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Are psychotic symptoms traumatic in origin and dissociative in kind?

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Despite increasing interest in the relationship between trauma and psychosis, relatively little attention has been paid to the potentially mediating role of dissociation. The important role dissociative processes may play in the development of psychotic symptoms is explored below.

Over the past several years, there has been considerable discussion about the relationship between the diagnosis of schizophrenia and dissociative disorders (and processes). The dramatic decrease of interest in multiple personality and associated disorders at the beginning of the 20th century has been attributed to Bleuler's 1911 concept of schizophrenia (Rosenbaum, 1980), which substantially broadened Kraepelin's 'dementia praecox' to include a wide range of apparently dissociative phenomena. Indeed, Colin Ross (2004) has recently argued that some of the cases Bleuler described as 'schizophrenic' would be considered DID today, and I have been tracing the influence of Pierre Janet and allied dissociationists on the development of Bleuler's ideas (Moskowitz, 2006). Issues of comorbidity between dissociative, (other) post-traumatic, and psychotic disorders have been the focus of dozens of studies and papers, resulting in proposals for a psychotic subtype of PTSD and a dissociative subtype of schizophrenia, and measures of dissociation and psychoticism have been shown to be highly correlated in numerous populations (Moskowitz, Barker-Collo & Ellson, 2005).

Here, we take a different approach to exploring the apparently close relationship between dissociation and psychosis. As the broadest definition of psychosis in the DSM-IV is simply all the symptoms of schizophrenia – excluding 'negative' symptoms – we decided to examine each of the 'positive' symptoms making up this diagnosis and consider the extent to which dissociative processes could be employed to understand them. In addition, we considered whether research findings on cognitive impairment and brain dysfunction in schizophrenia would be consistent with a dissociative interpretation of these symptoms. A diagnosis of DSM-IV schizophrenia (American Psychiatric Association, 1996) requires two of the following five symptoms:

- delusions
- hallucinations

- disorganized speech
- grossly disorganized or catatonic behavior
- negative symptoms (such as affective flattening, alogia, or avolition)
or only one of the following three symptoms:
 - bizarre delusions
 - a voice making a running commentary on a person's thoughts or behavior
 - two or more voices conversing with one another.

We will consider these symptoms in turn, with the exception of negative symptoms, including the three pathognomic (only one required) delusions and hallucinations in the general categories of delusions and hallucinations. For heuristic reasons, we consider hallucinations first.

Hallucinations

Of all the psychotic symptoms, hallucinations – at least in the form of auditory hallucinations/hearing voices – can most strongly lay claim to being dissociation-based. Voices are heard by many individuals otherwise meeting criteria for DID, and have been argued to be the prime cause for the apparently frequent misdiagnosis of DID as schizophrenia. Indeed, the two ‘pathognomic’ voice symptoms of schizophrenia (voices commenting and voices conversing) are quite common in DID1. While there is an entrenched clinical belief that ‘dissociative’ voices differ from ‘psychotic’ voices (primarily by being perceived ‘inside’ the head) there is no compelling evidence that this is so. At least 50% of persons meeting diagnostic criteria for schizophrenia hear internal voices, a third exclusively so (Copolov, Trauer & Mackinnon, 2004). These percentages do not significantly differ from those found in DID (or for that matter from non-patients, Honig et al, 1998); in addition, persons diagnosed schizophrenic develop consistent relationships with their voices, whose content does not appear to be any more circumscribed than in DID. Further, the main types of voices – hostile, supportive, sexual – appear consistent in both DID and schizophrenia. Finally, external voices (i.e., heard through the ears) do not appear to differ in content or duration from internal voices (though are more frequently associated with secondary delusions/lack of insight; Copolov et al, 2004). Because of the lack of evidence that perceived location has clinical significance, the DSM-IV no longer links external voices to schizophrenia (as was the case in earlier editions). Nonetheless, clinicians’ belief that the perceived location of voices is clinically significant remains entrenched; further research, particularly with multiple voice hearers can help to determine if there is any utility in this area. For example, in voice hearers with both internal and external voices, do the external ones represent the more disowned aspects of personality? And do the perceived location of such voices change with psychological treatment? Perhaps most importantly, characteristics of voices, including the perceived location, do not predict psychiatric patient status in children and young adults (Escher et al, 2002), and do not appear related to the level of psychiatric medications received (Copolov et al, 2004). As there do not appear to be any reliable characteristics which distinguish voices experienced in persons with psychotic or dissociative disorders, or persons otherwise not unwell, perhaps voices are best considered to be dissociative experiences period, which may become associated with psychotic symptoms (such as secondary delusions). Evidence for this comes from

several recent studies which found strong correlations between hallucinations and dissociative experiences.

Memory disturbances and psychotic symptoms

There is reason to believe that the other positive symptoms included under the DSM-IV criteria for schizophrenia bear a different relation to dissociation than hallucinations. Most studies have found a stronger relationship between hallucinations and recalled childhood trauma than other psychotic symptoms (e.g., Read & Argyle, 1999), and hallucinations are more common in DID than delusions or thought disorder. Further, as memory disturbances in schizophrenia are correlated with delusions and thought disorder (but not hallucinations; Brebion et al, 1999), it seems plausible that any role for dissociation in these symptoms may be mediated through the memory system. A number of memory researchers now conceive of the human memory system as having several subsystems, of which explicit and implicit memory is the most commonly cited. However, overlapping with this disjunction is the distinction between so-called 'emotional' or 'valence' memory, largely implicit, involving activity of the amygdala, and autobiographical (contextual) memory, exclusively explicit, involving the hippocampus. Persons diagnosed with schizophrenia often demonstrate deficits in hippocampal functioning and/or decreases in hippocampal volume – similar problems with the amygdala are less often noted (Heckers, 2001). Associated with this, they very often demonstrate deficits in explicit memory, but not in implicit (i.e., non-conscious) memory – indeed, one study found exaggerated implicit memory in persons diagnosed schizophrenic (Linscott & Knight, 2001). Finally, such deficits can result from long-term high levels of stress (e.g., Sapolsky, 2000), as would result from chronic childhood abuse or neglect. High levels of childhood abuse have been reported in persons diagnosed with psychotic disorders (summarized in Read et al, 2004). Thus, it is proposed that psychotic symptoms other than hallucinations can be explained by considering how persons with these deficits would behave when exposed to trauma reminders. It is argued, based on the research of cognitive scientists such as Jacobs & Nadel (1985; Nadel & Jacobs, 1996), that implicit emotional memories can be retrieved without their being placed in the appropriate historical context –leading to their mistaken attribution to the present context.

Grossly disorganized or catatonic behavior

This can be most easily seen in considering the symptom of grossly disorganized or catatonic behavior. Behavior is typically considered to be disorganized if its 'organization' is not understood. This may be because such organization is 'lacking' (whatever that might mean), or because the observer is ignorant of the context within which that behavior makes sense. The person behaving in a 'disorganized' fashion may be unwilling or unable to communicate that information, and may be actually unaware of the behavior's original spatial and temporal context. During flashbacks, a person acts or feels as though the traumatic event were occurring all over again. Importantly, flashbacks may lead persons to behave as though they were experiencing the traumatic event again (implicit memory), but without conscious recollection of the trauma (explicit memory). While a clinician who connects such 'disorganized' behavior to the earlier trauma is unlikely to make a diagnosis of psychosis, a clinician ignorant of the historical trauma

would likely consider the behavior to be disorganized or ‘bizarre’, and might well diagnose the person psychotic. In a similar fashion, I have recently argued that catatonia is a fear response (rather than a movement disorder) possibly exhibited under the influence of decontextualized emotional memories (Moskowitz, 2004).

Disorganized speech or thought disorder

At first glance it might be difficult to see how thought disorder could be related to dissociative processes. However, research findings suggest a connection. Some cases of thought disorder arise simply because the speaker has failed to provide the listener with adequate contextual information, much as in the proposed scenario for disorganized behavior above. This idea was first suggested by Martin Harrow, one of the foremost researchers in the thought disorder field (Harrow & Prosen, 1978). Harrow discovered that many instances of thought disorder arose because the individual had ‘intermingled’ associations from past events with the current context, but had failed to explain this to listeners. Thus, apparent thought disorder may occur if the speaker does not disclose to the listener the nature of his or her personal associations. Harrow has recently suggested that the ‘intermingling’ of past and present is due to the intrusion of emotionally-charged historical material, and that the amygdala is involved in this process. Consistent with this, persons undergoing a flashback, whose speech would be appropriate to the past traumatic situation but *inappropriate* in the present context, could be considered ‘thought-disordered’ by a listener unaware of their psychic state. Relatedly, apparent thought-disorder could also result from a struggle for control or dominance between personality states or alters.

Delusions

Delusions are typically considered the ‘core’ symptom of psychosis (the only symptom included in all three DSM-IV definitions of psychosis), and are also strongly emphasized in the diagnosis of schizophrenia. ‘Bizarre’ delusions, one of the three pathognomic symptoms of schizophrenia, are beliefs that the person’s culture would regard as “totally implausible” – in contrast to non-bizarre delusions, which are not inherently impossible (e.g., believing that one is being poisoned, spied on by the government, or worth billions of dollars). According to the DSM-IV, typical bizarre delusions include beliefs of loss of control of mind or body. These delusions include ‘thought withdrawal’ (one’s thoughts removed by some outside force), ‘thought insertion’ (‘alien’ thoughts placed in one’s mind), and ‘delusions of control’ (one’s body or actions determined by an outside force). However, according to several researchers, at least one of DSM-IV’s bizarre delusions (i.e., thought withdrawal, thought insertion, delusions of control) occur in one-third to two-thirds of DID patients. In DID, these symptoms describe the effects of alter personalities on the consciousness or behavior of the host personality². Could schizophrenia patients’ symptoms of thought withdrawal, thought insertion, ‘made’ actions, and influences on the body indicate an underlying dissociative process? This possibility is supported by the finding that psychotic patients with delusions of possession (which overlaps with delusions of control) had significantly higher DES scores than did psychotic patients without that symptom (Goff et al, 1991).

Other, non-bizarre, delusions, such as paranoia and delusions of reference (that random stimuli have personal meaning, such as someone coughing meaning that one is a coward), may arise out of a dissociative 'flashback'-type experience, in which the implicit emotional memory is experienced in the absence of autobiographical memory of a trauma or stressful event. There is a long history of viewing delusions as 'explanations' for 'anomalous experiences' (Maher, 1974) and a recent influential theory has argued that essentially *all* delusions arise from preexisting mood states (Freeman & Garety, 2003).

Implications for schizophrenia

Where then does this leave the diagnosis of schizophrenia?

Disaggregated into its component symptoms (or syndromes)? Perhaps. What can certainly be stated based on the above analysis is that the current diagnostic criteria for schizophrenia lack validity. *All* of the so-called pathognomic symptoms are common in DID and possibly more frequently found than in schizophrenia, and hallucinations in general appear to have no diagnostic (or possibly even psychopathological) specificity. If there is to be any validity to the diagnostic concept of schizophrenia (and here I differ from some of my co-authors who do not believe it can, or should, be salvaged), it may lie in two areas: a) negative symptoms, which appear to be uncommon in dissociative disorders (but may be related to the PTSD 'avoidance and numbing' symptoms) and b) non-bizarre delusions, which bears some explanation.

Some researchers, such as Marlene Steinberg (1995), see intact reality testing as a 'line in the sand' between dissociative and psychotic disorders. While others have argued that delusions *can* occur in dissociative disorders, it may be that persons diagnosed schizophrenic more rapidly form delusional explanations for odd experiences than persons with dissociative disorders. As an example of this, let's contrast the dissociative symptom 'derealization' with the psychotic symptom 'Capgras' delusion'. Steinberg (1995) has claimed that derealization often involves people close to the individual who suddenly seem 'strange' or 'alien' to them. She proposed that some derealization experiences are a re-emergence of negative feelings (i.e., what we would call decontextualized affective memories) toward people who are typically seen in a positive way. Derealization experiences may also underlie delusions of misidentification such as the Capgras delusion, in which an individual believes that someone close to him has been replaced by an imposter (Christodoulou, 1986). Perhaps individuals with depersonalization disorder are better able to tolerate their experiences of derealization than those who go on to develop Capgras delusions because they are better at separating themselves from their distressing experiences. Schizophrenia patients may be less able to distance themselves from aversive experiences or inhibit distressing emotions, consistent with the impaired frontal lobe activity often noted in persons with this diagnosis.

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Summary

It has been argued that all of the positive symptoms of schizophrenia – delusions, hallucinations, thought disorder and disorganized or catatonic behavior – can be

understood from a dissociation perspective. It is acknowledged, however, that the link with trauma and dissociation has been more clearly documented for auditory hallucinations than for other psychotic symptoms. The so-called pathognomic symptoms of schizophrenia (bizarre delusions, voices commenting or conversing) appear particularly strongly related to dissociative disorders. If schizophrenia is to retain any validity as a diagnostic entity (a position not shared by all chapter co-authors) it may be through an emphasis on negative symptoms and (non-bizarre) delusions. However, an argument, implicit in this review, is that the concept of psychosis could be dispensed with, and all the symptoms described above subsumed under dissociative or post-traumatic experiences, with the discriminating variable being the extent to which the observer understands the context in which the symptoms make sense.

References

- American Psychiatric Association (1996). Diagnostic and statistical manual of mental disorders (4th ed.). Washington, DC: American Psychiatric Association.
- Brebion, G., Amador, X., Smith, M. J., Malaspina, D., Sharif, Z. & Gorman, J. M. (1999). Opposite links of positive and negative symptomatology with memory errors in schizophrenia. *Psychiatry Research*, 88(1), 15-24.
- Christodoulou, G. N. (1986). Role of depersonalization-derealization phenomena in the delusional misidentification syndromes. In G. N. Christodoulou (Ed.), *The Delusional Misidentification Syndromes*.
Basel: Karger.
- Copolov, D., Trauer, T. & Mackinnon, A. (2004). On the non-significance of internal versus external auditory hallucinations.
Schizophrenia Research, 69, 1-6.
- Escher, S., Romme, M., Buiks, A. Delespaul, P. & van Os, J. (2002). Independent course of childhood auditory hallucinations: A sequential 3-year follow-up study. *British Journal of Psychiatry*, 181 (suppl. 43), s10-s18.
- Freeman, D., & Garety, P. A. (2003). Connecting neurosis and psychosis: the direct influence of emotion on delusions and hallucinations.
Behaviour Research and Therapy, 41(8), 923-947.
- Goff, D. C., Brotman, A. W., Kindlon, D., Waites, M. & Amico, E. (1991). The delusion of possession in chronically psychotic patients. *The Journal of Nervous and Mental Disease*, 179, 567-571.
- Harrow, M. & Prosen, M. (1978). Intermingling and disordered logic as influences on schizophrenic 'thought disorders'. *Archives of General Psychiatry*, 35, 1213-1218.
- Heckers, S. (2001). Neuroimaging studies of the hippocampus in schizophrenia.
Hippocampus, 11, 520-528.
- Honig, A., Romme, M. A. J., Ensink, B. J., Escher, S. D. M. A. C., Pennings, M. H. A. & deVries, M. W. (1998). Auditory hallucinations:

A comparison between patients and nonpatients. *Journal of Nervous and Mental Disease*, 186, 646-651.

Jacobs, W. J. & Nadel, L. (1985). Stress-induced recovery of fears and phobias. *Psychological Review*, 92(4), 512-531.

Kluft, R. P. (1987). First-rank symptoms as a diagnostic clue to multiple personality disorder. *American Journal of Psychiatry*, 144, 293-298. Linscott, R. J. & Knight, R. G. (2001). Automatic hypermnesia and impaired recollection in schizophrenia. *Neuropsychology*, 15, 576-585. Maher, B. (1974). Delusional thinking and perceptual disorder. *Journal of Individual Psychology*, 30, 98-113.

Moskowitz, A. (2006). Pierre Janet's influence on Bleuler's concept of schizophrenia. In P. Fiedler, (Ed.) *Trauma, Dissoziation, Persönlichkeit:*

Über Pierre Janets Beiträge zur modernen Psychiatrie, Psychologie und Psychotherapie, Lengerich, Germany: Pabst Science Publishers. Moskowitz, A. (2004). "Scared stiff": Catatonia as an evolutionary-based fear response. *Psychological Review*, 111, 984-1002.

Moskowitz, A., Barker-Collo, S. & Ellson, L. (2005). Replication of dissociation-psychoticism link in New Zealand students and inmates. *The Journal of Nervous and Mental Disease*, 193, 722-727. Nadel, L., & Jacobs, W. J. (1996). The role of the hippocampus in PTSD, panic, and phobia. In N. Kato (Ed.), *The Hippocampus: Functions and clinical relevance* (pp. 455-463). Amsterdam: Elsevier Science. Rosenbaum, M. (1980). The role of the term schizophrenia in the decline of the diagnosis of multiple personality. *Archives of General Psychiatry*, 37, 1383-1385.

Read, J. & Argyle, N. (1999). Hallucinations, delusions, and thought disorder among adult psychiatric inpatients with a history of child abuse. *Psychiatric Services*, 50, 1467-1472.

Read, J., Goodman, L., Morrison, A. P., Ross, C. A., & Aderhold, V.

(2004). Childhood trauma, loss and stress. In J. Read & L. Mosher & R. Bentall (Eds.), *Models of madness: Psychological, social and biological approaches to schizophrenia*. Brunner-Routledge: London. Ross, C. A. (2004). *Schizophrenia: An innovative approach to diagnosis and treatment*. Binghamton, New York: Haworth Press. Sapolsky, R. M. (2000). Glucocorticoids and hippocampal atrophy in neuropsychiatric disorders. *Archives of General Psychiatry*, 57(10), 925-935.

Spitzer, M. (1990). On defining delusions. *Comprehensive Psychiatry*, 31, 377-397.

Steinberg, M. (1995). *Handbook for the assessment of dissociation: A clinical guide*. Washington, DC: American Psychiatric Press.

1 What is not usually recognised is that 'voices commenting' and 'voices conversing' may not be essentially different. As voices usually comment in the third person ('he's brushing his teeth', 'he's eating his breakfast'), a silent third-party or audience – other than the voice-hearer – is assumed. That is, the voice appears to be making the comments for the benefit or another party/voice, leading to the symptom of 'voices conversing' if it responds, or 'voices commenting' if it doesn't.

2 Importantly, some theorists have argued (e.g., Spitzer, 1990) that such

experiences should not be considered delusions at all, as they do not involve beliefs about 'external reality', but are rather better considered 'disorders of experience' or 'anomalous experiences'. It is interesting in this regard that a symptom often grouped with these, 'thought broadcasting', is not found nearly as frequently in DID patients (Kluft, 1987);

However, thought broadcasting is a true delusion, involving the belief that others can read or hear one's thoughts; such a belief is unlikely to be based on any internal experience. In contrast, thought withdrawal, insertion and 'delusions' of control can all directly derive from abnormalities of consciousness consistent with DID.