isn't restricted to open-mindedness and is also observed in other phenomena like confirmation (e.g. Falbo 2021) and double-checking (e.g. Woodard 2024).

¹¹ Bjorndahl (2020: 482–3) also alludes to a similar view.

¹² This 'nice teacher' version of the example is inspired by Beddor (2024: 334).

Sara knows that Queen Elizabeth died in 1603 from reading her textbook a few days back, since she doesn't remember whether she read it in her textbook, she doesn't know that she knows that Queen Elizabeth died in 1603, and thus, it makes sense for her to consult her textbook. Accordingly, her lack of certainty could be explained in terms of this KK-failure, and more specifically, a lack of higher-order justified belief. The case for this can be further strengthened by imagining the following series of events transpiring:

(*Nice Examiner*): Suppose that Sara took full advantage of the opportunity provided by her teacher and went through the text multiple times over the span of that five minutes such that the fact that Queen Elizabeth died in 1603 is now firmly embedded in her memory. Not only does she now know that Queen Elizabeth died in 1603, but based on her reading the textbook just now, she's now psychologically certain that Queen Elizabeth died in 1603. Now imagine that while the students were revising, the teacher went out and the external examiner entered the examination hall. Suppose that right when they closed their books after five minutes, unaware of what they were revising, the external examiner announces, 'One of the questions you'll be asked is, "When did Queen Elizabeth die?"' You now have five minutes to review your materials before the test begins. However, if you do decide to review your materials, you'll lose one minute of your exam time'.

Would the students go through the textbook again to look at the same question? I think not! Imagine the reaction the students would have to the examiner's words—they'd probably be amused at the crazy coincidence and inform the external examiner that this was exactly the question they were revising for less than a minute ago. At least for someone like Sara, who has now attained psychological certainty about when Queen Elizabeth died, going back to the text again at the cost of losing a whole minute would simply be irrational. And in contrast to *Nice Teacher*, where she consulted her textbook, here she decides not to, owing to her being psychologically certain about the answer. One may say that earlier she had a *pro tanto* reason for consulting the textbook, which is now lost upon the consultation, such that, by her own lights, she has arrived at an epistemic position vis-à-vis the date of Queen Elizabeth's death that could no longer be improved upon, thus making further revisions at the cost of valuable time irrational. And once again, this psychological certainty can be explained in terms of the KK principle—Sara has just gone through her textbook, and so now, not only does she know that Queen Elizabeth died in 1603, but also knows how she came to form the belief, i.e. by reading the textbook. She no longer thinks that she might be mistaken about the answer and, in fact, believes that she knows

it. Accordingly, she now justifiably believes that she knows that Queen Elizabeth died in 1603, thus making her psychologically certain about it.¹³¹⁴

3.3 Open-Mindedness and Unawareness

But how specifically does this view account for cases like *Vaccine*, thus explaining the compatibility of an inquiring attitude with knowledge? I argue here that the relevant kind of higher-order lack of justified belief that Mira has lies in a sort of unawareness on her part and her sensitivity towards it. The kind of ‘awareness’ I discuss is what economists and decision-theorists describe as the entertainment of certain propositions or concepts by an agent (e.g. Karni & Viero, 2013; Mahtani, 2020; Steele & Stefansson 2021). Thus, suppose that I look at my hands and entertain the proposition that I might be deceived by an evil demon into thinking that I’ve hands; then I’m aware of the possibility that I might be deceived by an evil demon into thinking that I’ve hands. Conversely, if I fail to entertain such a proposition, then I’m unaware of the possibility that I might be deceived by an evil demon into thinking that I’ve hands. It’s in this sense that I shall use ‘aware’ and its cognates here.

With this in mind, in *Vaccine*, Mira’s unawareness could be said to lie in her failure to entertain certain possibilities about her piece of knowledge (and not the object of knowledge itself), the entertainment of which might lead Mira to lose her knowledge. Thus, firstly, the history of science is replete with examples where the availability of new data changed scientists’ minds. It’s possible that there could be such new data out there that Richard has access to which Mira and her team, as scientists, haven’t looked at—it could be that Richard and his team have tried to replicate her experiments in conditions she and her team haven’t tried in, leading to unfavourable

¹³ I take it that knowledge can come apart from psychological certainty. According to the traditional Cartesian view, knowledge requires psychological certainty (for a defence, see Unger 1975). Recent studies, however, demonstrate that both don’t always coincide. This has been argued to explain why sentences of the form ‘S knows that p , but isn’t completely certain that p ’ and ‘S knows with near certainty that p ’ could be true, and also why our intuitions in cases like *Nice Teacher* is very strong that the examinee knows answer without being psychologically certain about it (e.g. Stanley 2008, Beddor 2024: 344–6).

¹⁴ The question of whether Mira should remain open-minded despite knowing that the vaccine works is a form of the Kripkean dogmatism problem (KD). KD imagines an agent who comes to know that p^q and thinks that since any evidence against p^q will be misleading, she should close her inquiry into q . Hence, it’s irrational for Mira to remain open-minded in *Vaccine*. Although there are cases where being dogmatic in this way is the rational stance to take (for a discussion, see Fantl 2018: ch 2), in cases like *Vaccine* it’d be irrational. KD argues on the basis of two premises: p^q and if p^q , then one should avoid gathering evidence against her belief that p^q . But if the agent is seeking psychological certainty about p^q , and psychological certainty requires justified belief in one’s knowledge, then even if she may know that p^q , she may still not be justified in believing that she knows that p^q . Given this, she may not be in a position to rationally close inquiry into q and avoid any evidence against p^q . But if she cannot discharge the possibility that she should remain open to evidence against p^q , given that she might gain some epistemic benefits from it, then it’d be rational for her to seek evidence against p^q . Thus, one cannot always resort to closing inquiry into q just on the basis that one knows p^q as KD predicts, and since Mira is in such a position, her open-mindedness is justified. This sits well with views which observe that KD is rendered irrational in instances where the epistemic aim of the agent is more than mere knowledge (e.g. Carter and Hawthorne (2024) observe that such an aim could be higher-order knowledge; cf. Millar (2011), who argues that, ideally, the aim of inquiry takes the form of higher-order knowledge).

results; there could be population samples that they haven't tried their vaccine on, which Richard and others might have, etc. In other words, there could be unpossessed evidence.¹⁵ Secondly, there could also be confounding factors to which conclusions regarding her vaccine research are attributable. For instance, Richard may have found out that the antibody production in the people her team has tested may be explained by some biochemical factors other than the injection of the vaccine. Accordingly, we could think of Mira as being in a state of unawareness in terms of at least these two kinds of unconsidered possibilities—unpossessed evidence and confounding factors—such that they might lead her to change her beliefs about the safety and efficacy of the vaccine.

However, people could be unaware of many such possibilities without making them open-minded or even inquirers—my unawareness of the possibility that I might be deceived by an evil demon into thinking that I've hands doesn't make me inquire into it. The deeper reason why Mira lacks higher-order knowledge is that she's sensitive to the possibility that she might be overlooking those unentertained possibilities. This sensitivity is due to her social position as an expert in her area. Given her background as an expert, Mira has developed a reliable sensitivity towards what she should consider as evidentially relevant—an attitude which is a manifestation of her attunement to scientific truths (at least in her area of expertise). And owing to this sensitivity, she takes these unentertained possibilities as evidentially relevant for reliably figuring out whether the vaccine works. She knows (or at least, justifiably believes) that she's unaware of such possibilities, and this prevents her from being psychologically certain about the knowledge that she possesses. In other words, Mira takes this higher-order knowledge of her unawareness to be evidentially relevant to her belief that she knows that the vaccine works. This, in turn, prevents her from justifiably believing that she knows that the vaccine works. Thus, it's not just that there are unexplored possibilities—Mira, as an expert, is more sensitive to the possibility that there are those unexplored possibilities. And it's owing to this sensitivity that she cannot fully believe that she knows that the vaccine works. She believes in her cognitive limitations in a certain way, and that is what prevents her from having higher-order knowledge and thus psychological certainty.

In summary then, there are two components to Mira's KK-failure: (a) a genuine unawareness on her part about the unexplored possibilities and (b) her being sensitive towards her unawareness of those unexplored possibilities. She considers these

¹⁵ Some philosophers have argued that awareness of unpossessed evidence can sometimes defeat one's knowledge (e.g. Ballantyne 2015; Goldberg 2016). Let's assume that the relevant unpossessed evidence for Mira constitute of only those that are standardly accepted in scientific practices (and nothing non-standard that Mira, in virtue of being a scientist, has any obligation to engage with). An awareness of this, it might be objected, generates higher-order evidence suggesting that Mira's belief forming process is unreliable, thereby defeating her knowledge that the vaccine is safe and effective. In response, it could be said that, at this juncture, Mira's state of evidence is such that even though she's aware that there might be unpossessed evidence, she's not in a position where she knows what precisely such evidence is or could be. This means that, contrary to the objection, her higher order evidence is neutral on whether such unpossessed evidence would confirm or disconfirm that the vaccine is safe and effective in any way (a similar observation is also made by Benton 2016: 472–3). Given this, and bearing in mind Mira's first-order evidence towards the safety and efficacy of the vaccine, her knowledge that the vaccine is safe and effective is not defeated.

possibilities to be evidentially relevant to her belief and thus thinks that she's somehow evidentially impoverished about whether the vaccine works even though she's not, and it's this higher-order lack of knowledge that she expects to fulfill by being open-minded about it.¹⁶ This explains the compatibility of knowledge with open-mindedness as an inquiring attitude.

4 Wisdom and KK-Failure

4.1 *Non-Luminosity*

We noted earlier that the ignorance relevant to *Non-Luminosity* doesn't consist in the first-order ignorance of general facts about living well, but rather, in the higher-order ignorance of the body of knowledge of such facts. This leaves room for a wise agent to be psychologically certain about *individual* facts about living well, while remaining uncertain about the whole body of it.¹⁷ Here, I argue that this ignorance mirrors that of open-mindedness we just discussed. We observed that Mira's ignorance lay in a kind of KK-failure that emerged out of two things: her unawareness of unexplored possibilities and her sensitivity towards her unawareness of those unexplored possibilities. Similar points apply to wise agents as well—a wise agent may possess knowledge of ample general facts about living well and, yet, may be in a state of unawareness like Mira. Just as for Mira there may be unpossessed evidence, a wise agent may think that there are certain possible situations that she might not have encountered or is yet to encounter or life experiences that other people might have that she doesn't have access to, such that awareness of them may subject what she knows about living well to revision. Similarly, just as Mira entertains the possibility of confounding factors that may explain the antibody production, a wise agent may think that there are alternative ways of living well that she might not have imagined which may be more suitable to, say, those she's advising. Thus, the wise agent too could be thought of as being in a state of unawareness in terms of, at least, these two kinds of unconsidered possibilities—life experiences that she's unaware of and new ways of responding to various life situations that she hasn't considered—such that

¹⁶ This might invite one to think that the cognitive profile here resembles intellectual humility rather than open-mindedness. Now, there are certain features that both the intellectual virtues share. As in this instance, both involve a certain sensitivity towards one's cognitive limitations (cf. Riggs 2010; Whitcomb et al., 2017). However, as Peters et al. observe—and in my opinion, correctly—intellectual humility is crucially different from open-mindedness in that 'whereas open-mindedness partly consists of (1) a disposition to engage with the ideas of others and (2) a willingness to revise one's own beliefs, intellectual humility does not' (forthcoming). Thus, following them, Mira's cognitive state is more consistent with open-mindedness as she's disposed to engage seriously with Richard's counterevidence should he provide her and is also willing to change her mind regarding the safety and efficacy of the vaccine, as stipulated in *Vaccine*. This would not have been entailed by her cognitive state were she to be merely intellectually humble.

¹⁷ Such phenomenon isn't unprecedented as is demonstrated by the Preface Paradox where agents rationally hold asymmetric attitudes towards individual propositions and the body of the conjunction of those propositions.

had she had access to those possibilities, she might've changed her mind about performing an action related to living well.

However, as in Mira's case, mere unawareness of such considerations doesn't suffice to explain the KK-failure in wise agents; they're also sensitive to that unawareness and thus recognize that they might be overlooking those possibilities. Wise agents are typically taken as experts vis-à-vis good decision-making about living well (e.g. Swartwood, 2013; Tsai, 2022). Just as Mira's expertise in vaccine development makes her sensitive to unentertained possibilities that are relevant for whether the vaccine works, wise agents—owing to their expertise in life-related decision-making—also are sensitive to the kind of unentertained possibilities relevant for living well discussed above. And once again, it's this sensitivity to the unawareness of those relevant possibilities that prevents them from being psychologically certain about the wisdom-constitutive knowledge that they possess. They take this higher-order awareness of unaware possibilities to be evidentially relevant to their decisions about living well, which prevents them from coming to fully believe that they possess wisdom-constitutive knowledge.¹⁸ In other words, what prevents them from having such higher-order knowledge are their beliefs that they possess the relevant cognitive limitations and their sensitivity to those limitations.

Now, this is consistent with how wise agents characteristically behave. For instance, when wise agents offer advice, it's typically not in the form of some prescriptive or normative judgments; instead, their advice is usually open-ended and presented as recommendations, reflecting the complexities and nuances of the context (cf. Staudinger & Baltes, 1996: 762; Fleming, 2016: 183–6). Given our view that wisdom entails KK-failure, when a wise agent gives advice, certain counterpossibilities, like the ones noted above, become salient to her, such that inferences based on those counterpossibilities generate psychological uncertainty about the knowledge she has, thus leading her advice to remain more open-ended than not. It might be that ordinary agents who don't consider those possibilities aren't so sensitive to possibilities of unpossessed evidence, unimagined scenarios, and such like. They may possess higher-order justified belief as they aren't sensitive to the kinds of counterpossibilities mentioned above—they don't take them to be evidentially relevant for their belief structure. In contrast, wise agents take those counterpossibilities more seriously,¹⁹ making higher-order justified belief more difficult in those situations, and thus they're more sensitive to the fact that their inquiry isn't complete.

¹⁸ Once again, similar to our discussion in footnote 16, the cognitive profile of the wise agent here is not merely that of intellectual humility, but also open-mindedness in that she's also willing to engage seriously with such possibilities if made aware of and change her mind if required.

¹⁹ One explanation to this could be that wise agents aim to be in an epistemically ideal state about issues related to living well. Being in an epistemically ideal state in relation to p means that S not only has fulfilled the primary requirement of knowing that p , but also other epistemic requirements like understanding p , being certain about p , cognizing that p rationally coheres with other beliefs that the agent has, etc. Carter and Hawthorne (2024) observe that in so far as S aims to be epistemically ideal relative to p , they're rationally required to also to have higher-order knowledge about p , something that's not rationally required of someone not aiming to be epistemically ideal.

4.2 Wisdom's Characteristic Open-Mindedness

Current philosophical literature standardly mentions two types of KK-failure. Firstly, KK-failure that occurs owing to a contingent lack of information in that the agent fails to form beliefs about the knowledge they possess—like in Sara's case. The second type of KK-failure, largely attributed to Williamson (2000), appeals to the agents' limitations of perceptual discrimination. However, in both these cases, the relevant KK-failure can, at least in principle, be corrected—the first, by providing relevant contingent information, and the second, by correcting the agents' limitations of perceptual discrimination. However, the kind of KK-failure at issue here is distinctive in that it cannot be corrected—the wise agent simply cannot leave out the possibility that she hasn't considered certain forms of evidence or possibilities, and were she to stop entertaining them, whether owing to access to new information or to improved epistemic faculties and thus correcting the KK-failure, the agent will arrive at a state that isn't characteristic of wisdom.

To understand this, suppose that, for *reductio*, a wise agent fails to entertain those unconsidered possibilities such that now she not only possesses the wisdom-constitutive body of knowledge, but also knows that she possesses it. In other words, she'll now be psychologically certain about it. If that's the case, then, just like Sara, she can no longer have a rationally grounded inquiring attitude towards the relevant questions. But if open-mindedness is an inquiring attitude, then the agent will no longer remain open-minded.²⁰ And since open-mindedness is characteristic of wisdom (as we observed in §1), such an agent cannot be in a state of wisdom without KK-failure taking place. Thus, wisdom is an epistemic state such that it's constitutive of the structure of the state that if one is in that state, then she doesn't know that she's in that state. In other words, such an epistemic state can be instantiated only if KK-failure takes place. Sans KK-failure, and consequently open-mindedness, whenever such an agent gives advice (or performs any wisdom-related activity for that matter), it'll not be reliably conducive to living well. Thus, suppose we take wisdom to be a disposition (cf. Alvarez, 2017; Swartwood and Tiberius, 2019), and assume a modal view of dispositions (e.g. Aimar, 2019; Vetter, 2015). Since she's no longer open-minded, in the nearby worlds her advice doesn't lead to living well—in

²⁰ Objecting to this, an anonymous referee observes that an agent could have a substantial body of wisdom related knowledge, know that they possess it, and still maintain inquiring attitudes towards expanding that body of knowledge. Two responses could be made towards this. Firstly, such an objection rests on the intuition that wisdom comes in degrees. Although I agree with the intuition, the kind of wisdom I'm dealing with here is wisdom simpliciter. Given this, it's not straightforwardly clear that the sort of agent that the objection describes is wise simpliciter. Given the wisdom related body of knowledge that she has, she may be approximating wisdom in a certain way or on her way to wisdom, but she isn't wise. Secondly, even if we grant that such an agent is wise simpliciter, the objection still fails. It imagines an agent who has inquiring attitudes towards wisdom relevant questions, and the thought here is that this won't be a case of KK-failure since the agent has inquiring attitudes towards questions whose answers they do not already know. This, however, is misleading, for it implies that the kind of subject matter relevant to the inquiries and the kind of subject matter relevant for higher-order knowledge are not the same. In contrast, the cases relevant for my argument are those where the relevant inquiring attitudes and higher order knowledge pertain to the same subject matter. As such, the objection does not hold.

the nearby worlds, circumstances vary from the actual world; however, since she's no longer sensitive to those variations, she's no longer in a position where she gives advice and it's conducive to reaching the goals of living well in those worlds. In other words, her epistemic and pragmatic dispositions will be manifested in some forms of rigidity and dogmatism which aren't characteristic of wisdom. Seen this way, there's a certain kind of finkishness involved in wisdom such that if wise agents were to become aware of their wisdom-constitutive knowledge, they'd become less sensitive to the variations of the human condition, thus preventing them from reliably performing wisdom-related actions. This disposition, hence, is structurally such that anyone who possesses it must be in a position of KK-failure.

This explains the sort of open-mindedness involved in wisdom, which is of a habituated kind—the wise agent is characteristically open-minded such that she has a habit of being open to alternative options, views, arguments, etc. that pertain to living well. Since wisdom-related KK-failure cannot be corrected and is permanent, the open-mindedness ensuing from such KK-failure is also permanent—it doesn't go away even when the agent has new information or becomes more consistent at detecting real-world phenomena. And it's because of this characteristic open-mindedness that one can rely on a wise person to change her beliefs and actions in the light of new evidence—had the open-mindedness been merely incidental or one-off, the agent wouldn't have had a reliable disposition to change her attitudes depending on the exigencies of the evidence. Thus, wise agents can be said to possess a character trait that provides them with some epistemic 'blind spots'—even though they're reliably tracking some real-world phenomena, their character trait blinds them to that fact, such that if they were to become aware of that fact they'd no longer be tracking that real-world phenomenon. And it's these blind spots in the cognitive state of a wise agent that keep her characteristically open-minded.

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Declarations

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