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Free Will and Psychosis: Theoretical and Therapeutic Implications

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Abstract In this article the determinants of psychotic disorder and correlated free will is examined. Althought there is empirical evidence for significant cognitive, emotional and neurobiological correlates of psychosis the precise impact of these abnormalities on free will is largely unclear. More research is needed into a) the role of free will into psychotic etiology and maintenance and b) the impact of different categories of psychotic disorder on free will of the patient.

Introduction

To have free will is to have what it takes to act freely. When an agent acts freely—when she exercises her free will—what she does is up to her. She is an ultimate source or origin of her action. So runs a familiar conception of free will (Clarke, 2003). The degree of free will will have significant impact on the social, emotional and mental well-being/health, and social-emotional and moral development of human beings (Clarke, 2003). However, the real nature of free will and its precise impact on and interactions with psychosocial, emotional, neurobiological and intrapsychic functioning is largely unknown.

The role of choice in the etiology of mental disorders is a poor discovered area. When we study case reports of mental disordered patients we can conclude that there is some evidence that mental disorder in some psychiatric patients is a) a way of survival (Jaspers, 1963; Roberts, 1991; Strauss, 1991), and/or b) the result of personal choice which corresponds with a particular intrapsychic route to remission (Martens, 2002a,b). The relationship free will and psychotic disorder is examined in this article.

Definition of psychotic disorders

According the fourth edition diagnostic manual of mental disorders (American Psychiatric Association, 2000) of the American Psychiatric Association the category psychotic disorders includes the following disorders:

- Schizophrenia—paranoid, disorganized, catatonic, undifferentiated, residual type. Psychotic symptoms continue for at least 6 months and are coupled with impairment of social and occupational functioning;
- Schizophreniform disorder. Same criteria as schizophrenia but the psychotic symptoms last from 1–6 months and there is no social dysfunction;
- Schizoaffective disorder. Psychotic and mood disturbances:
- Delusional disorder. Delusions are defined as false, inaccurate beliefs (for instance grandiose delusion in which the persons importance is grossly out of proportion, or paranoid delusions) the person holds onto even when he or she is presented with accurate information;
- Brief psychotic disorder. Psychotic symptoms last between 1 and 30 days;
- Shared psychotic disorder. A delusion develops in an individual in the context of a close relationship with another person(s), who has already-established delusion. The delusion is similar in content to that of the person was already has the established delusion;

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- Psychotic disorder due to a general medical condition delusions;
- Psychotic disorder due to a general medical condition hallucinations (visual and auditory hallucination are common);
- Psychotic disorders not otherwise specified. Prevalence of hallucinations, delusions or disorganized speech or behavior without meeting above-mentioned diagnosis.

Growing evidence suggests that symptoms of psychosis may be a common end-state variety of disorders including manic depression, borderline personality disorder and schizophrenia; rather than a reflection of the specific etiology of schizophrenia (Tsuang, Stone, & Faraone, 2000). Psychotic disorders may be the product of (an interaction between) genetic and neurobiological factors on one hand and psychosocial and environmental factors on the other (DSM-IV, 2000; Gelder, Lopez-Ibor, & Andreasen, 2000; Kaplan and Sadock, 1999).

Method of examination of free will in psychotic individuals

In order to test the free will in psychotic patients I will utilze a) an adapted version of the internal needs satisfaction list (see Glasser, 1999) that is inspired on the choice theory, b) Kane's (2000) criteria of free will, c) Rollo May's theory (May, 1961, 1986/1987) that the patient's ability to revealing and exploring of life's deterministic forces leads to some freedom and choice, and d) psychological and neurologic empirical and theoretical studies into cognitive and emotional correlates of etiology and maintenance of psychosis.

Rational choice theories hold that individuals must anticipate the outcomes of alternative courses of action and calculate that which will be best for them. Rational individuals choose the alternative that is likely to give them the greatest satisfaction (Friedman & Hechter, 1990; Heath, 1976; Scott, 2000). These theories are build around the idea that all action is fundamentally 'rational' in character and that people calculate the likely costs and benefits of any action before deciding what to do. William Glasser (1999) contends that all behavior is intended to satisfy one of the following five internal needs:

1) To survive or (such as the author wants to define for his purpose) to escape unbearable reality.
2) To belong and be loved by others.
3) To have power and importance.
4) To have freedom and independence.
5) To have fun. The relevance of this need for psychotic development is questionable.

The author likes to add following relevant internal need:

6) The intrapsychic need to change and transformation.

According to Kane (2000) free will is characterized by a) the condition of alternative possibilities or the power to do otherwise; b) ultimate responsibility. A person must be at least in part responsible by virtue of past voluntary choices or actions for having a character and motives he or she now has; c) efforts of the will or "Self-Forming Actions." Is the current condition or situation the result of conscious efforts of the will?; d) plural voluntariness. They are both voluntary and there is at least one alternative choice (Kane, 2000).

Rollo May (1986/1987) suggests and obserbed that in the revealing and exploring of life's deterministic forces, the patient is orienting himself/herself in some particular way to the data and thus is engaged in some choice and is experiencing some freedom (May, 1986/1987).

Investigation into free will in psychotic patients

A) Fulfillment of internal needs

1) To survive or avoid unbrearable reality. It is hypothesized by many professionals like Jaspers (1963) and Roberts (1991) that psychosis is rather a manner to cope with unbearable circumstances, social-emotional and/or mental problems. Strauss (1991) believes that people are constructors of their worlds, including intentionality, feelings, meaning, and even development and self-regulation. The author believes that psychotic disorder can also be considered as a self-regulation strategy which is intended to handle or avoid stress, strong emotional reactions, difficult situations and to minimize undesirable psychosocial influences.
2) To belong and be loved by others. Erotomania patients create the fulfilment of this need by creating delusions of being loved by another person (usually of a higher status and it can be a complete stranger). The delusion concerns idealized romantic love and spiritual union rather than sexual attraction (APA, 2000).
3) To have power and importance. Patients (especially those with high self-esteem; see Smith et al., 2006) who experience a serious lack of power and importance can "fulfill" this lacuna by means of developing grandiose delusions.
4) To have freedom and independence. Some patients who experience galling bonds, too heavy responsibilities and/or obligation might free themselves by means of creating freedom with help of psychotic development.
5) To have fun. The relevance of this need for psychotic development appears nihil.
6) The intrapsychic need to change and transform. This might be a very significant need since the psychotic process can be regarded as a transformation via creative chaos into a new mental and emotional balance (Martens, 2002a). Furthermore, Warmana & Martinb (2006)

revealed (using Beck Cognitive Insight Scale) that those patients who were higher in delusion proneness were more open to external feedback and were more willing to acknowledge fallibility than those who were lower in delusion proneness (Self-Reflectiveness subscale of the BCIS; $p = .002$). The author suggests that a higher degree of openeness to feedback of other people and readiness to test their beliefs in patients with increased delusion proneness can be interpreteded as a correcting force and internal compass that could guide them through the disease process. This might prevent or diminish excessive and harmful delusional activities and it could prepare a recovery process. Such an openess to the external world is a sign that even high risk patients are not locked up in their disorder and own microcosmos, but that they are trying to free themselves.

B) Free will characteristics

The author speculates that it might be possible that some psychotic patients meet Kane's characteristic of free will (the power to do otherwise; ultimate responsibility; self-forming actions; plural voluntariness) when they a) are ready to and motivated for change; b) demonstrate sufficient insight in their disorder; c) demonstrate sufficient delusional-free moments; d) suffer from mild symptoms; e) show strong self-correction and reality-testing capacities; f) show enough cognitive and coping skills to handle their disease; g) receive effective therapeutic guidance and psychopharmacological medication; h) experience optimal psychosocial support; and/or i) when their life conditions are as much as possible free from stress (because stress increases risk or persistance of psychosis).

C) Patient's ability to revealing and exploring of life's deterministic forces

Some psychotic patients are able (and demonstrate a strong motivation) to reveal and explore their life's deterministic forces and to realize in this manner some freedom by means of insight-oriented therapy (Karon, 2006; May, 1961, 1986/1987). This wish and ability to explore are significant determinants of free will.

D) Cognitive and emotional abnormalities which correlate with free will

Cognitive distortions

The idea that delusions often reflect an abnormal attitude towards the self has a long history. Consistent with this idea, the most common delusional themes—persecution and grandiosity—seem to reflect individuals' preoccupations about their position in the social universe. Psycho-analysts have interpreted persecutory delusions as the consequence of defensive strategies that serve the function of protecting the individual from negative perceptions of the self, and the well-replicated finding of an abnormal style of explaining negative events in paranoid patients seems consistent with this idea (Bentall, 2003).

Empirical evidence demonstrate that mentalizing errors (misunderstanding of beliefs, feelings, intentions, goals and dispositions of others) (Moore et al., 2006; Craig, Hatton, Craig, & Bentall, 2004) and of attributional style (style of inferring the causes of important events) (Craig et al., 2004) might contribute to the development and maintenance of persecutory delusions. Theories have emphasized that early experience, perceptual abnormalities, motivational factors, and information-processing deficits (Bentall, Corcoran, Howard, Blackwood, & Kinderman, 2001), selectively attend to threatening information, jump to conclusions on the basis of insufficient information, attribute negative events to external personal causes, and have difficulty in envisaging others' intentions, motivations, or states of mind (Blackwood, Howard, Bentall, & Murray, 2001) play a major role in the development and persistence of persecutory delusions.

Blackwood et al. (2001) concluded after analyzing of relevant neurologic investigations that the "reality distortion" cluster of psychotic symptoms correlates with cerebral blood flow in the left lateral prefrontal cortex, ventral striatum, superior temporal gyrus, and parahippocampal region. Social cognitive processing (selective attention to threat, attribution of causation or mental states) in normal subjects involves similar areas (Blackwood et al., 2001). Blackwood et al. (2004) revealed in their own neurologic study (functional magnetic resonance imaging; fMRI) in schizophrenic patients with persecutory delusions ($n = 8$) and normal controls ($n = 8$) (while determining the self-relevance of ambiguous self-relevant or unambiguous other-relevant neutral and threatening statements) that abnormalities of cingulate gyrus activation while determining self-relevance suggest impaired self-reflection in the persecutory deluded state. This may contribute to persecutory belief formation and maintenance (Blackwood et al., 2004). Blackwood et al. (2000) examined also 2 components of social cognition (attentional and attributional biases) that contribute to the formation and maintenance of paranoid delusions, using functional magnetic resonance imaging (fMRI). 5 normal Ss (aged 28–36 yrs) performed tasks requiring attentional and attributional judgements. The authors investigated the neural response particularly associated with attention to threatening material relevant to self and with the "self-serving" attributional bias. The determination of relevance to self of verbal statements of differing emotional valence involved left ventrolateral prefrontal cortex (left inferior frontal gyrus, BA 47),

right caudate and right cingulate gyrus (BA 24). Attention to threatening material relevant to self differentially activated a more dorsal region of the left inferior frontal gyrus (BA 44). Internal attributions of events, where the self was viewed as an active intentional agent, involved left precentral gyrus (BA 6) and left middle temporal gyrus (BA 39). Anomalous activity or connectivity within these defined regions may account for the attentional or attributional biases subserving paranoid delusion formation (Blackwood et al., 2000).

Emotional correlates of etiology and maintenance of psychosis

A cross-sectional investigation was conducted by Freeman, Garety, and Kuipers (2001) on individuals ($n = 25$) with persecutory delusions. A detailed assessment was made of the presence of safety behaviours, the content of delusions and emotional distress. All participants had used at least one safety behaviour in the last month, most typically avoidance. Higher levels of anxiety were associated with greater use of safety behaviours. New data were obtained on the content of persecutory delusions. Aspects of the content of the delusions were associated with levels of depression, self-esteem, anxiety and delusional distress (Freeman et al., 2001). It is argued that in many cases delusions are a direct representation of emotional concerns, and that emotion contributes to delusion formation and maintenance. The content of hallucinations less often directly expresses the emotional concerns of the individual, but emotion can trigger and contribute to the maintenance of hallucinatory phenomena, although how this occurs is not well understood. (Freeman & Garety, 2003).

Also in a cross-sectional analysis, Smith et al. (2006) examined in patients ($n = 100$) who had suffered a recent relapse in psychosis the role of depression, self-esteem and negative evaluative beliefs in relation to specific positive symptoms (persecutory delusions, auditory hallucinations and grandiose delusions) and symptom dimensions (e.g. distress, negative content, pre-occupation and conviction). Analysis indicated that individuals with more depression and lower self-esteem had auditory hallucinations of greater severity and more intensely negative content, and were more distressed by them. In addition, individuals with more depression, lower self-esteem and more negative evaluations about themselves and others had persecutory delusions of greater severity and were more pre-occupied and distressed by them (that will likely contribute to the maintenance of delusions because risk factors provoke delusion and delusion activate risk factors, and so on). The severity of grandiose delusions was related inversely to depression scores and negative evaluations about self, and directly to higher self-esteem. (Smith et al., 2006).

In a study of Freeman et al. (2005a) a nonclinical population ($N = 327$) completed measures of paranoia, anomalous experiences (hallucinatory predisposition, perceptual anomalies), emotion (depression, anxiety, self-focus, stress, interpersonal sensitivity), and reasoning (need for closure). Paranoia was best explained by separation anxiety, depression, fragile inner self, hallucinatory experiences, discomfort with ambiguity, stress, self-focus, perceptual anomalies, and anxiety. The findings are consistent with the central predictions within the model of paranoia (Freeman et al., 2005a).

A cognitive model of persecutory delusions was used by Freeman et al. (2005b) to predict the occurrence of nonclinical paranoid thoughts in a virtual reality environment. Scorers across the range of paranoia entered a virtual reality scene populated by five computer characters programmed to behave neutrally ($N = 30$). Many appraisals of the computer characters were positive or neutral. However, there were also persecutory thoughts about the characters. Providing evidence of the validity of the experimental method, persecutory ideation was predicted by higher trait paranoia and a greater sense of presence in the environment. The psychological variables from the cognitive model that predicted persecutory ideation were anxiety, timidity, and hallucinatory predisposition. Further, hallucinatory predisposition distinguished the prediction of paranoid thoughts from social anxiety in virtual reality. It is concluded that nonclinical paranoid thoughts are most closely associated with emotional disturbances and anomalous experiences. Extreme reasoning bias may particularly contribute to the development of clinical phenomena (Freeman et al., 2005b).

Participants ($n = 100$) with current delusions were assessed baseline on measures of reasoning, emotions, and dimensions of delusional experience by Garety et al. (2005). Reasoning biases (belief inflexibility, jumping to conclusions, and extreme responding) were found to be present in one half of the sample. The hypothesis was confirmed that reasoning biases would be related to delusional conviction. There was evidence that belief inflexibility mediated the relationship between jumping to conclusions and delusional conviction. Emotional states were not associated with the reasoning processes investigated. Anxiety, but not depression, made an independent contribution to delusional conviction (Garety et al., 2005).

Analysis of empirical data

Study data did not indicate if and how precisely cognitive and/or emotional determinants of psychotic disorder might interfere with free will. The analysed studies did not provide explanations regarding the role of cognitive and emotional abnormality in the complete scala of determinations of delusions. Cognitive and emotional abnormailities might often lead to psychosis when also psychosocial (lack

of social support, a stressful environment; unemployment; poor social-economical conditions), intrapsychic (instincts, unconscious drives, defense, repression), and/or physical conditions (diabetes melitis, obesitas, see Cohen, Piute, Dekker, & Gispen-De Wied, 2003; sleep disorders and so on) are involved. Investigations are needed which cover all these relevant correlates of psychosis (and interactions between them) in order to form a complete picture which is necessary to understand the degree of impact of these correlates on free will of the patients. Since emotional dysfunctions were excluded in one study and cognitive distortions in another it is unclear what percentage of the investigated patients suffered (and in what degree) from one or more abnormalities that were not examined in that particularly investigation, but which were relevant to psychotic etiology. It extremely difficult to interprete these study results, because of a lack of precise and complete information about the seriousness, duration, and fluctuations of abnormalities and other comorbidities, disorders or incapacities which might be relevant to the assessment of psychosis and free will.

Some cognitive, emotional and/or neurobiological distortions are only temporary or episodically and the patient in question is able in his or her normal episodes to control his or her life and to experience at least some freedom of will. Strauss (1991) pointed out that delusions often appear to start out as very normal or normal-appearing ideas, then after an idea evolves into delusion, the delusion may fade back more or less to normal again. Phenomenological studies show that delusional beliefs, like ordinary beliefs and attitudes, vary across a number of dimensions such as their bizarreness, the conviction with which they are held, the extent to which the patient is preoccupied by them, and the extent to which they lead to distress. Over short periods of time, the conviction with which delusional beliefs are held may vary considerably, so that beliefs that are held to be absolutely true on one day may be described as possibly true only on the next. In the long term, however, the delusions of psychotic patients often persist for many years (Bentall et al., 2001). The formation, elaboration, and persistence of delusional beliefs may be an expression of the convergence of numerous causal influences, each exerting an effect at a different stage in the evolution of the belief (Roberts, 1992). As a consequence the degree of free will of psychotic patients will fluctuate during the disorder process. Nevertheless, there is some empirical evidence (see Warmana & Martinb, 2006) that even patients with increased delusion proneness demonstrate also increased correctional tendencies (this will discussed later) compared with persons with less delusion proneness. As a consequence the author can conclude that even (or especially) high risk patients are willing and able to test and correct their abnormal beliefs. This is an important sign of striving for freedom even in patients with poor prognosis.

Practical usefulness of these findings

Insight in the degree of free will in psychotic patients is therapeutic very significant, because free choice (and associated ability to change) in combination with motivation for change are important conditions for therapeutic success. The patient's ability a) to explore the determinating forces in his life, b) to use alternative possibilities (in combination with ultimate responsibility, self-forming actions, and plural voluntariness), c) cognitive and/or emotional functioning, and d) patient's ability to and motivation for exploration of the deterministic forces of his or her life should be assessed at several stages in the therapeutic process, because it correlated with free will and changeability of the patient.

The prevalence of specific internal needs hat correlate with psychosis in a particular psychotic patient can be assessed with help of an instrument that is based on the choice theory of Glasser (see Glasser, 1999; Sansone, 1998). Based on such assessment a therapeutic program can be constructed that is targeted towards fulfilling of these needs in a healthy and constructive way. In fact, negative and destructive mental and emotional energy (that is intrapsychic driven by extreme fear of reality and emotional suffering and that results in severe social isolation, confusion, inadequate attitude and lifestyle) in the patient should be transformed in positive en constructive energy en goal settings. In fact, most psychotherapeutic approaches are equipped for that task.

Following six internal basic needs could be fulfilled in an alternative way:

1) To survive or to escape unbearable reality, and
2) to belong and be loved by others. In therapy and/or psychoeducational programs patients should encourage to explain why they fear confrontation with reality. The therapist can frequently provide some useful feedback (patient's fear is mostly unfounded or exaggerated) and can try to convince the patient that cautious but solid confrontation with reality (in his or her tempo) can bring immense relief and benefits such as enhanced self-esteem and self-knowledge, increased awareness of social-emotional reality, and correlated increased possibilities to social interactions and form bonds.
3) To have power and importance, and
4) to have freedom and independence. The therapist and/or psycho-educator can reveal to the patient that the only adequate manner to obtain importance, power, freedom and independence is by means of reality testing. A healthy

sense of reality is always required to realize these goals in a satisfactory and lasting way.

5) To have fun (is not relevant).
6) The intrapsychic need to change and transform. This need to change and transform might be fulfilled by means of enhancement of self-insight and self-criticism, adequate utilization of feedback from the outside world, reality-testing and development of an effective transformation strategy. The patient must learn to consider and experience psychotic disorder as a meaningful dynamical learning process that could result in a valuable experiences and growth. In fact, this might be called the long road, because the fragile healthy person who is unable to continue his or her life in a normal way (as a result of lack of power, energy, hope and so on) takes the road from normality to psychosis and back again to normality. However, this roundabout route offers the patient insight that is crucial for his or her effective dealing with reality. The psychotherapist can play a significant guiding role in this complicated process.

Adequate therapeutic approach to enhance the patient's free will

The psychotic patient should indicate in the therapeutic process when he or she is ready to change and/or to investigate the motives for and profits from being psychotic. Only when it is the patient's wish to live without psychosis the therapist should try to find together with the patient a way out of his or her psychotic isolation. When a patient is motivated to change it is suggested that "wish" and "will" must be viewed as opposite but interdependent poles centering around freedom and consciousness, and that "decision" is the act in which they are brought together (May, 1986/1987). In practical therapy the interrelations among them occur on 3 levels: of awareness as wish, of self-consciousness as will, and of responsibility as decision (May, 1961). In this way can the patient increase and intensify his free will and associated responsibility for his or her life.

Adequate use of the patient's personal choice in the recovery process is a very powerful instrument, because it might lead to optimal activation of the patient's creative, emotional and will power, which is necessary for a fruitful transformation process. Growing choice abilities/opportunities are often associated with a) advanced social-emotional and intrapsychic maturation and development (because enhanced freedom might lead to exploration of new intrinsic and extrensic areas) and b) intrapsychic experiences that give the patient sufficient strength and optimism to take the difficult step to change attitude. It is the therapist's difficult task to offer powerful therapeutic guidance in combination with sufficient space for experiments and freedom for the patient that is needed to take responsibility for his or her new development. In order to increase free choice the patients must learn to cope with adverse conditions and circumstances that easily interfere with it. And the patient must learn a) to be flexible and have realistic expectation regadring his or her attempts to change, and b) to practice self-crticism. Rigid attempts to change will be doomed to fail because they are characterized by fear; lack of creativity, openess and subtility. The patient should learn to accept and experience the benefits of percepting, accepting and dealing with reality. As a consequence the energy-consuming avoidance and rejection of the fearful side of life might be gradulally diminish and the patient will experience more energy, power and self-esteem.

As a result of normalized and increased capacities and skills new opportunities will occur for social-emotional awareness/experiences, work or better work and associated increase of social-economical status (as a consequence of improved behavior, attitude, adjustment and use of capacities) and development of social relationships.

Discussion

There is some evidence that some categories of psychotic patients demonstrate at least some degree of free will. Althought there is empirical evidence that psychosis have significant cognitive, emotional and neurobiological determinants the precise impact of these abnormalities on free will is largely unknown. The interaction between personal choice and (correlates of) psychosis is a complicated one and the exact nature remains unclear. In order to explain the precise free choice related determinants of psychotic disorder following issues should be explored:

- Which environmental, psychosocial, intrapsychic, characterologic, cultural, ethnic, religious, educational and neurobiological factors are involved in the psychotic etiology as well as in the underlying development of free will and internal locus of control?
- Could psychosis be regarded as an ultimate attempt to avoid aversive experiences and related depression, stress, trauma, learned helplessness, serious disappointments, frustrations, and self-directed anger?
- What are the benefits of psychotic experiences? How could these benefits be utilzed within and outside therapeutic context?

More research is needed into a) the role of free will into psychotic etiology and maintenance and b) the impact of different categories of psychotic disorder on free will of the patient.

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