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Making Sense of the Cotard Syndrome Insights from the Study of Depersonalisation

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Abstract

Patients suffering from the Cotard syndrome can deny being alive, having guts, thinking or even existing. They can also complain that the world or time have ceased to exist. In this paper, I argue that even though the leading neurocognitive accounts have difficulties meeting that task, we should, and we can, make sense of these bizarre delusions. To that effect, I draw on the close connection between the Cotard syndrome and a more common (and better studied) condition known as depersonalisation. Even though they are not delusional, depersonalised patients seem to have experiences that are quite similar to those of Cotard patients. I argue that these experiences are essentially characterised by a (more or less important) lack of subjective character and of two other structural features of experience, which I call ‘the present character’ and ‘the actual character.’ Cotard’s nihilistic delusions simply consist in taking these anomalous experiences at face value.

In the 1880’s the French psychiatrist and neurologist Jules Cotard (1891, 314) extensively described an intriguing psychiatric condition, which had first been observed by Esquirol, Leuret and others. This condition, which has been dubbed ‘Cotard syndrome’ (*délire de Cotard*) by Régis (Séglas and Meige, 1895, 463), essentially involves a variety of negating or ‘nihilistic’ delusions. Cotard patients can for example deny being alive or having guts. Even more strangely, those patients can deny thinking or existing! In the last twenty years,

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psychologists and philosophers have put forward some influential neurocognitive models purporting to explain the Cotard syndrome and to make sense of the patients' delusions. However, these models focus on the comparatively less strange delusions being dead or lacking certain bodily parts, and it is not clear that they can make sense of the delusion that one does not think nor exist. Some researchers have actually insisted that such claims are simply too irrational to be made sense of. In this paper I argue that we should, and that we can, make sense of these bizarre delusions. To that effect, I draw on the close connection between the Cotard syndrome and a more common (and better studied) condition known as depersonalisation. Even though they are not delusional, depersonalised patients seem to display a phenomenology that is quite similar to that of Cotard patients. I argue that this phenomenology is essentially characterised by a (more or less important) lack of subjective character and of two other structural features of experience, which I call 'the present character' and 'the actual character.' Cotard's nihilistic delusions, I argue, simply consist in taking this altered phenomenology at face value. The resulting interpretation cannot only make sense of the delusion that one does not think and exist, it can also explain less common delusions associated with the Cotard syndrome such as the delusion that the world, or time, do not exist. It is moreover consistent with the core of the classical neurocognitive accounts of the disorder and we shall see that it can be considered as broadening of the latter rather than as a wholly antagonist theory.

In § 1 I give a brief overview of the Cotard syndrome. I then explain what we should expect from the interpretation of a delusion (§ 2), and critically assess the classical interpretations of the Cotard syndrome (§ 3-4). After describing depersonalisation (§ 5), I show that we can interpret it in terms of a lack of subjective character (§ 6) and that this allows us to interpret the Cotard delusion in similar terms (§ 7).

1 The Cotard Syndrome

The Cotard syndrome is characterised by a family of nihilistic delusions. Those can be clustered as follows.

1.1 Self-oriented Delusions

Most nihilistic delusions are *self-oriented*: the subject denies a certain feature to himself rather than to the world.

Desomatisation Delusions. Of those self-oriented delusions, the most frequent concern the body. Patients suffering from the Cotard syndrome typically deny having real and lively bodily organs ('I used to have a heart. I have something which beats in its place . . . I have no stomach, I never feel hungry (Enoch and Ball, 2001, 167),' 'my insides are rotting (Young and Leafhead, 1996, 146),' 'I have no blood, no veins, no genitals, I'm as empty as a shelf (Séglas and Meige, 1895, 464)'). Some also deny having certain limbs (Drake, 1988; Petracca et al., 1995). Others bluntly deny having a body. We may call those nihilistic delusions *desomatisation delusions*.

Dementalisation Delusions. Nihilistic delusions can also bear on the subject's mind. Many patients deny having memories or feelings. Some deny having any thought at all ('If I had a brain I would think, but I do not think (Ross, 2005)') or even a mind ('I don't have a mind (Berardis et al., 2010)').

Death And Nonexistence Delusions. In the severe forms, Cotard patients deny being alive and they may even, as we have already seen, negate their very existence (as some patients deny existing in an afterlife, and others don't, those two delusional claims are often not equivalent). A patient of Camuset's (Cotard et al., 1998, 162) for example explains:

You know that we have drowned. It is not me who is talking to you. You are talking to yourself in me. I am not anything anymore. I do not exist.

It should be noted that even though not all Cotard patients deny that they exist, many of them do (69% according to Berrios and Luque (1995)'s survey of one hundred cases).

1.2 World-oriented Delusions

Most common nihilistic delusions are self-oriented. However, patients can also deny some features to things other than themselves. Some otherwise believers deny that God exists; others deny the existence of their family, their doctors, their city, their marriage or even the whole world (cf. Cotard (1891, 314-45) and Ramirez-Bermudez et al. (2010)).

1.3 Time-oriented Delusions

Finally, delusions about the existence of time or of some of its essential properties (for example, the property that it 'passes') are not uncommon (see, among many others, the case reports of Wimmer (1919, 18), Leafhead (1997, 53) and Janet (1928, 54)).

1.4 Other Symptoms

The Cotard syndrome is usually associated with elaborations and rationalisations of the above delusions: a patient who believes that he is dead will become convinced that he is losing all his hair as he sees some falling, etc. I will neglect such 'secondary delusions' here and focus on the primary delusions on which they are based exclusively.¹ Cotard patients also frequently suffer from delusions of guilt or damnation, which I will neglect as well.²

¹On the distinction between primary and secondary delusions, see Jaspers (1962, 96).

²For statistical analyses of the delusions affecting Cotard patients, see Berrios and Luque (1995); Leafhead (1997); Swamy et al. (2007). For extensive case studies, see Cotard et al. (1998); Wimmer (1919); Leafhead (1997).

1.5 A Senuine Syndrome?

Some clinicians have expressed reservations about the claim that the Cotard syndrome is a genuine psychiatric *syndrome* (see Leafhead (1997, II)).³ Young and Leafhead (1996, 154) for example noted that there is no symptom or symptom complex present in all the patients described by Cotard and claimed that:

This gives grounds for arguing that the term ‘Cotard’s syndrome’ should be used cautiously; at best it represents an idealised pattern which in practice is not found even in pure cases.

If they are right, which I will grant, the fact that a given explanation of the Cotard syndrome does not account for every nihilistic delusion listed above should not necessarily count as a decisive objection against this explanation. If it is not to change the subject, such an explanation should however explain *some* of the four most common delusions associated with the symptom (desomatisation, dementalisation, death and nonexistence delusions). Given the frequent co-occurrence of those delusions in patients, we should also prefer those explanations that can account simultaneously for those four kinds of delusions. Finally, I will suppose that by default, explaining more delusions is better. Before moving on, and assessing some recent interpretations of the Cotard delusion, I need to say a few things about what we should expect from such interpretations.

³The debate on the nosographic status of the ‘Cotard syndrome’ is actually as old the introduction of the name. See for example Ségla and Meige (1895, 460-1).

2 Interpreting Delusions

2.1 Interpreting vs. Accounting For Delusions

An *interpretation*, as I use the term here, is only a small part of what we generally expect from an account, or an explanation, of a delusional condition. It is the part of the account that is concerned with the *reasons* the patients might have—or fail to have—for their delusional speech. An interpretation should show how we can make sense of the patients' strange affirmations, or else spell out why exactly it is not possible to do so. Unlike a full account, it can, however, generally remain neutral to the neurophysiological phenomena underlying the delusion.

2.2 Continuous And Discontinuous Interpretations

We can call 'continuous' interpretations that do make sense of the patients' claims and contrast them with discontinuous interpretations (claiming that we just cannot make sense of the patients' reports).⁴ Jaspers (1962) has famously argued that delusions do not admit continuous interpretations. He has been recently followed by Berrios (1991) and (arguably) by Campbell (2001).⁵

The difference between continuous and discontinuous interpretations hinges on the patients' rationality. For the sake of brevity, I will simply admit that continuous interpretations must affirm, and discontinuous interpretations deny, that patients are *minimally rational* in the following sense: they have a normal procedural rationality (i.e. a normal capacity to reason according to the laws of logic and probability theory) and a normal

⁴My use of the term 'continuous' owes much to Bortolotti (2009)'s 'continuity thesis'. I will assume that continuous interpretations should construe delusions expressing genuine beliefs.

⁵Jaspers (1962, 96)'s claim bears on primary delusions, not on the secondary delusions that are grounded on the latter. Campbell (2001) is only concerned with 'monothematic delusions' (delusions with a highly determinate topic, as opposed, for example, to persecutory delusions).

understanding of the conventional meaning(s) of the words one uses.⁶ Importantly, one can be minimally rational and yet suffer from cognitive biases such as the tendency to jump to the conclusion (i.e. to make judgments based on insufficient evidence).⁷

2.3 One-factor vs. Two-factors (Continuous) Interpretations

Recent continuous interpretations of delusions typically claim that patients' delusional beliefs are justified by abnormal *experiences*.^{8,9} We can distinguish two ways for an experience to justify a belief. If, on the ground that I have a stomach pain, I believe that there is something wrong with my stomach, it seems that my belief is *directly justified* by my pain experience and that it results from simply taking the pain experience at face value. If on the other hand I believe, on the same experiential ground, that I have a stomach ulcer or that I forgot to take my pain-killers this morning, the belief will result from a rationalisation of the experience, and it will only be *indirectly justified* by it. There are accordingly two ways to construe the relationship between abnormal experiences and delusions:

Endorsement. The delusion that P can result merely from taking at face value ('endorsing') a certain experience. In such a case the experience must directly justify the belief that P, and we can call this experience a *P-experience*.

Rationalisation. Alternatively it can result from rationalising an experience. In such a

⁶For more on the rationality constraints on continuous interpretations, see Bermudez (2001); Gerrans (2003); Bortolotti (2010).

⁷Minimal rationality plausibly involves recognizing obvious a priori truths as true. Cognitive biases affect epistemic rationality, that is, the capacity to maintain an optimal relationship between beliefs and evidence, not minimal rationality.

⁸Our notion of experience has two strands: by 'experience' we mean both a source of justification and a mental state individuated by its phenomenality. As these two strands might sometimes diverge (we might want to talk of the experiential justification of a phenomenally unconscious robot), I should emphasise that by 'experience' I mean to focus on the first, epistemic strand here rather than on the second (phenomenological) one.

⁹Continuous interpretations could also appeal, in a Freudian fashion, to the abnormal influence of drives or desires. Even though such interpretations have recently enjoyed a modest revival in psychopathology (see e.g. Billon (2011)), I will neglect them here.

case, the hypothesis that P must be the best explanation, from the point of view of the (minimally rational) patient, of the occurrence of this experience, and the experience will abductively justify the belief that P. We can call this experience a *proto-P-experience*.¹⁰

In both cases, the interpretation appeals to an abnormal experience, but it can appeal to a cognitive bias as well. We speak of *one-factor* interpretation in the first case, and of *two-factors* interpretation in the second case (Davies et al., 2001). While one-factor interpretations consider that the patient's endorsement or rationalization of his strange experience is relatively normal and does not need to be explained, two-factor interpretations believe that it should be explained by a cognitive bias, for example by a tendency to jump to the conclusion.

Even though I have introduced this terminology for the purpose of classifying *interpretations* we can of course apply it to the embedding *accounts* and talk of endorsement, rationalisation, one-factor, etc. accounts.

3 The Classical Neurocognitive Accounts And The Associated Interpretation

The Cotard syndrome has attracted a lot of scientific curiosity, giving rise to a great number of interpretations. The main target of this article will be a very few influential interpretations put forward in the last twenty years or so. In order to assess them, I will however

¹⁰Rationalisation interpretations are often called 'explanationist' (Pacherie et al., 2006). It is also usually assumed that the P-experiences of endorsement account will have the propositional content P (unlike the proto-P-experience of rationalisation accounts). I do not want to rule out, however, that some beliefs result from taking at face value an experience with no determinate propositional content: maybe some moods have no such content and one can form beliefs by taking them at face value? Maybe some delusions result from taking such abnormal moods at face value? I accordingly prefer to construe the difference between endorsement and rationalization in terms of justification (direct or indirect) rather than content (P or something else).

allow myself a few historical digressions. Even if the literature on the Cotard syndrome has recently mushroomed, this disorder was probably never more studied than in the period that goes from the seminal works of Esquirol in the first half of the 19th century to last works of Janet, a century later. Clinicians of those times not only left us a priceless database of patients' self-reports, they also proved very clever and imaginative at interpreting the Cotard delusion and related disorders. Those interpretations sometimes strikingly resemble the contemporary ones and the criticisms that were addressed to the former often generalise to the latter.

Here is how I will proceed. I will first give a brief summary of the leading contemporary accounts of the Cotard syndrome—call these the classical accounts. I will then quickly present the 'classical interpretations' associated with those classical accounts, which I will assess in the next section.

3.1 The Classical Neurocognitive Accounts

In a series of articles that have largely framed the contemporary discussion, Young et al. (1994); Young and Leafhead (1996) introduced a simple neurocognitive account of the patient's delusion of being dead. Their model is based on previous works on visual face processing among patients suffering from the Capgras delusion (patients suffering from the this delusion claim that some close relatives have been replaced by impostors). These works have suggested that face recognition is a complex phenomenon involving both a form of 'semantic recognition', impaired in prosopagnosia, and a form of 'affective recognition' which would be disrupted in the Capgras delusion (Young et al., 1993). This disruption would modify the experiences Cotard patients undergo when they see their close relatives. It would, more specifically, deprive those experiences from certain affective features that they used to have. The patients would then rationalise their unusual experience by supposing

that impostors have replaced the close relatives in question. Based on the fact that Cotard patients display face processing impairments that are similar to those of the Capgras patients, and that some patients can suffer successively from the Capgras and the Cotard delusion, Young and Leafhead (1996) hypothesised that Cotard patients have the same distorted experience as the Capgras patients. The difference between both delusions would stem from different attributional styles: while Capgras patients display an externalising bias (they tend to attribute negative events to external causes) the Cotard patients would suffer from an internalising bias (they tend to attribute negative events to internal causes). As a consequence, Capgras patients would explain their anomalous experiences by the disappearance of their relatives, whereas Cotard patients would explain it by hypothesising that they are dead. (Notice that this is a two-factors rationalisation account.)

This model, it should be stressed, was only designed to explain the delusion that one is dead. It is indeed not totally clear that it could account for other delusions associated with the Cotard syndrome. There are moreover reasons to suspect the experiential modification involved in the Cotard syndrome exceeds the affective aspects of face recognition. Given the prevalence of severe depression among Cotard patients, and given the flattening of affects induced by depression, Ramachandran and Blakeslee (1998) and Gerrans (2003) (see also Gerrans (2000)) have argued that the Cotard syndrome might involve a flattening of the affective phenomena associated not only with face recognition but also with perceptual processing more broadly (Ramachandran and Blakeslee, 1998) and even with cognitive processing as well (Gerrans, 2003). Such a wide attenuation of affects would deprive perceptions and thoughts from their ‘emotional colouring.’ It would consequently lead to an experience of disembodiment, which would provide a simple explanation of the bodily delusions. At the neurophysiological level, this affective flattening would correspond to a broad cortico-limbic disconnection severing all or most sensory pathways to the amygdala.

Ramachandran and Blakeslee (1998) and Gerrans (2003) have thus put forward some refinements of Young and Leafhead (1996)'s seminal account, in which the Cotard syndrome appears more like an exaggeration of the Capgras delusion than like a variation of it. As they provide new ways to account for the difference between the Capgras and the Cotard delusion, those refinements of Young and Leafhead's seminal account might also dispense us to suppose that the rationality of Cotard patients is abnormal. They might accordingly support a one-factor account of the Cotard syndrome (Gerrans, 2003).

These classical accounts face two kinds of objections. At the neurophysiological level, it is not clear that structural neuroimaging findings confirm the hypothesis that the neural correlate of the Cotard syndrome is a form of cortico-limbic disconnection (see Swamy et al. (2007)'s survey of 35 cases).¹¹ At the interpretative level, it might be wondered whether those accounts can really make sense, as they purport to, of the most common nihilistic delusions.

3.2 The Associated Interpretations

The classical neurocognitive *accounts* of Young and Leafhead (1996); Ramachandran and Blakeslee (1998); Gerrans (2003) are supposed to provide, among other things, a continuous *interpretation* of at least some of the delusions associated with Cotard syndrome. According to these interpretations,

- A disruption of some affective processes
- causes a P-experience or a proto-P experiences

¹¹It could be replied that the Cotard syndrome result either from a cortico-limbic disconnection *or* from other configurations involving an equivalent flattening of the affects associated with sensory and cognitive information. Sierra and David (2011, 163) argue that this is what happens in depersonalisation: '[A] frontally driven suppression of activity in the amygdala and possibly other structures of the emotional system might lead, via the insula, to a state equivalent to a functional cortico-limbic disconnection that would impair the process by which perceptions and cognitions become coloured emotionally.'

- which causes, through endorsement or rationalisation, and maybe because of some cognitive biases as well, the delusion that P.

Thus, on Young and Leafhead (1996)'s account, an impairment of the affective component of visual face processing causes a proto-death experience which the patient would rationalise by the delusion that he or she is dead, when he or she has as an internalising bias. On Ramachandran and Blakeslee (1998); Gerrans (2003)'s account, wider affectivity impairments would cause disembodiment or proto-disembodiment experiences explaining disembodiment delusions.

Those interpretations heavily depend, it should be noted, on the notion of affectivity. It is not always trivial to discern what is meant exactly by 'affect' and 'affectivity' but I surmise that it consists in:

- (A1) emotions in the broad sense in which this include moods,
- (A2) other mental features, if there are any, that are of the same kind as emotions,
- (A3) and neurophysiological mechanisms underlying (A1) and (A2), neurophysiological mechanisms that involve in particular the so-called limbic system, and whose functioning can normally be witnessed by responses of the autonomic system.

Unless something is said about which mental features, apart from emotions, are of the same kind as emotions (A2) —which is never done, to my knowledge, by proponents of the classical account— an experience that results from a disruption of affectivity is thus presumably an experience that lacks certain emotional features that it should normally have—call this a *de-emotionalised experience*.¹² A visual experience of a close relative that results from a disruption of the affective phenomena associated with face processing should

¹²Gerrans (2003, 50) clearly accepts this: 'the Cotard subject has a lack of affective response to all perceptual inputs, not just the perception of familiar faces. Consequently, nothing that occurs to her evokes the normal emotional response.'

for example be a visual experience that lacks a certain emotional glow characteristic of our encounters with those we love.

3.3 Assessing The Associated Interpretation

Now if the classical accounts are to explain a given delusion, say the delusion that P, they must claim that the de-emotionalisation of some experiences makes them P-experiences or proto-P experiences. In order to interpret the delusion that one is desomatised (partially or totally disembodied) partisans of the classical accounts have to claim that:

(PE-desomatisation) The de-emotionalisation of some experiences makes them either desomatisation experiences or proto-desomatisation experiences.

PE-desomatisation is not totally obvious. ‘Somatic feelings’ theories might support the claim that the de-emotionalisation of an experience should make it a desomatisation experience (that is, an experience whose endorsement results in the belief that one lacks certain bodily parts) but these theories are not totally uncontroversial. The idea that ‘somatic feelings’ theories of emotions are commonsensical might support the claim that the de-emotionalisation of an experience should make it a proto-desomatisation experience (that is, an experience whose explanation, by a minimally rational subject, results in the belief that he lacks certain bodily parts). Somatic theories of emotions do not however seem quite commonsensical. I will not, in any case, quarrel with PE-desomatisation, and I will admit that the classical accounts can provide a continuous interpretation of desomatisation delusions. A bigger worry comes from the delusions of dementalisation, death and nonexistence. These last two delusions, it should be repeated, are different: depending on one’s view on afterlife, death might not entail nonexistence. Moreover, when their nihilistic delusions reach their climax, some patients deny having any trait whatsoever and make it clear that they do not exist, not even dead, in some afterlife. As Cotard (1891, 345) put it, ‘Among

some patients the negation is universal, nothings exists and they are not anything anymore' (cf. also Camuset's patient quoted earlier who says that he *isn't anything* anymore). In order to interpret the delusion that one is dead, the classical accounts have to make the following claim about the phenomenology of emotions:

(PE-death) The de-emotionalisation some of the subject's experience makes them death experiences or a proto-death experiences.

In order to interpret the delusion that one is nonexistent or demented they would have to endorse the similar claims PE-nonexistence and PE-dementation.

I find PE-death, PE-nonexistence and PE-dementation very hard to believe. The mere absence of emotional features would not arguably provide a subject's global experience with contents such as 'I am dead' or 'I do not exist'. It would not, more broadly directly justify beliefs with such contents. Neither would it directly justify the belief that one does not think. After all, emotions are just one kind of thoughts, along with perceptions, beliefs, desires, memories, etc. and as far as we know, the latter can occur without the former. Accordingly, it seems that the de-emotionalization of an experience will not make it a death, non existence or dementation experience.

It is also hard to believe that the absence of emotional features could turn the subject's experience into a proto-death, proto-nonexistence or proto-dementation experience either. A proto-death experience is an experience whose best explanation, from the subject's point of view, is that he is dead. It is however hard to see how a subject, however biased, could abductively infer that he is dead from the fact that his experience is de-emotionalised. It is hard to see what kinds of beliefs could justify an inference such as 'I have no emotions so I must be dead'. The case of dementation and nonexistence delusions is even more problematic. Indeed, it seems that a minimally rational subject should always acknowledge the truth of 'I exist' and 'I think, ' and thus straightforwardly reject inferences such as 'I

have no emotions so I probably do not exist / think.’ This means that de-emotionalised experiences cannot be proto-nonexistence or proto-dementalisation experiences either.

3.4 The ‘Façon De Parler’ Reply

At that point it could be replied that our rapid criticism of PE-death, PE-dementalisation and PE-nonexistence rests on a certain misunderstanding, if not of the nature of death, nonexistence and dementalisation, at least of what the patients mean when they complain about them. The patients, it might be argued, actually mean things that the classical accounts can readily explain. For example, it might be argued that:

Emotional/Bodily-dementalisation (EBD) Quite generally, when they say that they do not think, the patients only mean that they have no ‘embodied thoughts’ or emotions.

Emotional/Bodily-nonexistence (EBN) Quite generally, when they say that they do not exist, the patients only mean that they have no ‘bodily existence.’

Gerrans (2003, 48, 50) for example suggests something like EBN when he says that Cotard patients deny ‘bodily existence’ or ‘material existence.’ Such a ‘façon de parler’ reply seems however unwarranted. Many patients indeed say things that are in tension both with EBD and EBN. Against EBD, dementalisation delusions do not only target mental states that are saliently emotional or embodied. Some patients explicitly say, for example, that they have no memories, imaginings, or even visual states (Janet, 1928, 40, 63-4). Many actually complain that they have no brain or no mind at all. Against EBN, some patients who deny existing make it explicit that they do not think and that they have no more mental features than bodily ones. Against EBN and EBD, some patients, including some of the original patients described by Jules Cotard, have no bodily delusions. Some can moreover deny

existing or thinking without denying that their body remains there, intact, or precisely say that they have only a ‘material existence.’¹³ A patient of Janet’s, Lætitia, for example explains that she is dead and that she has disappeared even though her body is there, functioning:

When I reflect on my situation I cannot understand it at all. Either I am alive or I am not alive, but I cannot be dead as my heart beats, but I am not alive as *my person has disappeared* . . . I feel like not being someone and nevertheless I talk, am I stupid? *I am a body without a soul* . . . It’s more complicated than the Holy Trinity (Janet (1928, 43), emphasis mine).

Another patient of Janet (1903a, 321)’s, Pot... (sic) likewise says:

I have lost all awareness of my own being. It seems to me that I only have a material existence, that my soul has gone away from my body.

So even if they might explain desomatisation delusions, the classical accounts will face great difficulties when it comes to interpreting dementalisation, death and nonexistence delusions. It should be emphasised that this is not just a minor worry. These last delusions are among the most commonly associated with the Cotard syndrome and unless it provides an interpretation for them, it is fair to say that an account of the disorder should be deemed unsatisfying.

3.5 Patching The Classical Neurocognitive Accounts

If we want to save the classical accounts, which all invoke an affective disorder, it seems that we will have to bridge the gap between affectivity on the one hand and our sense of having thoughts and existing on the other hand. For that, it seems that we will have to

¹³Ségla and Meige (1895, 465), already insisted that ‘when the denier [the Cotard patient] says that he does not exist . . . this is not in the materialist sense of the term.’

argue either that these senses are emotional after all, or that affectivity outstrips emotions. In the last ten years some researchers have indeed tried to patch the classical neurocognitive with phenomenological considerations connecting affectivity deficits to nonexistence or proto-nonexistence and dementalisation or proto-dementalisation experiences. Most notably, Matthew Ratcliffe has put forward a new, promising, way to construe the patient's anomalous experiences. It is not possible to do justice here to the richness of Ratcliffe's approach, whose scope exceeds the interpretation of Cotard's syndrome. For the present purposes, a rough summary of his interpretation of the syndrome will however suffice. While acknowledging, like most tenants of the classical neurocognitive accounts, that the affective problems of Cotard patients involve a flattening of certain somatic feelings, Ratcliffe argues that the latter should not be construed as emotions but rather as 'existential feelings'. As I understand Ratcliffe, the latter are structural features of experience¹⁴, which lack a determinate propositional content and are responsible for our '*sense of relatedness to the world,*' of '*being in the world*' (Ratcliffe, 2009). In the Cotard delusion, the altered somatic feelings would thus lead to an altered sense of being in the world:

When patients complain of unreality, they are not complaining that specific objects in the world, which may include their own bodies, do not look real. Rather, the possibility of anything appearing as 'real' is absent from experience. Patients no longer feel that they are *there*, part of the world, connected to things. What motivates claims such as 'I am dead' is not an anomalous perceptual content but a changed way of finding oneself in the world, involving the erosion of a practical meaningfulness that we ordinarily take for granted as a backdrop to our experiences and thoughts. (Ratcliffe, 2010, 582)

¹⁴By a *structural feature of experience* I mean a phenomenal feature of experience that is normally ubiquitous (i.e. that all the experiences of healthy adults normally have). Being ubiquitous such features are often hard to pin down.

More precisely, Ratcliffe (2010) suggests that Cotard patients experience something that is akin to what Heidegger construes as angst, namely a total erosion of the ‘background sense of belonging to the world, which we ordinarily take for granted’ leaving ‘what Heidegger refers to as the “nothing”, an experienced loss of the familiar, everyday world, “the complete negation of the totality of beings’ (Ratcliffe, 2010, 588).’ Such an experience, and the way it is interpreted by the patients, would explain their delusions.¹⁵

The idea that the patient’s phenomenology does not hinge on the mere absence of certain emotions but rather on the erosion of certain structural features of experience will, I believe, help interpreting death, dementalisation and nonexistence delusions. I doubt however that Ratcliffe’s account can by itself provide the sought interpretation. The problem is that the structural feature of experience Ratcliffe appeals to (his ‘existential feeling’) is defined in terms of the sense of ‘existing-in-the-world,’ or ‘relatedness-to-the-world,’ that it is supposed to ground. However, existence-in-the-world or relatedness-to-the-world is quite different from existence *tout court* and it is hard to see how a lack of the former could amount to or even explain a lack of the latter. To make this point, we can appeal to Descartes’ evil genius scenario. If I learned that the world is actually unreal—an evil genius has been deceiving me into thinking otherwise until now—and that I do not accordingly exist-in-the-world, that would not give me any evidence for the claim that I do not exist and it should not rise my credence in my nonexistence. This, moreover, is arguably a matter of minimal rationality alone.¹⁶ Accordingly, the belief that one does not exist and the belief that one does not exist-in-the-world are different and the latter could not justify the former. The fact that a subject does not feel like being-in-the-world might explain why he believes that he does not exist-*in-the-world*, and maybe why he believes the world to be unreal, not why

¹⁵See also Ratcliffe (2009, 189-90)’s remarks on depersonalisation.

¹⁶As Pust (2008) puts it, in a recent article on ‘Cartesian propositions’ such as ‘I think’ or ‘I exist,’ ‘The mere fact of one’s existence qua conscious creature is a necessary part of the background knowledge relative to which all epistemic probabilities are defined.’

he believes that *he* does not exist *tout court*.¹⁷

Ratcliffe might take the point but answer that the patients' talk of 'existence' is a *façon de parler* and that they actually mean 'existence-in-the-world,' 'relatedness-to-the-world,' etc. There are however reasons to believe that this is not the case. Some patients, in particular, appear to deny their existence-in-the-world (for example by saying that the world does not exist) without claiming that they do not exist, which indicates that they do not identify both kinds of claims. This is the case for example of one of Cotard's original patients, his case 4, Mme. M..^{18,19}

4 The Cogito Challenge

The difficulty to provide a satisfying continuous interpretation of nonexistence and dementalisation delusions might not come as a surprise. After all, it seems that 'I think' and 'I

¹⁷Those criticisms actually mirror a now classical dispute in the phenomenological tradition. This dispute opposes those phenomenologists who claim the Cartesian heritage, like (to some extent) Husserl and (to a greater extent) Michel Henry, to those who have explicitly rejected it, like Merleau-Ponty and Heidegger. I am in agreement, here, with the Cartesian camp, and in particular with Henry's incisive critique of Heidegger. The latter consists, to a large extent, in rehearsing the cogito intuition (I am absolutely certain that I exist and that I think, not that I exist-in-the-world or that I have a body) and its phenomenological significance (see for example Henry (1985, II-III)).

¹⁸Cases of derealisation without depersonalisation like those of Ball (1882); Krizek (1989) are also relevant here: those patients feel like they exist but not 'in-the-world.' The following patient of Ball's for example seems to have experienced pure derealisation before depersonalisation:

In July 1874, I suddenly felt a change in the way of seeing things, everything seemed funny, strange, even though the shapes and colours were unchanged. *Five years later, I felt that the disorder started to concern myself as well, I felt myself diminishing, disappearing: the only thing that remained of me was an empty body. Since then my personality has completely disappeared . . . not only do I fail to know what I am but I cannot become aware of what is called existence, reality* (Ball (1882), my emphasis, translations from the French are mine).

¹⁹Similar remarks would apply to Garry Young (2012)'s account of the Cotard syndrome. Very roughly (and not paying their due to the richness of this notion) Young (2012) appeals to a 'misplaced being' construed as an 'altered state of normative familiarity'. Unless the concept of familiarity is specified some more, it is not obvious that the claim that I do not exist could amount to the claim that I am unfamiliar with myself or that it could even rationalise an experience of unfamiliarity with myself: it is certainly unfamiliar to feel like not existing but there are many unfamiliar things which do not involve nonexistence, and it is hard to see how my nonexistence could provide a plausible explanation of a feeling of unfamiliarity (see also 6.6).

exist' are absolute certainties and should be acknowledged as true by minimally rational subjects. This is, roughly, the conclusion of Descartes's *cogito*. If this is correct, then the patients are not minimally rational, their claims do not admit a continuous interpretation and it is just a waste of time to search for an anomalous experience that could make sense of their delusions.

Partisans of continuous interpretations thus face an important philosophical problem. They must show that something is wrong with the above reasoning and its conclusion. We might say that they have to meet the *cogito challenge*.

There are really two problems to solve here, for continuous interpretations must not only show that some people can, without any obvious inconsistency, assert that they do not exist. They must also show that it can experientially seem to one as if she did not exist, that is, they must show that there can be such a thing as a nonexistence or a proto-nonexistence experience.²⁰ The first problem, call it the *consistency problem* is nicely captured by Graham (2009, 241):

It is . . . notoriously difficult to deny one's own existence or, for that matter, to assert that one is dead without being aware of the gross inconsistency of such speech acts with one's living or existing as speaker . . . How can I say something that is utterly incompatible with understanding that I am saying it?

Bermudez (2001, 479) likewise surmises that the patients' beliefs are 'pragmatically self-defeating' and that 'it is far from clear that [they] can be consistently expressed.' Ratcliffe (2004, 30) concurs that if we take the patients' reports literally 'then there is not merely a weakening of rationality but reckless abandonment.'²¹

²⁰The two commitments are logically independent, as there might be consistent situations that we could not experience and as conversely, it is not totally out of question that we might experience inconsistent situations (think, for example, about Escher's lithography *Relativity* and about what we see in it).

²¹Ratcliffe talks about death rather than nonexistence (but if it is absurd to assert one's death it is a fortiori absurd to assert one's nonexistence). He moreover grants, in later works, that the claim that one is

The second problem, call it the *experience problem*, does not seem much easier to solve. It is quite hard to fathom how it can seem to someone as if she did not exist. Quite hard to fathom how she can undergo a non-existence or a proto-nonexistence experience.

The cogito challenge puts the partisan of continuous interpretations in a delicate situation. She should not, however, surrender too quickly. There are indeed good reasons to favour continuous interpretations. First, the patients' delusions are usually highly specific, they usually have a normal procedural rationality (a normal capacity to reason according to the laws of logic and probability theory) and, despite common contentions to the contrary, we have no reason (independent from the nonexistence and the dementalisation delusions) to suspect that they are so irrational that it is impossible to make sense of what they say. I have argued for these points at length elsewhere and I will not repeat myself here (Billon, 2014b). Instead, I will focus on another reason why we should reject the temptation to claim that the delusion that one does not think or exist does not make sense, and violates the norms of minimal rationality. It is that some people who seem to have a perfectly normal rationality say that they feel as if they did not think or exist, and can even doubt that they do. Those people are the patients who suffer from severe forms of *depersonalisation*. I will describe depersonalisation in more details below. For now, the important point is that depersonalised patients are not delusional: they refuse to endorse the belief that they do not think and exist.²² This already makes it harder to question their minimal rationality. Moreover, recent investigations of the cognitive functioning of patients suffering from depersonalisation did not find anything suggesting an impairment of rationality (Guralnik et al., 2000, 2007). This arguably indicates that they are not only minimally rational, but also rational tout court.

dead might not be absurd after all (Ratcliffe, 2010, 385).

²²The border between mere depersonalisation and the Cotard syndrome might not be always clear-cut. There are however some clear cases of pure, non-delusional depersonalisation.

Now, the fact that depersonalised patients report feelings of nonexistence and dementalisation suggests that there might be such things as nonexistence and dementalisation experiences and that the experience problem might have a solution. Finally, if some subjects who have a normal rationality can doubt that they think and exist, it is arguable that minimally rational subjects might disbelieve that they do. The consistency problem might then admit a solution as well. All this suggests that the interpretation of the Cotard syndrome would benefit from a better understanding of depersonalisation.

5 Depersonalisation

5.1 Depersonalisation's Core

Depersonalisation is a complex condition involving a broad modification of experience. Its core, however, is probably the feeling that the self or some of some of its significant parts are estranged, missing or nonexistent. Patients suffering from depersonalisation thus typically complain that it seems to them:

- **Desomatisation experiences.** As if they missed bodily parts ('Parts of my body feel as if they didn't belong to me' (Sierra and Berrios, 2000, 160)),
- **Dementalisation experiences.** As if they missed the capacity
 - to have emotions and 'feel things' ('I seem to be walking about in a world I recognise but don't feel. (Sierra, 2009, 32)'; 'Kissing my husband is like kissing a table, Mr. The same thing. . . . Not the least thrill. Nothing on earth can thrill me. . . . My heart doesn't beat. I cannot feel anything (Dugas and Moutier, 1911, 109)'; 'I can feel numb of feelings, almost empty inside. I hate the fact I can't feel things as I used to (Sierra, 2009, 27)').

- to remember and imagine things (‘some complain that they have altogether lost the power of imagination (Sierra, 2009, 25-6)’)
 - or even to think at all (‘I have the feeling of not having any thoughts at all’ (Sierra and Berrios, 2000, 161) (see also Sierra, 2009, 37))
- **Death and nonexistence experiences.** As if they were dead (‘I don’t feel alive in any way whatsoever (Sierra, 2009, 8,29)’; ‘a state of nothingness, no mood at all, as if I were dead (Simeon and Abugel, 2006, 30)’) or nonexistent (‘she feels like she just does not exist (Simeon and Abugel, 2006, 8)’; ‘I have stopped being (Mayer-Gross, 2011, 106)’; ‘I doubted of my own existence and at times even disbelieved in it (Krishaber, 1873)’; ‘often I have to . . . enter a shop to talk, to ask for something, in order to get a new proof that I am really myself (Séglas and Meige, 1895, 131)’)

It will have struck the reader that there is an almost perfect one to one correspondence between the typical self-oriented delusions of Cotard patients and the complaints of depersonalised patients: the latter just seem to be Cotard patient’s delusions prefaced by a neutralising ‘it is as if.’²³ The Cotard syndrome can thus be characterised as the *delusional form* of depersonalisation, depersonalisation being, conversely, the *‘as if’ form* of the Cotard syndrome. This, and the fact that Cotard patients often display phases of (non-delusional) depersonalisation suggested very early that the explanation of depersonalisation and that of the Cotard syndrome might go hand in hand. It is very common to suppose that depersonalisation is an experiential state which is identical or at least similar to that of Cotard patients, and that it might contribute to the Cotard syndrome. Albeit they did not use the terms ‘depersonalisation’ or ‘Cotard syndrome,’ Cotard (1891), Séglas and Meige (1895, 665), and Janet (1903b, 353) already made such a claim. More recently it was endorsed by

²³Early authors, such as Janet (1908), often used ‘depersonalisation’ to denote Cotard patients as well. I follow recent conventions here by restraining ‘depersonalisation’ to non-delusional patients. It should also be stressed that there are borderline cases between depersonalisation and the Cotard syndrome.

Mayer-Gross (2011), Ey (1960) and even by Young and Leafhead (1996).²⁴

5.2 Derealisation

Just like depersonalisation refers, very roughly, to the feeling that the self (or some of its significant parts) is unreal and seems to be the ‘as if’ version of Cotard’s patients self-oriented delusions, derealisation refers to the feeling that the world (or some of its significant parts) is unreal. It seems to be the ‘as if’ form of Cotard’s patients world-oriented delusions. Depersonalisation and derealisation are actually closely tied to each other: patients suffering from the first one usually suffer from the second. ‘Depersonalisation’ is often meant to include derealisation as one of its features and some have denied that the distinction is clinically significant. Both disorders are however conceptually distinct, and there is evidence, coming both from individual case reports (Ball, 1882; Mayer-Gross, 2011; Krizek, 1989) and from statistical analyses of large samples of patients (Simeon et al., 2008) that they can occur independently of each other.

5.3 Detemporalisation

Finally, just like Cotard patients can be deluded about time, depersonalised patients often have distorted feelings of time. Some say that they have ‘no feeling of the present’ (Janet, 1903a, 301), or that they have lost any grip on the distinction between past, present and future:

I think about them all three at once, past, present and future (Lewis, 1932, 614)

She had lost the sense of time, she did not understand the sense of the terms:

²⁴See also the references in Sierra (2009, 78). I take Young and Leafhead (1996, 158-9) to claim that that depersonalisation (and derealisation) result from a de-emotionalisation of experience (‘a lack of emotional responsiveness’) and that the experiential substratum of the Cotard syndrome can simply be construed in terms of de-emotionalisation. However, they sometimes seem to imply that depersonalisation (and derealisation) are *additional* abnormal feelings.

yesterday, today, tomorrow: ‘Yesterday, today, tomorrow seem to me like the same thing, a big void’ (Janet, 1903a, 300)’

They can even claim that they feel outside of time. More frequently (in 70% of the cases according to Baker et al. (2003)’s study of 204 subjects) depersonalised patients complain that the ‘just past’ immediately seems very ancient:

It is strange. It seems to me that everything is [temporally] very far and at the same [temporal] distance, this is why I say ‘25 years ago’ for very past event (Claudine, a patient of Janet (1928, 55)’s)

In order to describe such complaints we can coin the name ‘detemporalisation.’ Depersonalisation, then, is often associated both with derealisation and with detemporalisation.

6 Interpreting Depersonalisation

How should we understand the reports of depersonalised patients? Is there some kind of pattern in the experiences they report? Is there a common phenomenological core, an ‘experiential nucleus,’ that would explain why they feel the way they do? I believe that there is. I will argue, in particular, that what is often called the ‘subjective character’ of their mental states is lacking and that this can explain what I have called the core of depersonalisation, namely the feeling that the self or some of its parts are missing.

6.1 The Subjective Character Of Experience

Patients suffering from severe depersonalisation typically complain that something is lacking in their experience and that, as a result, many of their mental states do not appear to be theirs to them. This missing feature can be characterised by the patients as a ‘feeling of ‘I’ the ‘experience of ‘me’ (Simeon and Abugel, 2006, 143),’ the ‘feeling of myself (Janet and

Raymond, 1898, 73)’ or the ‘awareness of myself (Krishaber (1873, 171) and Janet (1903a, 324)).’ When their condition is less severe, they can say that the feeling of ‘I’ is *not clearly present* (rather than absent) (Simeon and Abugel, 2006, 25) and that their mental states do not clearly seem to be theirs to them.

Such complaints strongly suggest that even if we do not usually pay attention to it, our experiences normally incorporate a certain subjective feature in virtue of which they seem to be ours to us, and that this feature is partially, or maybe sometimes totally, lacking in depersonalisation. We can make this subjective dimension more explicit by focusing on a certain experience. I am looking at a white sheet of paper in front of me (the reader is invited to substitute one of his visual experiences with mine). There is something it is like to see this sheet of paper — call it the phenomenal character associated with my perception. But it is not as if this phenomenal character was free floating, out there, so to speak. It has some kind of ‘meishness,’ it feels mine, and when I think about it, I immediately know that it is I who is experiencing it. Following, Levine (2001); Kriegel (2009) we might say that what it is like is to see this sheet of paper is normally what it is like *for me* to see it, and call this for-me aspect *the subjective character* or *subjectivity* of experience. Many philosophers have acknowledged the existence of such subjective character, and they have claimed that all phenomenally conscious states normally or even universally incorporate it. Such claims have for example been attributed to Aristotle, Locke, James and Brentano, and to a significant part of the phenomenological tradition (see Billon and Kriegel (2004)).

Early clinicians immediately construed depersonalisation as involving a partial or a total lack of subjective character. The term ‘personnalisation (Dugas, 1898; Dugas and Moutier, 1911) ’ and its cognates (“the personal mark (Ribot, 1885) ’, ‘the feeling of personality (Janet and Raymond, 1898)’ on which ‘depersonalisation’ is formed were in fact coined to designate the subjective character (Dugas and Moutier, 1911, 12-13,35). This is nicely

witnessed by Jaspers (1962, 121):

Every psychic manifestation, whether perception, bodily sensation, memory, idea, thought or feeling carries *this particular aspect of 'being mine'* of having an 'I' quality, of 'personally belonging', of it being one's own doing. This has been termed *personalisation*. If these psychic manifestations occur with the awareness of not being mine . . . we term them phenomena of depersonalisation.

Today, most accounts and descriptions of depersonalisation seem at least to imply a partial lack of subjectivity. The DSM-IV-TR for example mentions 'feelings of being detached from one's mental processes or body.' The ICD-10 specifically requires that the 'the individual feels that his or her feelings and/or experiences are detached, distant, not his or her own etc.' It could actually be argued that a lack of subjectivity is the phenomenological common denominator of almost all accounts and descriptions of depersonalisation (and accordingly of all accounts of the Cotard syndrome that take it to involve depersonalisation-like experiences). What those accounts mostly disagree on is the explanation of this lack.²⁵ They also disagree on whether depersonalisation involves other symptoms that are irreducible to this subjectivity problem (see Sierra, 2009, 24-27). The lack of subjective character is not in dispute. It is not however usually acknowledged that such a lack of subjectivity can explain most aspects of depersonalisation, and I will argue, most delusions of Cotard patients.

6.2 Desomatisation Experiences

The lack of subjectivity of patients' bodily sensations nicely explains the patients' desomatisation experiences. Indeed, if my bodily sensations didn't clearly feel mine, it could seem to me as if they were not my bodily sensations and as if the bodily part in which I feel

²⁵Is this lack caused by perceptive, interoceptive, emotional, agentive, memorial or metacognitive disorders? See Sierra (2009, Ch. I-II, X-XI), Dugas and Moutier (1911, 1-135) and Janet (1928, 35-88) and for an overview of the answers to those question.

them were not my bodily part.²⁶ The lack of subjectivity of patients' intentions-in-action could also explain why they do not feel in control of their body ('I would notice my hands and feet moving, but it is as if they did not belong to me and were moving automatically (Sierra, 2009, 29)'). It could thus explain all the depersonalised patients' desomatisation experiences.

6.3 Dementalisation Experiences

The lack of subjectivity can also explain the dementalisation experiences. When the subjectivity recedes from some of their thoughts, the patients might feel as if there are 'thoughts running through their brain [which] seem somehow foreign (Simeon and Abugel, 2006, 26)'. If the subjectivity recedes from their emotions, they might feel as if *they* had no emotions at all. When subjectivity recedes from all their mental states, the patients might feel as though they had no phenomenally conscious states at all. They might feel like mentally or phenomenally dead, and readily compare themselves to automatons (Janet, 1908, 515), machines or mechanical things (Sierra, 2009, 29), robot-like things (Simeon and Abugel, 2006, 24), zombies (Sierra, 2009, 51) or walking dead (Simeon and Abugel, 2006, 26).

6.4 Death And Nonexistence Experiences

What about the feeling of being dead or nonexistent? It is plausible that when they say that they feel dead, the patients often mean that they feel mentally or phenomenally dead: it seems to them that they do not themselves have any mental or phenomenal state. This is arguably indicated by the fact that they can articulate their death claims by comparing themselves to creatures deprived of phenomenality like zombies or robots.

²⁶See De Vignemont (2007, 2013) for a full account of bodily ownership based the subjective character (my term) of bodily sensations. Depersonalised patients indeed seem to further confirm De Vignemont (2013)'s case against what she calls 'the deflationary view of bodily ownership.'

This, however, will not explain nonexistence experiences. In order to explain such experiences, an interesting starting point is the fact the patients' complaints are typically first-personal. X.Y. will not for example claim 'I feel like X.Y. does not exist,' but rather 'I feel like *I* do not exist'.²⁷ Some patients who deny their existence explicitly insist on this first-personal aspect:

I can't seem to find my actual self. I feel as though my deliberations are those of a public body or corporation rather than those of a person. I used to say 'we' rather than 'I'. It is as though I had transcended personality, as if 'myself' had receded to an image which I regarded objectively, and which is not identified with the whole of me (Shorvon, 1946, 784)

This suggests that X.Y.'s nonexistence feeling might be construed as the feeling that she is not an 'I' anymore rather than as the feeling that X.Y. does not exist. Less loosely, we might say that she feels as if she were not something that that can legitimately be referred to using the 'I'-concept or (the 'I'-concept being reflexive) that she feels as if she is were not entitled to use the 'I'-concept.

This hypothesis is reasonably supported by many patients' reports. We have seen that some explicitly say that they lack a 'feeling of 'I',' 'the experience of 'me' or 'the awareness of myself'. Others convey the same idea differently saying that they appear to themselves in the third-person:

[It is like] seeing life as if it were played like a film in a movie. But in that case where am I? Who is watching the film? (Simeon and Abugel, 2006, 15)

I find myself regarding existence as though from beyond the tomb, from another world; . . . I am as it were, outside my own body and individuality; I am

²⁷Although the first complaint might occur when patients suffer from derealization as well, and feel like *everything* is unreal (see below).

depersonalised²⁸ (Simeon and Abugel, 2006, 133).

I felt that my brain was somewhere else and from there was just watching me...

I was completely unable to tell whether I was still present or whether I was the part that was gone. In short, there were two different beings, the one watching the other (Roberts, 1960, 481).

This suggests that they feel more entitled to refer to themselves in the third-person than in the first-person. Likewise, some say that unlike ‘I’s, they feel multiple. This is the case of the patient of Shorvon’s quoted above, who used to ‘feel as though [his] deliberations are those of a public body or corporation rather than those of a person’ and ‘used to say ‘we’ rather than ‘I’. Other patients similarly claim to be ‘double’ or ‘two selves’ (Krishaber, 1873, 47,125). Some even seem to imply that they have lost their ‘I’-concept (‘I lose the idea of myself (Janet, 1903a, 323),’ ‘I have lost the notion of my own existence (Krishaber, 1873, 151)’). Finally, and even though this is not very common (it is much more common among Cotard patients) some depersonalised patients can, like the patient of Shorvon’s quoted above spontaneously avoid the first-person singular when they talk about themselves (see for example the self-reports in Mayer-Gross (2011, 127) and Janet (1903a, 323)).

This supports the claim that reports such as ‘I feel like I do not exist’ often express the feeling that the thing(s) talking is not an ‘I’ anymore, entitled to use the first-person. Often express, in other words, the patient’s feeling that ‘I’ is not felicitously assertable. Now it is arguable that if someone underwent a sweeping withdrawal of the subjective character of his experiences, he would cease to properly *feel himself* and that his awareness of himself would be severely impaired. According to the present interpretation, it is precisely this kind of impairment of self-awareness, caused by a deficit in subjectivity, that the feeling of

²⁸This last quote is actually from Amiel’s journal, on which Dugas (arguably) drew to coin the name ‘depersonalisation’.

nonexistence reflects.²⁹

6.5 Derealisation, Detemporalisation And The Present And Actual Character

We have seen that many depersonalised patients do not only complain that their body, their thoughts or their very self seem alien or unreal; they can express the same kind of complaint about their surroundings as well and about the world in general. They can also suffer, that is, from derealisation. It was very early suggested that an impairment of subjectivity could readily explain why the patients say that they feel like the world is ghostly or unreal. Dugas and Moutier (1911, 27, 35) for example argued that an alienation from your perceptual states would *ipso facto* alienate you from the world to which these perceptual states normally connect you. I am not totally convinced by this explanation. We have seen, moreover, that that derealisation and depersonalisation can occur independently of each other, a dissociation this explanation cannot easily account for. There is however another interpretation of derealisation, which is consistent with its being linked to depersonalisation, but which leaves open whether both conditions might occur independently.

Just like I do not experience my phenomenal states as free floating, out there, but always as being mine, just like that, I normally experience them as being present (as occurring now) and actual (as occurring in the actual world rather than a merely possible or imaginary world). And just like I immediately know that this experience is mine, I immediately know that it is present and actual. We might then say that phenomenally conscious states normally have a *present and an actual character* as well as a *subjective character*. Now, it is common wisdom that the present comes with a certain ‘weight of reality.’ We tend to

²⁹I study the connection between the lack of subjective character and the mentioned impairment of ‘self-awareness’, as well as its implications for the nature of self-awareness, in much details elsewhere (Billon, 2014a).

judge as somehow ‘less real’ what is future or even past than what is present. We attribute an even bigger weight of reality to actuality. Unlike some philosophers (e.g. Lewis, 1986), common sense judges non-actual objects to be unreal. I hypothesise that in the same way that the subjective character of the depersonalised patients’ experience is impaired, the present character and the actual character of their experiences might be impaired, giving rise to derealisation experiences.³⁰ A sweeping withdrawal of the actual character of their experience could for example deprive the subjects of the impression that the world in which this experience occurs is actual and (hence) real. A sweeping withdrawal of the present character of their experience could similarly prevent them from feeling the moment at which this experience occurs as present. This last form of alteration, it should be noted, could not only explain some aspect of the patients’ derealisation experience. It could also explain what we have called their detemporalisation experience.

6.6 Interpreting Depersonalisation

Depersonalisation can vary a lot in intensity and extension. While in the mildest forms the patient will for only complain, for example, that a certain type of mental states do not clearly seem to be his, in the most severe cases, the patient will complain that it seems to him that he has no thought at all, that he does not exist and even, maybe, that the world and time do not exist either. According to the present account, depersonalisation’s core experience (as opposed to the associated derealisation and detemporalisation experiences) stems from a lack of subjective character. In order to explain the different degrees of severity of the disorder, we can suppose that the lack of subjective character can vary both in extension and in intensity.³¹ The milder forms of depersonalisation would be explained

³⁰Lewis (1932) similarly explains derealisation by an impairment of the sense of the present. Janet (1903a, 301) explains the latter by the former.

³¹The claim that the subjective character can vary in extension and in intensity might not be consistent with all accounts of the subjective character, and it was questioned, on that ground, by Dugas and Moutier

by a slight attenuation of the normal subjective character, or by one that is restrained to relatively small subset of the patient's mental states, say to some of his bodily sensations. The most severe forms of depersonalisation would, on the other hand, be accounted by a substantial diminution or even a complete deletion of the subjective character, and by one that is not be restricted to a specific kind of mental states, but extends to a significant portion of the thoughts of which the patient is aware. When the lack of subjectivity reaches such a climax, the patient would cease to properly *feel himself*. He would not be aware of himself as an 'I' anymore and he would start to feel unreal. As for the feeling that world or time are unreal, they would result from a lack of the actual and the present character of experience, a lack which could be, like that of the subjective character, either partial—a local attenuation—or total—a global loss.

Interestingly, the subjective, the present and the actual character are all *structural features* of experience thanks to which we locate those very experiences: we locate those experiences among subjects thanks to the subjective character, among times thanks to the present character and among possible worlds thanks to the actual character. We might say that they are all *self-locating features of experience*.

What is it like to lack these features and to be depersonalised? It seems rather hard to get a vivid sense of the answer to this question and our explanation might leave some readers yearning for more. The structural nature of the subjective, the actual and the present character can however both help us figure out why it is so difficult to vividly imagine being depersonalised, and get a better understanding of the phenomenology of the disorder. Being structural, these features are normally ubiquitous. This means in non pathological cases, we never lack them and—given the difficulties to imagine very exotic phenomenal states— that it will be very hard to vividly imagine what it is like to lack

(1911, 13). I articulate it in more details elsewhere (Billon, 2014b).

them. As already noted by Dugas and Moutier (1911, 40), their ubiquity also implies that we normally lack the contrast cases needed to spot the regular presence of these features, and that it is normally superfluous to mention them when we describe our experiences. It should accordingly be extremely hard to articulate the nature of what is missing when these features fade away and to convey the impression that results from this withdrawal except by saying that one's experience do not, or not clearly, feel one's, present or real. Finally, the ubiquity of these features entails that we should always tacitly expect their presence and that their lack, be it partial or total, should give rise to a radical feeling of unfamiliarity. This feeling should be radical not only because these features are ubiquitous—and thus extremely familiar— but also because what is lacking is a feature that is hard to notice and that we would not—and could not vividly—imagine lacking even in the weirdest scenarios. One might accordingly say that there is both a negative or "something missing" aspect and a positive, or "something extra" aspect to the phenomenology of depersonalization (the subjective, present or actual character). The negative aspect, on which the patients heavily insist, is the lack of a certain structural—and hence familiar— phenomenal feature. The positive aspect on the other hand, is an impression of unfamiliarity that results from the patients' boggled reaction to what they feel missing.³²

7 Interpreting The Cotard Syndrome

We are now in a position to come back to the Cotard syndrome and to provide it with a continuous interpretation. According to this interpretation,

³²I thus agree with authors such as Garry Young and, to a lesser extent Matthew Ratcliffe, who insist on the centrality of a certain feeling of unfamiliarity in the phenomenology of depersonalization (and of Cotard's syndrome). However, I take this feeling to result from a deeper phenomenon, namely a lack of subjective (and sometimes present and actual) character, that is neither equivalent nor reducible to a broad lack of 'familiarity of being' (Young, 2012, 133) or to a lack of the feeling of being in the world (Ratcliffe, 2009).

1. The delusions of Cotard patients result from experiences that are similar to those of depersonalised patients, which are essentially characterised by a lack of subjective character (desomatisation, dementalisation and nonexistence experiences), but also, sometimes, by a lack of present and actual character (derealisation and detemporalisation experiences).
 - (a) Desomatisation delusions would result from desomatisation experiences that are similar to the desomatisation experiences of depersonalised patients.
 - (b) Dementalisation delusions would result from experiences that are similar to the dementalisation experiences of depersonalised patients, etc.
 - (c) Nonexistence delusions would be explained by a more intense and global—maybe sometimes total—lack of subjective character, which would make the subject feel as if he is not an ‘I’ (nonexistence experience).
 - (d) Derealisation and detemporalisation delusions would be explained, similarly, by global lack of actual and present character (derealisation and detemporalisation experience).
2. The subject would take these experiences at face-value (he would endorse them), believing that he lacks bodily parts, thoughts, that he is not an ‘I’, etc.,
3. Given the similarity between the experience of depersonalised patients and that of Cotard patients, what differentiates Cotard and depersonalised patients, and explains why the latter (but not the former) believe that P, is plausibly some kind of rationality deficit (more precisely, a cognitive bias). Both kinds of patients would have the very same P-experiences but because of a rationality deficit, Cotard patients would endorse this P-experience. One might however maintain that although they are *similar*, the experience of Cotard and depersonalized patients are not in fact *identical*.

The P-experience of delusional patients might for example result from a more intense and more widespread withdrawal of the subjective character and accordingly be more ‘authoritative.’ If this is granted, it can be argued that Cotard and depersonalized patients are equally rational and that they only differ in the severity of their experiential alterations. Even though the first explanation strikes me as more plausible and less ad hoc, this second explanation should not, I believe be ruled until the cognitive functioning of Cotard patients has been more extensively studied.

4. Different forms of the Cotard syndrome could be explained by differences in the extension and the intensity of the lack the subjective, present or actual character of experience.

This is a continuous interpretation in terms of endorsement (2). It tends to favour a two-factor interpretation, but it leaves the option of a one-factor account open (3). Unlike its contenders, it explains virtually all the nihilistic delusions involved in the Cotard syndrome, including the dementalisation, nonexistence and detemporalisation delusions. Even though the neural correlates of the subjective character is not yet known with certainty —not to speak about those of the actual and the present character— it is fair to say that this interpretation has received some degree of neurophysiological confirmation. In the only PET-scan study of a Cotard patient so far, Charland-Verville et al. (2013) have recently shown that the condition is associated with an hypometabolism in the regions which seem to be responsible for the feeling of oneself, in particular in key parts of the so-called ‘default-mode networks’ which is active when the subject is in a resting state (Buckner et al., 2008; Northoff and Panksepp, 2008). Charland-Verville et al. (2013) conclude that their data suggest Cotard’s delusion involves ‘ a profound disturbance in brain regions responsible for ‘core consciousness’ and our abiding sense of self.’

We have seen that this interpretation already answers the experience problem (1c). We now have to show that it can solve the consistency problem and to situate it more precisely with respect to the classical neurocognitive accounts.

7.1 Solving The Consistency Problem

Remember that according to some philosophers, one cannot consistently deny, like Cotard patients do, that one thinks and exists, and Cotard patients are not accordingly minimally rational. The argument for this claim is however rarely made very explicit. It might be replied that it is just a rehearsal of Descartes' cogito argument, but the latter admits many different interpretations. On some of them the certainty that we think and exist is not only a matter of minimal rationality but also of experience, and a subject might deny that he thinks or exists without violating the norms of minimal rationality (see my Billon (2014b)). In order to solve the consistency problem, I will put forward what I take to be the three most influential arguments for the (maximal) irrationality of believing that one does not think or exist and I will show that these arguments can easily be answered, at least if it is granted that the patients believe that they are not 'I's, and that this stems from an experiential deficit (lack of subjectivity).

The Non-Being Argument.

For 'I do not exist' to be true, there must be something, namely I, that does not exist. There must accordingly exist something that does not exist, which is absurd.

That there is a problem with this objection is already apparent in the fact that it overgeneralises: an argument of this kind would prove that 'Pegasus does not exist' is absurd. This objection is actually an instance of a perennial philosophical problem that has been

answered already many times. The solution that I favour, in the present context, consists in claiming that in ‘I do not exist’, the negation is metalinguistic in Horn (1989, VI)’sense. Horn has noticed that we often say ‘x is not P’ to express the fact that ‘x is P’ is not felicitously assertable rather than the fact that x has the property of not being P. Understood this way ‘I do not exist’ will be true each time ‘I exist’ is not felicitously assertable, and in particular, each time I am not entitled to use the ‘I’-concept. Interestingly, metalinguistic negation also allows us to make sense of strange statements such as ‘I am not myself,’ which are extremely common among Cotard patients. The latter would simply mean that ‘I am myself’ is not felicitously assertable which would be true provided that I am not entitled to use the ‘I’-concept.

The Self-defeat Argument.

If thought is understood in a sufficiently general way, ‘I think’ will be true each time someone thinks it and ‘I do not think’ will be false each time someone thinks it. It follows that if I am minimally rational, I must always believe that I think, from which I should infer that I exist. (This argument is put forward as an interpretation of the cogito by Ayer (1953, 29), Williams (1978, 59), Shoemaker (1996, 53) and Burge (1996, 93) among many others).

In response, it must be stressed that the self-defeat argument would not be cogent if it were not phrased in the first-person. ‘Descartes thinks’ will be true each time Descartes thinks it and ‘Descartes does not think’ will be false each time he thinks it. It does not follow, however, that if Descartes is minimally rational he should believe ‘Descartes thinks’. He could suffer from amnesia, not remembering that he is Descartes, and be minimally rational nevertheless. The self-defeat argument is thus a strictly first-personal argument: an argument that can only be valid if it phrased in the first-person. Now, if Cotard patients

do not believe to be 'I's, they will (justifiably) believe that this argument, even if it is valid (when phrased in the first-person), does not concern them. They might grant that someone who is an 'I', entitled to use the first-person, should believe 'I think' but simply deny the relevance of this conclusion for them. They might do that, moreover, and be minimally rational. They might take it, finally, that their uses of 'I think' are not felicitously assertable and that their uses of 'I do not think' are in that sense (involving metalinguistic negation) true. So if Cotard patients do not believe that they are 'I's, the self-defeat argument cannot show that they would be (maximally) irrational to say, 'I do not think'.

The Reflexive-Rule Argument.

If a subject is minimally rational he must know the following reflexive-rule: *uses of 'I' refer to the very thinker of the thought they express*. He must accordingly know that 'I think' is equivalent to 'the thinker of this very thought thinks' and is true. He must accordingly believe 'I think' (an interpretation of the cogito along these lines is suggested by Kaplan (1989, 495,508-9) and Lewis (1970, 186)).

This reflexive-rule argument relies on the claim that anyone who is minimally rational must know that 'the thinker of this very thought thinks' is true. As 'the thinker of this very thought thinks' would not be true if 'the thinker of this thought' were not a referring expression, this argument presupposes that anyone minimally rational must know that 'the thinker of this thought' is a referring expression and that her thoughts have one and only one thinker. Yet we have seen that depersonalised patients often feel as if their thoughts had no thinker ('my thoughts have a life of their own') or many thinkers at once ('I feel as though my deliberations are those of a public body or corporation rather than those of a person'), and that this seems to stem from a problem of experience (absent subjective character) rather

than rationality. It seems moreover that we can conceive thoughts with many contributing thinkers—in the words of Anscombe (1975, 57), thoughts with ‘ten thinkers thinking in unison’ (see also Nozick (1981, 72)). This strongly suggests that minimal rationality does not suffice to know that our thoughts have a unique thinker and that ‘the thinker of this thought’ refers. A normal subjective character also seems required for that. This, in turn, suggests that the reflexive-rule argument is unsound.

Those answers are somehow schematic and they certainly leave room for discussion. Yet, I believe that they should suffice to convince us that if the patients are under the impression that their thoughts do not have a unique thinker and that they are not ‘I’s anymore, the major objections against their minimal rationality can be neutralised. This should be enough to outline an answer to the consistency problem and to the cogito challenge more broadly.

7.2 The Present Interpretation And The Classical Accounts

The interpretation put forward here contrasts with those associated to the classical neurocognitive accounts. I would like to argue, however, that it is consistent with the core of these accounts and that it might even be considered as a deepening or a specification of the latter rather than as a concurrent. First, I have only dealt here with the interpretative level, leaving other (neurophysiological) dimensions of explanation virtually untouched. Second, whereas they focus on disembodiment and death delusions and tend to neglect nonexistence and dementalisation delusions, I have explicitly focused on the latter as well. So my explanandum is wider. Third, proponents of the classical accounts often seem to imply that the subjectivity of Cotard patients is abnormal. In an earlier paper, Gerrans (2000, 211) for example explicitly claimed that in ‘extreme forms of the Cotard delusion (...) it

seems to the patient as if her experiences do not belong to her.’³³ Even though they do not say much about it and they seem to hold that it derives from the ‘lack of emotional responsiveness’ which is the central explanans of their account, Young and Leafhead (1996, 158-9) also invoke depersonalisation feelings to explain the Cotard syndrome. Similarly, in the latest version of his account, Ramachandran (2012, 223) not only claims, in line with the classical accounts, that in the Cotard syndrome ‘all or most sensory pathways to the amygdala are totally severed.’ He now adds that the syndrome also involves ‘a derangement of reciprocal connections between the mirror neurons and the frontal lobe system [resulting in a loss] of *the sense of self* (he argues independently that mirror neurons are essential to the sense of the self).

7.3 Affectivity And Subjectivity

Finally and more importantly, the affective deficit posited by the classical accounts and the experiential disorder posited by the present account might not be independent of each other. The central claim of the classical neurocognitive accounts is that the Cotard syndrome stems from an attenuation of the affective phenomena associated with perception or thought. Classical accounts of depersonalisation appeal to a similar aetiology (see Sierra (2009, IX) and Sierra and David (2011)). This aetiology would be trivially consistent with the present interpretation if (i) the anomalous subjective, present or actual character of experience posited by our account *explained* the affective disorder of the classical accounts (ii) or, even more simply, if it *were* an affective disorder.³⁴

According to (i), the present account is consistent with the classical account because it

³³Gerrans (2000, 211) adds that the disownership feeling stems from the fact that the body is not felt anymore, which I disagree with.

³⁴One might also argue that (iii) the affective disorder explains the subjective (res. present, actual) character disorder. Strictly speaking, (iii) is weaker than (ii). To my knowledge however, researchers who endorse (iii) usually endorse (ii) as well.

deepens the latter: it explains the affective disorder in more fundamental terms. According to (ii), the present account is consistent with the classical account because it *specifies* the latter: it specifies the affective disorder as a disorder of the subjective (present, actual) character. I will conclude with an argument for (i) and a few remarks on (ii).

Consider a standard emotional episode, say an episode of fear, and imagine what would happen if we removed the subjective (res. present, actual) character of the experiences involved in this episode. As we have already seen (§ 6.3), it would seem to you as if you are not yourself (res. currently, actually) afraid.³⁵ This is already enough to argue that your fear, if there were still such a thing, would be abnormal. Generalizing from this particular case, this is enough to argue that that the subjective (res. present, actual) character is a normal component of our emotions in virtue of which they feel ours (res. present, actual), and that an abnormal subjective (res. present, actual) character can explain an abnormal affectivity. We can, I believe, go further. For it is arguable that if we removed the subjective character of an episode of fear, it would not only seem to you as if you do not yourself feel any fear: it would arguably seem to you as if this ‘episode of fear’ is not even an emotion anymore. Phenomenologically speaking, to have an emotion is normally to *feel oneself* (now, actually) concerned by something. When I am afraid I *feel myself* (now, actually) endangered; when I am angry I feel myself offended; when I am disgusted I feel myself repulsed, etc. Such a feeling of oneself (present, actual) is required for something to appear to us as an emotion. But it is arguable that without a normal subjective (*cum* actual, *cum* present) character this feeling of oneself would be either absent or defective. The subjective (res. actual, present) character accordingly seems to be a normal component of our emotions in virtue of which they not only appear to us as being ours (res. actual, present), but also as being emotions at all. This reinforces the point that an abnormal

³⁵For simplicity, I consider the case of the total removal of the subjectivity of one experience. Similar remarks would apply, *mutatis mutandis*, to the case of a mere attenuation of the subjective character.

subjective (res. actual, present) character can explain an affectivity deficit.

(ii) asserts that the disorder of subjective (res. present, actual) character that we have posited *is* an affective disorder. The idea here is not that the subjective (res. actual, present) character of experience is an emotion itself, but rather that it is of the same kind as emotions and that it is accordingly affective in nature. This is a very strong thesis and I am not sure how it could be cogently argued for.³⁶ At the very least one would have to show that the subjective (res. present, actual) character is not only a normal component of our emotions but that it is in fact an essential component. One would also have to show, presumably, that it is a central component of our emotions: that if a mental state has a subjective (res. present, actual) character, it will normally, in virtue of that, contribute to my emotional state (remember that I use ‘emotions’ in the broad sense in which it includes moods).

I will not defend (ii) myself here, but I would like to note that it has enjoyed a considerable currency. Many neuroscientists have argued that the mechanisms responsible for the experience and the existence of oneself on the one hand, and emotions on the other hand largely overlap (Panksepp, 1998; Northoff and Panksepp, 2008; Damasio, 2003).³⁷ Northoff and Panksepp (2008, 263) in fact go as far as claiming that ‘the self . . . consists of strong affective colouring and [is] manifested in the phenomenal experience of mineness and belongingness’. Interestingly, the thesis that subjectivity is affective in nature is at least as old as (and arguably older than, see fn.30) the claim that the Cotard syndrome and depersonalisation are affective disorders. The last thesis was endorsed by Cotard and Dugas

³⁶The impression that this thesis is not so strong comes from the fact that we sometimes use ‘affective’ to mean ‘related to feelings’ and ‘feelings’ as a synonym of ‘phenomenally conscious states.’ However, tenants of the classical account do not just mean ‘phenomenally conscious’ by ‘affective.’

³⁷Their argument partly relies on conceptual considerations akin to the ones we used in the previous paragraph, to the effect that ‘the phenomenological experience of the core self is primary in affective processing rather than secondary (Northoff and Panksepp, 2008, 259).’ It also relies (a) on neuroimaging studies of ‘self-related processing’ (the processing of stimuli that are relevant to the self), (b) and of the so-called ‘default-mode networks’ involved in the resting state.

(the ‘discoverer’ of depersonalisation) themselves. The former thesis was articulated and defended by Dugas, and it was quite popular among French and German clinicians at the beginning of the last century. Dugas thus concluded his seminal paper on depersonalisation by an affective characterisation of the self and the feeling of oneself or ‘personnalisation’:³⁸

The self is essentially the being that vibrates, that feels moved, and not the one that acts or thinks, apathy [in the etymological sense of a lack of affect] is really the loss of the sense of the self (Dugas, 1898, 507).

8 Conclusion

I have put forward a novel interpretation of the Cotard syndrome. According to this interpretation, nihilistic delusions stem from a lack of the subjective, the present and the actual character of experience. The lack of subjective character would lead to an impaired self-awareness, and to the feeling that one is not an ‘I’, explaining the nonexistence delusions. The gap between depersonalised patients who go through similar experiences without being delusional and Cotard patients might be filled by some cognitive biases (two-factors interpretation) or, less plausibly, by a more intense and a important lack (one-factor interpretation). This interpretation is consistent with the classical accounts, and it might even be considered as a specification or a deepening of the latter. However, it makes it much easier to make sense of some of the most intriguing of the Cotard syndrome, such as the claim that one does not exist.

The present interpretation also suggests that the study of the Cotard syndrome might be of great philosophical and psychological significance. If this interpretation is correct,

³⁸Historically, Dugas may have been influenced by Maine de Biran, who made similar claims and whose influence on French psychology was very important. His German colleagues might have been influenced by Schopenhauer as well, whose view on the self and on self-awareness are close to those of Maine de Biran (see Henry (1985)’s ‘genealogy’ of the idea that the self and self-awareness are affective in nature).

the Cotard syndrome indeed provides a window on our sense of the self, our sense of the present, and our sense of actuality, as well as on the structural features of experience on which they are grounded. If, as some have claimed, the subjective character is a *constitutive* feature of phenomenal consciousness (see Billon and Kriegel (2004)), the Cotard syndrome might also help us get a better understanding of phenomenal consciousness and its neural underpinnings.

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References

- Anscombe, G. (1975). The first person. In Samuel, G., editor, *Mind and Language*. Oxford University Press.
- Ayer, A. J. (1953). "cogito, ergo sum". *Analysis*, 14(2):pp. 27–31.
- Baker, D., Hunter, E., Lawrence, E., Medford, N., Patel, M., Senior, C., Sierra, M., Lambert, M. V., Phillips, M. L., and David, A. S. (2003). Depersonalisation disorder: clinical features of 204 cases. *The British Journal of Psychiatry*, 182(5):428–433.
- Ball, B. (1882). La folie du doute. *La Revue scientifique de la France et de l'étranger*, II:42–47.
- Berardis, D. D., Serroni, N., Campanella, D., Marasco, V., Moschetta, F. S., and Gianantonio, M. D. (2010). A case of cotard's syndrome successfully treated with aripiprazole monotherapy. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, 34(7):1347 – 1348.

- Bermudez, J. (2001). Normativity and rationality in delusional psychiatric disorders. *Mind & language*, 16(5):493–457.
- Berrios, G. (1991). Delusions as “wrong beliefs”: a conceptual history. *The British journal of psychiatry. Supplement*, 159(14):6–13.
- Berrios, G. and Luque, R. (1995). Cotard’s syndrome: analysis of 100 cases. *Acta Psychiatrica Scandinavica*, 91(3):185–188.
- Billon, A. (2011). Have we vindicated the motivational unconscious yet? a conceptual review. *Frontiers in Psychology*, 2(0).
- Billon, A. (2014a). Pathological self-doubt and basic self-awareness. *Manuscript (under review)*, x(x):x–x.
- Billon, A. (2014b). Why are we certain that we exist? *Philosophy and Phenomenological Research*. <http://dx.doi.org/10.1111/phpr.12113>.
- Billon, A. and Kriegel, U. (2004). Jaspers’ dilemma: The psychopathological challenge to subjectivity theories of consciousness. In Gennaro, R., editor, *Disturbed Consciousness: New Essays on Psychopathology and Theories of Consciousness*, pages x–x. MIT Press.
- Bortolotti, L. (2009). Delusion. *Stanford Encyclopedia of Philosophy*.
- Bortolotti, L. (2010). *Delusions and other irrational beliefs*. Oxford University Press.
- Buckner, R. L., Andrews-Hanna, J. R., and Schacter, D. L. (2008). The brain’s default network. *Annals of the New York Academy of Sciences*, 1124(1):1–38.
- Burge, T. (1996). Our Entitlement to Self-Knowledge. In *Proceedings of the Aristotelian Society*, volume XCVI, pages 91–116. JSTOR.

- Campbell, J. (2001). Rationality, meaning and the analysis of delusion. *Philosophy, Psychiatry & Psychology*, 8(2/3):89–100.
- Charland-Verville, V., Bruno, M.-A., Bahri, M. A., Demertzi, A., Desseilles, M., Chatelle, C., Vanhaudenhuyse, A., Hustinx, R., Bernard, C., Tshibanda, L., et al. (2013). Brain dead yet mind alive: A positron emission tomography case study of brain metabolism in cotard’s syndrome. *Cortex*.
- Cotard, J. (1891). *Études sur les maladies cérébrales et mentales*. J-B. Baillière. available at <http://gallica.bnf.fr>.
- Cotard, J., Camuset, M., and Séglas, J. (1998). *Du délire des négations aux idées d’énormité*. Editions L’Harmattan.
- Damasio, A. (2003). Feelings of emotion and the self. *Annals of the New York Academy of Sciences*, 1001(1):253–261.
- Davies, M., Breen, N., Coltheart, M., and Langdon, R. (2001). Monothematic delusions: Towards a two-factor account. *Philosophy, Psychiatry, & Psychology*, 8(2):133–158.
- De Vignemont, F. (2007). Habeas corpus: The sense of ownership of one’s own body. *Mind and Language*, 22(4):427–449.
- De Vignemont, F. (2013). The mark of bodily ownership. *Analysis*, 73(4):643–651.
- Drake, M. (1988). Cotard’s syndrome and temporal lobe epilepsy. *Psychiatric journal of the University of Ottawa: Revue de psychiatrie de l’Université d’Ottawa*, 13(1):36–39.
- Dugas, L. (1898). Un cas de dépersonnalisation. *Revue Philosophique de la France et de l’Étranger*, 45:500–507.

- Dugas, L. and Moutier, F. (1911). *La dépersonnalisation*. F. Alcan. available at <http://www.biusante.parisdescartes.fr/histmed/medica/cote?79749>.
- Enoch, M. and Ball, H. (2001). *Uncommon psychiatric syndromes*. Arnold Publishers. 4th edition.
- Ey, H. (1960). *Traite des hallucinations: I-II*. Masson.
- Gerrans, P. (2000). Refining the explanation of cotard's delusion. *Mind & language*, 15(1):111–122.
- Gerrans, P. (2003). A one-stage explanation of the Cotard delusion. *Philosophy, Psychiatry, & Psychology*, 9(1):47–53.
- Graham, G. (2009). *The disordered mind: an introduction to philosophy of mind and mental illness*. Routledge.
- Guralnik, O., Giesbrecht, T., Knutelska, M., Sirroff, B., and Simeon, D. (2007). Cognitive functioning in depersonalization disorder. *The Journal of nervous and mental disease*, 195(12):983–988.
- Guralnik, O., Schmeidler, J., and Simeon, D. (2000). Feeling unreal: Cognitive processes in depersonalization. *American Journal of Psychiatry*, 157(1):103–109.
- Henry, M. (1985). *Généalogie de la Psychanalyse*. Épipiméthée. PUF.
- Horn, L. R. (1989). *A natural history of negation*, volume 960. University of Chicago Press Chicago.
- Janet, P. (1903a). *Les obsessions et la psychasthénie: Tome I Analyse des symptômes*, volume 1. Félix Alcan.

- Janet, P. (1903b). *Les obsessions et la psychasthénie: Tome II*, volume 2. Félix Alcan.
- Janet, P. (1908). Le sentiment de dèpersonnalisation. *Journal de Psychologie normale et pathologique*, 5:514–516.
- Janet, P. (1928). *De l'angoisse à l'extase, vol. 2 (Les sentiments fondamentaux)*. Paris, Alcan. available at http://classiques.uqac.ca/classiques/janet_pierre/angoisse_extase_2/Janet_angoisse_2_1.pdf.
- Janet, P. and Raymond, F. (1898). *Névroses et idées fixes, vol. 2. Paris: Félix Alcan.(b)*.
- Jaspers, K. (1962). *General Psychopathology*. Manchester University Press.
- Kaplan, D. (1989). Demonstratives. In Almog, J., JohnPerry, and Wettstein, H., editors, *Themes from Kaplan*, pages 481–563. Oxford: Oxford University Press.
- Kriegel, U. (2009). *Subjective Consciousness: A Self-Representational Theory: A Self-Representational Theory*. OUP Oxford.
- Krishaber, M. (1873). *De la névropathie cérébro-cardiaque*. Masson. available at <http://gallica.bnf.fr/ark:/12148/bpt6k767014>.
- Krizek, G. (1989). Derealization without depersonalization. *American Journal of Psychiatry*, 146(10):1360–b.
- Leafhead, K. M. (1997). *Delusions and attentional bias*. PhD thesis, Durham University.
- Levine, J. (2001). *Purple haze: The puzzle of consciousness*, volume 6. Oxford University Press Oxford.
- Lewis, A. (1932). The experience of time in mental disorder. *Proceedings of the Royal Society of Medicine*, 25(5):611–621.

- Lewis, D. (1970). Anselm and actuality. *Noûs*, 4(2):pp. 175–188.
- Lewis, D. K. (1986). *On the Plurality of Worlds*. Blackwell.
- Mayer-Gross, W. (2011). On depersonalization. *British Journal of Medical Psychology*, 15(2):103–126.
- Northoff, G. and Panksepp, J. (2008). The trans-species concept of self and the subcortical–cortical midline system. *Trends in Cognitive Sciences*, 12(7):259–264.
- Nozick, R. (1981). *Philosophical Explanations*, Cambridge. Harvard University Press.
- Pacherie, E., Green, M., and Bayne, T. (2006). Phenomenology and delusions: Who put the ‘alien’ in alien control? *Consciousness and cognition*, 15(3):566–577.
- Panksepp, J. (1998). The periconscious substrates of consciousness: Affective states and the evolutionary origins of the self. *Journal of Consciousness Studies*, 5(5-6):5–6.
- Petracca, G., Migliorelli, R., Vazquez, S., and Starkstein, S. E. (1995). Spect findings before and after ect in a patient with major depression and cotard’s syndrome. *Journal of Neuropsychiatry and Clinical Neurosciences*, 7:505–507.
- Pust, J. (2008). Cartesian knowledge and confirmation. *The Journal of Philosophy*, 104(6):269–289.
- Ramachandran, V. and Blakeslee, S. (1998). *Phantoms in the brain: Human nature and the architecture of the mind*. Fourth Estate London.
- Ramachandran, V. S. (2012). *The tell-tale brain: A neuroscientist’s quest for what makes us human*. WW Norton & Company Incorporated.

- Ramirez-Bermudez, J., Aguilar-Venegas, L., Crail-Melendez, D., Espinola-Nadurille, M., Nente, F., and Mendez, M. (2010). Cotard syndrome in neurological and psychiatric patients. *The Journal of neuropsychiatry and clinical neurosciences*, 22(4):409–416.
- Ratcliffe, M. (2004). Interpreting delusions. *Phenomenology and the Cognitive Sciences*, 3(1):25–48.
- Ratcliffe, M. (2009). Existential feeling and psychopathology. *Philosophy, Psychiatry, & Psychology*, 16(2):179–194.
- Ratcliffe, M. (2010). Delusional atmosphere and delusional belief. In Schmicking, D. and Gallagher, S., editors, *Handbook of Phenomenology and Cognitive Science*, pages 575–590. Springer Netherlands.
- Ribot, T. (1885). *Les maladies de la personnalité*. F. Alcan.
- Roberts, W. W. (1960). Normal and abnormal depersonalization. *The British Journal of Psychiatry*, 106(443):478–493.
- Ross, G. A. (2005). Syndrome de cotard et fuite des idées. *L'Évolution Psychiatrique*, 70(1):161 – 176.
- Séglas, J. and Meige, H. (1895). *Leçons cliniques sur les maladies mentales et nerveuses:(Salpêtrière, 1887-1894)*. Asselin et Houzeau. available at <http://gallica.bnf.fr/ark:/12148/bpt6k76631s>.
- Shoemaker, S. (1996). *The First-Person Perspective, and Other Essays*. Oxford University Press.
- Shorvon, H. (1946). The depersonalization syndrome. *Proceedings of the Royal Society of Medicine*, 39(12):779–791.

- Sierra, M. (2009). *Depersonalization: a new look at a neglected syndrome*. Cambridge Univ Press.
- Sierra, M. and Berrios, G. E. (2000). The cambridge depersonalisation scale: a new instrument for the measurement of depersonalisation. *Psychiatry Research*, 93(2):153–164.
- Sierra, M. and David, A. S. (2011). Depersonalization: a selective impairment of self-awareness. *Consciousness and cognition*, 20(1):99–108.
- Simeon, D. and Abugel, J. (2006). *Feeling unreal: Depersonalization disorder and the loss of the self*. Oxford University Press, USA.
- Simeon, D., Kozin, D. S., Segal, K., Lerch, B., Dujour, R., and Giesbrecht, T. (2008). De-constructing depersonalization: Further evidence for symptom clusters. *Psychiatry Research*, 157(1â3):303 – 306.
- Swamy, N., Sanju, G., and Mathew Jaimon, M. (2007). An overview of the neurological correlates of cotard syndrome. *The European journal of psychiatry*, 21(2):99–116.
- Williams, B. A. (1978). *Descartes: The Project of Pure Enquiry*. Harvester press.
- Wimmer, A. (1919). Sur l'ätat de conscience pendant la stupeur. les psychomäcanismes du dälire de negation de cotard. *Annales Medico-Psychologiques*, 11:14–44.
- Young, A. and Leafhead, K. (1996). Betwixt life and death: Case studies of the Cotard delusion. In Halligan, P. W. and Marshall, J. C., editors, *Method in madness: Case studies in cognitive neuropsychiatry*, pages 147–171. Psychology Press.
- Young, A. W., Leafhead, K. M., and Szulecka, T. K. (1994). The capgras and cotard delusions. *Psychopathology*, 27(3-5):226–231.

Young, A. W., Reid, I., Wright, S., and Hellowell, D. J. (1993). Face-processing impairments and the capgras delusion. *The British Journal of Psychiatry*, 162(5):695–698.

Young, G. (2012). Delusions of death and immortality: A consequence of misplaced being in cotard patients. *Philosophy, Psychiatry, & Psychology*, 19(2):127–140.