

Unjustified Veridical Memory-Belief

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That memory plays a fundamental role in our knowledge is apparent. Almost all of our knowledge involves learning which took place prior to the present. For example, I might claim to know that Mars has two moons, even though I learned it over a decade ago. Involved in my knowing that Mars has two moons is my belief and my justification—both of which are provided by memory.¹ I know that Mars has two moons in virtue of my remembering the past belief, and I am justified either by some psychological relation to my memory of the belief (e.g. I seem to remember that Mars has two moons) or the accuracy of my memory. While it seems clear that knowledge depends on memory, the relationship between a belief that P and a memory of the belief that P is not obvious. If we are to understand knowledge subsequent to the present, a theory of justification for beliefs provided by memory (henceforth, memory-belief) is essential.

Developments of such a theory has been attempted in the literature recently and many have failed on intuitive grounds.² In “The Problem of Memory Knowledge” (1999), Michael Huemer develops a justification theory called the dualistic theory which he supposes accounts for the intuitions that past theories have not. I begin the paper by examining how the dualistic theory succeeds in accounting for certain intuitions about the justification of memory-belief. I then propose three cases, all of which fall under a sort of case I call unjustified veridical memory-belief. I argue that these cases serve as counter-examples to the dualistic theory, and then develop motivation for such cases by considering results from psychological research on false memory.

Before we begin there is a distinction to be made among different sorts of memory—the most notable for our purposes is between event memory and propositional memory. Event memory involves a recollection of personal experience, e.g. I have the memory *of* being at the party last night. Propositional memory involves recollection of factual information, e.g. I have the memory *that* Mars has two moons. Both Huemer (1999) and Senor (2005) focus on propositional memory in the analysis of memory-belief, and so shall we in the present paper. Therefore, we can define a mem-

ory-belief as a proposition of the sort, “I remember that P” which refers to a recollection of some proposition previously believed (which is currently believed as a result of the recollection).

I. THE DUALISTIC THEORY

The dualistic theory holds that a memory-belief is justified if and only if

- (a) one was justified in adopting the belief that P, and
- (b) one was justified in retaining the belief that P.

Huemer assumes an internalist deontological view of justification for both conditions, in this case to be understood in terms of “epistemic responsibility.”³ On this view he posits that the condition of justified adoption will be satisfied as long as a person forms her belief in an epistemically responsible manner; namely, by acting as rationally as she possibly can in forming her belief. In contrast, if one forms a belief that P for example merely due to wishful thinking, then her belief that P will not be justified since she is not acting in a rational manner.

Similarly, the justified retention condition can be satisfied as long as one’s memory is retained in an epistemically responsible manner. Huemer explains this to mean that, “the normal functioning of memory, in the absence of specific reasons for revising a belief, constitutes an epistemically responsible manner of retaining beliefs.”⁴

What Huemer means by the “normal functioning of memory” is made clear in his explanation of the dualistic theory’s advantages. According to Huemer, the dualistic theory captures the “intuition that I am rational in believing something I seem to remember even if on this particular occasion, unbeknownst to me, my memory is deceiving me—even if, that is to say, I never really had that belief before.”⁵ Thus the justified retention condition is satisfied by the normal functioning of memory, where “normal functioning” will include *seeming to remember* even though one’s memory is actually deceiving them—just so long as they are unaware that their memory is erring.

Huemer claims that the dualistic theory accounts for two intuitive conclusions about justification for memory-belief that two opponent theories, the preservation theory and the foundational theory, cannot. The preservation theory holds that the justificatory status of a memory-belief is transferred from the original formation of the belief. For example, if I am justified in forming the belief that P, my memory-belief is automatically justified upon remembering that P. The preservation theory, however, fails to account for the intuition that the justification of memory-belief should depend on the internal state of the believer.⁶ Huemer considers a rendition of Russell’s five minute hypothesis to argue that not only do we hold the latter intuition, but that the dualistic theory accounts for it while the preservation theory fails to do so.

Suppose that, five minutes ago, an evil deceiver created someone who had the exact memories and was in the exact situation that Jones was in five minutes ago. This person, henceforth Jones2, is identical with Jones except for the fact that Jones2's memories are false in that he never *actually* experienced them (since he was created five minutes ago). It would therefore make sense for Jones2 to believe the same things that Jones believes, such as eating pizza for breakfast. Indeed both Jones and Jones2 have a memory of picking up pizza and eating it in the same way. The fact of the matter, however, is that Jones actually ate pizza while Jones2 did not.

Huemer thinks that in the above case Jones2 is justified in his belief that he ate pizza for breakfast. In terms of phenomenological experience, Jones and Jones2 are completely indistinguishable. Jones2 has no reason to suspect that his memories are false, so he will be justified based on the internalist "epistemic responsibility" view. Surely Jones2's belief that he ate pizza for breakfast is perfectly rational from his perspective. But the preservation theory, which supposes that a memory-belief retains the justificatory status of the original belief, is committed to concluding that Jones2 has no justification at all for his belief. Since Jones2 actually did not eat pizza for breakfast, according to the preservation theory there is no initially justified belief to transfer to the memory.

The intuition that Jones2 is justified is not present for one who holds a reliabilist account of justification (and perhaps other versions of externalism). According to the reliabilist, the fact that Jones2 has a faulty memory bars his belief that he ate pizza from being justified.⁷ However, for our present purposes we will continue to assume an internalistic deontological view of justification.

While the preservation theory fails in the case of Jones2, the dualistic theory can account for the internalist intuition. Jones2 satisfies the dualistic theory's condition of justified retention because he seems to remember eating pizza and has no defeaters he is aware of (e.g. Jones2 is aware that his memory usually leads him to hold false beliefs about his past). Since the memory of his eating pizza also happens to be the source from which he formed his belief, he meets the conditions for justified adoption as well. Since both criteria are satisfied, according to the dualistic theory, Jones2 is justified in his memory-belief as we have concluded on intuitive grounds.

The foundational theory, on the other hand, holds that seeming to remember that P is self-justified, and therefore a memory-belief that P is *prima facie* justified merely in virtue of seeming to remember that P.⁸ But a consequence of this theory is that a previously unjustified belief could gain justification merely by passing into memory, and this is in opposition to a second intuition that the justification of a belief cannot be increased by passing into memory; rather, justification of a belief should only be lowered as it passes into memory.

Considering an example elucidates this point: while traveling in Europe, Mary read in the *National Enquirer*, a supermarket tabloid news source, that aliens were seen strolling suspiciously around Williamsburg, Brooklyn. Mary reads the *National Enquirer* regularly and trusts it because she wishes its stories were real (she thinks life would be boring otherwise), and thus forms the belief that aliens were seen walking in

Williamsburg. It happens to be that Mary lives in Williamsburg herself, and upon returning from Europe three weeks later she remembers that aliens were spotted in her neighborhood. Mary has since forgotten from where she read about the aliens, but nonetheless she still remembers reading and believes that they were spotted. Mary decides to take preventative measures. She nails her all windows shut with wood.

Two points seem clear in the case of Mary: first, when Mary originally forms her belief that aliens were spotted in Williamsburg, she is unjustified (she formed the belief by reading a non-credible source and wishful thinking). Moreover, when she is back at home and has the memory-belief that aliens were spotted she is still unjustified. But the foundational theory would consider Mary justified, since, in virtue of seeming to remember that aliens were spotted in Brooklyn her memory-belief is justified. This cannot be satisfactory however, because it allows Mary's previously unjustified belief to become justified merely by passing into memory. Where the foundational theory fails in the case of Mary, the dualistic theory accounts for our intuitions: since Mary originally formed her belief in an unjustified manner, she did not meet the justified adoption condition and therefore the dualistic theory concludes that Mary is unjustified in her memory-belief.

Thus, according to Huemer, the dualistic theory is at least *prima facie* motivated as it accounts for intuitions that other justification theories such as the foundational and preservation theories allegedly cannot.

II. CASES OF UNJUSTIFIED VERIDICAL MEMORY-BELIEFS

There is, however, a sort of case in which the dualistic theory fails to account for our intuitions: those in which one's memory stores the original veridical belief that P, but memory distorts the details of the belief, leading us to call the belief-holder unjustified. For example, one may recall that P, where P is a true belief she held at one point, but her memory may confuse the source of her belief. We now turn to three cases in which the latter sort of situation leads to our calling the belief-holder unjustified.

Three plausible types of memory distortion come to mind:

- (1) those of source misattribution, in which one forgets or misremembers the source of her belief;
- (2) those of inflation, in which one falsely remembers that an event has occurred; and
- (3) those of misinformation, in which one receives false information that biases her memory of the original information surrounding the belief.

We begin by considering the case of Jean which involves source misattribution.

Jean is a normally functioning individual. She is a regular reader of the tabloid news source the *National Enquirer* because by wishful thinking she thinks it is credible (she wishes for example that “Batboy” is real). One Monday, however, Jean happens to be reading *The New York Times* and sees the headline that the stock market has hit an all-time low. Jean forms the belief that the stock market has hit an all-time low on Monday. A week passes and Jean remembers that the stock market was at an all-time low last Monday, but has misremembered the source of her information—she now believes that last Monday she read it in the *National Enquirer*. However, as a regular reader of the *National Enquirer* she nonetheless maintains her belief.

Surely Jean was justified in holding her belief when she originally formed it since she read it from a credible source. But when the belief passes into memory, and unbeknownst to her she misattributes the source, her memory-belief becomes unjustified. She now believes that she learned the information from a non-credible source, one which she personally thinks is credible only due to wishful thinking. Because she believes that P in the latter irrational way, she is barred from being justified especially according to an internalist deontological view.

However, the dualistic theory is committed to concluding that Jean is justified in holding her memory-belief. Since Jean was justified in forming her belief that the stock market hit an all-time low, she satisfies the justified adoption condition. Moreover, since she is unaware of the fact that her memory is faulty, she satisfies the justified retention condition since she has no specific reason to doubt her memory. But if Jean satisfies both conditions, then according to the dualistic theory she is justified, while we have concluded that Jean should *not* be justified. The dualistic theory therefore fails to account for the case of Jean, which involves a veridical memory of a belief, but also involves source misattribution that renders her unjustified.

One may object that upon remembering that the stock market hit an all-time low, Jean is forming a new belief. In other words, when Jean believes the stock market hit an all-time low via *The New York Times*, she has a different belief than when she believes the stock market hit an all-time low via the *National Enquirer*. After all, subsequent to recall, if asked where she learned her information about the stock market, Jean would report that she read it from the *National Enquirer* (while she originally would have reported reading it from *The New York Times*). If a new belief is actually formed, then this new belief would be considered unjustified by the dualistic theory since the adoption condition is violated: she will have adopted the belief from a non-credible source (the *National Enquirer*). Therefore, the dualistic theory does not conflict with our intuitions.

While the objection above proposes a correct analysis of a newly formed belief, it is not true that Jean forms a new belief upon remembering that P. It is important to distinguish between a change in details surrounding a belief that P, and a change in the belief that P itself. Jean might believe that the stock market hit an all-time low and that she read it from *The New York Times*. However, if the latter is viewed as one belief, it is a separate belief from the belief in question in the case of Jean. We are in-

terested in her belief that the stock market hit an all-time low, and while details may have changed surrounding that belief upon her remembering (namely, the source of her information), the belief in question remains that the stock market hit an all-time low when she remembers it. The fact that she misremembers the source of her information leads us to call her unjustified, but the dualistic theory is insensitive to this change because it focuses on the initial adoption of the belief, and then shifts sole focus to the retention. Since Jean passes both the adoption and retention condition, the dualistic theory will call Jean justified, while we have concluded the opposite.

A second type of memory distortion is that of inflation, in which one remembers facts about something without actually experiencing it (e.g. due to merely imagining an event). Consider the case of Chase: as a young child, Chase was abused sexually by his uncle. Being confused and hurt by the abuse, Chase chose not to tell anyone and repressed all memories of the abuse. Twenty years later, Chase began to feel high stress and crippling depression. He went to a therapy session in which his psychologist, Dr. Sanborn, asked Chase if there could be any past events underlying his current depression. Chase reported that there were no such events, but then Dr. Sanborn asked Chase to engage in mental imagery so he might uncover hidden memories. He asked Chase to imagine someone close to him touching him inappropriately and to fill in the details as vividly as he liked. Chase began to imagine a scene of child abuse but reported no uncovered memory. The next morning, however, when Chase woke up he suddenly remembered a frightening feeling upon thinking of his childhood. He immediately phoned Dr. Sanborn. When Dr. Sanborn answered Chase exclaimed, "Oh my goodness! I was sexually abused by my uncle as a child!"

The case of Chase is in a sense parallel to the case of Jones and Jones2: Chase, like Jones2, forms his belief that P as a result of remembering that P. It is true that Chase was sexually abused as a child, but as a result of repression he does not believe that he was sexually abused until the morning after his therapy session.⁹ As a result of the mental imagery exercise in which he vividly imagined abuse occurring, Chase suddenly remembered that he was abused and subsequently formed the belief that he was abused. Chase's memory has conflated his imagination with a true occurrence, although as it turns out the abuse that Chase remembers as a result of imagination did actually occur to him.

In the case of Jones2, he is thrown into the world by an evil deceiver and only believes that P as a result of remembering that P. As we have seen above, Huemer argues that the dualistic theory concludes that one in the situation of Jones2 is justified: "Since [Jones2] acquired his belief that he ate a bagel this morning by seeming to remember it, he is rational in accepting it."¹⁰

Since Chase similarly forms his belief that he was abused as a result of remembering that he was abused (after the mental imagery), the dualistic theory will conclude that Chase is justified in his memory-belief that he was abused as well. Chase's belief that he was abused satisfies the justified retention condition because like the case of Jones2 he has no "specific defeaters" he is aware of in his remembering that P. Also like Jones2, he satisfies the justified adoption condition because the dualistic theory

allows that seeming to remember P is a rational way of adopting a belief.¹¹ The dualistic theory therefore concludes that Chase is justified in his memory-belief that he was abused.

In the case of Chase, however, it seems that our intuitions call Chase unjustified in his memory-belief that he was sexually abused. While it is true that he was abused as a child, he only comes to remember that he was abused due to his imagination of an abusive event. If we removed the fact that Chase was actually abused from the case, then surely we would conclude that he is unjustified in his memory-belief that he was abused—he would only believe that he was abused as a result of the imagination of the event. As the case goes, Chase is in a sense in the latter situation: while the abuse actually did occur, his repression prevents him from remembering that he was abused *because* he was abused. He only remembers he was abused because he imagined it, and he is completely aware of his voluntary engagement in imagining the abusive event. Therefore, on the present internalist account of justification, we should conclude that Chase is unjustified in his memory-belief that he was sexually abused. The dualistic theory, however, yields the opposite conclusion.

Admittedly, the analysis of the case of Chase is contingent upon whether or not one thinks Chase is acting in an epistemically responsible manner when he comes to believe he was abused as a result of remembering. According to our analysis, Chase is called unjustified in his retention because he voluntarily engaged in imagining the abusive event, and this led to a false memory. Huemer may object, however, that on the internalist picture we should think that Chase is acting in a perfectly responsible manner, since he is completely unaware of his memory erring due to inflation. Therefore, our intuitions should coincide with the dualistic theory's conclusion that Chase is justified in his memory-belief.

I reply that the case is at best borderline in terms of epistemic responsibility, and in the least Huemer has a case where the dualistic theory does not obviously account for our intuitions. Perhaps details of the case could be altered to make it certain that we call Chase unjustified, thus securing our original conclusion about the case. For example, we can alter the case so that Chase has a history of visiting psychologists with the hopes that imagery therapy will help him uncover repressed memories that he wishes he had (this way he could easily explain his depression).

A third case of unjustified veridical memory-belief that poses a problem for the dualistic theory is one which involves misinformation. Cases of misinformation involve an original memory being biased towards false information learned prior to forming the memory. Consider the case of Jeff. Jeff and his girlfriend Sarah are having problems—they don't see each other very often these days, and when they do see each other it usually results in fighting. One day while walking on campus, Jeff saw Sarah with another man, but he couldn't tell who the man is. Jeff became angry because the two looked like they were flirting, but then suddenly he saw them start to kiss each other. Jeff ran home upset, forming the belief that Sarah cheated on him with someone. The next day Jeff confided in his friend who is a huge gossip on campus. Jeff asked the gossip if he knew anything about Sarah and this new man. The gossip

said that he knew who the man was, and said that Sarah and the man had been dating for months already. Jeff knew that the gossipier was a non-credible source—he often made up elaborate stories about people on campus because he liked to spread rumors. However, Jeff was so upset that he just had to know who Sarah was cheating on him with, and he chose to believe the gossipier. As it turns out, everything the gossipier said was a lie. However, later that day Jeff called Sarah and told her that he couldn't see her for at least a week. After a week, Jeff called Sarah ready to lecture her about everything she had been doing covertly over the past two months. He remembered that Sarah cheated on him with somebody, now recalling it from the gossipier source with the false details instead of his original perceptive source of information.

The case of Jeff is one of misinformation—Jeff forms his belief that P by witnessing an event, but then later is told incorrect information about the event which biases the details of his memory towards the false source. When Jeff forms the belief that Sarah cheated on him with someone as a result of his perception of the event, he is justified in his belief—on our present account of justification he passes the criteria of epistemic rationality. However, when he forms the memory-belief that Sarah cheated on him he is unjustified. Even though Jeff's belief that Sarah is cheating on him with someone is true, Jeff comes to remember the event with details from the gossipier source that contains false information. Moreover, Jeff only believes the gossipier due to his wishful desire to know who Sarah is cheating on him with. Therefore, Jeff is acting irrationally in epistemic terms and his belief is unjustified.

The dualistic theory, however, once again draws a contradictory conclusion compared to our intuitions on the case. According to the dualistic theory, since Jeff acquires his belief that P in a justified manner, he satisfies the criteria of justified adoption. Moreover, Jeff's trust of his memory satisfies the justified retention condition since Jeff is unaware of the fact that his original perceptual memory has been conflated with the gossipier story. Perhaps Jeff is aware that the gossipier is a non-credible source, but he has no reason to think that his memory should have conflated the gossipier's story with his perception of the cheating. Therefore, Jeff satisfies both conditions and the dualistic theory must conclude that he is justified in his memory-belief that Sarah cheated on him. On the other hand we have concluded that Jeff should be considered unjustified, and thus the dualistic theory fails to account for the misinformation case.

One may object that Huemer will actually call Jeff unjustified in his adoption, because it seems that he adopts the belief that someone cheated on him as a result of listening to the gossipier. Therefore, the dualistic theory will call Jeff unjustified by adopting the belief in an irresponsible manner (by using a non-credible source). However, this objection only succeeds if Jeff is forming his belief that someone cheated on him by way of the gossipier. In the case, Jeff adopts the belief rather by perceiving the event—talking to the gossipier skews his original belief but does not *form* it (this is the misinformation aspect of the case). The fact that his information is skewed leads us to call his memory-belief unjustified, but the dualistic theory is only worried about Jeff's retention of the belief from his perspective. Since Jeff is unaware that his memory has been biased, the dualistic theory will consider him justified in his retention. Thus,

the dualistic theory calls Jeff justified while we have concluded that he is unjustified in his memory-belief.

III. EMPIRICAL SUPPORT FOR CASES OF UNJUSTIFIED VERIDICAL MEMORY-BELIEF

The dualistic theory fails to account for three sorts of cases dealing with unjustified veridical memory-belief. In the cases, while the memory-belief that P is veridical (the proposition is true), details of the belief are distorted in the memory which leads to our calling the person unjustified in her memory-belief. For example, in the case of Jean, while Jean's memory that the stock market hit an all-time low is true, her false memory that she read it from a non-credible source bars her from being justified.

It may be objected at this point that the presented cases of unjustified veridical memory-belief involve memory distortions which are rare exceptions. These odd cases, one may object, need not be accounted for so long as a theory works in usual circumstances. However, empirical evidence from psychological research on memory suggests that the sorts of memory distortions involved in the three cases seem to be highly prevalent in normal populations. If the latter is true, then the cases of unjustified veridical memory-belief serve as solid counter-examples to the dualistic theory rather than exceptions that can be glossed over.

The case of Jean is an example of a common memory error known in the psychological literature as source misattribution—the tendency of subjects to confuse or forget the source of their memory. Jean misremembers the source of her information that the stock market hit an all-time low as from the *National Enquirer* instead of *The New York Times* where she actually read it. Source misattribution has been shown to be a robust phenomenon through numerous studies.¹² Moreover, subjects may have a correct memory of information but nonetheless confuse where the information came from.¹³ Source misattribution has also been shown to generalize to real world situations such as eyewitness cases¹⁴ and memory of childhood events.¹⁵

The second case dealt with Chase, in which his imagining of an event caused him to falsely remember information from the event and that the event actually occurred. This sort of phenomena, known in the psychological literature as imagination inflation, has also been shown across multiple studies to be a robust effect. One study found that just by having subjects imagine a childhood event (e.g., getting a hand cut by glass) increased their confidence ratings of the event occurring whether or not it actually did.¹⁶ Studies have extended research to find that subjects can be convinced they have recently performed an action (e.g. flipped a coin) merely by imagining they have done so.¹⁷

The last case presented was the case of Jeff which involved misinformation biasing the details present in his memory. This effect is brought out in experiments at a high rate through the post-event misinformation paradigm.¹⁸ The paradigm is known for finding that subjects who read or hear misleading reports often answer biased towards false information they are presented with (as compared to the control groups).

Some studies suggest that the misinformation effect decreases when subjects hear a report from something known to be non-credible.¹⁹ However, if a long enough delay occurs between actually witnessing the event and reporting what occurred, subjects will fall into the misinformation trap even if they previously knew the source was non-credible.²⁰

IV. CONCLUSIONS

The psychological research on false memory provides an array of evidence that memory distortions can occur in normally functioning individuals. The precise conditions in which they occur may still be an open question, but we do learn something clear about the relationship between a belief and the memory of that belief: namely that there is no necessary connection between a belief being stored and its being likely to be true upon recall.²¹ Since the psychological evidence generally supports the latter claim, then it seems that cases of unjustified veridical memory-belief that result from memory distortion cannot be ignored.

Future psychological evidence may help elucidate conditions in which memory distortions occur, but presently I have argued that there is a solid set of counter-examples that can be raised against the dualistic theory, and these are the cases in which one's memory holds a veridical belief, but false details of that belief render the memory-belief holder unjustified. Perhaps the dualistic theory can be amended to account for these cases of unjustified veridical memory-belief, but how such an amendment can be made remains to be seen. By developing a sort of case that gives the dualistic theory problems, this paper has hopefully given future theories another set of criteria to account for when seeking to be as valid as possible. The aim of this paper has been at least to extend the dialectic in regards to epistemological problems of memory towards necessary conditions for the justification of memory-belief.²²

Received January 2009

Revised March 2009

ENDNOTES

- 1: Assuming that Mars has two moons is a non-basic belief, and that justification is required for knowledge—some externalists like Dretske have argued that justification is unnecessary for knowledge e.g., Fred Dretske, *Knowledge and the Flow of Information*, (Cambridge: The MIT Press, 1981).
- 2: For a more complete summary of proposed theories and objections than presented here, see: Michael Huemer, "The Problem of Memory Knowledge," *Pacific Philosophical Quarterly* 80:4 (1999): 346-357; Thomas Senor, "Epistemological Problems of Memory." *Stanford Encyclopedia of Philosophy*, 2005.
- 3: Huemer, 355.
- 4: *Ibid.*, 351.

- 5: *Ibid.*, 357.
- 6: *Ibid.*, 350.
- 7: Alvin Goldman, *Epistemology and Cognition*, Cambridge: Harvard University Press, 1986.
- 8: Huemer, 348.
- 9: Let us assume here that Chase does not hold the belief that he was abused non-occurently prior to the therapy session
- 10: Huemer, 351.
- 11: *Ibid.*, 351.
- 12: See, for example: Larry L. Jacoby et al, "Becoming famous overnight: limits on the ability to avoid unconscious influences of the past." *Journal of Personality and Social Psychology* 56:3 (1989): 326-338; Johnson, Hashtroudi, and Lindsay, "Remembering mistaken for knowing: Ease of retrieval as a basis for confidence in answers to general knowledge questions." *Journal of Memory and Language* 32:1 (1993): 1-24; Robert Belli and Elizabeth Loftus, "Recovered memories of childhood abuse: a source monitoring perspective." *Dissociation: Clinical and theoretical perspectives*. New York: Guilford Press, 1994; Schacter, Harbluck, & McLachlan, "Retrieval without recollection: An experimental analysis of source amnesia." *Journal of Verbal Learning and Verbal Behavior* 23:5 (1984): 593-611.
- 13: Schacter et. al.
- 14: Kleider, Pezdek, Goldfinger and Kirk, "Schema-driven source misattribution errors: Remembering the expected from a witnessed event," *Applied Cognitive Psychology* 22:1 (2007): 1-20.
- 15: Ceci, Loftus, Leichtman, and Bruck, "The possible role of source misattribution in the creation of false beliefs among preschoolers," *International Journal of Clinical and Experimental Hypnosis* 42:4 (1994): 304-320.
- 16: Garry, Manning, Loftus and Sherman "Imagination inflation: imagining a childhood event inflates confidence that it occurred." *Psychonomic Bulletin & Review* 3:2 (1996): 208-214.
- 17: Goff & Roediger, "Imagination inflation for action events: Repeated imaginings lead to illusory recollections," *Memory and Cognition* 26:1 (1998): 20-33; Thomas & Loftus, "Creating bizarre false memories through imagination," *Memory and Cognition* 30:3 (2002): 423-421.
- 18: Loftus, Miller and Burns, "Semantic integration of verbal information into a visual memory," *Journal of Experimental Psychology: Human Learning and Memory* 4:1 (1978): 19-31.
- 19: Smith and Ellsworth, "The social psychology of eyewitness accuracy: Misleading questions and communicator expertise," *Journal of Applied Psychology* 72:2 (1987): 294-300.
- 20: Underwood and Pezdek, "Memory suggestibility as an example of the sleeper effect," *Psychonomic Bulletin and Review* 5:3 (1998): 449-453.
- 21: This point was argued by Senor (2005) independent of empirical evidence in order to critique internalistic justification theories.
- 22: Special thanks to Ram Neta and Jesse Prinz for testing their intuitions on the three cases of unjustified veridical memory-belief.