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DOSSIER

The typology problem and the doxastic approach to delusions[1]

O problema tipológico e a abordagem doxástica para delírios

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ABSTRACT

This paper explores one of the most fundamental philosophical worries underlying the occurrence of delusions, namely, the problem about the specific type of mental state that grounds a delusional report or, as I shall call it, 'the typology problem'. The analysis is developed as follows: (i) After formulating and circumscribing the target problem, (ii) I explore the main tenets and advantages of the doxastic view of delusions, perhaps, the strongest candidate currently available within the typology debate. (iii) After, I clarify and evaluate four of the main counter-arguments against the doxastic view offering a number of counter replies to these attacks. (iv) Finally, I conclude that the anti-doxastic argumentation offers no good reasons to abandon the doxastic model and that this model does not need to appeal to external resources to reply to such counter-arguments. At the same time, I finalize with some of the challenges that remain open within the doxastic view.

Keywords: psychosis, delusions, doxastic view of delusions, typology problem.

RESUMO

Esse artigo explora uma das preocupações filosóficas mais fundamentais que subjazem à manifestação de delírios, a saber, o problema do tipo específico de estado mental que fundamenta um relato de delírio - o que chamarei de 'problema tipológico'. A análise empreendida é desenvolvida do seguinte modo: (i) Após formular e circunscrever o problema-alvo, (ii) exploro os principais comprometimentos e vantagens da explicação doxástica dos delírios, que é talvez a mais forte dentre as soluções propostas dentro do debate tipológico. (iii) A seguir, esclareço e avalio quatro dos principais argumentos contra a explicação doxástica, oferecendo réplicas a esses ataques. (iv) Finalmente, concluo que a argumentação anti-doxástica não oferece boas razões para abandonarmos o modelo doxástico e argumento que esse modelo não precisa apelar a recursos externos para responder aos argumentos anti-doxásticos. Termino o artigo expondo alguns desafios ao modelo doxástico que permanecem em aberto.

Palavras-chave: psicose, delírios, visão doxástica de delírios, problema tipológico.

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From clinical observations to philosophical worries: The complexities of delusion

Delusional cases challenge our most fundamental assumptions about the normal functioning of human mind. Often, from a clinical point of view, delusions have been usually regarded as the *hallmark* of psychosis, the sign *per excellence* of a broken mind. As Jaspers (1963, p. 93) claims: "since time immemorial, delusion has been taken as the basic characteristic of madness. To be mad was to be deluded". Nowadays, delusions are considered a major symptom of a number of psychiatric conditions such as schizophrenia and major depression, although they can be also observed in neurological medical conditions such as dementia (Coltheart *et al.*, 2011).

The study of delusions is complex as they are heterogeneous in terms of content, scope, aetiology, and phenomenological features. In terms of content, the delusion that one is dead and that one's internal organs are rotten is clearly bizarre for example (Cotard delusion). However, not all delusions are bizarre; some of them might be even true in different circumstances, these are called 'mundane' delusions. Take the case of the delusion that my mother is a serial killer. Although this is not the case – not that I know of at least – this situation *might* be true if, in fact, my mother has got the atrocious habit of killing people[3]. Now, when patients exhibit a single delusion or a small set of delusional states that are all related to a single theme, delusions are called *monothematic*. In the Cotard case, the patient holds a specific delusional state and although some other delusional states might emerge – like the delusional belief of being immortal – they seem to be associated with the main delusional belief (being dead). In contrast, if patients exhibit delusional states about a variety of topics that are unrelated to each other, delusions are *polythematic*. For example, Capps (2004) comments the case of Josh Nash who believed he was the Emperor of Antarctica, the left foot of God on Earth, and that his real name was Johann von Nassau, among many other delusional beliefs.

In terms of scope, delusions are *circumscribed* when they do not lead to the formation of other intentional states that might be related to the content of the delusion, nor do they have important effects in the subject's behaviour[4]. Delusions are *elaborated* when the subject reporting it draws consequences from the delusion (often manifested in specific behaviours) and forms other beliefs that orbit around the main delusions. It is claimed that elaborated delusions can turn into complex narratives that might help to make sense of the whole delusional situation that the patient is living (Davies *et al.*, 2001)[5].

Regarding the aetiology of delusional phenomena, a basic distinction is usually drawn between motivational and deficit approaches (Mckay *et al.*, 2009; López-Silva, 2015). The former class claims that the production of delusions is motivated by the psychological benefits they confer to the deluded subject (see Bentall and Kaney, 1996; Bell, 2003). On this view, delusional phenomena are characterized as active psychological responses to threatening internal or external psychological stimuli, these responses not being necessarily linked to any particular type of affective, perceptual, or cognitive deficit or malfunction. Contrasting with the motivational formulation, *deficit approaches* conceptualize delusional phenomena exclusively as the result of different impairments at different stages of the process of belief and thought formation (McKay and Dennett, 2009). Rather than adaptive psychological responses, delusions involve disorders and alterations in the normal functioning of beliefs produced by a combination of anomalous first-order perceptual experiences (Maher, 1974, 2003), impairments in the process of hypothesis evaluation (Langdon and Coltheart, 2000), or unusual experiences accompanied by reasoning biases (Garety *et al.*, 2001), among many others.

All these distinctions are source of a number of debates within the current clinical community. However, although delusions are a crucial clinical phenomenon – given their consequences in human mental health –, when paying closer attention, they also become source of a number of philosophical discussions. Over the last years, delusions have attracted the attention of philosophers from different traditions as they propose a number of questions regarding the most fundamental aspects of human mind such as the rules of rationality (Bermúdez, 2001; Gerrans, 2002), the intentionality of conscious mental states (Berrios, 1991), the nature of self-knowledge (Fernández, 2010), the structure of self-awareness (Gallagher, 2014), and the reality of the self (Bentall, 2003) among many others. Certainly, the exploration of delusions is a matter that necessarily requires a great deal of cooperation between dif-

[3] The bizarreness of a delusion seems to be a matter related to the degree of empirical likelihood of a certain situation or state of affairs.

[4] As we will see in section "The anti-doxastic stance: Objections and replies", this issue represents a current debate within the context of the discussion about the nature of delusions.

[5] The circumscribed- elaborated distinction seems to be relevant to specify the degree of integration between the delusional state and other states of different kind of the subject. Coltheart and Davies (2000) claim that while polythematic delusions tend to be elaborated, monothematic delusions tend to be circumscribed. However, it is important to note that the same type of delusion might be circumscribed in some cases and elaborated in some others. For instance, a patient with the belief that her left limb is not hers but belongs to her mother (somatoparaphrenia) but shows no preoccupation for of her original limb and does not look for it seems to have a circumscribed delusion. Now, a patient with the same type of delusion (somatoparaphrenia) might show preoccupation and even develop paranoid thoughts about the situation. In addition, she might engage in behaviours aimed to find her original limb. In this case, the patient would have an elaborated delusion.

ferent disciplines such as psychopathology, clinical psychology, neuropsychiatry, cognitive sciences, and philosophy, just to name a few (Fulford *et al.*, 2013; López-Silva, 2014).

Following the interdisciplinary spirit that the study of delusions requires, this paper aims at exploring one of the most fundamental philosophical worries underlying this phenomenon, namely, the problem about the *specific type of mental state* that grounds a delusional report or, as I call it, '*the typology problem*'. The analysis will be developed as follows: (i) After formulating and circumscribing the typology debate, (ii) I will explore the main tenets and advantages of the doxastic view of delusions, perhaps, the strongest candidate currently available within our discussion. (iii) After, I will clarify and evaluate four of the main counter-arguments against the doxastic view and I will offer some counter-replies to these attacks. (iv) Finally, I will conclude that the anti-doxastic argumentation offers no good reasons to abandon the doxastic model and that this model does not need to appeal to external resources to plausibly deal with such counter-arguments. At the same time, I will refer to some of the challenges that remain open within the doxastic view.

Mapping the discussion

The definition of delusions

The current version of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-V) defines delusions as 'a false belief based on incorrect inference about external reality that is held despite what almost everyone else believes and despite what constitutes incontrovertible and obvious proof or evidence to the contrary' (APA, 2013, p. 819). As we can easily observe, this definition is controversial in many ways. For example, some delusions might be characterized as accidentally true – as in the case of my mother being a serial killer – and others might not even be about external reality but rather about internal mental or bodily states[6]. Sometimes, even the *internal-external* distinction becomes obscure as in the case of a patient that claimed to be at Boston and Paris at the same time (Weinstein and Kahn, 1955) or in cases where patients report that some of their thoughts have been stolen (Mullins and Spence, 2003).

Now, as well as there are elements of disagreement surrounding the DSM's definition of delusions, almost everyone would agree that delusions – as a mental symptom – are an important source of stress to patients (Van Rossum *et al.*, 2011; López-Silva, 2015). In this context, some might confuse a certain 'neutrality' or lack of affect of certain patients towards their delusions when reporting them, however, this seems misleading as the important moment to take into account is when patients are actually 'having' their delusions. In those moments, delusions are an undeniable source of stress. Delusions are usually regarded as 'pathological' for many reasons (Campbell, 2001; Frankish, 2009; Gallagher, 2009). A basic point to be made here is that, even within motivational approaches, delusions emerge as an abnormal way of dealing with mental conflicts or deficits (depending on the view from within delusions are formulated, see last section). Finally, a common view in the philosophy of psychiatry and psychopathology is that they are not biologically adaptive (Zolotova and Brüne, 2006). In this sense, the development of delusions would not help in any way to increase a subject's probabilities of survival in a specific environment McKay and Dennett, 2009). Finally, it is agreed that delusions are also reported in a *sincere* way even in the affective and behavioural reactions observed in patients are not those that one might expected if those report were true (Zahavi, 2005; Bortolotti, 2010).

The typology problem

A key debate underlying the clinical and philosophical understanding of delusions is the one concerning the type of mental states in which delusional reports are actually grounded. Think about the following cases. When Agustín says he is *watching* Star Wars, we can conclude without further discussion or doubt that Agustín's statement is grounded in a *perceptual* experience. Agustín reports what he reports just because he is having a visual experience of that movie. Now, when Nelly says she was thinking about what would it be like to be a caveman, we can uncontroversially conclude that she was *imagining* that something was the case. Nelly's report is based on an imaginative-cognitive experience of a certain kind. However, what can we say in cases where a subject asserts that she is dead (Cotard delusion; Berrios and Luque, 1995), her bodily movements are under control of aliens (Delusions of alien control; Firth, 1992), or when she says she an external agent is inserting thoughts into her mind (Mullins and Spence, 2003)? Independent from specific theoretical frameworks, all these cases are usually regarded as *delusions*, but what types of mental state are these patients reporting? Are delusional reports grounded in actual perceptual states? Does this make them perceptual states? Are they just the product of unmonitored imaginative activity that ends up deceiving the subject? Let's call this the *typology* problem, namely, the problem about the specific type of mental state that grounds delusional reports.

Why is the typology problem a problem at all? The answer to this question seems to have two dimensions. First, the typology problem is a problem from a clinical point of view. Clinicians aim not only at identifying pathological mental phenomena, but also, at building up explanatory theories and therapeutic treatments. Without a clear idea about the type of

[6] Take the case of Cotard delusion that involves the delusional belief that one is dead (McKay and Cicopolotti, 2007). Such delusional belief is not about external reality – as in the case of Capgras delusion for example - but rather about internal states of the subject.

mental state a delusion is, it is hard to see how clinicians might be able to offer specific explanatory theories, as these theories would necessarily take the form of explanatory frameworks about specific mental states and their disruptions (Coltheart, 2015). In the same way, it is hard to see how one might build specific therapeutic technics without having clear clues about the type of mental state one is dealing with. Second, the typology problem is a philosophical problem as it leads to a number of debates about our most fundamental ideas about human rationality, the nature of phenomenal consciousness, the nature of intentionality, and other key issues within the philosophy of mind. Certainly, a clarification of the typology debate might not only contribute to the development of conceptual fields such as philosophy but also, to applied fields such as psychiatry, clinical psychology, and psychopathology.

A potential solution? The doxastic approach to delusions and its appeal

One of the strongest solutions to the typology problem currently available in the literature is the so-called *doxastic* approach to delusions. This view takes its name from 'doxa,' Greek word for belief or opinion, and its main tenet is that delusions are better understood as a type of belief (Bayne and Pacherie, 2005; Bortolotti, 2010, 2012; Bayne and Hattiangadi, 2013)[7]. Contrasting with other views on the same problem, here, beliefs are broadly understood as *propositional attitudes*[8]. More specifically, most advocates of the doxastic view tend to endorse McKay and Dennett's notion of belief as "mental states of a subject that implement or embody that subject's endorsement of a particular internal or external state of affairs as actual" (2009, p. 493). Of course, it is important to note that within the doxastic approach, beliefs are not just a type of belief; they are an abnormal type of belief, or, in words of McKay and Dennett (2009), they are *misbeliefs*.

Two main doxastic expressions can be identified in the literature. On the one hand, top-down views suggest that delusional doxastic frameworks might influence the phenomenal character of experiences and actions (Campbell, 2001). On this view, abnormal doxastic states would act as an intelligibility framework for certain experience in a way that such frameworks would penetrate the subjective features of experiences. On the other hand, bottom-up views suggest that 'the proximal cause of the delusional belief is a certain highly unusual experience' (Bayne and Pacherie, 2004, p. 2). On this view, certain abnormal experiences would propose highly implausible doxastic hypothesis that would be accepted by a cognitive system as a result of a number of deficits in the process of evaluating that type of information (McKay *et al.*, 2009). As we can see, these two doxastic expressions differ when trying to set up the causal direction in the relationship between experience and belief. Within bottom-up approaches the causal relation goes from experience to belief (Maher, 1974, 2003; Coltheart, 2015), whilst in top-down approaches it goes from belief to experience (Campbell, 2001). This distinction is important, as it will be part of the main challenges that remain open within the doxastic approach. However, it is not my job to decide which one of these doxastic expressions is better here.

The doxastic view enjoys a well-deserved popularity within current philosophy of mind and neuropsychiatry. This can be easily explained by the empirical and conceptual advantages that this view offers over its main rivals. Now, let me explore some of these main advantages:

Diagnostic Evidence: It has been noted that delusions are usually reported *as* beliefs by patients (Bortolotti and Miyazono, 2014). Generally, when asked whether they really believe what they report within a psychotherapeutic setting, delusional patients claim that they really do so (Bisiah and Gemianini, 1991). For example, when asked if he really believed what he was reporting, one of my patients exclaimed "what do you mean? Of course! I'm not inventing it!"[9]. This type of reply and the high degree of subjective certainty commonly associated with delusional reports offer would be nicely explained by the doxastic view of delusions.

Subjective Certainty: Delusions are usually reported with a considerable degree of *subjective certainty*. This issue can be plausibly explained if we conclude that delusions are beliefs because high degrees of subjective certainty seem to be characteristic of beliefs (Langdon and Bayne, 2010). However, it is important to note that the degree of subjective certainty with which delusions are reported varies considerably from subject to subject (Parnas, 2003).

[7] The fundamental rationale behind the doxastic approach finds its roots in Locke's notion of madness. In his Essay on Human Understanding, Locke (1961) suggests that madness was due to faulty associations in the process whereby sense data (experiential inputs) were transformed into 'ideas' (beliefs) (for a contemporary version of this idea, see Maher (1974). Porter (2003, p. 127) claims that Locke's notion of madness as the result of different impairments in the process of formation of ideas became central to the new thinking about mental conditions in Britain and France around 1700. In fact, the term 'delusion' was first used as referring to mental problems around the same date.

[8] Roughly speaking, a proposition is whatever a declarative sentence expresses. A propositional attitude is the mental state of having a certain attitude or stance towards a certain proposition. Hoping, desiring, wanting, and believing are different instances of propositional attitudes, among many others.

[9] R was a schizophrenic patient who, among other symptoms, had the delusional belief of being able to have conversations with Elvis Presley every morning. He said that Elvis came every morning to the psychiatric hospital to have a chat with him. Along with this belief, the patient also claimed that he was in a relationship with Maura Rivera, dancer from a popular Chilean TV show at that time.

Discriminative Power and Conceptual Clarity: the doxastic view offers a conceptually and phenomenologically appealing way to distinguish delusions from other types of psychopathological mental states. While delusions reflect disturbances in the process of formation of beliefs, hallucinations, for instance, might reflect disturbances related to perceptual processes (Langdon and Bayne, 2010). Indeed, this ability is always desirable for it allows clinicians to develop a more specific diagnostic, which in turn might guide better-defined and more specific treatments in psychotherapeutic contexts. This conceptual clarity is highly desirable when trying to develop empirical research on delusions.

Pathological Nature of Delusions: The doxastic approach to delusions explains nicely the pathological nature of delusions. As Bortolotti and Miyazono (2014, p. 32) suggest:

> *LA-O's mental condition is pathological partly because she seriously denies that her left hand belongs to her. If she did not believe it, but merely imagined it, there would not be anything particularly pathological about her condition, as acts of imagination do not necessarily reflect how things are for the person engaging in the imagining. It is a strange thing for LA-O to imagine that her left hand does not belong to her, but we can easily entertain various kinds of strange possibilities in our imagination without losing mental health.*

Strong Research Framework: the doxastic approach provides a robust conceptual framework to guide empirical research on delusions (Coltheart and Davies, 2000; Coltheart, 2015). Once we accept delusions are beliefs, psychiatrists and philosophers would only need to focus on the way human beings come to form beliefs and understand the different alterations of these mechanisms that give raise to delusions (Coltheart, 2015). Naturally, here the challenge is to explore and comprehend such mechanisms in the adequate ways. A number of researchers in current neuropsychiatry have endorsed this the doxastic approach to delusions and claim that in order to understand delusions, philosophers and practitioners should have a closer look at the different perceptual and cognitive mechanisms involved in the process of production of beliefs (Maher, 1974; Coltheart, 2002, 2009). The thought here is that by understanding how these mechanisms break down under certain circumstances, we might be able to decipher the psychogenesis of delusions (Coltheart, 2005, 2015).

Explanatory Power: empirically well-supported doxastic accounts have been formulated for a wide range of delusions, such as, persecutory delusions (Freeman *et al.*, 2002), delusions of alien control (Frith, 1992), delusions of thought insertion (Frith, 1992; Martin and Pacherie, 2013), Capgras delusions (Ellis and Young, 1990), Fregoli delusion (Ramachandran and Blakeslee, 1998), Cotard delusions (Ramachandran and Blakeslee, 1998), Somatoparaphrenia (Bisiach and Geminiani, 1991), and mirrored-self misidentification (Davies *et al.*, 2001), among many others.

The anti-doxastic stance: Objections and replies

Despite all the aforementioned advantages, over the last years a number of authors have argued that the doxastic approach fails to make sense of delusions in a plausible way. The anti-doxastic stance can be divided into two main aspects: a negative and a positive one. Whilst the negative aspect refers to the reasons offered by the anti-doxastic to believe that delusions are not beliefs and abandon a doxastic stance, the positive aspect refers to the alternative answers that advocates of anti-doxasticism would offer to the typology problem[10]. Now, the main focus of the negative dimension of the anti-doxastic stance has been the idea that delusions would fail to instantiate the main features of paradigmatic beliefs and that therefore, delusions should not be understood as beliefs. In this section, I evaluate these anti-doxastic arguments and I offer counter-replies to these attacks. As I will stress in the conclusions section, as it stands, the doxastic approach seems to be in a good position to deal with these counter-arguments without appealing to external argumentative elements.

The argument about subjective certainty

The first attack to the doxastic view of delusions concerns the subjective features that would characterize delusional reports. The argument about subjectivity certainty would run something like this:

(1) Beliefs are consistently reported with high degrees of subjective certainty
(2) Delusions are reported with variable degrees of subjective certainty.

(C) Delusions are not beliefs because they do not posses the degree of subjective certainty that paradigmatic beliefs posses.

This argument rests on the idea that normal beliefs are reported with high and invariable degrees of subjective certainty. In contrast, delusions would be reported with vari-

[10] It has been suggested that delusions might be better characterized as cognitive imaginings, i.e. imaginative states that are misidentified by the subjects as beliefs (Currie, 2000; Currie and Jureidini, 2001). Hohwy and colleagues argue that delusions should be understood as the result of perceptual inferences (Hohwy and Rosenberg, 2005; Hohwy and Rajan, 2012). Egan (2009) claims that delusions are bimaginations, i.e. states with some belief-like and imagination-like features, and Schwitzbegel (2012) finally concludes that we should think of delusions as neither beliefs nor non-beliefs, but rather, as in-between beliefs.

able degrees of certainty. For example, De Hann and De Bruin (2010) claim that, in some cases, patients report their delusional episodes 'as if' they were the case: "it is as if my girlfriend can read my thoughts [...] it is as if I am from another planet" (p. 385, note 16). This fluctuation in subjective certainty would not be present in paradigmatic beliefs so it would give the anti-doxastic a reason to suggest that delusions do not instantiate the expected features of beliefs and therefore, that we should not characterize them as such.

There are a number of ways in which the doxastic advocate might reply to this attack. The main problem seems to be that plausibility of premise (1) as it imposes a too demanding requirement, in fact, a requirement that cannot be even met by normal beliefs. The truth is that even normal beliefs are reported with variable degrees of subjective certainty. Beliefs are not a static mental state, they are highly context-dependent, flexible, and fluctuating (Bayne and Hattiangadi, 2013). I can report a certain normal belief with variable degrees of subjective certainty depending on a number of internal (mood, affective processing, cognitive conditions, etc.) and external (social role, specific task in which it emerges, etc.) elements. Given the contextual nature of beliefs, all the elements might influence their degrees of subjective certainty. Take the case of P believing in G: God. The degree of subjective certainty with which P reports G might vary depending on the situation in which the belief is reported. Perhaps, after reading Nietzsche, P seems to believe in G but P's not quite sure about it. P's belief that G seems to show a low degree of subjective certainty in this situation. Now, P might report that G with high degrees of subjective certainty right after having experienced a massive earthquake. Arguably, P's doubts about God's existence do not show that P does not believe in G, but rather, that P has got a certain belief and some reasons to doubt about it. For many beliefs, it seems uncontroversial to say that one can have them while nurturing doubts about them. In that case, such doubts are just the product of the exercise of one's rational abilities. Therefore, it seems plausible to say that variable degrees of subjective certainty also characterize reports of normal beliefs and that one should rule out a doxastic stance towards delusions on this basis.

Another option available for the doxastic defender is to say that it is perfectly possible for a single cognitive system to have contradictory beliefs (which is quite different from holding a single belief with contradictory content of the type <P ∧ ~P>). According to Davidson (1982), a subject can have two mutually contradictory beliefs, as long he does not believe their conjunction at the same time i.e. <P ∧ ~P>. Regardless of the argumentative power of this last argument, here the main issue at hand is that the phenomenon of subjective certainty should be understood as a matter of degree. One should not think about this issue as a black-or-white phenomenon, but rather, as a continuum in which different degrees of subjective certainty can be located depending on the external and internal elements that accompany the emergence of such states. While one pole of this continuum might be associated with lower degrees of subjective certainty as those characterizes imaginative and dream-like states, the other pole would be related to states showing higher degrees of subjective certainty as those characterizing normal beliefs. Thus, although the degree of certainty in asserting the content of certain delusions can vary, this degree of certainty would not be comparable with those of imaginings, for example, where subjective certainty seems low or even non-existent. The truth is that, in most cases, delusional patients assert the content of their delusions with high degrees of subjective certainty at different stages of their aetiological development, and given that variability (within the higher-pole of this continuum), is present even in normal beliefs, delusions might be nicely explained by the doxastic model.

The argument about responsiveness

The second anti-doxastic argument concerns the way in which delusions respond to counter-evidence. This argument runs something like this:

(1) Beliefs are responsive to counter-evidence.
(2) Delusions are not responsive to counter-evidence.

(C) Delusions are not beliefs because beliefs are responsive to counter-evidence and delusions are not.

The idea behind this argument is that M is a belief of the subject if and only if M is responsive to evidence. Thus, delusions fail to meet this requirement and therefore, they should not be understood as beliefs of any kind. The first point to be made is that it is just not true that delusions are never responsive to counter evidence. As Schreber observes in his *Memoirs of My Nervous Illness,* "what objectively are delusions and hallucinations are to him [the patient] unassailable truth *and adequate motive for action"* (1988, p. 282, my emphasis).

A second reply emerges from a more practical point of view. Take the case of Cognitive Behavioural Therapy (CBT), perhaps the most popular approach to the treatment of delusions. This approach is premised in the idea that delusions are a type of belief (Alford and Beck, 1994). One of the main technics of CBT consists in questioning the patient's delusional belief in light of counterevidence (Dickerson, 2000). CBT has been proven effective in the treatment of some delusions and such effectiveness can be accounted by the fact that delusions are sometimes responsive to counterevidence (Garety *et al.,* 1997)[11]. In this context, the truth is that delusions are sometimes responsive to evidence while other times they are not.

[11] In fact, a great portion of the therapeutic work in the treatment of delusions can be explained by the fact that delusions are sometimes responsive to counterevidence.

A final reply to the *responsiveness* objection is that the argument is based on the idea that paradigmatic beliefs are necessarily rational in virtue of their responsiveness to evidence. However, this idea seems to be way too demanding for it has been shown that, sometimes, not even ordinary beliefs are entirely responsive to counterevidence (Nisbett and Ross, 1980; Bentall, 2003; Bortolotti, 2010). Clear examples of ordinary beliefs lacking the degree of responsiveness to evidence supposedly characteristic of paradigmatic beliefs are racist and sexist beliefs. A male sexist subject might have the belief that being a woman is enough for that subject to be considered as inferior in many ways. Sexist beliefs are the result of a number of biases, and they lack the degree of responsiveness to evidence that paradigmatic beliefs exhibit; however, they are not denied the belief status. The problem with this objection is that some of our ordinary beliefs are irrational in the same way delusions can be and therefore, again, the objection establishes a requirement that not even some ordinary (non-delusional) beliefs meet. Nonetheless, it is important to note that the main difference between delusional and non-responsive ordinary beliefs seems to be given by the *degree* of responsiveness. Irrational ordinary beliefs seem to be more responsive to evidence than delusional beliefs and the challenge for the advocate of the doxastic approach is to account for this difference[12]. The argument seems to take responsiveness as an all-or-nothing phenomenon, idea that is far from plausible. Different beliefs can be responsive to counter-evidence in different degrees depending on the quality of the information, the subject's personal cognitive patterns, the subject's current affective situation, social context, and on the psychological role that the relevant belief plays in the subject's mind, and the same seems to apply to delusions if understood as beliefs.

The argument about doxastic integration

(1) Beliefs are integrated with other beliefs of the subject
(2) Delusions are not integrated with other beliefs of the subject

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(C) Delusions are not beliefs because beliefs are integrated with other beliefs of the subject delusions are not.

The idea behind this argument is that M is a belief of the subject if and only if M is integrated with other beliefs of the subject. Thus, delusions fail to meet this requirement and therefore, they should not be understood as beliefs of any kind. Currie and Jureidini (2001, p. 161) conclude that delusions "[fail], sometimes spectacularly, to be integrated with what the subject really does believe".

First, it is important to note that it is not clear how Currie and Jureidini are in position to know what the patient *really* believe. If we take delusional reports at face value and consider the way in which patients report their delusional episodes, one might be able to say without much discussion that they do believe that aliens are controlling their bodily movements, that they are dead, that machines insert thought into their mind, and so on. The problem here is that delusional beliefs seem not to be integrated *with some other beliefs* of the subject. However, in this context we can ask two simple questions: The first is (i) do delusions really fail to be integrated with other beliefs of the subject? The answer seems to be 'not always.' In many cases, delusions are integrated well with other beliefs of the subject (Bortolotti, 2010). *Prima facie*, the patient that planned to remove one of his two heads with an axe was able to integrate his 'perceptual delusional bicephaly' with the belief with the content <I can use an axe to remove my second head> (see Ames, 1984). The second question to ask here is (ii) are paradigmatic beliefs always integrated between each other? The answer seems to be, again, 'not always.' The main problem with this objection is that the failure of delusions to be integrated with some other beliefs of the subject is exaggerated and therefore, it imposes a requirement that not even ordinary beliefs meet. However, as Bortolotti (2010) claims, it is necessary to note that delusions are evidently less integrated than ordinary beliefs so they show the mark of irrationality (bad integration) to a higher degree than non-delusional beliefs. Although this is a phenomenon that the advocate of the doxastic view should be able to explain, it is by no means a good argument to deny the status of belief to delusions.

The argument about action guidance

(1) Beliefs guide specific actions of the subjects that hold them.
(2) Delusions do not guide specific actions of the subjects that hold them

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(C) Delusions are not beliefs because beliefs guide actions of the subjects that hold them and delusions do not.

The idea behind this argument is simple, M is a belief of the subject if and only if M guide actions of the subject holding M. Thus, delusions fail to meet this requirement and therefore, they should not be understood as beliefs of any kind.

This seems to be one of the weakest arguments against the doxastic approach for it looks like a great number of deluded patients do act on their delusional beliefs (de Pauw and Szulecka, 1988). Blount (1986) reports a case of a patient suffering from Capgras delusion that decapitated his stepfather trying to find the batteries in his head. Certainty, the action of decapitation was guided by the belief that

[12] It is interesting to note that many delusional cases seem to be an exacerbation of the content of some ordinary (but not originally delusional) subjective themes. This seems to be case of jealousy and morbid jealousy, functional obsessive thought of contamination and parasitosis, just to name a few. Prima facie, these cases offer another reason to believe in doxasticism about delusions.

the patient's stepfather was some kind of machine. Similarly, Young and Leafhead (1996) showed that all Cotard patients showed some form of delusion-related behaviour. In fact, after planning to remove his second head with an axe, the aforementioned patient with perceptual delusional bicephaly decided to remove it with a gun leading this to a number of injuries (see Ames, 1984). A number of patients with delusions of superhuman strength have been reported injured after acting on their delusions (Petersen and Stillman, 1978). These cases show that, sometimes, delusions do guide actions in deluded patients.

Now, for the sake of the discussion, let me proposed a refined version of this objection. This version might propose that delusions fail to produce the *right kind of action and emotional response* that patients are expected to produced if delusions were beliefs. For instance, it is claimed that some patients suffering from the Capgras Delusion, who claim to have beliefs with the content <my wife is an imposter>, fail to react in the way we would expect if their delusions were actual beliefs. However, there are some basic difficulties with this new version of the argument.

First, one cannot expect psychotic patients to react or show the same type of reactive behaviours that non-psychotic people commonly exhibit. This is to ignore a number of cognitive, affective, and motivational impairments that patients suffer and that might influence the way they react to certain mental state such as their own delusions (Fuchs, 2005). Second, having a certain belief is different from the behaviour derived from it. It has been shown that schizophrenic patients tend to have problems with introspection and general problems with identifying their own mental states (Taylor *et al.*, 1997). Parnas and Sass (2003) conclude that schizophrenic patients usually show a condition called 'hyperreflexivity', i.e. an exacerbated explicit awareness of otherwise tacit elements that usually remains in the background of consciousness. Arguably, one might say that hyperreflexivity arises in the context of an informational surplus in consciousness that does not allow the patients to behave in the way that it is expected when having a certain clear and well-identified belief. Third, the argument seems to assume that we always act consistently with our beliefs but do we always behave consistently with our beliefs? Is it 'expected behaviour' a good parameter to distinguish between those states that are beliefs and those that are not? It seems that we do not always act consistently with the beliefs we hold. One can have the belief that there is a helper God that looks after his sons while acting as though there is no God. However, the status of belief is not denied to the belief in God, even if the subject holding it acts like there is no God.

Until this point, the reader might be able to realize that most of the anti-doxastic argumentation seems to rely on an idealization of the features of normal beliefs, imposing constraints on delusional phenomena that not even ordinary beliefs would meet. Therefore, there seems not to exist sufficiently compelling reasons to reject the doxastic approach, at least, on the basis of the four arguments analysed here.

Concluding remarks: The challenges of the doxastic approach

Over the last years, the doxastic approach to delusions has become a strong candidate in the context of the typology problem i.e. the problem about the type of mental state that delusional reports instantiate. However, this approach has not been free from attacks. Taking into consideration the analysis offered here, it seems reasonable to say that the counter arguments against the doxastic stance offer no sufficient reasons to reject it. If we are to reject such a view, it is not in virtue of the four arguments analysed in section 4 which are the most popular in current literature. Think about this issue in this way: the mere fact that delusions fail to perform some of the roles typically associated with paradigmatic beliefs is not sufficient reason to say that they are not beliefs at all (Reimer, 2010). Such a conclusion seems too hasty. One might say that they are not paradigmatic beliefs – just as the doxastic view suggests – or as McKay and Dennett (2009, p. 493) suggest, that they are misbeliefs, namely, beliefs that are not correct in all particulars. Metaphorically speaking, the fact that penguins cannot fly does not entail that penguins are not birds at all, rather, they are just birds that cannot fly. In the same way, the fact that delusions fail to instantiate certain features of paradigmatic beliefs in the same degree that they do does not entail the fact the delusions are not beliefs, but rather, that delusions are just abnormal beliefs. Strictly speaking, if we define a belief simply as a mental state of a subject that implements or embodies that subject's endorsement of a particular internal or external state of affairs as actual (see McKay and Dennett, 2009, p. 493), delusions can clearly count as an abnormal type of belief.

However, at this point it is important to note that although the anti-doxastic stance does not seem very successful, the doxastic model of delusions still faces a number of conceptual and empirical challenges. The doxastic view needs to refresh its main tenets taking into consideration a broader and more complete definition of belief and what beliefs imply in relation to other mental states of a single subject. The model needs to specify a contextualized definition of belief that takes into account their flexible, context-dependent, and fluctuating nature. In addition, the model needs to clarify the issue about the continuum of subjective certainty and the way in which external and internal factors might influence the way in which beliefs are reactive to counter-evidence. In this sense, such a definition needed involves the clarification of the role that beliefs play in a cognitive system's relationship with its environment and itself and not only the definition of the issue in isolation. Only by specifying all these aspects of a refreshed definition of delusions, the doxastic model will be able to keep informing good-quality empirical models and, in turn, the empirical understanding and therapeutic treatment of delusions. Of course, this is a task I cannot undergo here.

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