Deductive Cogency, Understanding, and Acceptance

Finnur Dellsén

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Abstract

Deductive Cogency holds that the set of propositions towards which one has, or is prepared to have, a given type of propositional attitude should be consistent and closed under logical consequence. While there are many propositional attitudes that are not subject to this requirement, e.g. hoping and imagining, it is at least *prima facie* plausible that Deductive Cogency applies to the doxastic attitude involved in propositional knowledge, viz. (outright) belief. However, this thought is undermined by the well-known preface paradox, leading a number of philosophers to conclude that Deductive Cogency has at best a very limited role to play in our epistemic lives. I argue here that Deductive Cogency is still an important epistemic requirement, albeit not as a requirement on belief. Instead, building on a distinction between belief and acceptance introduced by Jonathan Cohen and recent developments in the epistemology of understanding, I propose that Deductive Cogency applies to the attitude of treating propositions as given in the context of attempting to understand a given phenomenon. I then argue that this simultaneously accounts for the plausibility of the considerations in favor of Deductive Cogency and avoids the problematic consequences of the preface paradox.

Keywords: deductive consistency, deductive closure, the preface paradox, belief versus acceptance, epistemology of understanding.

1 Introduction

What claim, if any, does deductive logic have on the regulation of propositional attitudes? Some such attitudes, e.g. hoping and imagining, are clearly not subject to the demands of deductive logic. For example, there is nothing irrational or otherwise inappropriate about hoping or imagining that each of your two favorite tennis players will win (the relevant category of) the Wimbledon next year, even though you know that they cannot both win. Similarly, it is not irrational or inappropriate to hope or imagine that each of the two tennis players reaches the final while not hoping or imagining that they will play each other in the final. *Prima facie*, the situation seems different for our pre-theoretical notion of *belief* – what is variously known in the literature as 'full', 'outright', or 'binary' belief.[1] For example, given that you know that only one person can win the Wimbledon each year, it certainly seems irrational to believe that each of your two favorite tennis players will win the next tournament. Similarly, it seems irrational to believe that each of them will reach the final and yet refuse to believe that they will play each other.

This suggests that belief is different from many other propositional attitudes, e.g. hoping and imagining, in being subject to the following sort of requirement:

> **Deductive Cogency:** For a given propositional attitude A, the set of propositions towards which one has or is prepared to have attitude A should be consistent and closed under logical consequence.

In the case of belief, Deductive Cogency would most straightforwardly be understood to be a condition on beliefs being *epistemically justified* – roughly in the sense of counting as knowledge if the beliefs are also true and non-gettiered. On this picture, then, the laws of deductive logic function as constraints on epistemic justification and, by implication, knowledge. If that's right, then the epistemological import of deductive logic would be clear enough. However, according to a very influential line of thought inspired by the well-known *preface*

[1] Unless otherwise specified, I will use 'belief' to refer to this binary doxastic attitude, e.g. as opposed to the gradable doxastic attitude variously known as 'degree of belief', 'level of confidence', or 'credence'. (See section 2 for discussion.)

paradox (Makinson, 1965), belief cannot be subject to Deductive Cogency in this way. The problem, in short, is that belief being subject to this requirement conflicts with an intuitive connection between epistemically justified belief and rational levels of confidence. Indeed, a number of philosophers have concluded that Deductive Cogency, as such, has at best a very limited role to play in our epistemic lives (e.g., Foley, 1993, 2009; Christensen, 2004; Kolodny, 2007; Worsnip, 2016).

Against this trend, I argue that Deductive Cogency is an important epistemic requirement, albeit not as a requirement on belief. Instead, building on a distinction between belief and acceptance proposed by Jonathan Cohen (1989, 1992), I argue that Deductive Cogency applies to the attitude of treating propositions as given in the context of *understanding* some specific target phenomenon. Since this preserves the requirement of Deductive Cogency for an important class of propositional attitudes, it explains the epistemic importance of deductive logic while at the same time acknowledging that our pre-theoretical notion of belief is too closely tied to levels of confidence for it to be subject to the demands of deductive logic.

In order to motivate this position and situate it in the current literature, I will primarily examine the arguments for and against Deductive Cogency requirements given by Mark Kaplan (1981b,a, 1995, 1996, 2013) and David Christensen (2004) respectively. In short, I argue that although Kaplan's arguments in favor of Deductive Cogency do not convincingly show that it is a requirement on belief, they do strongly suggest that the requirement applies to the kind of acceptance involved in understanding. I then go on to argue that Christensen's objections to Deductive Cogency for belief are not only compatible with, but indeed congenial to, the position that this kind of acceptance is subject to the requirement. The upshot is that we can accommodate Kaplan's considerations in favor of Deductive Cogency, while at the same time avoiding Christensen's objections, by taking Deductive Cogency to be a requirement on a particular kind of acceptance rather than belief.

2 Deductive Cogency for Belief

Let us start by clarifying the thesis under dispute. We have already seen a general statement of the requirement – which I have labelled 'Deductive Cogency' – that the propositions towards which one has a given type of propositional attitude should be consistent and closed under logical consequence. When applied specifically to belief, this requirement can be stated thus:

> **Deductive Cogency for Belief (DC-B):** The set of propositions one believes or is prepared to believe should be consistent and closed under logical consequence.

As noted above, this requirement is *prima facie* plausible. After all, it certainly seems to be a legitimate criticism of someone's beliefs that they are either inconsistent with one another, or such that the person in question is not prepared to believe the logical consequences of what she already believes. Although I will argue below that we should reject DC-B upon closer inspection, I will also aim to account for its *prima facie* plausibility. Before we get to any of that, however, we must clarify how the requirement should be understood. A number of points will be important in what follows.

First, as indicated by the term 'should', DC-B is a *normative* requirement on belief. More specifically, it is a normative requirement on an agent's total store of beliefs, to the effect that the propositions towards which these beliefs are directed should form a set that is consistent and closed under logical consequence (i.e. be such that any proposition that follows logically from any combination of propositions in the set is also in the set). One way to understand the normative status of this requirement is as a necessary (though presumably not sufficient) condition for an agent to exhibit perfect epistemic rationality. Another (not necessarily incompatible) way to understand DC-B's normative status is as specifying a *pro tanto* requirement on belief that

[2] A *pro tanto* requirement for something is a requirement that might be trumped or outweighed by other conflicting considerations. Importantly, however, the fact that *pro tanto* requirements may be overridden or outweighed in particular cases does not mean that they do not apply in those cases. In this respect, *pro tanto* requirements should be contrasted with *prima facie* requirements, where the latter is something that may merely appear to be a genuine requirement.

applies in so far as we are concerned with epistemic rationality.[2] In any case, it is worth noting that although DC-B is a normative requirement on belief, it should not be taken to imply that those who fail to live up to it are epistemically irresponsible or blameworthy. It is a fact of epistemic life that we often fail to be epistemically rational in various ways; DC-B is merely meant to exemplify one of the many ways in which we may be unsuccessful in our epistemic pursuits.

Second, DC-B refers to the set of propositions one *believes or is prepared to believe*. To see why the qualification in the second disjunct is necessary, note that DC-B would otherwise require that one believe every logical consequence of one's beliefs. Such a requirement would certainly be psychologically unrealistic, presumably even impossible, since any set of propositions has an infinite number of logical consequences. Accordingly, DC-B requires only that the logical requirements of consistency and closure apply to the set of propositions one either believes already or is prepared to believe upon realizing that they are implied by what one currently believes. Thus, for the purposes of this paper, *being prepared to believe* P can be understood as having a disposition to believe P that is manifested upon realizing that P is entailed by propositions one already believes.

Third, I have chosen to formulate DC-B as the requirement that the propositions one believes or is prepared to believe should be *consistent and closed under logical consequence*, but some authors prefer to formulate it as the somewhat more modest requirement that the propositions in question should *not be known to be inconsistent and closed under known logical consequence* (or something to that effect). The point of this would be to allow that agents are justified in believing propositions even if those propositions are, unbeknownst to them, either inconsistent or such that they would not be prepared to believe their logical consequences. I think this weakening of DC-B is both poorly

motivated[3] and independently problematic,[4] but I won't push the point here since it is orthogonal to my main concerns in this paper. Thus, for our current purposes, the phrase 'be consistent and closed under logical consequence' may everywhere be replaced with 'not be known to be inconsistent and closed under known logical consequence.'

A fourth and final clarification of DC-B concerns the word 'belief'. As indicated above, this should be taken to refer to a doxastic attitude one either has or fails to have towards a given proposition – i.e. 'full', 'outright', or 'binary' belief – as opposed to the graded notion of belief variously referred to as 'degree of belief', 'level of confidence', or 'credence'. For reasons that will become clearer below, virtually no one thinks that graded doxastic attitudes satisfy Deductive Cogency, so it is the binary notion of belief that will concern us here. Now, it is very much an open question what exactly is involved in believing a proposition in this binary sense – a question that is still actively being discussed both in philosophy and in cognitive science. Accordingly, I will avoid making any assumptions about belief that may prove controversial. However, in order to fix the reference of the term for the discussion that follows, I will assume that *belief that* P is the doxastic attitude involved in, or entailed by, *knowledge that* P, at least in ordinary cases and according to mainstream

[3]The usual rationale for weakening DC-B in this way is that people cannot be expected to recognize what deductive consequences follow from a set of propositions, and thus that the original requirement would be too demanding. In my view, this argument confuses the issue of whether a set of propositions is consistent and closed under logical consequence with the issue of whether an agent *recognizes that* the set has these logical properties. While it would be preposterous to require agents to recognize that a set of propositions they believe or are prepared to believe is consistent and closed under logical consequence, it is quite another thing to require that the set *be* consistent and closed under logical consequence. Admittedly, agents will then not generally be in a position to recognize whether they themselves obey DC-B, and thus whether their beliefs are indeed epistemically justified, but only very strong forms of epistemic internalism would claim otherwise (e.g. what Pryor (2001, 105) calls 'Access Internalism').

[4]Roughly, the weakening allows agents to satisfy DC-B by failing to recognize, or even deliberately forgetting, logical connections between propositions. For example, someone who believes an inconsistent pair of propositions may satisfy DC-B in virtue of failing to recognize that the propositions are inconsistent. This has the absurd consequence that one may come to have justified beliefs by deliberately forgetting or neglecting to investigate logical connections between propositions.

accounts of propositional knowledge.[5] Of course, this is the sense of 'belief' that interests the vast majority of epistemologists who are interested in binary beliefs in the first place.

3 For and Against Deductive Cogency

Having clarified the thesis that belief is subject to Deductive Cogency, DC-B, I now turn to discussing what sort of considerations have been taken to count for and against DC-B in the recent literature. In later sections, I will go on to argue that the considerations in favor of DC-B can be accounted for without loss by positing a structurally similar requirement on a closely related kind of propositional attitude; and, moreover, that this new requirement avoids the considerations that count against DC-B.

3.1 Stories and Arguments: For Deductive Cogency

One consideration that is often appealed to in defense of DC-B is that there seems to be something epistemically desirable about having one's beliefs provide a coherent and unified account of some piece of the world. In the words of Bas van Fraassen, the role of belief is "to form a single, unequivocally endorsed picture of what things are like" (van Fraassen, 1995, 350). This point is echoed by Jonathan Roorda:

> [...] our beliefs are not just isolated sentences in a collection; they are meant to hang together, to tell a univocal story about the way the world is. It is this feature of belief which subjects it to the requirement of deductive cogency: we do not require the gambler

[5] Some philosophers (e.g. Radford, 1966; Black, 1971; Myers-Schulz and Schwitzgebel, 2013) have rejected the consensus that knowing that P involves or entails believing that P. Accordingly, these philosophers may not be able to identify the sort of doxastic attitude that we will be concerned with in this paper as the doxastic attitude involved in knowing that P. However, even these philosophers can identify this attitude as the attitude involved in knowing that P *according to the views they argue against*, i.e. according to mainstream accounts of knowledge. Thus, for our purposes, it turns out not to matter whether knowledge actually involves belief – all that matters is that belief that P can be identified as the the doxastic attitude that is widely assumed to be involved in knowing that P.

> to make sure that all of the propositions he bets on be logically consistent; but we do require of the storyteller that the logical consequences of what she has already said will not be contradicted as the story unfolds (Roorda, 1997, 148-149).

Similarly, Kaplan claims that when it comes to full or outright belief, "we evaluate propositions by looking at how their adoption might fit in, or fail to fit in (and if so require alteration of), the story we have so far" (Kaplan, 2013, 7). According to Kaplan, it is because our beliefs do not merely constitute "some individually probable things to say," but rather "a story ... about how the world is," (Kaplan, 2013, 7) that belief is subject to Deductive Cogency.

As I explain below, I think there are cases in which this argument breaks down. For now, I want to focus on contexts in which the argument is quite compelling. Consider, for example, the practice of giving detailed scientific explanations which appeal to numerous different theories, auxiliary hypotheses and initial conditions. Note first that inconsistent propositions cannot serve as the explanantia in a correct explanation since at least one of the 'explanantia' would then be guaranteed to be false, which implies that the 'explanation' in question would not be correct.[6] Furthermore, if the set of propositions to which one appeals in an explanation is not closed under deductive consequence, then one could be forbidden from applying straightforward logical operations when connecting an explanandum with the propositions one appeals to in the explanans. This is quite implausible on its face, and would moreover seem to go against scientific practice (which plainly does not ban the use of straightforward logical operations in explanations). Unsurprisingly, then, no account of scientific explanation has ever introduced such a prohibition on the use of logical operations within explanations, and at least two of the most prominent accounts – the deductive-nomological model (Hempel and Oppenheim, 1948; Hempel, 1965) and the unificationist account (Kitcher, 1981,

[6]I have put 'explanation' and 'explanantia' in scare quotes to indicate that it is usually taken for granted that explanations require true explanantia (see, e.g., Hempel and Oppenheim, 1948, 137-138). For a dissenting view, see van Fraassen (1980, 97-101).

1989) – explicitly require the use of the logical operations within explanations.[7] This suggests that something like DC-B must be correct, even if (as I'll suggest below) DC-B slightly mischaracterizes the kind of propositional attitude that is subject to Deductive Cogency.

A second reason to hold on to some version of Deductive Cogency concerns the epistemic force of deductive arguments.[8] Suppose an author of a book is confronted by another scholar who lays out a careful demonstration of how a number of the author's claims, $P_1, ..., P_n$, jointly entail a controversial claim C. Let's suppose that the scholar in question – the challenger – takes this as a *reductio* of the author's position in the book. If the author is prepared to endorse C, she might choose to view the argument instead as a constructive argument for C rather than a *reductio* of the claims that have been shown to entail C. In any case, it would be outrageous for the author to respond to such a challenge by insisting that even if the the claims in the book entail C, they do not in fact commit her to either believing C in any way. It would be even more outrageous to also insist that one believes the conclusion's negation, $\neg C$, despite recognizing that the claims in the book jointly contradict $\neg C$. Yet if Deductive Cogency holds no sway for the attitudes expressed by the author, then there is no reason why these responses could not be entirely appropriate.

Opponents of DC-B often respond to arguments of this sort by claiming that the epistemic force of deductive arguments can be explained without assuming that belief is subject to Deductive Cogency.[9] Suppose – as opponents of DC-B normally do – that there is some threshold $t < 1$ such that, for any proposition P, one is justified in believing P just in case it is rational for one to have a credence in P that exceeds t. (This assumption is known as 'the Lockean Thesis', a term coined by Richard Foley (1992, 111).) Suppose further that credence-assignments are rational only when they are probabilis-

[7] Additionally, at least one version of the causal account of explanation explicitly requires the use of deductive logic to derive the explanandum from the propositions appealed to in the explanans, viz. Michael Strevens's (2004; 2008) kairetic account of explanation.

[8] This argument is discussed in detail by Kaplan (1981b, 1995, 1996, 2013). See also Pollock (1983).

[9] See Foley (1993, 166-173), Weintraub (2001, 446-448), and especially Christensen (2004, 79-96).

tically coherent, i.e. only when they satisfy the axioms of probability. (This assumption is known as 'Probabilism'.)[10] Now, if we assume for simplicity that the propositions $P_1, ..., P_n$ used as premises in the *reductio* are probabilistically independent, it then follows that the credence assigned to $\neg C$ by a rational agent can be no higher than $(1 - t^n)$ if each one of $P_1, ..., P_n$ is epistemically justified. It is not hard to see that $(1 - t^n)$ is often considerably lower than t itself (for example, if $t = 0.9$ and $n = 3$, then $(1 - t^n) = 0.271 < t$), in which case one would not be justified in believing $\neg C$ according to the Lockean Thesis. The intended upshot is that these two assumptions about the relationship between justified belief, rational credence, and probabilistic coherence – i.e. the Lockean Thesis and Probabilism – together explain why one would not be justified in believing inconsistent propositions even without positing a special prohibition on inconsistency, as DC-B does.

One possible way to challenge this explanation is to point out that the Lockean Thesis is problematic for independent reasons.[11] However, even granting the Lockean Thesis (which I am prepared to do here, at least for the sake of the argument), the explanation is lacking in two important respects. First, for a given threshold t, the explanation only works when n is relatively low, and yet the epistemic force of deductive arguments intuitively does not depend on the number of propositions that an argument uses as premises. For example, even for a high threshold such as $t = 0.9$, $(1 - t^n)$ exceeds t when $n = 22$, and yet there is still something intuitively objectionable about believing each one of 22 independent propositions while at the same time believing a proposition that directly contradicts them. Relatedly, it seems implausible that there should be some 'magic' number of premises n_t determined by the threshold t such that deductive arguments with independent premises have epistemic force just in

[10]It is also, misleadingly, sometimes referred to as 'Bayesianism' – *misleadingly* because Probabilism does not entail Bayesianism's core tenet, *Bayesian Conditionalization*. Bayesian Conditionalization is a diachronic requirement that goes well beyond Probabilism's purely synchronic requirement that an agent's credences *at a time* should satisfy the probability axioms.

[11]See, for example, Kaplan (1995, 1996, 2013).

case they appeal to n_t premises or fewer.[12]

A second and more serious problem with this alternative explanation for the force of deductive arguments is that it does nothing at all to explain why the fact that $P_1, ..., P_n$ entail C would commit our author to believing C if she believes each one of $P_1, ..., P_n$. Indeed, it is not hard to see that for *any* threshold $t < 1$, even just two propositions P_1 and P_2 both of which are assigned credences that exceed t could easily entail a conclusion C which should not be assigned a credence above t according to Probabilism (and thus should not be believed according to the Lockean Thesis). For example, if we keep the threshold at $t = 0.9$ and suppose that an agent assigns the same credence of 0.94 to two probabilistically independent propositions P_1 and P_2, then Probabilism demands that she assign credence $0.94^2 \approx 0.88$ to their logical consequence $(P_1 \wedge P_2)$. Since this is lower than our threshold $t = 0.9$, this agent would be forbidden from making this elementary deductive inference from what she already believes. On closer inspection, then, the alternative explanation offered by opponents of DC-B is not even capable of accounting for the epistemic force of deductive arguments in the straightforward case of two-premise arguments.

3.2 The Preface: Against Deductive Cogency

Having discussed two considerations in favor of DC-B, I turn now to the quite significant problems associated with such a requirement. These problems are brought out by Makinson's (1965) preface paradox, a version of which goes as follows:

A historian has just finished writing a book on, for example, European emigration to North America. This historian is a responsible scholar, so let us suppose that she is epistemically justified in believing each one of the many claims she makes in the book. However, if the book is thick enough, it also seems that she would not be justified in believing that she hasn't made at least

[12]This is especially implausible if the value of the threshold t can vary, e.g. depending on one's context or the stakes involved (a common assumption among proponents of the Lockean Thesis).

one error somewhere in the book. In other words, it seems that our historian should not believe (or be prepared to believe) the following proposition:

(1) Every single claim made in the body of this book is true.

And yet notice that (1) is a logical consequence of the book's claims. Thus it seems that our author should not be prepared to believe a logical consequence of propositions she (justifiedly) believes, contrary to DC-B.

Furthermore, note that our author would seem to be epistemically justified in believing that she has made at least one error somewhere in the body of her book – though she presumably does not know where the error(s) are to be found. So it seems that our historian should believe, or be prepared to believe, the following proposition:

(2) The body of this book contains at least one false claim.[13]

Indeed, it is not unusual to see authors make concessions of this sort in the prefaces of their books, though perhaps in a less explicit manner. However, since (2) is inconsistent with the set of claims made by the author in the body of her book, this would again imply that DC-B is false.[14]

Kaplan's (1981b; 1981a; 1995; 1996; 2013) response to this argument is to reject that it is permissible for the author to admit that there are errors in her book. In other words, Kaplan maintains that the author should not believe or be prepared to believe (2). Indeed, Kaplan (and anyone else who defends DC-B) is also committed to the view that the author should be prepared to believe (1), which in effect states that her book is completely error-free. Kaplan recognizes that this flies in the face of intuition, but argues that our intuitive reaction rests on a confusion of belief with a state of high confidence,

[13]Notice that (2) is simply the negation of (1).

[14]Similar points are often made using the lottery paradox (Kyburg, 1961). However, I focus on the preface paradox here since lottery cases raise a number of issues orthogonal to our current concerns, e.g. whether purely statistical or chance-based evidence can justify one in believing a proposition (see, e.g., Nelkin, 2000).

i.e. a high degree of belief or credence.[15] Specifically, Kaplan admits that it would be irrational to be highly confident that the conjunction of the book's claims is true, but since belief is not a state of high confidence according to Kaplan, but rather roughly a matter of what you are inclined to assert in appropriate circumstances,[16] it does not follow that *believing* this conjunction would be unjustified, irrational, or otherwise impermissible (see esp. Kaplan, 1995, 1996).

However, Kaplan's response is problematic for at least two reasons. First, it is unclear why we should accept Kaplan's claim that the association of belief with a state of high confidence is a confusion, as opposed to an important datum about our notion of belief. Indeed, the intuitive connection between belief and high confidence seems like a plausible starting point for explicating the pre-theoretic notion of belief in which we are interested. For example, it would seem quite odd to claim that you believe that P but that you have almost no confidence in P being true; or that you believe that P but that you are unwilling to bet on P at equal or longer odds.[17] Any requirement on belief that fails to do justice to this intuitive connection between belief and levels of confidence would seem less plausible as a result. At the very least, this places a heavy burden of proof on defenders of DC-B with regard to how to account for the intuitive connection between belief and a high level of confidence in

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[15]Kaplan (1996, 15) adopts an orthodox Bayesian view of levels of confidence in terms of betting dispositions, on which an agent's level of confidence in a proposition P is r just in case the agent places a monetary value equal to $\$r$ on a bet that pays \$1 if P is true and \$0 if P is false.

[16]Kaplan (1995, 1996) presents the following theory of belief in the context of defending DC-B:

> You count as believing P just if, were your sole aim to assert the truth (as it pertains to P), and your only options were to assert that P, assert that $\neg P$ or make neither assertion, you would prefer to assert that P (Kaplan, 1996, 109).

It's worth noting that in Kaplan's most recent work on this topic, he suggests that 'belief' is not univocal and thus that the above definition captures only one sense of belief (Kaplan, 2013, 13). Importantly, however, it is this sense of belief that Kaplan claims is subject to Deductive Cogency.

[17]I am assuming here, as is standard, that there is a close connection between one's level of confidence in P and one's willingness to bet on P.

way that preserves the idea that these two states are wholly distinct.[18]

A second reason why Kaplan's response is problematic is that, as David Christensen (2004, 33-68) has argued in great detail, DC-B has extremely implausible downstream consequences given straightforward assumptions about the author's background beliefs. For example, unless the author believes herself to be extremely meticulous, she should believe that she would be amazingly lucky if she managed to write a book that is completely error-free. Thus, given DC-B, the author should also be prepared to believe that she is indeed amazingly lucky. Furthermore, suppose our author believes that anyone who manages to write a completely error-free book will soon win a lucrative book prize, and suppose she believes that she would immediately use the money to buy an expensive sports car. Given DC-B, the author should then be prepared to believe that she will win the book prize and soon be driving an expensive sports car. All of this is, of course, absurd. After all, we have not assumed that our author has any reason at all to think that she is more likely than other responsible scholars in her field to write a completely error-free book.

To sum up, the original preface paradox threatens DC-B by drawing out two problematic implications, viz. that preface-writers should not only not be unwilling to believe that their books contain at least one error, but also that they should be prepared to believe that their books are completely error-free. The first consequence is implausible; the second is outright absurd. We have seen that Kaplan's response of arguing for a separation between the notion of belief and that of a state of high confidence is problematic since (i) the connection between belief and levels of confidence is an intuitively plausible constraint on our notion of belief, and (ii) Kaplan's response does nothing to avoid the absurd downstream consequences of DC-B. However, recall also (from earlier in this section) that there appear to be strong reasons to think that something like DC-B is indispensable in certain intellectual contexts, e.g.

[18]One might think that the intuitive connection between belief and levels of confidence is undermined by Hawthorne, Rothschild, and Spectre's argument that belief is 'weak' in the sense that it is "compatible with having relatively little confidence" in the believed proposition (Hawthorne et al., 2016, 1393). However, on closer inspection, even they require that the believed proposition "be above some contextually determined threshold of likeliness" (Hawthorne et al., 2016, 1400). Since DC-B is incompatible with *any* confidence-threshold for belief, even proponents of the thesis that belief is 'weak' will be forced to reject DC-B.

when one is providing an explanatory story of some phenomenon, and that DC-B seems needed to account for the epistemic force of deductive arguments such as *reductios*. In what follows, I propose to relieve this tension by distinguishing between belief and a type of propositional attitude that I call 'noetic acceptance'.

4 Deductive Cogency for Noetic Acceptance

This section describes the sort of propositional attitude I take to be subject to Deductive Cogency – a kind of attitude closely related to what Jonathan Cohen (1989; 1992) calls 'acceptance'. I will start by discussing Cohen's notion of acceptance, focusing on how acceptance differs from belief in the relevant respects. I will then identify a specific kind of acceptance – the type of acceptance that forms the basis for potentially understanding a given phenomenon – as the appropriate domain of application for the requirement of Deductive Cogency.

4.1 Belief versus Acceptance

Cohen defines acceptance by contrasting it with his own conception of belief as follows:

> [...] belief that p is a disposition, when one is attending to issues raised, or items referred to, by the proposition that p, normally to feel it true that p and false that *not-p*, whether or not one is willing to act, speak, or reason accordingly. But to accept the proposition or rule of inference that p is to treat it as given that p. More precisely, to accept that p is to have or adopt a policy of deeming, positing, or postulating that p – i.e. of including that proposition or rule among one's premisses for deciding what to do or think in a particular context, whether or not one feels it to be true that p. (Cohen, 1992, 4)

So, on Cohen's definition, to *accept* a proposition is to *have a policy of treating the proposition as given* in some particular context, whereas to *believe*

something is to *have a disposition to feel it to be true*.

As I noted above, for the purposes of this paper I do not want to commit to any specific conception of belief beyond the truism that belief that P is the doxastic attitude involved in knowing that P (according to mainstream accounts of propositional knowledge). So while I find Cohen's conception of belief quite plausible, I will not assume it in what follows. Even so, it should be clear that belief differs from what Cohen calls 'acceptance' in a number of important ways. In particular, it is uncontroversial that belief is at least partly *involuntary*. One cannot simply decide to believe a proposition in the same way that one can, for example, decide to lift one's right hand.[19] By contrast, acceptance (in Cohen's sense) is clearly voluntary in a straightforward way. After all, to adopt a policy of treating a proposition as given in some particular context is no less possible than to adopt some other kind of policy, e.g. a policy of exercising three times a week.

There are two other differences between acceptance and belief that are relevant for our purposes. First, acceptance is by definition sensitive to context in a way that belief is not. One might treat a proposition as given in some contexts and not others (or even treat its negation as given in those other contexts). For example, a defence attorney might accept that her client is innocent in the context of her legal work even though she would not accept it in other contexts, e.g. in the context of deciding whether to take the case in the first place. By contrast, belief is not sensitive to context in the same way. After all, we would never say that the lawyer's belief about her client's innocence suddenly changes when she decides to take the case. Of course, belief (or belief-attributions) may well be context-sensitive in *other* ways, e.g. by depending on the context of the person attributing belief in much the same way that knowledge-attributions are according to epistemic contextualism.[20] The point here is not that acceptance is context-sensitive whereas belief is not (though that might also be true); rather, the point is that acceptance is clearly context-sensitive in a different and much more straightforward way than belief.

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[19] As was famously argued by Bernard Williams (1973).

[20] See, for example, Cohen (1986), DeRose (1992), Lewis (1996), Neta (2002), and the exchange between Cohen (2005) and Conee (2005).

The second difference between acceptance and belief that I wish to highlight is that while belief is plausibly closely tied to a state of high confidence (see section 3), acceptance is not. Specifically, one can clearly treat a proposition as given in some particular context without being at all confident that it is true. Consider, for example, a scholar presenting a paper to an audience of her peers. In the course of her presentation, she makes a number of claims in support of her main thesis, all of which she must treat as given – i.e. accept – in the context of this intellectual event. Whether or not she also *believes* these claims is besides the point in so far as she is not engaged in an exercise that is primarily about her own mental state. The same goes for being highly, or even just somewhat, confident that the claims are true. This is why there is no conflict at all involved in presenting a paper whose main premises or conclusions one confesses to have significant doubts about.[21]

Having detailed the ways in which acceptance and belief are distinct, let me now emphasize a way in which they are nevertheless quite similar propositional attitudes. Although acceptance is compatible with a lack of belief in the accepted proposition, acceptance still involves a robust kind of cognitive commitment. Recall that to accept P is to *have a policy* of treating P as given in some context, i.e. to include that proposition among one's premisses for the purpose of deciding what to do or think in the context. Thus someone who merely happens to act or speak *as if* she took P to be true in some context would not count as accepting that P; in order to accept P in that context she would have to commit to treating P as true whenever she is deciding what to do or think in that context. Nor is it sufficient for acceptance to *entertain* a proposition or *explore* its logical consequences, as when someone assumes a proposition for *reductio*. After all, entertaining and exploring a proposition P in some context is compatible with having no general policy at all as to whether one treats P as given in that context.[22]

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[21] A memorable illustration of this is provided by Andy Clark and David Chalmers's "The extended mind" (1998), in which the following footnote was attached to the author's names: "Authors are listed in the order of degree of belief in the central thesis" (Clark and Chalmers, 1998, 7).

[22] Thanks to an anonymous reviewer for pressing me to clarify the nature of acceptance in this respect.

4.2 Understanding and Noetic Acceptance

Now, I will propose that Deductive Cogency is more plausibly seen as a requirement on acceptance than belief.[23] However, it should be clear that there are contexts in which acceptance is not subject to Deductive Cogency, e.g. story-telling, role-playing, and other kinds of make-believe. But notice also that it is not contexts of this sort that defenders of DC-B appeal to in their arguments. Rather, as we have seen, the examples to which defenders of DC-B appeal concern agents that are attempting to provide an intellectual account of something, e.g. in a book or a talk. This is hardly a coincidence. When someone provides an intellectual account of something, we expect the claims that she makes to form a single, univocal (although often incomplete) account of the subject-matter in question. We also expect that she recognizes it as a criticism of her account if the claims she makes are shown to entail a position that she cannot herself endorse. In other words, we expect her claims to conform to Deductive Cogency in that particular context. This suggests that, on further reflection, the arguments in favor of belief being subject to Deductive Cogency should be recast as arguments for acceptance being subject to Deductive Cogency in certain intellectual contexts.

In order to be more specific about the sorts of 'intellectual' contexts I take to be subject to Deductive Cogency, I will now invoke the notion of *understanding*. A number of epistemologists have recently argued that understanding is a central cognitive goal of science and rational inquiry more generally, with some even suggesting that understanding should replace knowledge as the focus of

[23]Cohen (1992, 27-33) himself suggests that acceptance is subject to something like Deductive Cogency, but the thesis Cohen defends is much stronger (and correspondingly less plausible) than the thesis defended here. For one thing, Cohen claims that acceptance is not only subject to the normative requirement that what one accepts *should* be consistent and closed under logical consequence, but he further makes the metaphysical claim that acceptance of (knowingly) inconsistent propositions is *impossible* and that the acceptance of a set of propositions *involves* accepting their logical consequences. No claim of the latter (metaphysical) sort is made here. Furthermore, Cohen suggests that Deductive Cogency applies to acceptance in any context, whereas I argue in this section that we must restrict the contexts in which acceptance would be subject to Deductive Cogency. This is an important difference since the solution to the preface paradox that I propose below is, as a result, not available to Cohen. Instead, Cohen is forced into a Kaplan-style response to the preface paradox on which an author cannot rationally assert in the preface of her book that she has made a mistake in the body of the book (see Cohen, 1992, 36).

contemporary epistemology (see, e.g., Zagzebski, 2001; Kvanvig, 2003; Elgin, 2006; Pritchard, 2010; Grimm, 2012). While my arguments below do not hinge on adopting any specific account of understanding, it may be helpful to have a working conception of understanding as a point of reference in what follows. On a simple but fairly standard account of understanding, one understands some target phenomenon X just in case one grasps how to (correctly) explain relevant aspects of X in the right sort of circumstances (see, e.g., Khalifa, 2013; Strevens, 2013; Grimm, 2014).[24] For example, one understands Brownian motion (at least partially) when one grasps how to explain it by appealing to the atomic theory of matter and the kinetic theory of heat. Similarly, one understands Adolf Hitler's rise to power (at least partially) when one grasps how to explain this event by appealing to the toxic political climate in post-WWI Germany, Hitler's considerable abilities as a public speaker, and so forth.

Understanding in this sense is relevant to acceptance in that when one is attempting to explain something by appealing to a set of propositions as explanantia, there is a clear sense in which one is treating those propositions as given. For example, I cannot explain various aspects of Brownian motion unless I treat the atomic theory of matter and the kinetic theory of heat as given when providing these explanations. Accordingly, it seems clear that I cannot understand Brownian motion unless I have a policy of treating the atomic theory of matter and the kinetic theory of heat as given for the purposes of these explanations. More generally, understanding a given target phenomenon X involves having a policy of treating some set of propositions (the explanantia) as given in the relevant context, viz. the context of explaining aspects of X. In this sense, understanding – or at least the broadly-speaking 'explanatory' understanding with which we are concerned here – involves a kind of acceptance of the propositions which serve as the explanantia in the explanations that underwrite one's understanding.

Does understanding also involve *believing* these propositions? Granted that

[24]Others have argued that understanding and explanation are not so closely related, and that various non-explanatory abilities are also involved in understanding (see, e.g., de Regt and Dieks, 2005; Lipton, 2009; Hills, 2016; de Regt and Gijsbers, 2016; Dellsén, 2016a), although most if not all authors argue that explanation is involved in understanding in some way or another (for a possible exception, see Wilkenfeld, 2013).

understanding and belief often go together (because we tend to believe what we accept, and *vice versa*), there are both intuitive and theoretical reasons to resist any essential involvement of belief in understanding. First, as argued by both Dellsén (2016b) and Wilkenfeld (2016), there are intuitively convincing counterexamples to such a claim. Consider, for example, a particle physicist who (for whatever reason) cannot bring herself to *believe* that matter really is composed of discrete, submicroscopic entities (i.e. atoms), but who is nevertheless committed to appealing to the atomic theory of matter when explaining relevant aspects of Brownian motion to herself and others. It would be absurd to say that the scientist in such a case failed to understand Brownian motion merely in virtue of lacking the relevant belief.[25] Second, given that understanding already involves a robust kind of cognitive commitment to the relevant propositions, viz. a kind of acceptance for explanatory purposes, it is unclear what additional explanatory work would be done by positing that understanding involves belief as well. Thus parsimony considerations, i.e. Ockham's razor, suggests that we should prefer a conception of understanding that makes it independent of belief.[26]

In sum, then, both intuitive and theoretical considerations speak in favor of taking understanding to involve a kind of acceptance rather than belief. In what follows, I will refer to acceptance of this kind as 'noetic acceptance'.[27] Thus I will say that one *noetically accepts* P relative to some target phenomenon X just in case one has a policy of treating P as given whenever one is explaining aspects of X. Put differently, noetic acceptance of P relative to some target phenomenon X amounts to placing P in one's store of premises which can be called upon to explain aspects of X (one's X-*explanatory*

[25]This example is modelled after the one discussed by Dellsén (2016b, 11-13).

[26]Again, this is not to deny that understanding and belief often go together. The point here is not that understanding is incompatible with belief, but that understanding is compatible with lack of belief, at least in principle.

[27]'Noetic' from the Greek word 'nous', which is often translated into English as 'understanding'.

premises, if you will).[28] Now, the thesis that I wish to defend in what follows is that it is noetic acceptance rather than belief that should be consistent and closed under logical consequence. More precisely:

> **Deductive Cogency for Noetic Acceptance (DC-NA):** The set of propositions one noetically accepts or is prepared to noetically accept, relative to some target phenomenon X, should be consistent and closed under logical consequence.[29]

My defense of this thesis in what follows will consist in showing that it accounts for the considerations that have been marshaled in favor of the corresponding requirement for belief, DC-B, while at the same time avoiding the problematic consequences of the preface paradox.[30]

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[28] Elgin (2004) defines a somewhat similar notion of 'cognitive acceptance' with reference to understanding: "*To cognitively accept* that p, is to take it that p's divergence from truth, if any, does not matter cognitively", where a consideration is *cognitive* in her sense "to the extent that it figures in an understanding of how things are" (Elgin, 2004, 120). However, this definition relies on Elgin's claim that genuine understanding can be based on falsehoods (Elgin, 2004, 2009), which is highly contentious (see, e.g. Kvanvig, 2009a; Wilkenfeld, 2015).

[29] It's worth noting that the first three clarifications of DC-B in section 2 apply to DC-NA as well. Let me especially emphasize that DC-NA should, like DC-B, also be understood as a normative epistemic requirement on perfectly rational agents – or, alternatively, as a *pro tanto* epistemic requirement that would, all other things being equal, improve an agent's epistemic status. Of course, such a requirement may easily be outweighed by other non-epistemic considerations, or indeed turn out to be impossible to satisfy due to one's cognitive limitations. Accordingly, there will be many situations in which agents should arguably violate DC-NA *all things considered*.

[30] Those who resist my arguments for taking understanding not to involve belief might wonder whether a requirement similar to DC-NA would hold for the belief that they claim is involved in understanding. To see what this proposal amounts to, let us define "noetic belief" as the belief that would be involved in understanding, such that one *noetically believes* P relative to some target phenomenon X just in case one's belief that P figures in one's explanations of aspects of X. This allows us to define a Deductive Cogency requirement for noetic belief:

> **Deductive Cogency for Noetic Belief (DC-NB):** The set of propositions one noetically believes or is prepared to noetically believe, relative to some target phenomenon X, should be consistent and closed under logical consequence.

5 Revisiting Arguments For and Against

5.1 Revisiting Arguments for Deductive Cogency

Consider first the idea that beliefs should "form a single, unequivocally endorsed picture" (van Fraassen, 1995, 350), "tell a univocal story" (Roorda, 1997, 148), and "fit in [with] the story we have so far" (Kaplan, 2013, 7). While we have seen why this normative requirement cannot be endorsed as it stands, it is plausible that a parallel requirement applies to noetic acceptance. That is, it is plausible that the set of propositions one does or would treat as given in the context of attempting to understand some specific target phenomenon X (e.g. Brownian motion, or Hitler's rise to power) must, if one is to truly understand that X, form a unified account that isn't inconsistent or contradicted as it is spelled out in more detail later on. Given that the point of noetic acceptance is to understand some such X, it follows that noetic acceptance is defective if it fails to live up to this standard. Put differently, Deductive Cogency applies to noetic acceptance because any violation of this requirement for a given target phenomenon X precludes the possibility of genuinely understanding X.

Indeed, it is widely recognized that understanding requires a kind of coherence among the distinct items of information to which one appeals in the

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However, it should be clear that DC-NB is problematic for a similar reason as DC-B itself. Suppose that understanding some very complex phenomenon X involves noetically believing a large number of independent propositions $P_1, ..., P_n$. By DC-NB, then, any agent who understands X should (be prepared to) noetically believe the conjunction of these propositions, $(P_1 \wedge ... \wedge P_n)$. Since this conjunction can be arbitrarily improbable given a high enough number n of propositions, we have that DC-NB conflicts with any probabilistic restriction on (noetic) belief. This is highly implausible for the same reasons as given in response to Kaplan at the end of section 3.2.

[31] Kvanvig elaborates on this in a later piece:

> When the question is whether one knows, the issues that are foremost in our minds are issues about evidence, reliability, reasons for belief, and, perhaps most importantly, non-accidentality regarding the connection between our grounds for belief and the truth of the belief. When the question is whether one has understanding, the issues that are foremost in our minds are issues about the extent of our grasp of the structural relationships (e.g. logical, probabilistic, and explanatory relationships) between the central items of information regarding which the question of understanding arises. (Kvanvig, 2009b, 97)

relevant context. For example, Jonathan Kvanvig notes that "what is distinctive about understanding has to do with the way in which an individual combines pieces of information into a unified body" (Kvanvig, 2003, 197).[31] Similarly, Catherine Elgin writes that understanding "is in the first instance a cognitive relation to comprehensive, coherent sets of cognitive commitments" (Elgin, 2009, 323).[32] In other words, understanding requires a kind of coherence among the propositions to which one appeals in the relevant context, which (at a minimum) prohibits the propositional attitude involved in understanding, viz. noetic acceptance, from violating requirements of consistency and closure under logical consequence. The upshot of this is that the intuitive idea (expressed in different ways by van Fraassen, Roorda, and Kaplan) that our beliefs should tell a unified story of the world is on further reflection more plausibly seen as a requirement on noetic acceptance.

Similar considerations account for the kernel of truth in the idea that the epistemic force of deductive arguments cannot be explained without assuming DC-B. Of course, we have seen that belief is not plausibly subject to Deductive Cogency (for reasons having to do with the preface paradox; see section 3.2), so we cannot endorse a DC-B-based explanation of the epistemic force of deductive arguments. However, we can give a structurally similar explanation by assuming that *noetic acceptance* is subject to Deductive Cogency, i.e that DC-NA is true. What a deductive argument from noetically accepted premises shows is what sort of commitment is involved in treating that set of propositions as given in the context of attempting to understand something. Suppose one treats a set of propositions $P_1, ..., P_n$ as given in the context of attempting to understand some target phenomenon X, and suppose that it is discovered (e.g. by someone who is challenging one's explanation via a *reductio*) that these propositions together entail some conclusion C. According to DC-NA, it follows that one must be prepared to treat C as given in the same context. If one finds C plausible, one may be prepared to do so; if not, one must reconsider one's acceptance of at least one of the propositions $P_1, ..., P_n$

[32]Similar views are expressed by Cooper (1994), Zagzebski (2001), Pritchard (2009), Grimm (2011), and Bengson (2015).

which jointly entail C. What one cannot do according to DC-NA is to continue to treat $P_1, ..., P_n$ as given in the context of attempting to understand X and yet refuse to do the same for C, since that would involve a discrepancy in one's cognitive representation of X that is incompatible with a genuine understanding of X.

Now, it might be objected that DC-NA does not fully account for the considerations in favor of DC-B since (the objection goes) consistency and deductive closure seem legitimate requirements in contexts other than those in which one is seeking understanding. In particular, it might seem plausible that the propositions one accepts or is prepared to accept in the context of making practical decisions (e.g. about where to go to lunch, whether to bring an umbrella, and which route to take) should also be consistent and closed under deductive consequence. And yet, if Deductive Cogency applies only to an intellectual type of acceptance, viz. noetic acceptance, there would be nothing inappropriate about, say, treating an inconsistent set of propositions as given in the context of such practical decision making.

I offer two replies. First, and most importantly, the objection misconstrues my intentions in proposing DC-NA. My claim here is that noetic acceptance is subject to the requirement of Deductive Cogency, not that noetic acceptance is the only attitude that is subject to such a requirement. Indeed, I am open to the suggestion that there may be other types of acceptance beyond noetic acceptance that are subject to Deductive Cogency.[33] As a second, supplementary, response to the objection, I deny its implicit assumption that rational agents should ever treat any (non-tautological) propositions as given in the context of practical decision making. Here I agree with the 'Bayesian' orthodoxy that rational decision making can and should be accounted for exclusively in terms of credences or levels of confidence as opposed to binary propositional

[33]In particular, one might wonder whether Deductive Cogency applies to acceptance in other intellectual contexts beyond those in which one's aim is to understanding something, and I have no argument for there being no contexts of that kind. This idea does not conflict with DC-NA, which does not in any way deny that other types of propositional attitudes may also be subject to Deductive Cogency.

attitudes such as acceptance and (outright) belief.[34] For example, when deciding whether to go to your local steakhouse or seafood restaurant, you may well rationally choose the latter on the off chance that they serve clams (your favorite foodstuff) even though you neither accept nor believe that they do. Binary propositional attitudes simply have no place in an adequate theory of practical decision making on this picture. So the fact that DC-NA is restricted to non-practical contexts is, to my mind, part of what makes it plausible to begin with.

5.2 Revisiting the Preface: Escaping Paradox

We now finally turn to the issue of why it is that DC-NA does not lead to the same sort of problematic consequences due to preface paradox cases as the analogous requirement for belief, DC-B. The first thing to note is that noetic acceptance is always localized to some specific target phenomenon X that one is attempting to understand in a given instance. To noetically accept P vis-à-vis X is to treat P as given for the purposes of explaining aspects of X, irrespectively of whether one also treats P as given for the purposes of explaining aspects of some other target phenomena X', X'', etc. As a consequence, DC-NA merely amounts to the demand that the propositions one treats or would treat as given in the context of attempting to understand *a specific* phenomenon be consistent and closed under logical consequence. By contrast, it does not demand that the set of all propositions one treats or would treat as given in the context of attempting to understand *any* phenomena be

[34] A well-known proponent of this view is Richard Jeffrey (1956, 1968, 1970). See also Maher (1986) for a particularly lucid defense of the view.

consistent and closed under logical consequence.[35]

Let me illustrate by again returning to the example of the historian who is writing a book on European emigration to North America. In the process of attempting to understand this phenomenon, our historian will have noetically accepted a number of claims, some of which are made in the book while others remain tacit in the historian's line of thought. As we have seen, if the book is thick enough it would be entirely reasonable for her to admit in the preface that she must have made at least one error somewhere in her book. To be sure, this claim contradicts what she says in the body of her book, and thus contradicts claims that she noetically accepts. But note that this does not speak against DC-NA unless this claim in the preface is also noetically accepted relative to the same phenomenon as the claims in the body of her book. That is plainly not so: if the author's claims in the preface about whether or not her book contains errors form the basis for understanding anything, it is certainly not why Europeans emigrated to North America or any other phenomenon addressed in the body of the book. Rather, her claims in the preface concerns the book itself and, relatedly, her own fallibility; neither of which provide even the slightest understanding of the phenomena discussed in the book's body. Hence the fact that the preface claim contradicts those made in the body of the book is entirely compatible with the author satisfying DC-NA.

Moreover, since acceptance of P does not involve belief or a high level of confidence in P, we avoid the absurd consequence that the author should be prepared to believe or be highly confident that that there is not a single error in her book. Of course, our author must still be prepared to noetically accept,

[35]This brings to mind the widely discussed incompatibility of Quantum Mechanics (QM) and General Relativity (GR). Physicists seem happy to accept each theory in the context of explaining, respectively, purely quantum phenomena (e.g. the emission spectrum of hydrogen atoms) and purely relativistic phenomena (e.g. the formation of black holes). This practice accords with DC-NA in so far as the quantum and relativistic phenomena are genuinely distinct phenomena. However, this cannot be the end of the story since physicists clearly view the incompatibility of QM and GR as a reason to seek a new, unified theory to replace them both, e.g. String Theory. Interestingly, DC-NA accounts for that fact as well, since there are many phenomena that physicists would like to understand that cannot be described as either 'purely quantum' or 'purely relativisitic', e.g. the 'smoothness' of space-time (GR assumes that space is continuous, while QM requires it to be discrete). In so far as physicists are interested in understanding 'mixed' phenomena of this kind, DC-NA requires that they seek compatible or unified theories to which they can appeal in their explanations.

i.e. treat as given, the conjunction of all the claims in her book relevant to understanding the phenomenon in question, viz. European emigration to North America. But that is to say no more than that she should be prepared to appeal to that conjunction of claims in explanations of various aspects of this historical event (e.g. why it happened so quickly, why so many of the early emigrants were Irish, etc.). What the author cannot do according to DC-NA is to treat a set of claims as given within the context of attempting to understand some phenomenon without regard for whether the set is consistent and without being prepared to do the same for its deductive consequences.

Finally, let us note that since DC-NA does not imply that our author should be prepared to believe that there is not a single error in her book, we also avoid the outrageous implications that she should be prepared to believe, e.g., that she is amazingly lucky to have written an error-free book, that she will soon win a lucrative book prize, and that she will soon be driving an expensive sports car. Nor does DC-NA imply that she should be prepared to noetically accept these wildly implausible claims, i.e. treat them as given in the context of attempting to understand European emigration to North America. This is not just because the claims in question are clearly completely irrelevant to understanding the historical facts in question, but also because the background beliefs required to deduce these consequences (respectively: that anyone who writes an error-free book would be amazingly lucky, that anyone who writes such a book would soon win a lucrative book prize, and that our author would immediately use the prize money to buy an expensive sports car), while perhaps *believed* by our author, are not noetically accepted with regard the phenomena that are being addressed in the body of the book.

6 Conclusion

I have argued that the intuitive and explanatory benefits of the thesis that belief is subject to Deductive Cogency, DC-B, can be appropriated without loss by an analogous requirement on what I call noetic acceptance, DC-NA. In contrast to DC-B, DC-NA avoids the problematic consequences of the infamous preface paradox and allows us to retain an intuitively plausible link

between belief and levels of confidence. Both friends and foes of DC-B should take some comfort from these results. On the one hand, friends of DC-B should be relieved that there is indeed an epistemologically important type of propositional attitude that is subject to Deductive Cogency – one that is in many ways closely related (though not identical) to belief. On the other hand, foes of DC-B should see here the ingredients of an error-theory that explains the *prima facie* plausibility of DC-B in terms of a confusion of two similar types of propositional attitude, viz. belief and noetic acceptance.[36]

[36]I am grateful for very helpful written comments on earlier drafts of this paper from Christoph Baumberger and two anonymous referees for this journal. For constructive verbal feedback, I would like to thank the audiences at the 2016 Meeting of the European Epistemology Network and the 2016 Joint Sessions of the Aristotelian and Mind Societies.

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