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Epistemic Justification and Higher-Order Requirements

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Abstract

Traditionally, many have imposed higher-order requirements on epistemic justification. That is, many have argued that for a belief to be epistemically justified, it not only needs to satisfy first-order requirements, such as being formed via a reliable process or supported by sufficient evidence, but also some higher-order requirement that bears on the way the belief is formed. For example, BonJour has famously argued that a clairvoyance belief, however reliable, is not justified unless one also has a justified belief that one's beliefs formed via clairvoyance are reliable. More recently, some have argued for higher-order requirements for inferentially justified beliefs. That is, for example, that inferential beliefs are only justified if we take the reasons for which those beliefs are formed to support the belief. While there is a common underlying theme, these proposals differ with respect to the kind of higher-order state they require. Some proposals require (justified) higher-order beliefs, while others require higher-order evidence or higher-order awareness. This paper sets out to systematically discuss different kinds of higher-order requirements and the objections they face. While I will argue that there are good reasons to think that epistemic justification needs a built-in higher-order requirement, I will argue that only so-called evidential requirements are able to guard off well-known objections. In so doing, I will directly build on my previous work on evidentialist no-defeater clauses. In particular, I will demonstrate that such clauses can be understood as general higher-order requirements of epistemic justification.

Keywords: epistemic justification; epistemic rationality; higher-order requirements; evidentialism; defeaters; inference; epistemic basing

1. Introduction

Traditionally, many have imposed *higher-order requirements* on epistemic justification. That is, many have argued that for a belief to be epistemically justified, it not only needs to satisfy first-order requirements, such as being formed via a reliable process or supported by sufficient evidence, but also some higher-order requirement that bears on the way the belief is formed. For example, BonJour (1980) has famously argued that a clairvoyance belief, however reliable, is not justified unless one also has a justified belief

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that one's beliefs formed via clairvoyance are reliable.[1] More recently, some have argued for higher-order requirements for inferentially justified beliefs.[2] That is, for example, that inferential beliefs are only justified if we *take* the reasons for which those beliefs are formed to support the belief (Boghossian 2014). Similarly, many have proposed a so-called doxastic basing requirement for evidentially justified beliefs,[3] i.e., argued that for the belief that p to be justified in virtue of being supported by one's evidence, this belief also needs to be *based on* the supporting evidence E, which means that one believes, or has the disposition to believe, that E supports p.

While there is a common underlying theme, these proposals differ with respect to the kind of higher-order state they require. Some proposals require (justified) higher-order beliefs, while others require higher-order evidence or higher-order awareness. To have a general label, we can call such higher-order states defenders Φ.[4] This allows us to formulate the following template for higher-order requirements:

> **Higher-Order Requirement (in short: HOR):** If S's belief that p is justified, then S *necessarily* has a *defender* Φ, that is [a belief/a justified belief/ evidence/ . . .] *indicating* that p is justified.

This paper sets out to systematically discuss different kinds of HORs and the objections they face. While I will argue that there are good reasons to think that epistemic justification needs a built-in HOR, I will argue that *only* so-called *evidential requirements* are able to guard off well-known objections:

> **<HOR evidential>:** If S's belief that p is justified, then S *necessarily* has Φ, sufficient *evidence* that *indicates* that p is justified.

In particular, I will demonstrate that the no-defeater clause I recently proposed in Graf (2025) can be understood as a < HOR evidential>, which not only explains the intuitions motivating HORs but also enables us to avoid common objections:

> **Higher-Order Evidential Requirement (in short: HOE)**: If S's belief that p is justified, then S *necessarily possesses* some higher-order evidence $E_{H,}$ which is *sufficient to support* q, the proposition that the total evidence E_{TOTAL} on balance supports p, and S's belief that p is *properly based* on E_H.

Here is the outline. I will start by giving some motivations for thinking that we need to have some higher-order requirement built into our theory of epistemic justification [§2]. Next, I will give an overview of different types of extant higher-order requirements, including doxastic, non-doxastic, and dispositional requirements [§3]. In so doing, I will identify three worries often associated with such requirements. Namely, the charge of *overintellectualisation* [§4.1], possible *epistemic irrelevance* [§4.2], as well as a lurking *infinite regress* [§4.3]. I will conclude that none of the doxastic, non-doxastic, or dispositional requirements proposed in the literature provide a satisfactory reply to all of

[1]See BonJour (1980: 41–42). For further discussion, see Bergmann (2005: 427–29).

[2]See Fumerton (1995, 2004), Boghossian (2003, 2014), Tucker (2012), Chudnoff (2014), or Valaris (2017).

[3]For a defense of doxastic basing requirements, see Audi (1993: 233–73), Korcz (2000), and Leite (2008). For general discussions of epistemic basing, see Turri (2010), Neta (2019), or Korcz (2021).

[4]The term defender is taken from Graf (2025), in which I introduce the term in the discussion of positive no-defeater clauses. I will discuss the relation between such no-defeater clauses and general higher-order requirements in [§2.2].

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these worries. In [§5], I will demonstrate that HOE can avoid these worries once the underlying terms are specified properly. That is, given the right understanding of evidence, evidential support, and epistemic basing, evidential requirements withstand the above-mentioned worries.

2. Defencism defended

Before discussing any specific HOR in detail, we need to motivate the general need for HORs. As we will see below [§4.2], many criticise HORs by questioning the epistemic benefit they provide. So, one of the central challenges to HORs is answering the question of how fulfilling the higher-order requirements makes a belief epistemically superior to a belief that merely fulfils the first-order requirements.

Let us call the doctrine that any complete theory of epistemic justification needs to include a HOR *Defencism*. In this section, I will motivate Defencism and, with it, the need for HORs by identifying two intuitions, which I will then use to identify two desiderata [§2.1]. Afterwards, I will link these considerations to discussions of epistemic defeat [§2.2] and epistemic basing [§2.3], which both can be used to further motivate Defencism.

2.1 Internalism and higher-order requirements: two desiderata

Many think that a complete theory of epistemic justification needs to be able to distinguish properly and improperly formed *inferential* beliefs. For example, Fumerton (1995, 2004), in his defence of inferential internalism, argues that we need to differentiate cases in which someone infers a proposition p from a piece of evidence E while they are aware of the fact that E entails or supports p and cases in which someone is merely 'caused to believe p as a result of E where E does in fact entail P, but where the entailment is far too complicated for S to understand' (2004 : 154).[5] Tucker summarises Fumerton's idea as follows (Tucker 2012 : 325):

> 'Fumerton's argument [. . .] contrasts two cases where a subject accepts E therefore P, one in which the subject, call him 'Seer' sees that E supports P, and one where another subject, call him 'Non-Seer' doesn't see that E supports p. Since E therefore P seems capable of justifying its conclusion only for the subject who sees that E supports p, we are supposed to infer the following explanation of the Seer and Non-Seer cases: E therefore P justifies its conclusion for only Seer because only Seer sees that E supports'.

If we take this intuition seriously, we want to have an explanation for why we judge Seer to be justified and Non-Seer to be unjustified, or at least have an *error theory*, that is, an explanation for why we have that intuition. One popular way to do this is via a HOR. Here, we could distinguish between Seer and Non-Seer cases by referring to some higher-order awareness requirement for justified beliefs, which requires agents to have some kind of (non-doxastic) mental state indicating that 'E supports p' when successfully inferring p from E (Tucker 2012; Boghossian 2014; Chudnoff 2014; Valaris 2017).[6]

[5]Similarly, Broome argues that we need to distinguish properly inferred beliefs from the ones reached merely by 'mental jogging' (2013: 234).

[6]Note that on some understandings of the epistemic support relation, such as some versions of explanationism, epistemic support already contains a higher-order requirement (Fratantonio forthcoming: §2.3; Lutz 2020: 2637).

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This gives us the first desideratum for our HOR:

> **Desideratum 1:** Higher-order requirements need to enable us to distinguish between *proper* and *improper inferential* beliefs; that is, between Seer and Non-Seer cases.

Yet, accepting the need for a HOR for justification in the case of inferential beliefs, we have not established that HORs are general requirements for justification.

Here, and this is the more controversial part, I think that there are good reasons to take higher-order requirements to be general. We can motivate this via the following thought experiment:

> **SENSORY SUBSTITUTION:** Sandra, who is congenitally blind, grew up in a community of congenitally blind people. Sandra has never heard of eyesight before nor has she ever encountered a non-blind person. One day, she walks into a room and finds a specific kind of sensory substitution device, a tactile-visual sensory substitution waistcoat (in short: TVSS). After putting the TVSS on, the device converts the image from a camera into a tactile image on the skin of Sandra, pixel by pixel, using an electrode array. After wearing it for a few minutes, she has experiences phenomenologically similar to visual experiences. Based on these experiences, Sandra forms the belief that there is a round object in front of her. She does not confirm or disconfirm this belief by using different sense modalities.

When using the TVSS for the first time, Sandra has no evidence about the reliability of visual perception, nor does she even know that such a sense modality exists. This raises the following question: Can Sandra, upon 'looking' at the external world for the first time, form justified beliefs based on visual perception?[7] Let us stipulate that she does form a perceptual belief that there is a round object in the room, similar to how non-blind persons do. After all, she has the cognitive capacity to do so. Furthermore, as experiments have shown, when congenitally blind persons use TVSS devices, similar brain areas to those who are responsible for visual perception are activated. Moreover, in experiments, congenitally blind persons were able to rapidly learn to interpret the tactile stimulations and use them to detect simple shapes and orient themselves.

So let's say there is a round table in the room, and further, that Sandra forms the belief that there is a round object in front of her based on a vague visual impression of that table. Intuitively, this belief cannot be justified as regular perceptual beliefs are justified. For it to be justified, Sandra would have to confirm it by using some of her other sensory modalities. Furthermore, she would likely need to perform several tests until she has some feel for the general reliability of this newly acquired way of perceiving the world.

We can derive this judgement from a very central intuition underlying the internalist project of epistemic justification, the intuition that epistemic agents can have justified beliefs *independently* of whether their *external circumstances are (un)lucky*. This includes cases in which a suspect is *unlucky* but forms beliefs in a seemingly proper way, as in the new evil demon case (Cohen and Lehrer 1983), as well as cases in which an epistemic agent is *lucky* but seemingly reasons improperly, such as in BonJour's (1980) reliable clairvoyant case or Lehrer's (1990) Mr. Truetemp case.

[7]Note that giving an answer to this question relates to what has been called Molyneux's problem (Degenaar and Lokhorst 2024). The problem was raised by William Molyneux in a letter to John Locke, in which Molyneux asks whether a congenitally blind person who can distinguish geometrical shapes by touch would be able to discern these shapes by sight if they happen to acquire visual perception.

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Seeing Sandra bears some important similarities to BonJour's famous case. The basic idea is this: if we judge Norman, the reliable clairvoyant who forms beliefs via clairvoyance without having reasons to regard his clairvoyance as reliable, as having *no* justified beliefs, we should judge seeing Sandra's beliefs to be unjustified as well.[8] After all, for an agent like Sandra, there is no difference between beliefs formed via visual perception and beliefs formed via clairvoyance. How could there be? Seeing Sandra does not possess any evidence about her newly acquired belief-forming mechanism. So, as I will argue below, for Sandra to form beliefs via perception, Sandra needs to have and utilise some higher-order evidence about perception. But, regardless of whether that is the correct explanation or not, taking the internalist intuition seriously is to say that there needs to be some kind of explanation that enables us to judge regular beliefs formed via visual perception to be justified and seeing Sandra's beliefs to be unjustified.

Here is another way to put it. At some point, call it t_1, seeing Sandra if she continues to wear the TVSS device can form justified beliefs via visual perception. In this respect, Sandra is similar to the reliable clairvoyant who can, at some point t_1, form justified clairvoyance beliefs. Now the interesting question is what distinguishes the beliefs formed after t_1 and before t_1. Here, different higher-order requirements will give us different answers. For example, we might say, following BonJour (1980), that after t_1 both Sandra and Norman can form justified beliefs because they have higher-order beliefs that support that their respective belief-formation method is reliable.[9] Another possibility, which is the one which I defend, is that at t_1 Sandra and Norman have acquired higher-order evidence which they can then utilise to form justified beliefs via their respective method (more on this in [§5], while I will discuss a potential objection stemming from inherited reliable belief-forming mechanisms in [§5.1.2]).

All of this can be used to motivate a second desideratum:

Desideratum 2: Higher-order requirements need to enable us to distinguish between *proper* and *improper non-inferential* beliefs.[10]

2.2 Defeaters and higher-order requirements

Another context in which general HORs on epistemic justification have been proposed is discussions on *epistemic defeat*. Many epistemologists have argued that epistemically justified beliefs are defeasible. That is, beliefs that have some otherwise justification-conferring property, such as being based on sufficient evidence or formed via a reliable process, can lose their epistemic status because they are defeated by some evidence possessed by the believer or due to some external facts about the believer's epistemic environment.[11]

This has led to discussions about so-called no-defeater conditions or no-defeater clauses on epistemic justification, which are clauses that specify the conditions under which a *prima facie* justified belief is undefeated. The traditional way to handle

[8]Importantly, many externalists seem to have the clairvoyance intuition as well. See, e.g., Bergmann (2005) or Goldberg (2018: 34–44).

[9]This is one of the lessons that BonJour (1980) draws from the case.

[10]Desideratum 2 can also be motivated when thinking about cases in collective epistemology in which a newly assembled collective agent G starts to form beliefs via a novel belief-forming mechanism B whereby this agent does not possess any information about the reliability of B. I discuss such a case in Graf (2024: ch. 9).

[11]Discussions on epistemic defeat go back to Lehrer and Paxon (1969). I have provided an overview of different types of defeaters in Graf (2025: 5–10).

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defeater cases is to impose a *negative* condition such as 'a belief formed through a reliable process is justified *unless there are relevant defeaters*' (Goldberg 2018: 51; emphasis in the original); whereas much of the work goes into identifying which defeaters are relevant in which circumstances. Others have argued that epistemic agents need to be epistemically responsible by being sensitive to potential defeaters.[12] Since these proposals treat defeater cases to motivate some *positive* no-defeater clause, i.e., some clause which requires beliefs to have some additional feature above and beyond the first-order features of epistemic justification, these proposals can be understood as versions of HORs.

For the sake of narrative ease, I won't discuss such positive treatments of defeat. Importantly, however, the evidentialist clause HOE is also meant to serve as a positive no-defeater clause. This makes the proposed defence of HOE more promising since it suggests that we can live up to intuitions underlying Desideratum 1 and Desideratum 2, as well as defeater cases, in one swipe.

2.3 Epistemic basing and higher-order requirements

Many theorists employ the distinction between *propositional* and *doxastic* justification to distinguish between well-founded and non-well-founded beliefs (Conee and Feldman 2004), *ex-ante* justified and *ex-post* justified beliefs (Goldman 1979), or properly and improperly based beliefs (Turri 2010).

An agent can have a propositionally justified belief, e.g., by having a body of evidence which supports the belief to a sufficient degree, or by having reliable means of forming the belief (which constitutes a reliable process). But for the belief to be doxastically justified, it also needs to be *based on* the respective evidence or a reliable means. How this basing relation itself shall be understood is an open question. While some have argued that we should understand the basing relation as a causal relation, others have defended doxastic or hybrid causal-doxastic versions.[13]

Accordingly, one way to interpret the above-presented arguments in favour of HORs is as arguments that we need to go beyond a purely causal understanding of basing. That is, for a belief B to be based on some evidence E, we need some additional non-causal requirement, such as a meta-belief or some higher-order evidence, to fix the basing relation between B and E.[14] However, while I do share some of the concerns which motivate non-causal understandings of epistemic basing, I don't think that basing should be understood non-causally,[15] due to to-be-discussed problems with higher-order doxastic requirements [§4], as well as details about the evidentialist requirement defended below [§5]. In short, doxastic requirements are not only in danger of overintellectualising epistemic justification, but they also face a dilemma which makes them either epistemically irrelevant or regress-inducing (as argued by Bergmann (2005)). Furthermore, I think that higher-order evidential requirements themselves need some built-in basing condition (as we can see by looking at HOE [§1]), which I take to be an argument for a purely causal understanding of basing.

[12]Influential versions of such responsibilist treatments of defeat are found in Goldberg (2018), Lackey (2016), or Baehr (2009).

[13]For helpful overviews, see, for example, Turri (2010), Neta (2019), or Korcz (2021).

[14]Note that those sympathetic to hybrid understandings of basing typically understand basing to be disjunctive; i.e., that either sufficient causal requirements or non-causal doxastic requirements are met (Korcz 2000). In contrast, the defended requirement would be conjunctive.

[15]As I argue in Graf (2024: ch. 5; ch. 8).

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2.4 Summary

In sum, the role of HORs is twofold. First, we need them to distinguish properly inferred from improperly inferred beliefs (Desideratum 1). Seer is justified because she sees that E supports p by having a *defender* Φ [belief/justified belief/ evidence/ . . .], *indicating* that E supports p, while Non-Seer does not. Second, we need them to distinguish proper and improper non-inferential beliefs (Desideratum 2). Non-blind persons are justified in forming beliefs via visual perception because they have a *defender* Φ [belief/justified belief/ evidence/ . . .], *indicating* that the way they formed their belief is justified, while seeing Sandra does not. Accordingly, many epistemologists have defended higher-order requirements for inferential beliefs (Fumerton 1995, 2004; Tucker 2012; Boghosian 2014; Chudnoff 2014; Valaris 2017) or as general requirements for justification (BonJour 1980; Audi 1993; Leite 2008); whereas these general requirements can also be motivated by considerations about epistemic defeat [§2.2] and epistemic basing [§2.3].

As we will see in [§4], despite their alleged usefulness concerning our normative judgements, many have pointed out that positive higher-order requirements are problematic for various reasons.[16] But before I discuss some influential worries about HORs systematically, let me first give an overview of different kinds of HORs [§3].

3. Higher-order requirements: overview

To discuss different kinds of positive higher-order requirements and the problems they face systematically, we need some broad categorisations. Here is the given template of HOR again:

> **Higher-Order Requirement (in short: HOR):** If S's belief that p is justified, then S *necessarily* has a *defender* Φ, that is a [belief/justified belief/ evidence/ . . .] *indicating* that p is justified.

If we look at this characterisation, we can see that HORs can take various forms. In particular, we can distinguish four different versions by distinguishing four different kinds of *defenders* Φ:

> **<HOR doxastic>:** If S's belief that p is justified, then S *necessarily* has Φ, a *doxastic* mental state that *indicates* that p is justified.

> **<HOR mental>:** If S's belief that p is justified, then S *necessarily* has Φ, a *non-doxastic* mental state that *indicates* that p is justified.

> **<HOR dispositional>:** If S's belief that p is justified, then S *necessarily* has Φ, a *disposition* to form beliefs in a way that *indicates* that p is justified, and this disposition caused S to believe that p.

> **<HOR evidential>:** If S's belief that p is justified, then S *necessarily* has Φ, sufficient *evidence* that *indicates* that p is justified.

One detail that this categorisation leaves open is what is needed for a defender to *indicate* that p is justified. Different versions of different HORs will provide us with different

[16]See, for example, Bergmann (2005), Lasonen-Aaranio (2014), McHugh and Way (2016), or Baker-Hytch and Benton (2015).

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answers to that question, as we can see by taking a closer look at each category of requirements.

< HOR doxastic>: The basic idea behind <HOR doxastic> is simple. For S to be justified to believe that p, the belief does not only need to fulfil some first-order requirements, such as being based on sufficient evidence, but also S needs to have a defender Φ in the form of another (justified) belief that indicates that the belief that p is justified (or at least have the disposition to form such a belief upon reflection). For example, to be justified in believing that it is cloudy based on a quick glance through your office window, you need to have an accompanying higher-order (justified) belief that indicates that visual perceptions under these conditions are reliable. This is roughly the guiding idea behind BonJour's (1980) clairvoyance case. Furthermore, one encounters such requirements often in the defence of a doxastic (Audi 1993: 233–73; Leite 2008) or causal-doxastic (Korcz 2000) requirement of epistemic basing. Leite, for example, states that 'in order for one to have positive epistemic status δ in virtue of believing p on the basis of R, one must believe that R evidentially supports p, and one must have positive epistemic status δ in relation to that later belief as well' (2008 : 422).

< HOR mental>: Instead of requiring an accompanying doxastic state, <HOR mental> only requires epistemic agents to have some accompanying non-doxastic mental state. In the context of inferential beliefs, <HOR mental> requirements have recently seen a revival. In order to explain the difference between Seer and Non-Seer cases, many authors have argued that epistemic agents need to *take* the reasons for which a belief is formed (premises) to support the inferential belief (conclusion) (Tucker 2012; Boghossian 2003, 2014; Chudnoff 2014; Valaris 2017). Boghossian speaks of a taking condition for inference, whereby S successfully 'inferring from p to q is for S to judge that q because S takes the (presumed truth of) p to provide support for q' (2014 : 4).[17] However, while many defend a condition similar to Boghossian's taking condition, there is significant disagreement about what 'taking p to provide support for p' requires. For example, Chudnoff (2014) understands taking to mean having an intuition or seeming that E supports p. Boghossian (2014), on the other hand, understands taking to be a *sui generis* mental state. In contrast, Tucker (2012) takes the relevant relation to be one of awareness, while awareness can take multiple forms.[18] That is, for Tucker, I can be 'aware of E's supporting P by believing (justifiably or unjustifiably) that E supports P, by its seeming to me that E supports P, or by being acquainted with the fact that E supports P' (2012 : 326–27).

< HOR dispositional>: In contrast to the other higher-order requirements, <HOR dispositional> does not require the epistemic agent to have a defender Φ in the form of a mental state but to have some disposition to form their beliefs in a particular way. The basic idea behind <HOR dispositional> is that something within a well-functioning cognitive architecture manifests a disposition to react in a certain way when epistemic agents successfully form beliefs or engage in reasoning. An early account of such a higher-order requirement is found in Greco, who suggests that justification requires countenance of the rules of reasoning (1990, 1999).[19] For Greco, 'a belief p is subjectively justified for a person S [. . .] if and only if S's believing p is grounded in the cognitive dispositions that S manifests when S is thinking conscientiously'; where 'by "thinking

[17]In earlier works Boghossian (2003) defended a hybrid dispositional-doxastic understanding of inference.

[18]Another place where <HOR mental> shows up is in explanationist understandings of the epistemic support relation. For example, McCain argues that disposition 'to have a seeming that, for example, the truth of p and if p, then q ensures the truth of q'. (2014: 78).

[19]See also Sosa (2015: ch. 1).

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conscientiously" I intend the usual state that most people are in as a kind of default mode, the state of trying to form one's beliefs accurately' (1999: 289).

< HOR evidential>: Depending on different understandings of evidence <HOR evidential> will take different forms. If we need to have some kind of doxastic relation to evidence in order to possess it, <HOR evidential> will be similar to doxastic requirements. So, for example, if some proposition p needs to be believed, justifiedly believed or known to be part of my evidence.[20] If evidence, however, is understood in mentalist terms (Conee and Feldman 2004), evidential requirements will be very close to <HOR mental>. However, while similar to these other types of requirements, evidentialist requirements not only turn out to be more flexible with respect to the underlying terms but also provide more robust answers to the challenges posed by the sceptic of HOR [§5].

4. Higher-order requirements: worries

Having identified different kinds of higher-order requirements, we can now discuss various worries concerning these requirements. In particular, I will discuss three different worries: over-intellectualisation [§4.1], the charge of epistemic irrelevance [§4.2], as well as worries having to do with lurking vicious regresses [§4.3].

4.1 Overintellectualisation

One often-discussed problem with HORs is the so-called *overintellectualisation* worry:

> **Worry 1: Overintellectualisation:** We often judge less cognitively sophisticated epistemic agents (such as children and non-human animals) to have justified beliefs. Higher-order requirements that conflict with such judgements implausibly overintellectualise our theory of epistemic justification.

Let us start with <HOR doxastic>. Having a doxastic requirement built into your account of epistemic justification makes it the case that less cognitively sophisticated epistemic agents, such as small children or animals, who allegedly lack the capacity to form higher-order beliefs, cannot have any justified beliefs.[21]

Many think this result is problematic since we usually judge these epistemic agents to be able to acquire justified beliefs or knowledge via perception, simple inferences, or testimony. Similarly, we think that in many instances also sophisticated epistemic agents have direct knowledge or justified beliefs about a vast number of propositions via, for example, immediate perception or rational insight, while lacking any higher-order cognitive states about their doxastic attitudes.

To address this second point, we could weaken the requirement such that we only require the epistemic agent to have a *disposition* to form the respective higher-order mental state when reflecting on one's belief-formation process. This is reasonable since it tracks the way epistemic agents usually reflect on their belief formation processes when asked. So when asked why we believe that there is a bumblebee on the balcony, we are likely disposed to give certain answers to that question, having to do with visual perception, distinctive characteristics of bumblebees and so on. However, it does not

[20]See McCain (2014: ch. 2) or Fratantonio (forthcoming: § 2.1–2.2).

[21]For general discussions, see Greco (1990; 1999), Mc Hugh and Way (2016), Bohgossian (2014: 6–7), or Berghofer (2022: 78). For parallel discussions about testimonial knowledge and justification, see, for example, Lackey (2005) or Goldberg (2008).

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dismantle the worry with respect to the judgements we have towards children and other less cognitively sophisticated agents. If those do not have the capacity to form such higher-order mental states, they can neither have the disposition to do so.[22]

This pushes us towards non-doxastic requirements. Non-doxastic requirements of the structure <HOR mental> do not face the overintellectualisation problem to the same extent. After all, the required higher-order mental state does not need to be as cognitively sophisticated as the higher-order doxastic attitude. And as we have seen above, there are many possible candidate mental states, including seeming (Chudnoff 2014), higher-order awareness (Tucker 2012), or a *sui generis* taking state (Boghossian 2014).

Keeping the disagreements about the required mental state in mind, we need to ask ourselves what is needed for <HOR mental> to play its intended role. As McHugh and Way (2016), as well as Wright (2014), point out, any mental state proposed needs to be understood as an attitude with content which helps to explain how epistemic agents come to believe what they believe. That is, in the context of inferential beliefs, whatever the required mental state is, 'it is not just a placeholder for whatever it is that distinguishes inference from mere causation. Nor is saying that you take your premises to support your conclusion just another way of saying that you reason from the former to the latter' (McHugh and Way 2016: 317). It is only when understood in these more substantive terms < HOR mental> can place restrictions on justified beliefs. However, this brings us back to the root of the overintellectualisation worry. If the accompanying mental state needs to have some content, this requires the epistemic agent to have such a contentful higher-order mental state, which is a capacity that at least some of the less cognitively sophisticated agents we judge to have justified beliefs lack. So, neither <HOR doxastic> nor <HOR mental> avoids the overintellectualisation worry completely

But what about <HOR dispositional>? Take, for example, Greco's (1990; see also 1999) proposal that justification requires countenance of the rules of reasoning [§3]. Greco's proposal is promising since it not only gives us an intuitive understanding of what distinguishes Seer from Non-Seer cases, but it also bypasses the overintellectualisation worry completely. That is, as Greco (1990: 424) points out, countenance with the rules of logic as understood above is compatible with small children having justified beliefs. The idea here seems to be that these kinds of dispositions do not require us to have concepts such as 'argument', 'premises', or 'entailment' nor any kind of additional mental state that secures the connection between E and p. All that is required is to have the disposition to reason from E to p in instances in which these inferences are proper, whereby this may involve explicit reasoning and/or conceptual understanding or not. In Greco's words (1990: 424–25):

> 'Typically only logicians have beliefs about the deductive rules which we use in our reasoning, and it is agreed on all sides that no one has successfully characterised the rules which govern our non-deductive reasoning. But if we typically do not have beliefs about the rules which govern correct reasoning, how are we to include sensitivity to such rules [. . .] I would suggest that although we do not typically have beliefs about such rules, we do countenance such rules in our reasoning'.

While <HOR dispositional> are immune to the overintellectualisation worry, I will demonstrate below that these requirements fail to explain the epistemic relevance of higher-order requirements [§4.2]. However, before doing so, let me make some general remarks about the overintellectualisation worry.

[22]This is for example argued by Berghofer (2022: 78). Further discussions below [§5.1.1].

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As I understand it, many motivations behind the overintellectualisation worry rely on more fundamental intuitions regarding the general nature of epistemic justification. Every account of justification needs to make some cut-off when it comes to the question of how cognitively sophisticated systems need to be to count as epistemic agents, that is, potential bearers of attitudes which are abt for epistemic evaluation. And different theorists will draw this line differently. While I think that any theory that makes sense of our intuitive judgements with respect to children, non-human animals, etc., is *ceteris paribus* superior to any theory that does not, we need to balance these judgements with other intuitions. Especially when these intuitive judgements conflict with the desiderata identified above [§2]. In other words, if we take the intuitions underlying Desiderata 1 and Desiderata 2 seriously, we likely require epistemic agents to be more cognitively sophisticated to account for them.

In sum, both doxastic and non-doxastic mental requirements face the over-intellectualisation worry to varying extents depending on the complexity of the required mental state. While dispositional requirements are immune to these worries. However, for the above-stated reasons, I do not take any worries built on overintellectualisation to be especially conclusive. Any higher-order requirement needs to strike the right balance between overintellectualising justification and retaining our judgements with respect to Seer and Non-Seer, as well as clairvoyance and sensory substitution cases.

4.2 Epistemic relevance

We can now turn to the second objection. Many who are critical of higher-order requirements, including Bergmann (2005: 431) and Mc Hugh and Way (2016: 319), worry that adding a HOR to our first-order theory of epistemic justification does not improve the theory with respect to its general epistemic aim.

> **Worry 2: Epistemic Relevance:** HOR needs to contribute to achieving the overall aim of justification. It is not clear how HOR, such as the requirement to have a higher-order mental state, does that.

The epistemic relevance worry can take various forms, depending on what we think the aim of justification is. One way to raise the worry is to question whether the higher-order requirement increases the *truth-conduciveness* of the belief. Inspired by Tucker (2012: 326–27), we might spell out this worry as follows:

> **P1:** If one's *defender* Φ of Bp does not have a *positive epistemic status*, that is, if Φ is neither justified nor caused by a reliable or properly functioning faculty, then Φ cannot contribute to the *truth-conduciveness* of Bp.
>
> **P2:** If Φ cannot contribute to the *truth-conduciveness* of Bp, then it cannot contribute to Bp's justification.
>
> **C1:** Hence, if Φ is to contribute to Bp's justification, then Φ must have *a positive epistemic status* as well.

Tucker's discussion of this worry is inspired by Bergmann (2005), who makes a plausible case for P1 and P2 in discussing BonJour's (1980) doxastic higher-order requirement. Namely, having a higher-order mental state that bears on the epistemic status of one's first-order belief does not seem to be epistemically relevant to the justifiedness of the

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belief, unless the higher-order belief itself has some relevant epistemic properties. After all, we can imagine cognitively sophisticated but systematically faulty epistemic agents. That is, epistemic agents which always have accompanying higher-order beliefs or other mental states bearing on their belief-formation processes, but which do not increase their epistemic performance. Consequently, Bergmann doubts that any higher-order state, including 'irrational, irresponsible or insane belief(s)', can 'contribute to the justification of S's belief that p, any more than having no doxastic attitude at all [. . .] does' (Bergmann 2005: 431). In response to this, Bergmann speculates that defenders of HORs will likely suggest that the higher-order attitude needs to have some positive epistemic standing as well. Yet, as we will see, this suggestion is problematic since it likely faces a regress that many consider vicious [§4].

How threatening the epistemic relevance worry is depends on whether we think that the overall and sole aim of justification is truth-conduciveness, which is something that internalists about justification would likely deny. After all, it is baked into the fundamental internalist intuitions that epistemic agents can be justified despite their means of belief formation being fundamentally misguided. So, as Tucker (2012: 327) illustrates, all we need to dismantle P2 is to point out that doxastic justification concerns more than just the truth connection.

Tucker (2012) argues that the higher-order inferential requirement's main job is *not* to make the belief more truth-conducive but to secure some *mental connection*. In Tucker's own words (2012: 328; emphasis in the original):

> 'Apparently, then, basing one's belief in P on one's belief in E is not needed to secure the truth connection. Why, then, do we impose a basing requirement on inferential justification? Because, unless the subject satisfies this requirement, she will fail to secure the required *mental connection*. [. . .] Basing a belief in P on a belief in E contributes to the inferential justification of my belief in P, not because it makes the belief more likely to be true, but because it constitutes, at least in part, the required mental connection between my belief in E and my belief in P'.

While Tucker uses this response to argue for some <HOR mental> on inferential justification, we can apply this strategy to justified beliefs more broadly. That is, we might say, higher-order requirements are exactly relevant because they enable us to explain the difference between Seer- and Non-Seer cases as well as clairvoyance and regular perception cases. These requirements contribute to the aim of justification by establishing some kind of mental connection between the formed belief and the belief-forming mechanism.

Unfortunately, this is at best a partial response to the epistemic relevance worry. As pointed out above [§4.1], any mental state proposed needs to be understood as an attitude with content, which helps to explain how epistemic agents come to believe or should come to believe their conclusions (McHugh and Way 2016; Wright 2014). In other words, the mental state accompanying the belief that p needs to have some content that has some kind of epistemic significance with respect to the performed inference. Merely taking a premise to support a conclusion does *not* establish any epistemic benefit. After all, we can easily imagine someone being acquainted with poor inference rules such as counter-inductivism or affirming the disjunct (while incidentally reaching the right conclusion). This is similar to observations about basing requirements of doxastic justification [§2.3]. We can only value forming beliefs for the right kinds of reasons in the right kind of way if the reasoning itself is proper (Turri 2010: 317–18). So, even if my belief that p is supported by some evidence E and this evidence non-deviantly causes me

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to believe that p, and I have the respective higher-order mental state indicating that my belief is based on E, I could do so by following improper rules (while taking these rules to be proper). That is, if we want to have a properness constraint on the basing relation, we also want to have a properness constraint on the higher-order attitude that establishes the mental connection.[23]

Let us now turn to <HOR dispositional>. These requirements seem to establish the required mental connection between the evidence and the belief. After all, the basic idea behind those requirements is that properly forming a belief is exerting a cognitive disposition. However, as Tucker (2012) points out, these sorts of cognitive dispositions do *not* seem necessary to establish the right inferential connection. Suppose S is *not* disposed to believe p when he believes E (and not disposed to form the belief that E supports p) but, nonetheless, happens to recognise that E supports p. Then, it seems that in some particular instances, S can believe that p based on her justified belief in E, in part because she justifiably believes that E supports p, without having the disposition to believe that p because of E. Nonetheless, in such a case, E therefore p seems to make the conclusion justified. This is because when (i) S justifiably believes E and that E supports p, (ii) E does in fact support p, and (iii) S bases her belief in p on her belief in E, S seems to have all (and perhaps more than) S needs for the belief in p to be justified. So, at the very least, there are two ways to infer correctly, one which involves a disposition and another which involves a higher-order doxastic state.

This brings me to a more general observation made by Neta (2019) in his discussion of basing requirements. Neta (2019: 193–95) demonstrates that neither dispositions to form a relevant mental state, doxastic or not, justified or unjustified, nor actually having that higher-order mental state is sufficient to establish the right kind of mental connection. To illustrate this, Neta considers a case in which someone has a problematic disposition to form an inferential belief based on a CNN news report (stipulated to be an unreliable source) but a diverging but unproblematic representation of how the belief is based. For instance, I might have the disposition to believe that my belief is based on information received from Al-Jazeera (stipulated to be a reliable source), while it is actually based on the CNN news report (and this belief is formed by a cognitive disposition). This demonstrates that dispositional requirements miss the aim of higher-order requirements. If the purpose of these requirements is to establish some kind of mental connection between the evidence and some doxastic attitude, it is irrelevant whether that connection is a result of a disposition or not.

4.3 Vicious regress

To avoid the epistemic relevance worry, some have suggested a doxastic higher-order requirement that demands that the higher-order beliefs are justified as well (BonJour 1980; Fumerton 1995; Leite 2008). If one, however, understands this higher-level requirement as general, so that the required higher-level belief must itself be justified by having an accompanied justified higher-order belief, and so on, then the requirement gives rise to a regress viewed by many as vicious (Bergmann 2005; McHugh and Way 2016: 318; Boghossian 2003; Tucker 2012):

> **Worry 3: Regress:** If the initial reason to posit that first-order requirements need to be supplemented by HOR can be extended to HORs themselves, we end up with an infinite hierarchy of requirements.

[23] As in HOE [§5.1].

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Bergmann describes the regress problem as follows (2005: 431; emphasis in the original):

> 'the only way in which [a higher-order requirement] can sensibly be required for the justification of S's belief that p is if we stipulate that it must be made true by S's having a *justified* belief [. . .] But to require that [a higher-order requirement] must be satisfied by S's having a justified belief [. . .] is to face the dilemma noted earlier in the paper: either this requirement is a general one applying to all beliefs, which leads to a vicious regress, or it applies to beliefs at the object-level and perhaps at some higher levels but not at all higher levels, an *ad hoc* restriction made for no reason other than to avoid the regress'.

So according to Bergmann, the proponent of higher-order requirements faces a trilemma: (i) either we do *not* require the higher-order belief to be justified as well, which makes it *epistemically irrelevant*, or (ii) we do require the higher-order belief to be justified, which triggers a *regress,* or (iii) we provide some *ad hoc* reason that at some higher-order level beliefs do not need to be justified to make lower-level beliefs justified, to avoid the regress.

As we have seen above, defenders of <HOR mental> tend to grab the first horn of the trilemma. That is, they argue that higher-order beliefs or other mental states need not be justified to be epistemically relevant for the justificatory status of the first-order belief. Instead, they are epistemically relevant by establishing the right kind of mental connection between the respective (inferential) beliefs. That strategy is promising since it avoids the charge of epistemic irrelevance, as well as the regress worry, in one swipe. However, even if we grant that this strategy is successful with regard to the epistemic relevance worry, we might still be concerned that it cannot avoid the regress entirely (Boghossian 2003; Wright 2014; McHugh and Way 2016). Any kind of mental requirement adds one additional mental layer, M_2, to the initial mental layer, M_1, consisting of the belief, Bp, and the evidence, E, that supports it. If this additional layer M_2 is needed to govern the relationship between Bp and E, then it plausibly needs to be accompanied by a third mental layer M_3 that plays the same governing role between M_2 and Bp and E. As a consequence, we either need a *non-ad hoc* reason why this does not generalise, or we face a regress again.

This is, among others, pointed out by Wright in his discussion of Boghossian's taking condition (Wright 2014: 31; emphasis in the original):[24]

> 'Now I confess to seeing no alternative interpretation of this 'taking that' than to say that it requires an *information-bearing state* [. . .] – we will have to add that this registration state somehow *controls* S's movement in thought from judgement of the truth of his premises to judgement of the truth of the conclusion. [. . .] We confront a dilemma. Suppose the content of the registration state is *general*: for instance, that any transition of the appropriate kind is licensed when the system is in a state of acceptance of the relevant kind of premises. Then it seems that we will have to understand the control exerted by the registration state on the specific movement in question as mediated by an 'appreciation' that the latter comes with the ambit of the former – so as an instance, in effect, of the inference: transitions of such and such a kind are mandated; this is a transition of such and such a kind; so it is mandated [. . .]. And now, fatally, we have represented inference as involving another; regress ensues'.

[24]Ironically, Boghossian (2003) uses similar arguments to dismiss other mental requirements, such as intuition-based accounts. See Chudnoff (2014: 18–20) for a discussion of Boghossian's arguments.

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Faced with this problem, some have drawn the comparison to Lewis Carroll's (1895) parable of Achilles and the tortoise.[25] Carroll has shown that counting inference rules employed in an argument among the premises of the argument leads to a regress. It would require us to add further and further inference rules, which tell us how to infer from the premises and the initial inference rules, which expand the body of premises *ad infinitum*. Similarly, if the content of the required higher-order mental state accompanying the inference needs to be accompanied by another higher-order mental state that tells us how the first-order and second-order mental states hang together, we expand the set of required mental states to the infinite. In sum, if this reasoning is correct, <HOR mental> *cannot* avoid the regress by acknowledging that the higher-order state does not need to be doxastic or independently justified.

4.4 Summary

I have considered three objections, *overintellectualisation* [§4.1], *epistemic relevance* [§4.2], and a *vicious regress* [§4.3], against the three types of higher-order requirements <HOR doxastic>, <HOR dispositional>, and <HOR mental>. In so doing, I demonstrated that all of these requirements succumb to the discussed worries to varying extents.

First, <HOR doxastic> leads to an overintellectualisation of justification since having higher-order doxastic states is no easy cognitive task. Furthermore, it is not clear how <HOR doxastic> can add anything of epistemic relevance without producing a regress. Mere beliefs are too weak since they lack any epistemic relevance, while independently justified beliefs are too strong by leading to a vicious regress.

Second, <HOR dispositional>, while avoiding the overintellectualisation worry, as well as the regress worry, could not explain the epistemic relevance of higher-order requirements. Out of the three requirements discussed, < HOR dispositional> could make the least sense of the epistemic relevance of higher-order requirements and, therefore, could not live up to the desiderata identified in [§2]. This is a reason to take dispositional requirements to be a non-starter.

Third, <HOR mental> seems to strike the right balance between the complexity of <HOR doxastic> and the epistemic irrelevance of <HOR dispositional>. Those requirements promise to deliver a reasonably good answer to the epistemic relevance worry as well as the overintellectualisation worry. However, the replies given still left some questions unanswered. More importantly, however, <HOR mental> still could not avoid the regress.

5. Evidential requirements

Here is the general template for evidential requirements again:

> **<HOR evidential>:** If S's belief that p is justified, then S *necessarily* has sufficient *evidence* that *indicates* that p is justified.

Depending on different understandings of the nature of evidence, evidence possession, and evidential support <HOR evidential> will take different forms. If evidence possession is some kind of doxastic or perspectival relation, evidential requirements will be similar to <HOR doxastic>. If evidence and evidence possession, however, are

[25]See Boghossian (2003 : 233–36), McHugh and Way (2016: 319), or Chudnoff (2014: 8).

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understood in mentalist terms, as for example by Conee and Feldman (2004), evidential requirements will be very close to <HOR mental>.

Nonetheless, <HOR evidential> are superior to <HOR mental> for at least two reasons. First, in contrast to the above-discussed mental requirements, evidential requirements do *not* need the mental state to be of any specific kind to play their intended role. Instead of requiring some specific seeming (Chudnoff 2014), taking (Boghossian 2014), or higher-order awareness (Tucker 2012), on various prominent understandings of evidence, in principle, many different kinds of mental state(s) can establish the required higher-order relation. Second, evidential requirements can make immediate sense of what it means for some mental state to *indicate* that p is justified; namely, by supporting some higher-order proposition that bears on p.

However, instead of comparing <HOR evidential> to other types of HORs on this general level, let me focus on a particular evidential requirement.

5.1 A Higher-order evidential requirement

Interestingly, <HOR evidential> has rarely been discussed in the literature, whereas a recent exception is my proposal in Graf (2025). In particular, I discuss a positive evidentialist no-defeater clause (Graf 2025: 21), which we can reformulate to give us the following general evidential higher-order requirement:[26]

Higher-Order Evidential Requirement (in short: HOE):

If S's belief that p is justified, then S *necessarily*

a) *possesses* some higher-order evidence $E_{H,}$ which is *sufficient to support* q, the proposition that the total evidence E_{TOTAL} on balance supports p, and
b) S's belief that p is *properly based* on E_H.

First, a few words about clauses (a) and (b), as well as the underlying understanding of *evidence*, *evidence possession*, *epistemic support,* and *epistemic basing,* are needed.

According to (a), epistemic agents need to have higher-order evidence E_H that is sufficient to support the proposition q; the total relevant evidence (called E_{TOTAL}) on balance supports p. So, one promising way to understand clause (a) is that epistemic agents need to have higher-order evidence in the form of a mental state (with the relevant propositional content) that supports q. This means that we could either run with a mentalist understanding of evidence, in which the evidence possessed by an epistemic agent is all of their non-factive but representational mental states (Conee and Feldman 2008; Mc Cain 2014: 9–12), or an abstractionist understanding of evidence, according to which the evidence possessed by an epistemic agent is the propositional content of the relevant mental states.[27] Likewise, evidential support could be understood in explanationist or probabilist terms. That means that either E_H sufficiently increases the probability of q (that E_{TOTAL} supports p) or that E_H is part of the best explanation for q.[28]

Clause (b) rests on the idea that merely stipulating that S possesses some second-order evidence E_H is not sufficient since this does not guarantee that E_H is involved in the formation of the belief that p. Without (b), E_H could not bear on the epistemic standing of Bp. So, as with beliefs formed via first-order evidence, we need a basing requirement; i.e., we need to ensure that E_H is not merely possessed but actually used. That is, based on

[26]Another notable exception is Tucker (2012: 328–33).

[27]See, e.g., Turri (2009).

[28]See Fratantonio (forthcoming: §2.3) or McCain (2014: ch.4).

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different understandings of epistemic basing, clause (b) could be understood in multiple ways; it could, e.g., mean that the belief that q is (non-deviantly) caused by E_H or that there is a higher-order belief which governs the relationship between E_H and q. Here, I take the above-presented arguments against <HOR doxastic> to favour causal understandings of the basing relationship. If understood doxastically, we not only face the worry of overintellectualisation but also run the danger of triggering the regress again (for the sake of wanting the higher-order belief to be epistemically relevant).

In [§2.1], when motivating a general need for HORs, we have identified two desiderata that any higher-order requirement needs to have: the ability to distinguish between Seer and Non-Seer cases (Desideratum 1) as well as the ability to distinguish between clairvoyance and sensory substitution, on the one hand, and regular perception cases on the other (Desideratum 2). Furthermore, I have pointed out that one way to motivate the need for a HOR is via the notion of epistemic defeat [§2.2]. Since in Graf (2025), I understand HOE as a no-defeater clause, capable of giving us the right verdict with respect to the entire taxonomy of defeater cases, this makes HOE a promising candidate for a general HOR. In the rest of this section, I will demonstrate how HOE can respond to the above-identified worries and, in so doing, live up to Desiderata 1 & 2. This shall be seen not only as a specific argument for HOE but also as a more general proof of principle about the promising nature of evidential higher-order requirements.

5.1.1 HOE and Overintellectualisation

We can now turn to the first worry, *overintellectualisation*. As stressed above, every account of justification needs to make some cut-off when it comes to the question of how cognitively sophisticated a system needs to be to count as an epistemic agent. So, how demanding is HOE? Not very demanding. All it requires is that an epistemic agent needs to be capable of having two mental states with the relevant propositional content E and E_H that are sufficient to support two different propositions and that non-deviantly cause S to believe that p. This explains why Norman and Sandra cannot form justified beliefs via clairvoyance or sensory substitution, respectively (at least not right away), while toddlers and other less sophisticated agents, who possess a plethora of evidence about the kinds of inferences they are using, can (more on that below).

Importantly, if we understand evidential support correctly, in probabilist terms or the right kind of explanationist terms, I do not think that for E_H to support q (for S), S needs to be aware of or even need to have the cognitive capacities to grasp the support relation between E_H and q. That is, S doesn't need to be aware that E_H sufficiently increases the probability of q (assuming probabilism) or that E_H is part of the best explanation for q (assuming explanationism).[29] In this respect, the framework underlying HOE significantly differs from other explanationist accounts proposed in the literature (Conee and Feldman 2008; McCain 2014). For example, McCain tries to dismiss the charge of over-intellectualisation as follows (McCain 2014: 78):

> 'this does not require one to have well-developed concepts of 'evidence', 'explanation', 'logical consequence', or 'entailment'. All that is required is the ability to understand something as an answer to a why-question or the disposition to have a seeming that, for example, the truth of p and if p, then q ensure the truth of q'.

[29]See also Fratantonio (forthcoming: §2.3).

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Here, Berghofer, among others, points out that it is plausible to assume 'that when a dog hears its favourite person approaching and then sees the person, the dog knows (or has justification to believe) that the person is there' despite lacking 'the cognitive capabilities 'to understand something as an answer to a why-question' as required by McCain (Berghofer 2022: 78).[30] I agree with Berghofer (2022) that McCain's (2014) understanding of epistemic support makes justification too cognitively demanding. However, we can avoid this problem if all it means for E to support p is that E makes p sufficiently probable (assuming probabilism) or that p and E explanatorily cohere (assuming explanationism), according to (some permissible) epistemic standards that S subscribes to.[31] Furthermore, S can subscribe to epistemic standards without being able to spell out what these standards are, or even without having a concept of epistemic standards. Consequently, on my account, the dog can have a justified belief that his favourite person is approaching them, without having any (conscious) higher-order beliefs or the capacity to form such beliefs.

At this point, one might worry that these are empirical claims about the psychology of dogs and other agents, which cannot be argued for from the philosophical armchair.[32] While I agree that empirical evidence might enable us to differentiate cognitive agents who can have higher-order beliefs from those who do not, arguing that dogs have the respective capacities should not be controversial given the right understanding of evidence and its relation to mental states, such as, for example, an abstractionist understanding of evidence and an interpretationist (Dennett 1981) view of mental state ascriptions. The interpretationist will interpret much of the dog's behaviour as the dog having various beliefs and desires with respect to their immediate environment, since, after all, the dog successfully interacts with their mesoscopic environment in a reliable way; that is, the dog is (i) reliably interpretable from the intentional stance, and (ii) taking the intentional stance towards it yields novel predictive powers. These beliefs, or rather, the propositional content of these beliefs (abstractionism), are then trivially part of the (first-order) evidence possessed by the dog. Further, these first-order beliefs about specific interactions then serve as a basis when the dog interacts with their environment in novel situations in a predictable manner. For example, when the dog interacts with a specific kind of object for the first time, based on their interaction with other objects. Here, the abstractionist-interpretationist can argue that doing so requires the dog to extrapolate from extant beliefs and that, hence, the best interpretation of the dog, with the most predictive power concerning the dog's behaviour, includes the dog having higher-order evidence (in the form of an unconscious higher-order belief) about the reliability of their belief-formation processes.[33]

5.1.2 HOE and epistemic relevance

We can now turn to the second worry, the worry that higher-order requirements are *epistemically irrelevant*. I think the best way to address this worry is twofold. First, we need to demonstrate how HOE incorporates Desiderata 1 and Desiderata 2 [§2.1].

[30]See also Lutz (2020: 2637) or Berghofer (2020).

[31]I understand epistemic standards as functions that determine the amount of evidential support that is led by a body of evidence to a proposition (evidential standards), as well as a function that determines a doxastic output given that support function (doxastic standards). See Graf (2024: ch.1; ch. 5) for further details.

[32]I want to thank a referee for useful comments on this issue.

[33]Importantly, we could also utilise interpretationism to provide a demarcation criterion between agents that do have the right kind of cognitive sophistication to have higher-order evidence and potentially justified beliefs, such as probably toddlers and dogs, and those who do not.

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Second, we need to give an argument on why and how the respective explanation makes Seer's belief epistemically superior to Non-Seer's and regular perception cases epistemically superior to clairvoyance and sensory substitution cases.

Here is how <HOE> enables us to distinguish Seer and Non-Seer cases. Seer, in contrast to Non-Seer, properly infers her belief that p because her belief is based on (that is, non-deviantly caused by) the premise E as well as some higher-order evidence E_H about how the premises support the conclusion. So, Seer's and Non-Seer's beliefs that p, which are supported and non-deviantly caused by E, differ in the following respect. Seer's belief is also non-deviantly caused by some higher-order evidence E_H, which is sufficient to support that E_{TOTAL} supports p. This supports the judgement held by many about the nature of inference, in which inference is taken to be more than a causal process between the premise-beliefs and the conclusion-beliefs.

This is the same intuition that motivated internalist dismissals of clairvoyance (BonJour 1980) and sensory substitution cases. We judge the clairvoyant who (reliably) forms clairvoyance beliefs without having reasons to regard her clairvoyance as reliable as having unjustified beliefs. Now, for an agent like Sandra, there is no difference between beliefs formed via visual perception or clairvoyance. How could there be? After all, Sandra, like Norman, does not possess any evidence about the reliability of her newly acquired belief-forming mechanism. For Sandra to form justified beliefs on visual perception, such as the belief that 'there sits a pigeon on the tree outside my office', she needs to have some evidence E_H sufficient to support that 'for all she knows perception under these circumstances is a valid source of justification'. Compare this with again to a dog who is familiar with the causal structure of their mesoscopic environment and forms beliefs about immediate physical happenings. The dog, in contrast to Sandra, can justifiably form beliefs based on perception, without having the cognitive capacities to reflect on these belief formations (as argued above [§5.1.1]).

But this is only one step towards the answer to the epistemic relevance worry. How do these higher-order evidential requirements on inferential and non-inferential beliefs increase epistemic performance? Here, the answer provided by evidential requirements is straightforward (in contrast to the other above-discussed types of HORs). Having sufficient evidence for a belief contributes to the overall epistemic quality of the belief, especially given antecedent evidentialist commitments. Hence, having higher-order evidence about the entire evidential situation does so as well, at least indirectly. That is, if E supports p and E_H supports 'E_{TOTAL} supports p', we have increased the overall support for p by either increasing the explanatory coherence between S's evidence (including E_H), E_{TOTAL} and p, or by increasing the probability of p given E_{TOTAL}.[34]

Note that this is not to say that evidential requirements such as HOE cannot also appeal to other resolutions of the relevance worry, such as the mental connection provided by the higher-order evidence E_H. So whatever connection can be achieved by other non-doxastic mental states, such as seemings (Chudnoff 2014) or a taking state (Boghossian 2014), can be realised by E_H as well.

Before I move on to discuss the regress worry [§5.1.3], I want to address a potential objection that bears on the epistemic relevance of HOR in general as well as HOE in particular. Suppose that some agent forms beliefs about a certain domain in ways that are fully reliable but does so simply because they are (culturally or evolutionarily) disposed to do so. Suppose further that if the methods of belief formation in question were not reliable, the relevant agents would have been sensitive to this, and they would

[34]Note that this assumes that a belief can have maximal evidential support and yet not be justified because it fails to have additionally required properties, such as being based on the supporting evidence [§2.3] or fulfilling the respective no-defeater requirement [§2.2].

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have stopped using the methods. Yet, the agent in question does not possess any evidence about the reliability of the methods used.[35]

My worry with such potential counterexamples is twofold. First, it is unclear if, in these cases, the agents really do not possess any higher-order evidence. After all, the cultural or evolutionary process by which the respective belief-formation dispositions were formed left some imprint in the agents' cognitive architecture; that is, for S to be successful in the above-specified sense, something within S's cognitive architecture needs to keep track of the circumstances in which their belief-formation processes are reliable and the circumstances in which they are not. If there is such a cognitive state, this state is best understood (e.g., given the above-sketched interpretationist approach) as a higher-order belief which provides higher-order evidence. If there is no such state which keeps track of the proper use of belief-formation processes, the agent's beliefs simply are not epistemically justified, since they reliably track the truth by mere luck.[36]

5.1.3. HOE and the vicious regress

We can now turn to the *regress worry*. To see how evidential requirements can avoid the kind of regress that doxastic and other mental requirements face, we need to take another look at what is causing the regress. In the case of doxastic requirements, which require an accompanying justified belief, the regress is triggered because the higher-order belief to be justified needs to have another accompanying justified belief, which requires another justified belief, and so on. Now, with respect to other mental requirements or doxastic requirements which do not need the higher-order belief to be justified, the situation is different. The regress is triggered because of the supposed content of the mental state t connecting E to Bp. Here, t supposedly has the content that E mandates that the belief that p and t is used in getting us from E to Bp. But if it needs to be used to mandate us to get us from E to Bp, why is there no higher-order taking state t_2 that needs to be used that mandates us to use t in getting us from E to Bp.

Chudnoff (2014: 20) argues that we need to accept the following premise here to get this regress going:

> $P_{INFERENCE}$: In order to make an inference from some premises to a conclusion because of some higher-order mental state that those premises support that conclusion, one must take the claim that those premises support that conclusion as a premise in an inference.

Now, since I am also concerned with HORs concerning non-inferential beliefs, we need to reformulate this into a more general premise:

> $P_{GENERAL}$: In order to form a belief based on some evidence E because of some higher-order mental state D that E supports Bp, one must take D as part of their basis for Bp.

We can immediately see that HOE works without accepting $P_{GENERAL}$. First, while E_H is required to be part of the basis alongside E on which S believes that p, E_H does not concern the relationship between E and Bp directly. Instead, it is only concerned about

[35]I want to thank an anonymous referee for raising this concern.

[36]Note that the luck that underlies this intuition is the same kind of luck that motivated our intuitive judgements concerning Norman the Clairvoyant and Seeing Sandra [§2.1] and also the luck which underlies the distinction between propositional and doxastic justification [§2.3].

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the relationship between E_{TOTAL} and p. Second, in contrast to the <HOR mental> discussed above, we do not need to *take* E_H to support E_{TOTAL} in the sense that we have some conscious higher-order mental state. Instead, E_H is just evidence we have all along that bears on our overall evidential situation with respect to p.

So, if there is a lurking regress, it must rest on a different assumption than $P_{GENERAL}$. Here we could appeal to a recent argument put forward by Appley and Stoutenburg (2017) against explanationist understandings of evidential support. Appley and Stoutenburg point out that if the explanationist relies on a mental understanding of evidence and requires the epistemic agent to be aware that p is part of the best explanation for why S has E (in order to support p), we trigger a regress. This is because the required awareness is itself a mental state and, therefore, a piece of evidence. Thus, for every awareness, there is an emerging new piece of evidence such that a new awareness mental state is required, and so on *ad infinitum* (Appley and Stoutenburg 2017: 3077).

Two things to note about this. First, this worry is a general worry about explanationist understandings of evidential support. So it *only* concerns the defended higher-order requirement *if* it relies on such an understanding. Second, the argument, while plausibly successful against other explanationist frameworks such as McCain's (2014) or Conee and Feldman's (2008), does not concern my preferred version of explanationism. In my view, if S believes that p based on E, S does not need to be aware of or have a seeming (or a disposition to) that governs the support relation between E and p and E_H and q. All that is needed is that p is part of the best explanation of why S has E and q is part of the best explanation of why S has E_H, according to the relevant epistemic standards.

In sum, HOE lives up to Desiderata 1 and 2 and, therefore, provides us with an explanation of the case judgements about Seer and Non-Seer as well as clairvoyance and sensory substitution cases [§5.1]. Second, in contrast to other requirements discussed, HOE provides us with a satisfactory answer to prominent worries often raised against higher-order requirements [§5.1.1–§5.1.3].

6. Conclusion

There are multiple reasons why we might think that epistemic justification is subject to higher-order requirements. Namely, the reasons underlying defeater- and basing-clauses as well as the intuitions that motivate our case judgements with respect to Seer and Non-Seer, as well as clairvoyance and sensory substitution cases [§2]. However, as we have seen, often-discussed requirements [§3] face a plethora of well-known objections [§4]. In walking through these objections, I have given a systematic overview of the pros and cons of various HORs. I concluded that evidentialist requirements, and in particular the discussed higher-order required HOE, are the only type of requirements that allow us to give a satisfactory response to the discussed objections [§5].

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