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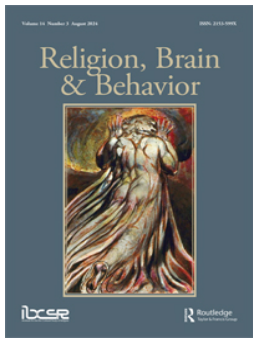
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William James on overbeliefs: the relation with self-deception, placebo-effects, and make-believe

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In their book *The Varieties of Spiritual Experiences: 21st Century Research and Perspectives*, Yaden and Newberg provide a compelling update of the classical book of William James. They pay tribute to his legacy, highlighting that many themes central to the contemporary study of spiritual experiences were already put on the agenda by James more than a century ago. In addition, they provide a state-of-the-art overview of the broad research field of altered states of consciousness, the empirical research methods employed, the variety of different empirical findings, and they reflect on the philosophical and theological implications of these findings.

While reading, I felt specifically intrigued by James' notion of "overbeliefs," which are defined as "beliefs for which one lacks sufficient evidence for or against, but which one is justified in adopting due to their beneficial effects." At the end of his "Varieties" – despite his initial metaphysical agnosticism – James acknowledged his own endorsement of spiritual beliefs about the existence of realms beyond physical existence. He did so based on the alleged benefits these beliefs would bring. Following his pragmatic philosophy and the premise "judge these experiences by their fruits, not by their roots," it seemed only rational to actively endorse spiritual beliefs and to pursue spiritual experiences. According to James, overbeliefs make the difference "between a life of which the keynote is resignation and a life of which the keynote is hope."

However, the notion of an "overbelief" is inherently paradoxical, as from a psychological perspective it entails a form of deceiving oneself. How can one deliberately decide to adopt a belief, of which the actual truth value can be contested? And how can a belief surrounded by a high degree of uncertainty still be beneficial? We know that placebo-effects work by virtue of the fact that a person truly believes in the efficacy of an intervention.

These questions are only briefly touched upon in the book by Yaden & Newberg, while they appear highly relevant for understanding the philosophical legacy of James and specifically his contribution to pragmatic philosophy. In order to make better sense of the notion of "overbelief," here I suggest that more insight can be gained from research on self-deception, make-believe, and placebo-effects.

Self-deception can be considered a motivationally based process that affects belief acquisition and maintenance (Mele, 2001). You want something to be true, and this in turn biases the way you process information. For instance, a student may be convinced that he is the best of his class. Upon receiving a bad grade, logical inference would be to infer that he is apparently not the best student. But due to motivated reasoning, the student discards the low grade as due to the teacher being in a bad mood or the exam being unreasonably vague. Several authors have speculated about the evolutionary significance of self-deception, as it might underlie more complex forms of deceiving others which in turn can have adaptive benefits (von Hippel & Trivers, 2011). Self-

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deception may also underlie the process of self-enhancement (Dufner et al., 2019), as inflated positive beliefs about oneself can foster well-being and social adaptation. James' notion of an overbelief can be considered an adaptive form of self-deception, as it involves the motivated belief that there is a metaphysical realm beyond the physical reality – despite lack of evidence.

But how do people adopt self-deceptive spiritual beliefs in the first place? Two theoretical frameworks can help to shed light on this question: (1) dual process models of thinking and (2) predictive processing theory.

First, Jane Risen has proposed a dual-process model, according to which supernatural and magical intuitions are triggered by system 1, which makes us prone to belief in dualism, teleological thinking, and ontological confusions (Risen, 2016). Depending on personal, motivational, and contextual factors, if the analytical system 2 is engaged, the supernatural intuition can be overridden or corrected. For instance, a girl may be intuitively inclined to believe that wearing a lucky shirt will help her to perform better on her exam (i.e., a classical example of magical thinking). In case she still obtains a high grade despite not wearing her favorite shirt, this results in a rejection of her initial belief. However, in some cases, according to Risen's model, system 2 can be engaged without correcting the supernatural intuition – a process that is called *supernatural acquiescence*. For instance, if the girl finds out that she received a high grade without her lucky shirt, she might attribute this to her still having used her lucky pen instead. This process is comparable to James' idea of an overbelief, as it involves the deliberate acquisition and maintenance of a belief, in the face of potentially contradicting evidence. Supernatural acquiescence is especially likely to occur when intuitions are strong and compelling and when the cost-benefit ratio favors adopting the intuitive belief instead of rejecting it. In line with the evolutionary logic of error-management theory (Johnson et al., 2013), sometimes it may be advantageous to adopt seemingly irrational beliefs, e.g., because failing to detect a pattern may be more costly than incorrectly inferring the presence of a pattern. Thus, in Jamesian terms: adopting an overbelief relies on an implicit process of an evolutionary cost-benefit analysis and, on the dual process account, it involves the deliberate suppression of error-detection mechanisms triggered by system 2 and the adoption of intuitions triggered by system 1.

Secondly, according to the predictive processing framework, our brain functions in a Bayes-optimal fashion in order to minimize prediction errors; within this framework, religious and spiritual experiences have been explained in terms of changes in the weighting of interoceptive and exteroceptive priors (van Elk & Aleman, 2017). On this framework, self-deception is also related to changes in the precision assigned to sensory evidence and to prior beliefs (Marchi & Newen, 2022). In order to maintain a self-deceptive belief, one may selectively sample the world to obtain evidence consistent with that belief (a process called “active inference”), which in turn is assigned high precision. To come back to the previous example: the girl may be motivated to seek out friends who have similar positive experiences with wearing a lucky shirt. Alternatively, disconfirming evidence may be assigned low precision and be rejected. In the example the girl might attribute the high grade without wearing her lucky shirt to the fact that the exam was just much easier than the other exams. Another process through which self-deceptive beliefs can be maintained, is called the “pseudo-rational reorganization of beliefs,” reflecting a slight adjustment of one's prior beliefs. For instance, the girl may revise her belief that the shirt caused high grades to the belief that the shirt and/or the pen causes high grades. In either case, according to the predictive processing account, adopting and maintaining an overbelief involves selective changes in the precision-weighting of prior beliefs and sensory evidence (note however, that this view is somewhat complicated by the distinction between personal/motivational and sub-personal processes in belief updating; see: Jurjako, 2022).

Several strands of research illustrate how this process of strengthening overbeliefs works in religious and spiritual practices (described by Yaden & Newberg as well, in chapter 10). Research on Pentecostal American Christians in the US has shown that the maintenance of religious beliefs in the face of conflicting evidence entails a process of hard work and training (Luhmann, 2012; Luhmann et al., 2021). Believers for instance, engage in a process of mental imagination, whereby they

actively try to imagine interacting with God. They also perform specific mental exercises to make the experience of hearing God's voice more real. This process is comparable to pretend-play observed in young children, that also involves the interaction with imaginary others and "doing-as-if." Similar psychological mechanisms of "real-making," have been observed in other religious traditions including for instance the Azande poison oracle, Catholics praying before statues of saints, or witchcraft practices (for review, see: Van Leeuwen & van Elk, 2019). In all these cases, an initial overbelief is given more weight and confidence through selective sampling and the seeking out of confirmatory experiences.

These mechanisms in turn, can help us to understand how overbeliefs exert their potentially beneficial effects. On the predictive processing account, placebo-effects reflect the top-down effect of beliefs on the processing of bottom-up sensory information (Buchel et al., 2014). A person who strongly believes in the efficacy of a physiologically inert pill will feel less pain, when presented with painful stimuli. The stronger and more precise one's prior beliefs, the stronger the placebo effect, e.g., as evidenced by the finding that more pills work better than one pill and that more complicated medical procedures yield stronger placebo effects (e.g., sham surgery works better than sham pills; Olson et al., 2021).

Self-deceptive beliefs can function like a placebo-effect, as they distort the sampling and processing of sensory information. Some self-deceptive beliefs may be more uncertain than others. James himself was not completely clear on the certainty of his spiritual beliefs, which were at odds with his overall agnostic attitude. The subjective uncertainty of self-deceptive beliefs can be operationalized as the imprecision of the prior likelihood of the belief. For instance, one may be skeptical about the possibility of faith healing, which is reflected in an imprecise prior for this belief. These imprecise and uncertain beliefs can still be adaptive, as shown for instance by open-label placebo studies. It has been found for instance that knowing that one receives a placebo-pill or even merely imagining receiving a pill can result in reduced test anxiety (Buegler et al., 2023). Based on the error-management principle "nothing ventured, nothing gained," people who are prescribed an open-label placebo might still implicitly hope (however weakly and vaguely) that they received something rather than nothing, and this in turn yields a beneficial placebo-response. As such, research on placebo-effects and open-label placebo-studies can help us to understand how overbeliefs, while uncertain, can still be adaptive.

Obviously, there is a dark side to overbeliefs and self-deception as well. Distorted beliefs about oneself and the world can be considered delusional, and extreme forms of self-deception may be maladaptive (see for instance: Peterson et al., 2003). Also, negatively valenced self-deceptive beliefs (e.g., the belief that someone cast a spell on you) can be maladaptive and in turn trigger a nocebo (instead of a placebo) response. As one example, the belief in Predestination in the Dutch reformed church (i.e., the belief that God destined at birth whether one will go to heaven or hell), can trigger considerable anxiety and depression (Shahid et al., 2020) and can even increase fear of death (Fortuin et al., 2019).

Whereas the overall evaluation of spiritual beliefs and experiences in the book by Yaden & Newberg is rather positive, it is important to keep an open eye to these darker sides as well.

Thus, research on self-deception, make-believe, and placebo-effects can help us to better understand the psychological mechanisms involved in James' notion of overbeliefs. While James at the end of the *Varieties* finally disclosed his personal overbeliefs on spiritual matters, Yaden and Newberg carefully keep their cards towards their chest and conclude that, "We believe that methodological agnosticism is an essential prerequisite in scientific and clinical work on spiritual experiences. (...) Last, we must retain a sense of epistemic humility regarding spiritual experiences." I wholeheartedly agree with such a humble approach. Still, as a reader I was curious to learn more about the authors' personal views on the matter. A more personal reflection towards the end of the book would have been very interesting – especially in light of the more outspoken views of professor Newberg in previous publications on this topic (Newberg & Waldman, 2009). As such, I would like to end this commentary with an invitation to the authors to disclose their personal

views on the topics covered in this book – specifically in relation to the intriguing notion of “over-beliefs.” Do they endorse overbeliefs themselves as well?

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No potential conflict of interest was reported by the author(s).

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