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Epistemic Justification: Probability, Normalcy, and the Functional Theory

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ABSTRACT
This paper puts forward a novel pluralist theory of epistemic justification that brings together two competing views in the literature—probabilistic and non-probabilistic accounts of justification. The first part of the paper motivates the new theory by arguing that neither probabilistic nor non-probabilistic accounts alone are wholly satisfactory. The second part puts forward what I call the Functional Theory of Justification. The key merit of the new theory is that it combines the most attractive features of both probabilistic and non-probabilistic accounts of justification while avoiding their most serious shortcomings. The paper also provides a blueprint for future pluralist projects in epistemology.

1. Introduction

What justifies belief? Theories that aim to answer this question can be divided into two broad families—*probabilistic* and *non-probabilistic* accounts. According to probabilistic accounts, epistemic justification is essentially a matter of *high probability* or *likelihood*.[1] In contrast, *non-probabilistic* accounts deny that high probability is either necessary or sufficient for a belief's being justified. Following leading versions of the view, the property that justifies belief is the property of *being true in all normal worlds* (see Leplin [2009] and Smith [2010, 2016]). However, there are good reasons for thinking that neither *probabilistic* nor *non-probabilistic* accounts of justification are wholly satisfactory. As we will see, probabilistic accounts are incompatible with an attractive conjunction principle according to which we can justifiably believe the conjunction of our individually justified beliefs, while non-probabilistic accounts that can accommodate this principle will inevitably turn out to be too demanding. As a result, neither of the two views can accommodate all of the beliefs that we plausibly take to be justified.

This paper puts forward a new *pluralist* theory of epistemic justification that promises to do better. According to what I'll call the Functional Theory of Justification, *being*

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[1] For prominent examples, see Moser [1989], Plantinga [1993], Swinburne [2001], Conee and Feldman [2004], Pryor [2004], BonJour [2010], and Goldman [2011].

justified is a functional property that can be realised by different justification-conferring properties in different epistemic circumstances. The key merit of the new theory is that it allows us to incorporate the most attractive features of both probabilistic and non-probabilistic accounts of justification. More specifically, *contra* probabilistic accounts, the new theory will be able to preserve a version of the conjunction principle according to which justification for believing many ordinary propositions will be closed under conjunction and, *contra* non-probabilistic accounts, the new theory won't be overly demanding.

The first part of the paper brings the distinction between probabilistic and non-probabilistic accounts of justification into focus, and briefly outlines the problems that these theories face. The second part puts forward the new pluralist theory.

2. The Probabilistic/Non-Probabilistic Distinction and Justification's Scope Problem

2.1 Probabilistic Accounts of Justification

Most prominent accounts of epistemic justification are, in the relevant sense of the term, probabilistic.[2] These accounts identify some epistemic *good-making feature*—for instance, an agent's total body of evidence or a belief-forming method's degree of reliability—and hold that S has justification for believing P if, and only if, given the relevant good-making feature, P is highly probable for S. Let's call this the *High Probability View*.

> **High Probability View**. S has justification for believing P if, and only if, P is highly probable for S.

While there is, of course, considerable disagreement about what the relevant epistemic good-making feature might be, proponents of probabilistic accounts agree that the property that justifies belief, or the *justification-conferring* property, is some property along the lines of *being highly probable*. Since many people feel drawn towards a fallibilist conception of epistemic justification on which justification doesn't require certainty or the impossibility of error, there is undoubtedly something very natural about the idea that justification requires high probability. As Smith, recently put it, 'if justification can fall short of epistemic certainty, then what else [other than high probability] could it possibly *be*?' [2010: 10].

However, despite its popularity, the High Probability View faces a number of objections. One of the most prominent criticisms is that it's incompatible with the following intuitively compelling and widely endorsed closure principle.[3]

> **Conjunction Principle (CP)**. If S has justification for believing P, and S has justification for believing Q … and S has justification for believing N, then S has justification for believing the conjunction (P & Q & … & N).

Accounts following the High Probability View are incompatible with (CP) due to the problem of risk agglomeration: as we start conjoining beliefs that are highly probable (but have a degree of probability below 1), the error-risk associated with each

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[2] I am here using 'probabilistic' in a very intuitive sense to pick out theories according to which justification requires high probability but not certainty or probability 1.
[3] For proponents of the principle, see Pollock [1986], Ryan [1991, 1996], Kaplan [1996, 2013], Evnine [1999], Leplin [2009], and Smith [2016].

individual belief begins to accumulate and eventually, after conjoining sufficiently many beliefs, yields a conjunction that is highly improbable. As a result, the conjunction will fail to be justified.[4] This has struck many as an unpalatable result. Particularly when it comes to many straightforwardly justified beliefs—for example, beliefs based on perception, memory, or well-researched historical or scientific facts—many people think, and I believe plausibly so, that we should be able to combine these beliefs without losing justification.[5]

The general lesson, then, is the following: if we want to accommodate (CP), we cannot analyse justification in terms of high probability. Instead, we will need to explicate justification in terms of a justification-conferring property that avoids risk agglomeration. But what might such a property be?

2.2 Non-Probabilistic Accounts of Justification

Recent years have seen the emergence of non-probabilistic accounts of justification that can avoid the problem of risk agglomeration and, therefore, promise to preserve (CP). Broadly speaking, according to accounts put forward by Leplin [2009] and Smith [2010, 2016], the property that makes a belief justified is the property of being true in all normal worlds.[6,7] Let's call this the *Normalcy View*.

> **Normalcy View**. S has justification for believing P if, and only if, given S's evidence E, there exists no *normal world* in which S falsely believes P.[8]

According to normalcy views, the justification-conferring property is some property along the lines of *being true in all normal worlds* or, for short, of *being normally true*.

Importantly, unlike their probabilistic counterparts, normalcy views can avoid the problem of risk agglomeration. Since, in order for a belief to be justified, there cannot exist a single normal world in which the belief is false, there will also exist no normal world in which a conjunction of individually justified beliefs is false. After all, a normal world in which the conjunction is false would require a normal world in which one of its conjuncts is false, and this is ruled out by normalcy views.

One question that immediately arises is that of how normal worlds are individuated. While not much hangs on this issue here, let me briefly outline the most prominent proposal, due to Smith [2010, 2016].[9] According to him, whether there exists a normal world in which one falsely believes P depends on whether, given one's

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[4] This point is familiar from discussions surrounding the lottery and preface paradoxes, originally proposed by Kyburg [1961] and Makinson [1965], respectively.

[5] Authors who explicitly defend this position in response to the preface paradox include Pollock [1986], Ryan [1991], Kaplan [2013], Evnine [1999], Leplin [2009], and Smith [2016].

[6] Note that, while there are some differences in how Smith and Leplin think about normalcy and its connection to justification, both can plausibly be seen as proponents of this general view. See Backes [2019] for a comparison of the two accounts.

[7] Similar accounts could, of course, be constructed in terms of *close* or *relevantly similar* worlds. For instance, one might hold what we may call the Safety View:

> **Safety View**. S has justification for believing P if, and only if, there exists no *close* (or *relevantly similar*) *possible world* in which S falsely believes that P.

Now, there will be important differences between the Safety View and the normalcy accounts defended by Smith and Leplin. However, these differences will not concern us here.

[8] This formulation is adapted from Backes [2019].

[9] An alternative proposal can be found in Leplin [2009]. However, many of the problems that arise for Smith's account apply equally to Leplin's account; see Backes [2019] for discussion.

evidence, it would call for a *special explanation* if P turned out to be false. If it would require some sort of special explanation, then, according to Smith, this indicates that there would be something odd or abnormal about the circumstances in which one's belief that P turned out to be false. In such cases, Smith concludes, there exists no normal world in which one falsely believes P and, therefore, one has justification for believing P. This, Smith argues, is usually the case for many ordinary beliefs formed via perception, testimony, memory, etc. In contrast, if it wouldn't call for any special explanation if one's belief that P turned out to be false—perhaps because one already has information that would explain P's falsity—then it appears that there wouldn't be anything particularly odd or abnormal if one's belief that P turned out to be false. In these cases, Smith suggests, there are some normal worlds in which one falsely believes P and, as a result, one lacks justification for believing P.

While the Normalcy View might seem initially compelling, it, too, faces a serious objection. The modal strength required to preserve (CP) makes normalcy views very demanding. After all, a belief fails to be justified if there exists just a *single* normal world in which S falsely believes P—even if P remains overwhelmingly probable. One consequence of this, as I have argued in previous work [2019], is that, on normalcy views, many beliefs that we ordinarily take to be justified turn out to be unjustified.

For instance, beliefs based on purely statistical evidence, regardless of how probable they are, will always turn out to be unjustified. Why? Consider a subject who holds a single ticket in a very large lottery. Many have the intuition that this subject can justifiably believe that they will not win the lottery (see Nelkin [2000: 375–6], Comesaña [2009: 9], Schechter [2013], and Ebert et al. [2018: 111]).[10] Normalcy views, however, can't accommodate this intuition as there exists at least one normal world in which the subject's belief is false. This, of course, is the world in which it just so happens that their ticket is drawn.

Importantly, this problem generalises to other cases not involving lotteries or purely statistical evidence. Recall that, on normalcy views, we lose justification for believing P as soon as there exists a single normal world in which we falsely believe P. One consequence of this is that seemingly trivial pieces of evidence can turn out to have considerable defeating powers. In earlier work [2019], I called this problem for normalcy views the *Easy-Defeat Problem*. Here is an example to illustrate the problem.

> **Lightning**. A few days ago, Helen made plans with her friend Bob to visit him in Oxfordshire next weekend. Based on this, Helen is justified in believing P, that she will see Bob next weekend. On the Normalcy View, this entails that there does not exist a single normal world in which Q, that Bob has been fatally struck by lightning. As Helen is thinking about her upcoming trip to Oxfordshire, she reads a newspaper headline stating D ('Man in Oxfordshire fatally struck by lightning').

After learning D, Helen's total body of evidence is plausibly such that there exists at least one normal world in which she falsely believes P—this, of course, is the world in which the person struck by lightning happened to be Bob. Subsequently, Helen's belief that she will see Bob next weekend is defeated and therefore no longer justified. This is likely to strike many as the wrong result. However, this result is

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[10] A number of recent X-Phi studies have also confirmed the prevalence of this intuition. See Turri and Friedman [2014], Friedman and Turri [2015], and Ebert et al. [2018].

necessary if we want to preserve (CP); after all, we need to avoid risk agglomeration. More cases like this can easily be generated.

What the above considerations show is that, while normalcy views might be able to preserve (CP), they can do so only at the cost of denying justification to many beliefs that we ordinarily take to be justified. Importantly, this is not an isolated problem for normalcy views. While they are currently the most promising non-probabilistic accounts of justification on the market, we can reasonably expect these problems to generalise to any account of justification that promises to satisfy (CP). After all, preserving (CP) requires avoiding risk agglomeration, and, as a result, any account committed to (CP) will need to deny justification as soon as any degree of relevant risk—no matter how small—enters the picture. In short, theories that promise to satisfy (CP) will inevitably turn out to be very demanding.

2.3 Justification's Scope Problem

As we have seen, neither probabilistic nor non-probabilistic accounts of justification are wholly satisfactory. Probabilistic accounts of justification force us to give up (CP), and therefore cannot accommodate a wide range of beliefs that many people reasonably believe should be justified—namely, beliefs generated by simply combining our individually justified beliefs. Similarly, non-probabilistic accounts that can preserve (CP) can't account for a range of other beliefs that we generally take to be justified. Let's call this *Justification's Scope Problem*. It may be seen as a particular instance of what Pedersen [2017: 52] called the *Epistemic Scope Problem*.

> **Epistemic Scope Problem**. Epistemic value bearers $x_1, \ldots, x_n$ should all be classified as enjoying positive epistemic standing F, but no single theory of F can plausibly account for all of $x_1, \ldots, x_n$ being F.

Importantly, since any theory of justification is either probabilistic or non-probabilistic, I take Justification's Scope Problem to present one of the central obstacles that we face in providing a satisfactory theory of epistemic justification—one that is likely to threaten many (perhaps all) extant theories of justification.

How should we respond to this problem? One option would be to bite the bullet and to concede that no theory of justification can account for all of the beliefs that, ordinarily, we take to be justified. However, I take it that this option should be a last resort. The remainder of this paper will defend an alternative and, I will argue, more compelling response. Particularly, I will put forward a new pluralist theory of epistemic justification that (i) preserves a version of (CP), according to which a large number of our justified beliefs will be closed under conjunction, and that (ii) won't be too demanding.

3. The Pluralist Solution

One implicit, yet crucially important, assumption underwriting Justification's Scope Problem is that probabilistic and non-probabilistic accounts of justification are mutually exclusive and cannot be combined or work side-by-side. In other words, the dilemma presupposes that there is only one way for a belief to be justified. Let's call this view *J-monism*.

> **J-monism**. There is only one way for a belief to be justified: that is, there exists only one justification-conferring property.

While J-monism is almost universally accepted amongst epistemologists, it is of course optional and can reasonably be rejected. A rejection of J-monism yields what I'll call *justification pluralism* (henceforth, *J-pluralism*).

> **J-pluralism**. There is more than one way for a belief to be justified: that is, there exists more than one justification-conferring property.

An important upshot of J-pluralism is that it makes room for the idea that some beliefs might be justified in virtue of *being normally true* while other beliefs might be justified in virtue of *being highly probable*. This has interesting implications for Justification's Scope Problem.

Note that, for all beliefs that are justified in virtue of being normally true (that is, all beliefs that would be justified according to normalcy views), justification will be closed under conjunction. As our previous discussion has shown, this will include many ordinary beliefs based on perception, testimony, memory, etc. However, *contra* normalcy views, we no longer need to accept the unpalatable result that, necessarily, any belief that fails to be true in all normal worlds is unjustified. After all, beliefs that aren't true in all normal worlds might still be highly probable and therefore might still be justified. Hence, by opening up the possibility that there might be more than one justification-conferring property in virtue of which a belief can come to be justified, J-pluralism offers promising new resources for dealing with Justification's Scope Problem. In particular, it appears that, on a pluralist picture, we'll be able to preserve a version of (CP)—one according to which all beliefs that are justified in virtue of being normally true will be closed under conjunction—without justification becoming too demanding. In fact, I believe that rejecting J-monism and 'going pluralist' will be the only way to accommodate these two *desiderata*. With the motivations for J-pluralism in clear view, let's start filling in some of the details.

4. The Cooperation Question and Epistemic Environments

One important issue that needs to be clarified is that of what, exactly, the cooperation between the two justification-conferring properties will look like. In particular, we need an account that tells us which beliefs are justified by what property. Let's call this the *Cooperation Question*. To address this issue, it will be helpful to look at how previous pluralist projects have dealt with this question and to see whether a similar response is available to J-pluralists. A particularly illuminating example for these purposes is *alethic pluralism* (or *truth pluralism)*, championed by, among others, Wright [1992, 1999, 2013] and Lynch [2009]. The analogy to alethic pluralism will also be helpful in another way: establishing that J-pluralism is relevantly similar (in both motivation and structure) to a more familiar type of pluralism shows that it can't be dismissed too easily.

4.1 The Truth Pluralism Analogy

As with J-pluralism, which claims that there exists more than one property in virtue of which a belief can come to be justified, so alethic pluralists have defended the claim

that there exists more than one property in virtue of which a belief can come to be true. And, like J-pluralism, alethic pluralism is motivated by a version of the scope problem (henceforth, *Truth's Scope Problem)*, according to which no single theory of truth can account for all of the propositions that we generally take to be true (see Lynch [2009: 4]). Take the sentences 'snow is white', 'murder is wrong', and '2 + 2 = 4.' Each appears to be true, and yet, as people have noted, it seems unlikely that they should all be true in exactly the same way, or, put differently, that we'll be able explain the truth of all of these propositions by appeal to a single property. While the sentence 'snow is white' is often taken to be true in virtue of its *accurately representing* some feature of the external world, many people have found it less convincing to try to explain the truth of moral or mathematical statements in this way. Instead, their truth is often explained by appeal to a different kind of property—for instance, some form of *coherence* with a larger belief system.[11] However, following coherence theories of truth, we would have to explain the truth of all propositions in non-representational terms, and this seems to get things wrong for a wide range of propositions (for example, ones about the external world). Hence, truth pluralists have argued that neither representational nor coherence theories of truth alone can plausibly accommodate all of the beliefs that, ordinarily, we take to be true. In order to escape Truth's Scope Problem, truth pluralists have proposed that we reject alethic monism, the idea that there is only one way in which a proposition can be true, and instead endorse alethic pluralism—the idea that there is more than one property in virtue of which a proposition can be true. According to alethic pluralists, some propositions are true in virtue of accurately representing the external world, while other propositions are true in virtue of their coherence with other beliefs. More specifically, truth pluralists argue that the property that makes a proposition true depends on the *domain of inquiry*. In some domains (for instance, when a proposition is about the external world), truth is realised by a kind of accurate representation of the external-world, while in other domains (for instance when a proposition concerns morality or mathematics) truth is realised by some form of coherence [Lynch 2009: 5].

As we can see, there are important parallels between alethic pluralism and the kind of J-pluralism that I'm proposing. Both begin by acknowledging that there are at least two competing theories, each of which captures something important about the nature of truth and justification, respectively. For alethic pluralists, these are representational and coherence theories of truth; for J-pluralists, they are probabilistic and non-probabilistic accounts of justification. However, neither theory is wholly satisfactory. For alethic pluralists, neither representational nor coherence theories of truth can account for all of the propositions that we take to be true, and, for J-pluralists, neither probabilistic nor non-probabilistic accounts of justification can account for all of the propositions that we take to be justified. Alethic pluralists call their dilemma Truth's Scope Problem; we called ours Justification's Scope Problem. In responding to Truth's Scope Problem, alethic pluralists have rejected alethic monism, arguing that alethic pluralism provides a more compelling alternative. Similarly, I have argued that J-pluralism offers a more compelling response to Justification's Scope Problem than is available under J-monism. Hence, alethic pluralism and J-pluralism should be seen as kindred spirits that closely resemble each other in both motivation and structure.

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[11] See, for instance, Lynch's [2009: 39–40] supercoherence account of truth. The account takes inspiration from Wright's [1992] widely discussed superassertibility account.

Aside from establishing a helpful precedent for J-pluralism, the analogy to alethic pluralism also plays another important dialectical role: critics of J-pluralism, in so far as they wish to target J-pluralism in particular, will need to show (i) that any alleged objections do in fact target J-pluralism specifically and won't generalise to alethic pluralism (or pluralism, more generally) and (ii) that alethic pluralists haven't already developed resources that J-pluralists could borrow in order to respond to these objections. Alternatively, a critic may wish to reject J-pluralism and alethic pluralism together (and perhaps pluralist projects in philosophy, more generally); but this will, of course, be a very different and considerably more difficult task. Hence, rejecting J-pluralism will be more difficult than perhaps initially thought.

4.2 Epistemic Environments

Let's return to the *Cooperation Question*. As we have seen, alethic pluralists solved the Cooperation Question by appealing to different *domains of inquiry*: when a proposition is about the external world then, they argue, its truth value is determined by whether it accurately represents that world; alternatively, when a proposition is about morality or mathematics, its truth value is determined by some form of coherence. Can J-pluralists offer a similar story about which beliefs are justified by what justification-conferring property and when? I argue that they can.

While I argued earlier that we have good reasons to be doubtful about the central claim of normalcy views—namely, that, in order to have justification for believing P, there cannot exist a single normal world in which one falsely believes P—it nevertheless seems that Smith and Leplin are onto something important. For instance, going back to Smith's notion of *calling for an explanation*, there seems to be something significant about the observation that sometimes our evidence is such that it would call for a special explanation if a belief turned out to be false, while at other times no special explanation would be required. More generally, there appears to be something interesting and significant about Smith's and Leplin's observation that sometimes our body of evidence is such that there exists no normal world in which we falsely believe P, while at other times our evidence is such that there do exist a number of normal worlds in which we falsely believe P. As such, one of Smith's and Leplin's key insights, we might think, is that, just as there exists a diversity amongst our *domains of inquiry*, so too does there exist a diversity amongst our *epistemic environments*. With respect to some propositions P, we are in an epistemic environment in which, given the evidence, there exists no normal world in which we falsely believe P. Let's call this a *normal epistemic environment*.

> **Normal Epistemic Environment**. For any proposition P and subject S, S is in a normal epistemic environment with regard to P if, and only if, given the evidence, there exists no normal world in which S falsely believes P.

Unfortunately, our epistemic situation is not always like this. Sometimes we are in an epistemic environment in which, given our evidence, there do exist some normal worlds in which we falsely believe P. Let's call this a *risk accumulating epistemic environment*.

> **Risk Accumulating Epistemic Environment**. For any proposition P and subject S, S is in a risk accumulating epistemic environment with regard to P if, and only if, given the evidence, there exist some normal worlds in which S falsely believes P.

Hence, like truth pluralists who distinguish between different *domains of inquiry*, so J-pluralists can distinguish between different *epistemic environments*.

One important feature of individuating epistemic environments in this way is that it's exhaustive. For any proposition P and body of evidence E, one will either be in a normal epistemic environment with regard to P or in a risk accumulating epistemic environment, but never in both. More succinctly, for any proposition P and body of evidence E, a subject will always be in *one and only one* epistemic environment with regards to P.

With the notion of epistemic environments in place, we can now answer the Cooperation Question—the question of how the two justification-conferring properties cooperate. In a normal epistemic environment, the property that makes a belief justified is the property of *being normally true*; while, in a risk accumulating epistemic environment, the property that makes a belief justified is the property of *being highly probable*.

4.3 Some Examples

To illustrate what the emerging pluralist picture would look like in practice, let's briefly consider how it would deal with some of the cases considered earlier.

As proponents of normalcy views have argued compellingly, for many of our ordinary beliefs—for example, beliefs based on perception, memory, and testimony—there usually don't exist any normal worlds in which these beliefs are false. Hence, for beliefs formed in these ways, we're usually in a *normal epistemic environment*, and, subsequently, the property that justifies these beliefs is the property of *being normally true*. Importantly, since the property of *being normally true* satisfies (CP), *all* justified beliefs formed in a normal epistemic environment can be combined without justification being lost.

In contrast, for beliefs based on statistical evidence (for example lottery beliefs) and for the relevant beliefs in easy-defeat scenarios (for instance, Lightning), our evidence is such that there does exist a small number of normal worlds in which we falsely believe P. This means that, with regard to these propositions, we are in a risk accumulating epistemic environment, and, subsequently, these beliefs will be justified as long as they're highly probable. Since both lottery beliefs and beliefs in easy-defeat scenarios are highly probable, both of them will turn out to be justified. Hence, *contra* normalcy views, the pluralist picture that I propose delivers the seemingly correct results in these cases. Now, as is to be expected, given the problem of risk agglomeration, justified beliefs formed in a risk accumulating epistemic environment will not be closed under conjunction. For instance, while we might have justification for believing, of any given lottery ticket, that it is a loser (even that a number of tickets are losers), we will not have justification for believing that all tickets are losers. But this strikes me as exactly the right thing to say in these cases. Importantly, however, the fact that the conjunction principle will sometimes fail for beliefs formed in a risk accumulating epistemic environment does not affect the result that it holds in full generality for all beliefs formed in a normal epistemic environment. This, to reiterate, will include many ordinary beliefs based on perception, testimony, memory, etc.—beliefs for which, we said earlier, the validity of the conjunction principle seems particularly convincing.

With the Cooperation Question answered, the remainder of the paper will be concerned with some of the metaphysical details required to turn the proposed pluralism

into a workable theory of epistemic justification. The next section considers a very natural interpretation of what J-pluralism amounts to, but argues that it faces a number of objections. I then propose a more compelling alternative.

5. Problems for Simple J-Pluralism

It may be tempting to think about the proposed pluralism as follows: there are simply two different *kinds* of justification—N-justification, according to which a belief is justified in so far as it is *normally true*, and P-justification, according to which a belief is justified in so far as it's highly probable. Let's call this view *Simple J-pluralism*.

> **Simple J-pluralism (SJP)**. There are two different kinds of justification—N-justification and P-justification

Following (SJP), the term 'justification' ambiguously picks out different kinds of justification.[12] However, here we can again glean important insights from previous work on alethic pluralism. It is well-known that simple ambiguity versions of alethic pluralism, according to which there simply exist a number of different truth predicates, face a number of serious objections.[13] The most prominent ones are the *Mixed Inference Problem*, the *Mixed Compound Problem,* and what we may call the *Commonality Objection*. Since these problems are quite general in nature, we can expect them to apply equally to (SJP). Below, I briefly outline these objections and consider whether they really do pose a problem for (SJP).

5.1 The Mixed Inference Problem

The Mixed Inference Problem, broadly speaking, arises when different premises of a seemingly valid argument employ different notions of some predicate.[14] For proponents of (SJP), the problem will arise when it comes to explaining the validity of seemingly straightforward inferences in which different premises of an argument employ different notions of justification. Consider the following example.

You have invited Ted and Bob to a party. Ted has already told you that if he comes to the Party then so will Bob, because they only ever attend parties together. Now, let's assume that Ted is generally reliable about these sorts of things, and that you have no reason to doubt his sincerity, such that your belief that 'if Ted comes to the party, then so will Bob' *is normally true*. In this case, your belief in the conditional will be N-justified. Ted then calls you, telling you that he is planning on coming to the party and that the only situation in which he wouldn't attend is the very unlikely scenario that he wins the lottery which is drawn that afternoon. In that highly unlikely scenario, he would go out for a celebratory dinner instead. While the belief that Ted will come to the party is not true in all normal worlds, it is nevertheless overwhelmingly probable and therefore P-justified. Since you are justified in believing that if Ted comes to the

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[12] Previous proposals in the internalism/externalism debate, according to which there are different concepts of epistemic justification might be understood in this way. For instance, Goldman [1988] suggested that there are two different concepts of justification—one internal (*Weak Justification*) and one external (*Strong Justification*). Similarly, Alston [1985, 2005] distinguishes between *deontological justification* and *evaluative justification*. What the following discussion shows is that such simple pluralist views are unsustainable and, in so far as people find them attractive, they will need to be revisited.

[13] See Lynch [2009: ch. 3] for a good discussion.

[14] The Mixed Inference Problem was introduced by Tappolet [1997].

party then so will Bob, and you are justified in believing that Ted is coming to the party, it seems that you should be able to infer, and justifiably believe, that Bob will come to the party.

(1) You are justified in believing that if Ted comes to the party then so will Bob.
(2) You are justified in believing that Ted comes to the party.
Ergo, you are justified in believing that Bob will come to the party.

But how may the validity of this inference be explained? After all, different notions of justification feature in the two premises. The belief in the conditional is N-justified, while the belief that Ted will come to the party is P-justified. This gives rise to two interrelated needs, (i) to explain what (if any) justification-conferring property applies to the belief in the conclusion, and (ii) to explain how this is to be inferred from the two premises.[15] What the mixed inference problem shows is that, as soon as we have more than one *kind* of justification in play, seemingly straightforward inferences start to fail.[16]

5.2 The Mixed Compound Problem

A second, closely related, problem is the Mixed Compound Problem.[17] Consider, for instance, a conjunction of two propositions that are justified in different ways:

(3) It's sunny outside and my lottery ticket is a loser.

Given that both conjuncts are justified, it seems that the conjunction should also be justified. But in what way would it be justified? The first conjunct is justified in virtue of being normally true, while the second conjunct is justified in virtue of being highly probable. Seeing that the two conjuncts are justified in different ways— that is, by different justification-conferring properties—it might seem initially unclear in what way the resulting conjunction would be justified. Would my belief in (3) be justified in virtue of being normally true, or would it be justified in virtue of being highly probable? Fortunately, we can respond to this worry.

Recall that we defined epistemic environments in such a way that, for any proposition P, we'll be in either a normal epistemic environment or a risk accumulating epistemic environment (but never both). This will apply equally to conjunctions like (3). Since there does exist a normal world in which I falsely believe (3)'s second conjunct, there does exist a normal world in which I falsely believe (3). Hence, I'll be in a risk accumulating epistemic environment with regard to (3), and, as a result, my belief will be justified as long as it is sufficiently probable. Interestingly, then, it appears that

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[15] It might seem initially compelling to think that the conclusion will be justified in virtue of being highly probable. However, things aren't so simple, for it is unclear how this may be inferred from the two premises.

[16] A possible response to the Mixed Inference Problem for J-pluralism can be anticipated from previous work by Beall [2000] and Wright [2013]. In particular, it might be argued that all that's required for the argument to be valid is that *some* (rather than any particular) justification-conferring property is necessarily preserved throughout the inference. If this is correct, then J-pluralists needn't worry about the Mixed Inference Problem. However, since the success of this kind of reply is controversial, I'll simply grant that the Mixed Inference Problem does present a problem for (SJP).

[17] The Mixed Compound Problem for alethic pluralism was introduced by Williamson [1994]. Tappolet [2000] also discusses this issue.

J-pluralism—even on a simple picture like (SJP)—can avoid The Mixed Compound Problem.

5.3 The Commonality Objection

The final objection is very different from the previous two. When we say, of a number of beliefs, that they're epistemically justified, it seems natural to interpret what we are saying as follows: there exist a number of beliefs that share a common property—namely, the property of *being justified*. In other words, it seems natural to think that there should be some property that all justified beliefs have in common. But if we accept (SJP), according to which justification ambiguously picks out different properties (or concepts) in different contexts, then the notion of justification will not be unified in this way. There will be no single property that all justified beliefs have in common. This lack of commonality, we might think, indicates that (SJP) misses something important and therefore is somehow on the wrong track. Let's call this the *Commonality Objection*.[18]

What the Mixed Inference Problem and the Commonality Objection show is that, if we want to turn J-pluralism into a workable theory of justification, we need a more sophisticated metaphysics; a simple ambiguity view will not do. The final two sections will be concerned with developing such a metaphysics.

6. Justification as One and Many

How might J-pluralists avoid issues like the Mixed Inference Problem and the Commonality Objection? One promising strategy, and perhaps the only viable strategy, is to opt for a view on which there exists a single property (or concept) of justification that can somehow be realised or manifested in more than one way. In a slogan: justification needs to be both one and many.

This proposal can be cashed out in different ways. For instance, we might think that there needs to be a *single concept* of justification that can be satisfied by *multiple justification-conferring properties*.[19] Alternatively, we might think that there needs to be *a single property* named by 'justification' that can be realised by *multiple justification-conferring properties*.[20,21] Since, for our purposes here, nothing hangs on which of these two pictures we adopt (J-pluralism is compatible with both), I'll simply focus on the second—*one property/multiple realisers*—view. The constraint that justification needs to be both one and many can then be understood as follows (cf. Lynch [2009: 67–8]):

> **Justification is One**. There is a single property named by 'justification' that all and only justified beliefs share.

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[18] Lynch [2009: 57] presents a version of this objection for simple versions of alethic pluralism, although he doesn't call it the *Commonality Objection*.
[19] Wright [1992, 1999, 2013] uses this 'one concept/multiple realisers' picture as the basis for his version of alethic pluralism.
[20] Lynch [2009] argues for this 'one property/multiple realiser properties' picture in developing his version of alethic pluralism.
[21] Yet another option would be to adopt a complex, *epistemic environment-sensitive*, disjunctivist view. For a model, see Pedersen and Wright [2013: 92].

> **Justification is Many**. The single property named by 'justification' can be realised by more than one justification-conferring property.

A pluralist theory of justification that satisfies these constraints would be able to avoid issues like the Mixed Inference Problem and the Commonality Objection. After all, there would be a single property—the property of *being justified*—that all justified beliefs have in common and that would be preserved throughout valid inferences. And, at the same time, we would be able to make good on the promise of pluralism, since the property of *being justified* could be realised by a number of justification-conferring properties.

In what follows, I will put forward an original theory of justification that can accommodate these constraints—the *Functional Theory of Justification*. This theory takes inspiration from Lynch's [2009] *Functional Theory of Truth*.[22] According to the new theory, *being justified* is a functional property that can be realised by more than one justification-conferring property.

7. The Functional Theory of Justification

Any time that we set out to provide a functional theory of some target notion, we must first specify the target notion's functional role, or its 'job description'. How might we do this? According to one influential approach, we should start with a number of *basic platitudes* or *truisms* that capture what is widely taken to be essential to the target notion.[23] To borrow a phrase from Wright [1999: 226], we might start with a set of basic principles that 'chime well' with how we ordinarily think about the target notion.[24] I will, of course, not be able to offer and defend a definitive or exhaustive list of justification's basic platitudes here; attempting to do so would take us too far off course. What I can do, however, is to tabulate some principles that have found widespread support in the literature and that have struck many as capturing something important about the nature of epistemic justification. The following list, then, should be taken as a simple starting point for further theorising about justification's core platitudes; the items on it are contestable and open to revision.

> **Truth Candidacy**. S has justification for believing P only if, for S, the belief that P is a good candidate for being true.

> **Permission**. If S has justification for believing P, then it is *at least* permissible for S to believe that P.

> **Blameless**. If S has justification for believing P, then, as long as S's belief is based on the appropriate reasons, S is blameless if P turns out to be false.

Following a Lynch-style functionalism, these basic platitudes provide justification's functional role: let's call it the *j-role*. And, importantly, since the basic platitudes exhaust what is generally taken to be essential to the nature of epistemic justification, nothing more is required for a property to count as a justification-conferring property

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[22] As mentioned earlier, J-pluralism is compatible with different pluralist pictures. So, anyone who doesn't like Lynch's functionalism is free to embed J-pluralism into their preferred pluralist framework instead.
[23] This kind of approach to conceptual analysis is sometimes called 'the Canberra Plan'.
[24] This proposal is compatible with different methodological approaches. For instance, Wright [1999: 226] suggests *a priori* reflection as way to discover what these basic principles or laws are. However, others might want to employ the recent tools of X-Phi to discover these principles.

than to satisfy the j-role. This allows us to say the following about the nature of epistemic justification. (cf. Lynch [2009: 72]).

(J) ($\forall x$) x is epistemically justified if, and only if, x has a property that plays the j-role.

Importantly, (J) leaves open how many properties can play the j-role. There might be just one such property or there might be many. The key idea underlying J-pluralism, of course, is that there exist multiple justification-conferring properties—that is, that there are multiple properties that satisfy the basic platitudes and therefore can play the j-role. To echo Wright again (cf. [1992: 75]), there is no reason to expect that justification's core platitudes will constrain their satisfaction to within uniqueness. A variety of properties might qualify as justification-conferring properties, and we should be receptive to the possibility that the justification-conferring properties across different epistemic environments might differ in important respects.

What does it mean for a property to play the j-role? Following Lynch's general framework, in order for a property to play the j-role, it needs various features that allow it to satisfy justification's core platitudes (that is, Truth Candidacy, Permission, and Blameless). Following Lynch's convention, we may call them *Jish-features*. For instance, for any property J, subject S, and proposition P, J plays the j-role—that is, it is a justification-conferring property—if it has the following features: P has J only if, for S, P is a good candidate for being true; if P has J, then it is at least permissible for S to believe P; and, if P has J, then, as long as S believes P for appropriate reasons, S is blameless if P turns out to be false (cf. Lynch [2009: 72]). In short, the metaphor 'playing the j-role' amounts only to a property's having various features (the Jish-features) that allow it to play the j-role—that is, that allow it to satisfy justification's core platitudes.

Putting these ideas together provides the two core tenets of the Functional Theory of Justification.

(J1) In order for a proposition to be justified, it must have a property that plays the j-role; and

(J2) A property plays the j-role if it has the Jish-features specified by justification's core truisms.

How does the Functional Theory of Justification meet the demand that truth must be both one and many? Justification is one, in the sense that there exists a single property —the property of *being justified*—that all justified beliefs have in common. More precisely, *being justified* is the property essentially had by propositions only when (for some agent) they are good candidates for being true, when they are at least permissible to believe for an agent, and when an agent who believes the proposition for appropriate reasons,would be blameless if the belief turned out to be false.[25] At the same time, justification is many. It's many, because the functional property of *being justified* can be realised (or manifested) in different ways. In some cases, justification may be realised by the property of being true in all normal worlds; at other times, it might be realised by the property of being highly probable.[26] What property determines whether

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[25] Following Lynch [2009: 74], we might say that the justification-conferring properties *manifest* the property of *being justified*, where a property M manifests some other property F when 'it is *a priori* that F's essential features are a subset of M's essential features.'

[26] I assume here that both of the properties *being normally true* and *being highly probable* can satisfy justification's basic platitudes—and therefore qualify as justification-conferring properties. While I do not have the space to expand on this point here, I take it as rather uncontroversial that both high probability and normalcy views can satisfy Truth Candidacy, Permission, and Blameless.

someone has justification for believing P, as was argued earlier, depends on the epistemic environment. If, for some proposition P, we are in a normal epistemic environment—that is, if our evidence is such that there exists no normal world in which we falsely believe P—then justification will be realised by the property of *being normally true*. Importantly, as mentioned earlier, justification for believing all of these propositions will be closed under conjunction.[27] Alternatively, if we are in a risk accumulating epistemic environment with regard to some proposition—namely, if, given one's body of evidence, there do exist some normal worlds in which one falsely believes P—then justification will be realised by the property of *being highly probable*. Hence, by accommodating the idea that justification is both one and many, the Functional Theory of Justification can (i) accommodate the idea that, for a large number of propositions, justification will be closed under conjunction, (ii) avoid the worry of being too demanding, and (iii) avoid both the Mixed Inference Problem and the Commonality Objection which troubled the simple ambiguity version of J-pluralism.

Finally, as we have seen, the pluralist picture of justification that emerges is in no way unprincipled or *ad hoc*, but follows naturally from a more general and indeed very popular metaphysical framework outlined above. At its heart is a *minimalist conception of epistemic justification*, according to which the essential nature of justification is captured by a set of basic platitudes that can plausibly be satisfied by more than one justification-conferring property.

8. Conclusion

This paper has presented a new pluralist theory of epistemic justification according to which there exists more than one justification-conferring property in virtue of which a belief can come to be justified. The key merit of what I called the Functional Theory of Justification is that contra probabilistic accounts, justification for believing many ordinary propositions will be closed under conjunction; and contra non-probabilistic accounts, the new theory isn't too demanding. This allows the new theory to answer Justification's Scope Problem. Furthermore, since so far there has been very little systematic work on pluralist views of justification (or related epistemic concepts), the Functional Theory of Justification presented here may also serve as a blueprint for future pluralist projects in epistemology.[28]

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[27] More precisely, the functional theory satisfies the following version of the conjunction principle:

> **Conjunction Principle Local (CPL).** If the proposition that P is justified in virtue of being true in all normal worlds, and the proposition that Q is justified in virtue of being true in all normal worlds, … and the proposition that N is justified in virtue of being true in all normal worlds, then the conjunction (P & Q & … & N) will be justified in virtue of being true in all normal worlds.

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