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DOSSIER

The acquisition of religious belief and the attribution of delusion

A aquisição da crença religiosa e a atribuição do delírio

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ABSTRACT

My aim in this paper is to consider the question 'Why is belief in God not a delusion?'. In the first half of the paper, I distinguish two kinds of religious belief: institutional and personal religious belief. I then review how cognitive science accounts for cultural processes in the acquisition and transmission of institutional religious beliefs. In the second half of the paper, I present the clinical definition of delusion and underline the fact that it exempts cultural beliefs from clinical diagnosis. Finally, I review cognitive models of the intuitive attribution of mental disorders and how they support cultural exemption. Through the comparison of the models of cultural acquisition of religious beliefs and of cultural exemption in the attribution of delusion I intend to make it clear that we can provide an answer to our motivating question: even though some institutional religious beliefs may seem as strange as the most florid delusions, humans can readily recognize that they are not the product of mental dysfunction due to the fact that their acquisition and transmission is embedded within a cultural context.

Keywords: religious belief, clinical delusion, cultural learning, folk psychiatry.

RESUMO

Meu objetivo nesse artigo é examinar a pergunta 'Por que a crença em Deus não é um delírio?'. Na primeira metade do artigo, distingo entre dois tipos de crença religiosa: institucional e pessoal. Então, passo em revista ao modo como a ciência cognitiva dá conta de processos culturais na aquisição e transmissão de crenças religiosas institucionais. Na segunda metade do artigo, apresento a definição clínica de delírio e sublinho o fato de que esta isenta crenças culturais do diagnóstico clínico. Finalmente, exploro modelos cognitivos da atribuição intuitiva de transtornos mentais e como estes dão suporte à isenção cultural. Através da comparação dos modelos de aquisição cultural de crenças religiosas e de isenção cultural na atribuição do delírio, pretendo tornar claro que podemos prover uma resposta à questão que motiva essa investigação: ainda que algumas crenças religiosas institucionais pareçam tão estranhas quanto os delírios mais extravagantes, seres humanos reconhecem facilmente que estas não são produto de disfunção mental devido ao fato de que a sua aquisição e transmissão está embutida em um contexto cultural.

Palavras-chave: crença religiosa, delírio clínico, aprendizado cultural, *folk psychiatry*.

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Introduction

Why is belief in God not a delusion? To many, this may seem like a disingenuous question. But in a recent paper, Robert M. Ross and Ryan McKay (2017) point out that the answer to this question is far from clear. Consider the following two cases they present to frame the problem:

(1) Arnold believes he has two heads, the second of which belongs to his late wife's gynecologist.

(2) Simone believes that each Sunday she drinks the blood of a long-since-murdered man whose mother was a virgin and whose father was the creator of the universe.

Whereas doctors would diagnose Arnold as suffering from a delusion, Simone would invite no medical attention at all. To the contrary, she would blend right in with a sizable part of the world population. Why is that? Although both hold implausible beliefs that violate established biological and physical principles, there is still something intuitively different about each case. Ross and McKay point out that while scientists who study religion from a biocultural perspective shy away from the topic of delusion, experts on delusion rarely engage with contemporary biocultural research on religion.

Some have argued that religion is a manifestation of unsound psychological processes. At different points in his career, Sigmund Freud considered it a collective social mechanism to process the Oedipal complex; an illusion and neurosis that could be overcome through maturation; and mass-delusion or a psychotic defense against reality (Freud, 1919, 1928, 1930). Likewise, Albert Ellis (1980) also asserted what he saw as the irrational basis of religion, which he equated with psychopathology. But consider that at any given moment of recorded history the vast majority of people were religious. In 2010, a comprehensive demographic study conducted by the Pew Research Center's Forum on Religion & Public Life estimated that there were 5.8 billion religiously affiliated adults and children around the globe, representing 84% of the world population (then 6.9 billion). The anti-religious attitudes of Freud and Ellis represent an obstacle to understanding billions of people, for many of which, as George Graham observes, "religious or spiritual commitments offer a precious and enduring sense that life is meaningful and worthwhile" (2015, p. 6) and whose religious commitments may also express and reinforce concern for neighbors and charity toward people in general.

Now, the members of each one of the world's religions hold beliefs that seem strange to those who do not share them. Against Freud and Ellis, there is something counterintuitive in pathologizing all religious belief. My aim in this paper is to flesh out why this is so. I do this by examining the role of cultural learning in the acquisition of religious belief and that of cultural exemption in the attribution of mental dysfunction. Toward this end, I do not concern myself specifically with belief in God (or gods), but with religious belief in a wider sense. In the following section, I outline a distinction between two kinds of religious belief. Then, I review how cognitive science accounts for the acquisition and transmission of religious belief. Next, I introduce a definition of delusion which encodes the counterintuitiveness of pathologizing cultural beliefs. Finally, I present a model of the intuitive detection and attribution of mental dysfunction that accounts for cultural exemption.

Two kinds of religious belief

Let us begin by taking a closer look at Ross and McKay's chosen examples. In 1984, David Ames of the Royal Melbourne Hospital published a case report about a 39-year-old man hospitalized with a self-inflicted gunshot wound through the left frontal lobe (Ames, 1984). What drove the man to this desperate act was his conviction that he had a second head on his shoulder, which belonged to his wife's gynecologist. According to the patient, 'The other head kept trying to dominate my normal head, and I would not let it. It kept trying to say to me I would lose, and I said bull-shit [...] and decided to shoot my other head off' (1984, p. 193). Call delusional bicephaly *Belief 1*.

Now, contrast that to *Belief 2*, in reality a set of beliefs which, for the sake of simplicity, we can break down to two: (a) the belief in transubstantiation, the Roman Catholic dogma according to which the bread and wine offered in the sacrament of the Eucharist are literally changed into the body and blood of Jesus Christ; and (b) the belief in the virgin birth, a basic article of faith in the Roman Catholic, Orthodox, and most Protestant churches, according to which Jesus was conceived in the womb of his mother Mary through the Holy Spirit without the agency of a human father, and that he was born while Mary was still a virgin.

There are two aspects that distinguish *Belief 1* from *Belief 2*. First, while *Belief 1* is idiosyncratic, a great number of people share *Belief 2*. According to the Vatican, baptized Roman Catholics numbered 1.299 billion in the year 2016 (*Bollettino*, 2018). It is safe to assume that even if many of the baptized do not subscribe to all dogmas of the Church, the remaining faithful still account for a rather large group. This brings us to an important distinction, already present in William James' classic *The Varieties of Religious Experience*: "one great partition [...] divides the religious field. On the one side of it lies *institutional*, on the other *personal* religion" (1902, p. 28, my emphases). So, in James' terminology, *Belief 2* would be an instance of an institutional religious belief.

Second, *Belief 1* refers to the subject who holds it, while *Belief 2* does not. While institutional religious beliefs are widespread representations that do not refer to the believers themselves, many religious beliefs *are* about the person who holds them. They are personal religious beliefs. In a recent paper, Neil Van Leeuwen and Michiel van Elk (2018) clarify the distinction: "One who believes, for example, *that God visited me in the hospital* has a personal belief, because of the indexical

me. [Institutional] beliefs might have contents such as *that the Oracle tells the future*, *that ancestors desire sacrifice*, or *that witches cause illness*. Related personal belief contents would be *that the Oracle told my future*, *that the ancestors want a sacrifice from me*, or *that a witch caused my cousin's illness*' (2018, p. 1).

Considering the distinction between institutional and personal religion and the examples Ross and McKay employ, we may now reframe the problem: why is institutional religious belief not a case of delusion? One intuitive hypothesis is that institutional religious belief is not a case of delusion because of its etiology. The way one acquires the belief that ancestors desire sacrifice, for example, is not the same as the way one acquires the belief that one has a second head. (Indexicality does not help to solve the issue since most delusional beliefs are other-referential.) To pursue this intuition, I will examine how cognitive science accounts both for cultural learning in the acquisition of institutional religious beliefs and for how intuitive models of the attribution of mental dysfunction exempt beliefs that are culturally learned.

Before moving forward, I would like to address a related question: when is personal religious belief a case of delusion? How can we distinguish those personal religious beliefs which sound as strange to outsiders as delusions from proper delusions that take on a religious theme?[2] To illustrate this problem, Graham (2015, p. 26-27) invites us to engage in a spiritual thought experiment. Imagine reading the New Testament without any previous acquaintance with the Judeo-Christian tradition. You read that Jesus speaks of himself as "the only begotten Son of God," "the light of the world," "the prince of this world" (John 3:16; 8:12; 12:31), "the bread of life" and "the way, the truth and the life" (John 6:35; 14:6). Of those who offend him, he says they "shall be in danger of hell fire" (Matthew 5:22) and that their "whole body shall be cast into hell" (Matthew 5:30). Finally, you read that he promises his followers supernatural powers to cast out devils, speak in tongues and recover from deadly poisons (Mark 16:16-18).

Graham surmises that one may wonder whether Jesus' beliefs expressed in the biblical texts are delusions. Indeed, this intuition figures in C.S. Lewis's famous "shocking alternative" trilemma, an apologetic argument which maintains that one cannot at once affirm that Jesus was a great moral teacher and not also divine:

> *I am trying here to prevent anyone saying the really foolish thing that people often say about Him: 'I'm ready to accept Jesus as a great moral teacher, but I don't accept his claim to be God.' That is the one thing we must not say. A man who was merely a man and said the sort of things Jesus said would not be a great moral teacher. He would either be a lunatic—on the level with the man who says he is a poached egg—or else he would be the Devil of Hell. You must make your choice. Either this man was, and is, the Son of God, or else a madman or something worse (1952, p. 54-55).*

Yet Graham goes on to say that if you answer that indeed Jesus was deluded, you may be "classifying millions of Christians and followers of Jesus as deluded" (2015, p. 27). But that is not so. Jesus' belief that he was "the only begotten Son of God" is of an altogether different kind from that of his followers, both those who witnessed his life and those whose belief relies on oral and written tradition. Jesus' belief is a case of what we have called personal religious belief. That of his followers would be a case of institutional religious belief.

The separation between religious delusions and personal religious beliefs admits of many intermediate cases. Emmanuelle Peters *et al.* (1999) compared a group of delusional inpatients with Hare Krishnas and Druids. The control groups consisted of nonclinical subjects, both non-religious and religious (Christian). The researchers assessed beliefs on their content and accompanying distress, preoccupation, and conviction. Members of the New Religious Movements scored higher than the control groups on all measures apart from distress. They did not show as much florid symptomatology as the inpatients, but could not be differentiated from them on the number of delusional items endorsed on the criteria of assessment. A key point is that they were much less distressed and preoccupied with their experiences. As Graham observes, in the clinical setting the consequences of religious attitudes matter to the diagnosis of religious delusion:

> *In contemplating a diagnosis of delusion, a person's relevant beliefs, attitudes, convictions, moods and so on, should be assessed, in goodly part, in pragmatic or consequence-orientated terms of whether the beliefs or attitudes help the person to lead a meaningful and worthwhile life. [...] [E]ven if a person's relevant religious attitudes are false, and perhaps even grounded in hallucinatory religious experiences, they may be practically (prudentially and morally) preferable to other attitudes that are circumstantially available to the person. If relevant religious attitudes are personally helpful or preferable overall [...] the person is not deluded. He or she may be religiously superstitious, or perhaps self-deceived, but not, despite his or her attitudes or other possible faults, deluded (2015, p. 21-22).*

[2] In practice, many factors contribute to raise the probability of a diagnosis of religious delusion: lack of formal religious affiliation and the supportive social and cognitive frameworks it provides (Koenig, 2009); other signs of disorder (Sims, 1992); and accompanying social dysfunction (Fulford and Jackson, 1997). See Graham (2015), especially chapter 6, for a pragmatic and up-to-date account of religious delusion.

A presupposition here is that anomalous beliefs and experiences are not pathological in and of themselves. That is to say, they can become so as a result of the way subjects interpret and react to them. As Scrutton (2016) argues, this contextualist view of pathology has the advantage of not shutting down potential therapeutic avenues that may arise out of spirit-related practices, beliefs, and experiences. These include spirit possession, both as this occurs voluntarily, as in most cases of mediumship, and involuntarily, as when a cure is sought through a healing ritual. In sum, benign personal religious beliefs are not taken to be delusions because, as Graham sums up elsewhere, "Living through a delusion *hurts* a person" (2010, p. 203, my emphasis). On the other hand, religious beliefs and experiences often have adaptive and life-enhancing consequences that should be taken into account in the clinical setting (as they often are).

Having distinguished between personal and institutional religious beliefs and having sketched the problem of distinguishing personal religious beliefs and religious delusions, I will now focus on institutional religious beliefs and how humans acquire and transmit them.

The acquisition of religious belief

Cognitive science of religion (CSR) is a multi-disciplinary academic field that draws from philosophy, religious studies, sociology, cognitive psychology, anthropology, cognitive neuroscience, and evolutionary biology. In the last three decades, CSR has anchored the study of religion in up-to-date scientific explanations of human cognitive architecture, offering a viable program of research to show how well-understood natural cognitive predispositions shape and constrain the mental representation and cultural distribution of religious beliefs.

Much debate has surrounded the question of the evolutionary and cognitive origins of religion. One proposal is that religion is a selected genetic *adaptation* for cooperative group living (Sosis and Alcorta, 2003). The argument for religion as a biological adaptation has some intuitive appeal. Since humans depend on cooperation for survival, religion could have provided an internal bias to promote social cohesion and feelings of guilt and fear about defecting from the group, and also to act as costly signals. However, in CSR the adaptationist paradigm has largely been discarded in favor of the view that religion is rather a *byproduct* of evolved, non-religious, cognitive functions (Boyer, 2001; Atran, 2002; Barrett, 2004).[3]

Ilkka Pyysiäinen and Marc Hauser (2010, p. 105) note two clear advantages in the view that religion is a cognitive byproduct. First, since 'religion' is a family-resemblance category, no natural partition exists between religious and other cultural representations. This poses a problem for any explanation of 'religion' as an entity-like whole. The byproduct view avoids this problem by using 'religion' as a heuristic term that refers to a fuzzy set of beliefs and behaviors without clear boundaries. Second, no specific religious cognitive mechanisms would need to be specified (Atran, 2002; Boyer, 2003). CSR has thus come to view religion as a recurring byproduct of the evolutionary landscape that creates cognitive, emotional and material conditions for ordinary human interactions (Atran and Norenzayan, 2004).

Yet, within the cognitive byproduct framework, there is considerable room for debate about the role of cultural processes in the evolution of religion. For example, there are those who argue that religious beliefs arise naturally and effortlessly from the biases and tendencies of the human mind (Barrett, 2004; Pyysiäinen and Hauser, 2010). Such mechanisms may include the abilities to infer the presence of organisms that might do us harm (Barrett, 2004), to come up with causal narratives for natural events (Kelemen, 2004), and to recognize that other people have minds with their own beliefs, desires, and intentions (Bering, 2006). Arguably, these mechanisms (among others) allow human beings to imagine purposeful agents behind many observations that could not be explained otherwise (e.g., thunder, lightning, the movement of planets, and the complexity of life).

General belief in gods, spirits, angels, and other supernatural beings may well emerge from our evolved mechanisms for agency detection, teleological thinking, mindreading, and so forth. But consider specific institutional religious beliefs, such as Ross and McKay's example of the belief in transubstantiation and the virgin birth of Jesus Christ. How are these kinds of specific, counterintuitive beliefs acquired and transmitted? As Will Gervais *et al.* (2011) point out, these pose a psychological puzzle, since we need to explain the difference between supernatural beliefs that are mentally represented but treated as fictional (e.g., fairies in folk tales, the gods of other religions, etc.) and those that are mentally represented and evoke deep worship and commitment (e.g., the gods of one's own group). Gervais and colleagues provide a model of the acquisition and transmission of religious beliefs by supplementing the byproduct view with an account of how two families of cognitive biases respectively constrain the content of transmitted concepts and push individuals to selectively attend to and acquire both concepts and degrees of commitment from those around them.

Along with other kinds of cultural beliefs and concepts, we acquire institutional religious beliefs through *cultural learning*. Michael Tomasello *et al.* (1993) define cultural learning as those instances of social learning in which intersubjectivity or perspective-taking plays a vital role. They identify three

[3] But note that the byproduct view does not thereby abandon the view that religion fosters cooperation. Belief in spirits or all-seeing gods blocks defection by triggering the feeling that one is watched and that one is rewarded for cooperative behavior and punished for cheating (Norenzayan and Shariff, 2008).

forms in which cultural learning manifests itself during human ontogeny: imitative learning, instructed learning, and collaborative learning. Although some instances of imitative and instructed learning are found in other animal species (Whiten, 2005), humans rely upon each other for adaptive information to an unparalleled degree in the animal kingdom. As Tomasello and colleagues put it:

> *[H]uman beings learn from one another in ways that nonhuman animals do not. In particular, human beings "transmit" ontogenetically acquired behavior and information, both within and across generations, with a much higher degree of fidelity than other animal species. The learning processes that ensure this fidelity serve to prevent information loss […] and thus, in combination with individual and collaborative inventiveness, form the basis for cultural evolution. Human beings are able to learn from one another in this way because they have very powerful, perhaps uniquely powerful, forms of social cognition. Human beings understand and take the perspective of others in a manner and to a degree that allows them to participate more intimately than nonhuman animals in the knowledge and skills of conspecifics (1993, p. 495).*

Humans must be sensitive to the quality of the information acquired from various sources. Cultural evolutionary theories such as dual inheritance theory (Boyd and Richerson, 1985) recognize two broad types of psychological mechanisms that aid in the processing of such information. They are *content biases* and *context biases* (Henrich and McElreath, 2003). The first such mechanisms draw our attention to the fact that humans selectively retain information because of differences in its content. With regard to the specific case of religious representations, one influential hypothesis is that the presence of *counterintuitive* content in concepts or narratives can bias memory to favor their maintenance in cultural evolution (Boyer, 1995; Barrett and Nyhof, 2001).

Religious concepts and beliefs are counterintuitive because they violate universal assumptions and expectations about the world's structure. This includes the basic categories of our "intuitive ontology", such as person, animal, plant, inanimate objects, and events. Because they depart from the established rules we use to understand information in our environment (be it physical, biological or psychological), minimally counterintuitive representations contribute to the memorability of concepts, beliefs, and narratives, thereby increasing the likelihood of their transmission (Norenzayan *et al.*, 2006).

Granted that content biases explain the higher chance of transmission of some types of representation, Gervais and colleagues' psychological puzzle still begs for an explanation. There is a wide gap between representing minimally counterintuitive concepts and narratives and committing to a subset of these while ignoring plenty of other ones. When so many concepts share similar content conducive to cultural success, the cognitive biases operating on representational content are insufficient to explain the persistence of particular religious beliefs. In order to bridge this gap, we need to examine the origins of religious faith within its cultural context. Gervais and colleagues propose that the cultural scaffolding necessary for religious representations to become objects of sincere belief is set up by context learning biases, the most studied of which are the *conformist* and *prestige biases* (Henrich and Boyd, 1998) and *credibility-enhancing displays* (Henrich, 2009).

Learners help themselves to a variety of cues to assess which potential information sources are more reliable. They thereby come to preferentially believe information from these sources. If a learner places weight on the prevalence of a certain belief, they are operating under a conformist bias (Boyd and Richerson, 1985). Psychologists have demonstrated that the capacities for context-dependent learning emerge early in development. For example, children are more likely to believe information that comes from sources who have proven to be reliable (Koenig and Harris, 2005). But if a learner imitates cultural models who are older, skilled, and successful, they are operating under a prestige-based bias (Henrich and Gil-White, 2001). For example, when choosing whether to imitate a previously reliable adult or child source, children follow the adult (Jaswal and Neely, 2007). Furthermore, young children track the visual attention of others and selectively learn from those who were preferentially attended to before (Chudek *et al.*, 2012).

Both conformist and prestige-based learning strategies help the acquisition and transmission of religious beliefs to the extent that they are common or that high-status individuals endorse them. But yet another context bias emerges from the specific need for learners to avoid deception. As Gervais *et al.* explain, "An unscrupulous model might knowingly transmit false information to others, perhaps to maintain a competitive advantage. In this case, it is important for learners to ensure that their models actually hold the beliefs they espouse before adopting the belief themselves" (2011, p. 392). Witnessing extravagant and often costly displays that reflect credible belief increases the likelihood of internalizing those beliefs (Henrich, 2009). In this case, the cultural learner commits themselves to a belief because actions speak louder than words. With regard to the cultural transmission of institutional religious beliefs, observing extravagant displays that betray credible belief in gods and spirits (e.g., fasts, sacrifices, and other costly rituals) causes a cultural cascade of religious beliefs and behaviors.

Thus, while content biases make supernatural concepts interesting, memorable, and contagious, context biases explain why people come to believe in (rather than merely represent) a particular subset of the supernatural concepts and narratives to which they are exposed. Having presented the role of cultural learning biases in the spread and stability of

religious beliefs and practices, I will now turn to the definition of delusion and, in the final section, present a model of the attribution of mental dysfunction that will tie in with the foregoing discussion of institutional religious beliefs.

The definition of delusion

Providing a definition of delusion that satisfies the needs of both psychopathological theory and clinical practice is a difficult task. The first two editions of the American Psychiatric Association's Diagnostic and Statistical Manual of Mental Disorders—DSM-I (1952) and DSM-II (1968)—did not provide one, but with the inclusion of the section 'Glossary of Technical Terms' in the DSM-III (1980), the manual came to define delusion as follows:

> *A false belief based on incorrect inference about external reality that is firmly held despite what almost everyone else believes and despite what constitutes incontrovertible and obvious proof or evidence to the contrary. The belief is not ordinarily accepted by other members of the person's culture or subculture (i.e., it is not an article of religious faith). When a false belief involves a value judgment, it is regarded as a delusion only when the judgment is so extreme as to defy credibility (APA, 2013, p. 819).*

Reflection upon the clinical literature raises difficulties with this attempt at a definition (Leeser and O'Donohue, 1999).[4] For instance, does delusion have to be false? Consider a case of delusional jealousy discussed by Karl Jaspers in which the stress of putting up with her husband's delusion causes the patient's wife to find consolation in another man's arms, thereby verifying the patient's belief. Nothing in the patient's mind has changed: he still holds that his wife is unfaithful without having any evidential justification. So, it is not the truth-value of the beliefs held by the deluded that is epistemologically crucial to the characterization of delusions, but the fact that they are "sustained despite what constitutes incontrovertible and obvious proof or evidence to the contrary."

Does delusion have to be based on inference? As Martin Davies *et al.* (2001, p. 134) observe, a subject might form a delusional belief by taking an anomalous perceptual experience to be true, and it is not obvious why this might involve an inferential step. Furthermore, Philip Gerrans has advanced a theory that relieves the emphasis on hypothesis confirmation to which the inferential view alludes, proposing instead that processes of selective attention and recall exert their effects on autobiographical narrative. In his words, "Someone with a delusion is not a mad scientist but an unreliable narrator" (2009, p. 152). Thus, the inferential nature of delusion formation is a point of contention.

Does delusion have to be about external reality? Consider delusions in which the patient affirms that some of her internal organs are missing (Cotard syndrome) or in which the patient denies ownership of her limbs or even an entire side of her body (somatoparaphrenia). Or, still, delusions in which the subject reports that another's thoughts occur in her own mind without her volition (thought insertion). Whether they are about "external" or "internal" reality—a terminology so vague as to merit scientific disrepute—is of no consequence to the delusional character of a belief.

Does delusion have to be firmly sustained? While that may be the case in many, if not most manifestations, the conviction of delusional subjects is subject to fluctuation. At least some delusional patients show appreciation of the implausibility of their delusional beliefs. Consider, for example, the following excerpt of an interview with a patient who maintained that both his family and his house had been replaced by duplicates—delusions respectively known as Capgras syndrome and reduplicative paramnesia:

> *E: Isn't that [two families] unusual?*
> *S: It was unbelievable!*
> *E: How do you account for it?*
> *S: I don't know. I try to understand it myself, and it was virtually impossible.*
> *E: What if I told you I don't believe it?*
> *S: That's perfectly understandable. In fact, when I tell the story, I feel that I'm concocting a story ... It's not quite right. Something is wrong.*
> *E: If someone told you the story, what would you think?*
> *S: I would find it extremely hard to believe. I should be defending myself.*
> *(Alexander et al., 1979, p. 335).*

Does delusion have to occur in the face of incontrovertible and obvious proof or evidence to the contrary? Consider the case of mirrored-self misidentification—the delusion that one's reflection in the mirror is not one's own. It is sometimes accompanied by the conviction that whoever the person in the mirror is, he or she is following the subject around. Are these patients in possession of 'incontrovertible and obvious proof or evidence' that, although they fail to identify the face in the mirror, it is nevertheless theirs? Consider that just as not all hallucinatory symptoms lead to delusion, an otherwise normal subject presented with the anomalous experience of not recognizing herself in the mirror would presumably not arrive at the belief that, say, although the mirrored person is waving just like I am, wearing the same clothes, sporting the same hairstyle, etc., that person is not me. In addition to these

[4] Among the difficult aspects of this definition, the status of delusions as *beliefs* has been especially contentious and engendered a philosophical debate between defenders of the commonsense position and those who point toward alternative characterizations, such as imaginings, cognitive hallucinations or hybrid attitudes (Porcher, 2018).

overriding facts (which point to the great plausibility that there is something wrong with *me*), the testimony of each and every one of one's epistemic peers would also weigh in heavily in the reasoning of a person whose thoughts did not mark the presence of some deficit, or bias, or both. So, imperviousness to evidence does indeed seem to be a central feature of delusion.

Last but not least, does delusion have to contradict what almost everyone else believes? Does the attribution of delusion have to take into consideration the person's culture or subculture? Davies *et al.* (2001, p. 133) object that if an implausible belief is formed and sustained in ways that are characteristic of delusions, it should be grouped together with delusions even if many other subjects believe the same thing. And Anthony Storr notes that idiosyncratic belief systems shared by only a few adherents are likely to be regarded as delusional, while "belief systems which may be just as irrational but which are shared by millions are called world religions. When comparing the beliefs held by psychotics with religious beliefs held by normal people, it is impossible to say that one set of beliefs is delusional while the other is sane" (1996, p. 203). However, as *ad hoc* a clause as it may seem, cultural exemption makes sense of the fact that we do not intuitively think that individuals who belong to other cultures which hold peculiar beliefs are in the grip of mental disorders.

The attribution of delusional belief

How do people detect and attribute mental disorders? How do culture-specific models of dysfunction influence these processes? And how do pan-specific features of human minds influence cultural models of detection and attribution? As Pascal Boyer (2011) notes, the actual cognitive processes engaged in when people think about mental disorder have eluded empirical research. Such processes fall between the domains of two well-established disciplines: cross-cultural psychiatry (which focuses on the cultural variation of disorders themselves) and anthropological ethnopsychiatry (which focuses on cultural models of sanity and madness). But recently Nick Haslam and colleagues have, in a series of theoretical and empirical papers, developed a social-cognitive model of laypeople's thinking about mental disorder (what they dub *folk psychiatry*) which shows promise as an organizing framework for a field that has lacked a clear theoretical basis.

Haslam's folk psychiatry model specifies four dimensions along which laypeople conceptualize mental disorders: *pathologizing*, that is, the extent to which the observed behavior is construed as abnormal or deviant, mainly on the basis of rarity and as a result of the failure to explain the behavior; *moralizing*, the extent to which the observed behavior is under the subject's control and to which individuals are morally accountable for their abnormality; *medicalizing*, the extent to which the observed behavior has a somatic basis and is the direct result of an underlying organic condition; and *psychologizing*, the extent to which the observed behavior has a mental, non-intentional basis and is the direct result of a psychological dysfunction which shifts the explanatory focus toward causes, not reasons, undermining moral judgment (Haslam, 2003, 2005; Haslam *et al.*, 2007).

Empirical support for the folk psychiatry model comes from studies in which participants rate descriptions of mental disorders on items that assess features of the model. In one study (Haslam and Giosan, 2002), Haslam's group interviewed American undergraduates who had no formal education in abnormal psychology. They were given the task of reading paragraph-length descriptions of 68 conditions, out of which 47 came from DSM-IV. They were asked to judge if they were mental disorders and to rate them on 15 items addressing components of the concept of mental disorder proposed by several theorists. The authors found that American lay understandings of 'mental disorder' showed moderate convergence with the DSM-IV. Then, in a follow-up study, Cezar Giosan *et al.* (2001) replicated the pilot study in student samples from Brazil and Romania. The most interesting departure from the American understanding of mental disorder was found among Brazilian participants, who did not represent moralizing and medicalizing as polar opposites, placing them in separate factors and thereby justifying the distinctness and irreducibility of these dimensions.

Besides mapping stable understandings of abnormality within and across cultures, the model illuminates shifts in these understandings. Since they found that North American understandings of mental disorders tend to be more psychologized or "internalistic" than those of Brazilians, Haslam's group predicted that the longer the period of acculturation of Brazilian citizens living in the United States, the more psychologized their understandings of disorders would be when compared to their less acculturated compatriots (Glovsky and Haslam, 2003). In a manner consistent with this prediction, more acculturated participants judged a larger proportion of the conditions to be mental disorders. They also understood these conditions more as manifestations of emotional distress and intrapsychic dysfunction and showed a stronger tendency both to understand disorder as a violation of social expectations and to pathologize behavior in excess ('acting out'). Thus, the concept of 'transtorno mental' they once shared with their Brazilian peers broadened and took on a more psychologizing cast.

While these studies and the theoretical framework that emerges from them provide an elegant illustration of the cognitive processes of intuitive detection at work, they do not address why and how intuitive folk psychiatries emerge. Boyer forges a cognitive model that builds on Haslam's work, as well as on observations about the causal connections between pathology, cultural context, typical manifestations, popular categorization, and scientific description. In the first stage of Boyer's account, dysfunction triggers behaviors, only some of which are detectable as violations of folk psychology (the ones that are not bounce off intuitive detection). Sometimes

causes other than dysfunction will trigger behaviors that will be interpreted as violations caused by dysfunction, and in these instances detection will have gone wrong. Detection of unexpected behavior will trigger explanatory causal models for the behavior, some of which will not make it through cycles of acquisition and communication (unsuccessful models bounce off transmission). Finally, frequently activated models may have feedback effects. These affect the models themselves through the work of context biases whereby people are more likely to adopt and transmit representations that are already widespread (Boyd and Richerson, 1985). Moreover, they affect people's behaviors when subjects of classification become aware of being so classified. Such changes, in turn, may lead to revisions in the initial descriptions of mental disorders (Hacking, 1995).

For our purposes, what is especially important are the first stages in Boyer's account which, in short, boil down to the claim that our intuitive detection of mental disorder involves judging that certain kinds of behavior are so different from our expectations that they are taken as evidence that the mental systems that produce them are dysfunctional. These are mental dispositions that form part of our shared cognitive architecture (Sperber, 1996). But just as "narratives, scholarship, etiquette, politics, cuisine, musical traditions, or religious rituals" (Boyer, 2011, p. 112) are culture-specific, the manifestations of these dispositions to attribute dysfunction will also be culture-specific by deriving from the sets of mental representations that constitute the models of what is wrong with people's behavior within specific contexts.

In the context of a discussion about what he calls the "counterintuitive biology" inherent in some religious and magical concepts, Boyer (2001) considers anthropologist Wendy James' account of ebony divination. This is a practice of the Uduk-speaking peoples that she encountered while carrying out fieldwork in the borderlands of Sudan's frontier with Ethiopia in the 1960s. The Uduk report that ebony trees can eavesdrop on conversations and that they "know of the actions of the *arum* [souls, spirits, including people who were not given a proper burial] and of *dhatu* (witches) and other sources of psychic activity" (James, 1988, p. 303). According to James, diviners perform oracular consultation by burning ebony wood as a form of seeking personal healing and keeping foreign gods at bay. During the consultation, the ebony stick will produce specific smudges in the water which indicate not only the nature of the problem at hand but also a solution.

Contrast the case of the Uduk reported by James with the following case reported by Dominic Murphy:

> *Let's consider [...] the (real) case of a person I'll call Ed. Ed was sleeping rough and heard (or, had the experience of) a tree in a park tell him that the park was a good place to stay. So Ed settled down for the night in the park. But a little later, the sprinklers in the park erupted and Ed was drenched. Thereupon Ed heard the tree tell him that he (the tree) was very sorry: trees like to be watered, and the tree had not understood that Ed would not appreciate a good soaking. Ed accepted the tree's apology and went on his way (2013, p. 118).*

Why is it intuitive to attribute dysfunction in Ed's case, but not in the Uduk's case? As we saw above, in addition to characterizing delusion as a "false belief based on incorrect inference that is firmly held despite what almost everyone else believes and despite being confronted by evidence to the contrary," the DSM's definition continues: "The belief is not ordinarily accepted by other members of the person's culture or subculture (i.e., it is not an article of religious faith)" (APA, 2013, p. 819). At first glance, this cultural exemption clause may appear to be a highly arbitrary, relativistic, and unscientific addition. As epistemology does not generally regard widespread cultural endorsement as a form of justification, this sort of exceptionalism may be dismissed as unwarranted and question-begging (Radden, 2011, p. 101).

However, the cultural exemption clause in the definition of delusion can be seen as encoding the fact that *other causes* would be assumed rather than dysfunction in the latter case. Uduk people who believe that trees can hear conversations are members of a culture wherein trees are believed to have counterintuitive biological characteristics, whereas Ed is not. These beliefs, therefore, are culturally learned. According to Richard Samuels' (2009) interpretation of cultural exemption, in the case of the Uduk the causes of what might seem aberrant behavior for outsiders will, on close inspection, have to do with testimony: when we acknowledge that the belief that trees have counterintuitive biological characteristics is part of the Uduk culture and is acquired through cultural learning, the pull to attribute dysfunction vanishes. In short, the concept of cultural learning helps to make sense of the acquisition of (some) strange beliefs.

What about Ed's case? Should we conversely interpret the intuitive pull to attribute dysfunction to him as being a result of Ed's not having the epistemic warrant that the Uduk have through testimony? As much as Samuels' observations about testimony make sense of cultural exemption in the detection and attribution of mental disorder, the converse interpretation in Ed's case makes the treatment of delusions implausible, as lack of testimonial warrant is too narrow a rationale to account for our intuitive attribution of delusion. For this reason, Murphy (2014) argues that to understand the attribution of delusion we should think more broadly about reasoning, going beyond testimony.

In consonance with Boyer's cognitive account of detection and attribution, Ed's dealings with trees are readily taken as evidence of mental dysfunction in the absence of cultural exemption. Murphy applies Boyer's framework to the case of delusion by hypothesizing that the psychiatric concept of delusion grows out of a widespread human tendency, which Boyer accounts for via cognitive science, to attribute mental disorder in cases where someone's behavior fails to accord

with folk-psychological assumptions about how the mind works. More specifically, Murphy proposes that our practices of attribution suggest that a delusion is a belief that is acquired through a process that does not fit our folk theories of belief acquisition (what he dubs *folk epistemology*). Unlike the DSM definition, then, Murphy suggests that what is crucial to demarcating delusion from other kinds of aberrant beliefs is not the end product of reasoning but the process by which these beliefs are formed:

> *What is conceptually basic about delusion is the perversion of normal mechanisms of belief acquisition and revision, not just the weird beliefs that one ends up with through that perverted changing of one's mind. "Normal" here does not mean "according to our best scientific theory." It means that folk psychology, broadly construed, endorses some avenues of belief formation and rejects others. Delusional people are people who are hooked up to the world in ways that [...] folk epistemology says are weird, in the sense of falling outside normal human expectations about other people's psychology. The weirdness of the ensuing belief is (defeasible) evidence for the abnormality of their reasoning mechanisms, but the weirdness itself is not the conceptually crucial element (2014, p. 115).*

Thus, what makes delusions distinctive is not that they violate epistemic norms *per se*. Instead, our folk-epistemological expectations are violated. All manner of beliefs that violate epistemic norms are part of our folk-epistemological expectations and can be accounted for by our folk-epistemological resources which includes beliefs and expectations about the role of "hot" cognition and personal interests in the formation and maintenance of belief (as well as the role of culture in shaping people's assumptions about what counts as legitimate evidence). In the case of self-deception, for example, though the belief is formed and maintained in the face of contradictory evidence, we as interpreters do not run out of explanatory resources and can readily come up with an explanation of how and why the belief came about. In other words, what is distinctive about delusion is the "explanatory gap" created by its observation and closed by its attribution.

In keeping with the comparison between the Uduk and Murphy's Ed, I suggest that Murphy's theory of delusion attribution helps us see why we are not even tempted to equate delusions and the vast majority of religious and culture-specific beliefs. The chasm between them owes its existence to the fact that these beliefs do not *prima facie* violate our folk-epistemological expectations because we readily recognize cultural learning as the primary source for their acquisition. This recognition thus prevents us from taking such beliefs (and related practices) as evidence that the mental systems that produce them are dysfunctional.

Conclusion

In the preceding discussion, I worked towards an answer to the question 'Why is belief in God not a delusion?'. In the first half of the paper, I first pointed out that the sense of religious belief relevant to the question is the institutional, not the personal one. I then reviewed how cognitive science accounts for cultural processes in the acquisition and transmission of such beliefs. In the second half of the paper, I presented the clinical definition of delusion and underlined the fact that it exempts cultural beliefs from clinical diagnosis. Finally, I reviewed cognitive models of the intuitive attribution of mental disorders and how they support cultural exemption. The comparison of the models of cultural acquisition of religious beliefs and of cultural exemption in the attribution of delusion is, I hope, enough to make it clear that we can answer Ross and McKay's question: even though some institutional religious beliefs may seem as strange as the most florid delusions, humans can readily recognize that they are not the product of mental dysfunction due to the fact that their acquisition and transmission is embedded within a cultural context.

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