The Epistemic Regress Problem

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[I]t is not possible to untie a knot which one does not know.
—Aristotle, *Metaphysics* β 1 995^a29-30 (1984, 1572).

Lather, rinse, repeat.
—Shampoo Instructions.

ABSTRACT. The best extant statement of the epistemic regress problem makes assumptions that are too strong. An improved version assumes only that that reasons require support, that no proposition is supported only by endless regresses of reasons, and that some proposition is supported. These assumptions are individually plausible but jointly inconsistent. Attempts to explain support by means of unconceptualized sensations, contextually immunized propositions, endless regresses, and holistic coherence all require either additional reasons or an external condition on support that is arbitrary from the believer's own point of view.

1. INTRODUCTION

It seems that we have knowledge. To know a proposition P_0 we must have a reason P_1 that supports P_0 by providing evidence for it. A proposition, however, is a reason only if there is a proposition that supports it. This requires that we have a reason P_2 that supports P_1, and so on. The resulting sequence of reasons is endless: infinite or circular. We cannot, however, acquire support by means of endless regresses. Thus we have no knowledge.

That, roughly, is the epistemic regress problem. Some of our core epistemic assumptions are jointly inconsistent, a paradox. To solve this problem we must understand it. Unfortunately, the best extant statement of the problem makes unduly strong assumptions and thus does not

capture its deepest challenges. Contrary to the received version, the regress paradox is not just a problem about knowledge and justification, it concerns evidential support, a more basic epistemic value.

This paper presents an improved version of the epistemic regress problem. I do not claim that there is no solution to the problem—I hope there is—but I do claim that some popular epistemologies do not solve it. In particular, I argue that unconceptualized sensations, contextually immunized evidence, endless regresses, and holistic coherence are insufficient for support. To provide support, such features must either include propositions that require support or be external factors that make the propositions that have them arbitrary from the believer's own point of view.

2. TWO VERSIONS

This section presents the best extant version of the problem and my alternative. I begin by clarifying the crucial concepts of *reasons* and *regresses*.

In paradigm cases, a reason for a proposition P_0 is a believed proposition P_1 that provides the believer with evidence for P_0. A proposition P_1 provides supporting evidence for a proposition P_0 only if P_1 *implies* P_0 by standing in a relevant logical or quasi-logical relation to P_0: P_1 entails or inductively implies P_0; the probability of P_1 given P_0 is sufficiently high; P_1 stands in an irreducibly epistemic relationship to P_0 such that P_1 would justify P_0; *et cetera*.[1] The nature of such relations and which is required for support are contested but that does not affect the structure of the regress problem.

Implication is insufficient for support since propositions can stand in the relevant

implication relation despite the fact that a person who recognizes that relation has no reason to believe either one. I see that *I have $10 million* implies that *I have at least $5 million* but (alas) I have no reason to believe either proposition. Implication is necessary but not sufficient for support.[2]

Call a finite or infinite sequence of propositions $\sigma = \langle P_0, P_1, \ldots P_n (\ldots)\rangle$ *implication-ordered* (*I-ordered*) just in case σ has propositions in at least its first two places and every member of σ is implied by its successor, if it has one. Similarly, call a sequence of propositions σ *support-ordered* (*S-ordered*) just in case σ is I-ordered, the elements of σ are propositions relevantly accessible to a person at a time, and every member of σ is supported by its successor, if it has one. So a *regress of reasons* is an S-ordered sequence of propositions.

An *infinite* regress of reasons is an S-ordered sequence every component of which has a successor. There are two kinds of such sequences, however, and I shall refine my terminology to capture this distinction. First, there are sequences with infinitely many filled *places*. Sequence σ_S = ⟨*I have three sisters*, *The number of my sisters* = √*9*, *I have three sisters*, …⟩ and the sequence σ_T = ⟨*I am at least 7 feet tall*, *I am at least 8 feet tall*, *I am at least 9 feet tall*, …⟩ have this feature. Call such sequences 'endless.' An *endless regress of reasons*, then, is an S-ordered sequence of propositions every member of which has a successor. Second, there are endless regresses with infinitely many *components*. Endless sequence σ_T has infinitely many components, unlike endless sequence σ_S. I reserve 'infinite' for sequences with infinitely many components. An *infinite regress of reasons*, then, is an S-ordered sequence of propositions σ with infinitely many components. Every infinite regress of reasons is endless, but not conversely.

I now state the two versions of the regress problem. The constituent propositions are

given shorthand names and stated in (philosopher's) English and in a first-order language. Let the variables 'x', 'y', and 'z' range over the domain **P** of propositions relevantly accessible to a person at a time. Assign the one-place predicate 'J' to the members of **P** that are epistemically justified: the propositions that it is permissible, virtuous, or otherwise good for the person to accept at that time. Let the two-place predicate 'S' express the relation between members of **P** that obtains when the first is supported by the second.[3]

Let the two-place predicate 'ERS' (for 'Endless Regress of Support') denote the set of ordered pairs $\langle x, y\rangle$ of propositions in **P** such that x is the first and y is the second member of an endless S-ordered sequence of propositions in **P**. So the sentence 'ERSP_0P_1' is true just in case P_0 and P_1 are the first two components, in that order, of an endless S-ordered sequence. 'ERS' is a device for referring to endless regresses of reasons by enumerating only their first two members. An ordered pair of propositions $\langle P_0, P_1\rangle$ satisfies 'ERS' just in case there is an endless S-ordered sequence of accessible propositions beginning with P_0 and P_1—$\langle P_0, P_1, \ldots\rangle$—an endless regress of reasons. Similarly, let 'IRJ' (for 'Infinite Regress of Justified propositions') be a two-place predicate satisfied by any ordered pair of accessible propositions $\langle x, y\rangle$ just in case x and y are the first members of an infinite S-ordered sequence of justified propositions.

The best extant version of the epistemic regress problem is posed as a paradox, a set of plausible propositions that are jointly inconsistent:[4]

(R1) *Justification Requires Justified Support*. Every justified proposition is supported by a justified proposition.

$(\forall x)(\mathrm{J}x \rightarrow (\exists y)(\mathrm{J}y \,\&\, \mathrm{S}xy))$.

(R2) *Some Proposition is Justified*. There is at least one justified proposition.

$(\exists x)\mathrm{J}x$.

(R3) *Support is Irreflexive*. No proposition supports itself.

$\sim(\exists x)\mathrm{S}xx$.

(R4) *Support is Transitive*. If a proposition x is supported by a proposition y and y is supported by z, then x is supported by z.

$(\forall x)(\forall y)(\forall z)((\mathrm{S}xy \ \& \ \mathrm{S}yz) \rightarrow \mathrm{S}xz)$.

(R5) *No Infinite Regress of Justified Propositions*. There is no infinite S-ordered sequence of propositions each member of which is justified.

$\sim(\exists x)(\exists y)\mathrm{IRJ}xy$.

(R1)-(R5) are jointly inconsistent. *Justification Requires Justified Support* and *Some Proposition is Justified* jointly imply that there is a proposition P_0 and a proposition P_1 such that P_0 and P_1 are justified and P_0 is supported by P_1. Given *Support is Irreflexive*, $P_0 \neq P_1$. Since P_1 is justified, *Justification Requires Justified Support* implies that there is a justified proposition P_2 that supports P_1 whence, by *Support is Irreflexive*, $P_1 \neq P_2$. Given *Support is Transitive* it follows that P_0 is supported by P_2, hence, by *Support is Irreflexive*, $P_0 \neq P_2$. At each step, therefore, the justified proposition that is required to support its predecessor cannot be identical to any proposition earlier in the sequence, so an infinite regress of justified reasons is required. (R1)-(R4) thus jointly imply that there is an infinite S-ordered sequence of justified propositions $\sigma = \langle P_0, P_1, \ldots\rangle$. Since this is true just in case P_0 and P_1 are the first two members of an infinite S-ordered sequence of justified propositions, there are propositions x and y that are the first two

members of an S-ordered infinite sequence of justified propositions. This is the negation of *No Infinite Regress of Justified Propositions*, so (R1)-(R5) are jointly inconsistent.

(R1)-(R5) are too strong. The paradox assumes only that supporting propositions are supported, that no supported proposition requires an endless sequence of reasons, and that some proposition is supported:

(1) *Reasons are Supported*. Only supported propositions provide support.
$(\forall x)(\forall y)(\mathrm{S}xy \rightarrow (\exists z)\mathrm{S}yz)$.

(2) *No Proposition is Supported only by Endless Regresses*. Propositions supported only by endless S-ordered sequences are unsupported.
$(\forall x)[(\forall y)(\mathrm{S}xy \rightarrow \mathrm{ERS}xy) \rightarrow \sim(\exists z)\mathrm{S}xz]$.

(3) *Some Proposition is Supported*. At least one proposition is supported by a proposition.
$(\exists x)(\exists y)\mathrm{S}xy$.[5]

(1)-(3) are jointly inconsistent. *Reasons are Supported* implies that any proposition P_0 is supported by a proposition P_1 only if P_0 and P_1 are the first two members of an endless—infinite or circular—regress of reasons.[6] Given *No Proposition is Supported only by Endless Regresses* it follows that that no proposition is supported. This contradicts *Some Proposition is Supported*.

If we assume that *Knowledge Requires Justification*:

For all x, x is known only if x is justified,

and that *Justification Requires Support*:

For all x, x is justified only if there is a y such that x is supported by y,

the problem also threatens core assumptions about justification and knowledge. Support is the keystone, however.

A set of jointly inconsistent propositions is a paradox only if each is independently plausible. What can be said for (1), (2), and (3)?

3. THE ASSUMPTIONS ARE PLAUSIBLE

I now give preliminary cases for (1), (2), and (3). Additional support will be given in my discussion of proposed solutions.

Why accept *Reasons are Supported*? A proposition P_0 is supported by a proposition P_1 only if P_1 provides evidence for P_0. This requires that P_1 implies P_0, but this is insufficient. Support requires that the relevant propositions satisfy an additional condition such as that expressed by (R1) *Justification Requires Justified Support* or that expressed by (1) *Reasons are Supported*.

To require that reasons be known or justified is too strong since unjustified propositions can provide support. Minimally credible testimony can be evidence for a proposition it implies even if we are not justified in believing the testimony itself. Suppose that Squealer's testimony (P_1) *I (Squealer) saw Mugsy do it* is minimally trustworthy but falls short of the threshold for

justification. Suppose that given all available evidence, (P_0) *Mugsy did it* is no more reasonable than its negation. Under these conditions, P_1 is evidence for P_0 though neither P_0 nor P_1 are justified.[7] *Reasons are Supported* is compelling, therefore, because it explains the probative value of supporting propositions: we have reasons for thinking that they are true even if those reasons do not satisfy all conditions on justification or knowledge.

I assume that a proposition P_0 is a reason for a proposition P_1 for a person S only if P_0 and P_1 are accessible to S, P_1 implies P_0, and P_1 is not epistemically arbitrary from S's point of view. A powerful consideration in favor of *Reasons are Supported* is that it implies that reasons are not epistemically arbitrary from the believer's point of view. A proposition is epistemically arbitrary *full stop* for a person S in a situation just in case there are no characteristics of that situation that make believing *P* epistemically preferable to believing *not-P*. A proposition is arbitrary *from the believer's point of view* just in case there are no such characteristics *accessible to the believer* that make *P* epistemically preferable to *not-P*. *P* is epistemically preferable to *not-P* for a person S only if *P* is more likely to be true than *not-P* given all of the features of S's situation. A characteristic Φ is accessible to a believer S in a situation just in case it is possible for S to distinguish cases in which Φ obtains from cases in which Φ does not obtain. For example, it is possible for me to distinguish cases in which I seem to see Mugsy confessing from cases in which I do not. From my own point of view, however, I am unable to distinguish situations in which my perception both seems and is highly reliable from situations that are otherwise similar except that my perception is systematically erroneous. We must not confuse questions about the conditions in which a proposition P_1 is a reason for a proposition P_0 for S from the conditions in which S has a reason to believe the higher-level proposition that *P_1 is a reason for P_0*. We have

and use reasons long before we are able to recognize them as such so I assume that the conditions that make a proposition non-arbitrary from one's own point of view do not require this ability.

This does not imply that there are no *external* conditions on reasons. It implies only that the propositions that are reasonable for a person S have some characteristic detectable by S that distinguishes them from unreasonable propositions. If *Reasons are Supported* is true, there are discernible features of one's situation—accessible propositional evidence—that make the target proposition epistemically preferable to its negation. *Reasons are Supported* is a weak condition that helps to explain the probative value of reasons and implies that supported propositions are not arbitrary from the believer's point of view.

No Proposition is Supported only by Endless Regresses also plausible. It does not imply that there are no endless regresses of reasons. It says only that support does not *require* endless regresses: if *every* proposition supporting P_0 does so only by means of an endless regress, then P_0 is not supported. Perhaps there are endless regresses that can enhance the support one already has for a proposition. *No Proposition is Supported only by Endless Regresses* is plausible because propositions supported only by circles or by infinite regresses are arbitrary from the believer's own point of view. I shall first consider the case of propositions supported only by circles and then the case of propositions supported only by infinite regresses.

Nothing about a circular sequence of I-ordered propositions $\sigma_C = \langle P_0, P_1, \ldots P_0 \rangle$ *per se* makes it a sequence of reasons, that is, S-ordered. To be S-ordered, σ_C must satisfy some additional condition. If this condition is not arbitrary from the believer's own point of view it must include having an independent reason P_1' to believe some member of σ_C, that is, it must

include having a reason that does not itself depend upon σ_C. By parity of reasoning, P_1' is not itself supported only by a circular sequence of reasons.

For example, sequence σ_L = ⟨*I was born in 1957 and will live 70 years*; *I will die in 2027*; *I was born in 1957 and will live 70 years*⟩ is a circular I-ordered sequence of propositions. Every member of σ_L is supported *if* its successor is. However, σ_L is not S-ordered for me even if I am aware that *I will die in 2027* implies *I was born in 1957 and will live 70* and vice versa. For despite this awareness the members of σ_L are arbitrary: I have no unconditional reason to believe any of them. So circular I-ordered sequences of propositions are not S-ordered *per se*. A circular I-ordered sequence of propositions is S-ordered only if it has some additional feature that explains why it is a sequence of *reasons*.

Consider, then, a circular I-ordered sequence of propositions $\sigma_C = \langle P_0, P_1, \ldots P_0 \rangle$. Each member of σ_C is conditionally supported: P_n is supported *if* P_{n+1} is, but σ_C is not S-ordered *per se*. The members of σ_C must satisfy some additional condition. This condition must include an independent reason to believe a member of σ_C. For without a reason P_1'—a reason not already a member of σ_C—to believe some member of σ_C, the sequence will be arbitrary from the believer's own point of view. If the sequence of propositions that conditionally supports P_1' is itself circular, the problem arises again. So no proposition is supported only by circular sequences of propositions. Therefore *No Proposition is Supported only by Endless Regresses* holds for the case of circular sequences of reasons.

The same problem afflicts infinite sequences of I-ordered propositions. Every proposition in such a sequence is supported *if* its successor is. However, no feature of an I-ordered infinite sequence of propositions *per se* explains why any of its members is unconditionally supported.

Indeed, every proposition is the first member of an infinite I-ordered sequence.[8] So there must be some additional feature that distinguishes S-ordered infinite sequences of propositions—infinite regresses of *reasons*—from merely I-ordered infinite sequences. If this feature is not arbitrary from the believer's own point of view, it must include an independent reason P_1'—a reason outside the infinite sequence—to believe some member P_n of the infinite sequence in question. By parity of reasoning, what makes P_1' a reason for P_n cannot consist merely in P_1''s being the first member of an infinite I-ordered sequence of propositions, P_1' must satisfy an additional condition. If it is not arbitrary from the believer's own point of view, this condition must include support by an accessible proposition P_1'' that is not a member of the new regress.[9] So *No Proposition is Supported only by Endless Regresses* holds for infinite and circular sequences of I-ordered propositions for the same reason. *No Proposition is Supported only by Endless Regresses* is therefore plausible because propositions supported only by endless regresses are arbitrary from the believer's own point of view.

Finally, consider *Some Proposition is Supported*. To reject this proposition is to adopt radical skepticism about support. If *Knowledge Requires Justification* and *Justification Requires Support* are true but *Some Proposition is Supported* is false, we have no knowledge and no justified beliefs. We might, however, lack knowledge or even justified belief but have support for a proposition. For this is true just in case we have at least one reason to believe some proposition, whether or not that proposition satisfies additional conditions on justification or knowledge. Giving this up is even less plausible than giving up the claim that we have knowledge or that we have justified beliefs. Furthermore, *Some Proposition is Supported* must be true if some propositions are more reasonable than others. For if *Some Proposition is*

Supported is false, then no one ever has any reason to believe any proposition, hence no more reason to believe one proposition than another. If there is a weak link in the regress paradox, *Some Proposition is Supported* does not seem to be it.

The regress problem requires only modest and plausible conditions on support that, alas, are jointly inconsistent. So at least one plausible core assumption about support is false. But which? To address this question, I turn to a consideration of some attractive responses to the regress problem. None succeeds. I conclude that it is difficult to solve the problem while maintaining that reasonable beliefs are not arbitrary from the believer's own point of view.

4. FOUNDATIONALISM AND *REASONS ARE SUPPORTED*

A *foundationalist* theory of justification, minimally, holds that (i) some propositions are *basic* because they are justified without the support of other propositions and that (ii) any non-basic proposition is justified only if it is supported by a basic proposition, or supported by a proposition that is supported by a basic proposition, and so on. Foundationalists therefore reject *Reasons are Supported* on the grounds that basic propositions can be reasons that are not supported by other propositions. Either basic propositions are unsupported or they are supported by non-propositional aspects of accessible states. Since unsupported propositions are arbitrary from the believer's own point of view, foundationalists must hold that some propositions are supported by accessible non-propositional states. States that lack propositional content such as unconceptualized sensations are reasons. Unfortunately, such states are insufficient for support.

Black rejects (R1) *Justification Requires Justified Support* since, for example, *there is a smell of cigarettes* is a sense experience, not a belief, that can be a reason to believe *someone has*

been in the room.[10] This is compatible with *Reasons are Supported*, however, for it does not imply that only *believed* propositions can be reasons. *There is a smell of cigarettes* is a state with propositional content and thus, by *Reasons are Supported*, must itself be supported if it is to support *someone has been in the room*.

Foundationalists must therefore make a choice. Either basic propositions are unsupported or some non-propositional features of accessible states are reasons for basic propositions. Since the former implies that basic propositions are arbitrary from the believer's own point of view, the second choice is required if support is not arbitrary.

Moser gamely makes this choice.[11] His view—*intuitionism*—is that all regresses of reasons for justified empirical propositions terminate propositions supported by sensory apprehensions or intuitions.[12] Since having sensory intuitions does not involve judging or classifying their contents, these states lack conceptual, hence propositional content.[13] Intuitions can, however, support propositions believed "in light of" them.[14] In sensing "bluely," for example, one has defeasible, non-propositional sensory support for the proposition that *something blue is before me*. Thus Moser can maintain both that justified propositions require support (where 'support' is now construed to include the relevant relations between the non-propositional contents of sensory apprehensions and the associated propositions) and that regresses of reasons for empirical propositions terminate with sensory apprehensions, not propositions. Sensory apprehensions are non-arbitrary and epistemically relevant because they are immediately apprehended extra-conceptual states, the unspoiled sensory data that constitute the proper foundation of our supported empirical beliefs. Because they are accessible mental states with sensory content, intuitions can provide support that is not arbitrary from the

believer's own point of view. Because they are not interpretations or classifications, they require no support. So *Reasons are Supported* is false. Problem solved, no?

No. Assume we have sensory experiences with non-conceptual content. Such states require no support because we can be in them without having beliefs or other attitudes that commit us to any propositions concerning their nature or significance. Call mental states that commit the person in them to propositions '*assertoric*' since they involve the sort of commitment to the truth of propositions that sincere assertions do. For example, beliefs, expectations, suppositions, and takings are assertoric, but desires, hopes, wishes, and "raw" sensory states are not. The problem with intuitionism is that non-assertoric sensory states such as unconceptualized sensations are insufficient to support beliefs. In particular, they cannot support beliefs unless they are accompanied by assertoric states with the hyperintentional propositional content that is distinctive of the content of *de dicto* beliefs. If apprehensions were sufficient for support, we would have support for propositions we have no reason to believe, a manifest absurdity. Let me explain.

The content of d*e dicto* beliefs is hyperintentional: the belief that *a is* Φ is not the belief that *b is* Ψ even if it is nomologically or even conceptually necessary that *a* is *b* and Φ *is* Ψ. The hyperintentionality of the content of beliefs is reflected in the *intensionality* of belief descriptions. *S believes that a is* Φ is not equivalent to *S believes that b is* Ψ even if it is somehow necessary that *a* is *b* and Φ is Ψ. The identity of beliefs and the truth of statements describing them depend upon the ways in which the relevant states of affairs are represented.[15]

How might sensory apprehensions support beliefs? The unconceptualized sensation of a cold, pink surface is evidentially relevant to beliefs about cold by being *of cold*, not by being *of*

pink. Thus it is only aspects of experiences, not complex sensations themselves, that could support particular beliefs. Presumably it is these aspects of experience that are the contents of sensory intuitions. In Moser's view, to have sensory intuitions and to form basic beliefs "in light of them" is to form beliefs on the basis of aspects of our sensations by means of directing our attention upon the relevant sensory features. So the infrastructure of consciousness must perform significant discrimination and sorting before it yields the sensory intuitions that constitute the alleged foundations of empirical knowledge.

Even if we suppose that the processes that yield such intuitions do not involve supporting assertoric mental states, the resulting intuitions cannot support the corresponding beliefs by themselves. For the content of a sensory apprehension of even a single property is itself thick with aspects and there can be many distinct, correct ways of conceptualizing those aspects. To support the propositional content of a belief, an intuition must involve the direction of attention not just upon a sensed property, but upon the relevant aspect of that property. The intuition of a sensed property can support a proposition involving that property only if the apprehension is (or is accompanied by) an assertoric state with the same hyperintentional propositional content that is characteristic of the content of *de dicto* beliefs.

Here is why. Even if a sensation represents a property Φ it will not support propositions about Φ unless Φ is apprehended in a way that picks out Φ from other sensed properties in the same sensory complex. The apprehension of a sensory complex that happens to include a sensation of Φ will not support beliefs about Φ unless the apprehension represents Φ in a way that screens Φ off from other properties in the same complex: we may not recognize a sensation of Φ even if it happens to be an element of our complex sensory state. So a sensation of Φ need

not support beliefs about Φ even if the sensation is evidence for the relevant proposition: Φ must be salient in the apprehension.

Attention therefore plays a crucial role. A sensation of Φ cannot support beliefs about Φ unless one's attention is directed upon the sensation of Φ itself, that is, unless one's attention picks the sensation of Φ out of the complex sensory state that includes it. The trouble is that the sensed property Φ we attend to itself has many aspects and only hyperintentional states can schematize Φ in a way that brings the relevant aspects to bear on the target belief. The bare apprehension of a single sensed property would, by itself, support too much—its content is too "thick"—since there can be ungrasped aspects of that property. The content of attending to a sensation of Φ does not support a proposition about Φ unless it is accompanied by a hyperintentional assertoric representation of Φ. Contrary to intuitionism, apprehensions of Φ must be (or be accompanied by) assertoric states with the relevant hyperintentional propositional content. For unless this is so, apprehensions of Φ would support beliefs about Φ even if the former do not represent the aspects of Φ that are expressed by the thin, hyperintentional content of the corresponding believed proposition.

Consider an example. If property *W* (*being water*, say) is (or is otherwise necessarily coinstantiated with) property *H* (*being* H_2O), then any sensation of *W* is a sensation of *H*. Not every sensation of *H* supports beliefs about *H*, however. For beliefs involving properties that happen to be signaled by sensations need not be held in light of the relevant aspects of the sensations, be causally sustained (or otherwise objectively controlled) by the relevant aspects of the properties they represent, or in any other way be appropriately linked to the relevant aspects of the sensed properties. A sensation of *H* may be inaccessible under the relevant description. A

person S can have a sensation X of *H* (=a sensation of *W*) that signals the truth of propositions about *H,* but even if S's attention is directed upon the sensory content of X, S's beliefs about *H* can be unsupported. For S might not, perhaps cannot, apprehend X as a representation of *H*. In apprehending the non-conceptual sensory content of X, S might not apprehend that content as a representation of *H*. So if they are to support beliefs, apprehensions must be or be accompanied by assertoric hyperintentional propositional states. In this case, S must *take* the relevant sensation to be of H_2O. Even if the unconceptualized sensory state figures somehow in the support of S's belief about *H*, that support also requires a representation of *H* that need not be a representation of *W* even if it is necessary that *H* is *W*.[16] Thales had sensations of H_2O but could not apprehend them as such so they did not support propositions about H_2O for him, even if he could have had access to such propositions.[17]

Intuitionism thus faces a fatal dilemma. If apprehensions of sensory content are sufficient to support beliefs but lack assertoric hyperintentional propositional content, then they would support propositions a person has no reason to believe, a manifest absurdity. If, however, apprehensions have such content, then they might support the corresponding propositions, but the regress problem remains. For, given *Reasons are Supported*, the assertoric states by means of which persons schematize and apprehend the relevant aspects of their sensations must themselves be supported if they are to provide support for other propositions.

Foundationalists have two choices. They can reject *Justification Requires Support* by claiming that basic propositions are justified without support because they have a relevant property that does not involve having reasons for basic propositions. Some hold, for example, that some beliefs are basic because they are produced by sufficiently reliable processes. The

alternative is to claim that basic propositions are unjustified: *Justification Requires Support* is true but *Reasons are Supported* is false. According to this view, unsupported, hence unjustified, propositions can be reasons. Any view that rejects *Justification Requires Support* is incompatible with the claim that justified beliefs are not arbitrary from the believer's own point of view. A tempting view of the second sort is a version of *social contextualism*.

5. A CONTEXTUALIST OBJECTION TO *REASONS ARE SUPPORTED*

A social contextualist can hold that justified propositions depend upon unsupported, contextually immunized reasons that are neither justified nor unjustified. Although this position is able to maintain that justified beliefs are not arbitrary from the believer's own point of view, it is false. It presupposes a mistaken view about the connection between legitimate doubts and having reasons. Furthermore, the unsupported reasons that are basic in contexts of inquiry are themselves arbitrary from the believer's own point of view.

Social contextualism holds that *Justification Requires Support* is true but that there are unsupported, hence unjustified, propositions that can be reasons because social practices of inquiry immunize them from criticism. So *Reasons are Supported* is false. Specifically, social contextualism holds that a proposition *P* is justified for a person in context of inquiry C if, and only if, that person has reasons for *P* in C that are strong enough to defeat the doubts about *P* that can legitimately be raised in C.[18] So *Justification Requires Support* is true. Propositions that cannot legitimately be doubted in a context are basic but unjustified in that context for they can provide support but require none. Whether a doubt is legitimate is determined by the social conventions governing inquiry in a context. Exactly which propositions are basic is determined

by the relevant conventions and therefore varies across contexts. Since doubts about some propositions are illegitimate because of their role in a particular context of inquiry, they are basic. Basic propositions can be reasons but are neither justified nor unjustified. Since every context immunizes some propositions from doubt, each context includes basic propositions that are, so to speak, unsupported supporters of justified propositions.

Assuming that a social contextualist says about justification what Wittgenstein says about knowledge,[19] the position outlined in *On Certainty* is a version of social contextualism that accepts *Justification Requires Support* but rejects *Reasons are Supported*: some reasons are basic since they make inquiry possible but are neither justified nor unjustified. Support for justified propositions can be provided by propositions that "stand fast" for us but that we cannot correctly claim to be justified or unjustified.[20] For to claim to be justified in believing a proposition is *ipso facto* to admit that doubts about it are legitimate and thus to commit oneself to having reasons for it.

Social contextualists can thus maintain that the value of justified propositions consists (partly) in our having reasons for them and, *contra* intuitionism, that only propositions provide support. The propositions that are justified in a context of inquiry require support, but all sequences of reasons terminate with propositions that cannot correctly be said to be justified because they are partly constitutive of the context of inquiry and are thus immune from doubt.[21] The basic propositions that terminate sequences of reasons are partly constitutive of the social infrastructure required for inquiry. Claims that such propositions are justified and claims that they are unjustified are equally incorrect or meaningless. G.E. Moore is mistaken when he gives his famous list of some of the things he takes himself to know despite the fact that it would be

equally mistaken to deny that he knows them.[22] Demanding reasons for such propositions expresses inappropriate doubt.

Social contextualism thus implies that there is a connection between the propriety of expressing doubt about a proposition *P* and the requirement that *P* be supported, for according to social contextualism *P* requires support for a person only if it is appropriate to demand that the person provide reasons for *P*. This confuses the appropriateness of demanding or giving reasons with the value of having them. In particular, social contextualism presupposes that *Reasons are Supported* is incompatible with the view that *in any given context of inquiry there are some reasons for which support cannot legitimately be asked*. But these are compatible. For it can be legitimate in a specific context to require that no one be allowed to demand reasons for a proposition *P* because this will prevent the inquiry from proceeding, while it is also true that unless one has reasons for *P*, *P* is arbitrary from one's own point of view.

Consider this analogy. While a professor is demonstrating a theorem, it is inappropriate for logic students to demand documentary evidence of the professor's qualifications for teaching the course, but this does not mean that the professor need not have the qualifications. Similarly, there is no connection between the inappropriateness of expressing doubt about a proposition *P* in specific contexts and the epistemic requirement that one have reasons for *P*. Indeed, if we lack reasons for the assumptions we make in specific contexts we would lack the ability to recognize them as non-arbitrary, trustworthy guides to the truth.

Inquiries take much for granted since the benefits of cooperation and the shortness of life require that we rule some questions out-of-bounds in specific contexts. It is bad form if an historian, for example, objects to an account of a battle on the grounds that the account

presupposes that there are truths about the past. However, unless truth is merely what is or would be defensible given the assumptions and practices that happen to structure inquiry, it can be legitimate to investigate whether what we normally accept without demanding reasons is true. Such fundamental questioning has sometimes revolutionized our understanding and our methods of inquiry. Even when they are embedded in the conventions that make specific inquiries possible, assumptions undertake evidential debts. When the epistemic bills come due, if persons have no reasons to think that their assumptions are true, their enterprise is bankrupt because their assumptions are arbitrary. In this case, the arbitrariness is not due to an inaccessible difference between believed propositions and their negations, for it is presumably accessible to persons whether or not there is a consensus about what is to be accepted without question. The problem is with the other constraint on arbitrariness: the characteristics that are accessible to the believer must make propositions epistemically preferable to their negations.[23] Unless truth just is what is produced by consensus, consensus does not make propositions epistemically preferable to their negations.

Social contextualism is a close relative of the most powerful and troubling version of skepticism. *Skeptical conventionalism* claims that because we cannot have evidential support for the propositions we believe, we should adopt the beliefs and practices of our own time and place. Skepticism arrives at conventionalism by way of the claims that the conditions on evidential support cannot be satisfied—*Reasons are Supported* and *No Proposition is Supported only by Endless Regresses*, for example—but that we must have beliefs in order to carry on. Contextualism arrives at conventionalism by means of the analogous claims that there can be no reasons for our basic assumptions and that what counts as a reason is just what our practices

dictate. Since, according to contextualism, the only concepts of evidence we have are those embodied in our practices, what we take to be good reasons are good reasons. At bottom, social contextualism is skeptical conventionalism disguised with the fig leaf of unsupported, merely conventional reasons.

Social contextualism confuses the conditions in which it is acceptable to demand reasons with the conditions in which it is valuable to have them. Further, since it holds that the propositions that constitute the foundations of inquiry are unsupported, they are arbitrary because they lack an appropriate connection to truth.

6. TRANSITIVITY AND CIRCULARITY

Post proposes to solve the received version of the regress problem by rejecting (R4) *Support is Transitive*.[24] This will not solve the more resilient problem, however. Still, this position deserves further consideration because *Support is Transitive* is connected to the important question of whether circular sequences of propositions can be support-affording. Unlike the received version of the problem, no consistent subset of (1)-(3) implies that circles of reasons are always vicious. So it will not solve the regress problem to claim that some circles of reasons are not vicious.

Post argues that the relevant epistemic support relationship is not transitive since there are propositions P_0, P_1, and P_2 such that P_0 is supported by P_1 and P_1 is supported by P_2, but P_0 is not supported by P_2. If so, this solves the received version of the problem. It does not solve the more resilient problem, however, for no consistent subset of (1)-(3) implies *Support is Transitive*.

Support is Transitive is, however, relevant to a question that is important to the regress problem: *is circularity always vicious*? *Support is Transitive* and *Support is Irreflexive*, if true, jointly imply that the answer is "yes." For *Support is Irreflexive* implies that no proposition is supported by itself. Thus no *small circle*—a sequence of propositions with the form $\langle P_0, P_0 \rangle$—is support-affording. What about *big circles*, I-ordered sequences such as $\sigma_{BC} = \langle P_0, P_1, \ldots P_m (=P_0) \rangle$ such that $P_0 \neq P_1$? A big circle σ_{BC} is support-affording only if each of its members is supported by its successor, if it has one. By *m* applications of *Support is Transitive*, σ_{BC} is support-affording only if P_0 is supported by P_m $(=P_0)$, that is, only if P_0 is supported by itself. This is incompatible with *Support is Irreflexive*. So *Support is Irreflexive* and *Support is Transitive* jointly imply that no circular sequence of propositions is support-affording. Rejecting *Support is Transitive* thus opens the door to the possibility of solving the regress problem by holding that big circles of reasons can be support-affording. For without the assumption of transitivity, big circles of reasons need not be cases of self-support.

The concept of the *evidential ancestry* of a proposition will simplify our discussion of circularity.[25] The evidential ancestry of a proposition can be specified recursively:

(A1) If P_0 is supported by P_1, then P_1 is in the evidential ancestry of P_0.

(A2) If P_1 is in the evidential ancestry of P_0 and P_1 is supported by P_2, then P_2 is in the evidential ancestry of P_0.

(A3) Nothing is in the evidential ancestry of P_0 except in virtue of a finite number of applications of (A1) and (A2).

Support is Irreflexive and *Support is Transitive* jointly imply:

No Circles. No proposition is in its own evidential ancestry.

So circularity is always vicious.

By contrast, *No Proposition is Supported only by Endless Regresses* implies:

No Required Circles. If a proposition P_0 is supported by any proposition P_1 only if some proposition is in its own evidential ancestry in the corresponding sequences $\langle P_0, P_1, \ldots P_m (\ldots)\rangle$, then P_0 is not supported by any proposition.[26]

No Circles implies *No Required Circles*, but not vice versa. In particular, *No Required Circles* is compatible with the possibility that a circular sequence is S-ordered because it enhances the support one has for its first member P_0 even if P_0 is in its own evidential ancestry. *No Required Circles* implies that there is no supported proposition that is supported only if it is in its own evidential ancestry. It does not imply that all circles are vicious, only that supported propositions must have independent support. In particular, every supported proposition P_n must be supported by at least one proposition P_m which is such that P_n is not in the evidential ancestry of P_m. So *No Required Circles* implies only that circles of reasons are not, by themselves, sufficient for support. This is compatible with the claim, accepted even by some foundationalists, that propositions can acquire additional support by being in their own evidential ancestry.[27]

Consider a circular sequence of propositions $\sigma_{SC} = \langle P_0, P_1, \ldots P_m (=P_0), P_{m+1}, \ldots \rangle$ such

that neither P_{m+1} nor any of its successors is identical to any other member of the sequence σ_C. Although P_0 is in its own evidential ancestry, σ_{SC} might be S-ordered by bringing additional evidence—the evidence provided by P_1-P_{m-1} and the propositions not in σ_{SC} that might support them—to bear on P_0. I think that there are support-affording circular sequences of this sort,[28] but their existence does not solve the regress problem. For *No Proposition is Supported only by Endless Regresses* does not imply *No Circles*. To solve the regress problem by appeal to circles of reasons we would need to show that a proposition can be supported even though it is supported only by circles of reasons. We have seen that this is false.

I conclude that, unlike the received version, the resilient version of the regress problem does not imply *No Circles*. Unfortunately, this makes the problem more difficult to solve, for the mere existence of S-ordered circular sequences of propositions is not incompatible with *No Proposition is Supported only by Endless Regresses*.

My earlier argument for *No Required Circles* clearly assumes a "linear" conception of support. In particular, it assumes that if a proposition P_0 is supported by P_1 and P_n is in the evidential ancestry of P_1, then P_n is in the evidential ancestry of P_0. Perhaps no proposition is supported only by linear circles of reasons, but the regress problem can be solved by showing that the non-linear, global coherence of propositions is sufficient for support. I now turn to this possibility.

7. COHERENCE WITHOUT CIRCLES

Until his conversion to foundationalism,[29] BonJour held that a believed proposition is justified for a person S just in case the propositions S believes are coherent.[30] BonJour rejected

the view that circles of reasons can provide justification, claiming instead that justification is holistic. Coherence is not "linear" circular support—which would require circles of reasons or unsupported supporters—but of "mutual or reciprocal support."[31] In particular, coherence requires "[t]he inferability of [a] particular belief from other particular beliefs, and further inference relations among particular beliefs."[32]

This does not solve the problem. Are justified beliefs supported (*Justification Requires Support*)? That beliefs in a coherent set must be "inferable" from others does not settle this since inferability is a logical, not an epistemological, relation. *Every raven I have ever seen or heard about has been black* is inferable from *all ravens are black* and vice versa. If justification requires coherence and coherence requires that the believed propositions in a coherent set be supported by supported propositions, then justification requires an endless regress. If, on the other hand, a set of beliefs can be coherent without every member of the set being supported by a supported proposition, then either support is not required for justification—*Justification Requires Support* is false—or unsupported propositions can provide support—*Reasons are Supported* is false. So either holistic coherentism does not solve the regress problem or it is a version of foundationalism, contextualism, or some other theory incompatible with *Reasons are Supported*.

One might reply that this criticism misses the point: the coherence of a set of beliefs itself supports the members of the set. So *Justification Requires Support* is true, but support is provided by the coherence of the set of beliefs itself and not by individual members of the set.

This equivocates on 'support.' The coherence of a set of believed propositions might contribute to the positive epistemic standing of a proposition in the set by, for example, making

it more likely to be true. Coherence cannot, however, support any proposition in the relevant sense, for coherence *per se* is not the sort of thing that could be a reason. Coherence cannot support a proposition in a coherent set any more than inconsistency can support the negation of a proposition in an inconsistent set: coherence and inconsistency are not propositions, they are properties of sets of propositions.[33] The proposition *P is a member of a coherent set of propositions* might support *P*, but this is a different matter. Furthermore, even if coherence is a non-arbitrary characteristic that helps make a proposition preferable to its negation, requiring belief in the coherence of one's beliefs for justification or support would be both too strong—one must have the relevant concept of coherence[34]—and too weak—to be a reason, this proposition needs support, and the regress returns.

Holistic coherentism thus faces a fatal dilemma: either it does not solve the regress problem or it denies that *Reasons are Supported*. In the latter case, either awareness of its coherence with one's other beliefs is required for a proposition to be a reason or it is not. If so, then the regress returns, for belief in the coherence of one's beliefs will require support. If not, then a proposition might be non-arbitrary *full stop* because it has a good-making epistemic property—coherence—but it will be arbitrary from the believer's own point of view. For if I am unaware that *P* is but *not-P* is not coherent with my beliefs, I have no reason to prefer one to the other.

10. INFINITISM

There remains the possibility that we might acquire support for a proposition by means of an infinite regress of reasons. *Reasons do not Require an Endless Regress* does not, however,

imply that infinite regresses are not support-affording, only that supported propositions do not require infinite regresses of reasons. This is correct, since propositions that are supported only by infinite regresses of reasons would be arbitrary from the believer's own point of view.

The conjunction of *Reasons are Supported* and *No Required Circles* entails:

> *Infinite Regresses Required*. A proposition P_0 is supported only if P_0 is the first member of an infinite sequence of propositions each of which is supported by its successor.

Two roads lead from these assumptions to the negation of *Some Proposition is Supported*, a very strong version of skepticism. One assumes that infinite regresses block support, period:

> *No Infinite Regresses*. There is no proposition P_0 such that P_0 is the first member of an infinite sequence of distinct propositions each member of which is supported by its successor.

The more secure road assumes only this consequence of *No Proposition is Supported only by Endless Regresses*:

> *No Required Infinite Regress*. For all propositions P_0, if P_0 is supported by any proposition P_n only if P_0 and P_n are the first two members of an infinite regress of reasons, then P_0 is not supported by any proposition.

No Required Infinite Regresses says that no supported proposition is such that its being supported requires an infinite regress of reasons. This does not imply *No Infinite Regresses*. Even if no supported proposition requires an infinite regress, such sequences of propositions might be support-affording. Indeed, it seems it would enhance the support one has for a proposition if it were the first member of such a regress. So the more resilient version of the regress argument implies *No Required Infinite Regresses*, but not *No Infinite Regresses*.

No Required Infinite Regresses is *prima facie* correct. Indeed, that *Reasons are Supported* and *No Required Circles* jointly imply that support requires an infinite regress of reasons seems paradoxical. Klein, however, argues that rejecting *No Required Infinite Regresses* is the key to solving the regress problem.[35] He holds that we can have justified beliefs, that justification requires support, but that circular reasoning cannot provide it. Hence, there are justification-providing infinite regresses of distinct propositions. Indeed, support requires infinite regresses. By making infinite support-affording regresses of propositions necessary, but not sufficient, for justification and by carefully distinguishing between occurrent and dispositional reasons, Klein successfully responds to the most popular extant objections to his "infinitism."

Infinitism must, as we have seen, distinguish infinite regresses of reasons from arbitrary, non-probative sequences of I-ordered propositions. Infinitism therefore requires that, in addition to being the first members of infinite sequences of propositions, justified propositions have an additional property Φ that does not, on pain of circularity, require justified beliefs or an infinite regress, but that does distinguish sequences of genuine reasons from I-ordered, but epistemically arbitrary, sequences of distinct propositions. This cannot be done, for any plausible account of the conditions under which P_0 is supported by P_1 will either require a justified belief (thus

making infinitism circular) or will be incompatible with the infinitist commitment to *Reasons are Supported*. Indeed, for the reasons that I have given above, Φ must include having a reason that does not require an infinite regress, otherwise a proposition ostensibly supported by an infinite regress of I-ordered propositions will be arbitrary from the believer's own point of view. So *No Required Infinite Regress* is true.[36]

Even if *No Required Infinite Regress* were false, that would be a Pyrrhic victory. For few, if any, of our empirical beliefs are supported by infinite regresses since most of us lack even dispositional access to reasons for our reasons *ad infinitum*.[37] By explaining the possibility of justified beliefs at the cost of their actuality, infinitism swallows the spider to catch the fly.

11. CONCLUSION

The epistemic regress problem is a powerful challenge to the consistency of some of our core assumptions about evidential support and, by extension, about knowledge and justified belief. Each assumption is compelling. Taken together they are intolerable. A solution will not come easily. For to solve the regress problem we must find a reason to reject at least one proposition that seems to be essential to any concept of support that is compatible with supported propositions being non-arbitrary from the believer's own point of view.

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NOTES

[1] I use 'implies' to abbreviate 'stands in the epistemically relevant logical or quasi-logical relation to.'

[2] A similar point is made by Sosa (1980, p. 13).

[3] In case the evidence that is available for a proposition consists of more than one proposition, we may represent it as the conjunction of the relevant propositions or as the set of those propositions.

[4] Post (1993, pp. 209-212) who follows Black (1988). Another account of the general structure of regress arguments along similar lines is given by Sanford (1975). I have modified Post's formulation of the problem somewhat.

[5] The first-order versions of (1)-(3) are formally inconsistent only assuming that *Reasons are*

Supported Requires an Endless Regress: $(\forall x)(\forall y)(Sxy \rightarrow (\exists z)Syz) \rightarrow (\forall x)(\forall y)(Sxy \rightarrow ERSxy)$. This proposition is evident.

[6] Indeed, we have the stronger consequence that *Reasons are Supported* just in case any proposition's being supported implies that there is an endless I-ordered sequence:

$$(\forall x)(\forall y)(Sxy \rightarrow (\exists z)Syz) \leftrightarrow (\forall x)(\forall y)(Sxy \rightarrow ERSxy).$$

[7] Elgin (2005, p. 157) presents a case to similar effect.

[8] See Post (1980) and Post (1987, pp. 84-92).

[9] I spell out this argument in greater detail in Cling (2004).

[10] Black (1988, p. 425).

[11] Moser (1985, pp. 141-210).

[12] I focus on Moser's view because it is one of the most careful and complete defenses of intuitionist foundationalism. My argument, however, is intended to show that any view on which sensory states suffice for support is bound to fail.

[13] Moser (1985, p. 164).

[14] Moser (1985, p. 184).

[15] So beliefs have what Dretske (1981, pp. 172-174) calls the "second" and the "third orders" of intentionality.

[16] Cling (1991).

[17] Compare to the distinction between "objective" and "subjective intentionality" in Churchland (1979, p. 14).

[18] The contextualism I discuss is suggested in Wittgenstein (1969) and is akin to the view

defended by Annis (1978), though Annis thinks unsupported reasons can be known. A subtle version of contextualism in the spirit of Wittgenstein is defended by Williams (1991). Some recent versions of contextualism have not focused on accounts of knowledge or justified belief *per se* but on the context-relativity of the truth conditions of sentences that attribute knowledge to a person, for example 'Sam knows that the cat is on the mat.' These accounts attempt to show that ordinary attributions of knowledge are not threatened by the skeptical doubts raised by skeptical hypotheses such as *I am a brain in a vat* because, in most contexts, the truth conditions for such attributions do not require the subject to be in a position to defeat such hyperbolic doubts. In the rare contexts in which one needs to be in a position to defeat such hypotheses, then ordinary knowledge attributions are false but—as I would put it—the kind of knowledge we would lack is different from the ordinary kind we still have. Such skeptical hypotheses raise the ordinary standards for knowledge. For such views, see DeRose (1994) and Lewis (1994). DeRose gives an account of the truth conditions for knowledge attributions in terms of the sensitivity of beliefs to changes in facts across relevant possible worlds and does not endorse an evidence requirement on ordinary knowledge while Lewis explicitly rejects an evidence requirement for knowledge. Even if DeRose succeeds in defending some types of knowledge against hyperbolic skeptical doubt, either his view does not provide a solution to the regress problem or, like Lewis', the kind of knowledge that is immune to skeptical doubts can be arbitrary from the believer's own point of view. In any case, since the reason requirement that generates the regress problem is weak—it can be satisfied without one having the ability to defeat hyperbolic skeptical hypotheses—it is not clear how semantic contextualism has the

resources to solve the regress problem.

[19] I shall not enter the dense thicket of Wittgenstein exegesis. I only investigate an interesting epistemological view suggested by some of his remarks. I leave it to others to decide what Wittgenstein believed.

[20] Wittgenstein (1969, §151).

[21] Ribeiro (2001, §1.8).

[22] Moore (1959a, 1959b), Wittgenstein (1969, §58).

[23] I am grateful to an anonymous referee for helping me to see this point.

[24] Post (1993).

[25] The term 'evidential ancestry' is due to Klein (1999, p. 298).

[26] I am indebted to John Post for pointing out serious limitations of a previous version of *No Required Circles*.

[27] For example Chisholm (1977, pp. 82-84).

[28] Cling (2002).

[29] BonJour (2001, pp. 21-38).

[30] BonJour (1976).

[31] BonJour (1976, pp. 285-286, and 1985, pp. 89-93).

[32] BonJour (1976, p. 287).

[33] Sosa (1980, pp. 8-9), Klein (1999, pp. 317-318).

[34] Acquiring evidence for such a claim will also be non-trivial given the computational complexity involved in making determinations of coherence (Milgram, 2000).

[35] Klein (1999).

[36] For more see Cling (2004).

[37] BonJour (1976, pp. 23-24) makes the stronger claim that finite minds could not have the infinite number of beliefs that such a regress requires. Klein (1999, pp. 306-310) shows that infinitism does not require this.