Higher-Order Evidence: Its Nature and Epistemic Significance

by

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Biographical Sketch

The author was born in Fort Smith, Arkansas. He attended the University of Oklahoma and graduated *summa cum laude* with a Bachelor of Arts degree in Philosophy, a Bachelor of Science degree in Mathematics, and a minor in Religious Studies. In 2007 he came to the University of Rochester, where he received a Master of Arts degree in Philosophy in 2011, at which point he began doctoral studies in the same field. He was awarded a Dean's Fellowship in 2007 and a teaching assistantship in 2008. He pursued his research in Philosophy under the direction of Professor Richard Feldman.

Abstract

Higher-order evidence is, roughly, evidence of evidence. The idea is that evidence comes in levels. At the first, or lowest, evidential level is evidence of the familiar type—evidence concerning some proposition that is not itself about evidence. At a higher evidential level the evidence concerns some proposition about the evidence at a lower level. Only in relatively recent years has this less familiar type of evidence been explicitly identified as a subject of epistemological focus, and the work on it remains relegated to a small circle of authors and a short stack of published articles—far disproportionate to the attention it deserves. It deserves to occupy center stage for several reasons. First, higher-order evidence frequently arises in a strikingly diverse range of epistemic contexts, including testimony, disagreement, empirical observation, introspection, and memory, among others. Second, in many of the contexts in which it arises, such evidence plays a crucial epistemic role. Third, the precise role it plays is complex, gives rise to a number of interesting epistemological puzzles, and for these reasons remains controversial and is not yet fully understood. As such, higher-order evidence merits systematic investigation. This thesis undertakes such an investigation. It aims to produce a thorough account of higher-order evidence—what it is, how it works, and its epistemic consequences. Chapter 1 serves as a general introduction to the topic and an overview of the existing literature, but primarily aims to further elucidate the concept of higher-order evidence and build a theoretical framework for later chapters. Chapter 2 develops an account of what I call “higher-order support”: the bearing higher-

order evidence has, not on corresponding “lower-order evidence” (roughly, the evidence the higher-order evidence is about), but on corresponding “object-level propositions” (roughly, the propositions the higher-order evidence alleges the lower-order evidence to be about). Chapter 3 develops an account of “levels interaction”: the effect on overall support when the different evidential levels combine. Chapter 4 identifies important consequences of the theoretical results of the previous two chapters and applies the theory to four select cases of current epistemological controversy—testimony, memory, the closure of inquiry, and disagreement.

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Chapter 1 The Concept of Higher-Order Evidence

Higher-order evidence is, roughly speaking, evidence of evidence. The idea is that evidence comes in levels. At the first, or lowest, evidential level is evidence of the familiar type—evidence concerning some proposition that is not itself about evidence. At a higher evidential level the evidence concerns some proposition about the evidence at a lower level. Only in relatively recent years has this less familiar type of evidence been explicitly identified as a subject of epistemological focus, and the work on it remains relegated to a small circle of authors and a short stack of published articles—far disproportionate to the attention it deserves. It deserves to occupy center stage for several reasons. First, higher-order evidence frequently arises in a strikingly diverse range of epistemic contexts, including testimony, disagreement, empirical observation, introspection, and memory, among others. Second, in many of the contexts in which it does arise, such evidence often plays a crucial role in epistemic evaluation. Third, the precise role it plays is complex, gives rise to a number of interesting epistemological puzzles, and for these reasons remains controversial and is not yet fully understood.

Although the ultimate goal of an investigation into higher-order evidence is to produce a satisfactory account of its epistemic significance, this is not my present concern. That will come in due time. My present concern is instead more fundamental. I have two primary sets of goals in this chapter. The first is expositional: to serve as a general introduction and literature review for readers new to the topic. The second is argumentative: to establish that the existing characterizations of the concept of higher-order evidence (including my rough, preliminary characterization of it above) and of

various related concepts are in dire need of refinement, to demonstrate that this current lack of conceptual refinement is the source of several major errors in the literature, and to provide the needed refinement to set the stage for further progress.

The place to begin is with an overview of the basic concepts, terminology, issues, possible theories, and existing literature. I provide such an overview in §1.1. In §1.2, I supplement the theoretical introduction with a set of concrete illustrations. Once a rudimentary understanding is in place, I turn to the argumentative part of the paper, beginning with §1.3, where I introduce the "problem of characterization" and critique the purported solutions currently on offer. This critique will highlight the fact that there are various kinds of evidence about evidence that might or might not be best construed as higher order. I further explore these kinds in §1.4, where I devise a set of criteria by which we can systematically decide the matter. In §1.5, I use the results to construct an adequate solution to the problem of characterization. I conclude in §1.6 by showing that the conceptual work of this chapter has a significant payoff, namely, that it suffices to dispel a number of faulty arguments, objections, and theories in the existing literature.

1.1 An Overview of Concepts and Theories

Let's start with the general characterizations of higher-order evidence that are already available in the literature. Unfortunately, such characterizations are sparse, though this is to be expected, since, after all, the current body of literature on higher-order evidence is itself rather small. Moreover, some authors, such as David Christensen (2010: 186) explicitly refuse any attempt at general characterization, preferring instead to

introduce the concept purely by example. Thankfully, though, a handful of attempts do exist:

C1. "evidence about the significance or existence of ordinary, or first-order, evidence" (Feldman 2009: 294, from the abstract)

C2. "evidence about the significance of one's first-order evidence" (Feldman 2009: 295)

C3. "Evidence about the existence, merits, or significance of a body of evidence" (Feldman 2009: 304)

C4. "evidence about the character of her first-order evidence" (Kelly 2005: 186)

C5. "evidence about the normative upshot of the evidence to which she has been exposed" (Kelly 2010: 138, footnote 24)

C6. "evidence about the evidence regarding the target of inquiry" (Kvanvig 2011: 45)

Unfortunately, it complicates matters that these proposals differ from one another, not only from author to author, but also from paper to paper by a single author (as with Kelly's two characterizations), and sometimes even from page to page within a single article (as with Feldman's three characterizations). Moreover, the differences are not merely terminological (though that, too, is a nontrivial problem of its own, as we'll later see). The more substantive problem is that the subtle differences among the six proposals yield conflicting results as to what kinds of evidence count as higher order.[1] For example,

[1] The conflicts arise only if C1–C6 are indeed taken as necessary and sufficient conditions for being higher-order evidence, rather than merely as sufficient conditions to cover just the range of cases discussed by the author in question. Even if merely intended as sufficient, it is worth considering them as both necessary and sufficient and identify

C2, C4, and C5, unlike the others, limit higher-order evidence to evidence about some *person's* evidence, since they qualify the second occurrence of the term "evidence" with a personal possessive pronoun. C2, C4, and C5 also limit higher-order evidence to evidence about some quality of a body of evidence (its "significance," "character," or "normative upshot"), whereas C1 and C3 expand the concept to include evidence about the bare existence of other evidence. C6 doesn't specify either way and is therefore up to interpretation. Finally, C1, C2, and C4 definitely require higher-order evidence to be about "first-order evidence" (whatever that is), and C6 probably does as well (on a natural reading of "evidence regarding the target of inquiry"), whereas C3 clearly does not, and C5 probably doesn't either (assuming one can be "exposed" to evidence that is not first order).

Because the proposals conflict with one other, we cannot simultaneously accept them all. Actually, we'll later see that we shouldn't accept any particular one of them either. But we don't need to worry about this just yet. For now, our task is not to come up with a precise characterization but merely a preliminary one. And we can easily do so by distilling from C1–C6 the common core on which they all agree. The result is the preliminary characterization with which I started this chapter:

> *Higher-order evidence (preliminary characterization):* Higher-order evidence is, *roughly*, evidence about evidence.

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the problems that arise so that we can work toward an adequate characterization of our concepts.

Later in the chapter, we'll see why the preliminary characterization is inadequate to serve our ultimate needs, and consider various strategies for moving beyond it. But it is enough to go on for now.

Given the preliminary characterization of higher-order evidence, we can easily construct corresponding preliminary characterizations of the correlative concepts that show up in the literature, such as "first-order evidence," "second-order evidence," more generally "nth-order evidence" (for any positive integer n), "lower-order evidence," and "object-level proposition." Though I haven't seen any of these correlative concepts explicitly characterized elsewhere, the term "first-order evidence" is used to mean something like this:

> *First-order evidence (preliminary characterization):* First-order evidence is, *roughly*, evidence that higher-order evidence is "ultimately" about—i.e., the evidence at the "bottom level."

For now, we can estimate "bottom level" to mean a level that is not itself about evidence, so that first-order evidence is just about the way the world is (e.g., about rocks and trees and paintings). Keep in mind, though, that this estimate is not quite correct, and we will later see why. But it suffices for now, since it gets most cases right.

We can build on our preliminary characterization of the first evidential level to produce a preliminary characterization of the second evidential level as follows:

> *Second-order evidence (preliminary characterization):* Second-order evidence is, *roughly*, evidence that is "directly" about first-order evidence.

Generalizing, we get:

Nth-order evidence (preliminary characterization): For any integer n > 1, nth-order evidence is, *roughly*, evidence that is directly about (n-1)th-level evidence.

Higher-order evidence is then any evidence that is nth-order evidence for any integer n > 1. As for the term "lower-order evidence," on one reading, it refers to any evidence that is not higher order. But since we already have another term for this ("first-order evidence"), I'll adopt the alternative meaning, which relativizes lower-order evidence to a given body of higher-order evidence:

Lower-order evidence (preliminary characterization): For any higher-order evidence E, lower-order evidence with respect to E is, *roughly*, evidence that E is about (whether directly or via intermediate evidential levels).

Finally, a rough definition of the term "object-level proposition":

Object-level proposition (preliminary characterization): An object-level proposition is, *roughly*, a proposition at the "bottom level." In other words, it is a proposition that the higher-order evidence is ultimately about, and the first-order evidence is directly about.

Given a preliminary understanding of the basic concepts in play, we are now in a position to understand the issues they raise. At the broadest level of generality, the central issue that higher-order evidence raises can be described as follows:

Higher-order influence: The evidential bearing, if any, that higher-order evidence has—whether by itself or in combination with corresponding lower-order evidence—on corresponding object-level propositions.

Notice the word "corresponding" in this definition. It occurs in two instances. To illustrate the need for both, imagine that E2 is evidence about E1, which is evidence for p, and E2* (but not E2) is evidence about E1*, which is evidence for p*.[2] Then E1, unlike E1*, is lower-order evidence in virtue of being evidence that E2 is about. This is what it means to say that E1 (but not E1*) is E2's *corresponding* lower-order evidence (whether or not E1 actually exists[3]). Similarly, proposition p, unlike p*, is an object-level proposition in virtue of being a proposition that E2 is ultimately about. And this is what it means to say that p (but not p*) is E2's *corresponding* object-level proposition. When discussing any bit of higher-order evidence, we need to make sure it's linked with its corresponding lower-order evidence and corresponding object-level proposition. When this happens, I'll say that the levels are *coordinated,* and are *uncoordinated* otherwise. In what follows, assume that levels are coordinated unless otherwise specified, though I'll usually try to make this explicit except when doing so overcomplicates exposition.

Although it is sometimes useful to discuss higher-order influence in general, doing so entangles two distinct issues that are often best addressed separately:

Higher-order support: The evidential bearing, if any, that higher-order evidence has *by itself* on corresponding object-level propositions.

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[2] I'll adopt the convention that, for any positive integer n, En is nth-order evidence (or, at least, evidence that is initially thought to be so). The absence of subscripts usually means that the particular ordinality is unknown or unimportant.

[3] E2 might be wrong that E1 exists. Even in such cases, I'll speak of E1 as E2's corresponding lower-order evidence.

Levels interaction: The evidential bearing of higher-order evidence *in combination with* corresponding lower-order evidence on corresponding object-level propositions.

One reason to treat these separately is that in some cases an agent possesses higher-order evidence without also possessing the corresponding lower-order evidence, in which case we will need a pure theory of higher-order support to assess the situation. Even when the corresponding lower-order evidence is present, it will be easier to develop a theory of levels interaction if we first develop a separate theory of higher-order support, and then factor in the corresponding lower-order evidence. Moreover, separate treatment affords us the opportunity to discuss the role of higher-order support in levels interaction. On some views, higher-order support first offers support at the object-level via a kind of evidential "filtration" (where evidential support filters down from the higher level, through the lower evidential levels, and ultimately to the object level), and this support must be added to or weighed against lower-order support to determine the overall support at the object level. In cases in which the higher-order support conflicts with the lower-order support (i.e., when the lower-order evidence does not actually relate to the object-level proposition in the way indicated by the higher-order evidence), the two levels act as full or partial rebutting defeaters for one another. On other views, higher-order support plays no role in levels interaction, at least when the two levels conflict, since the higher-order evidence would in that case act instead as an undercutting defeater for the lower-order evidence. On still other views, such as my own, the interrelation is much more complex—higher-order support sometimes plays a role in levels interaction but

sometimes it does not, and when it does play some role, this role can vary along a spectrum of significance.

Having identified and clarified the issues, I now outline the possible theories. Beginning with higher-order support, possible views are distinguished by the degree, if any, to which higher-order evidence has object-level significance (i.e., a bearing by itself on corresponding object-level propositions). Although there is a spectrum of such views, here's a coarse classification:

A. *Universal higher-order significance:* Higher-order evidence by itself *always* has some bearing on corresponding object-level propositions (at any rate, at least when the higher-order evidence attributes some particular evidential relation to the corresponding lower-order evidence and corresponding object-level proposition[4]).

B. *Universal higher-order irrelevance:* Higher-order evidence by itself *never* has any bearing on corresponding object-level propositions.

C. *Restricted higher-order significance:* Higher-order evidence by itself *sometimes* has a bearing on corresponding object-level propositions—a view that can be broken down into three subviews:

[4] If the higher-order evidence merely denies an evidential relation (E2 supports that E1 does *not* support p) or merely affirms a "non-committal" evidential relation (E2 supports that E1 is evidence *concerning* p), then the higher-order evidence does not say anything about what is supported at the object level, and therefore does not by itself have any bearing on the object-level proposition.

i. *Near-universal higher-order significance:* Higher-order evidence by itself *almost always* has object-level significance (i.e., it has such significance in all but a relatively small fraction of special cases).
ii. *Near-universal higher-order irrelevance:* Higher-order evidence by itself sometimes but *almost never* has object-level significance (i.e., it has such significance only in a relatively small fraction of special cases).
iii. *Moderate higher-order significance:* Higher-order evidence by itself has object-level significance about as often as it does not.

As for levels interaction, most authors agree (though I'll later contest this consensus) that when the higher-order and lower-order evidence are in agreement (i.e., when the lower-order evidence relates to the object-level proposition in the way indicated by the higher-order evidence), then the total combined evidence supports at the object level whatever the lower-order evidence supports and whatever the higher-order evidence indicates that the lower-order evidence supports (though there is disagreement about whether the degree of support increases beyond that of each level alone). The primary dispute over levels interaction arises when levels conflict (i.e., when the lower-order evidence does not actually relate to the object-level proposition in the way indicated by the higher-order evidence). In any such case, either the lower-order evidence dominates (i.e., the total evidential support is determined by whatever the lower-order evidence actually supports) or the higher-order evidence dominates (i.e., the total evidential support is determined by whatever the higher-order evidence misleadingly indicates about the lower-order

evidence). So, the main views about levels interaction can be classified by the circumstances in which a particular level dominates in cases of conflict:

A. *Uniform higher-order dominance:* In cases of levels conflict, higher-order evidence always dominates.
B. *Uniform lower-order dominance:* In cases of levels conflict, lower-order evidence always dominates.
C. *Restricted (or selective) dominance:* In cases of levels conflict, higher-order evidence dominates in some circumstances and lower-order evidence dominates in others. This comes in three subtypes:
    i. *Quasi–higher-order dominance:* In cases of levels conflict, higher-order evidence almost always dominates (i.e., it dominates in all but a relatively small fraction of special cases).
    ii. *Quasi–lower-order dominance:* In cases of levels conflict, lower-order evidence almost always dominates (i.e., it dominates in all but a relatively small fraction of special cases).
    iii. *Egalitarianism:* In cases of levels conflict, higher-order evidence dominates about as often as lower-order evidence dominates.

Despite the relatively small body of literature on the topic, most of these views have been defended in publication. Interestingly, views that assign a given degree of object-level significance to higher-order evidence are commonly paired with views on levels interaction that assign the same degree of higher-order dominance. For example, Feldman (2005, 2006, 2007, and 2009), Christensen (2007 and 2010), and Matheson (2009) seem

to defend universal higher-order significance and combine this with universal higher-order dominance. Kelly (2005) defends universal higher-order irrelevance and uniform lower-order dominance but later (in his 2010) weakens this position to near-universal lower-order dominance and quasi–lower-order dominance, placing him at the same end of the spectrum in the restricted camp with respect to both issues. Conee (2010) and Barnett (see chapters 2 and 3) defend near-universal significance and quasi–higher-order dominance. Kvanvig (2011) and Fitelson (2012) also fit into the restricted camp on both higher-order significance and dominance, though they are more difficult to classify more precisely, since they do not explicitly give clear emphasis to either higher-order evidence or lower-order evidence over the other. Perhaps they are candidates for moderate higher-order significance and egalitarianism. Then there are those like Huemer (2011) who argue against universal significance and uniform higher-order dominance, but do not explicitly say what alternatives they do accept. Finally, some remain silent on one side or the other, such as Hudson (in personal conversation with Feldman, as reported in Feldman (2009)), who rejects universal higher-order significance but does not say anything about levels interaction. In reverse, Weatherson (2013) and Lasonen-Aarnio (2014) reject higher-order dominance but say nothing explicitly about higher-order significance. It should also be kept in mind that there are massive volumes of work that are peripherally related and have some bearing on these issues, especially the work on the epistemology of disagreement. Most of it, though, is not cast explicitly in terms of higher-order evidence, brings other factors into play, and therefore does not easily map onto our discussion. But among those who do explicitly take a definite position on both

higher-order support and levels interaction, and therefore can easily be placed in the above taxonomy, there are no departures from the noted pairing phenomenon (at least as far as I can tell at this time). This is striking, especially in light of the aforementioned fact that there are radically different views about the relationship between higher-order support and levels interaction, some of which hold that higher-order support has little or no role in levels interaction.

1.2 Illustrations

Now that the basic concepts, issues, and theories have been outlined, I want to illustrate them with a set of concrete examples. I have selected the first five examples to be representative of the range of kinds of higher-order evidence that appear in the literature, and have grouped them by epistemic context: disagreement, testimony, empirical observation, reflection on the merits of evidence, and introspection. Beyond these, I also introduce new epistemic contexts in which higher-order evidence appears: memory, evidence-gathering, and the closure of inquiry.

1.2.1 Disagreement

I begin with higher-order evidence in informed peer disagreements, since this is the primary context in which the concept of higher-order evidence has been discussed. Here are a couple of my favorite cases, ones typical of the kind of disagreements that appear in the epistemology literature:

> Case 1: “How can I believe (as I do) that free will is incompatible with determinism or that unrealized possibilities are not physical objects or that human beings are not four-dimensional things extended in time as well as in space, when David Lewis—a

philosopher of truly formidable intelligence and insight and ability—rejects these things I believe and is already aware of and understands perfectly every argument that I could produce in their defense?" (van Inwagen 1996: 138)[5]

Case 2: "Suppose you and I are standing by the window looking out on the quad. We think we have comparable vision and we know each other to be honest. I seem to see what looks to me like the Dean standing out in the middle of the quad. (Assume that this is not something odd. He's out there a fair amount.) I believe that the Dean is standing on the quad. Meanwhile, you seem to see nothing of the kind there. You think that no one, and thus not the Dean, is standing in the middle of the quad. We disagree. Prior to our saying anything, each of us believes reasonably. Then I say something about the Dean being on the quad, and we find out about our situation. In my view, once that happens, each of us should suspend judgment. We each know that something weird is going on, but we have no idea which of us has the problem. Either I am "seeing things" or you are missing something. I would not be reasonable in thinking that the problem is in your head, nor would you be reasonable in thinking that the problem is in mine." (Feldman 2007: 207-8)

In each of these cases, there is an agent, S (van Inwagen, Feldman), who believes some proposition, p (incompatibilism about free will, that unrealized possibilities are not physical objects, that human beings are not four-dimensional things extended in time and space, that the Dean is on the quad), at some time, t1, and a second agent, T, who

[5] The case is also presented and discussed in van Inwagen (2010: 23ff).

believes ~p at t1. At t1, S and T share identical (or comparable[6]) evidence, E1, regarding p. And the two agents are "epistemic peers," meaning roughly that they are equally intelligent, insightful, intellectually able, reliable, and the like. Furthermore, at some later time, t2, S becomes fully informed of the above facts. (Perhaps T does as well, though the assumption doesn't matter for my purposes.)

In this situation, a pressing question is whether it is rational for S to maintain or abandon belief in p at t2. One way to understand this question is as a question about what S's total evidence supports at t2. In order to address this evidential version of the question, we must first consider what S's evidence *is* at t2.

It has already been stipulated that part of S's evidence at t2 is E1. But additional evidence also possessed by S at that time includes the evidence—call it "E2"—that (i) T believes ~p, (ii) T has identical (or comparable) evidence concerning p, and (iii) in comparison to S, T is as intelligent, insightful, intellectually able, reliable, and the like. Under these conditions (perhaps along with the condition that E2 contains sufficient information about what counts as evidence), E2 supports that T has some evidence, E1, in favor of ~p. E2 is therefore our first concrete example of higher-order evidence, while E1 is E2's corresponding lower-order evidence and ~p is the corresponding object-level proposition.

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[6] Perhaps two persons rarely, if ever, share exactly the same bodies of evidence. Feldman (2006: 423; 2009: 310) and Sosa (2010: 290) make this point. I also take van Inwagen (1996: 138; 2010: 25) to be hinting at this idea when he suggests that we often have incommunicable insights. However, it is plausible that our evidence can (and often is) similar enough to support all of the same propositions (at least the relevant ones), and so can harmlessly be treated as identical for the purposes of epistemic assessment.

Assuming S gains at t2 no evidence relevant to p beyond E1 and E2, S's total evidence concerning p at that time is E1+E2. Our question of what S's total evidence supports at t2 is therefore the question of what at that time E1+E2 supports regarding p—a question about levels interaction. The epistemic significance of disagreement therefore turns primarily on the question of levels interaction. Note, however, that although levels interaction is the primary concern here, higher-order support may also be of some relevance. To see this, notice that one strategy for answering the question of what E1+E2 supports is to first determine what each of E1 and E2 supports regarding p and combine the results. This strategy requires assessing what, if anything, E2 by itself supports regarding p—an instance of higher-order support. Plausibly, it supports ~p. If so, and if E1 supports p, then E2 serves as a (partial or full) rebutting defeater for E1's support for p. Of course, if E1 and E2 agree with respect to p, or if there is no such thing as higher-order support, the current strategy leaves E1+E2 supporting whatever E1 by itself supports. But it is nevertheless clear that under at least some circumstances the existence of higher-order support potentially plays a significant role in the epistemic significance of disagreement, even though levels interaction is the primary concern.

Higher-order evidence potentially has epistemic significance in disagreement cases even if higher-order support does not exist, or it exists but fails in a given case to provide object-level support of the kind needed to rebut the corresponding lower-order evidence. The above strategy for assessing E1+E2 does not allow for this possibility, but that's merely because the strategy does not work in every case. It leaves out certain crucial considerations, one being the possibility that E2 is misleading evidence which

supports some incorrect position about E1's evidential relation to p, in which case E2 potentially serves as an undercutting, rather than a merely rebutting, defeater for whatever it is that E1 supports. Hence, higher-order evidence has the potential to play a significant role in levels interaction independently of whether it provides higher-order support, although higher-order support also potentially affects levels interaction, as the first strategy of assessing E1+E2 shows. In any case, it is clear that both higher-order support and levels interaction, as well as the effect of the former on the latter, must all be accounted for in order to produce a complete and satisfactory epistemic assessment of disagreement.

1.2.2 Testimony

Although disagreement is the primary context in which higher-order evidence has been discussed, higher-order evidence occurs in many other contexts as well. One such context is testimony.

Few purely testimonial cases (i.e., testimonial cases that are not also cases of disagreement) have been presented as examples of higher-order evidence in the literature on the topic. In fact, I know of only two, and they are made merely in passing, in the context of making points having nothing specifically to do with testimony:

> Case 3: "If there is experiential evidence, then when you have a headache, you have experiential evidence supporting the proposition that you have a headache. When you tell me that you have a headache, I don't thereby get your headache. But I do then have reason to think that you have a headache." (Feldman 2009: 309)

> Case 4: "If someone tells you 'Jones has some evidence supporting P, but I don't know what it is,' then you have some evidence about the existence of evidence for P." (Feldman 2009: 304)

In these cases, a person, T, tells another person, S, some proposition, p. Presumably, S reasonably takes T to be sincere and reasonable or reliable (at least on that occasion, perhaps in general). The evidence, E2, that makes this reasonable for S is evidence that T has some evidence, E1, for p. E2 is another example of higher-order evidence, with E1 as corresponding lower-order evidence and p as a corresponding object-level proposition.

In cases like these, we typically think S has reason to believe p, as Feldman notes. If so, it is plausibly because E2 supports p in virtue of E2's support for the proposition that E1 supports p—an instance of higher-order support. So, our normal judgments about such cases plausibly turn on higher-order support. And notice that this is so independently of any role higher-order support plays in levels interaction. So, we see that in some contexts—at least in those cases, such as purely testimonial ones, in which higher-order evidence is not accompanied by any corresponding lower-order evidence—no levels interaction takes place and higher-order support becomes the only form of higher-order influence, in contrast to what happens in disagreement contexts.

From the examples of testimony and disagreement, it should now be clear that the presence of higher-order evidence has the potential to significantly affect overall evidential support, and therefore overall epistemic assessment, via higher-order support, levels interaction, or both. As such, I'll leave off further discussion of these matters as I continue to illustrate further contexts in which higher-order evidence arises.

1.2.3 Empirical Observation

A further source of higher-order evidence that has been identified in the literature is empirical observation. However, I know only of one such case in the original literature explicitly referred to as involving higher-order evidence:

> Case 5: "I'm a neurologist, and know there's a device that has been shown to induce the following state in people: they believe that their brains are in state S iff their brains are not in state S. I watch many trials with the device, and become extremely confident that it's extremely reliable. I'm also confident that my brain is not in state S. Then the device is placed on my head and switched on…" (Christensen 2010: 187)

Notice that, unlike cases of disagreement and testimony, this case makes no explicit reference to evidence possessed by other agents. Nor is there reason to suppose such evidence is implicit in the case. It is consistent with the case to suppose that the device to which the subjects are connected indicates whether the subjects are in brain state S and indicates whether they believe they are in that state. Purely on the basis of observing the device, Christensen gains evidence that the subjects hooked up to the device are in state S iff they are in fact not. When Christensen is not himself hooked up, he has good introspective evidence that he is not in state S. But he then plugs himself in and sees the switch flipped on. Christensen now has some empirical evidence, E, concerning the reliability of his evidence that he is not in state S. E is empirically derived higher-order evidence.

Christensen's case is elaborate and unrealistic. But empirical higher-order evidence also arises in more mundane cases. For example, by observing Koplick spots

and their constant conjunction with measles, scientists have gained empirically derived evidence that Koplick spots (or some proposition or set of propositions about such spots) are evidence of measles. Similarly, by observing a number of ravens over time, one can gain empirically derived evidence that the presence of a raven (or some proposition or set of propositions about its presence) is evidence of the presence of a black-colored bird. These examples of empirically derived evidence are higher order. Many others like these examples occur regularly in everyday situations. Empirical higher-order evidence is therefore quite common.

1.2.4 Reflection on Evidential Merits

The sources of higher-order evidence have so far been from the external world (other agents and empirical observation). But one need not look beyond one's own mind to find examples of higher-order evidence. One can get some such evidence purely by reflecting on the merits of one's own evidence. Feldman uses skeptical arguments as an illustration:

> Case 6: "In some cases, skeptical arguments appear to present people with reasons to doubt that the evidence they have for some class of propositions actually does provide justifying evidence for those propositions. Thus, the arguments can seem to provide people with reasons to doubt that their perceptual evidence really does support ordinary external world propositions, that the evidence in familiar inductive inferences really does support the conclusions routinely drawn, and so on." (Feldman 2009: 306)

In this case, the skeptical arguments (or the evidence that supports their plausibility) are evidence that our evidence does not support the conclusions we ordinarily believe about external world propositions. These arguments can be arrived at by pure reflection on the merits of our evidence. Hence, we now have a purely reflective source of higher-order evidence.

Purely reflective sources of higher-order evidence need not be as sophisticated as skeptical arguments. They need not be epistemological or even philosophical. Anyone with reflective tendencies (epistemological, philosophical, or otherwise) sometimes thinks about a piece of reasoning, A, with some conclusion C, and proceeds to assess whether A is successful in supporting C. This reflection can produce evidence, E, for the success or failure of A, which will be evidence that A supports (or does not support) C. In that case, E is evidence about A being (not being) evidence for C. Reflection on the merits of evidence is therefore another common source of higher-order evidence.

1.2.5 Introspection

Our next illustration shows just how easy it is to gain higher-order evidence. Even simple introspection can yield such evidence, as the following case demonstrates:

> Case 7: "Suppose you see an object that looks blue. Assume the blue look is evidence that the object is blue. Then, if you are sophisticated, you have learned that someone (you) has evidence for the proposition that the object is blue." (Feldman 2009: 304)

Suppose that S has evidence E concerning proposition p and that S introspects and notices E. Further suppose S has a good take on what evidence is. Then S's introspective information and information about what counts as evidence together form a body of

evidence supporting that there is some evidence concerning p. Any such body of evidence is introspective higher-order evidence. Feldman's case is one example. I take it that other examples of this sort of thing abound in everyday life.

1.2.6 New Applications: Memory, Evidence-Gathering, and the Closure of Inquiry

Finally, there are various issues in the epistemology literature whose connections with higher-order evidence have not yet been fully appreciated, at least as far as I'm aware.

First, consider justified memorial beliefs whose original evidence has been forgotten. How are evidentialists to explain such justification? This is the so-called "problem of forgotten evidence."[7] One possible solution that has largely gone unnoticed is that when we remember a proposition, the memory is often accompanied by a certain past-oriented phenomenology: the proposition seems to be something we learned in the past or something for which we once had evidence (even though we cannot now remember what that evidence was). This phenomenological experience is higher-order evidence that we once had evidence for the proposition. If this higher-order support filters down to the object level, we now have a potential higher-order solution to our problem.[8]

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[7] For discussion, see Harman (1986), Senor (1993), Audi (1995), Sosa (1999), Goldman (1999), and Conee and Feldman (2001 and 2011).

[8] This approach, although new, is an extension of the phenomenological solution briefly mentioned by Conee and Feldman (2001: 70 and 2011), supplemented with the past-oriented phenomenology of memory noted by Plantinga (1993: 57-61), and ties in the observation that this yields higher-order phenomenological evidence about past evidence.

Second, consider any stage of inquiry at which one is aware that there is still evidence out there to be gained. Is it epistemically proper to close inquiry at this stage, or must one wait until acquiring some of the missing evidence?[9] In contrast to the famous Sherlockian dictum that one should wait until "all evidence is in" before closing inquiry and forming a belief, some evidentialists have endorsed an anti-Sherlockian view, according to which unpossessed evidence does not affect one's justification, since justification depends only on the evidence one actually has.[10] Both the Sherlockian and anti-Sherlockian views are unpalatable to many: the Sherlockian view yields strong skeptical results, since it is never (or almost never) the case that *all* the relevant evidence is in, whereas the anti-Sherlockian view seems to justify sticking one's head in the sand when it comes to opportunities to gain further evidence (the so-called "Ostrich Objection").[11] However, higher-order evidence potentially gives us a middle way, an attenuated Sherlockian view: the evidence we have of this other evidence is higher-order evidence that we do possess, which might have object-level significance, thereby making the unpossessed evidence of derivative justificatory significance. Perhaps in some cases this filtered support might be enough to warrant suspension of judgment until all, or at

[9] The epistemic closure of inquiry is most extensively discussed by Kvanvig, since he includes it explicitly as a condition on knowledge. For example, see his (2003, 2009, 2011, 2013, and 2014).

[10] See Feldman and Conee (1985), Feldman (2000), and Conee (2001).

[11] For discussion of the Ostrich Objection and related problems pertaining to evidence-gathering, see Kornblith (1993), Cargile (1995), Feldman and Conee (1995), Hall and Johnson (1998), Feldman (2000), Conee (2001), and Webb, Chang, and Benn (2013).

least some, of the further evidence is acquired. Higher-order evidence might therefore have implications for evidence-gathering and when exactly it is appropriate to close inquiry. This view, along with the proposed higher-order solution to the problem of forgotten evidence and various other applications, will be further examined in Chapter 4.

1.3 The Problem of Characterization and Inadequate Solutions

Having completed the expositional half of the chapter, we now turn to the argumentative half. In this section, I introduce what I call the "problem of characterization" and show that the current proposed solutions are inadequate. This will motivate the search for a new solution, beginning in the next section.

According to the problem of characterization, careful characterizations of higher-order evidence and other closely associated concepts are needed to sufficiently grasp the concepts before proceeding to determine their epistemic significance. However, the characterizations we have seen thus far are mere preliminary approximations of the concepts--hence the qualification *roughly*. Thus, even when supplemented with a good range of examples, the boundaries of the concepts remain undefined. This in turn makes it difficult to delineate the boundaries of a theory of higher-order influence. Moreover, as we'll see at the end of the chapter, the lack of clarity is problematic because it is the source of several major mistakes in the literature.

Since the preliminary characterizations of the secondary concepts associated with higher-order evidence mostly inherit their lack of clarity from the preliminary characterization of higher-order evidence, let's focus exclusively on the latter. The first strategy one might propose for moving beyond the preliminary characterization of

higher-order evidence is to adopt the more precise characterizations from those who introduced the concept in the first place. But the problem for this should by now be clear: there are several such characterizations in the literature, and they conflict with one another, as earlier noted.

The second strategy is to be selective: just choose one of the already existing characterizations over the others. Unfortunately, not a single one of them is a good choice. In order to see why, let's remind ourselves of the proposals:

C1. "evidence about the significance or existence of ordinary, or first-order, evidence" (Feldman 2009: 294, from the abstract)

C2. "evidence about the significance of one's first-order evidence" (Feldman 2009: 295)

C3. "Evidence about the existence, merits, or significance of a body of evidence" (Feldman 2009: 304)

C4. "evidence about the character of her first-order evidence" (Kelly 2005: 186)

C5. "evidence about the normative upshot of the evidence to which she has been exposed" (Kelly 2010: 138, footnote 24)

C6. "evidence about the evidence regarding the target of inquiry" (Kvanvig 2011: 45)

Problem 1. C1, C2, and C4 contain the undefined technical term "first-order evidence." Nowhere have I seen this term explicitly defined. Nor is its definition obvious. One might naturally take "first-order" to mean "not higher-order," in which case C1, C2, and C4 would be circular and therefore entirely unhelpful. An improvement would be to take "first order" to mean "not about other evidence." However, as noted earlier and for

reasons soon to be discussed, this proposal will likewise fail. For now, the point is merely that the term is technical, needs a clear definition, and the available characterizations do not offer one. An additional potential worry that arises in characterizations that define higher-order evidence in terms of first-order evidence is that they threaten to collapse all higher-order evidence into the second evidential level, whereas it would be more natural (and more useful, as we shall later see) to allow the possibility of third-order evidence, fourth-order evidence, and in general nth-order evidence for any positive integer n. Perhaps, though, we can interpret "about" in C1–C6 so that even third-order evidence, which is *directly* about second-order evidence, is still *indirectly* about first-order evidence, thereby preserving the desired multilevel distinctions. But this way of resolving the worry leads directly into the next.

Problem 2. Many of the terms included in C1–C6 are unclear or ambiguous. We just saw how "about" can be interpreted as either a kind of direct or indirect "aboutness." C5's "exposed" and C6's "regarding" are likewise subject to interpretation. But more important for present purposes are the ambiguities in the terms "significance," "merits," "character," and "normative upshot." Let E be evidence about (whatever this means) some evidence E*, which is in turn evidence about p. It is unclear whether the significance, merit, character, and normative upshot of E* with regard to p are assessments purely of the *relation* between E* and p or also assessments of some *non-relational quality* of E* (a quality independent of E*'s bearing on p--e.g., that E* is evidence or that E* is a true proposition or set of true propositions). Moreover, if "significance," "merit," "character," or "normative upshot" refer to assessments of the

relation between E* and p, it is still unclear which relations count. Relations that are explicitly evidential (*is evidence for, is evidence against*)? Support relations (*supports*)? Probability relations (*makes it probable that, makes it improbable that*)? Justificatory relations (*justifies belief, justifies disbelief, justifies withholding*)? Deontic relations (*makes it so that one ought to believe, makes it so that one ought to disbelieve, makes it so that one ought to withhold judgment*)? How about corresponding negative relations, such as *does not support* or *is not evidence for*?

Problem 3. In addition to the terminological ambiguities, all six characterizations have scope ambiguities. Notice that the second occurrence of "evidence" in C1–C6 must be implicitly existentially quantified. It is unclear whether the quantification is intended to take wide scope (there exists some E* such that E is about E*) or narrow scope (E is about the existence of some E*), or whether C1–C6 are intended to include both readings. The answer has important implications. For example, the wide scope reading would require E* to actually exist, whereas the narrow scope reading would still count E as higher-order evidence even if it merely supports a false proposition about an E* that doesn't actually exist. Another scope ambiguity is whether E*'s status as evidence is to be given a wide or narrow scope reading. On the wide scope reading, E* needs not only to exist but actually be evidence. On the narrow scope reading, it isn't enough for E* to actually be evidence; E also has to support a proposition about E*'s being evidence, whether or not it actually is.

Problem 4. Some of these characterizations are inconsistent with the way in which the concept of higher-order evidence is employed on the literature, suggesting that they

do not capture what the authors actually intend them to capture. For example, the inclusion of a possessive personal pronoun in C2 and C4 (and possibly C5, depending on the meaning of "exposed") limits higher-order evidence to evidence about one's own evidence. However, as we shall see, the authors of the above characterizations apply the concept of higher-order evidence to evidence about evidence that belongs to other people.

It should now be sufficiently clear why it is a bad idea to simply adopt one of the existing characterizations as is. A third possible strategy is to identify the concept of higher-order evidence as what C1–C6 have in common. In other words, one might propose to "finalize" the preliminary characterization by dropping the qualification that makes it preliminary:

> *The Finalization of the Preliminary Characterization:* Higher-order evidence is ~~*roughly*~~ evidence about evidence.

But this doesn't really help. First, there is a reason why five of the six characterizations employ terms like "significance," "character," "merits," and "normative upshot." Without the use of such terms, the definition is extremely broad—in fact, way too broad, as we shall see in the next section. But for now, it suffices to note that the Finalization of the Preliminary Characterization inherits the aforementioned terminological and scope ambiguities from C1–C6.

Instead of simply adopting or finalizing the preliminary characterization of higher-order evidence, we need to fill it in, as C1–C6 attempt to do. But since they are inadequate attempts, we need a new proposal. In the next section, I lay the groundwork for constructing such a proposal in the subsequent section.

1.4 Kinds of Evidence about Evidence

In the process of introducing the problem of characterization and discussing the difficulties with various existing strategies for defining higher-order evidence, we have encountered various subtle distinctions that correspond to various types of evidence about evidence that might or might not count as higher order. We will now further clarify, develop, and categorize such distinctions and types. This will prove to be helpful in later chapters. But our primary purpose here is to make decisions as to which types of evidence to subsume under the concept of higher-order evidence. So, we will need some criteria by which to decide. I propose the following:

1. *Preliminary Fit:* Anything counted as higher-order evidence should plausibly fit the preliminary characterization of the concept.
2. *Exemplar Fit*: Anything that bears sufficient similarity to the original examples with which the concept of higher-order evidence was introduced should count as higher-order evidence.
3. *Role Fit:* Something should be counted as higher-order evidence when and only when it has the potential to play the role that the concept of higher-order evidence was introduced to play. In other words, higher-order evidence should raise the kinds of questions that drive our interest in higher-order evidence, namely questions about object-level significance and/or levels interaction.
4. *The Clarity Condition:* Adequate characterizations of higher-order evidence should be coherent and free from contradiction, avoid undefined or circularly defined terms, and avoid scope and term ambiguities.

In what follows, we'll focus mostly on exemplar and role fit. Although preliminary fit and clarity are equally important, their roles will be mostly implicit. Regarding preliminary fit, only evidence of evidence will be considered as a candidate for higher-order evidence in the first place. As for the clarity condition, we'll be working toward it the entire next section, as we draw distinctions, disambiguate, and offer careful definitions.

1.4.1 Intrapersonal, Interpersonal, and Impersonal Evidence about Evidence

I begin with a distinction that perhaps seems uninteresting in itself, but which will nevertheless prove useful later on. Notice that in some of the examples given in the literature, the higher-order evidence is about evidence that is possessed by some person or other. In the testimony and disagreement cases I presented (Cases 1-4), the higher-order evidence is *interpersonal*: it is about evidence that is possessed by *another*. In the introspection case (Case 7), the higher-order evidence is *intrapersonal*: it is about evidence that is possessed by *oneself*. However, in the case about reflection on the merits of evidence (Case 6), the higher-order evidence is *impersonal*: it is about evidence that is not indicated as being possessed by anyone (whether or not it is in fact). This demonstrates that the interpersonal, intrapersonal, and impersonal evidence about evidence maintain good exemplar fit. Which person, if any, possesses the evidence at the lower level makes no difference to whether the evidence about evidence possibly has some object-level bearing, whether by itself or in conjunction with the evidence at the lower level. So, all three types maintain good role fit as well. By all standards, then,

evidence about evidence can be higher order regardless of whether it is interpersonal, intrapersonal, or impersonal.

1.4.2 Non-Relational Evidence about Evidence

Notice that the second occurrence of the term "evidence" in the phrase "evidence about evidence" is ambiguous as to whether it refers to a particular piece or body of evidence, or to evidence as a kind. Unlike evidence about particular pieces or bodies of evidence, evidence that is purely about evidence as a kind always falls under the more general category that I'll call *non-relational evidence about evidence*: evidence that is about evidence but which does not indicate anything about any support relations that obtain or fail to obtain with respect to any particular proposition. In contrast, some evidence E is *relational evidence about evidence* when there is a proposition, p, and evidential relation R, such that E is not just about some evidence, E*, but is more specifically about E*'s bearing R to p. Whereas evidence that is purely about evidence as a general kind is always non-relational, we usually limit attention of evidence about particular pieces or bodies of evidence to instances that are relational. But this need not be so. E can be about E* without also being about E*'s bearing on p (or any other proposition). Examples include evidence about the mere existence of some piece or body of evidence, or evidence merely that some evidence is comforting to think about or is the butt of a philosophical joke.

Non-relational evidence about evidence has been altogether ignored by the higher-order evidence literature. All the examples of higher-order evidence in the literature are examples of evidence that indicate something about particular support

relations (at least as far as I am aware). Not only does non-relational evidence about evidence lack exemplar fit, but there is also excellent reason for this. If evidence E is about evidence E*, then even if E* is as a matter of fact evidence concerning p, if E does not indicate anything about how E* relates to p, then E itself has no bearing on p (at least not in virtue of its bearing on E*).[12] Of course, E+E* has a bearing on p, but only because E* itself does. So, non-relational evidence about evidence such as E neither has any potential object-level relevance on its own nor interacts with the lower evidential level in any way that could alter what's supported at the object level. In other words, non-relational evidence about evidence does not raise the kinds of questions that higher-order evidence was singled out to address, and therefore does not maintain good role fit, which rules it out as a kind of higher-order evidence. This means that non-relational evidence about evidence is first order. And this in turn is one reason for my earlier warning against the initially plausible proposal to define "first order" or "bottom level" as not being about evidence.

1.4.3 Wide vs. Narrow Existential Quantifier Scope

In the last subsection, we determined that in order to count evidence about evidence as higher order, it must be relational (in the technical sense defined). In other words, there must be a proposition, p, and evidential relation, R, such that evidence E is about some evidence, E*, bearing R to p. As pointed out earlier, this "some" can be understood as taking either wide or narrow scope. On the wide scope reading, there exists

[12] Externalists might disagree, but this will be further defended in later chapters when it becomes crucial.

some E* such that E is about E*'s bearing R to p. Here, "E*" functions as a proper name within the scope of what E is about. On the narrow scope reading, E is about *there being* some E* that bears R to p. In this case, "E*" functions instead as a variable within the scope of what E is about.

Whether on the wide or narrow scope reading, we have already seen that relational evidence about evidence maintains good role fit. Moreover, both scope readings also show up in the examples in the original literature. The narrow scope reading is made clear in Case 4. In that case you don't know what Jones's evidence is. What you do know is that he has some evidence or other in support of P. Your higher-order evidence is evidence *that there exists* some evidence for P (whatever that evidence may be). The wide scope reading is present in Case 5. In that case, Christensen has some evidence for his belief that he is in state S, and his higher-order evidence is evidence concerning the reliability of *that* evidence, not just higher-order evidence concerning the *existence* of some evidence or other. Therefore, in addition to good role fit, there is good exemplar fit, and we should count relational evidence about evidence as higher order regardless of whether the implicit or explicit existential quantifier takes wide or narrow scope.

It would be nice for there to be an easy way to express neutrality between a wide and narrow scope reading. There is a natural English way of being ambiguous between the two, as we've seen. But being ambiguous between two readings is not a way to be neutral between them: to be ambiguous is to be unclear about which of the two readings is intended; to be neutral is to be clear that a disjunction of the two readings is intended.

We want to be neutral, not ambiguous. One way to accomplish neutrality between the two readings is to formulate them separately and disjoin them. This would become tedious in what follows. In order to more easily and unambiguously represent neutrality between wide and narrow scope readings of a given existential quantifier, I'll place a parenthetical "w/n" immediately following the relevant quantifier. If one existential quantifier, Q, occurs within the scope of another, there are several possibilities for the scope of Q. In that case, let "w/n" indicate the disjunction of all possible scope readings. When I do not use this convention, it should be clear whether I intend a wide or narrow scope reading.

1.4.4 Evidential Aboutness

In order for some E to be higher-order evidence, we have determined so far that it must be evidence about the bearing of some (w/n) evidence E* on p, for some proposition p. Let's be sure to appreciate the full diversity of ways in which this can happen.

If E* really exists and is evidence concerning p, then E* is either *positive* with respect to p (evidence *for* p), *negative* with respect to p (evidence *against* p), or *neutral* with respect to p (evidence concerning p that is neither positive nor negative). This yields three ways in which E can be evidence about the bearing of E* on p:

(1) E is evidence for <some (w/n) E* is evidence for p>.[13]

(2) E is evidence for <some (w/n) E* is evidence against p>.

(3) E is evidence for <some (w/n) E* is evidence that is neutral with respect to p>.

[13] The corner brackets indicate propositions.

But these are only three of many possible ways. First, notice that (1)-(3) are cases in which E is *committal* about whether some (w/n) E* is evidence for, against, or is neutral with respect to p. E might instead be *non-committal* about E*'s relation to p by supporting that some (w/n) E* is evidence concerning p, without supporting whether E* is positive, negative, or neutral:

(4) E is evidence for <some (w/n) E* is evidence concerning p>.

Still more possibilities remain. (1)-(4) represent only cases in which E supports a proposition that *attributes* a committal or non-committal evidential relation between E* and p. There are also cases in which E supports a proposition that *denies* the existence of some evidential relation:

(5) E is evidence for <some (w/n) E* is not evidence for p (against p, neutral with respect to p, concerning p)>.

Finally, notice that (1)-(5) represent only cases in which E is evidence *for* a proposition about some (w/n) E*'s bearing or lacking a given relation to p. It is also possible that E is evidence against, or is neutral with respect to, p:

(6) E is evidence against <some (w/n) E* is (not) evidence for p (against p, neutral with respect to p, concerning p)>.

(7) E is evidence that is neutral with respect to <some (w/n) E* is (not) evidence for p (against p, neutral with respect to p, concerning p)>.

Letting R and R* be variables that range over {is evidence for, is evidence against, is evidence that is neutral with respect to, is evidence concerning}, we can capture all of the possibilities that (1)-(7) represent in a single schema:

S1: E bears R to <some (w/n) E* bears (does not bear) R* to p>.

This covers the main cases that we'll discuss. However, variations on the basic evidential relations should be acknowledged: there are degreed evidential relations (e.g., *is strong evidence for*), comparative evidential relations (e.g., *is better evidence than*), and complex evidential relations (e.g., *is evidence for but weaker evidence than*). If desired, we can easily expand the range of R and R* to include these variations. With this expanded range, S1 captures all possibilities. This will soon come in handy in constructing our final characterizations.

Clearly, the examples of higher-order evidence in the literature do not represent every possibility represented in S1. In fact, some of the possibilities (e.g., non-committal cases) have been entirely overlooked in the literature (as far as I can tell). This could be because some authors are unwilling to count some of them as cases of higher-order evidence. But none of them say explicitly either way. As such, the exemplar condition is silent on the matter. However, notice that any evidence that instantiates S1 potentially has significance for any proposition that it is ultimately about, or at least raises questions about, potential conflicts with the evidence at lower levels. This is least clear in non-committal cases. So, let's consider an example of that sort. Suppose you also have some evidence E1 for p. Without additional evidence, this plausibly means you should believe p. But suppose you also acquire some non-committal evidence E that supports that there exists some other evidence E* concerning p that you have yet to acquire. E by itself would justify agnosticism (or possibly no attitude) toward p. But since you have both E and E1, we need to think about what E+E1 supports. Perhaps you should you continue

believing p because E1 supports it and E does not go against this. Or perhaps E provides you with a reason to be agnostic (or have no attitude) about p until you acquire E* (or at least learn more about it). Both options have some prima facie plausibility. We see, then, that important and difficult questions about levels interaction arise even in non-committal cases. In general, evidence that falls under S1 has good role fit. We should therefore count any such evidence as higher order.

1.4.5 Explicit vs. Implicit Evidential Relations

In schema S1, R and R* range over a very specific set of evidential relations: {is evidence for, is evidence against, is evidence that is neutral with respect to, is evidence concerning} (and, if you wish, the degreed, comparative, and complex variations on these). Call the members of this set "explicit evidential relations." Some evidential relations are not explicitly so. Candidates include *supports, is a reliable indication of,* and *makes probable that*. What these have in common is that for any x and y, x's bearing one of them to y is plausibly a way for x to be evidence for y. In this way, it is plausible that these relations are "implicitly" evidence-for relations. The other explicit evidential relations have implicit versions as well. We can characterize these implicit evidential relations in general as follows:

> R is an *implicit evidential relation* iff, for any x and y, x's bearing R to y is a way for x to bear an explicit evidential relation to y.

Suppose now that some particular E, E*, R, and R*, where R and R* are implicit evidential relations, instantiate S1. Call any such E "implicit evidence about evidence." We should count implicit evidence about evidence as higher order. After all, there is

precedence in the literature for doing so. For example, Case 5 is a case of higher-order evidence that is evidence merely about the reliability of the appearance that one is not in brain state S, not about that appearance bearing an explicit evidential relation. The exemplar condition therefore yields the result that implicit evidence about evidence is higher order. Moreover, we can make as much sense of higher-order influence with respect to implicit evidence about evidence as we can for the explicit variety, implying good role fit.

Let's therefore further expand schema S1 to allow R and R* to range over both explicit and implicit evidential relations. Then, any evidence, E, that falls under S1, is higher-order evidence. Moreover, since on this expanded range S1 now represents all possible ways in which some E can be about the implicit or explicit evidential bearing, or lack of bearing, of some (w/n) E* on a proposition, and we have already established that any higher-order evidence must satisfy this condition, it follows that every piece or body of higher-order evidence falls under S1. This fact will later make it easy to state my final characterization of higher-order evidence. But before getting there, there remain other distinctions to discuss.

1.4.6 Ordinality

We have so far only discussed cases of evidence about some (w/n) evidence bearing (lacking) an implicit or explicit evidential relation to some proposition, p. If p is not itself a proposition that is about some (w/n) evidence bearing (lacking) an implicit or explicit evidential relation to a further proposition, then we have a two-layer evidential embedding, the head of which (i.e., the evidence attached to the outermost evidential

operator in the embedding) we might call “second-order evidence.” More levels are possible, e.g., there can be evidence about some (w/n) evidence about some (w/n) evidence about p, which we might call “third-order evidence” (assuming that p isn’t also about other evidence bearing (lacking) an implicit or explicit evidential relation to yet another proposition). More generally, nth-order evidence is possible for any positive integer n.

Most of the higher-order evidence in the examples from the literature are second-order cases. However, one example presented earlier clearly allows for evidence that is at least third order. Recall the following example:

> Case 4: “If someone tells you “Jones has some evidence supporting P, but I don’t know what it is,” then you have some evidence about the existence of evidence for P.” (Feldman 2009: 304)

Suppose the person testifying to you is S. In this example, you presumably have evidence that S has evidence that Jones has evidence supporting P (e.g., you know that S is trustworthy and that S knows Jones well). This evidence of yours is at least third order, and perhaps of an even higher order (if P is also a proposition about some (w/n) further evidence bearing an implicit or explicit evidential relation to some further proposition). And regardless of how many such evidential layers are involved, the evidence is what Feldman has classified as higher-order evidence. Moreover, any nth-order evidence for integer $n > 1$ is evidence that raises the question of higher-order influence. Both the exemplar and role fit criteria therefore classify evidence about evidence of all ordinalities as higher order.

1.4.7 Higher-Order Precedence and First-Order Influence

Consider a case in which E supports both p and that some (w/n) E* supports p, where p is not about some further evidential relations. One might be inclined to count E as higher order in virtue of the fact that it is the head of a two-level evidential embedding. On the other hand, one might be inclined to count E as first-order evidence in virtue of the fact that it is also the head of a one-level embedding. Which way do we go? Do we go with the smallest or the largest embedding in determining whether evidence is higher order?

We want to go with the highest-level embedding. I'll call this "higher-level precedence." There is a good reason for this. It might turn out that E2 supports q *whenever* E2 supports that some (w/n) E1 supports q (which, as we saw earlier, some authors on higher-order evidence advocate). Not counting something as higher order simply because it supports the innermost propositions of the corresponding evidential embedding therefore plausibly threatens to exclude *any* such E2 as higher order. This would preclude counting some of the paradigm cases, such as Case 4 (Feldman's testimonial case concerning Jones), as cases of higher-order evidence, which would be to go too far, according to the exemplar condition. However, even if the authors just mentioned are wrong, the role fit criterion clearly requires us to count E2 as higher order. Hence, higher-level precedence follows from our criteria.

There is an important corollary of higher-level precedence. Suppose that some evidence E = E1+E2, where E1 is first-order evidence for p and E2 is higher-order evidence that E1 supports p. Since E1 is presumably not a defeater for E2, E inherits from

E2 its support for the claim that E1 supports p, in which case higher-level precedence implies that E is higher order. But since E2 is presumably not a defeater for E1, E inherits from E1 its first-order support for p. Therefore, higher-level precedence forces us to recognize that there is higher-order evidence, like E, which has "first-order influence." We will need to return to this crucial point when constructing an account of higher-order support in the next chapter.

1.4.8 Absolute vs. Relativized Levels

The final distinction to explore is between two possible ways to conceive of evidential levels. Suppose that E2 supports that some (w/n) E1 supports p. One might initially be inclined to say that E2 is higher order *simpliciter*. But why not instead say that it is higher order *with respect to p* but first order *with respect to the proposition that E1 supports p*? In other words, should we understand levels as absolute or relativized to propositions? So far my language has tended toward an absolute understanding, but we could easily translate all that has been said into relative terms. Let's explore whether there is any reason to do so.

One potential reason to relativize arises because authors on higher-order evidence often choose to write in the abstract about some arbitrary evidence E concerning some arbitrary proposition p without specifying what E and p are. It is characteristic to say on this basis alone that E is first-order evidence despite the fact that p could very well be about a further evidential relation, in which case E would be higher order on an absolute understanding of levels. So, one might infer that we can make sense of this only if we understand E as first-order relative to p. But this argument is unconvincing. We could just

as easily take it as implicit that p is not itself about evidential relations. After all, it seems to me that most of the time when we introduce arbitrary propositions, we have in mind non-evidential ones unless they are explicitly identified as evidential. This is at least true of myself. Even if this is not so for others, it would be a harmless distortion to amend their discussions by tacking on the assumption that p is not about evidential relations or else label E as higher order.

In favor of an absolute understanding of levels, one might put forward the observation that the paradigm cases of first-order evidence are cases in which the evidence is not itself about evidence. First-order evidence is about rocks, trees, paintings, and the like. Relativization is inconsistent with this, since it would allow evidence about other evidence to count as first-order relative to the appropriate propositions (namely, propositions it supports about the next lower evidential level). However, this argument is also unconvincing. Sure, when we think of first-order evidence, we are usually thinking of evidence that is not about other evidence. However, "usually" does not imply "always." Note that in the previous paragraph I said that p cannot be about evidential *relations* without making E higher order. I didn't say it couldn't be about evidence at all. Recall my earlier distinction between relational and non-relational evidence about evidence. I argued that only relational evidence about evidence should be counted as higher order. Non-relational evidence about evidence is therefore first order. The proposed objection to relativization forgets this result.

Although I can't think of any plausible reasons to relativize, there is at least one good practical motivation to adhere to an absolute understanding of levels, namely that

relativization unnecessarily complicates exposition because it requires us to add cumbersome phrases that express what's relative to what. For this reason alone, I will continue to frame levels in absolute terms. However, if you prefer relativization, it should be easy to convert from absolute talk to relative talk. In fact, I will make some notes about how to do so in what follows.

1.5 An Adequate Solution to the Problem of Characterization

So far, we have seen that we need to fill in the preliminary characterization of higher-order evidence, and that the existing proposals for doing so are riddled with problems. We have also surveyed various kinds of evidence of evidence and used our criteria to systematically decide which kinds to count as higher order. We are now well prepared to begin constructing our final characterizations.

1.5.1 The Final Characterization of Higher-Order Evidence

We've already seen that any higher-order evidence, E, can be made to fit the following schema, where E* has unrestricted range, R and R* range over implicit and explicit evidential relations, and p ranges over propositions:

S1: E bears R to <some (w/n) E* bears (does not bear) R* to p>.

Remember, although this requires merely a two-layer embedding, it also allows for deeper embeddings, since p can itself be a proposition about evidential support relations. Since we've also seen that anything that instantiates E in S1 is higher-order evidence, we can infer the following:

Higher-order evidence (final characterization): For any E, E is *higher-order evidence* iff for some proposition, p, and implicit or explicit evidential relations, R and R*, E bears R to <some (w/n) E* bears (does not bear) R* to p>.[14]

This characterization resolves all the defects plaguing the preliminary characterization, the finalized version of it, and C1–C6. It doesn't contain any undefined or circularly defined terms such as "first-order," makes no use of ambiguous terms (such as "significance," "merit," "character," "normative upshot"), and contains no scope ambiguities. The new characterization clearly allows intrapersonal, interpersonal, and extrapersonal cases, since it makes no reference to agents. It clearly does not count non-relational evidence about evidence as higher order. It does allow both implicit and explicit evidential relations. And, since this characterization does not include the term "first-order," it avoids restricting higher-order evidence to evidence directly about first-order evidence, thus allowing for the full range of ordinality. Unlike preceding characterizations, this proposal therefore seems to satisfy all our criteria. So, I hereafter take it as my official characterization of higher-order evidence.

1.5.2 The Final Characterization of Ordinal Evidential Concepts

Although we've removed one deficiency in the literature on higher-order evidence by providing a fully satisfactory characterization of higher-order evidence, other

[14] Those who prefer relativization would need to adjust this as follows: For any E and proposition p, E is *higher-order evidence relative to p* iff for some implicit or explicit evidential relations, R and R*, E bears R to <some (w/n) E* bears (does not bear) R* to p>.

deficiencies in the literature remain. In particular, I know of no general characterizations of ordinal notions, such as first-order evidence, second-order evidence, and more generally nth-order evidence for any positive integer n. So, I now turn to developing ordinal characterizations.

Once again consider schema S1, for any E, proposition p, and implicit or explicit evidential relations R and R*:

S1: E bears R to <some (w/n) E* bears (does not bear) R* to p>.

Although the surface structure of S1 gives the appearance of a two-layer embedding, I explained earlier how this allows for nth-level evidential embeddings, for any integer n > 1: p can be a proposition that is about the bearing (lack of bearing) of some (w/n) other evidence on some further proposition. We can easily make this explicit by expanding the schema. To begin, rewrite S1 by replacing "E" with "En," "R" with "Rn," "E*" with "En-1," and "R*" with "Rn-1":

S1*: En bears Rn to <some (w/n) En-1 bears (does not bear) Rn-1 to p>.

We can now make a third evidential layer explicit by replacing "p" in S1* with the following proposition asserting an evidential relation between some further evidence and proposition: <En-2 bears (does not bear) Rn-2 to p>. This yields the following schema:

S1**: En bears Rn to <some (w/n) En-1 bears (does not bear) Rn-1 to <En-2 bears (does not bear) Rn-2 to p>>.

If we continue this process another n-2 times, what results is a schema that explicitly represents n evidential layers, for any positive integer n:

Sn: En bears Rn to <some (w/n) En-1 bears (does not bear) Rn-1 to < some (w/n) En-2 bears (does not bear) Rn-2 to <some (w/n) En-3 bears (does not bear) Rn-2 to …< some (w/n) E1 bears (does not bear) R1 to p>…>>>.

Any possible evidential embedding with n evidential layers, for any integer n > 1, fits within this schema, if we let En take unrestricted range, p range over propositions, and R1, R2, …, Rn range over implicit and explicit evidential relations. So, we can now offer the following general characterization of the depth of any evidential embedding as follows:

Evidential embedding depth: For any En, proposition p, and positive integer n, there exists an *evidential embedding of depth n from En to p* iff there exists implicit or explicit evidential relations R1, R2, …, Rn such that En bears Rn to <some (w/n) En-1 bears (does not bear) Rn-1 to < some (w/n) En-2 bears (does not bear) Rn-2 to <some (w/n) En-3 bears (does not bear) Rn-2 to …< some (w/n) E1 bears (does not bear) R1 to p>…>>>.

Counting levels in evidential embeddings allows us to define our ordinal notions. But we have to be careful. We don't want to say that some evidence E is first order whenever E is the head of an evidential embedding of depth 1 terminating with p, since E might also be the head of another evidential embedding terminating with p that has greater depth, in which case higher-level precedence implies that E is higher order, not first order. Even if we rule out an embedding of greater depth from E to p, there might still be an embedding of greater depth to another proposition q (an embedding which might or might not pass through p). In such a case, our absolute understanding of levels

would imply that E is higher-order. So, to ensure that E is first order, we need it to be the head of an evidential embedding of depth 1 and the head of no evidential embedding of greater depth *to any proposition* (p or otherwise). This yields the following characterization:

> *First-order evidence (final characterization)*: For any E, E is *first-order evidence* iff there exists a proposition p and an evidential embedding of depth 1 from E to p and there is no integer m > 1 and no proposition q such that there is an evidential embedding of depth m from E to q.[15]

And a slight adjustment results in an adequate characterization of second-order evidence:

> *Second-order evidence (final characterization)*: For any E, E is *second-order evidence* iff there exists a proposition, p, and an evidential embedding of depth 2 from E to p and there is no integer m>2 and no proposition q such that there is an evidential embedding of depth m from E to q.[16]

Generalizing yields an adequate characterization of nth-order evidence, for any positive integer n:

> *Nth-order evidence (final characterization)*: For any positive integer, n, E is *nth-order evidence* iff there exists a proposition, p, and an evidential embedding of depth n from

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[15] A relativized version would look like this: For any E and proposition p, E is *first-order evidence relative to p* iff there exists an evidential embedding of depth 1 from E to p and there is no integer m > 1 such that there is an evidential embedding of depth m from E to p.

[16] Here's a relativized version: For any E and proposition p, E is *second-order evidence relative to p* iff there exists an evidential embedding of depth 2 from E to p and there is no integer m>2 such that there is an evidential embedding of depth m from E to p.

E to p and there is no integer m > n and no proposition q such that there is an evidential embedding of depth m from E to q.[17]

We can further validate these new characterizations by noting that the final characterization of higher-order evidence matches up with the above ordinal characterizations in intuitive ways. First, the following corollary of the final characterizations of higher-order evidence and first-order evidence yield a natural result:

Higher-Order/First-Order Matching: For any E, E is first-order evidence iff E is evidence that is not higher order.

More generally, the following corollary of the final characterizations of higher-order evidence and nth-order evidence shows that our ordinal and non-ordinal characterizations match up in a natural way:

Higher-Order/Nth-Order Matching: For any E, E is higher-order evidence iff there is a positive integer n > 1 such that E is nth-order evidence.

1.5.3 The Final Characterization of Object-Level Propositions

Finally, given the framework in the previous section, we can now offer a more careful characterization of the notion of an object-level proposition.

Object-level proposition (final characterization): For any proposition, p, and evidence, E, p is an *object-level proposition for E* iff (i) for some positive integer, n,

[17] And finally a relativized version of this one: For any E, proposition p, and positive integer n, E is *nth-order evidence relative to p* iff there exists an evidential embedding of depth n from E to p and there is no integer m > n such that there is an evidential embedding of depth m from E to p.

there is an evidential embedding, L, of depth n from E to p and (ii) there is no integer m > n and no proposition, q, for which L is an evidential embedding of depth m from E to q.

Clause (i) ensures that p is at the bottom of some evidential embedding headed by E. But, again, this is consistent with there being an evidential embedding of greater length, passing through p, and downward to a further proposition, q. In that case, E is not *ultimately* about p and is therefore not at the object level with respect to E. Clause (ii) rules out that possibility, ensuring that if (i) is met, then p is one thing that E is ultimately about, placing p at the object level with respect to E. The above characterization therefore yields a satisfactory account of object-level propositions.

1.6 Taking Stock

Now that we've carefully defined the concept of higher-order evidence and its close associates, and clarified the corresponding epistemological issues, it is time to take stock of what we can already learn from this preliminary conceptual work. There are six primary lessons:

1. *Don't go non-relational:* I have argued that non-relational evidence about evidence should not be counted as higher order. This already blocks some objections to universal higher-order significance. In arguing against such significance, Fitelson (2012) constructs an example in which E2 supports E1 and E1 supports p, yet E2 does not support p. The problem for Fitelson's argument is that in this case, E2 is about E1, not about E1's support for p. It's therefore non-relational evidence about evidence, and therefore does not count

as higher-order evidence, failing as a counterexample to universal higher-order significance. (Of course, there's the possibility that the objection can be improved. But I will argue against this in Chapter 2.)

2. *Befriend all your relations:* Although some authors make what appear to be universal claims about higher-order evidence, the details of the discussion tend to focus exclusively on evidence about particular classes of evidential relations. Given our exhaustive survey of the possible relations, we can easily classify these particular classes and see what's missing. And it turns out that these discussions usually focus on non-neutral higher-order evidence about explicit evidential relations. However, this leads to problems. First, the exclusive focus on explicit evidential relations makes the resulting principles inapplicable to those who do not possess explicit evidential concepts (like children) but who might nevertheless possess corresponding implicit evidential concepts that play an analogous role. Second, the exclusive focus on non-neutral higher-order evidence masks potential problems with universal higher-order significance. When one's higher-order evidence is neutral about what the lower-order evidence supports, then uniform higher-order dominance would seem to imply that one should neither be neutral nor non-neutral about p—an incredibly puzzling result. Some, such as Weatherson (2007, 2010, and 2013) and Lasonen-Aarnio (2014) consequently deny uniform higher-order

dominance. So, a convincing defense of such dominance will need to explicitly account for neutral higher-order evidence.[18]

3. *Remember your influences:* I have argued that higher-order evidence must be allowed to have first-order influence. This already undermines all arguments, such as those offered by Kelly (2005), for universal higher-order insignificance and uniform lower-order dominance. Once we recognize the existence of higher-order evidence with first-order influence, it follows that higher-order evidence can sometimes have object-level significance by default in virtue of containing first-order evidence for the object-level proposition. And even if higher-order evidence does not undercut conflicting lower evidential levels, its object-level significance must at least be taken into account as a full or partial rebutting defeater. There's no reason in principle why the corresponding first-order evidence has to be stronger. So, there will be at least some cases in which the higher-order evidence dominates.
4. *Take on your issues one at a time:* A number of arguments in the literature against universal higher-order significance go like this: here's some evidence E2 that is evidence that E1 is evidence for p; but the total evidence doesn't support p; therefore, support at the higher level does not filter down to the

[18] For potential responses, see Elga (2010), Alexander (2013), and Barnett (Chapter 3).

object level.[19] Of course, the fallacy in this argument is that it mixes up what E2 supports (higher-order support) with what the total evidence supports (levels interaction).

5. *Consult your correspondents:* Consider the following argument against uniform higher-order dominance that sometimes comes up in conversation (an argument that will reappear in Chapter 3 as one possible interpretation of a passage from Kelly (2010)): let E2 be weak higher-order evidence that ultimately supports p but let E1 be strong independent first-order evidence against p; E1 wins in this case; therefore, higher-order evidence doesn't uniformly dominate. However, the argument is faulty, and the culprit is letting E1 be independent of E2. We must remember that higher-order dominance, as understood by those who claim it, says only that higher-order evidence dominates *corresponding* lower-order evidence. Of course, even the corresponding lower-order evidence might more strongly bear on the object-level proposition than does the higher-order evidence, in which case the latter evidence cannot fully *rebut* the former. But there remains the potential for higher-order evidence to fully *undercut* corresponding lower-order evidence, since undercutters in contrast to rebutters do not work by sheer power (a point

[19] For example, see Hudson (in personal conversation with Feldman, as reported in Feldman (2009)), Kvanvig (2011), and is assumed in the "double-counting objection" in Kelly (2005), as we'll see in Chapter 2.

to be further developed in Chapter 3). So, ignoring correspondence quickly leads us astray.

6. *Choose your roles carefully:* I have identified two different defeating roles that higher-order evidence can play—it can play a rebutting role via higher-order support or an undercutting role via levels interaction. I have also argued that these have different consequences and we therefore need to attend to the appropriate role in the appropriate context. This rules out a common defense of strong conciliatory views of informed peer disagreement. In particular, Feldman (2006, 2007, and 2009) and Matheson (2009), among others, appeal to universal higher-order significance for this purpose. The idea is roughly that the higher-order evidence one gains from learning that a peer (at least one who shares all of your evidence) disagrees with your own view on some matter gives you evidence that your peer has evidence against your view, which universal higher-order significance implies is itself evidence against your view to be weighed against your own first-order evidence. Given peerhood, it seems plausible that the higher-order support and lower-order support are equally strong and thereby defeat each other, justifying a move to suspension of judgment. But this cannot work. I'll argue in the next chapter that higher-order support weakens as it trickles down through evidential layers, in which case it can sometimes be rebutted by the first-order evidence. However, the weakness in the argument arises only because it focuses on a rebutting role for higher-order evidence provided by universal higher-order

> significance. Even in cases in which the higher-order evidence cannot fully rebut the lower-order evidence, it turns out that the former evidence nevertheless can (and almost always does) fully undercut the latter, as we'll see when we examine levels interaction in Chapter 3. So, if we instead shift our focus from higher-order support and rebutting defeat to levels interaction and undercutting defeat, we can potentially get a better justification for strong conciliation.

From these it should be readily clear that the lack of a well-developed conceptual framework for higher-order evidence has been the source of numerous hurdles in the literature. So, our conceptual work has paid off. We are now ready to proceed to the next step where we employ the conceptual framework to develop a theory of higher-order support (in Chapter 2), and eventually a theory of levels interaction (in Chapter 3).

Chapter 2 Higher-Order Evidential Support

The preliminary stage of our investigation into higher-order evidence is now complete. All is in place to take on the first of our two main theoretical goals: an account of higher-order evidential support—a principle or set of principles specifying how, if at all, any given piece or body of higher-order evidence bears by itself (specifically, without help or interference from corresponding lower-order evidence) on any given corresponding object-level proposition. This chapter aims to provide such an account.

The account will be built up piecemeal, beginning with a partial account of higher-order evidential support—an account of higher-order support restricted to a special kind of higher-order evidence. The special kind I have in mind is the sort that has received the most attention in the literature: evidence that there exists evidence in support of a given proposition.[20] Throughout the chapter, I will let E2 be an arbitrarily chosen example of such higher-order evidence (that is, arbitrary unless further details about E2 are specified), E1 be that which E2 supports as being evidence, and p be the proposition E2 supports E1 as supporting. Given these stipulations, the partial account I seek can be described as an account that specifies the conditions, if any, under which E2 supports p.

I include the qualification "if any" in this description of the partial account because one possible view is that E2 never, under any conditions, supports p. I'll dismiss

[20] This kind of higher-order evidence is distinguished by four main properties: (a) it is *positive at the higher level* (rather than negative or neutral); (b) it is *positive at the lower level*; (c) the existential quantification over the corresponding lower-order evidence takes *narrow scope* with respect to the outermost evidential operator; and (d) the corresponding lower-order evidence is supported as bearing an *explicit evidential relation* to some proposition. See §1.4 for a discussion of these (and other) distinctions.

this first candidate in the next section (§2.1), arguing instead for its denial, which I'll call "the Significance Thesis":

> *The Significance Thesis:* In at least some cases in which E2 supports that there is evidence, E1, in support of p, E2 is itself evidence for p.

Once it is established that E2 sometimes has positive object-level significance, the next pertinent question becomes whether this is so always or merely sometimes. According to Feldman (2005; 2006: 424; 2007: 208; and 2009: 308)[21], the answer is "always"—an answer I'll call the "Filtration Principle" (since it alleges that E2's evidential significance "filters" through E1 all the way down to p itself):

> *The Filtration Principle:* If E2 supports that there is evidence, E1, in support of p, then E2 is itself evidence for p.

Despite its initial attractiveness, this principle has its detractors, including Conee (2010: 88), Hudson (given in personal communication to Feldman, as reported in Feldman (2009: 309)), Kelly (2005: 186-188), Kvanvig (2011: 46-50), and Fitelson (2012: 85-88). However, most objections alleged against the Filtration Principle (namely, all but Conee's) are flawed, as I will show in §2.2. The Filtration Principle is nevertheless false for several new reasons to be revealed in §2.3.

In light of the falsity of the Filtration Principle and the truth of the Significance Thesis, the two simplest possible partial accounts are unacceptable. We are instead pushed toward an intermediate position according to which the sort of higher-order

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[21] See also Christensen (2007 and 2010) and Matheson (2009).

evidence under consideration sometimes but not always has object-level significance. A correct version of this intermediate position can be accurately understood as a version of the Filtration Principle with restrictions imposed—restrictions that rule out precisely whatever counterexamples arise for the original version of the principle. I'll develop such restrictions in tandem with my presentation of the objections. The final restriction will at last yield the sought-after partial account, the success of which will be defended in §2.4. In the subsequent (and final) section (§2.5), I'll show how to derive a full account of higher-order evidential support from the partial one. Since the resulting account entails that higher-order evidence generally has object-level significance except in a handful of special cases, it qualifies as a version of what I earlier called "near-universal higher-order significance" (see §1.1).

2.1 The Significance Thesis

The Significance Thesis is true. There should be little opposition to this given the point (developed in §1.4.7) that higher-order evidence—including the specific kind currently under consideration—sometimes has "first-order influence" (i.e., higher-order evidence can contain first-order evidence for its object-level propositions). Making use of this idea, a simple proof of the Significance Thesis can be constructed as follows:

> *Proof of the Significance Thesis:* Given the existence of higher-order evidence with first-order influence, there exists a body of evidence E2 = Ea+Eb such that Ea is first-order evidence for p and Eb is evidence that there exists some evidence, E1, in support of p. Since Ea and Eb need not conflict with each other in any way, we can also suppose that neither is a defeater for the other. Since Eb supports that there exists

some evidence in support of p, and Eb is not defeated by Ea, it follows that Ea+Eb still supports that there exists some evidence in support of p. Since Ea supports p and is not defeated by Eb, Ea+Eb is also evidence for p. Given that E2 = Ea+Eb, we can conclude that E2 is an example of evidence for p which is also evidence that there exists some evidence in support of p. The Significance Thesis is the thesis that there exists such an example. Hence, the Significance Thesis is true.

While the above proof rests on the possibility of higher-order evidence with first-order influence, the truth of the Significance Thesis does not rest thereupon. There are other reasons for which the thesis is correct. One such reason is this. Suppose Ea is not first-order evidence for p but does support that there exists some evidence, E1, in support of p. Suppose Eb is not first-order evidence for p but supports whatever is needed in order to license an inference to p from the fact that there exists some evidence, E1, in support of p. For example, Eb could support (perhaps misleadingly) the conditional claim that p is true if there is some E1 in support of p. Under the assumption that neither Ea nor Eb defeats the other, E2 = Ea+Eb licenses an inference to p and therefore supports p. E2 also supports that there exists evidence in support of p, since Ea supports this claim and Eb does not defeat Ea. Hence, E2 is both evidence that there is evidence for p and evidence for p, again confirming the Significance Thesis.

But notice that this result does not rest on E2 being or containing first-order evidence for p. It does not rest on E2 being first-order evidence for p because E2 is not an example of first-order evidence for p (since it contains Ea, which supports a claim which affirms an evidential relation, making both Ea and E2 higher order according to the

account of higher-order evidence offered in §1.5.1). The result does not rest on E2 containing first-order evidence for p because E2 need not contain any such evidence. All that E2 contains is Ea and Eb, neither of which is first-order evidence for p (by stipulation). The only other way for E2 to contain first-order evidence for p is for Ea and Eb to separately contain elements which, when combined, form first-order evidence for p that is a proper part of E2. But that need not be the case either. It is consistent with the details of the example to stipulate that Ea and Eb are minimal in the sense that every last bit of both is needed for them to jointly support p. Under this stipulation, it follows that no parts of Ea and Eb combine to form first-order evidence for p contained within E2 as a proper part. Since neither E2 nor any proper part of E2 is first-order evidence for p, E2 confirms the Significance Thesis without any help from first-order considerations.

There are many other abstract ways in which the Significance Thesis can be proven, and proven to hold independently of first-order considerations. However, I'll end my defense of the Significance Thesis with a concrete example—one which I think is representative of an ordinary, everyday sort of case. Suppose you tell me one and only one thing: that you have excellent visual and tactile evidence of an apple on the table.[22] Let's also assume my evidential situation regarding your testimony is highly favorable: I can tell that you are sincere; I know which proposition you're asserting to; I fully

[22] As we'll see in Chapter 4, some take testimony to provide first-order evidence for the proposition attested to. I wish to remain neutral on this issue for the time being. In order to do so yet avoid first-order influence in this case, I have constructed the example so that the proposition attested to is *not* that there *is* an apple; instead, you attest to the proposition that you *have evidence* for the apple. So, your testimony is higher order.

understand the proposition's constituent concepts (e.g., I have a well-developed concept of evidence); my total evidence strongly supports that you are a trustworthy testifier (at least on the sort of matter to which you're currently attesting); and, finally, I have no (undefeated) evidence that casts doubts on your testimony. Under these conditions—conditions I take to be fairly typical of testimonial situations—it seems I have good reason to think there is an apple on the table. Now, it is clear that this conclusion cannot be explained by any first-order evidence I may have for the proposition that there is an apple on the table, since there is no hint of any such first-order evidence in the case.[23] Hence, we have yet another clear case in which higher-order evidence supports an object-level proposition without first-order help.

I rest my case for the Significance Thesis. Once the thesis is accepted, the Filtration Principle gains substantial appeal due to its status as the most natural principle of higher-order support capable of accommodating the Significance Thesis (especially given the wide array of cases that undergird the truth of the thesis). Thus, it seems we have a strong prima facie case for the Filtration Principle: it appears to be the best explanation of the Significance Thesis. The question now becomes whether this prima facie case is overturned by defeating considerations. We next consider this question.

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[23] Perhaps one thinks we always have at least some first-order evidence (albeit perhaps defeated) for *every* proposition we grasp (as Feldman has suggested to me in p.c. on several occasions). I doubt that this is true (for reasons we need not go into here). In any case, note that even if it is true, we can easily modify the example so that this first-order evidence is defeated by other evidence in some way that does not interfere with the testimonial evidence. Then, the first-order evidence is of no ultimate significance.

2.2 The Filtration Principle: Unsuccessful Objections

Despite its initial appeal, the Filtration Principle has been resisted on a number of grounds in the literature. Although I agree with the upshot—that the Filtration Principle is false—I'll show in this section that the principle's faults have been misidentified. It is useful to do this because it is worth getting our grounds for rejection straight. But it is at least as important for the additional reason that all but the first of the objections could be raised with equal force to the restricted version of the Filtration Principle I will ultimately advocate. What I say here will therefore double as part of the defense of the view I later propose.

Before getting started on the objections, it is worth pausing to note an interesting theme running through the objections I find unsuccessful. The initial forms of these objections assume what I'll call *evidential relativism*—the view that evidential relations hold relative to background evidence, agents, times, possible worlds, or some other constraint beyond the first two relata of the evidential relation (i.e., the evidence itself and the proposition concerning which it is evidence). There are two main strands of evidential relativism, corresponding to two different interpretations of the phrase "relative to." *Binarist relativ*ism upholds the standard view that evidential relations are binary relations between some evidence and a proposition, but adds that these binary relations hold relative to some third constraint in the sense of being contingent upon that constraint. *Ternarist relativism* abandons the standard binarist picture and opts for the more radical claim that evidential relations are ternary relations between some evidence,

a proposition, and some third constraint. Whether as part of a binary or ternary relation, I'll call the third constraint the *relativization constraint*.

It is easy to see why the relativist of either sort might be unhappy with the Filtration Principle. For the relativist, the principle is up for interpretation, since it makes claims about evidential relations without explicitly mentioning any relativization constraints. Moreover, as an abstract principle that is intended to apply to all evidential contexts, it does not come with any single privileged context to supply implicit constraints. Without any implicit or explicit relativization constraints, the relativist might naturally view the principle as simply ill-formed or underspecified and therefore either false or lacking in truth value. Alternatively, the relativist might interpret the principle as implicitly universally generalized over all possible combinations of relativization constraints. On this understanding, the principle is well-formed but false if it turns out that there is some possible third constraint relative to which E2 fails to be evidence for p (rendering the consequent of the Filtration Principle false) despite the fact that relative to some other constraint E2 is indeed evidence for the claim that there exists evidence in support of p (rendering the antecedent of the Filtration Principle true). Finally, on what might initially be thought a more generous interpretation, the generalization over relativization constraints is not quite universal: it is to be restricted so that the constraints in the antecedent and consequent of the principle are identical. But a potential problem remains: the third constraint, though identical across the antecedent and consequent, might nevertheless interfere with the relation between E2 and p without also interfering

between E2 and the proposition that E1 is evidence for p, again making the principle false.

However we understand the details, I'll call this the "Relativist Objection" to the Filtration Principle. We'll soon see how the unsuccessful objections to the principle are versions of this more general objection. But for now, I want to present a catch-all response upfront.

The Relativist Objection to the Filtration Principle fails. It fails due to its appeal to evidential relativism. This appeal is a mistake because evidential relativism is false. Although I cannot here lay out my case against relativism in full, I will nevertheless provide an outline of the basic reasons. I begin with the conception of evidence in operation--that of truth indication. On my understanding of evidence, some item E (whether propositional or non-propositional) is evidence concerning a proposition p if and only if E indicates one of three possible positions with respect to p's truth value (truth, falsity, or neutrality).[24] So, E is evidence for p iff it indicates that p is true, evidence against p iff it indicates that p is false, and evidence that is neutral with respect to p iff it neither indicates that p is true nor that p is false but is nevertheless relevant in

[24] For further discussion of this conception of evidence, as well as rival conceptions, I recommend starting with the general overview in Kelly (2014). Also see Ayer (1972); Horwich (1982); Achinstein (1983 and 2001); Conee (1992); Joyce (2005); Feldman and Conee (2008 and 2011); Bell, Swenson-Wright, and Tybjerg (2008); Kelly (2008); Goldman (2011); Rysiew (2011); and Swinburne (2011).

some way relevant to p's truth value (e.g., by containing both evidence for p and a defeater for this evidence).[25]

In order to indicate a position on p's truth value, E must be relevant to p's truth value. E cannot, for example, merely indicate that p is fascinating to ponder, or that p can be expressed in a concise English sentence. Next, observe that most potential relativization constraints are not by themselves truth-relevant: one's interests in whether or not p is true, the doxastic attitude one actually takes toward p, how one acquired one's evidence concerning p, or whether one's response to the evidence is in accordance with proper functioning with respect to a certain design plan (although whether this design plan is reliable is potentially truth-relevant). The only relativization constraint that is potentially truth-relevant is background information on the proposition. In fact, this follows from the fact that background information with respect to a body of evidence E concerning proposition p is plausibly defined as any piece or body of information other than E itself that is relevant to the truth value of p.[26] Call the version of evidential relativism that adopts this relativization constraint *backgroundism*. Backgroundism, while

[25] As we shall see in Chapters 3 and 4, the difference between something that is not evidence concerning p and something that is evidence that is neutral about p is crucial for a number of reasons. But don't worry too much about this at the moment, since the difference doesn't matter for current purposes.

[26] Note that by "information" I do not mean to exclude non-propositional evidence (such as raw perceptual experience). I also do not intend to limit background information to information possessed by the agent in question. We need to keep the concept as broad a possible in order to avoid overlooking a potential type of truth-relevant relativization constraint.

exceedingly common (especially in formal epistemology and the philosophy of science), is incorrect. There are three main problems for it.

The first problem for backgroundism is the problem of "evidential crumbs." I'll define an evidential crumb to be a tiny part of the evidence that by itself bears no connection to the proposition in question—something that might easily go unnoticed or be left implicit. For example, consider a logical principle, such as the Law of Noncontradiction, that is used as one small (perhaps implicit) step in a long argument for the Theory of Special Relativity. Even given such an argument, the Law of Noncontradiction does not seem to count as evidence for Special Relativity. In general, evidential crumbs intuitively fail to count as evidence concerning the relevant proposition. But the problem is that it is difficult to see how this is so if backgroundism is true. The reason is that it is mostly arbitrary how we distinguish evidence in the foreground from information in the background. The foreground evidence is usually identified as whatever evidence is salient, which is usually whatever evidence has most recently come to light or whatever evidence has been singled out for the focus of discussion. But *any* component of the evidence—even evidential crumbs—can become salient in this sense given the appropriate context, and therefore could presumably be counted as the foreground evidence. In order to solve this problem, backgroundists need a better way to separate the foreground from the background. And the only plausible way I can think of to do this would be to say that the foreground has to be something that by itself counts as evidence. But, then, in order to avoid vicious circularity, what counts as

evidence has to be independent of what's in the background, thereby refuting backgroundism.

The second problem for backgroundism is the fundamentality of nonrelativized evidential support. Our understanding of how background information affects evidential relations is parasitic on a prior understanding of nonrelativized evidential relations: in order to determine whether E is evidence concerning p relative to background information B, we conjoin E with B and determine how the resulting body of evidence bears on p. For example, if I want to know whether the proposition that the deck of cards before me is evidence for some proposition p relative to my background knowledge about standard decks, I do this by adding my background knowledge to the proposition to see what I can infer about p. So, it seems that nonrelativized evidential relations take conceptual priority, and the relativization to background evidence is merely a derivative idea—a mere convenient way of speaking, of isolating a particular part of the evidence for practical purposes, not the ultimate truth about the nature of evidence.

The second problem for backgroundism leads to the third: the absence of background evidence for evidential totalities. For any case in which E plausibly is evidence concerning p relative to the total background information B, E+B itself seems to count as evidence concerning p. But with respect to what? Not further background information, since by stipulation there isn't any. Relative to the empty set? But what would that mean? If relativization to the empty set is interpreted as a mere convention, then this would be a mere circuitous way of saying that E+B is evidence but *not* relative to anything. In effect, the proposal unnaturally bifurcates evidential relations into those

like E that really are relative and those like E+B that aren't. On the other hand, if relativization to the empty set is not a mere convention—if it is intended as a relativization to a real something—then the empty set must actually exist, and the proposal therefore yields a contentious metaphysical commitment to the existence of a real empty set—a set that contains nothing but which is not itself nothing.[27] It seems, then, that backgroundism either leads us to a clumsy bifurcation of evidential relations or a dubious metaphysical commitment.

So, if we take backgroundism too seriously, we quickly run into trouble. Better, then, to take background relativization as a mere convenient way of speaking. Since backgroundism is the only relativist view compatible with the basic conception of evidence in play, we can dismiss evidential relativism in general. What remains to be seen is that the unsuccessful objections to the Filtration Principle are versions of the Relativist Objection.[28] Once this becomes clear, the objections fail for that reason alone.

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[27] For a good overview of philosophical concerns about the existence of the empty set, see §4.3 of Potter (2004).

[28] Specifically, they are versions of the binarist version of the Relativist Objection. However, corresponding ternarist versions could also be constructed, though I will not do so. I should also mention that there are kinds of evidential relativism that have been endorsed but which are not used in the literature to make the Relativist Objection. I will not discuss those either. It is clear enough that any form of the Relativist Objection will fail, since evidential relativism itself is false. The only reasons to discuss the particular versions of the Relativist Objection made in the literature is that (a) it may not immediately be obvious that they are versions of the objection and (b) most of these objections also fail for interesting reasons that are independent of the falsity of evidential relativism.

In some cases, however, the appeal to evidential relativism is eliminable. In those cases, I'll show that the objections nevertheless fail for additional reasons.

2.2.1 The Intransitivity Objection

The first objection I wish to consider is one that has come up several times in conversation, and which, pending interpretation, may also be the objection of Fitelson (2012). According to this objection, the Filtration Principle fails due to evidential intransitivity. That is, for some E1 and E2, E2 is evidence for E1, which is in turn evidence for p, yet E2 is not evidence for p. The falsity of the Filtration Principle is then alleged to immediately follow.

The first step of the "Intransitivity Objection"—the endorsement of intransitivity—is widely accepted. The usual reason (e.g., in Wesley Salmon 1975) assumes what I'll call the *probabilistic-increase view of evidence*, according to which something is evidence for a proposition iff it raises the probability of that proposition (viz., beyond the proposition's prior probability).[29] Evidential intransitivity follows from this view, since there are clear cases in which some evidence, E2, does not raise the probability of some proposition, p, despite raising the probability of some other (propositional) evidence, E1, which in turn raises the probability of p. To borrow an example from Fitelson (2012: 85), let E2 be the proposition that c is a black card in a standard 52-card deck, E1 be the proposition that c is the ace of spades, and p be the

[29] We will leave open the interpretation of probability as well as the appropriate way to set prior probabilities. For a good overview of the possibilities, I recommend Mellor (2005).

claim that c is an ace. While it is clear that E2 raises the probability of E1 and that E1 raises the probability of p, it is also clear that E2 does not raise the probability of p, thereby proving intransitivity (on the assumption of the probabilistic-increase view).[30]

Proponents of the Filtration Principle might first try to circumvent the Intransitivity Objection by dispensing with the probabilistic-increase view in order to maintain transitivity. I side with such proponents in thinking that the probabilistic-increase view is false, since, on the most common view (and in my view the most plausible), the probabilities here must be epistemic or subjective and must therefore set prior probabilities as contingent upon background evidence or subjective judgment, which renders the probabilistic-increase view a version of evidential relativism.[31] This in turn renders the above version of the Intransitivity Objection a version of the faulty Relativist Objection. However, the falsity of the probabilistic-increase view does not save the Filtration Principle from the Intransitivity Objection. No appeal to probability is necessary in order to see that evidential support is in fact intransitive.[32] To establish this,

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[30] Here's the formal justification: since $P(E1/E2) = 1/26 > 1/52 = P(E1)$, E2 raises the probability of E1; since $P(p/E1) = 1 > 1/13 = P(p)$, E1 raises the probability of p; but since $P(p/E2) = 1/13 = P(p)$, E2 does not raise the probability of p.

Note that Fitelson himself may not intend the example to be proving intransitivity, since, as already mentioned, his target of attack is ambiguously stated. However, the example works for my purposes whatever Fitelson's intentions.

[31] For reasons to doubt probabilistic views of evidence in general, see Conee and Feldman (2008: 94-95) and Pryor (unpublished manuscript).

[32] Hence, if Fitelson's intended object of attack is evidential transitivity, I'm not sure why he simply stipulates and then relies upon the highly controversial (and false) probabilistic-increase view in order to make his objection.

consider the following case. Suppose you're puzzling over whether proposition E1 supports p in an effort to determine what your total evidence (which includes E1) supports regarding p. Since you're having a difficult time of it, you seek the opinion of a trustworthy friend, who says to you: "Well, like you, I accept E1 and am puzzled about whether it supports p. But one thing I do know is that if it does support p, it does so misleadingly. I know this because I am highly confident for independent reasons that p is false." It is clear in this example that your friend's testimony supports both E1 and ~p, even if it turns out that E1 in fact supports p. Hence, we have a clear non-probabilistic case for intransitivity.

This result should not worry proponents of the Filtration Principle. Although the Intransitivity Objection does not go wrong in its claim that evidential support is intransitive, it goes wrong elsewhere, viz., in the move from intransitivity to the denial of the Filtration Principle. To determine why this move is fallacious, contrast the following formulations of the Filtration Principle and the "Transitivity Principle":

> *The Transitivity Principle:* If there exists an E1 such that (i) E2 is evidence for E1 and (ii) E1 is evidence in support of p, then E2 is evidence for p.
>
> *The Filtration Principle:* If E2 is evidence for both (i) that E1 exists and (ii) that E1 is evidence in support of p, then E2 is evidence for p.

One readily apparent difference is that clause (i) of the Transitivity Principle requires E2 to support E1's *truth*, whereas the corresponding clause in the Filtration Principle merely requires E2 to support E1's *existence*. This makes transitivity applicable only to a propositional E1. While filtration is more clearly applicable to a non-propositional E1, it

can also apply to a propositional E1, such as when E2 contains arguments from metaphysics about nature of propositions and the nature of existence (whether propositions are concrete or abstract, whether nominalism or Platonism is true, etc.). But let's just agree for the sake of argument that when E1 is propositional, clause (i) in the Filtration Principle is trivially satisfied.

The crucial difference between the two principles is one of scope. Clause (ii) of the Filtration Principle places E1's support for p within the scope of what E2 supports, whereas the corresponding clause in the Transitivity Principle does not. Clause (ii) of the Transitivity Principle instead requires E1 to actually support p, which clause (ii) of the Filtration Principle does not require, since E2's support for the claim that E1 supports p can be misleading. Thus, there are cases in which the Transitivity Principle applies but the Filtration Principle does not (and vice versa). This creates room for potential counterexamples to transitivity that are not also counterexamples to filtration. In fact, we have already seen such counterexamples. In Fitelson's case, E2 (the proposition that c is a black card) does not seem to bear on whether E1 (the proposition that c is the ace of spades) supports p (the claim that c is an ace).[33] Hence, the Filtration Principle does not yield the incorrect verdict that E2 supports p, although the Transitivity Principle does yield that verdict (given the probabilistic-increase view). Turning to my own example of

[33] This is so even given the probabilistic-increase view Fitelson assumes. On that view, the fact that E2 supports that E1 is evidence for p is equivalent to E2 raising the probability that E1 raises the probability of p. Although it is difficult to know how to deal with higher-order probabilities, intuitively E2 does not raise the probability that E1 raises the probability of p. If so, then on the probabilistic-increase view, it follows that E2 is not evidence that E1 is evidence for p.

intransitivity (the one offered above), E2 (the evidence from your friend's testimony) supports E1, which in turn supports p. The Transitivity Principle therefore kicks in to yield the incorrect result that the testimony supports p. But since the friend's testimony does not support that E1 supports p (she explicitly says she has no idea whether E1 supports p), the Filtration Principle does not likewise kick in to yield the incorrect result that the testimony supports p.

It is clear, then, that filtration is compatible with intransitivity. Even better, we can easily see that filtration is not simply compatible with but moreover entails intransitivity. Suppose that E2 supports E1 and that E1 supports p. Although E1 actually supports p, E2 can misleadingly support that E1 supports ~p. In that case, the Filtration Principle entails that E2 supports ~p, and hence that evidential support is intransitive. So, we can be quite sure that the Filtration Principle does not have the fault that the Intransitivity Objection attributes to it.

Despite that the Intransitivity Objection is far off track, it's not hard to see why some might initially find the objection convincing. I suspect any initial intuitive pull the objection may have derives from the ease with which the Transitivity Principle is conflated with the Filtration Principle (or with a version of the Filtration Principle restricted to cases in which E2 supports not just E1's existence but also E1 itself). This conflation is aided by the unfortunate fact that both the filtration and transitivity principles are often formulated in language such as the following:

> *Ambiguous Principle:* If E2 is evidence for E1 which supports p, then E2 is evidence for p.

What's unfortunate about this is that Ambiguous Principle is ambiguous. Namely, it is ambiguous as to whether E1's support for p falls within the scope of what E2 supports. It is thus ambiguous between the Transitivity Principle and the Filtration Principle (or, more accurately, the Filtration Principle restricted to cases in which E2 supports E1 itself). So, a failure to be careful about the language in which the two principles are couched can easily lead to conflation of the two. And once that happens intransitivity mistakenly looks like an attractive reason to resist filtration.

At the start of this section, I mentioned that Fitelson's recent objection to Feldman is perhaps a version of the Intransitivity Objection. Only "perhaps" because what Fitelson has in mind is unclear. It is unclear because he states his intended target of attack in the following manner:

> *Fitelson's Target:* If E (non-conclusively) supports the claim that (some subject) S possesses evidence which supports p, then E supports p.

What's unclear about Fitelson's Target is that it shares Ambiguous Principle's ambiguity. More specifically, Fitelson's Target is ambiguous between:

> *FT1:* If E (non-conclusively) supports both (i) that S possesses evidence and (ii) that this evidence of S's supports p, then E supports p.
>
> *FT2:* If (i) E (non-conclusively) supports the claim that S possesses evidence and (ii) this evidence of S's supports p, then E supports p.

These disambiguations of Fitelson's Target are restricted versions of the Filtration Principle and Transitivity Principle, respectively. It is therefore unclear whether Fitelson's intended object of attack is a kind of transitivity principle, a kind of filtration

principle, or whether Fitelson simply fails to distinguish the two. Whatever his intentions, though, it is clear that the considerations he offers cast doubt only on transitivity, since his objection to filtration is the card case already described, which we've seen is a case of intransitivity to which the Filtration Principle is inapplicable. So, whatever exactly Fitelson has in mind, there is nothing in what he says that is cause for doubt about the Filtration Principle.

2.2.2 The Objection from Defeat

A more substantive objection—one that doesn't depend on conflation—arises once a certain relatively common view of defeaters is adopted. The view I have in mind is what I'll call the *Nullification Thesis*, according to which defeaters for a given positive evidential relation nullify that relation (in the sense that, what would otherwise be evidence for a proposition is no longer so once it is defeated). We shall see that, given the Nullification Thesis, there are cases in which defeaters sever the evidential connection between E2 and p (rendering false the Filtration Principle's consequent) without thereby severing the evidential connection between E2 and the claim that there exists evidence in support of p (thereby preserving the Filtration Principle's antecedent). A relatively common view of defeat therefore leads to the rejection of the Filtration Principle.

Proponents of this "Objection from Defeat" include Kvanvig (2011: 46–50) and Hudson (in personal communication to Feldman, as reported in Feldman (2009: 309)). While both offer examples in support of the objection, I'll here focus on Hudson's case (since it seems to me clearer), which runs as follows. Suppose that Hudson, in a seemingly trustworthy fashion, knowingly tells Feldman a lie: the proposition (p) that it's

Hudson's birthday today. Hudson's testimony gives Feldman evidence (E1) that it's Hudson's birthday. By noting this effect of his testimony, Hudson gains evidence (E2) that Feldman has E1 as evidence that it's Hudson's birthday. But Hudson claims he does not thereby gain any evidence that it really is his birthday. (After all, he lied. He knows he lied. And noting the consequence of a lie—namely, that it resulted in someone else having evidence for its truth—does not seem to give one evidence for its truth.) If Hudson is right about this, it follows that E2 is not evidence for p (since he has E2), which runs contrary to what the Filtration Principle entails.

Although Hudson does not use the language of defeat in this context, it is nonetheless clear that his objection is a version of the Objection from Defeat. Notice that it is part of Hudson's example that he has knowledge that it's not really his birthday, that what he told Feldman was a lie. Serving as the basis of this knowledge, Hudson must have some evidence, D, that it's not his birthday, that his testimony was a lie. Now, it is clear that E2 would at least be evidence for p in the absence of D. (After all, if Hudson had a sudden onset of selective amnesia, remembering E2 but forgetting D, he would seemingly have some reason to believe p. This reason would have to be E2.) Since E2 is evidence for p in the absence of D while E2+D is not evidence for p, D is a defeater for E2's support for p. Given that E2 supports p in the absence of defeater D, in the presence of which Hudson allegedly has no evidence for p, it is clear that Hudson's reasoning depends crucially on the claim that defeaters nullify the evidential relations they defeat.

That is, Hudson needs the Nullification Thesis. His objection is therefore a version of the Objection from Defeat.[34]

Both Hudson and Kvanvig require the Nullification Thesis, though neither gives an argument for it. And it is clear an argument is needed, since the thesis is far from obvious. In cases in which there is a defeater, D, for E2's support for p, there are a number of things we can all easily agree with that are conceptually close to the conclusion that E2 is not evidence for p but which are nevertheless consistent with the rejection of the Nullification Thesis. We can all easily agree, for example, that E2+*D* does not support p, that the *total* evidence does not support p, that the evidence does not support p *on balance*, that an agent who has E2 and D and no other relevant evidence is not *justified* in believing p. But these claims do not entail the result that Hudson and Kvanvig need: the claim that E2 by itself does not count as evidence for p. Moreover, it is at least an open conceptual possibility that, even in the presence of D, E2 remains evidence for p, albeit defeated evidence. In fact, that is a perfectly natural way to think of the case. Yet it is inconsistent with the Nullification Thesis. So, in the absence of some special reason to think otherwise (a special reason beyond anything offered by Kvanvig and Hudson), there is no reason to accept the Nullification Thesis and therefore no reason to accept that cases such as Hudson's cast doubt on the Filtration Principle.

[34] Note that Feldman (2009: 309) also treats Hudson's objection in terms of defeaters, though he does not explain why such a treatment is appropriate. I assume he has something like the above explanation in mind.

In addition to being an unsupported assumption, the Nullification Thesis has the further and more serious defect of being false. The Nullification Thesis entails evidential relativism because the thesis makes evidential relations dependent on defeaters—contingent factors that exist apart from the two relata of evidential relations. Since evidential relativism is false, as earlier argued, it follows that the Nullification Thesis is also false.[35] Since the Objection from Defeat depends crucially on the Nullification Thesis, the objection is unsuccessful.

2.2.3 The Screening-Off Objection

The two final objections that belong in the unsuccessful category are raised by Kelly (2005: 186–188). Both objections proceed on the basis of a single example. The example is that of a rational agent, S, who, upon introspection, gains the (correct) information, E2, that S believes p on the basis of evidence E1. According to Kelly, S has E2 as evidence for the proposition that E1 is evidence for p, though does not also have E2 as evidence for p, which contradicts the Filtration Principle. Kelly's two objections provide two distinct rationales for this conclusion. I'll consider the first objection here. The second will be deferred to the subsequent subsection.

Kelly's first objection is that E2 is not evidence for p for S because S is also in possession of E1, which "screens off" E2. E1 screens off E2 in the sense that possession

[35] Feldman (2009: 309–310) also denies the Nullification Thesis by saying that evidential relations are "timeless and eternal and necessary." Although he gives no positive argument for this claim, he does defend it from worries that arise from certain common conversational practices and potential bootstrapping. I agree entirely with what he says there.

of E1 renders E2 irrelevant to one's assessment of p—irrelevant in the sense that E2 does not provide any support for p beyond what E1 already provides.[36] Although I think it is intuitively clear that E2 does not provide such additional support, Kelly offers an interesting point in favor of this conclusion. Remember, E2 is the fact that S believes p on the basis of E1. Since S's belief is based on E1, Kelly points out that the belief is merely the *result* of S's assessment of E1, rather than another consideration alongside E1.[37] Although Kelly does not explicitly explain why this means E2 does not provide additional support for p, I take the point to be that, since S already takes E1 into account as part of the process of belief formation, S's reliance on E2 as evidence for p would therefore ultimately amount to reliance on E1 itself. So, S's giving E2 weight above and beyond what is already provided by E1 ultimately amounts to giving E1 twice the weight it deserves. It is for this reason that Kelly convicts the Filtration Principle of being guilty of "illegitimate double counting."[38]

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[36] Screening off is originally a purely statistical notion, according to which A screens off B with respect to p iff B does not increase p's probability given A (but does increase it without A). My characterization of screening off is more general, replacing probabilistic increase with evidential support.

[37] E2, if evidence at all, is therefore the sort of by-product higher-order evidence that David Christensen (2010: 185) pays so close attention to. Unlike Kelly, however, Christensen also points out that not all higher-order evidence is like this. Moreover, while Christensen agrees with Kelly that this by-product information does not license an increase in confidence, he does not further argue, as Kelly does, that such information fails to be evidence concerning its object-level propositions.

[38] The objection is similar to the widely discussed idea that certain views about knowledge and epistemic justification entail "bootstrapping." See, for example, Stewart Cohen (2002), Richard Fumerton (1995: 178-179; 2008), and Jonathan Vogel (2000).

Although Kelly resists the thought that E2 is evidence for p for S, he does not seem to resist the idea that E2 is evidence for p for an agent who lacks direct access to E1. His view is that E2 serves as a "proxy" for E1 in E1's absence. I don't know what this means if not that E2 is evidence for p for an agent lacking E1. So, it would seem that Kelly endorses the view that E2 is evidence for p for such an agent. But herein lies a problem for Kelly: if E2 is evidence for p for some agents but not others, depending on what other evidence the relevant agent has, then evidential relativism is true (since what other evidence the agent has is a contingent factor that exists apart from E2 and p). But evidential relativism is false. Hence, Kelly's argument contains a flaw.

Perhaps Kelly wishes to resist the conclusion that E2 is evidence for p for agents who lack E1. Perhaps he can resist this because he means something else by the claim that E2 can serve as a proxy. I don't know what that meaning would be. But perhaps that is merely a failing on my part. Even if so, the Screening-Off Objection has further faults. One such fault lies in the premise that the presence of E1 guarantees that E2 is not evidence for p due to the screening-off effect of E1. This premise is presumably justified on the basis of the following universal generalization over E1 and E2:

> *The Screening-Off Principle:* For any A and B, if A is evidence for p which screens off any support B might otherwise provide for p, then B is not evidence for p (at least for any agent in possession of A).

Kelly provides no reason to believe either this general principle or its instantiation with respect to E1 and E2. Nor is the principle obviously correct. It at least seems an open possibility that, while A screens off B, B remains evidence for p in the presence of A,

albeit evidence for p which in the presence of A becomes insignificant and which can therefore be safely ignored in determinations of the support available for p. Not only is this an open possibility, but it seems quite clear upon reflection that this is what we should say. This is so for several reasons.

Feldman (2009: 310) agrees that the Screening-Off Principle is false, and presumably he would maintain this as one objection to the Screening-Off Objection. However, note that the argument he offers against the Screening-Off Principle is not one that will be effective against Kelly (whether or not Feldman intends it to). Feldman's argument is as follows:

> Suppose I learn that you know that I believe P. This is evidence for both P and the proposition that I believe P. However, by acquiring this evidence I do not become better justified in believing either P or the proposition that I do believe P. Evidence does not add up in a simplistic way.

Let E be the evidence Feldman has for the proposition that you know p* (the proposition that Feldman believes p). Feldman alleges that E is evidence for both p and p*, but that he is not thereby better justified in either proposition. That is, E combined with Feldman's other evidence (E*) does not better support either p or p* than E* alone. In other words, E* screens of E. Since E is nevertheless evidence for p and p*, it follows that the Screening-Off Principle is false. It is clear, however, that this argument should not move Kelly, given that he has no reason to accept the premise that E is evidence for p and p*. In fact, it's a premise he will want to use the Screening-Off Objection (and therefore the Screening-Off Principle) to reject. Since Feldman assumes a premise that

the Screening-Off Objection places in doubt, he cannot legitimately employ his argument as a response to Kelly. (Again, I am not charging Feldman with a flaw here, since for all I can tell he doesn't intend the argument as a response to Kelly.)

I agree with Feldman that the Screening-Off Principle is false, but for other reasons. One such reason is that there are a number of cases which cast doubt on the principle (to varying degrees of plausibility), including the following:

> Case 1: Let A be evidence for p. Suppose B = A. It follows that A+B = A, which entails that A+B does not support p more than A alone. The Screening-Off Principle therefore entails that B is not evidence for p. This is clearly incorrect, since it follows that B is evidence for p from the stipulation that A = B and A is evidence for p.[39]
>
> Case 2: Suppose A and B are two independent pieces of evidence for p, each of which supports p to the maximum possible degree (if there is such a degree). Then A+B does not support p more than either alone. It follows from the Screening-Off Principle that neither A nor B is evidence for p, which doubly contradicts the stipulation.
>
> Case 3: It is possible for a single agent to simultaneously have two distinct bodies of evidence, A and B, for a single proposition, p, where A and B are mutually defeating. (For example, suppose S has A and B, where A supports $q\&(q\rightarrow p)$ and B equally supports $p\&(q\rightarrow\sim p)$. Although A and B each supports p, it is clear that they mutually defeat each other, leaving A+B neutral with regard to p.) Although A and B each

[39] Of course, a minor revision to the Screening-Off Principle would accommodate the counterexample. It is nevertheless worth mentioning. The other counterexamples are more substantive.

support p, A+B does not support p more than A alone, since A+B doesn't support p at all. The Screening-Off Principle incorrectly entails otherwise.

Case 4: On some views, kinds of evidence fall into two categories—fundamental and derivative. For example, some hold that non-propositional evidence is fundamental but propositions can gain a derivative status as evidence by being descriptions of, or by being supported by, non-propositional evidence. Others hold that doxastic states can gain derivative status as evidence by having their contents bear some appropriate relation to non-doxastic evidence. Let B be derivative evidence for p in virtue of fundamental evidence A. It is plausible that A+B does not support p more than either A or B, despite that each is evidence for p, contrary to the Screening-Off Principle.

I recognize that Case 2 will not convince those who think there is no such thing as a maximal possible degree of support. I also recognize that Case 4 will not convince those who think there do not exist the two categories of evidence. But the other two cases clearly show that the Screening-Off Principle is false.

In addition to the existence of straightforward counterexamples, there is a further reason we should reject the principle. Whether A+B supports p more than A alone is dependent on what B is like, as the cases presented above make clear. The Screening-Off Principle therefore makes A's status as evidence for p relative to the presence or absence of B, which is a contingent factor not fixed by the identity of A and p. In other words, the principle entails evidential relativism, which is false. Hence, the Screening-Off Principle is likewise false.

It is clear, then, that we should reject the Screening-Off Principle. Fortunately for Kelly, Kelly's appeal to the principle is inessential to establishing that E2 is not evidence for p for S. Unfortunately for Kelly, the reason is that E2 is not even evidence that E1 is evidence for p (for anyone, including S), making the Filtration Principle inapplicable to E2. To see this, recall that E2 is just the proposition that S believes p on the basis of E1. As far as E2 goes, S is completely irrational in so believing. In order for E2 to provide a person, T, with evidence that E1 is evidence for p, T needs to include some supplemental information, C, regarding S's rationality. The falsity of evidential relativism forces us to conclude that possession of C does not make E2 evidence for p (since C is a contingent factor not fixed by the identity of E2 and p). The nearest thing to E2 that is evidence for the conclusion that E1 is evidence for p is the conjunction E2* = C+E2.

The Screening-Off Objection therefore fails to get off the ground due to the assumption that E2 is an example of evidence to which the Filtration Principle is applicable. Kelly should instead attempt to run the objection on a different example. He could, for example, try running the objection on E2*, since E2* is indeed evidence that E1 is evidence for p. The Filtration Principle therefore kicks in to yield the conclusion that E2* is evidence for p. Kelly will then have to claim that E2* is not evidence for p for S because S possesses E1, which screens off E2*. But the problem remains that the objection depends on the Screening-Off Principle, which we now see is false. In addition to this lurking difficulty, the new version of the objection creates a difficulty to which the original version is not subject: E1 does not screen off E2*. Note first that Kelly's reason for the claim that E1 screens off E2 does not apply to E2*. E2 is merely the fact that S

believes p on the basis of E1. Reliance on E2 for support for p would therefore ultimately amount to nothing but reliance on E1 all over again. But E2* is not like that. E2* adds the new and independent information that S's belief is rational or reliable or the like. So, reliance on E2* for support for p is not "nothing but" reliance on E1 all over again.[40] Moreover, it is independently plausible that E2* provides more support for p than E1 alone. It would be strange for S to increase confidence that E1 really is good evidence for p yet remain stagnant in his or her confidence in p. Rational backing to the effect that one's evidence is good evidence indeed seems to license an increase in confidence.[41]

The Screening-Off Objection seems to be left with no remaining leg on which to stand. The original version of the objection fails for two independent reasons: (a) it appeals to the Screening-Off Principle, which is false, and (b) it relies on an example to which the Filtration Principle is inapplicable. Removing defect (b) by modifying the original example makes it difficult to sustain the Screening-Off Objection for the additional reason that the revised example does not involve screening off. I conclude, then, that the objection is thoroughly refuted.

2.2.4 The Enumeration Objection

Once again suppose S is aware of E2, i.e., the fact that S believes p on the basis of E1. But now further suppose S is asked to enumerate what evidence he or she possesses in favor of p. Kelly claims that in response to such a request, S would omit E2, citing

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[40] I take this to be the roughly the point made by Jonathan Matheson (2009: 273).

[41] I take this to be roughly the point made by Conee (2010: 82).

only E1. Taking this as an indication that E2 is in fact not evidence for p despite the Filtration Principle's alleged implication to the contrary, Kelly concludes we have a second reason to doubt the principle.

One line of response to this "Enumeration Objection" is to argue that S's failure to cite E2 as evidence is no indication of E2's evidential status. S's failure to do so could be due entirely to purely pragmatic factors. Matheson (2009: 272-273) makes this point and offers a number of helpful suggestions as to what such pragmatic factors might be. One possibility is that we're often not all that great at identifying our own evidence. Another is perhaps that citing one's own evidence is hubristic or would at least seem hubristic to others. Alternatively, perhaps our practice with respect to citing evidence is like our practice regarding causes and explanations: when asked for the cause of or explanation for a given phenomenon, we simply leave out certain genuine causal or explanatory factors due to conversational insignificance or irrelevance. In fact, it seems clear that for just this reason we hardly ever cite all of our evidence for a given proposition when asked.

To reinforce this last point of Matheson's with an example: if asked to state my reasons for accepting the Pythagorean Theorem, it would not be surprising for me to simply provide a proof and stop there, even though I could continue with numerous other considerations that are clear examples of additional evidence for the theorem—e.g., a second proof, my memory of having seen proofs in the past, along with an abundance of testimonial information received over the years from numerous diverse and trustworthy sources. Plausibly, the reason it would not be surprising for me to leave all of this out is

that the thought behind the request for my evidence for the theorem was not really that I cite every last bit of evidence I might have, but only that I cite enough to meet some implicit conversationally appropriate standard (e.g., enough evidence to convince the person requesting the evidence)—a standard that a single proof would meet.

Even if conversational standards can license leaving out some evidence or other in response to a request for the evidence, there remains the question of why we should expect that S would leave out E2 in particular. I can think of a couple of candidate explanations. First, as just illustrated, a request for evidence is often implicitly understood merely as a request for enough of our evidence to meet some implicit standard, e.g., enough to convince the requesting party. If S understands the request for evidence in this way, then S would likely leave out E2, since E1 screens off E2, rendering E2 an ineffective confidence booster (a fact which, recall, is compatible with E2 being evidence for p for S, given the denial of the Screening-Off Principle). A second reason why conversational standards might license leaving out E2 in particular is that the request for one's evidence for p is usually understood as a request for the person's *grounds* for belief in p, where one's grounds consist in the evidence on which one bases the belief. One's grounds need not be identical with one's evidence. For example, one might have adequate evidence for p, but fallaciously arrive at belief in p on the basis of something else—something that is not adequate evidence for p. One might have evidence for p that is fully defeated, and therefore avoid using it in arriving at one's belief. And perhaps one avoids grounding belief on evidence that appears to yield an epistemically unsatisfactory kind of circularity, which is what seems to happen in the case of E2: S cannot properly

base belief in p on the basis of the fact that S believes p on the basis of E1. So, even if E2 is evidence for p, it is not evidence on which a reasonable person would attempt to ground belief in p. Hence, if S understands the request for S's evidence as a request for S's grounds, S is likely to omit E2.[42]

I suspect there is much more to say concerning pragmatic reasons why we might expect S to omit E2 from a list of S's evidence. But the above points at least suffice to make clear that Kelly would need to say much more to convince us that S's failure to cite E2 as evidence for p has more than merely pragmatic significance. Leaving this problem aside, Kelly is still faced with several further difficulties. One is that Kelly admits that those, unlike S, who lack direct access to E1 might very well cite E2 as evidence for p. Hence, it seems that Kelly should agree that E2 is evidence for p for at least those who lack access to E1, even though it is not evidence for those who do have such access. But this is problematic, since it makes the evidential status of E2 turn on the presence or absence of certain other evidence, which we've already seen is a version of evidential relativism. Kelly's reasoning must therefore contain some mistake.

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[42] The distinction between evidence and grounds corresponds to a distinction between two types of evidential justification. When one's total evidence supports a proposition, then the proposition is the one that is justified for the person to believe--whether or not one actually believes it, no matter how one arrives at the belief. This is sometimes referred to as "propositional justification." When a belief is propositionally justified and also meets the proper basing condition (i.e., the belief is arrived at for the right reasons in the right way), the belief is sometimes said to be "doxastically justified" or "well-formed" or "well-founded." For further discussion on evidence vs. grounds, propositional vs. doxastic justification, and especially the basing relation, see Korcz (2015).

In addition to the above problems, the Enumeration Objection faces a formal difficulty. There is a plausible case to be made that the premises are inconsistent. We can show this by showing that one of the premises leads to the negation of another. To see this, suppose we grant Kelly that S would not cite E2 as evidence for p along with the premise that S's failure to cite E2 is an indication that E2 in fact fails to be evidence for p. Suppose that instead of asking S to cite evidence for p, we ask for S's evidence for the claim that E1 is evidence for p. It seems to me S would not cite the fact that S believes p on the basis of E1 as a reason for thinking that E1 is evidence for p. That is, S would not cite E2 as evidence that E1 is evidence for p. It also seems to me that the source of this particular failure to cite E2 is no less likely to be traced to pragmatic factors than S's failure to cite E2 as evidence for p. Hence, granting Kelly's premise about the significance of what S would cite, we should infer that E2 in fact fails to be evidence that E1 is evidence for p. Since the first step in Kelly's argument is that E2 is indeed evidence that E1 is evidence for p, one of Kelly's premises has led to the rejection of another. Kelly's premises are therefore in tension.

Even leaving aside all of the above problems for Kelly, the Enumeration Objection shares a fundamental flaw with the Screening-Off Objection: the falsity of evidential relativism indicates that E2 is not evidence that E1 is evidence for p, rendering the Filtration Principle inapplicable to E2. As suggested with respect to the Screening-Off Objection, Kelly could respond with a revision of the Enumeration Objection. Instead of E2, he could consider the nearest thing to E2 that is genuinely evidence that E1 is evidence for p: E2* (the combination of E2 with evidence about the rationality or

reliability of S's belief that E1 is evidence for p). Since E2* is indeed the sort of evidence to which the Filtration Principle is applicable, the principle entails the result that E2* is evidence for p. The modified Enumeration Objection would then allege that S will not cite E2* as evidence for p and that this is not due solely to pragmatic factors. But this allegation is implausible. Unlike E2, E2* seems a prime candidate for something S should cite in favor of p. It is clearly something that would license an increase in confidence in p for S. And anything that should increase confidence in p is something that is perfectly legitimate to cite in favor of p. If S would not cite E2*, pragmatic factors must be to blame. The original and modified versions of the Enumeration Objection therefore share the same dim fate.

2.3 The Filtration Principle: Genuine Problems

I've now given my reasons for thinking that most previous attempts to refute the Filtration Principle are unconvincing. With these failed attempts cleared out of the way, it's time to see what's really wrong with the principle. I'll show it to be refutable for several independent reasons—reasons in light of which the Filtration Principle will be gradually revised.

2.3.1 The Blocking Problem

The first genuine problem for the Filtration Principle is due to the existence of what I shall call "blockers." For any E, B, proposition p, and evidential relation R, I'll say that B *blocks* E from bearing R to p, alternatively that B is a *blocker* for E's bearing R to p, iff there is an E* such that E = E*+B, where E* bears R to p and B is a (full) defeater for E*'s bearing R to p, so that E does not bear R to p. In cases in which some E2, which

supports that there exists some evidence E1 in support of p, is blocked from supporting p, E2 fails to be evidence for p, contrary to what the Filtration Principle implies. That there are such cases can be easily seen, as I now show.

Suppose Ea supports that there exists evidence, E1, in support of p. It follows from the Filtration Principle that Ea supports p. Let's grant that this is one result that the Filtration Principle gets right (which is something we can legitimately grant, since we know by the Significance Thesis that there are such cases). But also suppose there is some Eb that supports that p is false, even though Eb does not contest that E1 may very well be evidence for p. Then Eb does not defeat Ea's support for the claim that E1 is evidence for p, which entails that E2 = Ea+Eb still supports that there exists some evidence in support of p. However, since Eb defeats Ea's support for p (at least in the case that Eb's support for ~p is at least as strong for Ea's support for p), it follows that Eb is a blocker for E2's support for p and that E2 is therefore blocked from supporting p. Hence, E2 can be blocked from supporting p, even though it supports that there exists evidence in support of p. We therefore arrive at our first genuine problem for the Filtration Principle.[43]

The fact that all blockers are defeaters might lead some to be concerned that the above "Blocking Problem" reduces to the previously dismissed Objection from Defeat.

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[43] This objection is a version of the concern Feldman raised to a modified version of the Filtration Principle I once proposed (in personal conversation). I then realized it applies equally well to the original Filtration Principle. After reading about this in my dissertation proposal, Conee later referred me to the appendix of his (2010: 88), where he presents a version of the same objection. (Note, though, that neither Feldman nor Conee uses the language of blockers. The notion of blocking is my own.)

However, there are crucial differences between the two objections. While the Objection from Defeat alleges that the Filtration Principle is false because there exists a certain kind of defeater for E2's support for p, the Blocking Problem depends on no such allegation. The Blocking Problem goes through even in the absence of any defeaters for E2. The problem merely alleges there to exist a blocker for E2. And although a blocker for E2 is a sort of defeater, it is not a defeater *for E2*. Instead, what the blocker defeats is some evidence *contained within* E2, rather than E2 itself. Hence, E2 can be blocked from supporting p even when there are no defeaters for E2. And in such cases, the Blocking Problem succeeds where the Objection from Defeat doesn't even apply. Moreover, even when the Objection from Defeat does apply (due to the presence of a defeater for E2's support for p), the reason the objection fails does not extend to the Blocking Problem. Remember that the Objection from Defeat fails because it requires evidential relativism, and it requires evidential relativism because it allows defeaters for E2—factors external to E2 and p—to affect E2's evidential status. But the Blocking Problem does not require relativism. Blockers can have an effect on E2's evidential status because any blocker for E2 is part of E2's *contents*. And the claim that the contents of E2 can affect its evidential status is an uncontroversial one that clearly does not require relativism.

We now know the Filtration Principle is false and therefore needs revision. It is not difficult to see how to satisfactorily revise the principle to avoid the Blocking Problem. Various possibilities come to mind. First, notice that the Blocking Problem is applicable only to cases in which E2 contains some evidence for p, even though E2 is not itself evidence for p. This is because the Blocking Problem is applicable only when E2 is

blocked from supporting p, which by definition means E2 consists of some evidence for p that is defeated by the blocker. The Blocking Problem can therefore be avoided by weakening the Filtration Principle's consequent to specify that E2 either is *or contains* some evidence for p, which yields the following revision:

> *FP2:* If E2 supports that there exists some evidence, E1, in support of p, then E2 is or contains evidence for p.[44]

A second revision immediately follows from FP2. If E2 satisfies the consequent of FP2, then any agent who has E2 has something that either is or contains evidence for p. Either way, the agent has some evidence for p. Hence, if FP2 is correct, any E2 that satisfies the antecedent is evidence such that any agent who has it thereby has evidence for p. The following agential version of the Filtration Principle therefore also adequately handles the Blocking Problem:

> *FP3:* If E2 supports that there exists some evidence, E1, in support of p, then any agent who has E2 has evidence for p.[45]

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[44] One might worry about some kind of generalized blocking problem, where E2 contains two or more parts, neither of which defeats the other but each of which in turn has parts that yield defeat when combined. We can avoid such problems by assuming (a) the transitivity of evidential containment or parthood (so that for any X, Y, and evidence E, if X is a part of E and Y is a part of X, then Y is a part of E) and (b) a broad differentiation of evidential bodies so that any two such bodies are identical when they contain exactly the same parts, however ordered or grouped.

[45] Conee (2010: 88) proposes a similar principle in response to an objection that resembles the Blocking Problem. Feldman also sometimes (e.g., 2009: 308) states the Filtration Principle in agential terms, although he does not do so in response to any objection to the Filtration Principle. I suspect that Feldman treats the two formulations as different wordings of the same principle (or perhaps as two distinct but unimportantly different principles).

Although the two suggested revisions adequately handle the Blocking Problem, they are not quite satisfactory for the purposes of our current project. The reason is that FP2 and FP3 do not tell us when E2 itself is evidence for p, which is the information we seek. However, a revision of the Filtration Principle that provides this information is readily available from the fact that the Blocking Problem applies precisely to the cases in which E2 contains a blocker that blocks E2 from supporting p. Hence, if we simply add to the Filtration Principle the condition that E2 does not contain such a blocker, we get the sort of revision we desire:

> *FP4:* If E2 supports that there exists evidence E1 in support of p, then E2 is evidence for p iff E2 does not contain any blockers that block E2 from supporting p.

Given that FP4 is more apt for our purposes than FP2 and FP3, I'll leave the latter two principles behind. Note, however, that the remaining objections to be discussed apply equally well to FP2 and FP3.

2.3.2 The Propositionality Problem

We need not look to blockers to find problems for the Filtration Principle. A further problem arises due to the fact that the principle applies even to cases in which E2 supports the *bare existence* of some evidence, E1, in support of p. E2 is not further required to support E1's *truth*. This is usually unproblematic in cases in which E1 is non-propositional, since non-propositions cannot be true. But it is undesirable in cases in which E1 is propositional. Examples bear this out. Suppose E1 is a conjunction of some mathematical axioms. Suppose E2 doesn't support E1 but does support that E1 entails

theorem p, and also supports that this entailment renders E1 evidence for p.[46] Intuitively, E2 is not thereby evidence for p. The Filtration Principle is false, since it implies otherwise. For another example, suppose E1 is the proposition that I am having a visual experience as of a piano standing on the left-hand side of the concert stage. Further suppose that E2 supports (perhaps misleadingly) that E1 (the proposition) exists and is evidence for p, but does not also support that I'm really having the visual experience (i.e., does not support E1 itself).[47] Once again, these facts are not enough to legitimately conclude that E2 is evidence for p.

It looks, then, like the Filtration Principle fails in cases of a propositional E1 that E2 fails to support. It also looks like this "Propositionality Problem" is independent of the Blocking Problem. To see this, suppose again that E2 supports that the conjunction of some mathematical axioms, E1, supports p, where E2 does not also support E1. This is consistent with E2 containing no smaller subset of evidence for p. In that case, there is no evidence in support of p contained within E2 that is available for something else

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[46] The counterexample accommodates those like myself who think all evidence is non-propositional. Even if there is no such thing as propositional evidence, it is nevertheless possible for E1 to be a proposition or set of propositions that E2 *mistakenly* supports as being evidence for p. Although some might protest that something isn't really evidence if it's mistaken, this is surely wrong, at least given the conception of evidence currently in play, namely that of truth indication: it is clear that a proposition can be indicated as having a certain truth value without it actually having that truth value.

[47] Note that this example accommodates those who think that truths are the only propositions that can be evidence. My example does not require E1 to be false propositional evidence. E1 can be false but mistakenly supported by E2 as being evidence (which is possible even if we require E2 itself to be both propositional and true, if E2 is inductive or abductive evidence). Alternatively, E1 can be true but mistakenly supported as being false. A further possibility is that E2 is simply neutral regarding E1's truth value.

contained in E2 to defeat. E2 is therefore not blocked from supporting p, even though the Propositionality Problem continues to apply. Since the Propositionality Problem continues to apply even when E2 contains no blockers, the constraint against blockers in FP4 does not suffice to handle the Propositionality Problem. FP4 therefore inherits the problem from the original Filtration Principle.

It may initially appear that FP4 can be easily revised to handle the difficulty just presented. From what I've said so far, it looks like the cases in which the Propositionality Problem arises are precisely those in which E2 supports that there exists some evidence, E1, in support of p, where E1 is propositional and E2 fails to support E1. Hence, one might propose to revise FP4 by adding to it the requirement that E2 supports E1 when E1 is propositional, yielding the following revision:

> *FP5:* If E2 supports that there exists some evidence, E1, in support of p, then E2 is evidence for p iff (i) E2 does not contain any blockers that block E2 from supporting p and (ii) E2 supports E1 when E1 is propositional.

But this revision is faulty on a number of grounds. Suppose that condition (ii) fails even though E2 is evidence that there is evidence, E1, in support of p. Then FP5 yields the result that E2 is not evidence for p. But this inference is much too quick. All the Propositionality Problem shows is that we can't legitimately conclude that E2 is evidence for p from what has been said so far about E2. But it is a stronger claim that E2 is in fact not evidence for p. In fact, there are cases in which E2 will be evidence for p, as I will now show.

One way that E2 can be evidence for p despite not meeting condition (ii) of FP5 is for E2 to contain some undefeated evidence that supports p independently of what E2 supports regarding E1's evidential relation to p (e.g., E2 might contain undefeated first-order evidence for p). To generalize, whenever E2 contains some undefeated evidence that bears some evidential relation R to p independently of the evidential relations that E2 bears to the proposition that E1 bears R to p, I'll say that E2 bears R to p by *bypassing* E1's relation to p. Or, to simplify exposition, I'll say that E2 bears R to p *via a bypass*, leaving implicit what is bypassed.

When E2 does not support a propositional E1, it leaves a kind of gap between E1 and p. As just noted, one way for E2 to support p in such a case is for E2 to bypass this gap. But another possibility is for E2 to build a "bridge" across the gap. It can do so by supporting that there is a positive evidential relation, R, such that the proposition <E1 is evidence for p> itself bears R to p. For example, E2 can support p by supporting both (a) that the conjunction of mathematical axioms (E1), whether true or false, is evidence for p, and (b) that this fact is itself evidence for p. Although unusual, it's certainly possible (e.g., via testimony). To generalize, whenever E2 bears some evidential relation R to p in virtue of supporting that some special relation holds between p and the claim that there is an E1 that bears R to p, I'll say that E2 bears R to p *via a bridge* (where the bridge itself is the special relation that E2 supports).[48]

[48] By "special relation," I mean a relation that either does not actually hold or one that does hold but not in general (i.e., with respect to the universal generalization over E1 and p).

Plausibly, cases in which E2 supports p via a bypass or bridge are the only two exceptions to the rule that E2 fails to support p in cases of a propositional E1 that E2 fails to support. Hence, the following is plausibly an adequate revision of FP5:

> *FP6:* If E2 supports that there exists some evidence, E1, in support of p, then E2 is evidence for p iff E2 supports p via a bypass or bridge or the following conditions obtain: (i) E2 does not contain any blockers that block E2 from supporting p and (ii) E2 supports E1 when E1 is propositional.

Since this adequately handles all cases of support via bypasses and bridges, I'll hereafter focus solely on other cases unless otherwise specified.

Although FP6 handles the problem just identified for FP5, it unfortunately goes wrong for a host of other reasons inherited by FP5, deriving from clause (ii). I have been describing the Propositionality Problem as a problem for cases in which E1 is propositional. And restricting FP4 by adding clause (ii), yielding FP5, was a move motivated by that description. However, the description is overly simplistic, intended to serve merely as an approximation of the Propositionality Problem (for the purposes of facilitating an introduction to the basic idea of the problem). However, as we'll now see, the real problem is surprisingly difficult to identify more precisely.

One difficulty arises because I have been using the term "propositional" without saying exactly what I mean by it. A natural thought is that E1 is propositional iff it is either a proposition or a plurality of propositions. The first complication with this thought arises when E1 is a mix of both propositions and non-propositions. In that case, it seems that what we want is to require E2 to support the propositions in E1, not E1 as a whole.

I'll accommodate this by (a) allowing E1 to count as propositional when only some of its contents are propositions and (b) stipulating that E2 supports E1 when it supports all the propositions, if any, contained in E1. With these stipulations, FP6 avoids the complication just mentioned.[49]

Although the one difficulty just mentioned is resolved, numerous complications remain. Suppose again that E1 is a conjunction of axioms. Despite E1's propositionality, it might nevertheless turn out that E2 misleadingly supports both that E1 is a mental state and that this mental state is evidence for p. In that case it seems E2 can support p without supporting E1, whereas FP6 cannot allow this result (since E1 is in fact propositional). So, it looks like whether E1 *really* is propositional is irrelevant to what E2 supports. As the example just given shows, what actually matters is whether E2 *supports* E1 as being the kind of thing that is true or false (or as containing things that are true or false), regardless of whether E1 really is so or not. When E2 supports E1 as being such a thing, I'll say that E1 is propositional "from the perspective of E2." While this notion could

[49] One might object to the new understanding of FP6 for the following reason. Suppose E1 = E&q, where q is a proposition and E is not. Further suppose that E2 supports that E1 supports p. Now, it seems that there are circumstances in which E2 need not support q in order to support p, e.g., it would suffice if E2 supports that E supports p, and q is a proposition that is entirely irrelevant to E and p. Therefore, E2 need not support the propositions in E1 in order to support p. But, so the objection goes, the new understanding of clause (ii) seems to rule this out. However, this is no cause for concern about FP6. FP6 does not imply that E2 fails to be evidence for p. The reason is that E2's support for p in the case under consideration is not dependent on E2's support for the claim that E1 supports p. In the example given by the objection, E2's support for p is instead attributable to its support for the claim that E supports p, which means E2 *independently* supports p. FP6 therefore agrees that E2 supports p even though condition (ii) is unsatisfied.

surely use further elucidation, I think the idea is sufficiently clear for my purposes here. Revising clause (ii) of FP6 to be about *perspectival* propositionality rather than *actual* propositionality rules out the defect in FP6 just considered:

> *FP7:* If E2 supports that there exists some evidence, E1, in support of p, then E2 is evidence for p iff E2 supports p via a bypass or bridge or the following conditions obtain: (i) E2 does not contain any blockers that block E2 from supporting p and (ii) E2 supports E1 when E1 is propositional from the perspective of E2.

But FP7 is a little too weak. Suppose E2, which contains no blockers, supports that E1 is either an axiom or a mental state, but supports that whichever it is it exists and supports p. Then it seems to me that E2 will not thereby support p. This is so even though E1 meets condition (i) by not being propositional from the perspective of E2. What drives this problem is that E1 is also not non-propositional from the perspective of E2. In other words, E2 simply does not take a stance on E1's propositionality. Hence, we need to amend FP7 by adding the condition that E1 has some perspectival propositional status with respect to E2 (that is, E1 is propositional from the perspective of E2 or non-propositional from that perspective):

> *FP8:* If E2 supports that there exists some evidence, E1, in support of p, then E2 is evidence for p iff E2 supports p via a bypass or bridge or the following conditions obtain: (i) E2 does not contain any blockers that block E2 from supporting p; (ii) E2 supports E1 when E1 is propositional from the perspective of E2; and (iii) E1 has a perspectival propositional status with respect to E2.

We're still not entirely in the clear. Suppose E2 is testimonial evidence that q is true and that some true or false propositional evidence, E1, supports p. E2 provides no clue as to what E1 is, though, as a matter of fact, it just so happens to be identical with q. Since you do not have this information, you cannot put two and two together to conclude p. So, E2 does not seem to support p. Nevertheless, since E1 = q, it still seems correct to say that the testimonial evidence supports E1 (albeit you're in no position to be able to tell that this is so). Since E2 also supports that E1 supports p, then under the stipulation that no blockers are involved, the conditions of FP8 are met, which means that it yields the incorrect verdict that E2 is evidence for p.

The problem is that it is possible for E2 to support E1 without supporting it *under the same designation* (i.e., in terms of the same name or description or set of concepts) as the proposition <E1 supports p>, which creates a disjoint between the two propositions that precludes E2 from linking them together to form a single unified chain of support for p. So, we can resolve the difficulty by revising condition (ii) of FP8 as follows:

> *FP9:* If E2 supports that there exists some evidence, E1, in support of p, then E2 is evidence for p iff E2 supports p via a bypass or bridge or the following conditions obtain: (i) E2 does not contain any blockers that block E2 from supporting p; (ii) in cases in which E1 is propositional from the perspective of E2, E2 supports E1 under the same designation as the proposition that E1 supports p; and (iii) E1 has a perspectival propositional status with respect to E2.

In what follows, whenever I want to ensure that E2 supports both E1 and the proposition that E1 supports p under the same designation, I'll simply subsume both propositions

under a *that*-clause that explicitly uses "E1" as the designation: E2 supports *that E1 is true* and supports *that E1 supports p*.

Note that FP9 also resolves a further problem for FP8. Suppose that E2 supports that E1 is a true proposition that supports p, whereas E1 is in fact not a proposition but a river bank. This is another case in which E2 supports that E1 is true but does not support E1 itself. E2 therefore meets condition (ii) of FP9 but not the corresponding condition in FP8. FP9 therefore entails the intuitively correct result that E2 can support p, whereas FP8 yields the counterintuitive result that E2 cannot. As far as I can tell FP9 has no further difficulties along the lines of the Propositionality Problem. Finally, then, we have a version of the Filtration Principle that satisfactorily resolves the problem.

2.3.3 The Problem of Conceptual Inadequacy

Although FP9 handles all problems raised thus far, it shares with its predecessors two further fatal flaws. The first flaw arises for cases in which E2 fails to contain conceptual information about the tie between evidence and truth—more specifically, information about what the existence of evidence for a proposition has to do with that proposition being true. When E2 fails to contain such information, as far as E2 goes the fact that there exists evidence for p is of no more significance to p than the fact that there is a person who wishes p to be true, or that p is capable of being expressed with a 12-word English sentence, or that p was asserted in a song I heard on the radio yesterday. Hence, in cases of this sort, E2's support for the claim that there exists evidence for p does not suffice to make E2 evidence for p. This is not due to the existence of blockers or

to any perspectival propositionality issues. Therefore, E2 can meet the conditions of FP9 yet fail to be evidence for p.

To illustrate, consider a person, Keeley, who grasps various implicit evidential relations (i.e., instances of evidential relations) but does not have the general concept of evidence. Keeley then gains her first piece of information about what evidence is: she hears from Jayden—a person whom Keeley reasonably trusts—that the relation *is evidence for* is a special kind of two-place relation, the second relatum of which is always a proposition.[50] Jayden then adds that his current mental state is one example of evidence for proposition p. This minimal testimonial information (along with whatever information backs her comprehension and trust of Jayden) provides Keeley with reason (E2) to think Jayden's mental state (E1) is evidence for p. Moreover, E1 is non-propositional from the perspective of E2, which does not contain blockers. Hence, the conditions of FP9 are met, implying that E2 is evidence for p. But it clearly is not. As far as E2 goes, Jayden's mental state being evidence for p has no more significance for p than the fact that Jayden wishes p, or that he wishes p's falsity, or that he enjoys pondering p, or that he knows how to express p in Cantonese. As such, Jayden's testimony doesn't provide Keeley with even the slightest indication that p is true.

What Keeley is missing is information about the connection between evidence and truth.[51] She needs to gain some such information in order to gain support for p. But

[50] I use the names "Keeley" and "Jayden" in honor of my niece and nephew.

[51] Some might say she lacks the concept of evidence. However, whether this is true either does not add to what I've said or is irrelevant to my point. For, if Keeley has the concept

not just any information about the evidence-truth connection will do. For example, it would not suffice for Keeley to gain only the information that some propositions for which there are evidence are true, even though such information is about the connection between evidence and truth. Hence, Keeley's failure to have evidence for p is attributable not just to missing any old information about the tie between evidence and truth. Instead, what Keeley needs is *adequate* information about the connection. Once we have a sufficient grasp of adequacy, we can make use of it to avoid the Problem of Conceptual Inadequacy by revising FP9 as follows:

> *FP10:* If E2 supports that there exists some evidence, E1, in support of p, then E2 is evidence for p iff E2 supports p via a bypass or bridge or all of the following conditions obtain: (i) E2 does not contain any blockers that block E2 from supporting p; (ii) in cases in which E1 is propositional from the perspective of E2, E2 supports E1 under the same designation as the proposition that E1 supports p; (iii) E1 has a perspectival propositional status with respect to E2; and (iv) E2 contains adequate information concerning the tie between evidence and truth.

Unfortunately, I do not have an account of adequacy. What counts as adequate is a tricky matter, not just because of the fact that certain kinds of information about the evidence-truth connection would be insufficient for remedying Keeley's lack of evidence for p, but also because we need to avoid over-intellectualization. For example, we would not want to attribute Keeley's failure to have evidence for p to her lack of knowledge of

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of evidence yet lacks information about the connection between evidence and truth, the intuition remains that Keely lacks evidence for p.

some sophisticated abstract principle connecting evidence with truth—a principle of the sort that only a handful of philosophers, if anyone, might know. Adequacy conditions need to be more mundane, so as to require no more information about the evidence-truth connection than what typical living adult human beings have. In fact, we could allow adequacy conditions to be even weaker than this, since it seems clear that Keeley could gain evidence for p by gaining much less than the information we typically have. It would suffice for her to gain certain very strange false information about the tie between evidence and truth (e.g., that any evidence for a proposition necessitates that proposition, perhaps along with information about what necessitation is)—information most of us do not have. But I will stipulate that adequate information must be a general truth about evidence, since if it were false information or information that holds only in special cases, it would count as what I earlier called a "bridge," creating an unnecessary overlap of conditions in the Filtration Principle. Moreover, in order to count as adequate, whatever information E2 supports about the tie between evidence and truth must place evidence and truth under appropriate designations—designations that allow the information about the tie between evidence and truth to be linked up with the other information E2 needs to support. This will ensure that we avoid a resurgence of the problem that motivated the move from FP8 to FP9.[52]

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[52] Another important question is whether or not adequacy should require information about the reliability of the connection between evidence and truth. The answer depends on whether reliability is built into the concept of evidence itself. If it is, then it needs to be included in adequacy. Otherwise, reliability information would count as a bridge. This issue is closely connected to Huemer's (2011) objection to the original version of the Filtration Principle. Huemer argues that it is false, since evidence that there is evidence for p is not evidence for p in the absence of evidence that the lower-order evidence is

Although I do not have a more precise account of adequacy, FP10 is far from trivial or useless. Unlike FP9, FP10 at least makes clear that there is information of a certain special albeit very coarsely identified kind (some non-trivial amount of evidence about the connection between evidence and truth) that E2 must contain. And the points in the two previous paragraphs further help by making clear what some of the constraints are on what sort of information this is. Within these constraints, we can then employ our intuitions about a given case to decide whether the level of information seems adequate. In some cases this will suffice to make it clear that E2 does not contain adequate information (e.g., in the case of Keeley), in which case FP10 will yield the right result while FP9 will yield a false result. Of course, there will be tricky cases in which we are unsure, in which case FP10 will not help us decide whether E2 is evidence for p. But even there, FP10 is a significant improvement over FP9, since in such cases the latter

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reliable—evidence one need not have. Although I suspect Huemer would count reliability as a bridge, this is not necessary for his objection, since even if reliability is part of the concept of evidence itself, one can still have evidence that there is evidence without having this reliability information, which would yield a version of my Objection from Conceptual Inadequacy. I would agree that reliability is not built into the concept of evidence itself (at least not on any normal understanding of the word "reliable"): something can indicate the truth without reliably doing so. And so I would agree that reliability information is to count as a bridge. But I disagree that we need such a bridge in most cases: it seems to me quite clear that if I have evidence that there is something (e.g., a mental state) that is indicative of p's truth, then even in the absence of information that this indication is reliable, I generally (excluding blockers and other special exceptions) have reason to believe p. Of course, there's much more to be said about this. But in any case, whether reliability information counts as a bridge or as adequate conceptual information, FP10 can accommodate it. For further discussion of the evidence-truth connection in relation to reliability, I recommend Goldman (2011) and Fumerton (2011).

yields a false answer while the former merely yields no answer. And I much prefer no answer to a false one.

2.3.4 The Conjunction Problem

We are now just one revision away from a correct version of the Filtration Principle. To see the final problem, notice that FP10 implies that, if E2 supports that E1 is evidence for p (and does not support p via a bypass or bridge), then E2 will need to support multiple, distinct propositions in order to support p. In addition to supporting that E1 exists and is evidence for p, it also needs to support a claim about E1's status as propositional or non-propositional, a claim about the tie between evidence and truth, and in some cases it will have to support that E1 is true. I claim that E2 can support each of these propositions without supporting their conjunction and that this can be so even if E2 contains no blockers. I also claim that in such cases, E2 does not support p—a claim contrary to FP10. I'll call this the "Conjunction Problem."

Let's begin with the first of the two claims just made: the claim that an E2 which contains no blockers can fail to support the conjunction of the propositions FP10 says it needs to support in order to support p, even though it supports each of those individual propositions. Preface-style cases have made us aware of the failure of a conjunction rule for evidence. It is clear, for example, that I may have evidence for each of the claims in this dissertation without having evidence for the conjunction of those claims. But in this case and other standard preface-style cases the failure of my evidence to support the conjunction is plausibly due to a blocker. Plausibly, the reason I do not have reason to believe the conjunction of the claims in this dissertation is that knowledge of my own

fallibility suggests I am probably not right about such a large conjunction of controversial claims. This knowledge is a defeater for the conjunction. And it is this defeater in combination with my evidence for each claim in the dissertation that does not support the conjunction. That is, the conjunction fails to be supported due to a blocker.

But there are also clear cases in which a conjunction rule for evidence fails without the help of blockers. Suppose E2 is the information that some integer N has been randomly drawn from the set, S, of integers between 1 and 100 (including 1 and 100). Since evidential support is fallible, there will be some range of numbers, R1, which is a non-singleton proper subset of S such that E2 just barely supports the proposition (E1) that a number in R1 was drawn. There will also be another range, R2, which overlaps and is of equal size to R1, such that E2 just barely supports the proposition (E1*) that a number in R2 was drawn. And by "just barely" I mean E2 does not support that a number in any range smaller than R1 and R2 was drawn. Now consider E1+E1*, which is the claim that some number in the intersection of R1 and R2 was drawn. The distinctness and equal size of R1 and R2 entails that the intersection of the two is smaller than either alone. So, if E2 supports E1+E1*, it supports that a number was drawn in some range smaller than each of R1 and R2, which violates our stipulation. Hence, E2 does not support E1+E1*, even though it does support each conjunct. Moreover, it is consistent with all of the above that no subset of E2 supports the conjunction, which means E2 doesn't contain any blockers for its support for the conjunction. Therefore, evidence can fail to support a conjunction of claims, each of which the evidence supports, and this can happen without the help of blockers.

Now turn to the second claim: the claim that E2 must support the conjunction of the propositions it needs to support in order to support p. Suppose I give you an argument for p with two premises, B and C, and give you evidence A for each of the two premises (and for the argument's validity). But suppose A does not support the conjunction of B and C. Then I have not thereby given you a reason to accept p. This suggests that if A supports some number of claims (say B and C), both of which A needs to support in order to provide support for p, then A can fail to support p simply by failing to support the conjunction B&C.

The above two claims jointly entail that E2 can fail to support p simply by failing to support the conjunction of the propositions FP10 says E2 needs to support in order to support p. And E2 can fail to support this conjunction without the help of any blockers. Since FP10 does not impose the requirement that E2 must support the relevant conjunction, FP10 is false. We can easily fix the problem by requiring E2 to support the relevant conjunction:

> *FP11:* If E2 supports that there exists some evidence, E1, in support of p, then E2 is evidence for p iff E2 supports p via a bypass or bridge or all of the following conditions obtain: (i) E2 does not contain any blockers which block E2 from supporting p; (ii) in cases in which E1 is propositional from the perspective of E2, E2 supports E1 under the same designation as the proposition that E1 supports p; (iii) E1 has a perspectival propositional status with respect to E2; (iv) E2 contains adequate information concerning the tie between evidence and truth; and (v) E2 supports the conjunction of

(a) the proposition that there exists evidence E1 in support of p and (b) the propositions that (ii)–(iv) require E2 to support.

2.4 A Correct Version of the Filtration Principle

I began this chapter with a defense of the Significance Thesis and the argument that it serves as a prima facie motivation for accepting the Filtration Principle, since the Filtration Principle is the simplest and most natural principle of higher-order support that can accommodate the thesis. This suggests that if we find a relatively small set of counterexamples to the Filtration Principle, we have a prima facie reason to accept the closest principle we can to the Filtration Principle that accommodates the counterexamples. I have provided a small set of counterexamples and have argued that FP11 is the closest thing that accommodates them. We therefore have prima facie reason to accept FP11.

This prima facie reason would be defeated if further counterexamples came to light. However, the alleged counterexamples to the original Filtration Principle offered in the literature—the ones in response to which I did not revise the Filtration Principle—have been shown (in §2.2) to fail. Since FP11 is a restriction of the original Filtration Principle, it too avoids these alleged counterexamples. Moreover, after having thought long and hard about the Filtration Principle, I am unable to find further counterexamples. The prima facie reason to accept FP11 therefore remains strong and undefeated. I conclude that we should accept it as a correct account of evidential filtration.

2.5 Extending and Generalizing

Although FP11 is a correct account of evidential filtration, it is not a complete account of higher-order evidential support, since it accounts only for a very special sort of higher-order evidence. As we'll see in the next chapter, it is important that we have a general account that covers every possible sort of higher-order evidence. Hence, in this final section, I'll show how to build a complete account from FP11.

The first way in which FP11 is limited is that it is applicable only to an E2 that supports that some E1 bears an *explicit* positive evidential relation to p. It does not also cover *implicit* positive evidential relations. However, FP11 seems to straightforwardly generalize to cover any sort of positive evidential relation whatever:

> *FP12:* For any positive evidential relation R, if E2 supports that there exists an E1 that bears R to p, then E2 bears R to p iff E2 bears R to p via a bypass or bridge or all of the following conditions obtain: (i) E2 does not contain any blockers that block E2 from bearing R to p; (ii) in cases in which E1 is propositional from the perspective of E2, E2 supports E1 under the same designation as the proposition that E1 bears R to p; (iii) E1 has a perspectival propositional status with respect to E2; (iv) E2 contains adequate information concerning the tie between R and truth; and (v) E2 supports the conjunction of (a) the proposition that there exists an E1 that bears R to p and (b) the propositions that (ii)–(iv) require E2 to support.

Since a positive evidential relation borne to a proposition is equivalent to a corresponding negative evidential relation borne to the negation of the same proposition, we can convert FP12 into a principle about negative evidential relations as follows:

FP13: For any negative evidential relation R, if E2 supports that there exists an E1 that bears R to p, then E2 bears R to p iff E2 bears R to p via a bypass or bridge or all of the following conditions obtain: (i) E2 does not contain any blockers that block E2 from bearing R to p; (ii) in cases in which E1 is propositional from the perspective of E2, E2 supports E1 under the same designation as the proposition that E1 bears R to p; (iii) E1 has a perspectival propositional status with respect to E2; (iv) E2 contains adequate information concerning the tie between R and truth; and (v) E2 supports the conjunction of (a) the proposition that there exists an E1 that bears R to p and (b) the propositions that (ii)–(iv) require E2 to support.

One might naturally propose to similarly extend FP12 and FP13 to cover neutral evidential relations as follows:

FP14: For any neutral evidential relation R, if E2 supports that there exists an E1 that bears R to p, then E2 bears R to p iff E2 bears R to p via a bypass or bridge or all of the following conditions obtain: (i) E2 does not contain any blockers that block E2 from bear R to p; (ii) in cases in which E1 is propositional from the perspective of E2, E2 supports E1 under the same designation as the proposition that E1 bears R to p; (iii) E1 has a perspectival propositional status with respect to E2; (iv) E2 contains adequate information concerning the tie between R and truth; and (v) E2 supports the conjunction of (a) the proposition that there exists an E1 that bears R to p and (b) the propositions that (ii)–(iv) require E2 to support.

Although I think this move is correct, it is not obviously so, since it is inconsistent with a relatively common view of neutral evidential support:

> *The Minimalist Account of Neutrality:* For any evidence E and proposition p, E is neutral with respect to p iff E neither supports p nor ~p.

According to the minimalist account, E2 will be neutral evidence regarding p so long as E2 supports neither p nor ~p. But, in order for E2 to support neutrality about p, FP14 clearly requires more than E2's failure to support p and failure to support ~p. My response to this objection is that the minimalist view is wrong, at least given the most useful way of understanding neutrality. The reason is that the minimalist view collapses into a single category two importantly different ways in which evidence can fail to support. There is a crucial difference between evidence that supports neutrality with respect to a proposition and evidence that doesn't support anything about the proposition at all. For a useful image, think of evidence as a pointer on a scale of support between a proposition at one end and its negation at the other. Evidence provides neutral support when the pointer is pulled equally in both directions, landing in the middle. When there is no support at all, the pointer doesn't point anywhere, not even toward the middle (alternatively, there is no pointer in the first place).

One reason for which we need this distinction is due to its role in determining potential defeating power. Consider three pieces of evidence: (a) evidence E for p, (b) evidence D, which supports that there is a 50/50 chance that p is false, and (c) evidence F, which supports q, where F and q are unrelated to E, p, and D. Both D and F fail to support p but only D has defeating power, and this is precisely because D genuinely indicates neutrality about p whereas F indicates nothing at all about the matter. The distinction between neutral support and lack of support is therefore crucial for

distinguishing defeating evidence from irrelevant evidence, thwarting the ability for irrelevant evidence to play a defeating role, thereby saving us from global justificatory skepticism.

Now, to see how this lesson plays out at the higher evidential levels, consider the following two cases:

> Case A: E2 supports that some *non-propositional* evidence is neutral about p, E2 doesn't support anything about p either via a bypass or bridge, and conditions (i)–(v) of FP14 are met.
>
> Case B: E2, which contains no blockers, supports that some *propositional* evidence is neutral about p, but E2 *does not support that the propositional evidence is true*. E2 also does not support p via a bypass or bridge.

In Case A, E2 can serve as a (full or partial) rebutting defeater for independent first-order evidence for p that one may possess, whereas that is not so for Case B. That is, the first-order evidence for p is not defeated by finding out that some other proposition one has no reason to believe supports p and ~p as being on a par. But it can be defeated (at least partially) by finding out that some true proposition supports p and ~p as being on a par. The defeating power of E2 in Case A suggests that in that case E2 is evidence. The lack of defeating power of E2 in Case B suggests that in that case E2 is not evidence at all. We need the anti-minimalist FP14 in order to account for this difference.

FP12-FP14 jointly account for all committal evidential relations. Since all three principles are of a similar form, we can abstract from them a single general principle accounting for all committal evidential relations:

> *FP15:* For any committal evidential relation R, if E2 supports that there exists an E1 that bears R to p, then E2 bears R to p iff E2 bears R to p via a bypass or bridge or all of the following conditions obtain: (i) E2 does not contain any blockers that block E2 from bearing R to p; (ii) in cases in which E1 is propositional from the perspective of E2, E2 supports E1 under the same designation as the proposition that E1 bears R to p; (iii) E1 has a perspectival propositional status with respect to E2; (iv) E2 contains adequate information concerning the tie between R and truth; and (v) E2 supports the conjunction of (a) the proposition that there exists an E1 that bears R to p and (b) the propositions that (ii)–(iv) require E2 to support.

A few notes about the breadth of FP15 are in order, since there are some kinds of higher-order evidence that FP15 does not explicitly cover but which the principle nevertheless implicitly accounts for. For example, FP15 does not explicitly account for higher-order evidence with wide existential quantifier scope. However, as I maintained earlier in the chapter (in §2.2.1), whenever there exists some evidence that E2 supports a claim about, E2 also supports that the evidence exists. Higher-order evidence with wide existential quantifier scope is therefore implicitly covered by FP15.

Another misleading appearance is that FP15 initially appears to fail to deliver results about the filtration of support through multiple evidential layers. Although the principle only explicitly delivers results about whether support filters through a single evidential layer, it implicitly covers multilayer filtration as well. Suppose, for example, there are committal evidential relations, R1 and R2, such that E3 supports that there is an E2 that bears R2 to the claim that there exists an E1 that bears R1 to q. We can then apply

FP15 to determine whether E3 is evidence for the claim that there exists an E1 that bears R1 to q. If it is evidence for that claim, then we can reapply FP15 to get a verdict about whether E3 is evidence for q. If E3 is not evidence for the claim, then E3's support will not filter down to q except if E3 supports q via a bypass or bridge. In any case, FP15 yields a verdict about E3's relation to q. The same reasoning can be applied to cases of evidential filtration across three or more evidential layers. FP15 therefore implicitly covers all evidential filtration with respect to the kind of higher-order evidence that supports that some evidence bears R (any arbitrary committal evidential relation) to a given proposition.

FP15 also fails to explicitly cover cases of higher-order evidence about multiple evidential relations. For example, it does not explicitly say what happens if E2 supports that there is some evidence for p and some evidence against p, or evidence both for p and evidence that is neutral about p. However, it may be that E2 is separable in the sense that, for each evidential relation E2 is about, we can take the part of E2 that deals with this relation and apply FP15 to yield a verdict in the case. Then we can take the results and determine what E2 as a whole supports from principles about how to weigh evidence—principles I won't attempt to provide here, since they are not specific to higher-order evidence. However, perhaps there are cases in which E2 is not separable in this sense. I am unsure. But even if there are, complex evidential relations will ultimately amount to being positive, negative, or neutral. Once it is determined which of the three a given complex evidential relation is, we can then apply FP15.

There are plenty of other cases FP15 does not explicitly cover. It does not cover higher-order evidence that is neutral about or denies that a given evidential relation obtains at the lower level. It also does not cover higher-order evidence that supports the denial of, or neutrality with respect to, the existence of some evidence bearing or not bearing a given evidential relation to p. And it does not cover higher-order evidence that merely attributes a noncommittal evidential relation to the lower level. In all of these other cases, there are special circumstances in which the higher-order evidence will be evidence concerning p (i.e., when the higher-order evidence bears some evidential relation to p via a bypass or bridge). But apart from these special cases, the higher-order evidence will not be evidence concerning p. Some might be inclined to say that, at least in some of these cases, that the higher-order evidence will support neutrality with respect to p. But I think this inclination depends on ignoring the distinction made earlier between supporting nothing regarding p and being split evenly between p and ~p. If, for example, E2 supports that there is no evidence for p, and there are no special circumstances, then E2 is split between there being evidence for ~p and there being no evidence for either p or ~p. Such evidence therefore does not favor ~p. And it does not favor a split between p and ~p. Since it also clearly does not support p, and all evidence either supports p, ~p, or an even split between the two, E2 is not evidence concerning p at all. Similar reasoning applies to the other cases that do not fall under the scope of FP15. For example, if E2 is evidence that E1 is evidence concerning p, then except in special circumstances E2 will not favor either p, or ~p, or neutrality with respect to p. E2 will therefore not be evidence

concerning p. My proposal, then, is that in all cases not covered by FP15, E2 will not be evidence concerning p:

> *FP16:* For any higher-order evidence E2, corresponding lower-order evidence E1, and corresponding object-level proposition p, there exists an evidential relation R such that E2 bears R to p only if this result is entailed by FP15 or E2 bears R to p via a bypass or bridge.

Finally, I submit that FP15 and FP16 jointly yield a complete and correct account of higher-order evidential support. I conclude, then, that we finally have what we have been seeking in this chapter.

Chapter 3 Levels Interaction

The focus so far has been on higher-order evidence alone, specifically on what it is (Chapter 1) and what object-level significance it has (Chapter 2). But what ultimately matters, epistemically speaking, is the total evidence, which can, but need not, consist entirely of higher-order evidence. When the total evidence does consist entirely of higher-order evidence (e.g., when a person possesses evidence E2 that there exists some evidence E1 for a proposition p, but lacks access to E1 itself), then what has been said in previous chapters is sufficient to determine what the total evidence supports. However, nothing said up to this point determines what the total evidence supports in cases in which *both* higher-order evidence *and* the corresponding lower-order evidence are simultaneously in play. In such cases, what's needed is not only an account of the object-level significance of higher-order evidence but also an account of how such evidence interacts with corresponding lower levels.

Levels interaction might seem straightforward in cases in which the two levels in question are "friendly" toward one another—in other words, when the lower-order evidence actually bears the support relations that are indicated by the higher-order evidence. In such cases, the total mixed-level evidence presumably supports *both* what the lower-evidence supports *and* what the higher-order evidence indicates it supports, which is possible due to interlevel agreement. Nevertheless, even this seemingly obvious and widely affirmed claim is false. And if I'm right about this, perhaps one can anticipate how puzzling matters become when the two levels in question are "unfriendly" to one another—in other words, when the lower-order evidence fails to bear the support

relations indicated by the higher-order evidence. The consequence of such interlevel disagreement is that the total mixed-level evidence cannot agree with both levels. Nor can the total evidence retreat to middle ground, since there is no halfway point between bearing and failing to bear the disputed support relation to the object-level proposition. It follows that one level will have to "dominate" the other, meaning that the total evidential support will be determined by one level but not the other. But which level dominates?

Those who have written on this issue initially tended toward rather simplistic views. Feldman (2005, 2006, 2007, and 2009), Christensen (2009 and 2010), and Matheson (2009) argue that higher-order evidence uniformly dominates—i.e., dominates in every unfriendly case (but not in friendly cases, where neither level is dominant over the other). On the opposite end of the spectrum is Kelly (2005), who argues that lower-order evidence uniformly dominates—i.e., dominates in every unfriendly case (but not in friendly cases, where neither level is dominant over the other). And in between the two extremes is Kelly (2010), who retracts his previous position by scrapping uniform dominance altogether in favor of a theory of selective dominance, according to which each level dominates in some cases but not others (though Kelly continues to seem more sympathetic to lower-order dominance, and is therefore perhaps more specifically a quasi–lower-order dominance theorist: lower-order evidence dominates in all but some special cases). Unfortunately, however, Kelly (2010) offers no general account of when one level dominates as opposed to the other.

My own treatment of levels interaction does not neatly align with any of these views, though it shares some commonalities with each. I agree with Kelly (2010) that

lower-order dominance sometimes occurs. I also agree that uniform dominance is too simplistic to adequately handle the range of features that can affect evidential support. But I disagree with Kelly's arguments for this position. I also lean somewhat more in the direction of Feldman, Christensen, and Matheson in the sense that I am more sympathetic to higher-order dominance than lower-order dominance. The truth, I believe, is that higher-order evidence dominates modulo some special cases. Thus, I endorse a quasi–higher-order dominance theory of levels interaction. As a first step toward establishing this, the first section below begins by constructing the theoretical framework that I will employ throughout the remainder of the chapter. In the second section, I'll argue that any adequate theory of interaction must possess a certain kind of complexity. In the third section, I'll assess uniform dominance. In the fourth section, I'll set aside the problems identified in the previous two sections in order to refine our understanding of uniform dominance. The final section modifies this refined understanding in light of the previously identified problems for uniform dominance in order to yield a theory of selective dominance, specifically quasi–higher-order dominance.

3.1 A Theoretical Framework

The first notion to introduce into the framework is that of a *support space*. The support space with respect to a given proposition is a set consisting of the possibilities concerning what any given evidence can support with respect to the proposition in question. For example, with respect to proposition p, evidence E concerning p either

supports p, ~p, or neutrality with respect to p.[53] Hence, the support space for proposition p is the set {p, ~p, neutrality with respect to p}.

In addition to a mechanism for representing the possibilities concerning what any given evidence might support, we'll also need a mechanism for representing what it might fail to support. To accomplish this, I will extend the support space in two ways. First, let Ø(p) represent the possibility that the evidence in question supports nothing with respect to p. In other words, for any evidence E and proposition p:

> E supports Ø(p) = (E does not support p) & (E does not support ~p) & (E does not support neutrality with respect to p).[54]

Second, for any member M of the support space for a given proposition, let $M^{\#}$ represent the possibility that the evidence in question does *not* support M with respect to the

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[53] Evidence supports neutrality with respect to p when it is evidence concerning p that supports neither p nor ~p. Neutrality is not a doxastic attitude toward p. It's simply a type of evidential support. The corresponding doxastic attitude (the one that fits neutrality) is withholding belief or suspending judgment about p. In footnote 54 and §3.4 below, I discuss some further details about how to understand neutrality and withholding belief/suspension of judgment, which might be cause for expansion of the support space.

[54] One might be tempted to assume what in Chapter 2 I called the "Minimalist Account of Neutrality," according to which evidence supports neutrality with respect to p iff it supports neither p nor ~p, which would make it impossible for any evidence to support Ø(p). However, the Minimalist Account is false. As mentioned in the footnote 54, in order for evidence to support neutrality with respect to p, it should indeed support neither p nor ~p but must moreover be evidence concerning p. For example, a body of evidence made up of some evidence in favor of p and equally strong independent evidence in favor of ~p is evidence that concerns p, and therefore supports neutrality. In contrast, evidence that my car needs to be washed doesn't concern the population growth rate of Switzerland and therefore doesn't support neutrality on the issue. And this distinction is crucial, since evidence that supports neutrality about p potentially has the power to defeat other evidence concerning p, whereas evidence that doesn't concern p to begin with has no such power. See Chapter 2 for the reasoning behind this.

proposition, leaving open what, if anything, the evidence does support with respect to that proposition. So, for any evidence E and proposition p:

E supports $p^{\#}$ = E does not support p (leaving open whether it supports ~p, neutrality with respect to p, or Ø(p));

E supports $(\sim p)^{\#}$ = E does not support ~p (leaving open whether E supports p, neutrality with respect to p, or Ø(p)); and

E supports (neutrality with respect to p)$^{\#}$ = E does not support neutrality with respect to p (leaving open whether it supports p, ~p, or Ø(p)).

And with these two stipulations we can finally define the *extended support space* with respect to proposition p as the set {Ø(p), p, ~p, neutrality with respect to p, $p^{\#}$, $(\sim p)^{\#}$, (neutrality with respect to p)$^{\#}$}.

Given the concept of an extended support space, we can now precisely say what I mean by a *principle of interaction*. First, let X, Y, Z, and W be variables ranging over the extended support space with respect to any given proposition (not necessarily the same proposition). When I need to be specific about the proposition, I'll parenthetically affix the proposition to the variable. So, for any proposition p, X(p), Y(p), Z(p), and W(p) are variables ranging over the extended support space with respect to p. Now, for any particular X, Y, Z, and W, and any particular condition C, a principle of interaction is any claim of the following form:

For any evidence E1 and E2 and any proposition p, if E1 supports X(p), E2 supports Y(E1 supports Z(p)), and condition C obtains, then E1+E2 supports W(p).

As a first example, let C = the null condition (by which I mean the condition which necessarily obtains), Y(E1 supports Z(p)) = E1 supports Z(p), X(p) = W(p) = p, and Z(p) = neutrality with respect to p. This results in the following principle of interaction, which Kelly (2005) accepts:

> For any evidence E1 and E2 and any proposition p, if E1 supports p, and E2 supports that E1 supports neutrality with respect to p, then E1+E2 supports p.

Modifying this so that W(p) = neutrality with respect to p results in the following principle of interaction, which Feldman, Christensen, and Matheson accept:

> For any evidence E1 and E2 and any proposition p, if E1 supports p, and E2 supports that E1 supports neutrality with respect to p, then E1+E2 supports neutrality with respect to p.

But modifying this so that X(p) = Z(p) = W(p) = p results in the following principle of interaction with which all of the above parties seem to agree:

> For any evidence E1 and E2 and any proposition p, if E1 supports p, and E2 supports that E1 supports p, then E1+E2 supports p.

Principles of interaction become more complex when their antecedents contain conditions that aren't null (i.e., conditions which possibly fail to obtain). When C isn't null, it places a *restriction* on the principle, making the principle itself *restricted*. A principle is *unrestricted* otherwise. For example, the above principles are all unrestricted, whereas the following is a restricted principle with the associated restriction in italics:

> For any evidence E1 and E2 and any proposition p, if E1 supports p, E2 supports that E1 supports neutrality with respect to p, and *E2 supports that E1 supports p more strongly than E2 supports neutrality with respect to p*, then E1+E2 supports p.

Building on this concept of a principle of interaction, we can define a *theory of interaction* as a non-empty[55] set of generalizations of principles of interaction, generalized over the variables X, Y, Z, and W (in contrast to a principle of interaction, which is merely about a particular value for each of the four variables).

As a first example of a theory of interaction, consider Feldman's *higher-order dominance theory*, according to which higher-order evidence *dominates* the lower-order evidence in unfriendly cases, meaning that the total evidential support is determined by what the higher-order evidence indicates about what the lower-order evidence supports (does not support), but does not dominate in friendly cases, where neither level is dominant over the other. Moreover, Feldman holds the particular version of higher-order dominance according to which the higher-order evidence determines the total evidence to support whatever the higher-order evidence indicates that the lower-order evidence supports (does not support). This is the theory of interaction that results from setting W(p) = Z(p) for all cases in which Y(E1 supports Z(p)) = E1 supports Z(p):

[55] One might instead allow the empty set to qualify as a theory—the theory which asserts nothing. But such a theory would be useless, so we might as well simplify and leave it out.

Feldman's Theory: For any evidence E1 and E2, any proposition p, and any X and Z in the extended support space, if E1 supports X(p) and E2 supports that E1 supports Z(p), then E1+E2 supports Z(p).[56]

Unfortunately, this theory is *incomplete* in the sense that there are some cases on which it yields no verdict, namely those for which Y(E1 supports Z(p)) ≠ E1 supports Z(p). A *complete theory* is one that covers all possible cases—i.e., one that entails a particular value for W(p) for any given X, Y, and Z in the relevant extended support space. For example, on the opposite end of the spectrum from Feldman, Kelly (2005) holds a *lower-order dominance theory*, according to which the lower-order evidence dominates the higher-order evidence. But Kelly goes a little bit further by maintaining that this dominance is *uniform*—i.e., holds in every possible unfriendly case, though not in friendly cases, where neither level is dominant over the other. This is the theory of interaction that results from setting W(p) = X(p) for all cases:

Kelly's 2005 Theory: For any evidence E1 and E2, any proposition p, and any X, Y, and Z in the extended support space, if E1 supports X(p) and E2 supports Y(E1 supports Z(p)), then E1+E2 supports X(p).

Notice that Feldman's and Kelly's theories set only a single value to W(p) at a time. If we add that it does not also take on other values, which most dominance theorists

[56] Although Christensen and Matheson clearly accept higher-order dominance, it is unclear to me whether they endorse this particular version of it. Notice that Feldman's Theory implies that if E1 supports p but E2 supports that E1 supports ~p, then E1+E2 supports ~p. But I cannot tell whether Christensen and Matheson agree or instead opt for the view that E1+E2 supports neutrality with respect to p in such a case. What they do make clear is that E1+E2 does not support p.

implicitly assume, then we get theories of *univocal dominance*—they have just one level dominating over the other. But it is also possible for a theory to endorse *simultaneous dominance* (where each level simultaneously dominates the other) or *agent-relative dominance* (where different levels dominate depending on the agent in question). Univocal dominance theories assume an evidential version of what has been called "the Uniqueness Thesis" (among other names).[57] Originally, the Uniqueness Thesis was framed in terms of rationality or justification. Although there are different variations on the thesis, the basic idea is that there is a unique rational or justified attitude toward any given proposition in any given epistemic situation. Here is my preferred evidential version of the thesis:

> *The Evidential Uniqueness Thesis (EUT):* For any proposition p and evidence E concerning p, if p and ~p are in competition[58] from the perspective of E, then exactly *one* of the following obtains, and which one obtains is independent of which agent

[57] For discussion of uniqueness, see White (2005 and 2014), Christensen (2007, 2009, and 2014), Feldman (2007), Kelly (2010), Matheson (2011), Ballantyne and Coffman (2012), Luis (2012), Muralidharan (2015), Kopec (2015), and Kopec and Titelbaum (2016).

[58] I add this parenthetical qualification to handle cases in which one has evidence for true contradictions. Even though I am convinced there cannot be any true contradictions, I do think one can have evidence for them from the Liar's Paradox (and related paradoxes about truth), quantum mechanics, testimony, and cases in which p is grasped in terms of one set of concepts while ~p is grasped in terms of another set. In these examples, a single body of evidence can support both p and ~p because p and ~p are not in competition with one another (i.e., one's being correct doesn't put pressure on the other's being incorrect), at least as far as the evidence is concerned.

possesses E: (a) E supports p, (b) E support ~p, or (c) E supports neutrality with respect to p.

Suppose that E1 supports p, E2 supports that E1 supports ~p, and E1+E2 supports ~p, in accordance with higher-order dominance. If EUT is false, then even if E1+E2 isn't one of those rare paradoxical cases of candidates for true contradictions like the Liar's Paradox, it might turn out that E1+E2 *also* supports p, in accordance with lower-order dominance. E1+E2 supports p and it supports ~p (though it doesn't support the conjunction p&~p). This would yield simultaneous dominance of each level over the other. I mention this possibility only for the sake of completeness, though I doubt many epistemologists would find it plausible. The usual context for rejecting the original Uniqueness Thesis is in the peer disagreement context, where some epistemologists wish to say that each party to the dispute is rational in choosing to stick with his or her original position, even if they share all of the same relevant information and recognize their peerhood and are informed of the disagreement. But even those epistemologists wouldn't want to say that it is rational for a single party of the dispute to simultaneously endorse both sides. Therefore, better than simultaneous dominance would be agent-relative dominance. To see how denying EUT could allow for this, suppose again that E1 supports p and that E2 supports that E1 supports ~p. If EUT is false, then, even though E1+E2 cannot simultaneously support both p and ~p (and cannot support the conjunction), E1+E2 might be able to support p in some cases and ~p in others, depending on some non-evidential feature of the agent whose total evidence concerning p is E1+E2. For example, it might depend on the agent's preferences or prior attitude. This would yield agent-relative dominance. Note, though,

that this would require evidential relativism, which I argued against in Chapter 2. For this reason among others, I reject both simultaneous dominance and agent-relative dominance. For the remainder of the chapter, I will set such theories aside and proceed on the assumption that EUT is correct.

Notice that Feldman's Theory and Kelly's 2005 Theory are both very simple in the sense that they each are made up entirely of a single generalized unrestricted principle of interaction. A complete theory that remains simple is easy to maintain for those like Kelly (2005) who endorse lower-order dominance, since on such a view E2 plays no role in what E1+E2 supports, implying that the value of Y(E1 supports Z(p)) is irrelevant. In contrast, a simple complete theory of higher-order dominance is an unfeasible idea because higher-order dominance theories say that what E2 is like matters to what E1+E2 supports, and therefore it should matter for such theories whether Y(E1 supports Z(p)) = E1 supports Z(p) or Y(E1 supports Z(p)) ≠ E1 supports Z(p). To illustrate, consider the universal generalization of Feldman's Theory:

> *Feldman's Theory Universalized:* For any evidence E1 and E2, any proposition p, and any X, Y, and Z in the extended support space, if E1 supports X(p) and E2 supports Y(E1 supports Z(p)), then E1+E2 supports Z(p).

Now focus on the case in which X(p) = p, Z(p) = ~p, and Y(E1 supports Z(p)) = (E1 supports Z(p))$^{\#}$ = ~(E1 supports Z(p)) = E1 doesn't support ~p. In this case, the theory implies that E1+E2 supports ~p, which would be very surprising since neither E1 nor E2 supports ~p (at least not typically). So, any plausible completion of Feldman's Theory needs to separately treat at least some of the different possible values for Y(E1 supports

Z(p)). This isn't to say that higher-order dominance theories shouldn't be uniform. It might still be that in each of the four cases what the higher-order evidence supports (or doesn't support) dictates what the total evidence supports (or doesn't support). It's just that it will have to dictate in different ways in different cases. In fact, as I'll argue in §4.4, plausible claims about evidential support in combination with Feldman's Theory (the non-universalized version) yields uniform higher-order dominance. But, for now, the crucial point is simply that plausible complete theories of higher-order dominance require a sort of complexity that complete theories of lower-order dominance do not. And for this reason it should be no surprise that Kelly's 2005 Theory is complete while Feldman's Theory is not.

Despite the differences between Kelly's 2005 Theory and the complete version of Feldman's Theory that I will later argue should appeal to any proponent of uniform higher-order dominance, both theories share a crucial feature. Return to the concept of an unrestricted principle. Corresponding to this concept is the concept of an *unrestricted theory* of interaction, which is any theory that can (though need not[59]) be stated as a

[59] Any unrestricted theory of interaction can be restated with restricted principles, since any unrestricted principle can be partitioned into a set of restricted principles. For example, given any condition C, Kelly's 2005 Theory, although originally stated as a generalization over a single unrestricted principle, can be stated (albeit suboptimally) as a theory comprised of generalizations over two restricted principles as follows:

(a) For any evidence E1 and E2, any proposition p, and any X in the extended support space, if E1 supports X(p) and E2 supports Y(E1 supports Z(p)), and condition C obtains, then E1+E2 supports X(p).

theory containing only unrestricted principles of interaction. Both Kelly's 2005 Theory and the complete version of Feldman's Theory are unrestricted. And unrestricted theories, as the simplest of all possible theories, are probably the most natural place to begin a search for a complete theory of interaction. So, that's where I begin in the next section. However, I will argue that there are no true complete unrestricted theories of interaction. Perhaps more surprisingly, I will argue that there aren't even any true unrestricted *principles* of interaction.

3.2 Against Unrestricted Principles and Theories of Interaction

I will begin with the least controversial of all unrestricted principles:

> *Seemingly Obvious Unrestricted Principle (SOUP):* For any evidence E1 and E2 and any proposition p, if E1 supports p and E2 supports that E1 supports p, then E1+E2 supports p.

Perhaps surprisingly, not even this principle is true. This is so for two reasons.

The first reason SOUP fails is due to what I'll call *supportive complexity*. Higher-order evidence is supportively complex (with respect to a given principle of interaction), when it not only supports what the antecedent of the principle says it supports, but also bears at least one other support relation that runs counter to the first-order support relation affirmed in the antecedent. There are two ways this can happen.

(b) For any evidence E1 and E2, any proposition p, and any X in the extended support space, if E1 supports X(p) and E2 supports Y(E1 supports Z(p)), and condition C does not obtain, then E1+E2 supports X(p).

First, the higher-order evidence mentioned in the principle can have first-order influence that runs counter to the first-order support affirmed in the antecedent of the principle. (Recall from earlier chapters that first-order influence occurs when the higher-order evidence in question is a complex body of evidence containing a combination of higher-order evidence and first-order evidence.) For example, E2 might contain some further evidence E1* that is first-order evidence against p.

Second, the higher-order evidence mentioned in the principle can have higher-order influence other than that which is mentioned in the antecedent. For example, in addition to the fact that E2 supports that E1 supports p, E2 might also support that some other evidence E1* supports ~p.

Given the phenomenon of supportive complexity, there is good reason to reject SOUP. The particular reason depends on one's particular persuasion. For those who accept that first-order evidence can remain effectual in the presence of higher-order evidence, take the first of the above examples of supportive complexity, where E2 contains some E1* that is first-order evidence against p. It is possible that this evidence is independent of and stronger than E1, in which case it defeats E1, showing that in some cases E1+E2 will not support p, rendering SOUP false. Of course, this won't convince those who think lower-order evidence becomes inert in the present of higher-order evidence. For those of that ilk, consider the second of the above examples of supportive complexity, where E2 supports that E1* supports ~p. And suppose that it supports that E1* supports ~p more strongly than it supports that E1 supports p. And, if you think it matters, let this also be a case in which E2's support for the claim that E1* supports ~p

contributes support to ~p. If need be, we can even suppose that E2's support for the claim that E1 supports p doesn't carry over to p itself (for any of the reasons discussed in the previous chapter). It seems clearly possible, then, that E2's support for the claim that E1* supports ~p overrides E2's support for the claim that E1 supports p, in which case E1+E2 can support ~p (or at least neutrality with respect to p), rendering SOUP false. So, the two kinds of supportive complexity together show that whether or not lower-order evidence continues to be effectual in the presence of higher-order evidence, SOUP is false.

The second reason why SOUP fails is due to what I'll call *interference*. Two evidential levels interfere with each other (with respect to a given principle of interaction) when proper parts of each combine to form either (a) new higher-order evidence that runs contrary to what the original higher-order evidence supports or (b) new lower-order evidence that runs contrary to what the original lower-order evidence supports. As an example of (a), suppose E2 = E2a+E2b and E1 = E1a+E1b, where E1a+E2a is higher-order evidence that supports something contrary to the claim that E1 supports p (e.g., it supports that E1 supports ~p). As an example of (b), suppose instead that E1b+E2b is lower-order evidence that supports something contrary to p (e.g., ~p). Then, if lower-order evidence remains effectual in the presence of higher-order evidence, interference of type (b) should make it possible for E1+E2 to support something other than p. And if lower-order evidence becomes inert in the presence of higher-order evidence, then interference of type (a) should still make it possible for E1+E2 to support something other than p.

These points against SOUP can easily be generalized to cover any unrestricted principle of interaction. For any given X, Y, and Z, whatever value is assigned to W in a given unrestricted principle, supportive complexity and interference make it possible for hidden evidential relations (relations not made apparent by the principle itself) to prevent E1+E2 from supporting W. So, surprisingly, it turns out that there are no true unrestricted principles of interaction. Therefore, there can't be any unrestricted theories either.

But there is one more problem case that applies to all unrestricted principles that accept the higher-order defeat of lower-order evidence. To see the problem, let's understand *conceptual impoverishment* to be failure to fully grasp or possess a concept, specifically in this context the concept of evidence and/or support. For example, suppose a person (e.g., a child) has evidence for p, and has evidence that there is evidence against p (e.g., on the basis of testimony), but has no idea what this amounts to due to failure to understand what evidence is.[60] Having no idea what evidence is, the higher-order

[60] One might object to the possibility of this example by claiming that one cannot have evidence for a proposition that one doesn't fully grasp. But it does seem that the child has testimonial evidence for some related proposition. You'd have to claim that the child has evidence for the proposition <What the person said is true.> (or something in the vicinity, but not the proposition <There is evidence against p.>, even though what the person said *is* that there is evidence against p. So, the objection requires a very fine-grained view of propositions—one which I find counterintuitive. However, the issue of propositional individuation is much too complex to debate in passing. Instead, I'll leave you with a potential doubt about the claim that one needs to fully grasp a proposition in order to have evidence for it. If this claim were true, it puts pressure on our ability to have evidence for almost any proposition, since most of the time there is at least some extent to which we don't fully understand the proposition in question. Most ordinary people do not grasp the equation $E = MC^2$ yet they take themselves to justifiably believe it. The same for many other advanced scientific and mathematical claims that have made their way into popular consciousness. On another level, puzzles in metaphysics put pressure on

information that there is evidence against p shouldn't undermine the first-order evidence for p. In general, conceptual impoverishment (of the relevant sort) precludes the existence any true unrestricted principle that endorses higher-order defeat.[61]

3.3 Against Uniform Dominance

Let's now set aside problems for unrestricted principles generally. In other words, let's ignore supportive complexity, interference, and conceptual impoverishment for the time being. Additional problems plague theories of uniform dominance. However, since the problems for uniform dominance differ depending on whether dominance is lower order or higher order, we need to treat each type separately. I'll begin with uniform lower-order dominance.

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how well we really understand simple everyday things (such as what numbers are, what a mind is, and what distinguishes water from twater).

[61] Why is this only a problem for unrestricted principles that endorse higher-order defeat? Because if higher-order evidence never makes a difference at the object level in the presence of the corresponding lower-order evidence, it's hard to see how it could be suddenly rendered relevant by impoverished concepts.

But why isn't conceptual impoverishment also a problem for SOUP? Well, suppose that E1 supports p and that E2 supports that E1 supports p, but the person who has this evidence has no idea what evidence or what support is. That will indeed render E2 irrelevant to the object level. But it doesn't render E1 itself irrelevant. So, E1+E2 should still support p in accordance with SOUP. Of course, if instead the person doesn't simply lack a full grasp of the relevant concepts but more strongly has a justified mistaken understanding (e.g., has testimonial evidence that evidence for a proposition renders the proposition false), this misconception (at least if it's support is contained in E2) can indeed prevent E1+E2 from supporting p, thereby refuting SOUP. However, this case isn't simply a case of conceptual impoverishment. Instead, it's a case of interference or supportive complexity.

3.3.1 Against Uniform Lower-Order Dominance

The main argument in favor of uniform lower-order dominance derives from Kelly (2005). It takes as its premise Kelly's conclusion from the previous chapter, namely that higher-order evidence never has any object-level relevance (186-190). From this premise, Kelly infers that first-order evidence is the sole factor that determines total evidential support. Hence, he claims, lower-order evidence uniformly dominates.

There are two fallacies in this argument. One is that the premise is false, as we have already discussed at length in the previous chapter. The other is that the inference is invalid. Even if higher-order evidence does not by itself have object-level relevance, it does not follow that it is irrelevant to what its conjunction with the lower-order evidence supports. For example, suppose that E1 is a set of propositions that one knows, and E2 supports that E1 is a set of propositions that is evidence in support of p, where E2 does not itself contain evidence that the propositions are true. As argued in the previous chapter, in typical cases E2 by itself is not evidence for p. And we can stipulate that E1 isn't either. However, when E1 is added to E2, it is sufficient evidence to license a deduction from E2 through E1 to p, and so E1+E2 plausibly supports p, at least for all Kelly has argued here.

Although the main argument for uniform lower-order dominance fails, there are a couple of other ideas that a proponent of such dominance might be tempted to defend. One such idea begins with Kelly's (2005) argument that even if higher-order evidence sometimes has object-level significance, there is a canceling-out effect (189-190). To illustrate the concept, suppose that person S believes p on the basis of E1, which actually

does support p, but then discovers that some other equally reliable person T believes ~p on the basis of E1, and thereby gains some evidence E2 that E1 supports ~p. But Kelly suggests that this isn't the full evidential picture. Since S also has information E2* about his/her own reliability, this is evidence that E1 does support p, which cancels out E2, leaving E1 as the only undefeated evidence. Hence, lower-order evidence dominates. If one takes this a step beyond Kelly by claiming that this canceling-out effect occurs in every case, then the conclusion extends to uniform lower-order dominance.

But the problem for taking this additional step is that the extra information E2* is not always available. In some cases, one will lack evidence about one's own reliability (e.g., in the case of young children or anyone with a sufficiently bad case of amnesia). Or more strongly, one might even have evidence that the other person is more reliable than oneself, in which case this extra evidence doesn't just cancel out E2 but overtakes it (i.e., the extra information defeats E2 but is not mutually defeated by E2). But even without taking the extra step to extend the original canceling-out argument to cover all cases, the original argument is already fallacious for two reasons.

First, the extra higher-order evidence E2* doesn't cancel out the original higher-order evidence E2, at least not in the sense that Kelly needs. By "cancel out," Kelly must mean that E2* makes E2 disappear or at least renders E2 it irrelevant. It is clear that E2 doesn't disappear, and a good case can be made that E2 doesn't become irrelevant either. Sure, when we add E2* to E2, the resulting body of evidence supports neutrality about what E1 supports concerning p. But the fact that E2+E2* supports neutrality doesn't mean that we can rightly ignore it and focus exclusively on what E1 supports. To ignore

neutral evidence is to treat it as on a par with the absence of evidence. But neutral evidence is crucially different from the absence of evidence. Neutral evidence plausibly has defeating power. For example, consider a case in which one has evidence that there's a 50/50 chance that a particular perception is mistaken. This higher-order evidence, which supports neutrality about whether the perceptual evidence supports the perceptual judgment, plausibly defeats the perceptual evidence. However, in order to avoid a strong skeptical result, we must distinguish this from a case in which one has no evidence about whether the perceptual evidence supports the perceptual judgment, and maintain that the absence of evidence doesn't defeat.[62]

But even if I'm wrong about all this—even if the extra higher-order evidence E2* cancels out E2—E2* need not be contained within E1+E2, in which case E2* has no role in what E1+E2 supports. Being outside of E1+E2, E2* could make a difference to what E1+E2 supports only if evidential relativism were true. And perhaps Kelly implicitly assumes evidential relativism, as argued in the previous chapter. However, as also indicated in the previous chapter, we are proceeding on the plausible assumption that evidential relativism is false, from which it follows that E2* has no effect on what E1+E2 supports. Instead, it only has effects what E1+E2+E2* supports. And if we grant the dubious assumption that E2 and E2* indeed cancel each other out in the sense that Kelly

[62] For other arguments about whether E2 and E2* cancel each other out, see Kelly (2010), who retracts his former position, arguing against the canceling-effect. Matheson (2009) rejects Kelly's reasons for this retraction, but goes on to provide his own reasons (reasons related to some of what is discussed below, namely the linking view of evidence and the distinction between undercutting and rebutting defeaters).

needs, the total higher-order evidence E2+E2* doesn't support anything (not even neutrality) about what E1 supports, in which case the levels aren't unfriendly and the dominance thesis doesn't apply. So, the canceling-out is at best applicable only where the dominance thesis isn't.

Apart from the above two arguments for uniform lower-order dominance, there is a third and final argument worth anticipating that I have not seen in the literature. As argued in the previous chapter, higher-order evidential support can dissipate over evidential distance. Given this fact, one might make the argument that higher-order evidence is therefore always weaker than lower-order evidence, and that lower-order evidence therefore always overrides unfriendly higher-order evidence. But this argument misunderstands the sense in which higher-order support dissipates. It does not dissipate in the sense that E2's support *at the object level* is always weaker than E1's support at that level. Instead, it dissipates in the sense that E2's support *at the next lower level* (the level of first-order evidence, which is one up from the object level) is weaker than its support at the object level. And E2's support at either of these two levels is independent of the actual strength of E1's support at the object level. Hence, even with dissipation, E2's support at the object level can still be stronger than E1's support at the same level. For example, suppose that E1 barely supports p but E2 supports that E1 supports ~p as strongly as any evidence can support anything. Then, it could very well turn out that even with dissipation, E2 supports ~p quite strongly, even if less strongly than it supports that E1 supports ~p, in which case it would still more strongly support ~p than E1 supports p.

Even if E2's support at the object level could never rise to the level of E1's support at that level, it's not clear that it matters. E2's defeat of E1 would only depend on their comparative strength at the object level if E2 acts as a *rebutting* defeater as opposed to an *undercutting* defeater. Rebutting defeaters work by sheer power, i.e., by pushing in the opposite direction of competing evidence, whereas undercutting defeaters work by implying that the contrary evidence—*whatever* its initial strength—should no longer be relied upon. Because of this difference, an undercutter can still successfully defeat even if it is weak in comparison to the evidence it undercuts. For example, suppose that you clearly perceive (or seem to perceive) a tree standing right in front of you but you then gain evidence that it's 51% probable that you have been given a hallucinogen with the strange effect that it makes people look like trees and trees look like something else. Your perceptual experience is by itself very strong evidence that you are looking at a tree. Your higher-order evidence is at best very weak evidence (making it barely probable) that you are not looking at a tree. Despite this discrepancy in strength, it still seems clear that the higher-order evidence undercuts the support provided by the perception.

So, if E2 acts instead as an undercutting defeater, it might still trump E1's support regardless of E1's comparative strength. And there is indeed reason to think that unfriendly higher-order evidence should sometimes be treated as undercutting rather than rebutting. Just note the existence of cases in which unfriendly higher-order evidence does seem to make a difference when it has no object-level relevance at all. For example, consider the case in which E2 supports that E1 doesn't support p, even though E1 actually supports p. As far as this support relation goes, E2 leaves open whether anything

else supports p, and therefore has no object-level significance by itself. Yet, intuitively, E2 can have defeating power over the first level. If so, this defeat can only be explained as undercutting rather than rebutting.

In fact, notice that the last couple of points not only refute arguments in favor of uniform lower-order dominance but moreover provide positive reasons to reject such dominance. As argued two paragraphs back, unfriendly higher-order evidence sometimes has object-level significance that is stronger than any support the first-order evidence provides at the object level, in which case the higher-order evidence can serve as a rebutting defeater for the lower level. But even in cases in which the higher level does not by itself have object-level significance, it seems clear that it can nevertheless serve as an undercutting defeater for the lower level. Either way, lower-order evidence does not always dominate the higher level. Uniform lower-order dominance is therefore a mistake. Of course, this isn't to say that higher-order evidence uniformly dominates either. It doesn't.

3.3.2 In Defense of Uniform Higher-Order Dominance

A common way to argue for uniform higher-order dominance is by appeal to examples in which higher-order evidence intuitively trumps lower-order evidence. For example, if I have evidence that my perceptions are probably incorrect (e.g., I have evidence that it's an optical illusion, or that I'm hallucinating, or that my vision or hearing or smell is poor in the circumstances in question), then even if my perceptions are actually correct, my total evidence does not support believing in line with my perceptions. For an example of a different sort, suppose you and a friend share a meal at a

restaurant, and agree to evenly split the check. Although each of you has the same evidence, you determine that you each owe $22 while your friend comes up with $23.[63] You know that your friend is as reliable on such matters as yourself. In virtue of this unfriendly higher-order evidence, you should suspend judgment about who's right (until further evidence decides one way or the other). These examples and others like them seem to support that unfriendly higher-order evidence always trumps the corresponding lower-order evidence.

Of course, these are arguments by generalization, which always run the risk of hasty generalization due to the possibility that the data set used as the basis for generalization might not be representative of the full range of cases that the generalization covers. And to show that the generalization is hasty, all that's needed is a single counterexample. Kelly (2010) purports to offer such counterexamples, beginning with a case of intrapersonal disagreement, where one comes to the realization that one has two conflicting beliefs. According to Kelly, in some such cases it is reasonable to stick to one of the two beliefs and drop the other. He points out that this is "paradigmatically" so in cases in which the total evidence supports one belief over the other (125). He further observes that any view that ignores what the total evidence supports would be "unattractive" (125). Apparently, this is supposed to be an argument against uniform higher-order dominance. But it is difficult to make out exactly how the argument is supposed to go.

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[63] This case is a modification of an example originally offered by Christensen (2007: 193).

Here is one way of interpreting the argument. Perhaps what Kelly is saying here is that uniform higher-order dominance is implausible because it ignores the total evidence. And perhaps he thinks it ignores the total evidence because it ignores the lower-order evidence, which is part of the total evidence. But, as Feldman (2009) explains, this would be a mistake. Those who endorse uniform higher-order dominance hold that lower-order evidence is always defeated by contrary higher-order evidence. And to object that this is to ignore lower-order evidence is on a par with objecting to the view that defeaters exist by claiming that such a view ignores the evidence that is defeated, which is confused. Rather than describing uniform higher-order dominance as the view that simply ignores lower-order evidence, better to describe it as a view that takes such evidence into account in a particular way—namely, by viewing it as defeated when unfriendly higher-order evidence is present. And since neither the lower-order evidence nor higher-order evidence is simply ignored by uniform higher-order dominance, the total evidence is not ignored.

All parties to the dispute over levels interaction can, and should, agree that what matters is the total evidence. The real issue is between two competing views about how to determine what the total evidence supports. According to uniform higher-order dominance, the total evidence supports whatever the higher-order evidence supports. But in cases of intrapersonal disagreement in which the first-order evidence actually supports one belief over the other, Kelly says that one ought to stick with the supported belief, which implies that the total evidence supports what the first-order evidence supports. If this is the whole of Kelly's argument, then it doesn't make the error of the previous

interpretation, though it still isn't a problem for uniform higher-order dominance. Proponents of uniform higher-order dominance can consistently agree with the conclusion that the total evidence in this case supports what the first-order evidence supports. This is because uniform higher-dominance does not claim that the total evidence *never* supports what the lower-order evidence supports. It only says that the total evidence doesn't support what the lower-order evidence supports in the special circumstance in which there is higher-order evidence that is unfriendly. So, if there's a problem for uniform higher-order dominance to be located somewhere in the case of intrapersonal disagreement, there must be some unfriendly higher-order evidence in the case, which Kelly does not explicitly identify or discuss.

However, in passing, Kelly does mention that the case involves the *realization* of a conflict between the beliefs. Though he doesn't explicitly say that this is higher-order evidence, and doesn't explicitly discuss the role of the realization, perhaps the realization of conflict is meant to include an awareness that the first-order evidence cannot support both beliefs and an awareness that the first-order evidence doesn't clearly favor one or the other. If so, the realization would be (or come with) evidence that one's first-order evidence is neutral between the two beliefs, yielding unfriendly higher-order evidence. This yields a third and final interpretation of the argument from intrapersonal disagreement: in cases of intrapersonal disagreement, one should stick with the belief that one's first-order evidence actually supports—even in the presence of unfriendly higher-order evidence—thereby refuting uniform higher-order dominance.

If this is what Kelly has in mind, then the problem is that the argument contains an unobvious premise for which he offers no support. As already agreed, it is reasonable to stick with the belief supported by the first-order evidence in the absence of unfriendly higher-order evidence, which follows from the trivial fact that the total evidence supports what the total evidence supports (along with the fact that the total evidence is made up entirely of the first-order evidence). But the stronger claim needed for the argument is that it remains reasonable to stick with the same belief *even after one gains unfriendly higher-order evidence*, which Kelly doesn't defend. Perhaps Kelly intends the claim as a brute intuition. But there doesn't seem to be any such intuition here. In fact, intuition seems to go in the other direction. It seems clear that if I have evidence E1 in favor of p but gain evidence E2 that my evidence E1 is mistaken, then I ought to retract belief in p, even if E1 actually does support p. If I initially also believe q on the basis of E1, which doesn't actually support q, and q is incompatible with p, and I come to realize the conflict, the intuition that I should abandon belief in p remains intact.[64] So, in cases of intrapersonal disagreement with unfriendly higher-order evidence, intuition supports that the lower-order evidence is defeated. At any rate, this is what proponents of uniform higher-order dominance will say, and Kelly cannot refute it with the bare assertion that it's incorrect.

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[64] I suppose one might attempt to argue that, since the higher-order evidence is misleading, I *should* ignore it, especially given that the original evidence is correct. But the fact that the evidence is misleading just means it doesn't support what's actually true. And the fact that the belief in question is actually true does not affect whether I should believe it. That would be to confuse the epistemic with the alethic.

In contrast to the example of intrapersonal disagreement, another example of Kelly's shows that first-order evidence *can* make some difference to what the total evidence supports even if unfriendly higher-order evidence is included. Consider a case in which a person makes a perceptual judgment while being moderately inebriated. Cognizant of the inebriation and fully aware that inebriation often distorts both perception and judgment, the person has higher-order evidence that at least partly undermines the perceptual evidence, in light of which he/she ought to temper confidence in the perceptual judgment. But this isn't to say the judgment should be altogether abandoned. It seems reasonable to retain the judgment but with less confidence. Thus, first-order evidence can indeed make a significant evidential difference in the presence of unfriendly higher-order evidence.

In response, proponents of uniform higher-order dominance can agree but make a simple qualification to render this consistent with their view. The qualification needed depends on a distinction between two different types of evidential support. Evidence supports a proposition merely *pro tanto* when it lends some slight degree of weight to the proposition. In contrast, evidence supports a proposition *on balance* when the degree of support is sufficient to support the proposition over its negation. For example, the purchase of a lottery ticket might be said to offer pro tanto support to the proposition that one will win (because it slightly increases one's chances), but it does not offer on balance support to the proposition (because it is still more likely that one will lose). Kelly's inebriation example poses a challenge to uniform higher-order dominance only if such dominance is interpreted in terms of to pro tanto support. But proponents of uniform

higher-order dominance can, and should, stipulate that the theory is to be understood only in terms of on balance support. Clearly, the total higher-order evidence in the inebriation example (E2) lends some *pro tanto* support to the claim that the first-order perceptual evidence (E1) is unreliable, since E2 makes the total level of support for the perceptual proposition p drop below the level at which E1 alone actually supports it. But surely E2 does not support *on balance* that E1 is unreliable. If it did, then it would indeed seem unreasonable to continue believing in accordance with the perception. So, it must be implicit in the case that E2 includes not just E2a, the fact that the person is inebriated and that inebriation diminishes perceptual reliability and judgment, but also E2b, the fact that the inebriation is in this case sufficiently moderate for perceptual reliability and judgment to remain trustworthy to some degree. If E2a were the total higher-order evidence, then the intuition that it remains reasonable to stick with the perceptual judgment goes away. But when we expand the higher-order evidence to include E2b, the total higher-order evidence can be said to undermine the judgment only in a pro tanto sense. So, if higher-order dominance is understood only in terms of on balance support, there's no challenge here.

But Kelly has other arguments. One of them is his accusation that uniform higher-order dominance is guilty of illegitimate bootstrapping (128-132). For example, if a person initially is irrational in believing p on the basis of evidence E1 that does not support p, uniform higher-order dominance implies that the person can too easily become rational in that belief simply by noting his or her fallacious assessment that E1 supports

p.[65] This should seem familiar. In the previous chapter, we already considered this objection as part of the Screening-Off Objection, although it was there construed as an objection to the Filtration Principle rather than uniform higher-order dominance. But the basic idea is the same, and so are the responses. We need not reiterate those responses here.

Moving on to Kelly's fourth argument (149-150), consider one of Christensen's variations on the restaurant case. Suppose again that you and some friends have finished dining at a restaurant and decide to evenly split the bill. This time you calculate that you each owe some moderate amount, say $43, but one of your normally reliable friends independently calculates that you each owe some inordinate amount, say $450. This amount is absurd, you know that it's absurd, and your initial calculation turns out to be correct. Now, it's clear that you are justified in sticking to your initial calculation and thinking that your friend is wrong. Kelly points out that this can be explained by the fact that your evidence supports your answer but not your friend's. Although Kelly admits that there are also potential ways to explain this without allowing lower-order evidence to dominate (e.g., perhaps your evidence that your friend gives an absurd answer yields higher-order evidence that your friend's evidence doesn't support that answer, or that your friend isn't reliable in this particular case), but quickly adds that his explanation is simple and straightforward. So, I take it that he wants to conclude on the basis of

[65] Kelly also gives an example where two people bootstrap off of each other (125-128). But it's basically the same idea. I'll only consider the single-person case, since Kelly says it's more clearly problematic.

inference to the best explanation that his explanation is correct, and therefore that the first-order evidence in this case trumps the unfriendly higher-order evidence.

There are three adequate responses. First, the explanations that do not appeal to lower-order dominance do not seem to me any more complex or less straightforward. But I don't want to insist on this response. Instead, note that, even if Kelly's explanation is the best explanation of this particular case, it's not the best explanation all things considered. Since in other cases higher-order evidence clearly trumps first-order evidence, explaining the above restaurant case in terms of lower-order dominance would require a complex theory that has different levels dominating in different cases. But if we explain the restaurant case in a way that denies that the lower level trumps the higher level, then even if Kelly is right that such an explanation might itself be more complex and less straightforward than his, this decrease in explanatory virtue is offset by the simplicity it allows the rest of the theory to have.

Proponents of uniform higher-order dominance need not rest their response on considerations of explanatory virtue. They need not even reject Kelly's claim that the first-order evidence trumps the higher-order evidence in the restaurant case. Suppose that E2 is your evidence that your friend has evidence E1 that $450 is the correct amount. If your first-order evidence E1* for the claim that the correct amount is $43 is not the same as your friend's first-order evidence (i.e., E1* ≠ E1), then E2 need not be evidence that bears on E1*, in which case E2 does not undermine E1*, which is consistent with uniform higher-order dominance. Uniform higher-order dominance only requires that unfriendly higher-order evidence defeats the *corresponding* lower-order evidence (the

evidence that the higher-order evidence is about), which in this case is E1, not E1*. Of course, E2 might still have object-level significance that needs to be weighed against E1*, but it's plausible in this case that E1* is stronger than E2.

But suppose instead that the first-order evidence that went into your determination of $43 is identical with your friend's, so that E1*= E1. In this case, uniform higher-order dominance does entail that E2 defeats E1. However, notice that the first-order evidence E1** that your share is not $450 is inessential to E1's support for the claim that it's $43. Your visual perception of the bill and the calculations you went through are sufficient first-order evidence that each share is $43. But you also have independent additional first-order evidence that $450 is significantly higher than the total bill itself, that one of multiple shares cannot be higher than the total amount, that you've never seen a share that large for a meal of this sort at this sort of restaurant, etc. It is open to proponents of uniform higher-order dominance to say that this overwhelming first-order evidence (E1**) defeats your weaker higher order evidence (E2) that E1 supports that the shares are $450 each, since, again, uniform higher-order dominance only implies that E2 defeats the *corresponding* lower-order evidence (the lower-order evidence that E2 is about), which in this case is E1, not E1**.

Perhaps, though, Kelly wants a case in which you and your friend really do share *all* of the same evidence, remain peers, continue to disagree, and you know all of this, then Kelly would be right that uniform higher-order dominance implies that you should abandon your belief and suspend judgment about who is right despite the absurd amount. In that case, though, my intuition is that this is the correct result. The absurdity of your

friend's amount is what makes some think they would continue to insist against it were they to find themselves in the situation. But in real life, when faced with an initial absurdity, if that absurdity is insisted upon long enough by other people we judge to be serious (not joking), honest, sufficiently knowledgeable, and reasonable, it seems to me that most people do eventually begin to lose confidence in their initial judgment. Sometimes what initially seems absurd gradually becomes more plausible. In other cases, we retain the sense of absurdity and simply find ourselves utterly baffled and at a total loss for what to think. But if you continue to insist on your initial answer despite having no reason to think your own judgment is better than your friend's, I can't see how it could be anything other than pure stubbornness.

We finally reach Kelly's last source of opposition to uniform higher-order dominance, which he calls the "Litmus Paper Objection" (132-135). The objection begins with a claim about the nature of evidence: evidence for a proposition qualifies as such in virtue of being a reliable indication that the proposition is true. For example, the fact that a piece of litmus paper turns red when immersed in a particular liquid is evidence that the liquid is an acid precisely because the former is a reliable indicator of the latter. The same idea explains how other people's psychological states (e.g., the weather forecaster's judgment about tomorrow's weather) become higher-order evidence. Given that higher- and lower-order evidence qualify as evidence in virtue of the exact same considerations, Kelly claims that it is implausible to think that any one level always overrides the others.

Although I do not agree that we should understand evidence in terms of reliable indication,[66] there's no need to argue for this here, since I agree that all evidence—whether first order or higher order—qualifies as such in virtue of the same basic considerations, and it does not seem essential to Kelly's reasoning whether these basic considerations have anything to do with reliable indication or something else entirely. But it does not follow from evidential univocality that it is implausible for one type of evidence to uniformly trump others. After all, the type *strong evidence* plausibly always trumps the type *weak evidence*, even though both qualify as evidence in virtue of the same considerations.

Nevertheless, I do understand the reaction that it seems mysterious why one level would always trump others given the fact that neither level is necessarily privileged in regards to strength or defeasibility or in any other obvious way. Perhaps this is the basic driving motivation behind the Litmus Paper Objection. One response is to deny that an air of mystery is good enough reason to reject a theory. We continue to endorse many claims that we judge to be mysterious. For example, it seems mysterious why there exists

[66] One reason is that evidence can fail to be reliable (at least if we understand the term as we do in everyday language). For example, a quick glance at Bertrand Russell's (1948) stopped clock can give one evidence of the time, even though such evidence is unreliable. A second reason is Feldman and Conee's "generality problem" for reliabilism (1998). A third potential reason derives from a mentalist ontology of evidence. On this view, non-mental things like fingerprints aren't really evidence (though we speak as if they are, which can be understood as a useful fiction rather than the literal truth). Strictly speaking, the closest thing to fingerprints that qualifies as evidence would be *perceptions* of the fingerprints. If this is correct (which I don't necessarily think), then fingerprints, since they are reliable indications but not evidence, are counterexamples to the reliable indication view.

something rather than nothing, but I don't for one second take this to be a reason to deny that something exists. Similarly, it might seem mysterious why higher-order evidence uniformly dominates, but this by itself isn't a reason to deny that it's true, especially given that many straightforward examples seem to support it.

But uniform higher-order dominance doesn't seem all that mysterious. There are at least three potential explanations for why higher-order evidence might always trump lower-order evidence. Christensen (2010: 198) proposes what he calls "bracketing." Start with the plausible idea that evidence we possess sometimes derivatively gives us other evidence that we can justifiably rely upon. For example, if I have evidence for p, this plausibly makes p a proposition that I can justifiably rely upon as evidence for a further proposition. As I understand Christensen, bracketing is a similar idea that goes in the opposite direction: even if I can initially justifiably rely upon some evidence E1 in forming judgments, if I then gain some evidence E2 against E1 (or against E1's relation to some proposition), then E2 makes it so that I can no longer justifiably rely upon E1 as evidence for forming judgments. In Christensen's terminology, E2 "brackets off" E1. Given bracketing, we can produce a general explanation for why higher-order evidence uniformly dominates: since unfriendly higher-order evidence brackets off the corresponding lower-order evidence, the higher-order evidence is the only evidence that can be justifiably relied upon in unfriendly cases, in which case the total evidence that can be justifiably relied upon supports whatever the higher-order evidence says about what the lower-order evidence supports.

Unfortunately, though, Christensen doesn't explain exactly how bracketing works and why. If the reason unfriendly higher-order evidence always brackets off the corresponding lower-order evidence is simply that the former evidence always defeats the latter, then Kelly's question remains unanswered by the bracketing approach: why doesn't the defeat relationship sometimes go in the other direction? The bracketing approach offers a potential answer only if we do not cash it out in terms of defeat. But it is difficult to see any other plausible way to cash it out. When E2 brackets off E1, it's not as if E1 disappears or dislodges itself from the agent's mind. So, we cannot explain bracketing in terms of evidential possession. When E2 brackets off E1, it's not as if E1 becomes somehow inaccessible to the agent who possesses it, since E1 won't suddenly become incomprehensible or buried in the subconscious. So, we cannot explain bracketing in terms of conscious or conceptual accessibility. But if, after being bracketed off, E1 continues to exist, be possessed by the agent, and remains just as comprehensible and accessible to the agent's consciousness as before, it is hard to see why it could no longer be justifiably relied upon in the formation of judgments unless it's simply because it has been defeated.

But suppose bracketing could somehow be explained in terms of evidential possession or accessibility or something else independent of defeat relations. In that case, the bracketing approach still wouldn't tell us what E1+E2 supports in any unfriendly case. It would merely tell us that in unfriendly cases E1+E2 can never be possessed or accessible or whatever, since the presence of an unfriendly E2 always renders E1 itself incapable of being possessed or accessible or whatever. And higher-order dominance, as

framed, is a view about what E1+E2 supports. So, the version of the bracketing approach under consideration would simply ignore the question we are asking. Of course, it would also render the question unimportant, since E1+E2 couldn't make any difference to anyone. Only E2 would matter in unfriendly cases, and so the bracketing approach would at least have the same practical import as uniform higher-order dominance.

An alternative to the bracketing approach is the idea that unfriendly higher-order evidence alters what the corresponding lower-order evidence supports. Specifically, the higher-order evidence makes it so that the corresponding lower-order evidence no longer bears the support relations to the object level that it did when in isolation. The higher-order evidence that is initially unfriendly converts its lower-order enemies into friends. The higher-order evidence is never unfriendly when it occurs in combination with lower-order evidence. Hence, on this view, the only true principles of interaction with antecedents that can be satisfied are principles that are compatible with SOUP. Technically, this means that no level dominates. But, as with bracketing, the practical import of this view is the same as uniform higher-order dominance.

Unlike the bracketing approach, the strategy just sketched is seriously problematic because it requires evidential relativism, which we are assuming here to be false. So, we now arrive at the third and final attempt to explain uniform higher-order dominance, which hinges on the so-called "linking view" of evidence.[67] On the linking view, in order

[67] The linking theory is motivated by Conee and Feldman's (2001) response to their TA example, which will be discussed shortly. Also see Conee and Feldman (2008) for related discussion, and see Matheson (2009) and Rogers and Matheson (2011) for further

for E to be evidence in support of some proposition p, E contains a *base* B and a *link* L that connects B to p.[68] For example, suppose a doctor finds Koplick spots on a patient and on this basis forms the conclusion that the patient has measles.[69] Now, in everyday conversation, we might say that Koplick spots are evidence of measles. And this might be true, but since the Koplick spots themselves can't literally be in your mind, it's not the kind of evidence that can be possessed in any sense that is directly epistemically relevant. And I am interested here only in the kind of evidence that can be directly epistemically relevant. In the example under discussion, the kind of evidence of interest (the directly epistemically relevant kind) is partly made up of *perceptions* of the Koplick spots (not the spots themselves). But these perceptions do not constitute the whole of the evidence. Also part of the evidence is the doctor's information about how Koplick spots link up with measles (e.g., that they are reliably correlated). Such linking information is a necessary part of the evidence. Moreover, if the doctor had this linking information but no awareness of Koplick spots on the patient, the doctor would again fail to have any reason to conclude that the patient has measles. Awareness of Koplick spots on the patient is the base information required to activate the link. Thus, the full body of

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discussion and development of the theory (although a somewhat different version of it, as discussed in footnote 68 below).

[68] An alternative version of the linking theory is that every base and every link counts as a piece of evidence, at least when the base and a relevant link are simultaneously possessed by some agent. This is suggested by Matheson's way of describing links as "linking *evidence*" (278). However, I reject this version of the theory because it requires evidential relativism.

[69] The example comes from Kelly (2014). Cf. his treatment of the example.

evidence required to support that the patient has measles contains some base information—the awareness of Koplick spots—in conjunction with a link that connects this base to the proposition that the patient has measles.

One might question whether the linking view extends to cases in which the base (or link) by itself entails the proposition that the evidence supports. For example, suppose that p logically entails q. One might wonder whether the base (p or evidence for p) is by itself evidence that supports q in virtue of the objective relation of entailment between p and q. However, consider Feldman and Conee's (2001) example of the logic student and the logic TA. Both have good reason to believe p but only the TA understands how p leads to q; the student has no information about that. Intuitively, the TA has evidence sufficient to support q but the student does not. The difference is explained by the fact that the TA possesses the link as part of his evidence, whereas the student does not.

In some cases, though, links can be harder to identify because the base is very similar to the supported proposition, which makes it easy to mistakenly see the base and proposition as nearly identical, which in turn makes it appear as if there is insufficient room for a gap that needs to be filled by a link. Simple perceptual cases are good examples of this. For instance, suppose you see a blue object and on this basis form the belief that there's a blue object. The base is your perception of the blue object. But what is the link between the perception of the blue object and the existence of one?[70] Well, even if you have a perception of a blue object, if you do not also know what blue is—that

[70] Thanks to Feldman for suggesting this objection to me (in p.c.).

is, you don't have the concept *blue*—then you don't have enough information to support that there is a blue object. In many simple cases like this, the link is often just a concept or set of concepts.

Of course, there is the worry that the linking theory leads to an infinite regress of links, in which case skepticism ensues. Whether the theory implies such a regress depends partly on how the theory is understood. One might interpret it as holding that for any evidence E and proposition p, if E is evidence for p, then there must be a link L from E to p. Then, presumably E* = E+L is evidence for p, which, given the linking theory, entails the existence of a further link L* from E* to p, and so on ad infinitum. But this is not the theory as I have described it. According to the description given, if E is evidence for p, the theory requires E to have a two-part structure composed of a base B and a link L from B to p, so that E = B+L. The required link is a *proper part* of the evidence that connects a *proper part* of the evidence to the supported proposition, placing the link *inside* of the evidence itself. In contrast, the above incorrect interpretation would have us understand the link to be between the evidence *as a whole* and the supported proposition, placing it *outside* of the evidence. It is this deviation from the correct interpretation that allows the link to combine with the original evidence to form a new body of evidence that then generates the needs a further link, initiating the regress.

But even if the theory as stated does not entail a regress, one might argue that what motivates the theory also motivates positing an infinite regress of links: if one needs a link L between B and p to have evidence for p, then for the same reason one would also need a link L* that connects B and L to p, and a link L** that connects B, L, and L* to p,

ad infinitum. This is essentially Carroll's Paradox (Carroll 1895), which I cannot fully deal with here. I will limit my response to a few brief comments. First, some have argued that the regress isn't vicious (see Rogers and Matheson (2011)). Second, my own view is that what motivates positing the initial link does not also motivate positing further links. In other words, there are non-arbitrary ways of limiting links (again, see Rogers and Matheson (2011) for some of the proposals). Third, the examples presented in favor of the linking theory makes it quite clear that links are required. And, since it is quite clear that skepticism is false, it must be that there is no regress or that it is not vicious, whether or not anyone is able to explain why. Here I'm proposing that we "modus tollens a modus ponens," and I support a Moorean reason for doing so: the intuitions in favor of the linking theory and against skepticism seem straightforward whereas it is far from obvious that there can be no non-arbitrary stopping place for links (or at least a way to render the regress non-vicious); hence, we have better reason to endorse the linking theory than to reject it.

Having sketched and defended the linking theory, we are now prepared to see how it explains uniform higher-order dominance.[71] Supposing E1 is evidence for p, it must contain a base B and link L from B to p. Supposing E2 is evidence that E1 doesn't support p (or that E1 supports ~p or supports neutrality with respect to p), this amounts to supporting that E1 contains no adequate link to p. As we might put it, E2 provides an "anti-link" A against link L. And anti-links can be thought of as link rebutters.

[71] Matheson (2009) also puts the linking theory to this use, though his account is different than mine in various minor respects.

Specifically, A is an anti-link that is a rebutting defeater for L. Of course, L might be initially stronger than A itself. But E2 also contains evidence for A over L, thereby reinforcing A, whereas E1 contains no evidence that bolster's the strength of L (except in cases of interference or supportive complexity, which we're still setting aside). Hence, E2 defeats E1 regardless of their comparative strength. So, we have a plausible picture that explains why uniform higher-order dominance holds despite both levels being evidence in virtue of the same considerations: unfriendly higher-order evidence provides an undercutting defeater for the corresponding lower-order evidence in virtue of providing a reinforced anti-link that rebuts, and overtakes, the link contained in the lower-order evidence. Mystery solved.

Although we have so far focused our efforts on responding to various doubts about uniform higher-order dominance, along the way we have also seen two positive arguments in favor of such dominance: (a) the argument from generalization with which this subsection began and (b) the application of the linking theory of evidence. There is a third argument in favor of uniform higher-order dominance that cannot be ignored. In his defense of uniform higher-order dominance, Feldman (2005 and 2009) notes that in cases in which E1 supports p but E2 supports that E1 doesn't support p, if E1+E2 continues to support p, it would justify believing *p, but my evidence doesn't support p*, which is highly counterintuitive. While there are various maneuvers one might try to make, the only plausible way to avoid the awkward result is to hold that E1+E2 does *not* support p. And this point generalizes: for any member X of the extended supports space, if E2 supports that E1 supports X(p) but E1+E2 does not, it would justify the attitude *X(p), but my*

evidence doesn't support X(p), which is highly counterintuitive, which in turn gives us reason to maintain that E1+E2 supports X(p). The conclusion is that higher-order evidence uniformly dominates. And the beauty of this argument is that it avoids the weaknesses of the other two arguments for uniform higher-order dominance. Feldman's argument doesn't appeal to anything as controversial as the linking theory of evidence (though it can be explained by the theory and I don't know of any feasible alternative explanation). Moreover, it is immune to the charge of hasty generalization, since the intuition that drives the argument isn't an intuition about any set of concrete examples that are generalized. The intuition is instead a direct assessment of the generalization itself.

3.3.3 Ah, Problems for Uniform Higher-Order Dominance After All

But the arguments for uniform higher-order dominance do not withstand *all* scrutiny. First, remember that we have been operating for a while now on the simplifying maxim that we set aside cases of interference, supportive complexity, and conceptual impoverishment, which are clearly problem cases for uniform higher-order dominance (as well as unrestricted theories generally). Second, there is a phenomenon I'll call *evidential latching* that leads to a constraint on undercutting defeat that some unfriendly higher-order evidence fails to meet.

In order to introduce evidential latching, consider any evidence E2 that supports that some evidence E1 supports X(p). I'll say that E2 latches onto E1 whenever E2 is sufficient to enable any person who has E1 to recognize E1 as the very evidence E2 is about. One way in which latching occurs is when E2 specifies E1 by detailing its

contents. For example, if E1 is a particular proof of mathematical theorem T, and E2 is evidence that *the following proof [insert the actual proof]* is evidence for T, then E2 enables anyone who already had E1 before gaining E2 (and retains E1 upon gaining E2) to recognize E1 as the very same evidence that E2 is about. Latching can also occur when E2 specifies E1 by general description. For example, if E1 is the actual proof of T and E2 is evidence that *the proof discussed yesterday in class* is evidence for T, then E2 enables any party to yesterday's class discussion with sufficiently good memory to recognize E1 as the very same evidence that E2 is about. But latching also sometimes fails when E2 specifies E1 by general description. Continuing with the example just described, although E2 enables some parties to yesterday's class discussion to recognize E1 as the evidence E2 is about, E2 does not enable those who have E1 but are uninvolved in the class to recognize E1 as the same proof that E2 is about.

I propose that there is a latching requirement on undercutting defeaters: if D is an undercutting defeater for evidence E, then D must latch onto E. As applied to higher-order evidence, if E1 supports X(p) but E2 supports that E1 doesn't support X(p), then E2 is an undercutting defeater for E1 only if E2 latches onto E1. To illustrate, let E1 be proof P of theorem T and let E2 be evidence that *the reliable teacher demonstrated yesterday in class that the purported proof discussed in the textbook is not an adequate proof for T*. And suppose that the purported proof turns out to be identical to P. Now, someone who has E1 and also has E2 in virtue of being present and attentive in the class under discussion recognizes that both pieces of evidence are about the same proof, and therefore has reason to abandon reliance on E1. In contrast, someone who has E1, isn't

involved in the class, but has E2 as testimonial evidence from someone who is in the class probably won't be able to recognize that E1 and E2 are about the same proof. In such a case, E2 doesn't provide this person with any reason to think that proof P is the bad one; it only indicates that *some* bad proof exists. So, even with E2, the person has no reason to abandon reliance on E1. E2 doesn't undercut in this case, and the reason is that E2 doesn't latch onto E1.

As a further argument for the latching requirement, notice that, for any given proposition, there exists a bad reason for it (whether or not anyone actually accepts the reason). Now that I've pointed this out, you and I have higher-order evidence of the existence of bad reasons for every proposition. If higher-order evidence uniformly dominates without a latching requirement, then the higher-order evidence you and I now have undercuts every belief we have. The latching requirement is therefore necessary to protect higher-order dominance from a particularly strong form of epistemological skepticism.[72]

But the mere fact that higher-order evidence doesn't always undercut doesn't automatically mean that it cannot defeat; it could instead serve as a rebutting defeater.

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[72] Where, then, do the arguments for uniform higher-order dominance go wrong? The latching requirement shows that the negative linking information provided by unfriendly higher-order evidence must have the right sort of content in comparison to the link provided by the corresponding lower-order evidence before the negative linking information can be a genuine anti-link that rebuts the link. As for Feldman's argument, notice that when E2 doesn't latch onto E1, E2 doesn't justify the attitude *X(p), but my evidence doesn't support X(p)*. This is because when the latching requirement isn't met, E2 doesn't allow one to recognize that my evidence for X(p) is the very evidence that isn't supported.

For example, suppose E1 is evidence for p but E2 is evidence that E1 is evidence for ~p. Even if E2 doesn't latch onto E1, and therefore cannot undercut E1, E2 can still provide object-level support for ~p via the Filtration Principle discussed in the last chapter. And if E2 does provide object-level support for ~p, then it must be weighed against E1's support for p in the same manner as first-order competing evidence. Of course, there's the possibility that E1 is stronger, in which case the lower-order evidence dominates. Such a case refutes uniform higher-order dominance.

Another case that refutes uniform higher-order dominance is due to the fact that the Filtration Principle has exceptions, as argue in the previous chapter. In any case in which unfriendly higher-order evidence is one of these exceptions, it fails to have object-level significance and cannot serve as a rebutting defeater. If it simultaneously fails to undercut the corresponding lower-order evidence due to failure to meet the latching requirement, it cannot serve as an undercutting defeater either. In that case, unfriendly higher-order evidence doesn't defeat the corresponding lower-order evidence at all, yielding another exception to uniform higher-order dominance.

So, unfriendly higher-order evidence usually dominates, but there are significant exceptions. More specifically, unfriendly higher-order evidence dominates except when it cannot act as an undercutting defeater due to failure of the latching requirement, in which case we need to apply the version of the Filtration Principle defended in the last chapter to determine whether the higher-order evidence has object-level significance, which would then convert the higher-order evidence into a rebutting defeater if it's object-level significance is sufficiently weighty in comparison to the corresponding lower-order

evidence. Of course, even this only holds only on the assumption that there is no supportive complexity, interference, or conceptual impoverishment.

3.4 Hold on … What Is Uniform Higher-Order Dominance, Exactly?

I've been operating on the simplifying assumption that we know what uniform higher-order dominance amounts to. And we do in a sense: uniform higher-order dominance means that the higher-order evidence always dictates what the total evidence supports. But regarding *what* it dictates hasn't yet been fully determined. Of course, it should be clear from the foregoing discussion that if E2 supports that E1 supports Z(p), then uniform higher-order dominance in this case means that E1+E2 supports Z(p). Hence, uniform higher-order dominance endorses:

(A) For any evidence E1 and E2, any proposition p, and any X and Z in the extended support space, if E1 supports X(p) and E2 supports that E1 supports Z(p), then E1+E2 supports Z(p).

Applying this to the case in which $Z(p) = (X(p))^{\#}$, we get the result that if E2 supports that E1 does not support X(p), then E1+E2 does not support X(p). But (A) doesn't entail what, if anything, E1+E2 *does* support in such a case. Moreover, (A) only applies to cases in which Y(E1 supports Z(p)) = E1 supports Z(p). We haven't seen how to understand higher-order dominance in cases in which Y(E1 supports Z(p)) ≠ E1 supports Z(p), i.e., the case in which E2 doesn't support that E1 supports Z(p), the subcase in which E2 supports nothing at all about what E1 supports, and the subcase in which E2 supports neutrality about what E1 supports. The task of this section is to fill in these gaps. Only once we have a full understanding of uniform higher-order dominance can we

formulate a theory of levels interaction by factoring out the exceptions to such dominance.

First take the case in which E2 supports that E1 does not support X(p). Now, if E1 actually does support X(p), then uniform higher-order dominance should mean that E2 undermines E1's support for X(p), and since E2 doesn't support anything else about what E1 supports (if it did, it would be a case of supportive complexity, which we're still setting aside), E1+E2 is neutral about p. So, we should understand uniform higher-order evidence to entail:

(B) For any evidence E1 and E2, any proposition p, and any X in the extended support space, if E1 supports X(p) and E2 supports that E1 does not support X(p), then E1+E2 supports neutrality with respect to p.

However, if E1 doesn't support X(p), then E2's support for the claim that it doesn't support X(p), shouldn't undermine anything that E1 does support, in which case E1+E2 supports what E1 supports. (Of course, E2 might also support that E1 supports something in particular other than X(p), in which case E1+E2 need not support neutrality about X(p). However, that would again be a case of supportive complexity, which we're still setting aside.) So, we should understand uniform higher-order dominance to entail:

(C) For any evidence E1 and E2, any proposition p, and any X and Y in the extended support space, if E1 supports X(p) and E2 supports that E1 does not support Y(p), where $X(p) \neq Y(p)$, then E1+E2 supports X(p).

Now consider the case in which Y(E1 supports Z(p)) ≠ E1 supports Z(p), i.e., the case in which E2 doesn't support that E1 supports Z(p). Focus first on the subcase in

which E2 supports nothing about what E1 supports. It is important to distinguish this from the case in which E2 supports neutrality about what E1 supports. One reason is due to the existence of higher-order evidence that is irrelevant to E1 (but relevant to other evidence), which in virtue of its irrelevance, it shouldn't defeat E1. In order to preserve this fact, irrelevant higher-order evidence should be distinguished from higher-order evidence that genuinely neutralizes the lower-order evidence. So, in cases in which E2 supports nothing (rather than neutrality) about what E1 supports, E2 simply has no effect on what E1+E2 supports regarding p, meaning that E1+E2 supports whatever E1 supports regarding p. Hence, uniform higher-order dominance should be understood to entail:

(D) For any evidence E1 and E2, any proposition p, and any X in the extended support space, if E1 supports X(p) and E2 supports nothing about whether E1 supports X(p), then E1+E2 supports X(p).

Finally, consider the subcase in which E2 genuinely supports neutrality (rather than nothing) about what E1 supports regarding p. This subcase is the trickiest of all. There are different potential treatments to consider.

One treatment of the subcase reasons as follows. Let E2 = E2a+E2b, where E2a is evidence that E1 is evidence for p and E2b is evidence that E1 is evidence for ~p, where E2a and E2b are mutually independent and of equal strength. E2 then supports neutrality about whether E1 supports p or ~p (it does not support that E1 is neutral about p). But what does E2 support at the object level? Well, uniform higher-order dominance implies that E1+E2a supports p and E1+E2b supports ~p. Now, since E1+E2 supports an even split between what E1+E2a supports and what E1+E2b supports, and E2a and E2b are

independent and of equal strength, it follows that E1+E2a+E2b = E1+E2 supports neutrality between p and ~p. While not all higher-order evidence that is neutral about the lower-order evidence is like E2 (for example, consider E2* = E2a+E2b+E2c, where E2c supports that E1 is neutral about p), I see no reason to distinguish cases here. E2 seems sufficiently representative of what higher-order evidence is like when it supports neutrality about whether E1 supports p, ~p, or neutrality about p. Hence, if E2 is completely neutral about what E1 supports and uniform higher-order dominance is correct, then E1+E2 supports neutrality about p. So, we should understand higher-order dominance as entailing:

(E) For any evidence E1 and E2, any proposition p, and any X in the extended support space, if E1 supports X(p) and E2 supports neutrality about whether E1 supports X(p), then E1+E2 supports neutrality about p.

Another argument for this view is that E1+E2 is clearly evidence that concerns p, and therefore must support either p, ~p, or neutrality about p. But if E2 is neutral about what E1 supports, and uniform higher-order dominance holds, then it's clear that E1+E2 doesn't support p and doesn't support ~p, which leaves neutrality about p as the only remaining option.

But from another perspective this result seems wrong. If E2 is neutral about what E1 supports, in particular it's neutral about whether E1 supports neutrality about p. And if E2 is neutral about whether E1 supports neutrality about p, E2 would seem to indicate *not* being neutral about p, in which case uniform higher-order dominance shouldn't entail that E1+E2 supports neutrality. One might instead opt for the view that since E1+E2

clearly doesn't support p, ~p, or neutrality about p, it doesn't support any position on p whatsoever. Anyone with such evidence shouldn't be neutral about p but should instead simply be at a total loss for what to think. As Alexander (2013) puts it, such a person should hold no attitude toward p, not even the attitude of withholding or suspending judgment about p.

It is surely correct that suspension of judgment is an attitude, and that it is possible to have no attitude at all toward a proposition. The clearest case is when one has never even considered a proposition, perhaps also when one has considered a proposition but is not currently doing so (if you require doxastic attitudes to be occurrent), and even perhaps is considering a proposition but failing to grasp it (though it might be better to describe such a person as *trying* but failing to consider it). But for Alexander's solution to work, he'd need it to be possible to fail to suspend judgment even in cases in which one is considering a proposition that one grasps (namely, the relevant proposition about what the lower-order evidence supports or fails to support). And it is unclear whether this is possible. Even if it is, Alexander's solution only helps with the above original version of the puzzle. It leads to analogous puzzling results in other cases. Suppose that E2 is not just neutral about what E1 supports but is neutral about whether E1 even supports any position at all. For example, you don't know anything about E1 except one friend tells you that E1 supports a position on p and another equally reliable friend tells you that E1 doesn't support any position at all. It would be odd for E1+E2 to favor taking an attitude vs. not taking an attitude when E2 indicates being neutral on the matter. But in this case there is no remaining space to which we can retreat. Alexander's solution breaks down at

this stage. Moreover, it seems defeated by the initial argument for (E), which seems convincing, at least if we assume that it is even possible for E2 to be neutral about what E1 supports.

Having just noted that the initial argument for (E) presupposes the possibility that E2 is neutral about what E1 supports, an alternative to Alexander's resolution of the puzzling implications of (E) becomes apparent: deny the presumption. In other words, one might maintain that it is impossible for E2 to be neutral about what E1 supports. The reasoning for this position goes something like this: if E2 doesn't support that E1 supports p and doesn't support that it supports ~p, then since it is indeed evidence concerning whether E1 supports p, it must support the only remaining option: that E1 supports neutrality. One problem with this solution is that, even if E1 must actually support either p, ~p, or neutrality about p, E2 need not support that E1 must support one of the three. Evidence (especially testimonial evidence) can support pretty much any proposition, even necessarily false propositions. Perhaps in order to for E2 to support that E1 supports neutrality, E2 must involve a conceptual error or impoverishment. But even so, it would still be possible for E2 to bear such a support relation, since conceptual error and impoverishment are possible. Of course, if bearing such a support relation does require conceptual impoverishment or error (and remember that conceptual error would be a case of interference or supportive complexity), then, since we are still setting aside conceptual impoverishment, supportive complexity, and interference, (E) in effect becomes vacuously true, making it harmless to maintain as part of uniform higher-order dominance.

A more serious problem for the view that E2 cannot support neutrality about what E1 supports is that E2 need not support that E1 is evidence concerning p (never mind whether E2 includes information about which evidential relations between E1 and p are actual or possible). E2 can fail to support that E1 is evidence concerning p and remain evidence concerning whether E1 is evidence concerning p. And this can happen for reasons unrelated to conceptual impoverishment or error. For example, if I do not know what evidence "E1" refers to, but one friend tells me that it is evidence concerning p while another, equally reliable friend tells me that it is not evidence concerning p, then my higher-order evidence supports being neutral about whether it is evidence concerning p, even if I have a full and accurate grasp of the concept of evidence. And this precludes me from reasoning from E2 to the conclusion that E1 must either support p, ~p, or neutrality about p. So, clearly, the antecedent of (E) can obtain even if we are setting aside cases of conceptual impoverishment and error. Therefore, the presumption underlying the initial argument for (E) holds up.

How, then, can we avoid the awkward implications of (E)? Recall that the initial argument for (E) appealed to simpler principles of higher-order defeat (namely, principle (A)). So, one might still avoid the awkward implications by denying the whole idea of higher-order defeat. This is the move made by Weatherson (2013) and Lasonen-Aarnio (2013). Though the details of their arguments are different, the gist is the same. I'll focus on Lasonen-Aarnio's development. It begins with an epistemic dilemma for cases in which higher-order evidence supports that one is unreliable in responding to evidence. In such a case, she maintains that higher-order defeat would imply the defeat of any attitude

one takes, including suspension of judgment. She argues that there is no adequate way to avoid this consequence without rejecting higher-order defeat.

It is not clear to me why proponents of higher-order defeat cannot simply embrace the alleged consequence: it is impossible to be rational if one is unfortunate enough to have higher-order evidence that is so radically unfriendly. But there are also ways to avoid the consequence without rejecting higher-order defeat. One might maintain, as Alexander does, that it is possible to be rational with such higher-order evidence by not holding any attitude at all, not even suspension of judgment. Another possibility is to reject the claim that the higher-order evidence defeats suspension of judgment. Lasonen-Aarnio overlooks this last possibility because it is ruled out by the way she chooses to define the notion of higher-order defeat:

> *Higher-order defeat (Lasonen-Aarnio's definition):* "Evidence that a cognitive process producing a doxastic state S as output is flawed has defeating force with respect to S." (319)

Since this definition has the object of defeat ranging over even suspension of judgment, the definition indeed implies that the higher-order evidence in question would defeat even this more modest doxastic attitude. But we are not obligated to conform our understanding of higher-order defeat to Lasonen-Aarnio's definition. In fact, (A)-(E) entail the denial of the definition, since they entail that the higher-order evidence in question supports suspension of judgment. So, proponents of (A)-(E) should reject it.

But apart from Lasonen-Aarnio's arguments, we still have to face the fact that (E) does have strange consequences. It implies that even when E2 supports neutrality about

what E1 supports about p, E1+E2 nevertheless supports neutrality. This in turn justifies the attitude "I suspend judgment about p, but my evidence doesn't support suspending judgment about p," which is counterintuitive. However, I have already argued that there is higher-order defeat, and numerous independent intuitions support this. Throwing out this massive body of support for higher-order defeat is much more problematic than endorsing the one strange consequence of (E). It would be incredibly hasty to abandon all of those other intuitions and arguments just for the sake of avoiding a single oddity in a case that is highly unusual to begin with. Moreover, the denial of higher-order defeat doesn't resolve the awkwardness that it purports to resolve. It still allows E2 to support neutrality about whether E1 is neutral, in which case it still justifies the attitude "I don't know whether my evidence supports suspending judgment." And no matter what attitude toward p (or lack thereof) is tacked onto this, the conjunction is strange. And this is so whether or not the two levels that lead to the strange consequence bear any sort of defeating relationship. The strangeness is inevitable. It isn't peculiar to higher-order defeat. It looks, then, like (E) is the best way to understand higher-order dominance in cases in which E2 supports neutrality about what E1 supports. So, I propose that we hereafter understand uniform higher-order dominance as (A)-(E) above.

3.5 A True, Complete Quasi-Higher-Order Dominance Theory

We now have all of the pieces needed to put the entire puzzle together. First, I have argued that there are no true unrestricted principles in cases of supportive complexity, interference, or conceptual impoverishment. Second, I have argued that, setting those special cases aside, uniform higher-order dominance (as developed in the

previous section) holds with the exception of cases in which unfriendly higher-order evidence fails the latching requirement on undercutting defeat, in which case higher-order evidence is to be weighed as a potential rebutting defeater against the corresponding lower-order evidence on the condition that the higher-order evidence has object-level significance, which we can determine by the version of the Filtration Principle defended in the previous chapter.

Of course, I have not treated the cases of supportive complexity, interference, and conceptual impoverishment. But I propose that these aren't uniquely higher-order concerns. They are equally first-order concerns. My task being simply to determine how higher-order evidence works, it seems acceptable to set aside concerns that apply to evidence generally. Finally, I should acknowledge that I have dealt only with second-order evidence cast in terms of explicit evidential relations. But it should be easy to extend the results to third-order evidence, ordinalities beyond, implicit evidential concepts, etc., as I did for the Filtration Principle at the end of Chapter 2. I won't go through how to do so here. But once the theory is extended to cover other types of higher-order evidence and we combine it with whatever principles govern first-order evidence (and whatever those principles tell us in cases of supportive complexity, interference, and conceptual impoverishment), the result is a quasi–higher-order dominance theory that serves as a complete and correct restricted theory of levels interaction.

Chapter 4 Implications and Applications

The previous chapters jointly present a full account of higher-order evidence—what it is, how it works, and how it interacts with other evidence. Now finally comes the time to discuss the consequences of the account, which include various general implications and specific applications. The general implications primarily concern the concept of evidence itself and how we should go about resolving debates over higher-order evidence. The specific applications include testimonial justification, memorial justification, the closure of inquiry and evidence gathering, as well as the epistemic significance of disagreement. However, in order to understand how these consequences unfold from my account, we shall first need to recall many of the details of the account itself.

4.1 The Theory of Higher-Order Evidence: A Review

My account of higher-order evidence comes in three main parts: an account of what higher-order evidence is (along with definitions of corresponding notions, such as lower-order evidence, nth-order evidence, and object-level propositions), an account of higher-order support (independently of how it interacts with lower-order support), and an account of levels interaction (how higher-order evidence and lower-order evidence combine to yield an overall body of support). I'll review each in turn.

4.1.1 What Higher-Order Evidence Is

As my starting point for an account of what higher-order evidence is, I adopted the preliminary characterization of higher-order evidence that all parties to the discussion seem to assume: that higher-order evidence is roughly evidence about evidence. As

argued in Chapter 1, this preliminary characterization needs to be filled in (since it only tells us *roughly* what such higher-order evidence is), and the existing ways of filling it in are plagued with problems. I also argued that the best remedy is the following characterization:

> *Higher-order evidence (final characterization):* For any E, E is *higher-order evidence* iff for some proposition, p, and implicit or explicit evidential relations, R and R*, E bears R to <some (w/n) E* bears (does not bear) R* to p>.

A few reminders are in order about some of the symbols and terminology that appear in this characterization. First, explicit evidential relations are those conceptualized explicitly using the concept of evidence: *evidence for*, *evidence against*, etc. Implicit evidential relations are relations that render their first relatum evidence but which are not explicitly conceptualized as evidence. Although the particular relations that meet this definition are up for debate, some plausible candidates include relations like *is a reliable indicator of*, *makes probable*, *entails*, *establishes*, *proves*, *is a reason for*, or *justifies*. Second, a set of corner brackets ("<…>") indicates that what falls inside is a proposition. Third, the notation "(w/n)" indicates that any reading of the scope of the existential quantifier (wide or narrow) is permissible.

In order to define the ordinal evidential notions (first-order evidence, second-order evidence, third-order evidence, etc.), I introduced the notion of evidential embedding depth as follows:

> *Evidential embedding depth*: For any En, proposition p, and positive integer n, there exists an *evidential embedding of depth n from En to p* iff there exists implicit or

explicit evidential relations R1, R2, …, Rn such that En bears Rn to <some (w/n) En-1 bears (does not bear) Rn-1 to < some (w/n) En-2 bears (does not bear) Rn-2 to <some (w/n) En-3 bears (does not bear) Rn-2 to …< some (w/n) E1 bears (does not bear) R1 to p>…>>>.

Given this definition, we can easily define nth-order evidence for any positive integer n:

Nth-order evidence (final characterization): For any positive integer, n, E is *nth-order evidence* iff there exists a proposition, p, and an evidential embedding of depth n from E to p and there is no integer m > n and no proposition q such that there is an evidential embedding of depth m from E to q.

Something is then first-order evidence when it is nth-order evidence for n = 1 and higher-order evidence when it is nth-order evidence for some integer n > 1. And some Em is lower-order evidence with respect to some piece of higher-order evidence En when Em is mth-order evidence and En is nth-order evidence for some positive integers n and m such that n > m.

Also making use of the concept of an evidential embedding depth, we can finally explain what it is for a proposition to be at the object level:

Object-Level Propositions: For any proposition, p, and evidence, E, p is an *object-level proposition relative to E* iff (i) for some positive integer, n, there is an evidential embedding, L, of depth n from E to p and (ii) there is no integer m > n and no proposition, q, for which L is an evidential embedding of depth m from E to q.

4.1.2 Higher-Order Support

Given clear characterizations of higher-order evidence and related notions, we now turn to the more substantive accounts of how such evidence works by itself and in conjunction with other evidence. My account of how higher-order support works is via evidential filtration: higher-order evidence initially offers direct support to a proposition that it is immediately about (i.e., one evidential embedding depth down), and then this direct support filters down to lower levels, ultimately to corresponding object-level propositions. The question is whether evidential support always filters all the way down or does so only in restricted cases. Feldman's original version of the Filtration Principle is unrestricted:

> *The Filtration Principle (Feldman's Version):* If E2 supports that there is evidence, E1, in support of p, then E2 is itself evidence for p.

But I argued that, even though this simplistic version does not succumb to objections others have made to it, it has significant exceptions. The version I argued to be correct can be stated as a conjunction of two principles:

> *FP15:* For any committal evidential relation R, if E2 supports that there exists an E1 that bears R to p, then E2 bears R to p iff E2 bears R to p via a bypass or bridge or all of the following conditions obtain: (i) E2 does not contain any blockers that block E2 from bearing R to p; (ii) in cases in which E1 is propositional from the perspective of E2, E2 supports E1 under the same designation as the proposition that E1 bears R to p; (iii) E1 has a perspectival propositional status with respect to E2; (iv) E2 contains adequate information concerning the tie between R and truth; and (v) E2 supports the

conjunction of (a) the proposition that there exists an E1 that bears R to p and (b) the propositions that (ii)–(iv) require E2 to support.

FP16: For any higher-order evidence E2, corresponding lower-order evidence E1, and corresponding object-level proposition p, there exists an evidential relation R such that E2 bears R to p only if this result is entailed by FP15 or E2 bears R to p via a bypass or bridge.

These two principles make use of some technical terms that need explanation. To begin with, the relation *is evidence concerning* is a *noncommittal* evidential relation: a relation that does not commit the first relatum of the relation to any more specific evidential relation (*is evidence for*, *is evidence against*, *is evidence in support of neutrality*) or the denial of such a relation (*is not evidence for*, *is not evidence against*, *is not evidence in support of neutrality*). When an evidential relation does commit its first relatum in that way, then it is a *committal* evidential relation.

The two principles also make use of the notions of a bypass and a bridge. In order to introduce the notion of a bypass, notice that one way that E2 can be evidence for p despite not meeting condition (ii) of FP15 is for E2 to contain some undefeated evidence that supports p independently of what E2 supports regarding E1's evidential relation to p (e.g., E2 might contain undefeated first-order evidence for p). To generalize, whenever E2 contains some undefeated evidence that bears some evidential relation R to p independently of the evidential relations that E2 bears to the proposition that E1 bears R to p, I say that E2 bears R to p by *bypassing* E1's relation to p (or, to simplify exposition, that E2 bears R to p *via a bypass*, leaving implicit what is bypassed).

Now to introduce the notion of a bridge, notice that when E2 does not support a propositional E1, it leaves a kind of gap between E1 and p. As just noted, one way for E2 to support p in such a case is for E2 to bypass this gap. But another possibility is for E2 to build a "bridge" across the gap. It can do so by supporting that there is a positive evidential relation, R, such that the proposition <E1 is evidence for p> itself bears R to p. For example, E2 can support p by supporting both (a) that the conjunction of mathematical axioms (E1), whether true or false, is evidence for p, and (b) that this fact is itself evidence for p. Although unusual, it's certainly possible (e.g., via testimony). To generalize, whenever E2 bears some evidential relation R to p in virtue of supporting that some special relation holds between p and the claim that there is an E1 that bears R to p, I say that E2 bears R to p *via a bridge* (where the bridge itself is the special relation that E2 supports).

With the ideas introduced so far, we can now see the difference between FP15 and FP16. If higher-order evidence supports the existence of a committal evidential relation, FP15 kicks in and implies that support can filter down to the object level under certain conditions that have yet to be reviewed. But if it's a noncommittal evidential relation, support won't usually filter down. It could only do so via a bypass or bridge. And this is just what FP16 says.

Now that we understand the need for FP16, we can set it aside and focus instead on the remaining conditions on FP15. First, FP15 makes use of the notion of a "blocker," which is similar to a defeater. The difference is that a defeater defeats already existing evidence, whereas a blocker blocks an evidential relation from obtaining in the first

place, though it does so by means of defeat. For example, suppose that E2 = Ea+Eb, where Ea supports that E1 supports p but Eb supports that p is false (without supporting anything about what Ea supports). Add that Ea and Eb are mutually independent and of equal strength. Then Eb defeats Ea, thereby blocking E2 from being evidence for p. This is so despite the fact that E2 remains evidence that E1 supports p. Hence, blockers provide counterexamples to evidential filtration. Condition (i) of FP15 accounts for this.

Going back to the earlier example where E2 supports that E1 is a proposition that supports p but doesn't support that E1 is true. Again, it seems that E2 won't usually support p in this case. So, when E2 supports that E1 is a proposition and doesn't support p via a bypass or bridge, it needs to support that E1 is true. Moreover, if E2 supports that some X is true, and supports that E1 supports p but doesn't support that X = E1, then even if X is in fact E1 so that E2 in some sense supports E1, E2 isn't sufficient information to reason from E2 and X to p. In order to get to p, E2 would need to support E1 "under the same designation" as it does in its support for the proposition that E1 supports p. This is what condition (ii) of FP15 says. Condition (iii) is related. It says that E1 must have a perspectival propositional status with respect to E2. This means that E1, no matter what propositional status it actually has (i.e., whether it is propositional or non-propositional), E2 must take a perspective on (i.e., support) it being propositional or not. For example, if E2 supports that E1 is either a proposition or a nonproposition that supports p but doesn't specify which, then it's hard to see how E2 could support p any more than if E2 instead supported that E1 is a proposition that supports p without

supporting E1's truth. (Of course, there is an exception—when E2 supports p via a bypass or bridge. But in that case FP15 says that (iii) need not be satisfied.)

Condition (iv) requires E2 to contain adequate conceptual information. I do not have an account of what it takes for it to be adequate. Instead, I introduced this constraint by example. For instance, if E2 supports that E1 is evidence for p, but E2 contains no information about what that means, then this won't help E2 support p. Think of young children who might be given E2 by testimony but who do not have much of a grasp of the concept of evidence.

Finally, condition (v) rules out what in Chapter 2 I called the "Conjunction Problem." The problem begins with the fact that the other conditions in FP15 sometimes require E2 to support multiple propositions in order to support p: it needs to support that E1 bears some R to p; it needs to attribute some propositional status to E1; it needs to support the truth of E1 if it supports that E1 is propositional; and it needs to support information about the tie between R and truth. But supporting these individually without supporting their conjunction wouldn't help support p (just as evidence that individually supports the premises of an argument but doesn't support their conjunction doesn't provide sufficient evidence for the argument's conclusion). So, condition (v) specifies that E2 needs to support the conjunction of all the propositions that the other conditions require E2 to support. It is also important to note that this requirement can be thought of in another way. Because evidential support for a conjunction will almost always be weaker than, the support for any individual conjunct, E2 will usually support p more weakly than it supports that E1 supports p. In this sense, evidential support usually

dissipates over evidential distance. So, condition (v) can be thought of as ruling out too much evidential dissipation by saying that E2 will only support p if it doesn't dissipate so much that it falls below some threshold (e.g., the threshold at which E2 makes p more likely than its negation).

4.1.3 Levels Interaction

We finally turn to levels interaction. Begin with the distinction between friendly and unfriendly higher-order evidence. It is friendly when it agrees with the lower-order evidence, roughly in the sense that the higher-order evidence says the lower-order evidence supports whatever it in fact supports. Higher-order evidence is unfriendly otherwise. In friendly cases, most are in agreement that the total evidence supports whatever the lower-order evidence supports (and whatever the higher-order evidence says it supports). This yields the following principle:

> *Seemingly Obvious Unrestricted Principle (SOUP):* For any evidence E1 and E2 and any proposition p, if E1 supports p and E2 supports that E1 supports p, then E1+E2 supports p.

However, in Chapter 3, I proposed three types of counterexample: SOUP holds only in the absence of supportive complexity, interference, and conceptual impoverishment. Supportive complexity is when E2 not only supports the existence of some evidential relation between E1 and p, but it also contains evidence that supports some competing evidential relation (e.g., E2 contains evidence that there is also some evidence E1* that supports ~p). Interference occurs when parts of E2 and parts of E1 combine to form new contrary evidence not originally contained in either body. Finally, conceptual

impoverishment occurs when E2 doesn't contain sufficient information about the meaning of the evidential relation it supports E1 as bearing to p.

Turn now to unfriendly cases, which is much more complex. In order to state my theory, I need a few technical notions. First, I defined what I called the "support space" with respect to a proposition p, which is the set of possible objects that any given body of evidence can support with respect to p: {p, ~p, neutrality with respect to p}. However, not all evidential relations I want to express can easily be expressed in terms of the support space. For example, consider the relation E does *not* support p, which is neutral between supporting ~p and neutrality. Also consider that E might support nothing at all about p, which I have also argued is crucially different from supporting neutrality about p. This possibility I represent with the null symbol: Ø(p). Although such possibilities cannot be expressed directly in terms of the support space, they can be expressed as negations of relations to objects in the support space. So, I use the symbol "#" to capture this idea:

E supports $p^{\#}$ = E does not support p (leaving open whether it supports ~p, neutrality with respect to p, or Ø(p));

E supports $(\sim p)^{\#}$ = E does not support ~p (leaving open whether E supports p, neutrality with respect to p, or Ø(p)); and

E supports (neutrality with respect to p)$^{\#}$ = E does not support neutrality with respect to p (leaving open whether it supports p, ~p, or Ø(p)).

I defined the *extended support space* with respect to proposition p as the set {Ø(p), p, ~p, neutrality with respect to p, $p^{\#}$, $(\sim p)^{\#}$, (neutrality with respect to p)$^{\#}$}. This now allows me

to easily express any evidential relations I might need. Finally, let X, Y, Z, and W be variables ranging over the extended support space. Whenever I affix a parenthetical letter to one of the variables, the result represents a member of the extended support space for the proposition that the letter represents. So, for example, X(p) represents an object in p's extended support space.

Given this setup, I argued that higher-order evidence usually dominates corresponding lower-order evidence in unfriendly cases (i.e., that what the overall body of evidence supports or fails to support is dictated entirely by whatever the higher-order evidence supports or fails to support). Since I showed that there was some significant variation in how to interpret this claim, I argued that on the most plausible interpretation, it amounts to the following set of principles:

(B) For any evidence E1 and E2, any proposition p, and any X and Z in the extended support space, if E1 supports X(p) and E2 supports that E1 supports Z(p), then E1+E2 supports Z(p).

(C) For any evidence E1 and E2, any proposition p, and any X in the extended support space, if E1 supports X(p) and E2 supports that E1 does not support X(p), then E1+E2 supports neutrality with respect to p.

(D) For any evidence E1 and E2, any proposition p, and any X and Y in the extended support space, if E1 supports X(p) and E2 supports that E1 does not support Y(p), where $X(p) \neq Y(p)$, then E1+E2 supports X(p).

(E) For any evidence E1 and E2, any proposition p, and any X in the extended support space, if E1 supports X(p) and E2 supports nothing about whether E1 supports X(p), then E1+E2 supports X(p).

(F) For any evidence E1 and E2, any proposition p, and any X in the extended support space, if E1 supports X(p) and E2 supports neutrality about whether E1 supports X(p), then E1+E2 supports neutrality about p.

My position on unfriendly levels interaction is then that higher-order evidence dominates in the way described by the above principles except in special circumstances. Of course, it need not dominate when there is supportive complexity, interference, or conceptual impoverishment. But I also argued that it need not dominate when the higher-order evidence does not "latch on" to the lower-order evidence. The basic idea here is that higher-order evidence E2 latches onto E1 whenever E2 is sufficient to enable any person who has E1 to recognize E1 as the very evidence E2 is about. There are various ways latching can happen (e.g., E2 can detail the specific contents of E1 or E2 can provide a sufficient general description). But one kind of latching that is especially important for our later disagreement discussion is "inferential latching," which happens when E2 first latches onto E1, then information about how some other evidence E1* compares to E1 allows the latching to extend from E1 to E1*, and therefore to E1+E1* as a whole.[73]

[73] Although I did not specifically discuss inferential latching when I introduced latching in Chapter 3, the kind of information given in inferential latching about E1 and its connection to E1* results in a general description of certain comparative features of E1*, which makes inferential latching a special case of the kind of latching by general description that I discussed in Chapter 3.

When E2 does not latch onto E1 in any way, it cannot be an undercutting defeater for E1, as argued in Chapter 3. However, E2 might still directly bear a support relation to p via evidential filtration (if it satisfies the conditions of FP15). If not, then the total evidence supports whatever E1 supports. But if so, then E2 can act as a rebutting defeater for E1 and needs to be weighed against E1's evidential relation to p in the normal way in which we weigh competing evidence. This completes my theory of levels interaction.

4.2 Implications

Having reviewed the account, I now turn to the general implications and specific applications thereof. I begin with the general implications.

First, there are the more obvious implications: that higher-order evidence sometimes has object-level significance and sometimes doesn't, that higher-order evidence sometimes defeats lower-order evidence and sometimes doesn't; that when higher-order evidence defeats lower-order evidence, it is sometimes as a rebutting defeater and sometimes as an undercutting defeater, depending on the circumstances; and more generally, that the way in which higher-order evidence operates is much more complex than previously conceived in the prior literature.

Second, in various places scattered throughout the defense of my account, we also encountered in passing a number of indirect implications for the nature of evidence generally. In fact, whether or not one agrees with the details of my account, it turns out that anyone who endorses a unique role for higher-order evidence must agree on some very interesting theses about evidence. It is worth singling these out and collecting them together:

1. *Evidential anti-relativism:* What any piece or body of evidence supports (or does not support) is determined by what is contained within the evidence itself. Evidential relations are not relative to (i.e., do not depend on) any external factors, such as time, possible world, context, the particular agent in possession of it, or background evidence. This can be thought of as a sort of absorption principle: if something makes a difference to what the evidence supports, then the evidence "absorbs" it (i.e., it is thereby part of the evidence). As we saw in Chapters 2 and 3, this anti-relativism is needed for a response to numerous objections to both evidential filtration and any view of levels interaction that allows higher-order defeat.
2. *Anti-bracketing:* In Chapter 3, we saw that Christensen proposes to account for higher-order dominance via what he calls "bracketing." On this account, when higher-order evidence is unfriendly, it dominates its corresponding lower-order evidence by bracketing it off, i.e., the lower-order evidence can no longer justifiably be relied upon. However, it is unclear how bracketing is supposed to work. I argued that, on the best interpretation, it works by way of defeat, in which case it's just an alternative language for higher-order defeat—not an explanation of it. But I also suggested ways that bracketing might be understood apart from defeat, and argued that on such an understanding there is never any levels interaction at all for any agent, since bracketing entails that no agent ever simultaneously has unfriendly higher-order evidence in conjunction with the corresponding lower-order evidence as a body of

evidence that he or she can justifiably rely upon. Given these results, my own account, along with any other that allows for genuine levels interaction, must endorse an anti-bracketing approach (at least if it's understood as a substantive proposal, not merely an alternative way of speaking about higher-order defeat).

3. *The linking view of evidence:* Evidence has a bipartite structure: it is composed of a "base" and a "link" that connects the base to the relevant proposition. We saw in Chapter 3 that the linking view is the most plausible way to explain how higher-order support and defeat work. Moreover, combining this with anti-relativism, we get a specific version of the linking view. One version has it that the base itself is evidence when there is an appropriate link (and perhaps the link is also evidence in the presence of an appropriate base, though this is less plausible). Another version has it that only the base-link composite is evidence. This second version is required by anti-relativism. So, proponents of higher-order support and defeat (and therefore anti-relativism) should endorse this second version of the linking view.

4. *The Evidential*[74] *Uniqueness Thesis*: For any proposition p and evidence E concerning p, if p and ~p are "in competition"[75] from the perspective of E, then exactly *one* of the following obtains, and which one obtains is independent of which agent possesses E: (a) E supports p, (b) E support ~p, or (c) E supports neutrality with respect to p. As we saw in Chapter 3, without this thesis (or a close variant of it) unfriendly higher-order evidence either dominates only in dependence on some non-evidential feature of the agent in possession of it (such as the agent's prior attitude or personal preference) or lower-order evidence simultaneously dominates. Proponents of any sort of robust higher-order defeat (i.e., uniform or near-uniform higher-order defeat) need to deny agent-relative dominance, and deny that the lower-order evidence can simultaneously dominate. If so, they must accept the thesis (or some close variant of it).

[74] In Chapter 3, I distinguished this version of the Uniqueness Thesis from earlier versions, which typically case it in terms of rationality or justification rather than evidential support.

[75] As explained in Chapter 3, I add this parenthetical qualification to handle cases in which one has evidence for true contradictions. Even though I am convinced there cannot be any true contradictions, I do think one can have evidence for them from the Liar's Paradox (and related paradoxes about truth), quantum mechanics, testimony, and cases in which p is grasped in terms of one set of concepts while ~p is grasped in terms of another set. In these examples, a single body of evidence can support both p and ~p because p and ~p are not in competition with one another (i.e., one's being correct doesn't put pressure on the other's being incorrect), at least as far as the evidence is concerned.

5. *Evidential*[76] *mentalism:* Only mental items are evidence, at least the kind of evidence that can be possessed in an epistemically relevant sense of possession. We saw in Chapter 3 that the linking view requires this, since other things that some people classify as evidence (such as fingerprints and DNA) clearly do not require links. So, those who endorse robust higher-order support and defeat should either reject the existence of non-mental evidence or admit that their views of higher-order evidence have exceptions and are therefore applicable only to higher-order evidence of the mental sort.
6. *On balance support:* Sometimes when we talk about evidential support, we mean on balance support, where the evidence supports the relevant proposition over its negation. In contrast, some talk about evidential support in a pro tanto fashion, where evidence can support a proposition by lending some slight weight to it that is insufficient for on balance support. We saw in Chapter 3 that if we understand the notion of support in the higher-order dominance thesis as pro tanto support, there are plausible objections to uniform higher-order dominance. Those who endorse such dominance therefore need to hold either that evidential support is always on balance support or admit that higher-order dominance occurs only in restricted

[76] In Chapter 3, I distinguished evidential mentalism from justificatory mentalism. The latter is what most epistemologists just call "mentalism": roughly, the view that epistemic justification supervenes on the mental. Evidential mentalism is not a view about justification but is instead a view in evidential ontology (which might have a bearing on justificatory mentalism, depending on one's views of justification).

circumstances, namely when on balance support is the kind of support at issue.

One final implication falls directly out of the above points: that there need not have been any genuine dispute between some proponents and some opponents of higher-order support and defeat. It is possible that some of those on opposite sides have been operating on different but compatible perspectives on evidence. For example, the pro tanto and on balance views of support are different but compatible (perhaps two different but equally legitimate ways of talking about support), and if one person employs one framework and another employs the other framework when evaluating higher-order support and defeat, they will come to different answers that deceptively seem incompatible. Similarly, those operating on an evidential mentalist picture would come to different conclusions from those operating on an evidential non-mentalist picture, where in fact the two are compatible. The upshot is that some disputes about higher-order evidence may be merely verbal; others will be genuine. So, I encourage those who disagree about the significance of higher-order evidence to revisit their underlying assumptions about evidence generally and to be explicit about the frameworks within which they are working. Only then can we get to the bottom of the dispute, and when we do get to the bottom of it, it is interesting that the resolution might depend entirely on the general nature of evidence.

In any case, for the purposes of moving forward I will now assume that my account of higher-order evidence in all its detail is correct, and likewise by extension the above underlying claims about evidence generally. I now turn to applications.

4.3 Applications

Although I'm sure there are many applications of my account of higher-order evidence, in this section I will focus on four: two applications of the Filtration Principle (testimonial and memorial justification) and two applications of the theory of levels interaction (disagreement and the closure of inquiry).

4.3.1 Testimonial Justification

The first application up for discussion is testimonial justification. As is standard in the philosophical context, let's understand testimony not in the narrow legal sense but in the broader sense of people telling things to other people (whether by mouth, written text, or other symbolic means).[77] In any case of testimony, there is a testifier T, a

[77] This definition could use some refinement. In some ways, it might be too restrictive. For example, perhaps it need not be restricted to people. And perhaps it doesn't have to be restricted to *other* people, since perhaps one can testify to oneself (such as when one takes notes or writes a reminder for one's future self). In other ways, the definition might be too broad, since, for example, it would count jokes as pieces of testimony. In addition to being both too restrictive and too broad, the definition is also unclear. It doesn't specify whether to count cases of miscommunication (where the proposition on the receiving end isn't the same proposition on the telling end). And it doesn't specify whether both agents need to be actual or whether there might instead be just one agent who falsely (though perhaps justifiably) believes there to be another agent with whom he or she is communicating. But I do not intend to worry here about such problems, since for the most part nothing much turns on getting the definition just right. We can be flexible. Just count whatever you wish to count without straying *too* far outside of the bounds of the rough definition offered above. However, for those interested in a more detailed discussion of the definitional problem, see Lackey (2006).

recipient R of the testimony, and a proposition p attested to by T to R.[78,79] R is often justified in believing p on the basis of T's testimony. The goal here is to apply the Filtration Principle to produce an evidentialist account of such justification.

By way of motivating the appeal to the Filtration Principle, note that there are two other approaches an evidentialist could take toward testimonial justification.

One evidentialist possibility is the view that testimonial justification depends entirely on R already having evidence for p that is independent of T's testimony. However, such justification would actually be non-testimonial. In other words, this approach would circumvent rather than explain testimonial justification. This by itself is not a problem for the view. But combine it with the fact that many things we know are empirical truths for which we have no first-hand experience. For example, I've never been to Asia but I know that it exists. The only way for me to know this is by testimony. So, we cannot plausibly circumvent testimonial justification by appeal to testimonially independent evidence. The account is incorrect.

A second, somewhat more plausible evidentialist view is that testimony doesn't need to be supported by independent evidence because testimony *is* evidence. More

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[78] Often in the literature on testimony, the testifier is called the "speaker." I avoid this since testimony need not be spoken. Similarly, the recipient is often called the "hearer," but I avoid this since testimony need not be heard (for example, it could be read from text or seen from hand signals).

[79] As discussed in footnote 77 above, there might not actually be a testifier or recipient or a single proposition conveyed from the former to the latter, depending on how we define testimony. So, if you wish, you could allow any of T, R, or p to be mere intentional objects.

carefully, T's testimony is evidence for p for R.[80] One can defend this approach by an analogy to perception (and other standard sources of justification), accompanied by the plausible view that something is evidence if it is a "presentation-as-true" for the relevant proposition (i.e., if it presents or indicates the proposition as being true): just as a perceptual experience is evidence because it presents the world to us as being a certain way, T's testimony for p is evidence for p because it presents p to R as being true.[81] Although one might contest the presentation-as-truth view of evidence, I'll instead focus on a different criticism. The central problem, as I see it, is that a thorough breakdown of what actually happens in cases of testimony reveals that instances of testimony are not themselves presentations-of-truth.

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[80] A variant of this view would be that the evidence of testimony, rather than testimony itself, is the evidence for the proposition attested to. That is, R's evidence of T's testimony about p is evidence for p for R. Whether this variant or the view as originally stated is more plausible probably depends largely on how we define testimony. On a testifier-oriented definition of testimony, the testimony is identified with the act actually performed by the testifier (or perhaps the information conveyed or intended to be conveyed by the act). Given this type of definition, it is more plausible that R's evidence of T's testimony is evidence for p. However, on a recipient-oriented definition of testimony, according to which the testimony is identified as that which is received by the recipient, the more plausible view is that T's testimony itself is R's evidence for p. I won't try to decide here between the two types of definitions and will therefore remain neutral about which version of the current view of testimonial justification is more plausible. In order to simplify discussion, I will continue to talk in terms of testimony as evidence (and therefore with a tacit bias toward a recipient-oriented definition). But what I say in those terms could easily be translated into testifier-oriented terms.

[81] See Graham (2006) for a defense of this view.

Upon hearing T's testimony, what R immediately gains is experiential evidence of the physical mechanism by which the testimony is conveyed (e.g., the auditory sensations caused by an utterance, the visual information from reading a text or lips or sign language, or the tactile sensations from feeling the bumps on the page when reading Braille). This provides nothing but bare linguistic information, which, in order to be meaningful must be accompanied by additional information about how to interpret it. Even with this additional information it isn't yet enough. The experiences of the physical mechanism of testimony in combination with the information about how to interpret it can at best justify R in believing that p is the meaning of T's language. And the information that p is the meaning of T's language doesn't have anything to do with p being true, and is therefore not yet a presentation of p's truth. R needs more information. T's facial expressions, tone, and other contextual clues won't be enough. They at best provide R with evidence that T's testimony is sincere, meaning that T actually believes p. But the fact that someone believes p is not itself evidence for p, since being presented with someone as believing p is not a presentation of p's truth. In fact, as argued in previous chapters, it follows from evidential anti-relativism combined with a linking view of evidence that evidence of belief is not evidence for its truth. So, in order to link up the fact that T believes p with p's truth, what R needs is evidence that T is reasonable or reliable or the like (either generally or specifically on the topic or in the circumstances in question). However, this last addition of evidence is not plausibly part of the testimony itself. One might still say that the testimony is evidence *when* accompanied by this

additional information. But evidential anti-relativism rules this out. Hence, T's testimony is not evidence for p.[82]

This leaves one final candidate for an evidentialist account of testimonial justification: if testimonial justification can't depend entirely on evidence independent of testimony, and testimony by itself is not itself evidence for the proposition attested to, then the only remaining option is that testimonial justification depends on a *combination* of testimony and independent information, such as evidence that the testimony is a reliable indication or that the testifier has evidence for the belief attested to. This independent information is higher-order evidence. So, in combination with the evidence of testimony, the total body of evidence in play—which I'll now call the "total testimonial evidence"—is itself higher order. A plausible evidentialist account of testimonial justification will therefore have to hold that whenever testimony indeed justifies, it is because the total testimonial evidence supports the proposition attested to by way of the Filtration Principle.

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[82] The view argued for here is a version of what is commonly referred to as "reductionist." "Anti-reductionists" commonly criticize reductionists for relying on epistemic internalism. For discussion about the link between reductionism and internalism, see Lackey (2006: 184 n. 13) and Fumerton (2006). I admit that my argument does rely on internalist intuitions but see this as unproblematic, since I am convinced that internalism is true. Unfortunately, I cannot offer a general defense of internalism here. For this I defer to Conee and Feldman (2001), although note that some of the things I said in Chapters 2 and 3 in defense of the linking view of evidence, and in defense of the idea that conceptual inadequacy interferes with justification, also support the sort of internalism I need. Related to the worry about internalism is the allegation that it overintellectualizes testimony and/or threatens a strong form of skepticism. I offer a few remarks in response toward the end of this section.

In order to see whether this account will work, we'll need to see whether the total testimonial justification satisfies the conditions required for the Filtration Principle to kick in. In normal cases of testimony, the conditions of the Filtration Principle are indeed satisfied. First, in testimony, the total testimonial evidence is indeed evidence of a committal evidential relation, since it is evidence that the testifier has evidence *for* (is reasonable, reliable, etc., with respect to) the proposition attested to. So, FP15 is the relevant version of the principle. Second, the total testimonial evidence would not offer support via a bypass or bridge. Support via a bypass would require testimonially independent evidence to support the proposition attested to. Support via a bridge would require a very unusual (but possible) sort of evidence: evidence that the proposition <the speaker is testifying to p>, which might or might not be true, is itself evidence for p (or something of the sort). Although the testimonial recipient might also have either of these two types of evidence, it wouldn't properly be characterized as part of the total testimonial evidence. However, if the total testimonial evidence does offer support via a bypass or bridge, then FP15 automatically implies that total evidence supports the object-level proposition (the proposition attested to) regardless of whether the other conditions in FP15 are satisfied. So, at any rate, we need only consider cases in which the total testimonial evidence offers no support via a bypass or bridge, in which case several other conditions in FP15 need to be met. Third, the total testimonial evidence will not contain blockers. Although the testimonial recipient might indeed have defeaters for the testimonial evidence, he or she would not be included as part of the body of evidence I've characterized as testimonial. So, condition (i) of FP15 is met. Fourth, given my definition

above (and the argument of the previous paragraph), the total testimonial evidence includes evidence that that the testifier is testifying and evidence that the testifier is reasonable or reliable or has good evidence or the like. So, the higher-order testimonial evidence is not about some propositional lower-order evidence that the testimonial evidence fails to indicate as true. This precludes it from succumbing to the Propositionality Problem that motivated conditions (ii) and (iii) in FP15. Fifth, since most people have a basic grasp of the concept of evidence, reliability, or whatever evidential relation the higher-order evidence is about, in normal cases of testimony there is no conceptual deficiency, which would mean that condition (iv) of FP15 is satisfied. Finally, testimonial evidence is often of reasonably moderate strength (so, for example, it doesn't just barely indicate that the testimony exists, or just barely indicate that the testifier is sincere, or just barely indicate that the testifier is barely reliable or has evidence that just barely supports p). Often, then, the Conjunction Problem does not arise and therefore evidential support doesn't dissipate to the point of disappearing as it trickles down to the object level. So, under common testimonial circumstances, the total testimonial evidence satisfies condition (v) as well. FP15 then implies that its support filters down to the object level, thereby supporting the corresponding object-level proposition (i.e., the proposition attested to).

Beyond offering the evidentialist the only plausible account of testimonial justification, the account just outlined has further advantages. The fact that it acknowledges the possibility of evidential dissipation explains why we naturally take first-hand evidence to be better than evidence gained second-hand (or third-hand, etc.).

This in turn explains why we often stick to our original beliefs derived from first-hand experience (though perhaps with a weaker degree of confidence) when confronted with competing second-hand (third-hand, etc.) information received from testimony (though this is a bit complicated and will be further explored later on in our application of levels interaction to disagreement). Finally, it explains why we are inclined to dismiss testimony when we become aware that is has been repeatedly passed from person to person before reaching us. For example, consider the children's game "Telephone," where testimony is whispered from one ear to the next in a long chain of participants, and the first person's testimony is checked against the last (and are rarely a perfect match). In such cases, it is plausible that (a) each participant has good reason to believe that the person next to her has accurately transmitted the testimony from the previous person, but (b) the last person in the sequence isn't testimonially justified in believing what she was told. This is because her higher-order evidence includes an awareness of the testimony being filtered through many evidential layers, which implies a good chance that evidential dissipation has occurred to the point where there is no longer on balance support. Or, to try another example, suppose you meet an actress whose Bacon number is 1.[83] She shares with you information she says she got from Kevin Bacon himself. Also suppose you have fairly good reason to trust her. Then, in the absence of special defeaters, you probably have fairly good reason to believe what you were told Bacon said. But now consider the

[83] An actor's or actress's Bacon number is defined as the lowest number of links in the chain from him or her to Kevin Bacon, where each person in the chain acted in a film with the consecutive person(s) in the chain. So, Kevin Bacon's Bacon number is 0, those who have acted in the same film as Bacon have a Bacon number of 1, etc.

alternative scenario in which an actor whose Bacon number is 11 (an extraordinarily high Bacon number[84]), and shared with you information that he says was passed to him through a chain of 10 other actors and actresses, each of whom worked with the previous, all the way back to Bacon. Even assuming you have decent reason to trust each person in the chain, it is plausible that you are not justified in believing the proposition ultimately transmitted to you due to evidential dissipation. It is important to note, though, that not all lengthy testimonial chains involve radical evidential dissipation. First, there are those cases in which the testimonial chain is actually long but the recipient at the end of the chain isn't aware of this. In such cases, the higher-order evidence is actually second-order evidence and evidential dissipation should therefore be slight. Second, there are those cases in which one testimonial chain is actually long but there is another available testimonial chain that is short, making the dissipation of the longer chain irrelevant. For example, consider information in the Gospels. We are aware that this has been passed down from generation to generation for nearly two thousand years and therefore radical evidential dissipation happens with respect to this particular bit of higher-order evidence. But we also have the Gospels themselves, which provide a much shorter testimonial chain to the original testifier. Though a matter of debate whether it is short enough in this particular instance, surely in many less controversial cases of ancient sources, we have short enough testimonial chains to avoid radical evidential dissipation, thereby preserving such historical knowledge.

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[84] Purportedly, high Bacon numbers are extremely rare.

Despite the advantages, there are also some potential objections to the higher-order account of testimonial justification. According to one prominent objection, the higher-order account overintellectualizes testimonial justification.[85] The crudest version of this objection points to the fact that most people do have testimonially justified beliefs yet have never even heard of higher-order evidence, much less have the ability to think through any explicit sophisticated reasoning about higher-order evidence or the Filtration Principle. This version of the objection is easy to dispel—just note that the version of the Filtration Principle I have argued for applies even in cases in which the agent in question possess neither knowledge of the principle itself nor the concept of higher-order evidence. The principle simply says that one must possess higher-order evidence that in fact satisfies certain conditions; it does not say that one must also have the ability to identify one's evidence as falling under that concept or as meeting those conditions.

A slightly stronger version of the objection points out that the principle does require the person to have evidential concepts, and to have adequate conceptual information about these concepts. One thing to note in response is that, unlike Feldman's version of the principle, my version doesn't require the person in question to have the concept of evidence itself, or any other evidential concept in particular. It is generalized to implicit evidential relations precisely in order to avoid that problem. But it does indeed require possession of some evidential concept or other, along with basic information

[85] For discussion of the overintellectualization charge in various forms, see Reid (1997 and 2002), Lackey (2005), Audi (2006), Fricker (2006), Fumerton (2006), Van Cleve (2006), and Goldberg (2008).

about whatever evidential concept is operative. However, this is information that most of us do have. Again, most people do have a basic grasp of some evidential concept, such as reliability or probability or trustworthiness or reasonableness or something of the sort, if not the concept of evidence itself. It's surely a rare thing for us to explicitly, consciously appeal to this information when forming testimonially based beliefs. And it's probably true that most people couldn't articulate the evidential story even if they tried. But we need not be able to articulate evidence in order for it to offer us support. We need not be able to identify what our evidence is for us to be able to rely on it. And we need not even be consciously attending to our evidence, since it can perfectly well operate implicitly in the background of our thoughts at a low level of conscious awareness.[86] On some views, evidence can even be stored so that it can continue to support even when we are not conscious of it at all.

The above remarks go a long way toward mitigating the overintellectualization worry, but they do not touch on the strongest variant of the worry—the so-called "infant-child" objection. According to this objection, there are some people—primarily young children—who form testimonially justified beliefs well before they have a chance to gain evidential concepts, much less adequate information about what such concepts entail.

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[86] However, it does seem that one needs to at least consciously attend to something in order for it to be admitted as evidence in the first place, if Feldman's account of introspective justification is right (2004). But proponents of the higher-order account of testimonial justification can still plausibly maintain that once something is admitted as evidence, sustained attention need not be required to retain the evidence; once admitted, it can instead be relegated to the background or perhaps stored in unaccessed but accessible memory. More on this in the next section when we get to memorial justification.

Even if we suppose that children have a sufficient grasp of evidential concepts, they lack information about how those concepts relate to the testimony they receive from adults. In other words, children have no information that would confirm for them that the adults have evidence for their statements. They have no reason to suppose that the adults are reasonable or reliable or the like. They therefore cannot possibly have the higher-order evidence that my account requires of them.

This objection does not convince. On my view, children can and do have evidence of reliability or other evidential concepts before learning from testimony. In fact, I cannot see how it could be otherwise. In order to form beliefs on the basis of adults' testimony, children first have to learn what's being expressed by the language involved. It is quite clear that they must learn this through noticing reliable ways in which language corresponds to reality. Now and then further experience reveals exceptions to the pattern, which gradually provides a refined understanding of when language is reliable and when it is not. In this way, children automatically gain information about reliability and other evidential concepts from experience as a necessary part of language acquisition. Higher-order evidence has to be present before testimony is even possible. My account does not overintellectualize.

4.3.2 Memorial Justification

The second application of the Filtration Principle that I wish to focus on is memorial justification. A special problem for evidentialists arises concerning memorial justification because it seems that memory can retain its ability to justify its content even

when the original evidence has been forgotten. I propose that the Filtration Principle can solve this "problem of forgotten evidence."[87]

In order to understand the solution, we first need to clarify the problem. In order to clarify, I'll need two distinctions. First, we can distinguish types of memories based on how they are situated in one's mind. One type of memory is mental storage, which occurs when information that was once gained is now stored for later recall but which is not currently part of one's conscious awareness. Another type of memory is recollection, which occurs when information that was once stored has now returned to conscious awareness. Second, we can distinguish types of memories (whether mental storage or recollection) based on whether their contents are propositional or non-propositional. Propositional memories are memories of propositions. Non-propositional memories are memories of non-propositional items, such as past feelings, perceptions, or events.[88]

Notice that the problem of forgotten evidence does not arise for non-propositional memories, since their contents aren't even the types of things that need to (or even can be) justified. The problem might or might not arise for mentally stored propositions. Evidentialists can view mental storage in one of two ways. One possible view is that mental storage plays a direct justificatory role: it justifies even while stored. On this view, the problem of forgotten evidence would still arise for mentally stored propositions, since

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[87] For discussion, see Harman (1986), Senor (1993), Audi (1995), Sosa (1999), Goldman (1999), and Conee and Feldman (2001 and 2011).

[88] In the psychology literature, propositional and non-propositional memories are sometimes called "semantic memories" and "episodic memories" respectively. For various reasons that we need not go into here, I prefer to avoid these terms.

the original evidence might have been forgotten not just in the weak sense of having transitioned from the conscious mind to the unconscious mind but in the stronger sense of having been lost entirely (not even existing in mental storage). The alternative view of mental storage is that it plays a mere causal role in justification: mental storage is first activated by prompting, which yields recollection, which in turn directly justifies. On this alternative view, there is no memorial justification without recollection. Only that which is in one's current conscious awareness justifies. So, when one is asleep or simply not thinking about a given topic, one has no justification. At best, one is all set to be justified in the sense that one has the disposition to be justified and will be justified when the right circumstances activate the disposition.

It is because I am inclined toward the causal account of the justificatory power of mental storage that I think the problem of forgotten evidence reduces to a problem for propositional recollection.[89] So, let's focus our attention on this version of the problem, for which there are three potential evidentialist solutions.

The first potential evidentialist solution is the direct approach, according to which a recollection that p is itself evidence for p. Since we can retain the recollection even if we forget the original evidence, and since this recollection would itself be evidence for

[89] For a good defense of the causal account, see Feldman (1988). In addition to the points he makes there, note that there is a special reason for evidentialists to adopt the causal account. As we shall see, the problem of forgotten evidence seems intractable for evidentialists who adopt the non-causal account because (i) the phenomenological approach I take to the problem for propositional recollection is the only plausible evidentialist approach to propositional memorial justification yet (ii) it is also an approach that is inapplicable to mental storage.

the proposition recalled, we retain evidence for the proposition. The second potential evidentialist solution is the reductionist account, which relegates the justificatory power of recollection entirely to evidence obtained independently of the recollection, such as evidence about the general reliability of recollection or independent evidence about the proposition recalled. The final potential evidentialist solution is the phenomenological approach, according to which propositions recalled are justified by the phenomenology associated with the recollection.

The plausibility of the direct solution depends partly on what we identify as part of the recollection itself. It is highly implausible that we identify as part of the recollection evidence obtained independently of it. So, the direct solution isn't reducible to the reductionist solution. However, if the phenomenology that occurs when we recall a proposition is part of the recollection itself, and if the direct solution maintains that this phenomenology bears all the justificatory weight, then the direct solution is reducible to the phenomenological account. The direct account can only work in its own right if we abstract away the phenomenology from the recollection. But a recollection that p consists of a belief (or thought) that p and the associated phenomenology, perhaps also the causal process leading up to the belief or thought. So, if we abstract away the phenomenology, nothing is left to the recollection but the belief or thought that p and perhaps the causal process leading up to it, neither of which is evidence for p.

The reductionistic approach is also implausible. It is surely true that we sometimes have independent evidence for the content of a propositional recollection. And it is also surely true that we often have independent evidence for the reliability of

recollection. But this cannot be the whole picture, as the reductionist would have it. One potential worry here is that we would have to remember this independent evidence in order for it to do any justificatory work, and if such memory is propositional, we'd need it to be independently justified, which means the account threatens to lead to a vicious justificatory circle or regress. But this objection is not decisive, since perhaps we can ground memory of independent evidence in non-propositional memory, to which the problem of forgotten evidence does not apply. The more important reason that reductionism is implausible is that children who have their first propositional recollections about something for which they have no independent evidence can surely be justified in virtue of such recollections in the absence of their original evidence even without having had time to gain any information about the reliability of recollection. Unlike with testimony, where learning the language automatically comes with reliability information, it is not clear that the same is true for developing first memories. Perhaps to avoid the issue, just consider an amnesiac who doesn't remember what memory is or any past instances of it but suddenly acquires her first propositional memory without also remembering the evidence for it. It seems she would be justified in believing it despite having no information about its reliability or anything else of the sort.

Only the phenomenological approach can work, though it has not been adequately developed or defended. It needs to be supplemented with a specification of what phenomenological properties justify recalled propositions. Conee and Feldman (2001) do suggest examples, namely "vivacity" and the "associated feeling of confidence." But these two qualities are present even for experiences without justificatory power, such as

imaginings and beliefs based on wishful thinking. Some people can imagine things quite vividly, and there's no limit to how confident one can feel about a belief simply due to a strong desire for it to be true. So, vivacity and feelings of confidence are insufficient to justify. Of course, these qualities do play a role in determining *how strong* the recollective justification is: if a recollection does justify, then surely the degree to which it does so can be affected by its vivacity and associated feelings of confidence. But the crucial point is that these phenomenological properties do not explain *why* propositional recollections justify in the first place. We need some other phenomenological quality for that purpose, namely the past-oriented quality of recollection (as identified by Plantinga (1993)). It is clear that non-propositional recollections present their contents to us with a seeming quality of having been acquired from past experiences. Although it is less blatant, I believe that propositional recollections likewise present their contents to us as having been learned in the past (even if we cannot remember the details, such as when, where, or how). This must be so, as revealed by the fact that we have the ability to identify them as memories as opposed to spontaneous groundless beliefs that appear to us as utterly mysterious in origin and which are therefore unjustified (assuming epistemic internalism).[90] So, all recollections (at least those which plausibly justify, whether

[90] Of course, some propositional recollections are utterly mysterious to us. For example, I was recently playing trivia with my wife, and was presented with a multiple-choice question on which I felt I had to guess. But my choice wasn't entirely random. I felt somewhat pulled toward it, and it turned out to be correct. Finding out that it was correct gave me some evidence that it was probably a genuine recollection, that I had indeed learned it in the past but entirely forgot about it until then. But before I received confirmation that my guess was correct, it seems to me that I was not justified in believing my answer. And this is precisely because the propositional recollection

propositional or non-propositional) come with phenomenological qualities that indicate to us that we once gained them from past experience. Past experience is evidence we once had. So, these phenomenological properties are evidence that we once had evidence. In other words, the phenomenology that comes with propositional recollection is higher-order evidence whose object-level proposition is the propositional content of the recollection. Under normal conditions, this higher-order evidence satisfies the conditions of the Filtration Principle, and therefore supports the recalled proposition itself.[91]

But notice that this account cannot plausibly be applied to solve the problem of forgotten evidence when it comes to propositional storage. The phenomenological qualities associated with memory can only arise during recall (not during storage), and therefore stored propositions that have not yet been recalled for the first time could not be justified by the phenomenological approach. Stored propositions that have been recalled can have associated phenomenology, which can also be stored in memory and can perhaps do justificatory work while stored. But phenomenology can be forgotten too, just as the original evidence can, generating the problem all over again. One might try a version of the direct approach that mental storage of propositions justify those propositions, or a version of the reductionist approach that independent evidence justifies

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occurred in the absence of the phenomenological quality of seeming to have learned the proposition in the past.

[91] The details concerning the conditions under which the Filtration Principle applies have been discussed in the context of the higher-order account of testimonial justification in the previous section. Since what I say there applies mutatis mutandis to the current context, I will skip over such details here.

mentally stored propositions, but both of these fall to the same objections I raised for their original versions. So, there seems to be no plausible evidentialist account that allows stored propositions to have justified contents.

Suppose evidentialists admit that stored propositions do not justify. Could they then plausibly maintain that stored non-propositions do? It seems to me that it would yield not only an unsatisfying disunity in the account of memorial justification but also a strange disparity in our treatment of actual cases. For example, consider two people who both learned in the past that George Washington was the first POTUS. The only difference between them is that one has stored non-propositional evidence for this proposition (namely, stored perceptual experiences from the event of learning the fact), whereas the other merely has the proposition stored in memory without any stored non-propositional evidence. Neither is currently recalling any of this but would immediately do so when prompted. Further suppose that both would be justified were they to actually form the recollection (the first in virtue of the stored non-propositional evidence, the second in virtue of the phenomenology associated with the recollection). But the evidentialist who allows a non-causal justificatory contribution of non-propositional memory would have to say that while not actually recalling the information, the first person is justified while the second person is not. This seems very strange. So, if I am right that my account of propositional recollective justification is the only plausible evidentialist account, evidentialists should probably also adopt the causal picture of the justificatory power of mental storage.

So, we can provide a plausible evidentialist account of propositional recollective justification that solves the problem of forgotten evidence only by appeal to higher-order evidence and the Filtration Principle. As argued above, the proposal also explains how non-propositional recollection justifies, yielding a unified higher-order evidentialist account of recollective justification. If I am right that this in turn leads evidentialists to a causal account of the justificatory power of mental storage, then the final result is a full evidentialist account of memorial justification in general. The account also has further advantages that parallel the advantages of my account of testimonial justification. For example, it allows us to explain why memorial justification is weaker than perceptual justification: perceptual justification is first order, memorial justification is higher order, and higher-order evidence is generally weaker than corresponding first-order evidence because of dissipation across evidential distance.

Of course, there are objections to be addressed. The strongest objection is probably the claim that the account overintellectualizes memorial justification. When we recall a memory and form beliefs on the basis of it, we do not consciously think through any explicit sophisticated reasoning about higher-order evidence or the Filtration Principle. In fact, so the objection goes, some people who receive memorial justification lack the higher-order evidence required by my account. One might even claim that some people, such as small children, have memorial justification without any evidential concepts at all. However, what I said in response to these sorts of objections in defense of my higher-order account of testimonial justification in the previous subsection applies here equally well. One does not need to know what higher-order evidence is or how it

works in order for the Filtration Principle to apply. If any reasoning is necessary, it might be tacit. My account does require those who receive memorial justification to have evidence about some evidence, but this does not require them to have the concept of evidence explicitly. Implicit evidential concepts, such as reliability and trustworthiness, work just fine. Moreover, most people, even starting at an early age, do usually have some evidential concepts, even if they lack the linguistic sophistication to communicate them. Actually, my account of memorial justification is less subject to the overintellectualization charge than my account of testimonial justification, since the latter requires reliability information about the speaker, whereas the former does not require reliability information about memory. Why the difference?[92] The reason why testimony needs to be supplemented with some information that connects it up with truth is that someone saying something does not itself include a connection to truth, and my linking view of evidence requires of any evidence that it contain such a connection to serve as a link to the proposition it is evidence for. This was a crucial step in my argument against anti-reductionist views of testimony from the previous subsection. The reason why memory does not likewise need to be supplemented with extra information that connects memory up with truth is that memory comes with the phenomenological quality of having learned the proposition in the past, which is evidence of evidence. So, as long as one already has an adequate grasp of an evidential concept, the Filtration Principle kicks

[92] For interesting comparison and contrast between memory and testimony beyond the difference I am about to present, see Audi (2006), Schmitt (2006), and Barnett (2015).

in. No separate reliability information about memory is needed. And this is intuitively backed up by my earlier amnesiac example.

4.3.3 Closure of Inquiry and Evidence-Gathering

Now that we've seen two substantive applications of the Filtration Principle, I'd like to provide two applications of my theory of levels interaction (which, in special cases, will also involve further applications of the Filtration Principle, given that the principle comes into play under certain conditions as part of the theory of levels interaction). The first application of the theory is to resolve a certain puzzle concerning cases in which we have some but not all of the evidence concerning a given proposition. If the evidence already in one's possession supports the proposition, the question arises as to whether one should nevertheless remain neutral (or take no doxastic stance) toward the proposition until one gathers all or some of the remaining evidence. If so, then the further question arises as to how much more of the unpossessed evidence one must gain before it is proper to close inquiry (i.e., cease evidence-gathering) and move from neutrality (or no doxastic stance) to belief.

The time at which it is proper to close inquiry depends on what type of evaluation is intended by "proper." It can be interpreted either as moral, aesthetic, pragmatic, or epistemic. There are also subtypes of some of these. For example, epistemic evaluation can be further differentiated by focusing on evaluation with respect to a particular epistemic virtue (such as justification, knowledge-level justification, knowledge, understanding, or open-mindedness). Perhaps there is also an all-things-considered evaluation that incorporates all types of evaluations, but this is controversial and we need

not worry about it here. Here I am solely interested in an epistemic evaluation, specifically with respect to justification. So, the question we shall focus on here is when inquiry can be closed as far as epistemic justification is concerned. In other words, is belief in p epistemically justified for S when S's current evidence supports p but there exists evidence that S does not yet possess? And, if not, then how much more of the evidence does S need to gather before belief could be epistemically justified? So construed, proper closure of inquiry is not directly about what one should do, but about what one's evidence supports and what other evidence one would need to add to one's original evidence in order to have support for the target proposition. Once this purely epistemic question is settled, then the answer can be combined with plausible assumptions to yield implications about the pragmatic and moral dimensions of evidence-gathering, though we won't pursue that project here.[93]

Let's examine possible views about the proper closure of inquiry with respect to epistemic justification. At one extreme is the Sherlockian view that proper closure of inquiry with respect to epistemic justification occurs only when "*all* the evidence is in."[94] At the other extreme is the anti-Sherlockian view, according to which (a) inquiry is properly closed with respect to epistemic justification whenever one's current evidence

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[93] The epistemic closure of inquiry is most extensively discussed by Kvanvig, since he includes it explicitly as a condition on knowledge. For example, see his (2003, 2009, 2011, 2013, and 2014). For further related discussion about evidence-gathering, see references in footnote 95 below.

[94] At least, this is one way to interpret Sherlock Holmes' principle, as reported by Dr. Watson in Arthur Conan Doyle's "A Study in Scarlet."

supports the proposition in question, and—here's the crucial part—(ii) what the current evidence supports is entirely independent of the evidence yet to be gained. As a compromise, one might propose an attenuated Sherlockian view, where proper closure of inquiry with respect to epistemic justification is not completely independent of the evidence yet to be gained. One might first have to gain some of it, but it is not usually (or never) necessary to wait until acquiring it all before forming a belief.

The Sherlockian view is radically implausible, at least if the "all" is interpreted literally as an unrestricted quantifier (in other words, if we are not talking about the attenuated version). This is partly because it proposes an impossible (or nearly impossible) standard, since it is never (or almost never) true that all the evidence is in, given that there is always (or almost always) further testimonial, memorial, and observational evidence that could be gained. The standard is also implausible because it implies that existing evidence of which one has neither current awareness nor stored memory nevertheless has current justificatory significance, which is highly counterintuitive (at least for us internalists about epistemic justification).

On the other hand, the anti-Sherlockian theory faces the Ostrich Objection, according to which the theory would justify protecting one's views simply by burying one's head in the sand and ignoring further evidence that one might gain.[95] The ostrich attitude toward evidence-gathering is certainly unsatisfactory from a pragmatic or moral

[95] For discussion of the Ostrich Objection and related problems pertaining to evidence-gathering, see Kornblith (1993), Cargile (1995), Feldman and Conee (1995), Hall and Johnson (1998), Feldman (2000), Conee (2001), and Webb, Chang, and Benn (2013).

point of view, at least when the belief in question is of practical or moral significance. Evidentialists attracted to the anti-Sherlockian theory tend to respond that the theory is intended only as a response to the synchronic question about what doxastic attitude is justified at the moment in question.[96] Perhaps there are moral or pragmatic reasons to attempt to acquire more evidence, but until one acquires it, it is justified to believe solely on the evidence one already has. However, it is possible to update the old Ostrich Objection to a version that focuses on the synchronic epistemic question by employing higher-order support and/or levels interaction. This vamped up version of the Ostrich Objection will be immune to the usual response.

The updated Ostrich Objection begins with the observation that anti-Sherlockianism does not follow from evidentialism itself. It is easy to think otherwise because evidentialism does say that one should always believe what one's current evidence supports, not what evidence you don't have supports, and it is easy to forget that anti-Sherlockianism adds a further claim that goes beyond evidentialism: that what the current evidence supports has nothing at all to do with the evidence one doesn't yet have. It is clear that when one doesn't have evidence about the existence of evidence that one lacks, this missing evidence does not by itself have an effect on justification from the evidentialist perspective. But when one has evidence that there exists this missing evidence (which is almost always), this higher-order evidence potentially has object-level significance via higher-order support or levels interaction. In this sense, higher-order

[96] This is the gist of the response given by Feldman and Conee (1985), Feldman (2000), and Conee (2001).

evidence might give us derivative access to evidence that we do not actually possess, ultimately having an effect on what our current evidence supports, contrary to the anti-Sherlockian account.

There are two ways to develop the details of this updated Ostrich Objection. The first line of development ignores higher-order support and focuses on levels interaction alone. This line of development begins by claiming that one's higher-order evidence is usually neutral about what the unpossessed evidence supports. And one usually does not have any reason to suppose that one's current evidence is better. So, one's higher-order evidence is usually neutral about what the total first-order evidence supports. Now to employ the theory of levels interaction, when one's higher-order evidence is neutral about what the total first-order evidence supports, the higher-order evidence usually (supposing it meets certain conditions) undercuts the first-order support, and the total evidence therefore supports neutrality with respect to the object-level proposition. Therefore, one might argue, one should usually suspend judgment on a proposition when one is aware of the existence of relevant unpossessed evidence. However, this would be a mistaken application of my theory of levels interaction. The higher-order evidence is neutral only about what the unpossessed first-order evidence supports. It is *not* neutral about *your* first-order evidence. So, the total first-order evidence *in your possession* is not undercut by the higher-order evidence.

To avoid this problem, the updated Ostrich Objection needs to focus on higher-order support rather than levels interaction. So, let's start over and try again. Suppose E1 is your first-order evidence for p, E1* is the unpossessed evidence concerning p, and E2

is your evidence about E1*. The second way to develop the updated Ostrich Objection starts with the claim that E2 is usually neutral about what E1* supports concerning p. But since you usually have no evidence that E1 is any better than E1*, E2 is usually neutral about what E1+E1* supports concerning p. While you do not have E1+E1* and therefore need not worry about what my theory of levels interaction implies about E2+E1+E1* (as the previous line of development tried), you do have E2, which perhaps has object-level significance on its own due to the Filtration Principle. So, applying the Filtration Principle, one might conclude that since E2 is neutral about what the total first-order evidence supports concerning p, E2 supports neutrality (or no attitude) concerning p. This support from E2 at the object-level has to be weighed against E1's support at that level. Of course, evidential dissipation implies that the first-order evidence has an advantage. The higher-order evidence will typically (at least partially) rebut the first-order evidence, but the first-order evidence will ultimately win out unless the higher-order evidence is especially strong or abundant. So, one might plausibly claim that, in the beginning stages of inquiry, when we have only a little evidence to go on, which favors p, but are aware that there is a mountain of remaining evidence that we have good reason to be neutral about, it is plausible that inquiry is not properly closed and we should suspend judgment until further evidence is gained. But as we gain more evidence and most of it continues to support p, thereby giving us an inductive base sufficient to infer that the evidence not yet possessed probably supports p, the higher-order evidence ceases to defeat the first-order evidence, yielding justified belief in p and thereby licensing closure of inquiry. One might conclude, then, that higher-order evidence therefore yields an attenuated

Sherlockian view that avoids the unsatisfactory head-in-the-sand attitude of anti-Sherlockianism without wandering hopelessly into the deep skeptical waters of the full-blown Sherlockian theory.

Unfortunately, this is all too good to be true. I suppose one might try objecting to the updated Ostrich Objection (either of the above two versions) by denying the claim that one's higher-order evidence is usually neutral about what the unpossessed first-order evidence supports. One might instead claim that since one's first-order evidence supports your view, that this gives you evidence that the other evidence supports it as well. The higher-order information about unpossessed evidence is therefore friendly toward your first-order evidence and does not defeat it. I find this response dubious, since it seems to me that what one body of evidence supports doesn't indicate anything about what other, independent bodies of evidence support. It seems to me right that the higher-order evidence is usually neutral about what the unpossessed evidence is like. The real flaw in the updated Ostrich Objection depends on which of the two developments we have in mind. I have already located the flaw in the first line of development in a mistaken application of the theory of levels interaction. The flaw in the second line of development is in a mistaken application of the Filtration Principle, a mistake that arises due to the failure to be careful about the evidential level at which neutrality comes in. If E2 were to support that E1+E1* is neutral about p, then (under the relevant conditions) E2 would support neutrality about p. But E2 does not support that E1+E1* supports neutrality. It is instead neutral about what E1+E1* supports. As far as E2 is concerned, E1+E1* could support p, or it could support ~p, or it could support neutrality about p. It is entirely non-

committal on the issue. And as argued in Chapter 2, in such a case, E2 does not support anything concerning p, not even neutrality. Again, lack of support is crucially different from neutral support, since only the latter has defeating power. It seems, then, that the Ostrich Objection fails in all its forms.

Given the above, we can now state a solid case for anti-Sherlockianism. First, the full-blown Sherlockian theory is implausible. Second, the only plausible way to defend attenuated Sherlockianism from an evidentialist perspective is to make unpossessed evidence epistemically relevant via higher-order evidence, which initially seems promising but ultimately collapses when the details are carefully examined. Hence, by process of elimination, we are left only with the anti-Sherlockian view.

4.3.4 The Epistemic Significance of Disagreement

And now for our final application—a second application of the theory of levels interaction, specifically to disagreement and its epistemic significance. In many ways, this last application is the most complex of the four we are considering here, primarily because there are numerous distinctions with numerous qualifications that require careful attention before the issue can be adequately discussed. I begin with those distinctions.

The natural place to start is with a definition of disagreement itself, since we need to know what kinds of cases we are talking about. For the purposes of this discussion, I'll adopt the definition offered by Conee, who writes, "people and their doxastic attitudes disagree about a proposition when their doxastic attitudes toward the proposition differ"

(71).[97] As Conee points out, this definition implies that two people disagree about a proposition when one of them believes while the other disbelieves the proposition, when one of them believes or disbelieves the proposition while the other withholds judgment on the matter, and when they both believe or disbelieve the proposition but to different degrees (or with different levels of confidence).

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[97] I think there are several potential worries about this definition. I don't think any of them has any significant bearing on our discussion of the epistemic significance of disagreement. Nevertheless, they are at least worth acknowledging. First, I'm inclined to think that a single person can simultaneously believe p and disbelieve p (say, because of the Liar's Paradox or multiple personalities). But if it is possible, then Conee's definition (at least if we read it to allow that the "people" involved can be numerically identical), implies that the person disagrees with himself or herself in all such cases, which I'm not sure is quite right. It does seem right in the multiple personalities case but I'm somewhat inclined to think it seems wrong in the Liar Paradox case. Second, suppose that two people have exactly all the same doxastic attitudes toward p, and in particular, they both believe p with the same level of confidence. So, it's true that one person believes p and that the other has a certain level of confidence in p, and these are two differing (but compatible) doxastic attitudes. On one way of reading Conee's definition, they disagree, which is surely incorrect. So, perhaps we should read the definition as saying that two people who disagree must have differing *total sets* of attitudes toward p. But on that reading, it would imply that a single person with multiple personalities cannot self-disagree, which seems wrong. Third, it is unclear to me whether two people, one of whom believes (or disbelieves) and one of whom withholds, really disagree. Perhaps the person who withholds could truly say to the other, "I don't agree with you, but I don't disagree with you either; I just haven't made up my mind yet." Fourth, consider a case in which I form a belief in p, which is on a topic far outside of my own expertise, but then encounter an expert I trust who says that p relies on a common misunderstanding. I might legitimately say to this person "Well, you must be right. You're the expert. I would never disagree with you." This might suggest that differing views do not suffice for disagreement until one person becomes aware that another holds a contrasting opinion and remains persistent in his or her original attitude despite this awareness. On the other hand, when two people hold contrasting opinions and only later discover this to their surprise, it seems perfectly appropriate for one of them to say, "I always assumed that we were in agreement on this, but I suppose it turns out that we have always disagreed." My suspicion, then, is that disagreement talk is simply inconsistent. And Conee's definition will therefore need to be accompanied with a stipulation about which strand of disagreement talk it is intended to capture.

Disagreements can usefully be divided into two stages depending on what each party knows (or is justified in believing) about the other. In *isolation*, where neither party is aware that the other disagrees (and we can relativize isolation to a particular person in cases in which only one party is aware that the other disagrees). In *revelation*, isolation has been broken (whether by direct conversation between the disagreeing parties or by some more indirect means) and the disagreement has therefore been revealed in the sense that each party involved has become aware that the other (or at least someone, never mind exactly who) disagrees (and we can also relativize revelation to a particular person in cases in which the disagreement is only revealed to one person). Note that when disagreement has been revealed, there need not yet have been any disclosure of the other party's evidence.[98]

In addition to various stages of disagreement, there are various types of people that can be involved in disagreement. As is standard in the literature, I will distinguish the types of people involved by their comparative epistemic status. In order to define the various types, I'll make use of the following notion: for any agent S and proposition p, let

[98] Some epistemologists distinguish various degrees of disclosure: (i) nondisclosure, where none of the other party's reasons have been disclosed, (ii) partial disclosure, where some but not all of them have been disclosed; and (iii) full disclosure, where all of them have been disclosed. Making such distinctions then raises all kinds of tricky issues about what counts as disclosure, such as how to individuate reasons (by token or relevant type), whether there exists private or incommunicable evidence that cannot be shared, how common such evidence is if it does exist, and whether full disclosure is overly idealized. Fortunately, however, due to the framework I will use to discuss disagreement (specifically due to the way in which I am about to set up the notions of comparative epistemic status, such as epistemic peerhood), we need not worry here about any particular stage of disclosure or any of the complications that arise from it.

S's *evidential standing* with respect to p be an overall assessment of (a) the objective quality of S's total evidence E concerning p (by "objective" I mean to exclude how good E looks, or even should look, from S's perspective and focus instead on agent-independent attributes like representativeness) and (b) how likely it is for S to form the justified attitude toward p on the basis of E. The significance of evidential standing is that it is a measure of how well third-party, neutral observers can read off the truth value of p from S's doxastic attitude toward p (at least when S believes or disbelieves p). In other words, evidential standing it is a measure of how probable it is that p is true on the assumption that S believes p. We might call this the *evidential probability* of p for S, and represent it in probability function notation as $EP_S[p]$. We can now use this to define three important classes of evidential standing: S has *positive evidential standing* with respect to p when $EP_S[p] > EP_S[\sim p]$ (which would happen when E is representative and S is likely to form the attitude toward p that fits E), *negative evidential standing* with respect to p when $EP_S[p] < EP_S[\sim p]$ (which would happen when either E is misleading or it is representative but S is likely to form the incorrect attitude toward p), and *neutral evidential standing* with respect to p when $EP_S[p] = EP_S[\sim p]$ (which happens when, for example, E is representative but S is as likely as not to form the appropriate attitude toward p).

We can now offer adequate characterizations of comparative epistemic status. One such status is epistemic peerhood. On my preferred way of defining the notion, two people, S1 and S2, are *epistemic peers* to each other with respect to a given proposition p

iff they have equal evidential standing with respect to p (formally, $EP_{S1}[p] = EP_{S2}[p]$).[99,] [100] In cases in which two parties are not epistemic peers, one is an epistemic inferior and the other is an epistemic superior. S1 is S2's *epistemic inferior* with respect to p iff S1's evidential standing with respect to p is weaker than S2's (formally, $EP_{S1}[p] < EP_{S2}[p]$). And S1 is S2's *epistemic superior* with respect to p iff S1's evidential standing with respect to p is stronger than S2's (formally, $EP_{S1}[p] > EP_{S2}[p]$).[101]

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[99] There are many significantly different definitions of epistemic peerhood in the literature on disagreement. In contrast to some definitions, my definition does not say that two epistemic peers must have the same (or even comparable) evidence, abilities, etc. Consider a case in which one person has less evidence but is better at evaluating it than the other person in question. If the greater ability makes up for the lack of evidence, the two might still be equally likely to be right from an objective third-party standpoint, making them epistemic peers by my definition. This consequence is intentional, since I think it makes my definition not only broader but also more realistic and more useful than other definitions.

[100] Or, if you wish, S1 and S2 have equal evidential standing on the general topic of the proposition (formally, $EP_{S1}[x] = EP_{S2}[x]$ for every x such that x belongs to the general topic of p). Of course, you could likewise generalize the other definitions of comparative epistemic status.

[101] Some important qualifications about epistemic inferiority and superiority should be noted in order to ward off moral reservations about these concepts. Epistemic inferiority doesn't imply anything denigrating, such as stupidity. Epistemic inferiority need not reflect incompetence or inability but might instead be due to inexperience on the topic in question due to youth, lack of interest in the topic, lack of time to investigate the topic, lack of access to another's private evidence, or perhaps just because another person who is usually your epistemic peer has just luckily happened onto a new piece of evidence to which you haven't yet had the opportunity to be exposed. It should also be kept in mind that probably almost everyone is epistemically inferior to almost everyone else on some topics but superior to them on others. For example, I am surely an epistemic inferior to you about whether or not you have a headache, and you are surely an epistemic inferior to me about whether or not I have a headache.

Epistemic superiority and inferiority come in various strengths as well. I wish to distinguish three degrees of epistemic inferiority: (i) S1 is *weakly epistemically inferior* to S2 with respect to p iff S1 is S2's epistemic inferior with respect to p but S1's evidential standing with respect to p is nevertheless positive (formally, $EP_{S1}[\sim p] < EP_{S1}[p] < EP_{S2}[p]$); (ii) S1 is *moderately epistemically inferior* to S2 with respect to p iff S1 is S2's epistemic inferior with respect to p and S1 has neutral evidential standing with respect to p (formally, $EP_{S1}[\sim p] = EP_{S1}[p] < EP_{S2}[p]$); and (iii) S1 is *strongly epistemically inferior* to S2 with respect to p iff S1 is S2's epistemic inferior with respect to p and S1 has negative evidential standing with respect to p (formally, $EP_{S1}[\sim p] > EP_{S1}[p] < EP_{S2}[p]$). I also wish to distinguish three degrees of epistemic superiority, but this is easy since they are complements of the degrees of epistemic inferiority just defined: S1 is weakly (moderately, strongly) epistemically superior to S2 with respect to p iff S2 is weakly (moderately, strongly) epistemically inferior to S1 with respect to p.

Notice that as far as the epistemic significance of disagreement goes, it doesn't matter whether there is any *real* disagreement with any other *actual* person or whether they are *actually* epistemic peers, inferiors, or superiors (to whatever degree). All that is of epistemic significance is whether one has *evidence*—veridical or otherwise—that on balance supports that these factors obtain. When a person is in possession of such evidence, I will say that the person is in *apparent* disagreement (or agreement) with an *apparent* epistemic peer (inferior, superior).

We are now in a position to begin framing our question. But we must be careful to frame it properly. Here's a first attempt: When some person S1 enters an apparent

disagreement over some proposition p, apparently with some person S2, who is in some apparent comparative epistemic status C with respect to S1, what doxastic attitude toward p is justified for S1? But this first attempt is problematic in various ways, since it does not zero in on the epistemic significance of disagreement itself due to the fact that its answer depends on various factors that can come into play that have nothing specifically to do with disagreement.

First, in order to zero in on the epistemic significance of disagreement itself, we need to narrow the question by limiting the amount of evidence that S1 gains or loses when entering the disagreement. Clearly, in order for it to be apparent, S1 needs to gain evidence that there is some person S2 who holds a different doxastic attitude toward p (but S1 need not have any clue which person S2 is), and evidence that S2 is in some comparative epistemic status with respect to the topic. And S1 might or might not have evidence that allows him or her to grasp the significance of the higher-order evidence involved (e.g., evidence about the concept of evidence, reliability, or truth indication). But if S1 does have such evidence, it might play an important role in disagreement and we cannot deprive him or her of it. Now, in regards to the higher-order evidence about his or her own epistemic status and the evidence S1 might or might not have about evidential concepts, there arises the question of whether S1 already has this information while in isolation or only gains it in the transition from isolation to revelation. And clearly this has a good chance of making a difference in whether or how his or her doxastic attitude should change. So, it will simplify matters greatly to suppose that S1 already has this information in isolation, and does not lose it in the transition to revelation. We also need

to stipulate that in this transition, S1 does not lose any other evidence concerning p and does not gain any evidence other than that which we have already included. In many actual cases of disagreement, additional evidence might be gained or some of the original evidence lost, but such evidence can always be separately factored into the equation after we have decided on the epistemic significance of disagreement itself.

Second, notice that the epistemically justified doxastic attitude in revelation might depend on what doxastic attitude was justified in isolation. This is because the higher-order evidence gained by revelation might be friendly to the evidence already possessed in isolation. In such cases, the attitude originally held was unjustified, the higher-order evidence gained does not change that, and the agent should therefore switch attitudes—*but for reasons having nothing to do with disagreement*. Even though the person should change attitudes in revelation, this is because the attitude should have been different in the first place, and the epistemic significance of disagreement would actually be nil. So, if we want to know the epistemic significance of disagreement itself, we need to factor out irrationality in isolation. We can do so by stipulating that S1 begins with rationality in isolation. Whenever this stipulation actually turns out to be false, we should easily be able to adjust accordingly.

Now that we have carefully framed the question, I want to provide a categorization of the possible answers. According to my preferred categorization, there are five main possible responses to disagreement:[102]

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[102] Note that the framework is degreed, whereas my account of higher-order support and levels interaction are all-or-nothing. However, I have nothing against a degreed framework. My decision to work in an all-or-nothing framework was purely pragmatic. It

1. *Dogmatism* (sometimes called the *steadfast view*): Maintain one's original doxastic attitude (the attitude held in isolation immediately prior to revelation) and hold it with the same degree of confidence (the same degree with which one held the attitude in isolation immediately prior to revelation).[103]
2. *Contrarianism*: Move one's original doxastic attitude even further away from the attitude the other party appears to hold (unless one is already certain that the other party is wrong, and therefore cannot move further away).

was needed for the sake of simplification, since matters were complex enough without adding degreed support into the mix. When it comes to disagreement, though, I find a degreed framework particularly useful and interesting. In what follows, I will suppose that the all-or-nothing framework can be straightforwardly mapped onto a degreed one.

[103] For defense of this view, see Plantinga (2000 and 2008), Kelly (2005), van Inwagen (2010), and Weatherson (2013), among others.

3. *Conciliationism:* Move one's original doxastic attitude toward, but not all the way to, the attitude the other party appears to hold (except, perhaps, if one starts out with suspension of judgment[104]).[105]

    3a. *Slight conciliationism* (sometimes called *weak conciliationism*): Move one's original doxastic attitude closer, but less than halfway, toward the attitude the other party appears to hold (except, perhaps, if one starts out with suspension of judgment).

    3b. *The split-the-difference view* (sometimes called *strong conciliationism* or the *equal weight view*): Move one's original doxastic attitude halfway in the direction of the attitude the other party appears to hold (except, perhaps, if one starts out with suspension of judgment).

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[104] Conciliatory views that are cast in a degreed framework typically do not have this parenthetical qualification. However, I think it is important to add. Suppose that in isolation you suspend judgment about p and your apparent epistemic peer believes p with confidence C. Suppose suspension of judgment can be represented as 0.5 on the credence scale. Then, conciliatory views would seem to imply that in revelation you should believe p with a confidence halfway between 0.5 and C. In an all-or-nothing doxastic framework, this would not just be conciliation but full-on conversion (entirely abandoning your original attitude, suspension of judgment, in order to fully adopt your peer's attitude, belief). This seems to me implausible. So, my preferred version of conciliationism would actually have one stay put in the face of peer disagreement when and only when one starts out with suspension of judgment. It's not dogmatic to refuse to move in such a case because you have already taken the compromise position and there's nothing left to do by way of compromise. I'll further defend this shortly. For now just note it's the reason for the parenthetical qualification in my characterization of conciliationism.

[105] For defense of a version of this view, see Feldman (2003, 2006, 2007, and 2009), Christensen (2007, 2009, 2010, and 2014), Matheson (2009), and Elga (2010).

4. *Conversion:* Move one's original doxastic attitude all the way to, or at least more than halfway toward, the attitude the other party appears to hold.

    3a. *Weak conversion*: Move one's original doxastic attitude more than halfway toward, but not all the way to, the attitude the other party appears to hold.

    3b. *Strong conversion*: Move one's original doxastic attitude all the way to the attitude the other party appears to hold.

5. *Hyperconversion:* Move one's original doxastic attitude in the direction of and beyond the attitude the other party appears to hold (unless the other party is already certain and therefore going further in that direction is impossible).

We can now apply the theory of levels interaction to determine which of these views is/are correct. It turns out that each has its time and place, and (under the assumptions outlined above) it depends almost entirely on which degree of which comparative epistemic status is apparent. Thus, my classification of the various degrees of comparative epistemic status maps neatly onto my classification of possible responses to disagreement. To see that this follows from my theory of levels interaction, we need to determine whether the higher-order evidence an agent has in revelation (as outlined above) dominates the first-order evidence carried over from isolation. As my theory goes, this is in turn determined by whether or not the higher-order evidence is friendly, supportively complex, creates evidential interference, is conceptually impoverished, and meets the latching requirement for undercutting defeaters (requiring higher-order

evidence to latch onto the corresponding first-order evidence in order to undercut). So, let's consider these in turn.

First, the higher-order evidence is not supportively complex. By stipulation, the higher-order evidence in revelation includes only evidence about the fact of disagreement, evidence about comparative epistemic status (or degrees thereof), and evidence about evidential concepts.

Second, the higher-order evidence does not create evidential interference. By stipulation, the total first-order evidence in revelation includes only the original first-order evidence carried over from isolation. It follows that the higher-order evidence originally possessed in isolation and gained in revelation does not combine with the original first-order evidence to produce new first-order evidence. So, there's no first-order interference. Similarly, by stipulation the higher-order evidence in revelation only includes the evidence outlined in the previous paragraph. So, this means that the original higher-order evidence doesn't combine with the original first-order evidence to produce new higher-order evidence. Hence, there's no higher-order interference either.

Third, despite my stipulations, the total evidence in revelation might still be conceptually impoverished. I only stipulated that it might not be. This is because there are indeed cases in which the epistemic significance of disagreement is nil due to conceptual impoverishment, justifying dogmatism. This is clearest in cases of very young children and special classes of adults (e.g., adults with some severe mental impairment). But typical adults aren't conceptually impoverished with respect to the basic evidential

concepts in which their higher-order evidence is cast. So, we can focus on the typical adult and set aside cases of conceptual impoverishment.

Fourth, the latching requirement is met in all cases of apparent disagreement with a person with an apparent comparative epistemic status (at least if we set aside conceptual impoverishment). Depending on the stage of disclosure, one might or might not know what the other's first-order evidence is. But one does know what one's own first-order evidence is. In virtue of having evidence about comparative epistemic status one also has evidence about how the other person's first-order evidence compares with one's own. Putting these two bits together yields a total body of higher-order evidence that inferentially latches onto the total first-order evidence, thereby meeting the latching requirement.

So, for those who aren't conceptually impoverished who are in an apparent disagreement with another person with an apparent comparative epistemic status, the conditions for higher-order dominance are met unless the total higher-order evidence in revelation is friendly (in which case there is no conflict between levels to resolve). In other words, the total evidence in revelation supports whatever the total higher-order evidence in revelation says that the total first-order evidence supports. So, all we need to do to determine the epistemic significance of disagreement in cases with no conceptual impoverishment is to determine what the total higher-order evidence in revelation supports. And this is determined almost entirely by which degree of comparative epistemic status is apparent. Let's work out the details. Again, suppose that S1 and S2 are in an apparent disagreement over p, where S1 holds attitude D1 toward p in isolation on

the basis of evidence E1 (which actually fits D1). Suppose that from S1's perspective S2 appears to hold attitude D2 (≠ D1) toward p in isolation on the basis of evidence E2 (which might or might not be identical with E1). Finally, S2 has some apparent comparative epistemic status from S1's perspective, which will vary across the following cases.

1. *The epistemic significance of apparent disagreement with an apparent weak epistemic inferior (in the absence of conceptual impoverishment) → slight conciliationism:* Suppose that S2 is S1's apparent weak epistemic inferior. Then S1's total higher-order evidence in revelation supports that the total lower-order evidence fits an attitude closer to D1 than to D2. Since we've already determined that the higher-order evidence dominates, it follows that S1's total evidence in revelation fits an attitude closer to D1 than D2. Hence, slight conciliation is appropriate.[106]
2. *The epistemic significance of apparent disagreement with an apparent moderate epistemic inferior (in the absence of conceptual impoverishment) → dogmatism:* Suppose that S2 is S1's apparent moderate epistemic inferior.

[106] Feldman has raised an interesting objection (in p.c.). One might try as a counterexample a case in which one starts out already knowing that other apparent epistemic inferiors disagree and subsequently finds out about someone in particular who does so. In this case, it seems one does not need to adjust. Actually, though, my stipulations rule out this sort of case. It will not count as revelation when one finds out about the particular someone. Given the way I have defined things, one will have already moved to the revelation stage by previously finding out that other apparent epistemic inferiors disagree, even if one didn't know who any of those others were. So, when one finds out that someone in particular is an apparent epistemic inferior who disagrees, there's no revelation of disagreement.

Then S1's total higher-order evidence in revelation continues to supports that the total lower-order evidence fits D1. Since we've already determined that the higher-order evidence dominates, it follows that S1's total evidence in revelation continues to fit D1. Hence, dogmatism is appropriate.

3. *The epistemic significance of apparent disagreement with an apparent strong epistemic inferior (in the absence of conceptual impoverishment) → contrarianism:* Suppose that S2 is S1's apparent strong epistemic inferior and that D2 is not already at one end of the doxastic spectrum. Then S1's total higher-order evidence in revelation supports that the total lower-order evidence supports that D2 is an attitude headed in the wrong direction on the doxastic spectrum, and therefore lends further support to the direction that D1 is headed. Since we've already determined that the higher-order evidence dominates, it follows that S1's total evidence in revelation fits an attitude further away from D2 in the direction D1 is already headed. Hence, contrarianism is appropriate.
4. *The epistemic significance of apparent disagreement with an apparent epistemic peer (in the absence of conceptual impoverishment) → conciliation:* Suppose that S2 is S1's apparent epistemic peer. Then S1's total higher-order evidence in revelation is neutral about what the lower-order evidence supports. Since we've already determined that the higher-order evidence dominates, it follows that S1's total evidence in revelation fits neutrality about p. If D1 = neutrality, then staying put is justified. If D1 ≠ neutrality, then

whatever degree of conciliation results in neutrality is justified. This might require slight conciliation or splitting the difference. This has the strange implication that differences in the degree to which one is required to move along the doxastic spectrum need not be due to evidential differences. But, as argued in the previous chapter, this result is a consequence of the fact that the higher-order evidence in question yields undercutting defeat, and an undercutting as opposed to a rebutting defeater completely defeats regardless of its strength in comparison to that which is defeated, yielding the same result of neutrality no matter what, however much doxastic change this requires.[107]

5. *The epistemic significance of apparent disagreement with an apparent weak epistemic superior (in the absence of conceptual impoverishment) → weak conversion:* Suppose that S2 is S1's apparent weak epistemic superior. Then S1's total higher-order evidence in revelation supports that the total lower-order evidence fits an attitude closer to D2 than to D1. Since we've already determined that the higher-order evidence dominates, it follows that S1's total evidence in revelation fits an attitude closer to D2 than D1. Hence, weak conversion is appropriate.

[107] One might object that staying put at neutrality seems more dogmatic than conciliatory, and that genuine conciliation would require abandoning neutrality. However, as suggested earlier in this chapter when I defined conciliationism, when one starts out at neutrality, one has already taken the conciliatory position and cannot become more conciliatory. So, when the person does not move from this position, he or she is choosing to remain conciliatory. If this seems an odd way to think of it, then feel free to relabel remaining neutral in such circumstances as another justified instance of dogmatism. Whatever you call it, one should remain neutral in such cases.

6. *The epistemic significance of apparent disagreement with an apparent moderate epistemic superior (in the absence of conceptual impoverishment) → strong conversion:* Suppose that S2 is S1's apparent moderate epistemic superior. Then S1's total higher-order evidence in revelation supports that the total lower-order evidence fits D2. Since we've already determined that the higher-order evidence dominates, it follows that S1's total evidence in revelation fits D2. Hence, strong conversion is appropriate.
7. *The epistemic significance of apparent disagreement with an apparent strong epistemic superior (in the absence of conceptual impoverishment) → hyperconversion:* Suppose that S2 is S1's apparent strong epistemic superior and D2 is not already at maximum confidence. Then S1's total higher-order evidence in revelation supports that the total lower-order evidence supports that D2 is an attitude headed in the right direction on the doxastic spectrum, and therefore lends further support in the direction D2 is headed. Since we've already determined that the higher-order evidence dominates, it follows that S1's total evidence in revelation fits an attitude even further in the direction of D2. Hence, hyperconversion is appropriate.[108]

[108] In the abstract, hyperconversion probably seems weird. So, let me give a concrete example. Consider a child whose father wanted him to be the world's greatest musician. The father would often test his son's musical ear and get very angry at the slightest error. As a result, the child became very good at correctly identifying musical notes by ear but also developed deep fears and insecurities that led to underconfidence about his ability. Knowing all of this, you witness the child hear a note and say "I think it's a B-flat but I'm not sure." You yourself don't have a good ear, but upon being exposed to this evidence, you should become more confident than the child that the note is indeed a B-flat.

So, utilizing an appropriate framework, my theory of levels interaction gets us a fully worked out view of the epistemic significance of disagreement. Moreover, the view has major advantages over other views developed in the disagreement literature. Unlike most discussions of disagreement in the literature, the view developed here is not restricted to actual disagreements or actual comparative epistemic statuses or any particular stage of disclosure (and therefore avoids numerous complications that arise from distinguishing stages of disclosure). It is not restricted to epistemic peers. It recognizes exceptions that are often ignored, such as the possibility of conceptual impoverishment. It better isolates the significance of disagreement itself by setting aside supportive complexity and interference. Finally, it provides a stronger basis for conciliationism in the case of epistemic peer disagreement. Other conciliationists have argued for their view on the basis of the Filtration Principle.[109] Doing so is dangerous, since I have shown that there are major exceptions to the Filtration Principle, and those exceptions might in turn create potential counterexamples to conciliationism. But in any case, it is a mistake to appeal to the Filtration Principle, since (a) the epistemic significance of apparent disagreement is dependent on levels interaction, (b) levels interaction is independent of the Filtration Principle except when the higher-order evidence doesn't meet the latching requirement, but (c) the requirement is met in cases of apparent disagreement.

[109] See Feldman (2006, 2007, and 2009) and Matheson (2009).

The primary objections to my view of disagreement would come from the objections in the literature to conciliatory views in cases of peer disagreement. Some of those objections are fundamentally objections to the Filtration Principle or its application to disagreement and are therefore easily bypassed since I do not appeal to it in this context. Other objections are objections to higher-order dominance, which I have responded to in Chapter 3. The remaining objections to conciliatory views of peer disagreement concern skeptical consequences. Conciliationists other than myself (e.g., Feldman (2006 and 2009) and Matheson (2009)) have suggested that their view implies suspension of judgment about controversial matters, such as politics, religion, and philosophy—a result that anti-conciliationists have used in their favor since it gives rise to questions about self-defeat (whether the conciliatory view, in light of the fact that many other well-informed and intelligent colleagues disagree with it, requires conciliationists to give it up[110]). This last class of objection deserves major attention, and I cannot fully address it here. For now, suffice it to say that I disagree with other conciliationists about skeptical consequences. I do not think the view has major skeptical consequences because I do not think that apparent epistemic peerhood is all that common even among disagreeing colleagues who are well-informed and intelligent. I think that it is rather easy to have good reason to think you have better reasons than your colleagues, and not because you are more intelligent but because you have just thought of a

[110] See Weatherson (2013) for such an objection. Cf. Elga (2010) for a different conciliationist attempt to resolve Weatherson's dilemma.

seemingly strong argument that you don't think they've yet considered. This claim needs defense but I leave it to a future project.

4.4 Conclusion

We have finally reached the end of our current exploration. I have provided and defended a complete theory of higher-order evidence. I have argued that it has some major implications for how evidence in general is viewed. And I have argued that it has major concrete application in the epistemic assessment of testimony, memory, the closure of inquiry, and disagreement. If I have not convinced you of the particulars, I hope to have at least convinced you that higher-order evidence is interesting, of tremendous epistemic importance, and well worth taking seriously.

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