The Factual Belief Fallacy

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Abstract: This paper explains a fallacy that often arises in theorizing about human minds. I call it the Factual Belief Fallacy. The Fallacy, roughly, involves drawing conclusions about human psychology that improperly ignore the large backgrounds of mostly accurate factual beliefs people have. The Factual Belief Fallacy has led to significant mistakes in both philosophy of mind and cognitive science of religion. Avoiding it helps us better see the difference between factual belief and religious credence; seeing that difference in turn enables us to pose interesting normative questions about various mental states labeled "belief."

1. Introduction: A common Intellectual Mistake

Ty stopped me after class to ask if I thought true beliefs were valuable.

On hearing his question, I suspected the contrarian point he had in mind. I also suspected he was about to make a particular mistake I had encountered before.

"Of course, true beliefs are valuable," I said. "If we didn't have them, we couldn't figure out how to achieve our goals."

He replied with an example. A banker tends to be late to meetings. So for an important meeting, it would be *better* for him to believe falsely that it starts 15 minutes earlier than it actually does than to believe truly that it starts when it really does, since the false belief would help him be on time. (For now, let's not worry about the meaning of the term "belief," to which we'll turn shortly.)

I told Ty, setting aside the intrinsic value of truth, that it's *possible* for particular false beliefs to be useful in particular circumstances. But his example only argues against the value of true beliefs if one *ignores* the large background of true beliefs the banker must have in order to get to the meeting at all. To get to the meeting and be successful, he needs true beliefs about topics like *what a clock is, how to read a clock, what time the clock says, that he was invited to the meeting, what room the meeting is in, where he is in relation to that room, whether the elevator can help him get there, how to open the door to the room, what the meeting's topic is, whether he's expected to speak, that he works in the bank, many facts about what job he does,* etc. I told Ty that if we reflect on this large and coherent web of (mostly) true beliefs in the banker's mind, we notice two things: first, the banker would be crippled in everyday scenarios without his true beliefs (suppose he wasn't aware he worked at the bank); second, most of these beliefs are so obvious one scarcely notices them (instead of thinking about the agent's true beliefs, one just thinks of how the agent behaves in relation to the world[1]).

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[1] cf. Byrne (2011) and Evans (1983) on the "transparency" of belief, which is a different idea from the one discussed here, but if Byrne and Evans are right, it would help explain why people tend not to notice their factual beliefs.

So Ty's example doesn't show true beliefs aren't valuable. And it doesn't merely fail to show this because the example implies a *greater number* of relevant true beliefs than false ones in the banker's head. Rather, the utility of the banker's focal false belief *depends* on true beliefs that enable it to generate the right action. It may help him to believe falsely that the meeting starts at 3:00 PM rather than 3:15 PM, but that will only help if he believes truly *that he is supposed to go to the meeting*, *that the object on his desk is a clock*, *that numbers on clocks tell the time*, *that there are sixty minutes in an hour*, and hence *that 2:50 PM is ten minutes before what he thinks is the meeting time*. This dependency of useful false beliefs on true beliefs ensures that Ty-type examples will never show what they are meant to show, namely, that true beliefs aren't valuable.

Let's call the beliefs Ty was ignoring *factual beliefs*. The "factual" part of this term of art isn't meant to imply that all factual beliefs are true (mistakes are possible); rather, it just implies a matter-of-fact way of *processing* ideas—a matter-of-fact cognitive *attitude*.[2] If the banker, for example, thinks his boss will attend the meeting and she doesn't, that's a false factual belief; also, his false belief about the time of the meeting was a useful false factual belief, which is why it caught Ty's attention. Nevertheless, if a person's factual beliefs weren't *mostly* true (and prone to correction when false), she would run into dramatic difficulties. Imagine *not* having true factual beliefs about what a clock is. Granted, *other* mental states that are colloquially called "beliefs" may be prone to systematic distortion in ways that factual beliefs aren't—e.g., "beliefs" that constitute one's social identity—but that doesn't contradict the fact that sane people have largely true factual beliefs, as Donald Davidson was fond of pointing out.

In other papers (2009, 2014, 2017a), I detail what factual beliefs are and how they differ from—and are fundamental to—other cognitive attitudes, such as fictional imagining and religious credence. But the detailed theory, part of which I summarize below, isn't needed to explain the present point. Since factual beliefs constitute an agent's basic map of the world for navigating and selecting actions in it, Ty committed a particular mistake in developing his example: he drew an inference about the psychological realm that relied on *ignoring* the background of largely true factual beliefs that a normal person has. He thought true belief might not be valuable because he ignored all the true factual beliefs without which the banker would be crippled.

This mistake is common enough to deserve a name. Call it The Factual Belief Fallacy.

Factual Belief Fallacy: The mistake of drawing inferences about psychological phenomena that only seem legitimate because one ignores the many true factual beliefs a person has (or persons have) that are relevant to those

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[2] Many readers, when hearing the term "factual belief," might think of different concepts from the one I develop here. One might think, for example, of Hume's distinction between relations of ideas and matters of fact and think that a "factual belief" is one whose content concerns matters of fact. That's a fine way of deploying the phrase for someone else. But that is *not* how I'm using the term, since I'm using it as a label for a specific attitude concept (see section 3). So, in interpreting this paper, one must be careful not to import meanings associated with *other* ways the phrase "factual belief" might be used.

phenomena, where attention to the factual beliefs *should* make a difference to those inferences.

The Factual Belief Fallacy is not just a bad habit among college sophomores. It occurs in philosophy of mind and in related ways in cognitive science of religion (CSR). Accordingly, one purpose of this paper is to identify some of its instances and mistakes that follow from them in those fields.

Correcting those mistakes serves a wider purpose. An important fact about much religious psychology and practice—from myth making to prayer to ritual—is that they rest on a *two-map cognitive structure*, where one basic map (factual beliefs) mostly represents mundane facts about the physical and social worlds and the second map, which has distinct functional properties, typically represents the supernatural.[3] And if this two-map structure is characteristic of religious cognition—if the two maps don't usually get conflated in people's minds—then that fact should guide future research on religious psychology.[4]

My impression, however, is that the Factual Belief Fallacy has caused some researchers in CSR to miss the two-map structure altogether. So in detailing instances of the Fallacy I am also paving the way for more productive thought about the cognitive states underlying religious practice in the future. I focus on the work of Maarten Boudry & Jerry Coyne (2016a, b) and Neil Levy (2017), to whom I have responded before (2016a, 2017a) but never in the way I do here.

Here's an outline of what follows. In section 2, I examine two instances of the Factual Belief Fallacy in philosophy of mind to highlight that it is a *general* intellectual temptation, not just a mistake in CSR. In section 3, I explain the notion of a *cognitive attitude*, which is needed for understanding the two-map cognitive structure and how it operates. In section 4, I examine the Factual Belief Fallacy in CSR. Section 5 considers the whole dialectic from a different angle: Noam Chomsky's (1965) competence/performance distinction, which sheds further light on the two-map structure. The Conclusion, section 6, returns to Ty's question and examines it in a new light.

The aim of this essay is not to propose a particular thesis (except maybe the obvious one *that* people commit the Factual Belief Fallacy). My aim, rather, is to promote a pair of *abilities* in readers. First, I want to promote the ability to notice, when doing psychological theory, the many ways in which successful human action depends on ordinary factual beliefs, because being able to notice this improves theorizing and helps prevent other mistakes that stem from the Fallacy. Second, I want to promote the ability to be aware of the two-map cognitive structure operative in guiding much religious action, since as far as I can tell, the non-identity of the two maps—one posits a wafer where the other posits the flesh of Jesus—is at the heart of how many religious minds operate.

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[3] Key: those content-attitude associations are *patterns*, not *necessities*, as I explain in section 2.
[4] Note that a two-map cognitive structure is also present in pretend play; see my 2016b. See Taylor (1999) and Weisberg (2013) on how pretense and reality in pretend play don't get confused. And see Luhrmann (2012) on the role of pretend play in religious practice.

2. The Factual Belief Fallacy in Philosophy of Mind

The Factual Belief Fallacy led Ty to the mistaken conclusion that true belief is not needed for successful action. The *only* factual belief he noticed was the one usefully false one, and having nothing else in mind on which to generalize, he generalized on that one[5]. The Factual Belief Fallacy led him to an induction of the following form (where what's inside the curly brackets is not explicitly thought):

> All or most "beliefs" {that I focus on} have a certain property P; therefore, all or most beliefs have the property P.

Of course, whether an instance of this induction form is good depends on how representative the "beliefs" are to which the premise refers. Ty missed all the useful *true* factual beliefs, so his sample was unrepresentative. The property P for him was *not needing to be true to be useful*, and he mistakenly generalized from the one belief he focused on about the meeting time, which did have P, to other beliefs, which mostly don't.

Similar ill grounding happens in philosophy of mind. Examining two examples of it will help us notice some things about factual beliefs.

First, Tyler Burge (2010: 292-308) maintains that evolution by natural selection did not select for *knowledge* capacities in humans or other animals. His argument is twofold. First, he says that accuracy on the part of, say, detection mechanisms (he says similar things about perceptual structures) is not the what natural selection favors: "Detection is, however, not *in itself* a biological function… Detectors were selected, not because they were accurate in detecting a condition, but because they tended to contribute fit responses, including fit behavior, with respect to the condition" (302, Burge's emphasis). But this line of thought implies a false dichotomy: accuracy *or* fitness (where the *or* is exclusive). On the contrary, many detection mechanisms are able to contribute to fit behaviors *because of* their accuracy; it's not as if selection can only favor one aspect of a psychological mechanism, and it's common for phenotypic features in general to be massively multi-functional. (Suppose, for comparison, someone said hearts were not selected because they pump blood efficiently, but because they increase fitness. That would be a clear error, since the efficient pumping is what increases fitness. I think Burge's position on detection is mistaken in the same way.) Second—and more substantively—Burge stresses that selection often favors some form of cognitive bias, like hypersensitivity to predators, which gives many *false* positive representations (better to think a predator is present when one isn't than to think one isn't present when one is). And since selection often favors mechanisms that tend to produce false representations, there's no reason to think it favors representational accuracy or knowledge in general.

But Burge's second argument commits an expanded version of The Factual Belief Fallacy (extending it to representational processes generally). Selection indeed favors *some* cognitive processes in some animals, including humans, that yield false positive representations, as Error Management Theory details (Haselton & Nettle, 2006; McKay & Efferson, 2010). But the utility of *particular* tendencies toward false positives, like predator detection, *depends* on the organism's background of accurate representations about things like *whether there is a place to*

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[5] cf. Bartolotti & Sullivan-Bissett (2017).

flee, *what other objects are nearby*, *how far away the triggering event occurred*, *whether one can climb trees*, etc. (Note this parallels the dependency in Ty's banker example.) So a false positive-producing cognitive device is a *special-purpose mechanism*; such devices don't indicate that accuracy-oriented cognitive processes in *general* don't enjoy selective advantages (cf. McKay & Dennett, 2009). The impression to the contrary rests on ignoring an organism's (mostly) accurate representations and their role in successful action; in other words, it rests on (and expanded version of) the Factual Belief Fallacy.[6] In terms of the induction form above, the P here is *not needing to be true/accurate to be adaptive*: granted, some representations have this P, but we should not generalize from them.

Second, Eric Mandelbaum & Jake Quilty-Dunn (2015) argue that human belief formation and updating is largely irrational (and not based on evidence). They argue by highlighting studies in psychology that reveal humans often believe incoming information automatically and uncritically. "Given the constraints of our cognitive systems, we are prone to acquire all sorts of beliefs in the same way we catch colds: through mere contact" (50). Their argument, roughly, is that "beliefs" are produced by automatic and often biased processing, so they are not rational. But though many biases *exist* and much belief formation is uncritical, the intended conclusion doesn't follow. Human beings, on the contrary, rationally update their factual beliefs about mundane matters so routinely that it's easy to miss. Let's return to Ty's banker, who has rationally formed factual beliefs about the floor that the meeting is on (etc.), which would update rationally in response to incoming information (like an email about a room change). The banker's factual beliefs about *what a clock is* and *what floor the meeting is on* are not products of irrational foibles; they are the products of perception, attention, memory, and reasoning. In short, they are the result of learning processes, which, though imperfect, are to a large extent rational. So Mandelbaum & Quilty-Dunn commit the Factual Belief Fallacy in focusing disproportionately on beliefs that result from psychological shortcomings, while missing or ignoring the rational processes that update factual beliefs so routinely that one scarcely notices them.

This point bears emphasis. Davidson (1980, 1985) points out that irrationality is only possible against a background of rationality. And Daniel Dennett (1987), similarly, holds that in order to attribute mental states to a being at all, one must assume that being is mostly rational. These views are well known. But to understand their force we need to realize that rational aspects of psychological processing are so easy to take for granted that we tend to overlook their presence when we consciously think about the mental states of others. Our attributions *implicitly* assume rationality. And one common way for *theorists* to miss rational processing is by missing the background of factual beliefs to which it gives rise.

The Factual Belief Fallacy, in sum, leads to multiple errors. It led Ty into error about the value of truth. It led Burge into error about the adaptiveness of true (factual) belief. And it led Mandelbaum & Quilty-Dunn into error about the rationality of typical (factual) belief formation.[7] These points are not merely negative, however, since correcting each error

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[6] I'd like to thank Dan Dennett for a discussion several years ago that helped me see this issue more clearly.

[7] I put "factual" in parentheses in this sentence because "factual belief" is more my term than theirs, but they clearly mean their generalization to cover what I would call *factual beliefs*.

suggests a positive lesson about what factual belief is. The present realizations suggest that factual beliefs are largely (not exclusively) products of rational processes which were likely selected for their roles in keeping us alive and achieving our interests (cf. Velleman, 2000). Returning to the idea of a two-map structure, we can say that the basic/first map (factual beliefs) is formed by relatively reasonable and routine rational processing. Any given second map layer—religious credence, or whatever—may be quite different.

Let's now explore the notion of a *cognitive attitude*, which will allow us to see the differences more clearly.

3. What's in an attitude?

While we were having drinks one evening in the garden behind his apartment, my friend Dirk, an Anglican minister, expressed interest in my ideas about "belief." So I started with the rough idea of "belief" in philosophy and cognitive science, with the intention of eventually transitioning to my own views.

We had discussed the copper beech tree in the garden. So I pointed out that Dirk *believed* (in some sense) there was a copper beech in the garden. He shot back (and this response is telling about the word "belief" [8]), "That's not a *belief*. That's a *fact*!"

I agreed it was a fact. But if he didn't have a *representation* of that fact in his mind/brain, he couldn't have told me about it. After all, there were plenty of facts about which his mind did *not* store information, and most of those facts couldn't influence his behavior (verbal or otherwise) precisely *because* his mind didn't represent them.

So one thing that's typically conveyed by saying Dirk "believes" there's a copper beech in the garden is that his mind/brain has a representation (of some sort) that carries that information.[9]

But Dirk didn't *just* represent that; he also had an *attitude*[10] that determined how the relevant representation would be processed. And understanding the attitude dimension of representational mental states is crucial to understanding the Factual Belief Fallacy and factual belief more generally, so let's explore it.

3.1 Attitude Type as an Independent Dimension of Variation

Humans have different *ways of processing* internal mental representations; equivalently, we take different *attitudes* to what we represent. Someone who hadn't seen the

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[8] See Heiphetz, Landers, and Van Leeuwen (in prep.) for studies that suggest speakers of American English tend to use "think" to refer to factual beliefs and "believe" to refer to religious credences. So it's not surprising that people would often take exception when one says, as one often does in philosophy, people can "believe" things that are factually true.

[9] Sometimes, conversationally, calling something a "belief" is a way of implying that we're not really sure about its truth—which explains Dirk's knee-jerk response—but the way "belief" is used in philosophy and psychology is neutral on that point: saying someone has a "belief" is just a way of pointing out that someone has a mental state of a certain sort, without implying anything one way or another about its truth or certainty.)

[10] Fair warning: the use of the word "attitude" here is different from what you typically see in social psychology, which is a more general orientation to some social group.

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tree might <u>hypothesize</u> there's a copper beech in the garden. Someone in a speculative frame of mind might <u>suppose</u> there's a copper beech in the garden. Someone writing a play might <u>fictionally imagine</u> there's a copper beech in the garden. And someone, like Dirk, who had seen it and could recognize copper beeches would <u>factually believe</u> there's a copper beech in the garden. These are examples of *different* attitudes toward the *same* content (namely, *that there's a copper beech in the garden*).

The attitudes whose terms are underlined in the previous paragraph are *cognitive attitudes*, which means they portray how some portion of the world *is* or *might be*. Many other attitudes are also possible (wanting, hoping, fearing, etc.).[11] So saying Dirk "believes" there's a copper beech in the garden doesn't only imply there's a representation of that in his head; it also implies he connects some *attitude* to that representation. In this case, he had what I call <u>factual belief</u> (the same attitude type as the one Ty mostly ignored), *as opposed to* <u>hypothesizing</u>…<u>supposing</u>…<u>fictionally imagining</u>…etc. Factual belief, as an attitude/manner of processing, is one possible referent of the word "believes." Often, however, "believes" doesn't refer to factual belief at all; it can refer to a different attitude altogether.[12]

We can now start understanding what I mean when I say <u>religious credence</u> is not <u>factual belief</u>. These are different ways of processing ideas—different attitudes—and they both exist in people's minds. The point is not that the natures of the *contents* of the different attitudes are different. Rather, they are distinct ways of processing ideas. There do, of course, *tend* to be differences in content: religious credence is often connected to representation of the supernatural; factual belief tends to deal with matters mundane. But those tendencies are not necessities; as I say elsewhere (2017b), contents are *heuristic* of attitude types, which are ways of processing ideas that can in principle apply to any given idea.

We now understand the dimension of variation along which religious credence and factual belief differ: attitude type / manner of processing. Let's now examine one difference between religious credence and factual belief, since doing this will enable us to diagnose the Factual Belief Fallacy better in CSR and to understand the two-map cognitive structure, in which each map counts as separate from the other because it is processed differently from the other.

3.2 Practical Setting and Attitude Types

The basic function of cognitive attitudes *in general* is to represent what things are like (or might be like) so you can choose actions that satisfy your goals.

Factual beliefs are the most basic in this regard. If your goal is to get ice cream, factual beliefs about ice cream stores guide your behavior. If one of your goals is *to avoid injury*, factual

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[11] And it seems likely that most of the underlined terms actually can be used for a family of related attitudes, rather than just one unified type. Never forget how flexible human minds are in terms of the range of attitudes we can take (cf. my 2009: section 5).

[12] Note that in different contexts, the word "believes" and "belief" refers to *various* attitudes that aren't factual belief (religious credence, political conviction, opinion (Dennett, 1978), etc.). The flexibility of the words "believe" and "belief" makes theorizing about cognitive attitudes tricky, which is why I often introduce terms of art with more specific meanings, like <u>factual belief</u>.

beliefs about what objects are sharp, what substances are hard, or where ditches are help guide your behavior, and so on.

Other cognitive attitudes also guide behavior in ways that help satisfy goals. If your goal is to portray Lady Macbeth, your imaginings about how the Lady speaks help guide you. If your goal is to ascertain the truth of a proposed idea, hypotheses might guide your behavior. If your goal is to be "better safe than sorry" in the context of budgeting, an acceptance in a context might guide your behavior (Bratman, 1992).

But here is one thing that distinguishes factual belief. Factual beliefs, as a class, are *always* involved in guiding your action (at least if you're sane)—*across settings*. If your goal is to climb a tree, factual beliefs about where nearby trees are (say, copper beeches) guide you to them. If your goal is attending a meeting, your factual belief about when it is helps guide your behavior. Granted, those particular factual beliefs are inoperative when your action choice isn't about trees or meetings, but that is because those particular factual beliefs are not relevant to those other situations. But in those other situations, *other* factual beliefs help guide behavior. Basically, whenever you're engaged in action, *some* factual beliefs are involved in guiding your behavior, and the main determinant of which ones are is *relevance*.

To put it precisely: for any given action, there is at least one factual belief implicated in producing it.[13] Many people would deny that, but then again, many people commit the Factual Belief Fallacy; they just don't notice the factual beliefs at work. And since factual beliefs always *are* doing some work whenever a person acts, I call them *practical setting independent*: the class of factual beliefs stays operative in guiding behavior across changes of practical context (when one goes from backstage to the stage, one still remembers where the trap door is); of course, *which* factual beliefs one relies on change, but *some* factual beliefs (the relevant ones) are always working (unless one has a lapse of memory or other performance error).

Other cognitive attitudes, like <u>supposing</u> or <u>fictional imagining</u> or <u>assuming for the sake of argument</u>, are not like this. They *often* guide behavior. If I'm engaged in argument and assume something for the sake of argument, that attitude guides some aspects of my verbal behavior. If I'm playing Macbeth on stage, then my fictional imagining that I'm a Scottish usurper guides me. However, most of the time, no assumptions for the sake of argument are involved in my behavior choice. Likewise for hypothesis, acceptance in a context, and fictional imagining. For broad swaths of my life, fictional imaginings don't impinge upon my behavior, since most of the time I'm not acting or playing make-believe. Fictional imaginings, as a class, lie dormant. It requires a special kind of context, a special *practical setting*, for one of the other, *secondary* cognitive attitudes to start guiding behavior.

Here's an illustration. Suppose Bridget, who is playing Lady Macbeth tonight, is in Starbucks; when the barista calls "Bridget," she still comes to the counter, even though she's imagining she's Lady Macbeth[14]. Nor does she tell the barista, "I am Lady Macbeth!" Furthermore, even if *at that very moment* she had been rehearsing lines in her head and

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[13] Hursthouse's (1991) arguments don't undermine this point. Even when one ruffles a lover's hair in an expressive action, the factual belief that that person is one's lover is still operative, even if the etiology of the action isn't the typical desire-belief one.

[14] The historical Lady Macbeth was named Gruoch; Shakespeare's texts never mention this name, however.

imagining herself as Lady Macbeth, she still doesn't say that, since Starbucks is not the right *practical setting* for acting out imaginings.

So factual beliefs differ from secondary cognitive attitudes in that factual beliefs are always inputs in guiding behavior (they are practical setting *independent*), while secondary cognitive attitudes require a special practical setting, like a stage or playground, to turn on and guide behavior (they are practical setting *dependent*). True, any particular factual belief won't operate when its content isn't relevant, but secondary cognitive attitudes won't operate in guiding behavior *even when* their contents *are* relevant, as long as the setting isn't right.[15] Practical setting dependence is a feature *in addition to relevance* that determines when secondary cognitive attitudes guide behavior, but factual beliefs play a role no matter what the setting.

Importantly, factual beliefs as a class, though some may be bracketed, do *not* stop guiding behavior *even in* the setting of make-believe play or other practical settings. Someone pretending the couch is a spaceship still pretends in a way that shows awareness of the physical properties of the couch. And this helps us to see what I mean by two-map cognitive structure. Since factual beliefs still guide behavior across settings, the person imagining the couch is a spaceship uses two cognitive maps in guiding action in relation to the object in front of her: the factual belief map continues to represent it as a couch, which enables her to move around it and manipulate it in certain ways, while the fictional imagining map simultaneously represents it as a spaceship, which guides other movements, like 'steering.' The simultaneous utilization of both maps is crucial to make-believe play, and the second map layer (fictional imagining) deactivates when the play is over, while factual beliefs stay operative always (the couch is always a couch, even when it is something else as well). Analogous examples can be generated in relation to other secondary cognitive attitudes indefinitely (assumptions for the sake of argument, for example, deactivate outside the context of the argument, etc.).

How does religious credence fit into this picture?

3.3 Religious Credence is Practical Setting Dependent

A great many—I think *most*—religious "beliefs" do not operate like factual beliefs. They guide behavior on holy days, in sacred spaces, during existential crises (birth, sickness, the approach of death), and when identities are tested (what do *you* believe?). Having them partially constitutes a person's social identity. But they lie dormant much of the time. Furthermore, they often lie dormant *even when their contents are relevant to a given action choice*, if the person who has them is not in the right practical setting. In other words, these religious mental states are *practical setting dependent*. Hence, they are secondary cognitive attitudes—not factual beliefs. My term of art "religious credence" refers to such mental states.

I argue for the existence of religious credences in several places (2014, 2016, 2017b), so I won't rehash those arguments here. Rather, I wish to illustrate them in a way that aids understanding. Keep in mind that my claim is an existence claim, not a universal claim. A great

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[15] Gendler's (2003, 2006) notion of *contagion* might seem to undermine this point. But Gendler herself would be first to admit that contagion, especially cognitive contagion, is *not* part of the ordinary function of imaginings in relation to beliefs. The fact that it goes against the normal function is what makes it interesting.

many mental states in people's minds around the world fit my theory of religious credence, but there is also massive cultural variation in which mental states are most frequent in which communities; I certainly don't claim that *every* "religious" state of mind is a religious credence.

With all that said, here are three examples of the practical setting dependence of religious credence.

First, Cheryl Townsend Gilkes (1980) describes charismatic church services in which parishioners and choir members behave as if, overtaken by the Holy Spirit, they lose control of their bodies. Her main interest is in explaining the therapeutic role of churches in Black American communities, but her observations are also revealing in connection with religious credence (and its difference from factual belief). At first glance, it often appears in the churches she describes as if the parishioners "believe" the Spirit has taken control of their bodies. Yet Gilkes writes,

> No matter how severe the pandemonium within the church service, I have never witnessed a church service in which every single person's episode of 'getting happy' or 'shouting' was not resolved, worked through, or finished before the singing of the final hymn and the recessional. When participants leave, they usually appear as unruffled as they did when they came into church. (39)

There are two lessons here. The first is that whatever "beliefs" drive the church members' ecstatic behavior, those "beliefs" turn off when they leave the sacred space. The second is that, in order for this to work, they must be keeping track of their material surroundings all along, even *during* the ecstatic episodes (despite appearances), since otherwise they wouldn't 'know' when to stop being ecstatic, as they evidently do. To put the lessons together, continual reality tracking by factual beliefs enables practical setting dependence on the part of religious credence. The two maps work together.

Second, Erik Duhaime (2015) reports on Muslim shopkeepers in the medina in Marrakech, Morocco. In his study, he went around presenting shopkeepers with an economic game with three options. Picking option 1 would yield 20 dirhams solely for the person choosing (one dirham is about eleven U. S. cents). Option 2 garnered 10 dirhams for the chooser, while 30 dirhams would go to charity. Option 3 meant 60 dirhams would go to charity (none for the chooser). (Selfish preferences dictate: 1 > 2 > 3. Altruistic preferences dictate: 3 > 2 > 1. Total monetary sums allocated also dictate: 3 > 2 > 1.) Duhaime reports that 100% of participants who made the choice within about 20 minutes of hearing the call to prayer picked option 3, the most charitable. But outside that window the figure sunk to 50%. Thus, though some people are generally inclined to be charitable—good for them—some require their religious "beliefs" to be toggled on by the sacred setting of the call to prayer; those "beliefs" (that is, religious credences) become inoperative soon after the call to prayer ends.

Third, E. E. Evans-Pritchard (1965) describes a pre-industrial mystical ritual in the following terms: "some peoples put stones in the forks of trees to delay the setting of the sun; but the stone so used is casually picked up, and has only a mystical significance in, and for the purpose and duration of, the rite" (88-89). Thus, the "belief" in the mystical power of the stone

is inoperative outside the setting of the rite. The stone is always a stone; during the rite it's also magical.[16]

These are the tip of the iceberg of similar examples. More than anything, the *pattern* of deactivation needs explaining. And we should not attribute failure to act on sacred representations outside sacred settings to mere mental processing failure, because processing failure can't explain why people are *adept* at turning their religious representations on and off at the 'right' moments. My explanation is that religious credences are secondary cognitive attitudes, so they are practical setting dependent. The practical setting that activates them is not the stage or the playground (as with fictional imaginings) or the setting of inquiry (as with hypothesis) but rather a sacred setting, such as a church, a call to prayer, a certain holy day or time of day, or a challenge to one's religious identity, cognition of which switches religious credences from inoperative to operative.

3.4 Coda to section 3: "believing" something is a "fact"

Here is a test to see if you've gotten the point about attitudes.

Suppose someone says, "I believe it's a *fact* that Jesus was born of a virgin." Should we classify the mental state thus reported as religious credence or as factual belief?

Importantly, the word "fact" in the person's verbal report does not decide the matter and is likely to mislead. "Religious credence" and "factual belief," after all, are terms of art for different *attitudes*, which can in principle be taken toward *any* content. So it is perfectly possible for one to have religious credences about what is or isn't a "fact." Indeed, that happens all the time. Thus, nothing prevents the speaker in this example from having a <u>religious credence</u> *that it is a* fact *that Jesus was born of a virgin*. And this is the probable case whenever one appends the word "fact" to expressions of religious doctrine. Saying "fact" loudly does not turn a religious credence into a factual belief. (Compare: one can just as well <u>imagine</u> or <u>assume for the sake of argument</u> that it is a "fact" that such and such occurred, so the presence of the word "fact" in an attitude report doesn't necessarily imply factual belief as the *attitude type*.)

Alison Gopnik, relatedly, has been known to say that a good way of telling that someone doesn't believe something is if they *say* they "believe" it.[17] I interpret her idea as follows: when people <u>factually believe</u> something, they tend not to use the word "believe" to report the contents of their mental state.[18] And if they insist on the word "fact," that makes things doubly dubious: such wording protests too much. Rather, someone with a factual belief (in my sense of the term) is likely to speak directly, saying things like, "That's a copper beech."

4. The Factual Belief Fallacy in Cognitive Science of Religion

The preceding sections suggest a substantive convergence among three ways of identifying a certain class of mental states, which I call *factual beliefs*.

Section 1 suggests the first way: some mental states that guide action are so taken for granted that we—who are all a bit like Ty—tend *not* to notice them; we take the world to be as

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[16] Mark Chaves' magnificent (2010) "Rain Dances in the Dry Season" alerted me to the first and third examples.

[17] Reported to me in conversation by Eric Schwitzgebel.

[18] See Heiphetz, Landers, and Van Leeuwen (in prep.).

they describe without noticing the mental states doing the describing. We tend to think *with* them, not *about* them.

Section 2 suggests the second way: those same mental states are largely products of processes naturally selected for accuracy, which (among other things) differentiates them from imaginative mental states. (Again, that does *not* mean that *only* accuracy-conducive processes influence factual belief formation; rather, they characteristically do (Dretske, 1983; Velleman, 2000).)

Section 3 suggests the third way: those mental states are practical setting *in*dependent, unlike other cognitive attitudes, which turn on and off for purposes of guiding behavior.

Importantly, though there are reasons why these thee ways converge on the same class of mental states, it's not definitional, analytic, or in any way *a priori* that they should. So if I am right about the convergence, that is not just interesting to *a priori* theorists; it's interesting to everyone who cares about cognitive architecture. The emerging picture is that factual beliefs are an agent's relatively reliable map of the world, what Bratman (1992) calls a "default cognitive background," which the agent herself tends not to notice, since when she reasons using factual beliefs, it just feels like she's thinking about how things are around her.

Now we can move forward. The *first* identifying feature of factual beliefs—they tend not to be noticed *as* mental states—undermines people's *ability* to understand that factual beliefs differ from religious credences in the *second* and *third* ways. That is, it's easy to miss that factual beliefs are (mostly) rational states that guide behaviors across settings, whereas religious credences are not, because it's easy not to notice the factual beliefs in the first place (like Ty and Dirk didn't notice them). And if you don't *notice* your factual beliefs, you'll likely misinterpret my claim "religious credence is not factual belief," since you don't even notice the mental states constituting the second half of the distinction. Instead, under such circumstances, you'll fish around among the "beliefs" you *have* paid attention to—which are likely problematic, since problematic "beliefs" are the ones we notice—and think that I'm trying to distinguish religious credences from *them*. Otherwise put, if you hear my use of the term "factual belief" and think it refers to mental states people express by saying, "I *believe* that's a fact," then you'll miss the distinction being offered.

Let's expand that point.

Boudry & Coyne (2016a), who argue lengthily against my (2014) "Religious credence is not factual belief," write:

> To sum up, although religious beliefs may be indeterminate, poorly developed, or partly inconsistent, that does not mean they are entertained as anything less than factual. The same is true for many people's beliefs about medicine and science, yet nobody questions that those are held as factual rather than quasi-fictional. (605-606)

In other words, they remark on some properties of religious "beliefs" and then say "Ah, but 'factual beliefs' are *like that* too!"—and thereby attempt to undermine my distinction.[19]

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[19] Note also that their phrases "entertained as anything less than factual" and "held as factual" are ambiguous. They could refer to the attitude of factual belief, or they could refer to mental

Boudry & Coyne, however, commit the Factual Belief Fallacy in the way just outlined. That's because *most people*'s "beliefs" about science and medicine are patchy and somewhat confused. So many "beliefs" lay people have about science and medicine are *not* factual beliefs *in the sense relevant to my distinction* (cf. Sperber, 1982/1985). (You might wish to call those beliefs "factual beliefs," but then you are just changing terminology, and we would still need a term for the factual beliefs *I* am talking about.) *Doctors* and *scientists* do have factual beliefs about medicine and science, and *some* scientific and medical facts are well enough known to be factually believed by others. But for most, large fragments of science and medicine are murkily grasped and so are not factual beliefs in the sense identified by the three ways here.

Boudry & Coyne commit The Factual Belief Fallacy even more clearly here.

> Given that religious doctrines are often far from coherent…we should not be surprised that actual displays of religious belief vary depending on circumstances and priming. …This phenomenon is not restricted to religious contexts, even though it may be more prominent there. People believe that a country is undergoing recession, or that a new transuranium element has been discovered, or that space-time can be curved, or even that evolution occurred, while having only a superficial understanding of what such propositions amount to. The average literate person is likely to endorse the truth of quantum mechanics without understanding it, deferring to physicists for the full explanation. Similarly, Catholics may express belief in the Trinity without having a definite mental representation of what this doctrine amounts to. For the full story, they are happy to defer to the priests and theologians. (605)

This passage jumbles together doctrinal incoherence, practical setting dependence, and deference to authority—which are distinct phenomena. But their strategy is clear. Again, they point to features of religious credence and say, "See, 'factual beliefs' are like that, too!"

But again, this strategy ignores actual factual beliefs. People may only murkily grasp that a "recession" is happening. But one's factual belief *that one has not received a raise in four years* is not murky. People may be murky on how birds evolved. But one's factual belief *that birds have feathers* is not murky. And though "the average literate person" may only in an attenuated way have "beliefs" about quantum mechanics, that person can factually believe *that there is a physics department at the university*. The latter factual beliefs in each of these pairs are the kind relevant to my contrast, and Boudry & Coyne ignore them. The two-map cognitive structure I posit does *not* have its first map layer composed of "beliefs" that agents themselves barely understand; it has a first layer composed of factual beliefs so sensible and obvious that most people, including evidently Boudry & Coyne, hardly notice them.[20]

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states that have the idea of factuality as a constituent of their contents. Boudry & Coyne never sort out this crucial difference.

[20] The differences between religious credences and the supposedly "beliefs" they do focus on are also substantial but different, so I won't explore that contrast here. Furthermore, in arguing that (what they think of as) factual beliefs resemble religious credences in reliance on authority, Boudry & Coyne ignore the fact that the most fundamental factual beliefs in such a situation are ones with contents like *that Father so-and-so is a priest* or *that Dr. so-and-so has a PhD in physics*. One must first represent the simple fact that the authorities exist in order to rely on

Here is a more abstract take on the foregoing discussion. Factual beliefs *usually* represent relatively simple descriptive contents about some portion of the world. So if we are looking for factual beliefs, we can use simple descriptive contents as a heuristic. And if, using this heuristic, we find there indeed are mental states that fit my theory, then we've found the factual beliefs in my sense. I claim this is what happens, *if* we pay attention and avoid The Factual Belief Fallacy. It doesn't matter that *other* mental states (like a layperson's confused assent to quantum mechanics) could be *called* "factual beliefs" (or "held as factual") according to some other labeling scheme. What matters is that mental states of a certain basic sort exist, and if we didn't call them "factual beliefs," we'd need another term. Likewise, what matters is that *these* mental states have different functional properties from religious credences, so if we didn't mark that distinction with "factual belief" and "religious credence," we'd need *another* pair of terms for it.

Levy's (2017) critique is similar:

> Van Leeuwen cites evidence for the practical setting dependence of religious credences. The Vezo seem to have two competing representations of death, and contextual factors explain which will dominate. Closer to home, Van Leeuwen cites Dennett's (2006) observation that Christians who profess to believe that God is always watching them engage in behaviors that it seems they would not perform if they took the factual attitude to the proposition. But practical setting dependence occurs with a range of factual beliefs.
>
> For instance, adults with college level education in evolution often invoke a competing essentialist theory of species transformation (Shtulman, 2006) and adults with college level education in mechanics invoke folk physics to explain and predict motion (Halloun & Hestenes, 1985). This exhibits the practical setting dependence of factual beliefs: beliefs that guide behavior (including verbal behavior) in one setting fail to guide it in another, despite the relevance of the content of the beliefs to the second setting. (111)

This passage conflates two distinct phenomena: (i) the practical setting dependence of secondary cognitive attitudes and (ii) the unintuitiveness of scientific beliefs (of any sort). Notice how Levy gravitates to the same kinds of example as Boudry & Coyne—"beliefs" about mechanics and evolution. Such "beliefs" stick out because the scientific pictures of biology and physics sit ill with intuitive ("folk") biology and physics, which are most likely evolved, imperfect reasoning systems for these domains (McCauley, 2011; Shtulman, 2017). This ill fit makes reflective attempts at absorbing scientific knowledge both hard and a matter of deep psychological interest. But the nature of that ill fit, for all its interest, has no bearing on the question of whether factual beliefs, in my sense, are or aren't practical setting dependent in the way that religious credences are. It's true that some factual beliefs about matters that are unintuitive may fail to guide behavior when they conflict with various intuitions that arise— even on the part of professional scientists. But that is an entirely different phenomenon from practical setting dependence. Religious credences (or imaginings, etc.) cease guiding behavior outside their characteristic practical setting, despite the fact that the ones that can impact non-verbal behavior at all are *not* unintuitive (the religious credences, for example, *that God*

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them to disambiguate more complex ideas, and simple representations of people existing are more likely to be actual factual beliefs than are complex ideas in need of disambiguation.

approves of giving to charity or *that God is watching* are not unintuitive). It follows that unintuitiveness and practical setting change are two *distinct* routes to deactivation of any given mental state; Levy conflates those distinct routes.[21]

But I wouldn't even have to emphasize that distinction if Levy hadn't committed the Factual Belief Fallacy in the first place: instead of focusing on beliefs about sophisticated theories in physics—whose status is going to be difficult to work out in any case—it would have been better for Levy to focus on mundane beliefs about things like whether glasses are breakable or whether the grocery store is open after 7 PM. Considering those would have been sufficient to reveal that the class of factual beliefs that are *plainly* practical setting independent is non-empty. Levy, committing the Factual Belief Fallacy, misses the broad background of mundane factual beliefs altogether, as Boudry & Coyne did.

5. Performance Error versus Attitude Competence

There is deeper dimension to this disagreement. Notice Levy's word choice, "This exhibits the practical setting dependence of factual beliefs: beliefs that guide behavior…in one setting *fail* to guide it in another" (my emphasis). The word "fail" implies Levy thinks *practical setting dependence* is a matter of performance error: one has difficulty working out consequences of ideas and thus "fails" to act on them. The appeals in Levy's article to "processing disfluency" and lack of "intuitiveness" also suggest he thinks practical setting dependence arises from mental performance error. Boudry & Coyne's view is similar. Religious "believers" sometimes just don't process what their "beliefs" would have them do.

That, however, misconstrues practical setting dependence. Practical setting dependence is *not* performance error; it is part of the *competence* to have and use secondary cognitive attitudes at all. I mean that distinction in Chomsky's (1965) sense: for him, some verbal utterances—the grammatical ones—express speakers' underlying linguistic competence, while others occur due to performance error—mistakes. It is a theoretician's mistake to confuse performance errors for indicators of the nature of the underlying competence. Similarly, some behaviors arise from competent operation of internal mental states, while others arise from performance errors. Here's the point. Secondary cognitive attitudes cease guiding behavior outside their practical settings because that's how they work—it's part of the competence of having and using them.[22] Consider imagining again. When Bridget doesn't tell the barista she's Lady Macbeth, despite imagining she is, that's not because her imaginings "fail" to guide action. Rather, the normal function of fictional imagining includes ceasing to guide behavior outside make-believe play. The same holds for other secondary cognitive attitudes. If you suppose something during a thought experiment and stop verbalizing that supposition afterward, it's not that you "failed" to act on your supposition; rather, the supposition's going inoperative is how suppositions work. The same holds for acceptance in a context, hypothesis, and every other secondary cognitive attitude.

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[21] Some scientific beliefs in the heads of some individuals are both unintuitive *and* distinct from factual belief in terms of attitude type. See section 2.4 of my 2014 for discussion.
[22] See my (2016b: 293-294) for a description of what a practical setting is in the context of pretend play; several aspects of that description can be generalized to give a general characterization of what a practical setting is.

Apply this to religious credence. Religious credence does not cease guiding behavior six days a week (or whatever) merely due to mental processing error. Rather, just as Bridget's imaginings about Lady Macbeth deactivate when she leaves the *stage*, so too typical Christians'—even Pastors' or Priests'[23]—religious credences deactivate when they leave the *church* or when *Sunday* is over. *Deactivating outside the religious practical setting is a consequence of the normal competence that supports having religious credences at all.* One more time loud and clear: practical setting dependence is not a result of performance error in processing religious credences; it's part of how those mental states work.

This view is in one way radical. It sharply disagrees with many ways people *talk* about the role religion plays in people's lives. We often hear that religion is "totalizing" or "all encompassing" or that religious devotees comprehend all reality in terms of their "worldview" or that, to paraphrase C. S. Lewis, Christian "belief" is like the sun by which one sees "everything" else.[24] In my view, such totalizing claims are erroneous when applied to the majority of religious "beliefs" that actually exist in people's heads around the world. So we need a theory of those "beliefs" that, as a matter of their normal function as attitudes, do *not* operate in a totalizing way; my theory of religious credence is such a theory. The grand, totalizing claims sit ill with the simple fact that most of the time even serious devotees behave little different from people of a different religion or of no religion. Many people, I grant, may *aspire* to have their religious "beliefs" govern their behaviors in all settings, but the fact that they *have* to aspire to this confirms that practical setting *in*dependence is *not* part of the default function of religious credences—it is not part of their competence. Such aspirants are swimming against the psychological current, placing norms on religious credences that sit ill with how they naturally operate, and the fact that they bother to have those norms shows they're aware of this at some level.

I am not, however, alone in this perspective. Consider Evans-Pritchard's (1965: 8) stern correction of reports of travelers and unsystematic anthropologists on "primitive" religion:

> What travellers liked to put on paper was what most struck them as curious, crude, and sensational. Magic, barbaric religious rites, superstitious beliefs, took precedence over the daily empirical, humdrum routines which comprise nine-tenths of the life of primitive man and are his chief interest and concern: his hunting and fishing and collecting of roots and fruits, his cultivating and herding, his building, his fashioning of tools and weapons, and in general his occupation in his daily affairs, domestic and public. These were not allotted the space they fill, in both time and importance, in the lives of those whose way of life was being described. Consequently, by giving undue attention to what they regarded as curious superstitions, the occult and mysterious, observers tended to paint a picture in which the mystical…took up a far greater portion of the canvas than it has in the lives of primitive peoples, so that the empirical, the ordinary, the common-sense, the workaday world seemed only to have secondary importance…

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[23] Consider, for example, the famous "Good Samaritan" experiment of Darley & Batson (1973), in which seminarians *on their way to preach about the good Samaritan* failed to help a person in need.

[24] Lewis (1962).

We can almost hear Evans-Pritchard accusing the "observers" in question of the Factual Belief Fallacy. His terms "empirical," "ordinary," "common-sense," and "workaday" all suggest those matters toward which one typically has an attitude of factual belief, which is exactly what those "observers" ignore in drawing inferences about "primitive" psychology. And just as I say factual belief is practical setting independent, Evans-Pritchard, pointing out that "humdrum routines" are nine-tenths of people's activities, implies much the same. Religious credences are different. An agent competently deploying religious credences deploys them in appropriate times and places, but not at all times—verbalized norms to the contrary notwithstanding.

Finally, Jonathan Cohen (1981: 318) writes: "our fellow humans have to be attributed a competence for reasoning validly, and this provides the backcloth against which we can study defects in their actual performance." In my terms, the competence Cohen is talking about generally applies to the formation of factual beliefs. I would add that understanding *that* competence provides not only the backcloth against which error can be studied, but also the backcloth against which competence of a different sort—the competence to hold secondary cognitive attitudes—can be studied.

6. Conclusion

Let's return to Ty's question. *"Are true beliefs valuable?"*

In my response at the time, I implicitly (and knowingly) interpreted Ty's use of the word "beliefs" to mean factual beliefs. And this was justified, given the humdrum example he offered of the banker and the meeting. *Of course*, true factual beliefs about what a clock is or what your job is are valuable, since you couldn't act successfully without them. And given the work that's been done in this paper, we no longer need to argue this point only by example; we can make the point theoretically: since factual beliefs are *practical setting independent*—cued up to be relied on whenever relevant—they had better give us an accurate representation of the world, on pain of constantly subverting goal achievement if they're false.

Avoiding the Factual Belief Fallacy—by first identifying Ty's instance of it—was crucial to seeing how valuable it is for one's factual beliefs to be true.

But in learning to avoid the Fallacy, we also start seeing how different religious credences are from factual beliefs. Factual beliefs are largely overlooked but mostly rational representations that pervasively guide action. Religious credences, to invoke Kierkegaard's idea, involve "suspension" of reason (not to mention the ethical) and are compartmentalized with respect to guiding behavior. One stops "shouting" or "getting happy" when one leaves the sacred practical setting and returns to the "empirical" world, as Evans-Pritchard puts it; in my terms, one returns to relying simply on factual beliefs.

So the work of this essay has, I hope, enabled us to understand factual belief better and avoid the Factual Belief Fallacy. But doing this comes at the cost of showing that we are faced with a normative question that, at present, no one can confidently say how to answer: is it more valuable for *religious credences* to be true than not? And importantly, the obvious value of true *factual beliefs* does not logically entail anything one way or another about this question, since religious credences are just different psychological states. Does it even *matter* to goal satisfaction whether one's religious credences are true? People certainly talk as if it does, but their manifest disregard for normal evidence and interpretation in religious matters implies otherwise. So Ty's question under one interpretation has been answered; under the other

interpretation, we have no idea, because we haven't been making the distinctions needed to ask it properly. This may be a bitter pill for analytic epistemologists to swallow. But it's better to look at the problem squarely than to pretend it doesn't exist.

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