Epistemic Closure Violation and Doxastic Modellability: Infallibilism and Fallibilism through the Eyes of Doubt

ABSTRACT

Generally, an epistemic fallibilist considers it reasonable to claim, "I know that P, but I may be wrong." An epistemic infallibilist, on the other hand, would consider this claim absurd. I argue initially that infallibilism presents more advantages in its assertion of the claim's absurdity than fallibilism does in making the claim. One, infallibilism is not faulted with the propensity for violations of epistemic closure that beleaguers some fallibilist accounts, due in part to the latter's problematic shunting of fallible epistemic standards across inferential chains. Two, infallibilism is more easily modelled doxastically than fallibilism, as the former's understanding of certainty is more tractable than the latter's idea of what counts as a viable standard of fallibility. A rectification of these fallibilist issues may then be called upon to motivate gradualist variants of fallibilism. For epistemic gradualism, the problematic modellability and shunting of standards is curtailed via an awareness that the standard for knowledge is just one out of many along a gradient that includes, at one extreme, the infallibilist standard of certainty. Specifically, first, gradualism, along with infallibilism, can be modelled doxastically through elucidating upon an obtaining relation between doubt and knowledge; next, the problem with violating closure, although not generally applicable to infallibilism, can be answered by gradualism with a reasonable denial of closure altogether that makes precise which epistemic standard is relevant for which part of an inferential chain; lastly, these modelling resources can be appropriated, by both gradualism and infallibilism, to successfully address a doxastically pertinent form of closure violation called rational self-doubt.

Keywords: Infallibilism, Fallibilism, Epistemic Closure, Doubt

1. INTRODUCTION

Within epistemology there is a common contention between infallibilism and fallibilism. One might, on one hand, laude infallibilism for ascribing knowledge the special position of certainty, while on the other, criticise it for seemingly revoking the majority of what we commonly claim to know. Fallibilism, on the other hand, although it can intend to safeguard the proper epistemic status of what infallibilism denies, can also be said to posit the claim, "I know that P, but I may be wrong," which infallibilists may regard as absurd partly due to the contention that a fallible epistemic standard is arbitrary. This essay seeks to explore this contention by arguing for infallibilism, against fallibilism, along two main lines: epistemic defeasibility and doxastic modellability. I argue that infallibilism is more doxastically modellable than fallibilism, while also not being defeasible in the way that fallibilism is through closure violation. I also argue that the defeasibility and doxastic pitfalls of fallibilism could be worked through by a more gradualist epistemology, whereby knowledge attributions take the form of a gradation along a continuum, thus allowing differences between infallibilist and gradualist accounts to be in degree, not in kind. This essay, due to space constraints, largely sets aside a range of potential structural issues regarding specific accounts of infallibilism in favour of focusing on how infallibilism takes the upper hand against fallibilism. As such, mention of infallibilism is primarily done as a means to explain how it avoids the same risks incurred by fallibilism in general.

I begin this essay by detailing out epistemic fallibilism and a few of its usual manifestations (Section 2) before outlining the concept of epistemic gradualism and introducing some issues it shares with fallibilism in general (Section 3). I then proceed to discuss these issues, relating them to potential gradualist and infallibilist responses, in connection to epistemic closure (Section 4) and doxastic modelling in terms of doubt (Section 5). After briefly conceiving both infallibilism

and fallibilism through the notion of doubt, I finally compare them as viable answers to the challenge of defeat by rational self-doubt (Section 6) before offering some concluding remarks (Section 7).

2. EPISTEMIC FALLIBILISM

2.1 General Remarks

In general, epistemic fallibilism is the view that a subject 'S can know some proposition P even though S's justification for P is less than fully conclusive.'[1] This means that knowledge does not necessarily entail certainty, as 'it is still possible that further justification will make one's knowledge better.'[2] Importantly, fallibilism implies that 'it is never a given . . . that P, even when

[1] Michael Hannon, "A Solution to Knowledge's Threshold Problem," *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 174, no. 3 (2017): 607, https://doi.org/10.1007/s11098-016-0700-9.

[2] Hannon, 615n16. See also, Clayton Littlejohn, "Concessive Knowledge Attributions and Fallibilism," *Philosophy and Phenomenological Research* 83, no. 3 (2011): 604n, https://www.jstor.org/stable/23210043. Justification can be associated with what is usually called *rational* justification, wherein what counts towards knowledge has mainly to do with some *internalist* notion of reason-centred support. However, justification can also be used as a broader term to encompass both reason-centred and *evidence*-centred approaches; the former is a common internalist position, while the latter can be conceived under internalist *and* externalist jurisdictions. When necessary, this internalism/externalism distinction of justification will be differentiated and specified. See, for example, Stephen Hetherington, "Concessive Knowledge-Attributions: Fallibilism and Gradualism," *Synthese* 190, no. 14 (2013): 2840, https://www.jstor.org/stable/24021413, for the evidentialist version. Nevertheless, for this essay, given the character of the majority of the views of evidence that are discussed, "justification", "evidence", and "reason" are used interchangeably unless specific reference is made to *externalist* notions of evidence.

we [fallibly] know it is true',[3] that, *for all a fallibilist knows*, P's falsity is still an open possibility; whatever S's strength of epistemic position (SEP), i.e., S's justificatory extent,[4] whether internal and/or external, 'what matters is not whether an entailment relation holds between the subject's SEP and [P] but rather whether there is a probabilistic relation between the SEP and [P].'[5] This probabilistic relation, when deemed radically internalist, consists in a probabilistic modelling of the rationally established relations between S's *wholly* internal justificatory extent and the occurrence of P; when deemed radically externalist, the probabilistic nature of said relations can be read as a natural structure of the external world itself, such that evidence coming from the external world, to which we are understood as epistemically sensitive, is said to be fallibly/probabilistically referencing/oriented to some other state of affairs constitutive of P.

This externalist reading of the world as probabilistically structured is a metaphysical assumption that the internalist account does not make. To get at an externalist epistemology that also does not metaphysically pre-empt the world, either as deterministic or probabilistic, we would have to go between the radical extremes outlined above. Within this more moderate account lies a fallibilism that denies the probabilistic referentiality as inherent within the externally derived evidence itself and instead argues that, while we are sensitive to external evidence, how we deem this evidence as probabilistically related to P is an *internalist* construction.

[3] Baron Reed, "A Defense of Stable Invariantism," *Nous* 44, no. 2 (2010): 229, https://www.jstor.org/stable/40660513. See also, Littlejohn, "Concessive Knowledge Attributions," 603.

[4] See, Reed, "Stable Invariantism," 233.

[5] Reed, 240n29. See also, Reed, 240n30. The sense of "probability" here is *epistemic*, not *logical* nor *metaphysical*.

In any case, this externalist/internalist distinction is not terribly important for our current discussion on fallibilism, but will become salient once infallibilism enters the picture.[6] This is because, for fallibilists in general, what is relevant here is simply that there is a probabilistic relation, not a conclusive one, between S's SEP and P.[7] Nevertheless, it will be argued that the main issues for fallibilism are two-fold:

1. All fallible epistemologies can be rendered defeasible when regarding certain problems relating to closure; and,
2. There is a greater difficulty for fallibilism, compared to infallibilism, to come up with doxastic attitudes corresponding with varying extents of fallible knowledge.

Before delving into different approaches as to how these issues may be addressed by the fallibilist and infallibilist, we first outline fallibilism from the point of view of its two subcategories, contextualism and invariantism, along with their related versions.

[6] However, to give an example, Littlejohn's fallibilist account can be seen as leaning more towards the moderate reading. See, for example, Littlejohn, "Concessive Knowledge Attributions," 608-10.

[7] One consequence of the discussion of internalism/externalism as *fallibilist*, which will be further explained in Section 3.1, is that whenever a claim is made for S's knowing that P, *with another consideration or condition of P being true*, only the former claim can be regarded as properly within the bounds of epistemic fallibilism – asserting, for whatever reason, the actual occurrence, or not, of P is essentially metaphysical, as this actuality is, according to fallibilism, *epistemically inaccessible*; otherwise, if accessible, then we would not be dealing with fallible knowledge anymore. As such, to claim that "S knows that P, *and P is true/false*" is to make an *impure* epistemic claim, one that imports properly metaphysical/*infallibilist* assertions. This impurity can be present regardless if the claim is internalist or externalist in nature, since asserting the infallible truth value of P does not in itself discriminate between P expressing either an external (i.e., in the external world) or internal (i.e., as a mental state) state of affairs.

2.2 Contextualism

We start with contextualism, or the thesis that S's SEP standard for knowledge is sensitive to non-epistemic factors in S's context. The traditional 'thesis of contextualism says only that the truth conditions of knowledge assertions will be determined by the epistemic standards fixed by the conversational context'.[8] When the standard is determined instead by 'the subject's practical context', then we are dealing with 'subject-sensitive invariantism [SSI]', a version of non-traditional contextualism.[9] Additionally, for traditional contextualism, there are different "senses" of "knows" that correspond to different SEP standards – one can "know" in a way that is proper for a more stringent standard in, for example, contexts where scepticism is conversationally introduced, but which is rarely, if ever, achievable compared to the sense of "knows" proper for more mundane, less stringent everyday standards.

For SSI, on the other hand, there is only one sense of "knows" (hence its moniker *invariantism*) that *tracks* different standards that are contextually determined; its difference with traditional contextualism seems to be that SSI 'does not assign "knows" to a well-recognised general semantic category (like that of indexicals)', from which contextualism derives its different senses of "knows".[10] Regardless, both traditional contextualism and SSI share two features:

[8] Reed, "Stable Invariantism," 227.

[9] Reed, 231. Traditional contextualism, against SSI, has its epistemic standards set by *anyone* attributing knowledge to S, whether the attributor be S or not. For SSI, epistemic standards are set only by S, and not just anyone attributing knowledge to S.

[10] Timothy Williamson, "Contextualism, Subject-Sensitive Invariantism and Knowledge of Knowledge," *The Philosophical Quarterly* 55, no. 219 (2005): 218, https://www-jstor-org.ipacez.nd.edu.au/stable/3542889. There is another difference, in that '[w]hereas contextualism exploits differences in the situation of the *speaker* who applies

1. Both treat S's 'SEP [as]a context-invariant feature of the subject';[11] and,
2. technically, both have a "contextualist" nature, since epistemic assertions for both are viewed as sensitive to non-epistemic factors in one's context, however these are conceptualised.[12]

Consequently, for *both* traditional contextualism and SSI, in considering two subjects, S1 and S2, that have the same SEP regarding the same P, but are situated in different conversational/practical contexts, S1 may know that P while S2 may not.[13]

Another context-sensitive fallibilism relies on appropriate SEP standards being set not 'by [*S's*] practical reasoning situation', but by practical situations 'faced by other inquirers (even potential inquirers)'.[14] In this community-centred epistemology, espoused by Hannon, deeming someone as a knower of some set of propositions privileges that person's SEP, in that she can validly inform others as to the evidence required for being more justified in knowing said propositions. The knower in this case must be able to discern the propositional possibilities that would be '*fitting* or *reasonable* to the members of the epistemic community' before 'distinguishing

the word "know", . . . [SSI] exploits differences in the situation of the *subject* to whom the word "know" is applied.' Williamson, 217. This difference is of minimal importance for us here, for we will be regarding S, the subject, as the speaker and claimant of S's knowledge.

[11] Reed, "Stable Invariantism," 231.

[12] See, Williamson, "Contextualism, Subject-Sensitive Invariantism," 217, where he concurs in his definition of SSI's context dependency.

[13] See, Williamson, sec. 1 for a detailed discussion.

[14] Hannon, "Knowledge's Threshold Problem," 613.

[those] possibilities that must be eliminated in order to have knowledge from those that typically do not.'[15]

According to Hannon, a knower ends up becoming 'epistemically [well] positioned [enough] with respect to P so as to [know that P]' through the community's processes of '[s]ocialization and acculturation.'[16] Furthermore, these social processes must exhibit a 'high enough [SEP] to ensure that anyone who meets it will be sufficiently reliable for most practical reasoning situations, . . . [but not] *too* high [so as to] make knowledge less than widely [and usefully] available'.[17]

This community-centred fallibilism is contextualist simply because its communal SEP can change depending on the epistemic "demography", or demographic context, of a community. That is, different people face different epistemic needs that are "fitting or reasonable" for them, which, in turn, epistemic standards must be sensitive to: some are serious and urgent (e.g. knowledge regarding survivability) while others are less so (e.g. knowledge regarding more mundane affairs, like deciphering parking signs).

2.3 Invariantism

We now move on to *invariantism* by first considering what an invariantist version of the above community-centred contextualism may look like. For Hannon,

> [a]ccording to the insensitive invariantist, what counts as being in a sufficiently good epistemic position to know some proposition does not vary—is not sensitive to—any individual's stakes or

[15] Hannon, 615-6.

[16] Hannon, 616.

[17] Hannon, 617, 617n22.

> practical interests at the time in question, whether it be those of the subject, the attributor, or the evaluator of a knowledge claim. An insensitive invariantist might argue that the communal [SEP] for knowledge firmly settles at a level high enough to satisfy the function of identifying good informants to the community, and the alleged context-sensitivity of our knowledge ascriptions might be dealt with at the level of pragmatics [i.e. considerations irrelevant to whether the *stable* SEP standard has been already met].[18]

This constitutes the usual conception of invariantism: knowledge necessitates the acquisition of *only one* stable SEP. The difference between subject-centred and community-centred invariantism is simply that the former deals with an SEP solely dependent on S, while the latter does not.[19]

3. FALLIBILIST ISSUES AND GRADUALIST RESOLUTIONS

3.1 The Lack of a Non-Arbitrary SEP Standard

Nonetheless, the same notion of inconclusive knowledge persists in all the fallibilist accounts mentioned thus far, regardless of whether it is contextualist (in a traditional or subject-sensitive invariantist sense) or invariantist. Whether such a fallible SEP is set by community or individual considerations, what counts as a "good-enough" SEP for S's knowing that P is set by factors not necessarily determined by P itself, i.e., some not-P context. In other words, any "good-enough" SEP inherits an epistemic disconnection to some P it is meant to probabilistically point towards veridically. Furthermore, because what is "good-enough" comes about from extra-P considerations, there is no certain way for a fallibilist to know whether her "good-enough" SEP

[18] Hannon, 617n23.

[19] Subject-centred invariantism is not Subject-*sensitive* invariantism, for the former professes a 1:1 ratio of "knows":SEP, while the latter has a 1:n ratio, with "n" being indeterminate in quantity.

closely approaches P or misses the mark entirely. The issue here is of concordance: saying that, for example, S's communal context sets the proper SEP standard for knowing that P is to say that one does not know, *on* S's SEP, whether P has a 99% chance of obtaining or a 1% chance, simply given that this communal context does not necessarily have to do with P at all. [20]

Thus, for fallibilism, there is no clear way of ascertaining how any P can dictate the extent of its epistemic disconnect with S's fallible SEP concerning P. If P constitutes some subject matter – i.e. the content/subject of P itself – then the question is: what *about* P in any way necessarily deems how one can fallibly know that P? If fallible knowledge that P denotes the possibility of P not obtaining, then it does not seem as if anything about P can be used to discern how one can fallibly know that P, for how would P mandate the possibility of knowing that P without P actually obtaining, which is a fallibilist possibility?

If P is made to pre-emptively obtain as a condition to fallible knowledge, then we would not be making a *purely* fallibilist claim, given that we would be claiming fallible knowledge that P as well as infallible knowledge of P's obtaining as a condition for fallibly knowing that P. If P is made to obtain as a condition to infallible knowledge, then the infallible epistemic claim would be not only pure but sufficient for knowledge that P, given P and S's infallible SEP, for no epistemic disconnect between S's SEP and P would occur; nevertheless, we would not be dealing with fallible knowledge anymore. If, however, it is left indeterminate as to whether P obtains or

[20] Granted, one could have *infallible*, and thus *certain*, knowledge of probabilities, given that the modelling is ideal, but since fallibilism is usually conceived of as having a non-entailing SEP towards non-ideal situations, then any fallibilist model that may be invoked to capture the probabilistic dynamics of some state of affairs will be less than perfect. Consequently, fallibilism is still regarded as having *fallible probabilistic* knowledge, in that the probabilistic model *itself* may be incorrect.

not, then we would be making a purely fallibilist claim, although it would be anyone's guess, and thus arbitrary, as to what thus counts as a good-enough justification for S to know that P, given what has been said before: what one could appeal to regarding the establishment of a "good-enough" SEP is exactly whatever 'practical or theoretical *interests*' S may be acknowledging at the time which do not have to deal solely with anything about P.[21]

Therefore, with these contextualist and invariantist versions of fallibilism, knowledge that P can be influenced by a whole slew of not-P considerations, to the point where fallibly knowing that P appears to covertly introduce the necessary attendance of other knowledge claims. These other claims could be some "practical or theoretical interest" of S, as described above: some not-P context. In other words, fallibly knowing that P looks to entail knowing also some not-P, and what this not-P is would depend on what determines what counts as a "good-enough" SEP for S's knowing that P. So, it seems the fallibilist has two options, being the importation of either infallibilist or arbitrary not-P issues. Both options lead to *impure* fallible knowledge that P, impure in the sense of being other than either fallible knowledge or knowledge that P: the impurity of infallibilist assumptions – infallibly claiming the existence of P as an epistemic condition – or impurely claiming some knowledge that not-P as necessary for fallibly knowing that P. Is there another, more reasonable fallibilist approach worth regarding?

3.2 The Gradualist Response

One seemingly promising candidate is gradualism, which tries to diffuse the contention between different methods of ascertaining the proper SEP for knowledge by paying attention instead to the *descriptions* of the various SEPs that can obtain, from highly fallible epistemic states

[21] Reed, "Stable Invariantism," 237.

all the way up to certainty. Reed defends this position as *stable invariantism*, which foregoes general assertions of knowledge and instead implores epistemic agents to be precise with describing their entire epistemic position: knowledge becomes a broad umbrella term with many epistemic "grades" that can be associated with various levels of justification and evidence; furthermore, not focusing on what dictates any one SEP as "good-enough" also allows the gradualist to avoid specific commitments to impure knowledge that not-P. Reed writes:

> Having the status of knowledge is a *determinable* property of beliefs. Much of the time, our purposes are served simply by attributing the determinable property to a particular belief (or to the subject who has the belief). However, some contexts call instead for the attribution of some more *determinate* value of knowledge; this can easily happen when theoretical or practical circumstances require us to pay careful attention to the specific level of SEP underwriting a particular instance of knowledge. Attributions of knowledge simpliciter are then too broad to be useful - and may in fact be misleading. Hence, we switch to attributions of some degree of certainty (e.g., being sure or pretty sure), or we make an admission of some degree of doubt, where this can still be small enough to be compatible with knowledge.[22]

Gradualism has been seen as a promising fallibilist justification for concessive knowledge attributions (CKAs), which express the claim of, "I know that P, but I may be wrong."[23] Alternatively, CKAs can be boiled down to, "I know that P, but I am *not certain* that P," meaning

[22] Reed, 242n44.

[23] One famous CKA is, 'I know that Harry is a zebra, but it might be that Harry is just a painted mule.' Littlejohn, "Concessive Knowledge Attributions," 603. See also, David Lewis, "Elusive Knowledge," *Australasian Journal of Philosophy* 74, no. 4 (1996): 550, https://doi.org/10.1080/00048409612347521.

that knowledge and certainty are two *different* epistemic standards.[24] Given that this latter CKA formulation is intuitive, then gradualism can be seen as the epistemic position that best explains how people usually claim knowledge but acknowledge its imperfection.

Indeed, Hetherington claims that the reason CKAs are commonly seen as inappropriate is because of a disconnect between the way people normally speak about knowledge and how they think about it, in that speech normally involves fallible absolutism, whereas thought normally conceives knowledge in terms of fallible gradualism:

> When we omit gradualist details, the knowledge-attribution, it seems, is heard as absolute, as pointing to the single standard there is for knowing. And then the concessive half of the concessive knowledge-attribution is heard as pointing to a possible way of falling short of that single—that only—standard for knowing. With no gradualist leeway being mentioned or described, therefore, the concessive half of the concessive knowledge-attribution is heard as inconsistent with the attributive half of the concessive knowledge-attribution. Accordingly, the concessive knowledge-attribution sounds inconsistent to people because they are reacting not as gradualists.[25]

However, issues persist for gradualism, those in fact being precisely the two issues plaguing fallibilism in general, as mentioned at the end of Section 2.1.

[24] Hetherington argues that diversifying the population of epistemic standards is reasonable, since 'in practice no specific [one] standard has been agreed to by fallibilists.' Hetherington, "Concessive Knowledge-Attributions," 2841. Thus, instead of dismissing every other standard but one, gradualists can mine the 'conceptual richness' within the set of multiple epistemic standards under one overarching fallibilist paradigm. Hetherington, 2841.

[25] Hetherington, 2849.

3.3 The Gradualist Issues

In the following sections, I will argue that, first, gradualism may allow for the defeat of any fallible claim to knowledge by closure violations of inferential chains. This occurs in either of two ways: multi-premise closure (MPC) violation, like that of the lottery paradox,[26] or single premise closure (SPC) violation, like the inference of P from a non-sceptical context to a sceptical one.[27] For example, in terms of the lottery paradox, I may reasonably claim fallible knowledge of my lottery ticket losing given that, one, I know that there is a total of 1,000 tickets, two, only one of them is the winning ticket, and three, a probability of 999/1,000 for my ticket failing more than meets an established SEP standard. I may then keep adding tickets to the proposition, such that I claim that I know that these 2, or 4, or 20 tickets will lose. However, there will come a time when enough tickets will be added to the proposition, conjuncted with multiple single tickets, that my SEP, which *has not changed from the beginning* due to the same evidence obtaining throughout, inevitably fails to meet the required standard for knowledge. This is inevitable because once I have conjuncted all 1,000 tickets into the proposition, any fallible knowledge claim of ticket failure will fail since I *already know* that one of the 1,000 tickets is the winning ticket.

For the case of SPC violation, for example, I know that I have hands (non-sceptical standard), but if I do not know that I am not a BIV (sceptical standard), then I do not know that I have hands (sceptical standard). I do not know that I am not a BIV, so therefore I do not know that I have hands (sceptical standard). A further complication arises when the sceptical standard is made relevant for the non-sceptical scenario, therefore disallowing handed knowledge *at all*. Thus,

[26] See, Reed, "Stable Invariantism," sec. 3.1.

[27] See Section 4.2 for details.

in regards to MPC and SPC violation, gradualism still faces the issue of the *defeasibility* of knowledge claims.

I lastly argue that, second, if both fallibilism, in general, and gradualism, in particular, regard having knowledge that P as necessarily having first a belief that P, then S may have a great enough SEP to pass some established standard but attain a highly doubtful doxastic attitude towards P; moreover, one may have an abysmally poor SEP while being overly confident that P. Thus, gradualism still faces a *doxastic* challenge: what having an appropriate attitude to match one's SEP precisely looks like is hard to come by in fallibilist or gradualist accounts.

This second *doxastic* issue is addressed in Sections 5 and 6. The first issue is taken up in the upcoming Section by outlining three ways that gradualists can address it. In what follows, I will endeavour to show that the first of these ways gives ground to infallibilism, while the last two do not.

4. THE PROBLEM WITH CLOSURE

4.1 The Problem with Multi-Premise Closure and the First Two Ways of Response

We must ask, what is problematic about *multi-premise closure* (MPC), or, in fallibilist terms, the principle of conjuncting multiple fallibly known single premises together to form multi-premise statements? According to Schechter, MPCs *defeat* knowledge for fallibilism due to their easy violability, such that, for example, one cannot claim fallible knowledge of failure for *any* number of lottery tickets:

> [h]aving a justified belief is compatible with there being a small risk that the belief is false. Having a justified belief is incompatible with there being a large risk that the belief is false. [Nevertheless,

> risk] can aggregate over deductive inferences. In particular, risk can aggregate over conjunction introduction.[28]

The first way a gradualist might address this problem, similar to what has been said in Section 3.1, is to consider the lottery paradox as not a *pure* situation of fallible knowledge, for knowing that one out of the 1,000 tickets will win is *infallible* knowledge; consequently, insofar as any MPCs introduce an infallible knowledge claim as one of their conditions, then they cannot be seen as valid contestations against infallibilism, therefore granting ground to infallibilists. Concession to infallibilism by fallibilists occurs here insofar as paradoxes concerning MPCs are only diffused via appeal to some infallibilist consideration, and not resolved in purely fallibilist terms.

The second way that gradualists might address this problem is to outright reject MPCs that permit 'inferences where the probabilities of the premises are not sufficiently high to yield a conclusion that is probable enough to surpass the standard for knowledge.'[29] In this way, according to Reed, '[S] can also know, for any collection of, say, five of [the lottery] tickets, that all of them will lose. [S] cannot, however, know that the first 500 tickets will lose', since the probability of failure for the conjuncted 500-membered proposition fails to meet some established SEP.[30] Furthermore, unlike the first way of addressing MPCs discussed above, there is no ground being garnered here by infallibilists as the second way does not appeal to infallibilist manoeuvrings in the rejection of dubious MPCs.

[28] Joshua Schechter, "Rational Self-Doubt and the Failure of Closure," *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 163, no. 2 (2013): 435, https://www.jstor.org/stable/41932677.

[29] Reed, "Stable Invariantism," 243n47.

[30] Reed, 234.

4.2 The Problem with Single-Premise Closure and the Third Way of Response

Rejecting, as Reed does, dubious multi-premise inferences can also shed light on why the aforementioned inference from P as a *single* non-sceptical premise to P as a *single* sceptical conclusion does not necessarily violate *single*-premise closure (SPC). One reason why is that it is certainly possible for S's SEP concerning the conclusion to be within some established standard, albeit if set low enough, such as when claiming knowledge that one is not a BIV employs a standard allowing for the possibility of being mistaken. However, if sceptics see such inference as violating SPC, then Reed's other response to the sceptics, characterising the third gradualist response, would be to reject closure altogether.

To see why Reed would reject closure in SPC, first note that if closure is not rejected, and the premise-conclusion inference is undertaken, then it will be easy for a sceptic to shuttle a sceptically high SEP standard to the non-sceptical context. This denies us knowledge that, for example, I have hands in the context wherein the introduction of the BIV/not-BIV possibility has not occurred. This shuttling of epistemic standards is not unreasonable, for SEPs that are poor in the sceptical context, in relation to the high standard, should also be poor in non-sceptical ones as well. SEPs are *context-invariant* features of the knower after all,[31] and while the high SEP standard is introduced in the sceptical context, it is made relevant for *both* contexts due to them being connected inferentially by SPC.

Reed gets around this inferential connectivity through SPC rejection, which disallows this very shuttling of epistemic standards, since the rejection separates non-sceptical and sceptical

[31] See, Reed, 231. See, also, Brian Kim, "In Defense of Subject-Sensitive Invariantism," *Episteme* 13, no. 2 (2016): 233ff., https://doi.org/10.1017/epi.2015.40. Kim's use of SEP also follows that of Reed's.

contexts that would otherwise be connected in an inferential chain of reasoning. This rejection ultimately allows knowledge claims of some P to be evaluated in terms *independent* of a particular context, in terms that are context-*invariant*, hence Reed's stable *invariantism*. This context-insensitivity does not give ground to infallibilism, in that Reed's gradualism ensures a lack of *defeat* of fallible knowledge, as now S's SEP can be evaluated through whatever SEP standard S may choose, albeit arbitrarily; context-insensitivity also makes it reasonable, at least in Reed's view, to claim that we know even the denial of sceptical propositions but are not certain of this denial, given that such knowledge could be assessed on non-sceptical standards without the sceptical standard being made relevant and therefore defeating this instance of fallible knowledge. Littlejohn concurs when he considers it obvious to state, 'I know that Harry is a zebra, but my evidence for believing that Harry is a zebra does not logically entail that Harry is not a painted mule.'[32]

4.3 Final Remarks on Closure Violation

Note that the general rejection of closure in SPC can be applied to MPC to safeguard knowledge of cases that would otherwise be defeated with the obtaining of closure, such as those involving the lottery paradox in Section 3.3. If closure is violated while making an inference from multiple premises that singly satisfy an SEP standard but jointly, in the conclusion, do not, then rejection of closure in MPC can allow for the premises to be epistemically evaluated *independently* of the conclusion. For example, in the inferential chain that starts from one ticket and gradually conjuncts to all 1,000 of them, closure rejection entails that my SEP towards the claim that this one ticket will lose is of the standard appropriate for a probability of 999/1,000 *without* having that

[32] Littlejohn, "Concessive Knowledge Attributions," 605.

standard be shuttled to the claim that all 1,000 of them will lose. Since closure is rejected, the inference is not actually made at all, and so I can validly attain the *same context-invariant* SEP towards the claim that these 1,000 tickets will lose,[33] just that this position is of the *context-contingent* standard appropriate for a probability of 0/1000.

The mistake of not rejecting closure in MPC and of not seeing the lottery paradox in gradualist terms is to think that S's SEP appropriate for the sense of S "knowing" that S's own ticket will lose is the same as that appropriate for S's "knowing" that these 1,000 tickets will lose, yet both senses of "knowing" track different SEP standards, thus making these senses different at least in this regard. If we think gradually, and reject closure, then S's SEP remains the same throughout – it is context-invariant – but can now clearly be seen, given *n* number of tickets, as validly evaluable, in terms of each standard of "n-1/n" to "0/n", for each proposition of "this one ticket will lose" to "these n tickets will lose", respectively.[34]

If the gradualist's response to the first issue of problematic closure violation is satisfactory, then only the second issue remains, that of gradualism's persistent difficulty, shared by fallibilism in general, in determining the appropriate attitude to match one's fallible SEP. Nevertheless, it is

[33] Remember, SEP stays the same in the case of MPC paradoxes, since the evidence does not change throughout the inferential chain: I am still dealing with the same tickets and the same conditions of the lottery.

[34] This situation is different from the non-sceptical to sceptical SPC inference, for in that case, S's SEP is properly valid for only *one*, and not *every*, probabilistic standard, since only one premise is relevant, while in MPC, multiple premises are relevant. Moreover, this one standard is indeterminate, not *determinate* as in the lottery paradox, since in the latter situation I *infallibly* know that there are n tickets, and that one of them will win; this infallibility, which is not possessed by S in the non-sceptical to sceptical single-premise inferential situation, explains this SEP standard indeterminacy.

important to note that this remaining issue is pertinent not just to gradualism, but infallibilism as well. It is just that the issue of closure would not be at all problematic for infallibilists: the infallibilist could simply assert that S does not know that S does not have hands, nor does S know that any number of lottery tickets will lose, since it is not impossible for S to be mistaken, i.e., for such propositions to fail to obtain.

5. DOXASTIC CONFORMITY AND DOUBT

5.1 The Need for Conformity and its Relation to Doubt

The second doxastic issue, that of SEP-attitude conformity, speaks in favour of infallibilism over gradualism: gradualism has more epistemic standards, besides the infallibilist one of certainty, to account for doxastically. The importance of having this conformity cannot be overstated, for one's doxastic attitude, once properly described, will allow for its associated SEP to be *doxastically* accessible and not just dismissed as some empty formalism of *epistemic* accessibility – i.e., once properly described, any knower would be, ideally, better prepared to at least start to experience what it feels like to be at a particular SEP, since the proper attitude would be indicated from the markers of the SEP description.[35]

[35] One way to motivate the need for a proper doxastic account of an SEP is through Fraser's understanding of *defeat epistemology*. For Fraser, 'knowledge that P may be lost when I acquire new evidence, regardless of whether I respond to this new evidence by altering my [doxastic attitude concerning] P. A defeat epistemology is any epistemology that can accommodate this phenomenon' of a shifting SEP with a corresponding doxastic change. Rachel Elizabeth Fraser, "Risk, Doubt, and Transmission," *Philosophical Studies: An International Journal for Philosophy in the Analytic Tradition* 173, no. 10 (2016): 2814, https://doi.org/10.1007/s11098-016-0638-y. In gradualist terms, knowledge may be lost, but the acquisition of new evidence can shift one's SEP to another epistemic state requiring another descriptor besides that used for knowledge. Given that gradualism employs more relevant SEP standards than infallibilism, any

For infallibilism, this conformity between the SEP of certainty and its appropriate doxastic attitude can be conceived in terms of the opposition between doubt and knowledge; how this opposition plays out formally and phenomenally is analysed below. Furthermore, after adumbrating recent expositions on the nature of doubt and its relation to fallible and infallible knowledge, we will see how this relation brings up another problem for both infallibilism and fallibilism regarding rational self-doubt as a form of epistemic closure violation.

5.2 General Remarks on Doubt

The nature of doubt, as it is commonly and most generally described in the literature, consists of psychological as well as epistemic features. For the former, '[d]oubt is occasioned by contrariety of psychological elements',[36] by 'an uneasy and dissatisfied state'.[37] Doubt, according to Moon as well as Lee, is compatible with belief, although strong doubt is not.[38] To strongly doubt

evidence-contingent SEP change between standards would oblige its accordant gradualist doxastic threshold description, while any infallibilist would not be held to the same obligation due to the descriptor for certainty being the only one that would matter for infallibilism.

[36] Matthew Brandon Lee, "On Doubt," *Philosophia: Philosophical Quarterly of Israel* 46, no. 1 (2018): 142, https://doi.org/10.1007/s11406-017-9911-3.

[37] Charles Sanders Peirce, "The Fixation of Belief," *Popular Science Monthly* 12 (1877): 4-5, http://www.bocc.ubi.pt/pag/peirce-charles-fixation-belief.pdf.

[38] See, Andrew Moon, "The Nature of Doubt and A New Puzzle about Belief, Doubt, and Confidence," *Synthese* 195, no. 4 (2018): 1831, https://doi.org/10.1007/s11229-016-1310-y. See also, Lee, "On Doubt," 155.

that P is to weakly doubt that not-P, while suspending one's judgment that P is to doxastically lie in between strongly doubting and weakly doubting that P.[39]

Regarding its epistemic features, people can also oscillate between doubting and not doubting that P by virtue of shifting contexts wherein one's poor SEP concerning P may not or may be out of one's awareness, respectively. Moon takes doubt's epistemic feature to consist in this, that '[S] has doubt if and only if [S] believes [that S] might be wrong.'[40] This belief that S may be mistaken is some *defeater* of S's belief that P and can either consist in direct evidence against P (rebutting defeater) or indirect evidence against P (undercutting defeater).[41] In short, we can characterise doubting that P as being aware of the relation between one's SEP and P as non-entailing, i.e., that not-P is possible; this is why, in what Moon calls Doubt1, '*S* has some doubt that *P* if and only if *S* believes that it's possible that not-*P*.'[42]

The question then becomes, is simply being made aware of the possibility of not-P sufficient for inducing belief that not-P is possible? I can think of two subjects, S3 and S4, who have *and are aware of* the exact same non-entailing, yet extremely strong, SEP concerning P and yet have vastly different doxastic attitudes concerning P: S3 is a sceptic who strongly believes in

[39] 'Strong doubters and slight doubters hedge assertions (of not-P for the former, of P for the latter); suspenders of judgment can do so in either direction, and they commonly refuse to assert altogether.' Lee, 155.

[40] Moon, "The Nature of Doubt," 1828.

[41] See, Lee, "On Doubt," 144-5.

[42] Moon, "The Nature of Doubt," 1837. Doubt1 should not be taken as saying that *only* undercutting defeaters are required for doubt to manifest, *at the denial* of rebutting defeaters, just that the belief of not-P's possibility can occur from *either* undercutting or rebutting defeaters. Moreover, 'doubt [that P] need not incline one to *disbelieve* P (i.e., believe not-P); it need only incline the person to *not believe* P.' Moon, 1828n3. See also, Lee, "On Doubt," 148.

the possibility of not-P and claims to not know that P, while S4 is epistemically very nonchalant, has not formed a doxastic attitude towards the possibility of not-P since he could not be bothered, and claims to know that P.

5.3 Specific Remarks on Doubt

Given that a purpose of this essay is to find a proper *infallibilist* doxastic attitude, then it seems clear that being made aware that one's knowledge that P is *not* infallible is to be made aware of the mere possibility of not-P, or, of the relation between one's SEP and P as non-entailing. In other words, recognition of a fallible SEP-P relation is to become aware that one's SEP does not in fact just *contain* P, i.e., it contains also the possibility of not-P. As such, we can specify S's *reasonable infallibilist* doubt that P (RI doubt that P) as obtaining when,

(i) there is no entailment between S's SEP and P: not-P is possible,

(ii) S is made aware of *at least the possibility of* (i), and,

(iii) S comes to believe, through (ii), that (i) is *at least possible*.[43]

The epistemic subject, S3, meets all three of these conditions, for S3 expresses RI doubt; S4 does not meet (iii) but does meet (ii) and (i). There are other combinatorial possibilities besides those evinced by S3 and S4:

a) (ii) and (iii) not being met, with (i) being met: i.e., S is ignorant of not-P's possibility;[44]

[43] (ii) and (iii) have to be defined in terms of possibility, since we want to avoid S in any way knowing that (i) through being made aware of its *actuality*. If S knows that (i), then S knows that not-P is possible, but doubt only requires that S *believes* that not-P is possible, which is a weaker condition than knowledge.

[44] If, then, S forms a belief that P on this basis, this belief would be considered *unreflective* – i.e. S would be unaware of the lack of entailment – which many writers on the nature of doubt regard as not occasioning doubt, for doubt

b) (i) and (ii) not being met, with (iii) being replaced by (iv): S comes to believe that (i) is at least possible, regardless if (i) actually obtains: i.e., S ignorantly doubts P's certainty;

c) (i) being met, with (ii) not being met and with (iii) being replaced by (iv): i.e., S luckily doubts P's certainty. Lucky doubt is a state in which it is just by chance that S's doxastic attitude corresponds to the actual state of affairs;

d) Insensitivity to (i), and thus also to (ii), with (iii) being replaced by (iv); this corresponds to Moon's Doubt1.[45]

Consequently, against RI doubt that P, one must meet the following conditions to have infallible knowledge that P:

(i*) there is entailment between S's SEP and P, i.e., not-P is impossible,

(ii*) S can epistemically access (i*), and,

(iii*) S comes to believe that (i*) given awareness of (ii*).[46]

requires a more *reflective* attitude. See Lee, "On Doubt," 143; Moon, "The Nature of Doubt," 1841; Rik Peels, "Doxastic Doubt, Fiducial Doubt, and Christian Faith: A Response to Gunter Zimmermann," *Neue Zeitschrift für Systematische Theologie und Religionsphilosophie* 49, no. 2 (2007): 188, https://doi.org/10.1515/NZST.2007.014; and also, Peirce, "The Fixation of Belief," 5. In other words, to have an unreflective belief that P without doubting that P is to 'have formed a doxastic attitude toward [P] without having formed an attitude toward its negation.' Moon, "The Nature of Doubt," 1841n40.

[45] Doubt1 is not the ignorant doubt in b) since the former still allows for the certainty of P, i.e., an entailing SEP-P relation, that b) denies.

[46] The implications of epistemic accessibility are discussed in the next paragraph. (ii*) and (iii*) are not defined in terms of possibility, since our concern here is not with doubting that P, or with mere belief that not-P is possible, but with infallible knowledge that P, i.e., knowing for sure that P, or, infallibly knowing that P is certain.

We now list descriptions of combinatorial possibilities for these three additional conditions:

a*) (i*), (ii*), and (iii*) obtaining: i.e., S KKs that P. This is S having infallibilist knowledge that P that is reflective given the presence of the doxastic attitude of belief and the state of S being aware of one's knowledge.

b*) (iii*) not obtaining, with (i*) and (ii*) obtaining: i.e., S Ks that P. This constitutes S having infallibilist knowledge that P that is *un*reflective given that no doxastic state obtains, and that S is unaware of one's knowledge.[47]

c*) (ii*) and (iii*) not obtaining, with (i*) obtaining: i.e., S is ignorant of not-P's impossibility;

d*) (i*) and (ii*) not obtaining, with (iii*) being replaced by (iv*): S comes to believe in (i*), regardless if (i*) actually obtains: i.e., S ignorantly believes P's certainty;

e*) (i*) obtaining, with (ii*) not obtaining and with (iii*) being replaced by (iv*): i.e., S has lucky, *Gettiered* infallibilist knowledge that P.

[47] In other words, K-ing that P does not require S's belief that P, meaning that K-ing deals with *propositional* – i.e. *non-doxastic* – knowledge, while KK-ing deals with *doxastic* knowledge. We can also describe the difference between K-ing and KK-ing in terms of dispositional beliefs: S's K-ing that P places S with a disposition to believe that P, which, if actualised through (iii*), manifests S's KK-ing that P. In other words, K-ing that P can be considered as a *dispositional* KK-ing that P. See Lee, "On Doubt," 143, for a related discussion on dispositional beliefs. Again, this does not mean that belief is all it takes to transition from K-ledge to KK-ledge, for awareness of one's epistemic access is also required, just that when one epistemically accesses something, it becomes possible for one to subsequently believe what has been accessed in an awareful manner. Moreover, whenever "knowledge", and other related terms, is left unspecified as to whether it is KK or K, that means that either the term's use will be specified later on, or the term's use is not salient to knowledge having to be specified as either KK-ledge and/or K-ledge, such as when dealing with other concepts of knowledge from the literature.

What the above discussion shows is that only RI doubt entails epistemic access to S's SEP-P non-entailment relation,[48] while Doubt1 does not require this.[49] Epistemic access, at least in terms of infallible knowledge, is made possible by access of S's SEP's entailment of P, i.e., (ii*), which is necessary for infallible KK-ing, as otherwise all knowledge would be lucky. However, what does epistemic accessibility specifically mean? Is *conscious* access exhaustive of epistemic

[48] Other than awareness and belief of not-P's possibility, Thagard restricts doubt's conditions of manifestation to the 'incoherence of a proposition with the rest of what one believes.' Paul Thagard, "What is Doubt and When is It Reasonable?" *Canadian Journal of Philosophy* 30, suppl. (2004): 395, ProQuest Religion Database. An interesting consequence of this is that apparently unfalsifiable hypotheses – There is a God, I am not a BIV, etc. – can never be doubted, for whether such hypotheses obtain or not does not affect their coherence 'with other beliefs', (Thagard, 401.) such as coherence sets only containing perceptual beliefs. For Thagard, '[a] proposition is incoherent with a person's belief system when the process of coherence maximization does not lead to its acceptance into that belief system.' Thagard, 396. Thus, someone only subscribing to perceptual coherence sets can never doubt unfalsifiable propositions, for none of them oppose members of the set. Of course, such propositions are only incoherent with their negations, so depending on what one starts out with as accepting – the starting proposition could be accepted due to no incoherence with the set – its negation would be automatically necessarily doubtable. Also, Thagard's account of what counts as acceptable coherent propositions borders on arbitrary, since he seems to be sympathetic to Rudner's own account wherein accepting a proposition 'depends on how serious a mistake [it] would be [not to do so].' Richard Rudner, "Value Judgments in the Acceptance of Theories," in *The Validation of Scientific Theories*, ed. Philipp G. Frank (New York: Collier Books, 1961), 33. Standards of seriousness are quite idiosyncratically and culturally contingent, hence rather arbitrary.

[49] Moon's second definition of doubt is 'Doubt2: *S* has some doubt that P if and only if *S* believes that not-P is possible, and it's not the case that *S* believes that the possibility that not-P . . . [does not preclude] S's knowing P.' Moon, "The Nature of Doubt," 1845-6. If we take "S's knowing that P" to be infallible KK-ledge and S's coming to the belief of not-P's possibility as precluding such KK-ledge derived from the above method of (i) through (iii), then we can reconcile Doubt2 with RI doubt.

access in general? Externalists would argue not, and the example usually applied to substantiate their case is that of the chicken sexer.

5.4 The Difference Between Conscious and Non-Conscious Epistemic Access

In effect, if chicken sexing is regarded as infallible, then a chicken sexer Ks that P, "the chicken is of a certain sex", without necessarily KK-ing that P. This case of knowledge is not sensitive to the belief condition of (iii*) given that the chicken sexer is not aware of what they are epistemically accessing. An externalist position would contend that chicken sexers can in fact epistemically access, *non-consciously*, the entailment relation between the chicken sexer's SEP – i.e., whatever is infallibly signifying P – and P. Thus, we can differentiate between,

(Cii*) S can *consciously* epistemically access (i*), and,

(NCii*) S can *non-consciously* epistemically access (i*).

Therefore, we have:

f*) Internalist K-ing that P: SEP-P entailment is *consciously* epistemically accessed without belief. In other words, (iii*) does not obtain, while (i*) and (Cii*) obtains;

g*) Externalist K-ing that P: SEP-P entailment is *non-consciously* epistemically accessed without belief. In other words, (iii*) does not obtain, while (i*) and (NCii*) obtains.

In any case, this distinction between (Cii*) and (NCii*) is not terribly relevant here. For now, the simple fact that epistemic accessibility showcases a difference between epistemically accessing an entailing SEP-P relation and believing that relation given said access, and thus a distinction between infallibly K-ing and KK-ing that P, is the motivating factor behind rational self-doubt as a violation of SPC (single premise closure).

6. RATIONAL SELF-DOUBT AND THE INFALLIBILIST/FALLIBILIST RESPONSE

6.1 Priming the Issue: Infallibilist KK-ledge and its Opposition with Doubt

To introduce the issue, notice that if (i*) and (ii*) obtain – SEP-P entailment and epistemic access thereof, respectively – without (iii*) obtaining – S's belief in entailment through epistemically accessing it – then S is left open to Moon's Doubt2. In Doubt2, which is an interpretation of Doubt1's ramifications on S's epistemic state, S believes that not-P is possible whether not-P obtains or not. As such, if (i*), (ii*), and Doubt2 obtain, then S infallibly KK-ing that P is infringed, despite S indeed K-ing that P. Doubt2 is therefore grounded in (iv): the belief in the mere possibility of (i) – SEP-P *non*-entailment – even without (i) obtaining, since there is no contesting belief in an SEP-P entailment present, i.e., (iii*). Thus, given that (i*) and (ii*) can obtain without (iii*) obtaining, all during S's Doubt2, then S can still doubt that P, concerning Doubt2, while still *K-ing* that P. Nonetheless, since (iii*) does not obtain, as Doubt2's belief in SEP-P non-entailment precludes belief in SEP-P entailment, then S, amid Doubt2, cannot ever *KK* that P. Doubt2 serves to illustrate the distinction between KK-ledge and K-ledge (the KK/K-ledge distinction),[50] because Doubt2, or any type of doubt that allows for the epistemic access of SEP-P entailment, can concord with K-ing that P while excluding KK-ing that P; this makes doubting that P relevant solely to KK-ing that P as mutually opposed to such doubt – i.e., doubting that P contradicts KK-ing that P – while still being compatible with K-ing that P.

[50] Any time the term "KK/K" is used in this Section, it indicates that the consideration being made at the time applies to both KK-ledge and K-ledge. This does not therefore necessarily mean that K-ledge occurs in tandem with KK-ledge whenever KK/K-ledge is used in this Section.

6.2 The Link Between Rational Self-Doubt and Deductive Inference

One can agree that deductive inference is a legitimate way to sustain knowledge.[51] Although, if "knowledge" is regarded as KK-ledge, and one doubts the validity of the deductive inference being made – one engages in rational self-doubt – then problems ensue. For instance, if KK-ledge and doubt are incompatible, then any self-doubt present in the deductive process would undermine the deduction's sustainment of "knowledge" as KK-ledge.[52] Moreover, this would occur even if K-ledge was indeed preserved via competent deduction, obtained through S's epistemic access (ii*) of an SEP-P entailment (i*) wherein P is the conclusion of a deductive inference and S's SEP is the inference itself, from premise(s) to conclusion, present as evidence. To see how, we now move to discuss Schechter's account of why this self-doubt is rational.

For Schechter, 'it can be rational to be less than fully confident in one's beliefs', especially concerning 'the conclusion of [single-premised] long deduction', as it is not impossible for one to have 'made a mistake in [the deductive process].'[53] If one is aware even of the mere possibility for them to be 'prone to errors in [one's] reasoning'[54] – i.e., doubt ensues – then, given P as the conclusion of a deduction, "KK-ledge that P" would necessarily be absent, and even if "K-ledge that P" were present, one would not be able to have a doxastic guarantee for such K-ledge. Thus, doubting that P due to (iv), i.e., through awareness of the chance of inferential error, despite competent inference having been made, constitutes rational self-doubt and is a violation of KK-

[51] See, for example, Timothy Williamson, *Knowledge and Its Limits* (New York: Oxford University Press, 2000), 117.

[52] Schechter describes "deductive knowledge in terms of KK-ledge" as the extension of 'one's beliefs.' Schechter, "Rational Self-Doubt," 432.

[53] Schechter, 430, 439.

[54] Schechter, 439n29.

ledge closure. Schechter utilises the KK/K-ledge distinction to place competent deduction within the jurisdiction of K-ledge, given that '[w]hether a thinker has made a competent deduction shouldn't depend on her meta-beliefs about her reasoning.'[55]

We can generalise Schechter's approach and say that whether a thinker is justified in K-ing that P should not depend on her KK-ing that P, but that K-ing that P is *necessary*, but not sufficient, for KK-ing that P – the conditions for K-ledge attainment overlap with those for KK-ledge, but what ultimately becomes *sufficient* for KK-ing that P is, one, K-ing that P, and two, believing that you K that P.[56] This is to say that rational self-doubt acts as a separating agent between KK-ledge and K-ledge; for Schechter, in the case of deduction,

> [l]earning that my reasoning is not fully reliable does not provide direct evidence that the premises of my deduction do not support the conclusion [i.e. it does not contradict K-ledge]. Rather, it provides direct evidence that I may not be assessing my evidence correctly [i.e. it contradicts KK-ledge,] . . . [and hence] it partially defeats my *justification for believing* the conclusion of my reasoning [i.e. it is a justificatory defeat separating K-ing from KK-ing].[57]

[55] Schechter, 437n23. Reed makes a similar comment for epistemic reliabilism, in that '[a] subject does not need to be aware that her faculties are reliable in order to [have knowledge]; all that matters is that her faculties *are* reliable.' Reed "Stable Invariantism," 236.

[56] Again, belief deals also with awareness of epistemic access, not just mere belief. In any case, this generalisation is for Schechter's approach, *not ours*. This is because there is more to the relationship between KK-ledge and K-ledge than what Schechter hints at, especially concerning K-ledge's necessity for KK-ledge, which is left for a future project.

[57] Schechter, "Rational Self-Doubt," 442-3. Italics mine.

How can we then ensure infallible KK-ledge against rational self-doubt, which would show how infallible KK-ledge acts as rationally *un*doubtable KK-ledge?[58] First, note that rational self-doubt can manifest when S believes their SEP-P relation to be fallible when in fact it is infallible. If S's belief of fallibility, i.e., something akin to (iv), can come about in tandem with (i*) and (ii*), such as in Doubt2, then we must address why, despite S's epistemic access to an SEP-P entailment relation, they still choose to believe in non-entailment.[59] In Schechter's example above, S may have evidence that entails P, but S could still believe that they have not *assessed* the evidence correctly; in other words, S would have the entailing evidence (he would have K-ledge) without knowing for sure that it is entailing (he would not have KK-ledge).

It seems, then, that to save KK-ledge from rational self-doubt, we must describe a particular doxastic state expressing that KK-ledge follows from K-ledge when the state is attained, in that what one Ks is *fully epistemically accessed* and believed by S, which then grants S their KK-ledge. We would have to outline a state wherein S could never even possibly attain any doubt that P when they have epistemic access to entailing evidence that P, through which any claims of doubt would be irrational due to the doubt's contradiction with the nature of the doxastic state. This would not be equating KK-ledge with K-ledge, but simply explicating how the epistemic infallibility of K-ledge can be expressed as the doxastic infallibility, or rational indubitability, of KK-ledge. How would such a doxastic state look like?

[58] Rational self-doubt and rational doubt are different in scope, the former being more constrained than the latter. Nevertheless, both forms of doubt share an important feature: the doubt of one's infallible SEP-P relation.

[59] Rational self-doubt functions similarly, in terms of conditions met, to Doubt1 and Doubt2. In effect, rational self-doubt is meant to be compatible with all the accounts of doubt that have been described so far, except for *irrational doubt*, which is described in Section 6.3.

6.3 Saving KK-ledge from Rational Self-Doubt: The Infallibilist Approach

There are two candidates. The first works from the Williamsonian view that our knowledge equals our evidence (K = E). This view denotes that, at least for Fraser,

> whenever P is a proposition that I know, the epistemic probability that P will (on my evidence) be 1. [Moreover, where] Q is some proposition that is entailed by a proposition that I know, the epistemic probability that Q will (on my evidence) be 1. [This view has some problems, for] then there may well turn out to be cases where I ought (or so it seems) to have a low degree of confidence in propositions with an epistemic probability of 1.[60]

Such cases of low confidence are those of rational self-doubt, wherein one's confidence in some entailed proposition is simply due to the possibility that one may not be assessing one's evidence correctly. We could, to avoid Fraser's critique, modify this view and say that the E in K = E is only what we have epistemic access to *and* believe we are not assessing incorrectly – i.e. in those cases where we can access our evidence that P and subsequently believe that P on account of such accessing. This would lead to the second candidate, KK = E, which, in infallibilist terms, means the infallible obtaining of P given an entailing SEP-P relation that is epistemically accessed and believed; in other words, we are led back to the obtaining of (i*), (ii*), and (iii*). Here, we argue, self-doubt would be *irrational*, for then there would be the presence of the *contradicting* doxastic states of (iii*), i.e., belief in an epistemically accessed SEP-P entailment, and (iv), i.e., doubt of said entailment regardless of whether accessed or not.[61] This infallible KK = E (infallible-KK=E) serves as the proper doxastic attitude of infallibilist knowledge that saves KK-ledge from rational

[60] Fraser, "Risk, Doubt, and Transmission," 2814n11.

[61] In short, When K-ledge is ensured, it is still possible for self-doubt to be rational. On the other hand, when KK-ledge is ensured, it is *impossible* for self-doubt to be rational.

self-doubt by turning said doubt irrational through S's adoption of the contradicting states of (iii*) and (iv).[62] These states contradict each other because entailment and non-entailment are mutually exclusive. To further explore the implications of infallible-KK=E, we now discuss Littlejohn's critique of the first candidate of K = E, and how infallible-KK=E avoids the critique.

For Littlejohn, K = E implies that,

> if one subject knows P but some other subject fails to know P for purely Gettierish reasons we can say that P is part of the first subject's evidence but not the second no matter how similar these subjects and their epistemic situations might otherwise be. That seems counterintuitive. It seems that if we send two subjects on drives through the country on subsequent days showing the first real barns and showing the second some real barns and some fakes, it seems the first might know she's seen a barn while the second might believe that she's seen a barn on essentially the same grounds. We might stipulate that all of their beliefs are true and experiences are veridical. I just don't see that the second subject lacks evidence the first has.[63]

Infallible-KK=E avoids this critique by making $E = P$,[64] which is the view that S's infallible knowledge (KK-ledge and/or K-ledge) only concerns propositions that deal with entailing evidence and their infallible entailments, for infallible non-inferential and deductive knowledge,

[62] The formulation of infallible-KK=E is identical to that of infallible KK-ledge in Section 5.3. Nevertheless, infallible-KK=E will be used from here on out instead due to its explication of KK = E and the fact that infallible KK-ledge, as a term, in itself does not explicitly differentiate between its characterisation as infallible-KK=E and its characterisation in terms of some other system.

[63] Littlejohn, "Concessive Knowledge Attributions," 607.

[64] Not in terms of identity, but of infallible referentiality. The details of the exact character of this referentiality are left for another project in the interest of space.

respectively. In terms of the barn case, both subjects are infallibly justified only in believing P, "there are *at the very least appearances of barns*," since all of the subjects' evidence *entails only* this P, at least when both E and P only deal with the phenomenal experience at hand. The barn case illustrates how infallible-KK=E can obtain when P deals with entailing evidence; the version that addresses infallible entailments, as in, non-ampliative deductive inferences, is left for a future project.[65]

6.4 The Relationship between KK-ledge with Rational Self-Doubt: The Fallibilist Approach

Littlejohn's own alternative to K = E is, interestingly, a fallibilist version of KK = E (fallible-KK=E), which is a view on evidence in which '*P* is part of S's evidence iff *P* is the case and S is non-inferentially justified in believing that *P* is the case.'[66] However, given Littlejohn's fallibilism, non-inferential justification is not infallibly entailing, for here, E ≠ P.[67] The fallible

[65] Littlejohn further critiques a *fallibilist* view of E = P in terms of whether S knows S has hands. For Littlejohn,

> [i]t isn't hard to create a context in which someone might (properly) concede [no-handed-P,] "It might be that there are no hands"; [however,] it seems that in such contexts we can still say that among the propositions included in someone's evidence is [handed-P,] that they have hands. If [handed-P] is included in the speaker's evidence, it seems that if the speaker says [no-handed-P], the speaker says something false on their account. (Littlejohn, "Concessive Knowledge Attributions," 607n.)

However, infallible-KK=E also avoids this critique by considering both handed-P and no-handed-P as dealing with two propositions of *different* levels of justification: no-handed P is infallibly justified by the evidence of one's experience of hand-appearances, while handed-P is only *fallibly* justified by such phenomenal evidence, meaning that handed-P is *not* included in the evidence set for infallible-KK=E. As such, a speaker claiming no-handed P *does not* say something false on the account of infallible-KK=E.

[66] Littlejohn, 608.

[67] In this case, there is no infallible referentiality from E to P, given that E could obtain even if not-P obtained.

justificatory mode of E ≠ P implies, one, an externalist assumption of one's evidence being oriented to external reality, and two, an internalist assumption of fallible justification – i.e., a fallible SEP-P relation. In the barn case, for Littlejohn, both subjects are fallibly non-inferentially justified in believing the existence of barns, despite one being Gettiered and the other not, since our 'veridical experience' of the external world can be 'taken at face value.'[68] Thus, we can say that, for Littlejohn's fallible-KK=E, where E ≠ P, KK-ledge is saved from rational self-doubt via one's evidence's externalist orientation to reality, even if one's evidence does not entail infallible *internalist* justification.[69]

[68] Littlejohn, "Concessive Knowledge Attributions," 610.

[69] It should be noted that, although the internalist/externalist divide here is drawn across the conscious/non-conscious divide, there are many different conceptions of the internalist/externalist divide, but we are setting aside direct engagement with these alternatives and instead prioritising the conscious/non-conscious one for its ease of applicability to infallibilist models of knowledge. In any case, internalist infallibilist knowledge, which includes infallible-KK=E, relates somewhat to Ned Block's characterisation of consciousness: infallible internalist KK-ledge and K-ledge both deal with P-conscious states – i.e., phenomenal states – it is just that KK-ledge involves being fully aware of the P-conscious state one is epistemically accessing to guarantee belief in that state, while K-ledge involves conscious access of a P-conscious state without being fully aware that one is doing so. Both internalist KK-ledge and K-ledge can also deal with A-conscious states – i.e., states whose contents can be applied as premises in reasoning – but not necessarily, for it is not assumed here that both internalist knowledge forms have to deal with conscious states that are, as Block puts it, 'inferentially promiscuous'. Ned Block, "On a Confusion about a Function of Consciousness," *Behavioral and Brain Sciences* 18, no. 2 (1995): 231, https://doi.org/10.1017/S0140525X00038188. Moreover, fallible-KK=E assumes an orientation to one's external reality by one's internally accessed, either P-consciously and/or A-consciously, evidence. There is nothing inherent in fallible-KK=E that disallows alternative characterisations of fallible KK-ledge however, such as perhaps without the aforementioned externalist assumption. Nevertheless, nothing turns on this assumption, for the primary significance in every mention of fallible-KK=E here

Fallible-KK=E can then still allow for persistent self-doubt, but not in a way that undermines KK-ledge, as the evidence's orientation is externalist in nature while the doubt is distinctly *internalist* in origin. In this case, if infallible-KK=E concerns belief and epistemic access of an entailing SEP-P relation, fallible-KK=E would assume belief and access of at the very least a *non*-entailing SEP-P relation. To clarify, fallible-KK=E is still open to self-doubt by the fact that, when S claims that "S Ks that P but may be mistaken", S acknowledges the possibility of coinciding doxastic attitudes of "S believing that P" and "S believing that not-P is possible". The latter belief constitutes S's doubting that P, i.e., (iv), but unlike infallible-KK=E, it does not defeat S's KK-ing that P since KK-ledge is understood as fallible from the start for fallible-KK=E. "S believing that P", for fallible-KK=E, is not considered an actualization of (iii*), i.e., belief in an entailing SEP-P relation, since the P in a fallible-KK=E subsists at the very least within a non-entailing SEP-P relation.

6.5 Comparing the Infallibilist and Fallibilist Accounts of the Relationship between KK-ledge and Rational Self-Doubt

In fallible-KK=E, where KK-ledge obtains, any self-doubt would be *rational*, for there is not a problem here with being in a state of KK-ing and doubting that P at the same time. In infallible-KK=E, however, claiming doubt while believing that P, through (i*), (ii*), and (iii*), would be *irrational* self-doubt, for then we would be having the contradictory states of (iii*) and (iv) mutually excluding each other. In other words, doubting that P in infallible-KK=E is irrational and contradicts KK-ledge because, here, KK = E = *P*: i.e., my evidence that P entails and

is a non-entailing SEP-P relation, regardless of whether that relation crosses the internalist/externalist divide, which is ideally a feature of fallibilist KK-ledge accounts in general.

guarantees the truth of P (this is meant by E = P), and which allows, once accessed and believed, my KK-ledge that P.[70] Alternatively, my infallible KK-ledge equals my entailing evidence (E) for P in the same way that my entailing E equals P, that is, such KK-ledge that P entails a reference relation to P and its E in the same way that E references P.[71] Otherwise, doubting that P in fallible-KK=E is not irrational and does not contradict KK-ledge because KK = E ≠ *P* here instead: the separation of my evidence that P and its entailing that P, due to the lack of infallible referentiality between E and P, allows for otherwise contradicting doxastic attitudes towards P.

Now we can see that, whether KK = E is conceived in fallibilist or infallibilist terms, self-doubt does not defeat KK-ledge: the fallibilist still keeps KK-ledge, as externalist in nature, even with self-doubt, as internalist in origin, being present; the infallibilist, on the other hand, cannot rationally self-doubt at all *once* the conditions for infallible-KK=E are met, thereby turning all doubt irrational due to the prior instantiation of (iii*), that being the belief of a true entailing SEP-P relation that is fully epistemically accessed. Infallible-KK=E, through the instantiation of (iii*), precludes any harm to closure caused by the persistence of *rational* self-doubt, for if (iii*) obtains, then all doubt would be irrational and not capacious enough to defeat KK-ledge. Moreover, if (iii*)

[70] We must remember that the conditions for K-ledge and KK-ledge are not identical, thus meaning that KK and K are not identical (KK ≠ K). There is more to be said for what happens to one's K-ledge once KK-ledge is ensured; does K-ledge disappear, or does it manifest in tandem with KK-ledge? In any case, it is reasonable to suppose that we can formulate infallible K-ledge in terms of infallible-K=E in the same way infallible KK-ledge can be expressed as infallible-KK=E.

[71] Another way of stating this is that someone who KKs that P guarantees the truth of P and E due to them being fully aware of the relationship between E and P – i.e., between the evidence and all it guarantees when made to refer to some representative P. Also remember, equality here is in terms of referentiality, not identity, so while infallible KK-ledge refers to E, which itself refers to P, this KK-ledge is *not* identical to E, which itself is not identical to P.

does not obtain, we would no longer be dealing with *infallible*-KK=E, since then it would be open for rational self-doubt to preclude any possibility of infallibly K-ing that P to infallibly KK-ing that P.

7. CONCLUSION

From what has been discussed so far, we seem to have reached a point where we can more competently compare gradualism and infallibilism on the two issues of closure and doxastic attitudes. Regarding doxastic modellability, the gradualist who adopts fallible-KK=E is precise with what her evidence is, even if it is non-entailing, yet the increased amount of relevant SEP standards, compared to the one infallibilist standard of certainty, speaks in favour of infallibilism over gradualism, and, *a fortiori*, over fallibilism as well,[72] albeit only in the sense that what separates infallibilism over gradualism is a difference in degree, not in kind. Regarding the issue with closure, the gradualist may avoid violations of multi-premise and single-premise closures (MPCs and SPCs, respectively) through closure rejection, thereby allowing for knowledge claims to be assessed on their own terms without the problematic shuttling of overly severe SEP standards. Nonetheless, when the SPC violation of rational self-doubt is introduced, the way in which the gradualist can avoid it, by making doubt and KK-ledge compatible, seems to stand in equal footing with infallibilism's lack of such compatibility in this way: concerning the safeguarding of KK-ledge from rational self-doubt, both KK-ledge accounts can define which cases of KK-ledge survive being *undermined* by rational self-doubt in their own way.

Therefore, even if an account of undoubtable infallible KK-ledge can be expressed, for we desire a description of infallible KK-ledge that is epistemically *and* doxastically concordant, the

[72] See Note 35.

gradualist can stepwise meet the infallibilist's effort simply by rejecting closure and putting in additional modelling work to achieve epistemic and doxastic concordance. Although this work would be proportional to the amount of relevant SEP standards in use, it is work that is different from the infallible-KK=E account merely by degree, not by kind. In short, if fallible-KK=E can save KK-ledge from rational self-doubt, and if the only charge against it is ostensibly that the gradualist just has to work harder to gradually catch up to the infallibilist, then we have to look elsewhere to address *categorical* differences between fallible and infallible knowledge.

Infallible-KK=E seemingly provides the principled epistemological account that fallible-KK=E cannot. After all, choosing what counts as the epistemic standard for knowledge, as well as the other gradualist standards, and exactly how many there are may be essentially arbitrary tasks. One could, for the sake of clarifying this issue, employ a method of outlining the exact relation between knowledge of P and knowledge of not-P, introduced in Section 3.1, in order to discover whether or not the relation can be construed in non-arbitrary terms. Moreover, establishing infallible-KK=E as a principled account would likely entail a precise formulation of the referentiality present in E = P. Nonetheless, we leave this effort for a future project.[73]

[73] Notwithstanding the concern of arbitrariness, it should be clear how Fraser's critique of fallibilism's inherent 'defeasibility of knowledge of propositions that don't have probability 1' (Fraser, "Risk, Doubt, and Transmission," 2814n11.) can be addressed: taking up fallible-KK=E implies that, as long as the equation actually holds for S, and that E ≠ P, S can always KK that *at the very least* E, with any doubt defeating S's KK-ing that P being non-problematic, for this would not affect S's KK-ledge that E. In other words, KK = E would obtain, thereby leaving the fallibilist without any pressure, at the state of strong doubt that P, to *also worry about their* KK-ledge that P. If we then still want to save KK-ledge that P, not just KK-ledge that E, then Fraser's critique becomes harder to rebut for the fallibilist.