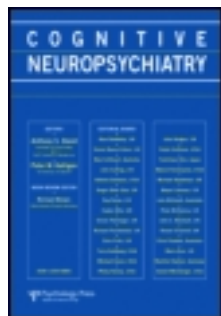


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Publisher: Psychology Press

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Cognitive Neuropsychiatry

Publication details, including instructions for authors and subscription information:

<http://www.tandfonline.com/loi/pcnp20>

The "Truman Show" delusion: Psychosis in the global village

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Available online: 29 May 2012

To cite this article: Joel Gold & Ian Gold (2012): The "Truman Show" delusion: Psychosis in the global village, *Cognitive Neuropsychiatry*, DOI:10.1080/13546805.2012.666113

To link to this article: <http://dx.doi.org/10.1080/13546805.2012.666113>



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The “Truman Show” delusion: Psychosis in the global village

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Introduction. We report a novel delusion, primarily persecutory in form, in which the patient believes that he is being filmed, and that the films are being broadcast for the entertainment of others.

Methods. We describe a series of patients who presented with a delusional system according to which they were the subjects of something akin to a reality television show that was broadcasting their daily life for the entertainment of others. We then address three questions, the first concerning how to characterise the delusion, the second concerning the role of culture in delusion, and the third concerning the implications of cultural studies of delusion for the cognitive theory of delusion.

Results. Delusions are both variable and stable: Particular delusional ideas are sensitive to culture, but the broad categories of delusion are stable both across time and culture. This stability has implications for the form a cognitive theory of delusion can take.

Conclusions. Cultural studies of delusion have important contributions to make to the cognitive theory of delusion.

Keywords: Culture; Delusion; Grandiosity; Ideas of reference; Persecution; Reality television.

In the future, everyone will be world-famous for 15 minutes. (Andy Warhol)

INTRODUCTION

With the advent of the Internet and other novel forms of communication and social interaction, our society is undergoing a shift in culture greater

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We are grateful to Leah Katzman and Elizabeth Scott for research assistance. The paper has been greatly improved by comments from Adam Karpati, MD, Lauren Olin and two anonymous referees.

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<http://www.psypress.com/cogneuropsychiatry> <http://dx.doi.org/10.1080/13546805.2012.666113>

than anything we have witnessed in decades. What impact might significant changes in culture have on the processes of mental illness? Here we explore one aspect of this cultural change. Internet sites such as YouTube, and another new cultural presence—reality television—reveal two new cultural phenomena. First, they demonstrate that people without ostensible skill or talent can become celebrities in an age when celebrity holds great currency. Second, these forms of entertainment make it possible to become known to tens of millions of people overnight. They have the powerful effect of making the world feel at once very small and possibly overwhelming. We present five patients in whom the ideas of celebrity and exposure take centre stage in the presentation of their psychosis. They developed the delusional belief that they were the “star” of a reality television show secretly broadcasting their daily life, much like the main character in Peter Weir’s film *The Truman Show*.

The film

The Truman Show was released in 1998 and presaged the wave of reality television shows that succeeded it. It follows the story of Truman Burbank, a 30-year-old man whose entire life—from *in utero* to the time of the movie’s present—is broadcast around the world, without his knowledge, as a form of soap opera. The city he inhabits is, in fact, a domed sound studio, and all the people in his life, including his wife, parents, best friend, co-workers, and strangers, are all actors and extras. Even the weather is controlled. The plot centres on Truman’s dawning awareness of his condition and his escape to the real world, where he is reunited with his former girlfriend, previously banished by the show’s creator.

Given his realisation that the world he lives in is counterfeit, Truman begins to sound like a patient with mental illness. He has the “idea of reference” that “[t]he radio starts following me along, talking about everything I’m doing”. He expresses the “paranoid” ideas that he is “definitely being followed” and that he is “being set up for something”; he has the “grandiose” notion that “the whole world revolves around [him] somehow”. In order to keep the show going at all costs, the actors tell him that he is imagining these things—that he is, in effect, mentally ill. The five patients described later,¹ all treated at different times but on the same psychiatric inpatient unit at Bellevue Hospital Centre in New York City, believed themselves to be in the same position as Truman Burbank; three of them referred to the film by name.

¹ These patients were first presented at Grand Rounds in the Department of Psychiatry, New York University, 21 September 2006.

Cases

Patient 1. Mr A. was admitted after he scuffled with security at a federal building. He said that his life was like *The Truman Show* and that he had come to ask for asylum. He had held this belief for five years, and although he lived with family, they were not aware of his delusions until several days prior to admission; he had only told a friend about it 2 weeks prior to admission. He believed that the attacks of 9/11 were fabricated as part of his narrative. He had travelled from out-of-state in order to see if the World Trade Centre had in fact been destroyed; if the towers were standing, he would have proof that he was on the show. On first presentation, he demanded to speak to "the director". He said that since he had seen *The Truman Show*, he believed that all the individuals in his life were part of the conspiracy. He also believed he had cameras in his eyes. Despite this long-standing delusion, Mr A. had had no previous psychiatric treatment. It is noteworthy, however, that the patient had been using over-the-counter fat-loss supplements and had lost 40 pounds over the previous 2 months in order to be able to join the military. Initial DSM-IV differential diagnosis was schizophrenia, chronic paranoid type versus substance-induced psychotic disorder. The patient was started on risperidone 1 mg twice daily. Within days, he was transferred to a hospital in his home state.

Patient 2. Mr B. was admitted after he told psychiatric outreach that he believed he was being taped continuously for national broadcast. As a result, he had formulated a "plan to come to NYC and meet an unknown woman at the top of the statue of liberty. He expected [her] to release him from the control of an extended network of individuals who are . . . taping him continually . . . and broadcasting the tapes nationally for viewers' enjoyment as part of a scenario similar to . . . *The Truman Show*". He said: "I realized that I was and am the centre, the focus of attention by millions and millions of people . . . my [family] and everyone I knew were and are actors in a script, a charade whose entire purpose is to make me the focus of the world's attention". The patient had a history of three suicide attempts in the context of dysphoria, hopelessness, and persecutory delusions. However, he denied ever being in psychiatric treatment. He had a significant substance use history, including frequent crack cocaine use of up to \$150 per day, and regular marijuana use. On exam, Mr B. was dysphoric and irritable. He was also diagnosed with chronic hepatitis B viral infection. He was initially treated with risperidone, which required discontinuation due to transaminitis. He was then given haloperidol, titrated to 15 mg daily and lithium, titrated to 300 mg tid, with therapeutic blood levels. Mr B. became akathetic on haloperidol, which was cross-tapered with quetiapine, advanced to 300 mg at bed. By this time the patient had been hospitalised for 7 weeks

with little improvement; he remained psychotic, with labile mood. He was therefore transferred to state hospital for continued treatment. On transfer, Mr B's DSM-IV diagnoses were schizoaffective disorder, bipolar type; crack cocaine dependence and marijuana dependence.

Patient 3. Mr C. worked as a writer for a local newspaper. His family brought him to Bellevue Hospital Centre's psychiatric emergency room after they received a disorganised letter intimating that the patient might be suicidal. He had a history of outpatient treatment for depression but no history of hospitalisation. In fact, on admission, the patient was not suicidal but was found to be manic and psychotic, with racing thoughts, loosening of associations and pressured speech. Mr C. believed that news stories in the newspaper, on television, and on the Internet were created for his amusement by his associates in the media. He claimed to know this because his colleagues were using his style of reporting. He said that his privacy was being invaded and that his friends had had him hospitalised as a prank. He believed that his doctor, the staff, and every patient on the unit were well-paid actors, that everything was "fake", and that "all my associates are involved". Mr C. believed that he had won a prize for his journalism and that the hospitalisation was a build-up to his being awarded a large sum of money both for his writing as well as for playing along with the "conspiracy". During his hospitalisation, the patient attempted to escape ostensibly to see the disparities between the news he was receiving on the ward and what was really happening outside. Mr C. had a positive family history of bipolar disorder on both sides. Using DSM-IV criteria, as well as psychological testing, the patient was given a diagnosis of bipolar disorder, current episode manic, with psychotic features. The patient was treated with olanzapine 30 mg at bed, valproic acid 500 mg in the morning and 1000 mg at bed, and lithium 450 mg twice daily, the latter two to therapeutic blood levels. Mr C. improved to the point where he could say that "there is an 80% chance that I will treat the hospitalization as if it is for real" and that he could distinguish "reality from unreality". The patient was discharged with residual delusional ideation after a 10-week hospitalisation.

Patient 4. Mr D. was working on a reality television show when he was hospitalised after causing a public disturbance. While working on the production of the show, he came to believe that he was the one who was actually being broadcast: "I thought I was a secret contestant on a reality show. I thought I was being filmed. I was convinced I was a contestant and later the TV show would reveal me." He believed his thoughts were being controlled by a film crew paid for by his family. During the 2 weeks prior to admission, he experienced decreased sleep, pressured speech, irritability, paranoia, and hyperreligiosity. The patient carried a diagnosis of bipolar

disorder and had had two previous hospitalisations for manic episodes. He had smoked marijuana intermittently since he was in college and had last smoked marijuana one week prior to admission. Mr D. was treated with quetiapine titrated to 500 mg daily and valproic acid 750 mg twice daily, with therapeutic blood level, and he responded to this treatment regimen. As his mania subsided, his delusion remitted, and he was discharged after 4 weeks of treatment with DSM-IV diagnoses of bipolar disorder, most recent episode manic, with psychotic features, and marijuana abuse.

Patient 5. Mr E. was hospitalised after he was found in a library after hours. He claimed that the Secret Service was following him in order to protect him because he had "broken the code". He had been treated with methylphenidate for attention deficit hyperactivity disorder and acknowledged using more than was prescribed at times. He had seen a psychiatrist in the month prior to admission, as he had been feeling depressed, and was prescribed paroxetine and olanzapine but did not take the medication. He had no history of hospitalisation. Mr E. described a "scheme", which he said was similar to *The Truman Show*. He believed that he was the master of the scheme, that it involved everyone in his life including the hospital staff, and that all these people were actors. He thought that he might be recorded while in hospital. He believed that the news was fabricated and that the radio was recorded for him. Mr E. said that he wanted to "get back to my real life" and wanted to find out "what's really going on in the outside world". He believed that the scheme would end on Christmas Day and that he would be released then. He was prescribed risperidone 5 mg daily, which he accepted only because he believed that it was actually the methylphenidate required to treat his attention deficit hyperactivity disorder. Propranolol was added for akathisia and was titrated to 30 mg twice daily. He was initially prescribed fluoxetine for depressed mood, but given the akathisia, his antidepressant was switched to escitalopram 10 mg daily. Mr E.'s insight gradually improved. He continued to question the veracity of the news but also expressed concern that he might be developing schizophrenia. The patient's DSM-IV differential diagnosis was schizophreniform disorder versus methylphenidate-induced psychotic disorder. After 8 weeks at Bellevue, the patient was discharged to a partial hospitalisation programme.

Other cases

We know of no other scientific reports of patients with delusions of the Truman Show type, but Fusar-Poli, Howes, Valmaggia, and McGuire (2008, p. 168) report on a patient who "had a sense the world was slightly unreal, as

if he was the eponymous hero in the film *The Truman Show*". However, at "no point did his conviction reach delusional intensity".

There have been at least two news reports of individuals who appear to have suffered from the Truman Show delusion. In 2007, William Johns III, a psychiatrist from Florida, attempted to abscond with a child, Thorin Novenski, and subsequently attacked the child's mother. A news report on the incident claims that "a friend of the psychiatrist reportedly told a judge that Johns said he had to go to New York to 'get out of "The Truman Show."'"²

In 2009, Antony Waterlow, a Sydney man, murdered his father and sister while in a psychotic state. A news report stated that "Mr Waterlow believed his family was behind a 'world wide game' to murder him or force him to commit suicide." A doctor who interviewed the man is reported to have said that "Mr Waterlow told her in a consultation in February that he believed computers were accessing his brain through brainwaves and satellites. He said his family was screening his life on the Internet for the world to watch, akin to the film *The Truman Show*."³

We have heard a number of anecdotes from colleagues who have, or have had, patients expressing the same delusion. We have had numerous interactions, both by email and telephone, with individuals who claim to have suffered, or be suffering, from this delusion. We have also spoken to people who believed their family members were suffering from TSD. While these histories seem to us authentic, we have not conducted formal clinical interviews to substantiate this possibility.

These patients raise three general questions of interest. First, how precisely should their delusions be characterised? Second, what does the delusion contribute to our understanding of the role of culture in psychosis? And, third, what, if anything, does the influence of culture on delusion suggest about the cognitive processes underlying delusional belief? We address these questions in the next three sections.

CHARACTERISING THE TRUMAN SHOW DELUSION

It is clear that the broad themes of the Truman Show delusion are persecutory and grandiose, with ideas of reference, but some unusual features manifest in the particular contents of the patients' beliefs to the effect that they are living in an artificial environment populated with people who are merely playing a role.

² <http://abcnews.go.com/TheLaw/story?id=3416296&page=1> (accessed 11 May 2011).

³ <http://www.smh.com.au/nsw/waterlow-shattered-by-the-reality-of-killings-20110412-1dcpz.html> (accessed 11 May 2011).

One hypothesis concerning the core belief of the patients is that it is a form of misidentification delusion, such as the Capgras delusion, in which the patient typically believes a loved one to have been replaced by a duplicate or fake (Enoch & Ball, 2001). In Capgras, the object of the delusion appears like the loved one, but is not in fact the loved one. Silva, Leong, and O'Reilly (1990, p. 45) report on a patient of whom they say the following: "Mr D. recognized several of the patients, whom he had met during previous hospitalizations on this ward and explained that they had been genuine psychiatric patients in the past, but had since been replaced by identical doubles who were well paid actors." Because this patient believes those around him to be duplicates, Capgras seems to be the correct diagnosis. In contrast, the present patients' delusions do not involve duplication. They do not believe that the identity of the people around them are at odds with their appearance, nor is their environment a copy of a genuine hospital that exists elsewhere (a manifestation of the delusion of reduplicative paramnesia; see Forstl, Almeida, Owen, Burns, & Howard, 1991). It is rather that the *functions* of the personnel and the hospital are being misrepresented. We suspect, therefore, that the patients described do not suffer from delusional misidentification but rather from a culturally shaped combination of persecutory and grandiose delusions, as well as ideas of reference.

Parallels to the present case might also be sought in the experience of unreality that may be brought about by stress such as that caused by hospitalisation (e.g., Granberg, Engberg, & Lundberg, 1999) and, to a greater extent, by the phenomenon of depersonalisation which is sometimes expressed as the experience that everything feels fake or unreal (Young & Leafhead, 1996). Patients suffering from depersonalisation have also been reported to say that their doctors are actors and the like. Such claims, however, seem best understood as expressions of the general experience of unreality characteristic of depersonalisation, rather than the belief in an organised deception.

A third parallel may be found in the sense of unreality that is characteristic of the onset of schizophrenia. Sass (1988, p. 224) represents the prodromal phase of schizophrenia as characterised by "a sense that everything has undergone some subtle, all-encompassing change". Subsequently, the phenomenology of schizophrenia may continue to include the sense of a world that is "radically alien". Although this phenomenology, which Sass refers to as *Stimmung* (i.e., mood), does not amount to delusional belief, it does resonate with the Truman Show idea that the *entire world* is unreal, rather than some particular person or thing in it. The all-encompassing nature of this experience is thus similar to what might be called the "controlled unreality" of the Truman Show world.

THE TRUMAN SHOW DELUSION AND REALITY TELEVISION

However the Truman Show delusion ought to be classified, it is well worth considering which cultural phenomena, if any, might be relevant to its manifestation. Of course, the patients' reference to the film might be quite coincidental. It may, in contrast, be a product in part of the contemporary popularity in our culture of reality television. Can a case be made that the phenomenon of reality television might interact with the expression of psychotic symptoms?

There is less in the way of psychological research on reality television than one might expect given its popularity. In one study, Reiss and Wiltz (2004) investigated the correlation between the viewing of reality television and a large number of personality traits. They found the strongest correlation between reality television viewing and a trait they refer to as "social status", which entails an "above-average trait motivation to feel self-important" (p. 363). They also found a dose effect; the more reality television watched, the greater the concern.

This is perhaps not altogether surprising, but it suggests that reality television resonates with a common anxiety about one's position in the social hierarchy. As noted earlier, reality television makes it conceivable that one could come to the attention of a community of people orders of magnitude larger than was possible only a few years ago. One might speculate that because our world really is a global village now, the threats from other members of one's community (see Buss & Duntley, 2008), as well as the promise of the status that might be achieved by being known to strangers, is also significantly greater than it has ever been. Someone who is particularly anxious about their social status, therefore, might experience reality television as presenting a significant social threat, or a tantalising possibility of success, or both. In the life of such a person, reality television might act as a significant stress, the effects of which might include a persecutory or grandiose delusion of the Truman Show type.

THE TRUMAN SHOW DELUSION AND CULTURE

Content and form in delusion

Novel delusions that make reference to popular culture or technology are striking in part because they seem to provide evidence of the capacity of the cultural environment to interact with psychotic illness. Cultural psychiatry does indeed make reference to a wide variety of exotic delusional ideas that depend on the local culture. For example, one can find patients in China who believe that they are the chief disciple of the Buddha (Yip, 2003), but such a

delusion is unlikely to occur in Western cultures; sufferers from delusional "turabosis"—the belief that one is being covered by sand—can be found in Saudi Arabia but probably not Finland (Qureshi, Al-Babeeb, & Al-Ghamdy, 2004); and one can believe that one is pregnant with puppies after being bitten by a dog in West Bengal but probably not Australia (Chowdhury, Mukherjee, Ghosh, & Chowdhury, 2003). In addition, delusional beliefs are sufficiently sensitive to culture that both current events (Sher, 2000) cultural innovations such as microchips (Eytan, Liberek, Graf, & Golaz, 2002), and the Internet (Bell, Grech, Maiden, Halligan, & Ellis, 2005) can be used as delusional vehicles, as can general scientific knowledge (see, e.g., Stefanidis, 2006).

Nonetheless, the variety of delusions across cultures obscures the important fact that the basic motifs of delusion are both universal and rather small in number. Delusions, as Jaspers (1959/1997, p. 411) put it,

are of striking variety, imaginativeness and eccentricity. The initial folly was committed of considering every single delusional content as a special illness and giving it a name . . . without noticing that nomenclature of this sort has no end. But the contents do have a number of general, common characteristics that recur repeatedly and give a peculiarly uniform character to the multiplicity of the contents.

Following Jaspers, we will refer to a particular delusional idea as a delusional *content*, and the type or category of the delusion as the delusional *form*. Thus, a belief with the delusional content that one's phone is being tapped by the CIA is a delusion with a persecutory form; a belief with the delusional content that one is the star of a reality television show is a delusion with a grandiose form; and so on.

The distinction between content and form in delusion is vague but not in any way that threatens its coherence (see Sorensen, 2001). One might be uncertain, for example, whether the delusion of thought insertion is a species whose genus also includes thought broadcast, mind-reading, and the like, or deserves to be counted a genus all its own. Issues such as this can only be resolved by comprehensive epidemiological research into the frequency of occurrence of particular delusions and an adequate theory of delusion which motivates one taxonomy rather than another. Neither the epidemiology nor the theory is as yet available to make such decisions. Nonetheless, it seems very plausible that an American's belief that his phone is being tapped by the CIA and a Chinese person's belief that his post is being read by the General Secretary of the Communist Party deserve to be classified together. Only a developed theory will be able to confirm the validity of this classification and of the content–form distinction more generally.

Variability and stability in delusion

In addition to the cultural plasticity of delusional contents, the frequency of delusional forms also appears to exhibit some variability over time. Stompe, Ortwein-Swoboda, Ritter, & Schanda (2003, p. 9) surveyed studies of changes in the frequency of delusional forms in schizophrenia in four countries (Austria, Germany, Italy, and Switzerland) between 1856 and 1975. They found evidence of both increases and decreases in these forms; religious delusions, for example, have increased, whereas delusions of guilt have decreased.

The distribution of delusional forms also varies with culture. Delusional jealousy is more common in Tübingen, for example, than Tokyo (Tateyama, Asai, Hashimoto, Bartels, & Kasper, 1998). Gender and class are also relevant. A wealthy male Pakistani is more likely to exhibit grandiosity, whereas a poor female is more likely to exhibit erotomania or delusions of control (Suhail, 2003). A dislocation from one culture to another also changes the manifestation of delusions. Pakistanis who have migrated to Britain exhibit a pattern of delusional forms that is more like that of the local population than the population in the country of origin (Suhail & Cochrane, 2002). Finally, differences in the occurrence of delusional forms have even been reported across different regions of the same country (Gecici et al., 2010).

It remains unclear whether the prevalence of delusions *in general* varies across time or culture. One would like to know, for example, whether particular cultures or historical periods are more conducive to delusional ideation of any kind, rather than to other psychotic symptoms, such as hallucinations. This question is particularly acute when a society is undergoing rapid cultural change. Under such conditions, it is conceivable that the stresses of this change could produce a greater number of delusions in those who are suffering from psychotic disorders. In addition, one would like to know whether particular cultures or historical periods are more conducive to the development of psychosis at all. That is, are there times or places where people who would otherwise not suffer from psychosis do so?

Despite the variability in the frequency of delusional forms over time, the available evidence supports the claim that the absolute number of delusional forms is relatively small. Stompe et al. (2003) list seven motifs that are central to delusion: persecution, grandiosity, guilt, religion, hypochondria, jealousy, and love. To these we would add: reference, control, thought, nihilism, and misidentification. Table 1 summarises three studies of the frequency of these delusional forms in different locales or cultural groups. Although the taxonomy of the delusional forms differs somewhat across the studies, all three support the claim that the number of forms is small, particularly those that are high in frequency.

TABLE 1
The frequency of delusional forms in 11 locales or cultural groups

(a)	<i>Form</i>	<i>Seoul</i>	<i>Shanghai</i>	<i>Taipei</i>
	Persecutory	72.3	78.9	79.1
	Reference	66.0	54.2	59.0
	Grandiose	48.2	27.5	38.8
	Control	35.5	23.9	30.9
	Somatic	23.4	14.1	24.5
	Guilt	31.2	4.9	5.8
	Jealousy	17.0	8.5	3.6
	Poverty	2.1	4.2	5.0
	Nihilism	0.7	2.1	3.6
(b)	<i>Form</i>	<i>Tokyo</i>	<i>Vienna</i>	<i>Tübingen</i>
	Injury (including persecution)	78.4	71.3	77.3
	Grandeur	25.3	25.7	26.7
	Belittlement	13.3	37.6	24.0
	Unclassifiable	3.4	1.0	2.7
(c)	<i>Form</i>	<i>White</i>	<i>British Pakistani</i>	<i>Pakistani</i>
	Persecution	48	60	62
	Control	50	26	13
	Reference	48	43	11
	Grandiose ability	26	19	28
	Grandiose identity	14	23	42
	Religious	14	21	11
	Sexual	18	13	16
	Depersonalisation	12	11	2
	Hypochondriacal	8	17	5
	Misinterpretation	8	6	8
(d)	<i>Form</i>	<i>Western Turkey</i>	<i>Central Turkey</i>	
	Persecutory	74.6	83.7	
	Reference	57.7	70.9	
	Poisoning	9.5	26.2	
	Religious	10.9	20.9	
	Grandiosity	10.0	19.8	
	Being controlled	6.0	19.8	
	Mind reading	4.5	17.4	
	Jealousy	3.5	14.0	
	Guilt/sin	0.5	13.4	
	Hypochondria	1.0	12.2	
	Erotomania	2.5	9.3	
	Thought broadcasting	0.5	11.1	
	Thought insertion	1.0	9.3	
	Nihilistic	4.0	5.2	
	Thought withdrawal	0.5	5.2	

Table 1 (*Continued*)

(d)	<i>Form</i>	<i>Western Turkey</i>	<i>Central Turkey</i>
	Nobility	0	3.5
	Inferiority	0	3.5
	Homosexual	0	3.5
	Parasitosis	0	1.2
	World catastrophe	0	1.2
	Resurrection	0	1.2
	Others	4.5	0.6

Sources: (a) Kim et al. (2001); (b) Tateyama et al. (1998); (c) Suhail and Cochrane (2002); (d) Gecici et al. (2010).

In contrast, there is little evidence to suggest that novel delusional forms arise in response to cultural change. When new delusions arise, the novelty is typically rather minor. Schmid-Siegel, Stompe, and Ortwein-Swoboda (2004), for example, report on a patient who believed that her perceptual experiences were being transmitted to others via the Internet. “Perception broadcast”, as the authors refer to it, differs in two ways from thought broadcast. It involves the transmission of perceptual experience, rather than thought, and does so via the intermediary of the Internet, rather than directly. Despite the novel features of this delusion, however, perception broadcast seems much more like a variation on thought broadcast than like a new delusional category. The same is true of the Truman Show delusion. Although the feature of controlled unreality is novel, the delusion remains a variant on persecution, grandiosity and reference.

The same can be said of the so-called “culture-bound syndromes” (Simons & Hughes, 1985), psychopathological phenomena that are believed by some to be culture specific. There is reason to be sceptical about the coherence of this theoretical construct (Kirmayer, 2007). In any case, few of the phenomena listed in the DSM-IV are clearly psychotic in nature, making them only marginally relevant to the present discussion. Those that are include bouffée délirante, a brief psychotic episode occurring in West Africa and Haiti, qi-gong psychotic reaction, a psychotic episode associated with qi-gong practice, and locura, a form of chronic psychosis found in Latin America and the United States. Crucially, however, these psychotic states do not involve unique delusional forms. Other cases of delusion that look to be culture specific—the delusion of puppy-pregnancy, for example, or the Jerusalem syndrome, a religious delusion that develops in some visitors to Jerusalem (Bar-El et al., 2000)—nonetheless fall into one of the familiar delusional forms.

We are in agreement, therefore, with Stompe et al. (2003), who argue that putatively new delusions are never more than novel manifestations of

delusional forms that are unchanging across time and culture. Changes in delusional content, as the authors put it, are never more than old wine in new bottles. Culture is thus "pathoplastic" with respect to delusions—it can shape delusional contents—but it is not pathogenic; it does not create new forms of delusion (Tseng, 2001, p. 178ff.).

CULTURE AND COGNITIVE THEORIES OF DELUSION

Cognitive neuropsychiatric theories of delusion have not, to date, taken any account of the role of culture in the genesis and shaping of delusional ideation. There are at present three general approaches to cognitive accounts of delusion (Garety & Freeman, 1999), all of which are concerned primarily with the question of how delusions are formed, rather than why they are retained in the face of conflicting evidence: (1) the "theory of mind" hypothesis, due to Christopher Frith, holds that delusions arise in part as a result of a disorder in the processes involved in making inferences about the mental states of others; (2) the "jumping to conclusions" hypothesis, due to Phillipa Garety, holds that delusions arise in part as a result of a bias in probabilistic reasoning; and (3) the "attributional bias" hypothesis, due to Richard Bentall, holds that delusions arise in part as a result of a distorted explanatory style in which blame for negative events is located in the external world rather than in the subject. We describe each in turn and then briefly discuss the relevance of culture for the cognitive theory of delusion.

Theory of mind disorder

The "theory of mind" (ToM) capacity refers to a family of abilities to make inferences about the mental states of others (see Baron-Cohen, Leslie, & Frith, 1985). An example of this capacity is the ability to know what someone in a particular social situation is, or might be, feeling or thinking. The ToM capacity is thought to be disordered in autism which would account for the social impairments that are characteristic of the disorder. Frith (1992) hypothesises that a ToM disorder may also be implicated in at least some delusions.

In order to be able to think about the mental states of others, one must be able to keep track of thoughts that are self-generated and those that originate with others. "Self-monitoring" of an analogous kind is present in other domains of mental life. Eye movements, to use Frith's analogy, do not lead to the impression that the world is moving, even though the retinal image is shifting. An "efference copy" of the motor command alerts the visual system that the change in the retinal image is caused by motor behaviour and not by a change in the external world. The efference copy enables the visual system

to compensate for the movement of the retinal image and generate the appearance of a stable environment in which only the direction of gaze is changing. Frith hypothesises that something like an efference copy must be present in thought as well so as to tag one's thoughts as self-generated rather than originating from someone else. An intention to think a thought, so to speak, is preceded by a copy of the intention, which serves as an indicator of the origin of the thought.

Suppose, however, that this process of self-monitoring were disordered. One would then "encounter" thoughts that were not tagged as having originated in one's own mind. An explanation of this anomalous phenomenon might be that someone else had placed the thought there. Such an explanation would amount to a delusion of thought insertion. A similar account can be given of delusions of control. If an efference copy of the intention to carry out an action were not made, then the action would seem to occur without the agent's intention. One possible explanation for this occurrence is that the intention to carry out the action in fact lies in someone else's mind.

Jumping to conclusions

Phillipa Garety (e.g., Garety et al., 2005) has proposed that one contributor to the development of delusions is a disorder of probabilistic reasoning known as the "jumping to conclusions" (JTC) bias. The basic phenomenon is as follows (see Fine, Gardner, Craigie, & Gold, 2007). A subject is told that he will be shown a sequence of coloured beads drawn either from a jar in which 85% of the beads are red and 15% of the beads are black or from a jar in which 85% of the beads are black and 15% of the beads are red. The subject is shown one bead at a time and asked to stop the experiment when he is confident he knows which jar is being used. People with delusions require significantly fewer beads before reaching a decision; they jump to probabilistic conclusions on the basis of less evidence than nondelusional subjects.

Garety and her colleagues believe that delusion formation is a multifactorial process only part of which requires the presence of a JTC bias. One possible role of the bias in delusion development is as follows. It is very widely believed that delusions begin with a strange or "anomalous" experience. The anomalous experience seems to call for explanation, and the hypothesised explanation is the delusion. For the experience to lead to a delusional belief, however, many theorists believe that some cognitive process has to be disordered as well. The strongest evidence for this claim is that the anomalous experiences hypothesised to be present in some delusions are also found without the presence of delusions in other psychological or

neurological disorders (see Davies, Coltheart, Langdon, & Breen, 2001). Intuitively, a cognitive disorder—sometimes referred to as a “second factor”—seems implicated in delusion formation because delusions are improbable or bizarre. If one were to have the anomalous experience that one were being watched, for example, the Truman Show delusion is surely not the most plausible explanation of that feeling. In order for the delusion to seem plausible, the reasoning goes, one must have a second disorder of some kind which blinds one to the implausibility of the proposed explanation for the anomalous experience. The JTC bias is a possible candidate for a second factor in delusion formation. If one were to entertain the hypothesis that one is being filmed as an explanation for the anomalous feeling that one is being watched, that hypothesis could only be accepted if one were prepared to accept hypotheses on relatively little evidence.

Attributional bias

Richard Bentall incorporates Garety’s jumping to conclusions theory as well as Frith’s ToM deficit account into a model of paranoia (see, e.g., Bentall, 2009). According to Bentall, however, the “engine of paranoia” is primarily the externalising of attribution in the face of negative life events as a way of maintaining self-esteem. In the face of the disappointments of life, paranoid individuals maintain self-esteem by blaming their misfortune on others rather than on themselves. Someone who does not receive a promotion at work and concludes that her boss is out to get her, rather than that she has not done a very good job, maintains her self-esteem; the cost is paranoia.

Buffering against narcissistic injury alone, however, does not lead to delusion. The goal of preserving self-esteem is near universal in nondepressed people, but delusions are not. In Bentall’s model, people with paranoid delusions are more likely to have a history of insecure attachment to parents in childhood or to have experienced powerlessness and victimisation. These adverse life events result in low self-esteem and, in conjunction with ToM deficits, yield the externalising attributional bias. These circumstances then sensitise the dopamine system, raising the assessment of threat and ultimately produce paranoia. Finally, the JTC bias inhibits the paranoid patient from questioning the delusion once it is in place.

Culture and delusional cognition

The models of Frith and Bentall differ from that of Garety in general approach. Frith and Bentall posit disorders that are tailored to explain individual delusional forms—thought insertion and delusions of control in Frith’s account, and persecutory delusions in Bentall’s. In contrast, Garety’s

account is “global”, insofar as it posits a cognitive bias that is putatively implicated in the formation of any delusion. The fact that culture appears to be pathoplastic with respect to delusions rather than pathogenic, however, suggests that a global account of this kind cannot stand on its own (as Garety acknowledges). A JTC bias is neutral with respect to the content of beliefs. *Any* belief evaluated against evidence should be more quickly adopted by someone with a JTC bias without regard to the content of the belief. Thus, the presence of a JTC bias, on its own, would be expected to lead to the adoption of all manner of delusional belief. In particular, as novel ideas appear in the local culture, someone with the bias would be as likely to adopt that idea as part of their psychotic ideation as any of the familiar delusional forms. By itself, a JTC bias directed at the phenomenon of reality television, for example, is not more likely to lead to a persecutory delusion than to the bizarre idea that human beings are being transformed from creatures of flesh and blood into electromagnetic radiation. And yet no such delusional form exists. The stability of the categories of delusion across culture supports the idea, therefore, that delusions arise as a result of disorders of relatively narrow cognitive mechanisms such as those subserving a ToM capacity or attributional style.

The cross-cultural stability of delusional forms thus represents a significant constraint on the construction of cognitive theories of delusion. A salient aspect of cultural change in general is precisely the changing beliefs held by the members of the culture. These changes are reflected in the changing *contents* of delusion in those suffering from psychotic illness. Persecutory beliefs, for example, can and do make reference to reality television once the idea is available in the local culture. However, reality television can only appear in one of the familiar *forms* of delusion which remain stable across culture and history. The delusional forms are conceptual placeholders which culture can fill in a variety of ways, but culture does not appear to be able to create or abolish the delusional categories themselves.

CONCLUDING REMARKS

The Truman Show delusion represents a new addition to the many particular delusional ideas that arise by means of a pathological transformation of culturally available concepts. Although relatively little is known about the interactions between culture and the processes of delusion formation and retention, the available evidence points to cognitive mechanisms that are both *universal* and *specific*. The universality of the mechanisms is supported by the fact that the same handful of motifs recurs in different historical periods and cultures. At least some aspects of delusional thought, therefore, are rooted in features of cognition that seem to be shared by people

regardless of culture. Whether this universality is the result of biological commonalities, or aspects of human existence that are shared (or both) remains an open question. The processes of delusional cognition are specific in the sense that despite the variety of human experience, delusional forms are highly restricted in subject matter. Once again, the reasons for this specificity remain to be clarified.

The universality and specificity of the forms of delusion represent significant constraints on a cognitive theory of delusion, and further attention should be given to these facets of cognition in psychosis. In addition, further consideration of the cultural manifestations of delusional ideation has much to contribute to the cognitive theory of delusion. A focus on what is variable in delusion across cultures and what is stable can be expected to contribute to our understanding of the variety of cognitive processes implicated in delusional thought.

Manuscript received 23 June 2010

Revised manuscript received 31 May 2011

First published online 29 May 2012

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