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PSYCHOANALYTIC PHENOMENOLOGY OF SCHIZOPHRENIA: *Synthetic Metacognition as a Construct for Guiding Investigation*

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A review of psychoanalytic writings reveals a vibrant but overlooked history of descriptions of the phenomenology of schizophrenia. In this paper we suggest that neglect of these important psychoanalytic contributions to the understanding of alterations of self-experience in schizophrenia is at least partially due to an absence of sufficient operational definitions by which to study these constructs. We then detail an emergent line of research from the neurosciences investigating processes, referred to as metacognition, by which persons develop, evolve, and reflect upon mental representations of self and others. The findings from this growing line of research are convergent with psychoanalytic descriptions of self-experience in schizophrenia, and may provide a method to guide investigation of concepts found in psychoanalytic literature. This convergence presents a number of implications for both contemporary understandings of schizophrenia, future research, as well as psychoanalytically and nonpsychoanalytically informed treatments of schizophrenia.

Keywords: metacognition, schizophrenia, psychotherapy, phenomenology, self-experience

Since the advent of psychoanalysis, the field has had a close but complicated relationship with the study and treatment of schizophrenia. Freud (1911, 1914) offered a detailed theoretical account of schizophrenia, but held that psychoanalysis with a person with

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schizophrenia was impossible due to their inability to develop transference. Although Freud's theoretical contributions left a lasting mark on psychoanalytic theories of schizophrenia, by at least the 1940s several other psychoanalysts had challenged his pessimism regarding treatment, offering descriptions of successful attempts at psychotherapy for schizophrenia (Fromm-Reichmann, 1954; Searles, 1965; Will, 1961). Despite these reports of psychoanalytic success with persons with schizophrenia, over time psychoanalytic theory related to schizophrenia garnered substantial criticism and psychodynamic approaches to its treatment gradually receded from widespread popularity in favor of medical, psychosocial rehabilitation, and, eventually, cognitive-behavioral treatments.

The difficulty of psychoanalytic approaches to schizophrenia in sustaining prominence in the research seems, at least partially, a result of criticisms it received on two fronts. First, the popularity of psychoanalytic theories of schizophrenia began to wane due to a perceived overemphasis on etiological roots of schizophrenia in disordered early relationships, an emphasis that produced controversial and increasingly unpopular notions such as the schizophrenogenic mother and the centrality of latent homosexuality in psychosis. Second, trends such as the empirically supported treatment movement that emphasize quantification have led to repeated criticisms leveled at psychoanalysis and psychodynamic approaches to psychotherapy on the grounds of a failure to sufficiently provide operational definitions of treatment targets and measurable outcomes. It may be that the combination of these two areas of criticism, coinciding with the increasing popularity of alternative models and treatments of schizophrenia, led to the fall of psychoanalysis as the authoritative domain for the study and treatment of schizophrenia.

One by-product of the decline in popularity of psychoanalytic approaches to schizophrenia is that it may have led many to neglect a vibrant phenomenology of schizophrenia offered by these writings. In particular, often derived from direct clinical work with persons with schizophrenia, many psychoanalytic writers offered descriptions of alterations in self-experience and disruptions in the experience of interpersonal connections found in psychosis. These contributions still resonate in clinical practice with persons with psychosis and appear to remain distinct in their phenomenology from even the most contemporary phenomenological analyses (Lysaker & Lysaker, 2010). It may be that the failure to establish operational definitions of certain constructs, alongside the unpopularity of notions related to developmental dynamics and etiology, has unnecessarily prevented these valuable contributions from psychoanalytic literature from being more fully integrated into contemporary understandings of schizophrenia. Consistent with this, others have called for an empirical recasting of certain psychoanalytic concepts, offering a quantitative model of constructs such as alexithymia (Taylor & Bagby, 2013).

With calls for those influenced by psychoanalytic thought to adapt and develop methods to operationalize concepts, we see an opportunity in a line of research from the neurosciences that is potentially related to a number of early psychoanalytic descriptions of the phenomenology of schizophrenia. To this end, we suggest that some of these observations found in psychoanalysis are consonant with a separate, emergent line of research related to the cognitive and socioemotional processes by which people form, reflect upon, and evolve mental representations of self and others.

Specifically, in this paper we will revisit observations made by psychoanalytic writers regarding alterations in self-experience in schizophrenia and then discuss an emergent body of literature that addresses psychological processes sometimes referred to as synthetic metacognition. We will suggest that links between these concepts might not only offer support for psychodynamic approaches to the treatment of schizophrenia, but may also provide a route for developing operational definitions that could offer quantifiable

strategies for tracking progress as well as offer innovative new avenues for psychodynamic research. It may offer a novel investigative strategy to help elucidate some of the deeper processes linked with disturbances in consciousness in schizophrenia, such as the role of anxiety and depression as well as disruptions in intersubjectivity, concepts that may not be sufficiently captured by contemporary approaches to schizophrenia research. It is also possible that a synthesis of the findings from the metacognitive research and psychoanalytic theory could offer novel ways to integrate psychoanalytic theory into contemporary models of treatment. By doing so, integrative efforts might not only offer those from psychoanalytic traditions a methodology for expanding their understanding of these concepts by providing a strategy for quantitatively investigating important theoretical elements, but might also allow clinicians working outside psychoanalytic and psychodynamic orientations to add richness and depth to their work.

Psychoanalysis and Phenomenological Observations of Self-Experience in Schizophrenia

Although exploration of phenomenological descriptions of schizophrenia within the psychoanalytic literature is complicated by a lack of continuity of the use of constructs and terminology, it is clear that many psychoanalytic writers have observed and commented upon alterations in self-experience occurring during psychosis. Often separate from models of etiology, a number of psychoanalytic writers observed abnormalities in how persons formed ideas about themselves and others both within the general flow of life and during moments of reflection. From these observations emerged a rich literature offering a phenomenology of schizophrenia as an alteration in consciousness as well as in the experience of oneself as a being in the world.

Accounts of the phenomenology of psychosis can be found in psychoanalytic writing as early as Freud. Freud's (1911, 1914, 1957) emphasis in his early descriptions included proposing processes of decathexis and regression to autoeroticism, both concepts that on a purely descriptive level seem to be fundamentally addressing disruptions of self-experience. For Freud, the experience of schizophrenia involves persons fully detaching from the world by redirecting psychic energy inward. This notion has some apparent overlap with the concept of schizophrenic autism that was being advanced by Bleuler (1911), roughly concurrent with Freud's writing, though Freud posited the process of decathexis specifically in terms of regression to an early developmental stage. For both Freud and Bleuler, though, phenomenologically this process implicates an experience of self that is disengaged from other persons to the point that the possibility of consensually valid meaning or intersubjective processes with others is gravely imperiled. Importantly, Freud understood this disruption of self-experience as posing an unmanageable barrier to developing a transference, thereby eliminating the possibility of effective therapeutic intervention.

Although Freud did not appear to work directly with many persons with schizophrenia, with perhaps his most cited work on schizophrenia being his analysis of Schreber's memoirs (1911), he continued in his writing to explore psychosis as an avenue for understanding other forms of human experience. In later writing, Freud (1930) makes clear his awareness of certain subjective alterations occurring in psychosis. Specifically, he writes:

There are cases in which parts of a person's own body, even portions of his own mental life—his perceptions, thoughts and feelings—appear alien to him and as not belonging to his

ego, there are other cases in which he ascribes to the external world things that clearly originate in his own ego and that ought to be acknowledged by it. Thus even the feeling of our own ego is subject to disturbances and the boundaries of the ego are not constant (p. 13).

As previously noted, other psychoanalysts resisted Freud's conclusion about the impossibility of therapeutic intervention in psychosis, although many continued to observe the profound alterations in self-experience. As these psychoanalysts attempted to work with persons with psychosis, they began to uncover more nuanced understandings of disruptions in self-experience. From these efforts at intervention there begins to emerge in the psychoanalytic literature rich descriptions of the phenomenology of psychosis. In contrast to the exclusively inward focus that Freud's concepts of regression to autoerotism might suggest, descriptions began to emerge of persons with psychosis as having fragmented identities that possessed seemingly irreconcilable conflicting desires for interpersonal connection and terror of this connection (Fromm-Reichmann, 1954; Searles, 1965; Sullivan, 1962; Wexler, 1965). According to these models, despite needs for love and connection, persons with schizophrenia encounter a world they feel they must avoid to prevent catastrophe and even shield from their own potential destructiveness.

A prominent voice among this group of writers was Harold Searles, who seems to have been particularly sensitive to the centrality of these alterations of self-experience. Drawing from his direct clinical experiences with persons with schizophrenia, Searles' writings offer a number of compelling descriptions of the phenomenology of schizophrenia. For instance, Searles (1965) writes that:

From a purely descriptive viewpoint, schizophrenia can be seen to consist essentially in an impairment of both integration and differentiation . . .

It is difficult or impossible for him to differentiate between himself and the outer world. He often cannot distinguish between memories and present perceptions; memories experienced with hallucinatory vividness and immediacy are sensed as perceptions of present events, and perceptions of present events may be experienced as memories from the past. He may be unable to distinguish between emotions and somatic sensations; feelings from the emotional sphere often come through to him as somatic sensations, or even as variations in his somatic structure. He cannot distinguish between thoughts and feelings on the one hand, and action on the other . . . he may be unable to differentiate, perceptually, one person from another. He is unable . . . to distinguish between the symbolic and the concrete (pp. 304–305).

Speaking directly to the experience of fragmentation, Searles (1965) also noted "The ego is severely split, sometimes into innumerable islands which are not linked discernibly with one another" (p. 318). Importantly, Searles also observed that accompanying these alterations in sense of self in the present are disruptions in the sense of self as a temporally stable being with a particular history, stating, "when we perceive him in a temporal dimension, we find that he cannot integrate his life-experiences over a span of time as being all part of a continuing, unbroken pattern. Instead, his present and past experiences become all jumbled up" (p. 318). This may be capturing a similar phenomenon that Winnicott (1974) noticed when he later described an "interruption of the continuity of being" in persons with severe disturbances.

In a more comprehensive review of psychoanalytic contributions to a descriptive understanding of psychosis, Frosch (1983) addresses the importance of the perceived danger in psychosis, and its relationship to disruptions of self-experience. Frosch notes, "the actual danger is one of self-dissolution and disintegration, that is of an ultimate loss of cathexis of the self" (p. 125) . . . "Because of the amorphous, all-pervasive quality of

this fear, the adult psychotic patient finds it difficult to articulate. Frequently when such patients are asked to describe their anxiety they are unable to do so" (p. 205). Frosch advances this idea by stating that vulnerable ego structures in the person with psychosis may "remain in a somewhat diffuse and fragmented state, or at best a poorly integrated state, highly susceptible to dedifferentiation" (p. 205).

Frosch's writing builds off of earlier concepts advanced by several other writers. Although an exhaustive review of these contributions is well beyond the parameters of the current discussion, a few contributions are worthy of note in brief. These include observations of writers such as Fenichel (1937), who suggested "the ego and the self are part of reality. Loss of object means possible dissolution of self"; Sullivan (1956), who noted that schizophrenia involves "an almost unceasing fear of becoming an exceedingly unpleasant form of nothingness by collapse of the self system" (p. 318); and Jacobson (1967), who observed that "the psychotic is afraid of an impending dissolution of the psychic structure—involving a partial or total breakdown of object and self-representations and resulting in a withdrawal from the external world to the point of manifest psychotic symptom formation." Additionally, Frosch's synthesis is also consistent with contributions from Will (1961), who described schizophrenia as being characterized by "uncertainty regarding self-identity; misidentification of other; instability of 'ego boundaries'; feelings of 'depersonalization'; self-disorganization . . ." (p.77), Federn (1926), who addressed self-experience through his descriptions of the loss of ego(I)-feeling; and Fairbairn (1954) who offered descriptions of a movement toward fragmentation, involving aspects of an ordinary ego being split-off and disavowed. Other related observations come from authors such as Bak (1954) and Bion (1967), who described schizophrenia as involving prominent experiences of emptiness and inability to make meaning. Bion (1959), for instance, observed processes by which psychosis involves the destruction of the possibility of interpersonal connection through what he called attacks on linking, processes which disrupt the possibility of shared meaning-making.

While each of these contributions found in the psychoanalytic literature offers a unique angle related to self-experience in schizophrenia, taken together they seem to suggest a set of common disturbances that one could expect to find in persons with schizophrenia. In attempting to draw some general conclusions from these writings, then, we view psychoanalysis as presenting a phenomenological view of schizophrenia as involving a self that is poorly integrated, at once desires and is terrified of interpersonal connection, is marked by an inability to understand relationships from multiple perspectives, and a self ill-equipped to manage emotionally provocative events, impulses, and experiences. The descriptions found in the literature each seem to present a subjective experience of fragmentation, both of self and others, in a manner that leaves persons bereft of the capacity to be aware of, detect in others, and make sense of nuanced emotions. In addition, there appears to be a general absence of a sense of oneself as a being in a larger world. Ultimately, these descriptions leave us with an account of persons unable to draw from any core set of self-experiences in a manner required to sustain goal-directed behavior or respond to unexpected challenges in life.

Despite the presence of this phenomenology available in psychoanalytic literature, as noted by others (Frosch, 1983), the field of psychoanalysis, on balance, has tended to focus relatively less attention to descriptive accounts of these types of experiences in favor of the development of models that have explored how these experiences might develop. Additionally, a lack of ability to study these experiences empirically may have held back efforts to add depth to an understanding of such experiences. Indeed, if we could operationalize and measure aspects of these disturbances in self-experience, we might

better understand their effect on persons with psychosis, as well as track changes in these experiences.

Links Between Self-Experience and Synthetic Metacognition

If these alterations in self-experience as described in psychoanalytic literature were indeed present in schizophrenia, we might make a series of predictions related to the types of difficulties persons with schizophrenia would exhibit. For one, we would assume that persons with schizophrenia would demonstrate significant difficulties within the flow of life in navigating a variety of interpersonal contexts. The breakdown in the capacity to organize self-experience and understand others in a coherent manner would likely be linked with a range of deficits in tasks requiring relatively intact capacities from these domains, including activities such as discerning another person's intentions, understanding and responding to interpersonal conflict in a variety of contexts, and drawing upon knowledge of oneself to devise strategies for adaptively responding to psychological challenges. These deficits should predict future problems in sustaining goal-directed behavior, in forming and sustaining meaningful interpersonal connections, and also would likely be accompanied by heightened anguish in persons with schizophrenia. By contrast, one would expect that remission of these difficulties would be linked with greater opportunities for recovery. Additionally, greater levels of these difficulties would be predicted to be found in persons with schizophrenia than in representatives from groups experiencing other forms of life adversity.

There have been some limited efforts reported in the literature of attempts to operationalize the alterations of self-experience described above. These include attempts at measuring degree of alteration in self-experience in performance on the Rorschach (Blatt & Wild, 1976), as well as the creation of self-report measures such as the Bell Object Relations Inventory (Bell, 1995; Bell, Billington, & Becker, 1986), designed to identify disturbances in object relations. While these approaches have offered information about links between internal experience and symptoms (Chapleau, Bell, & Lysaker, 2014), they may lack ecological validity in their inability to parallel persons' abilities to respond to emotionally evocative stimuli occurring in lived experiences that involve complex and nuanced interpersonal demands. Additionally, a self-report measure's ability to reliably tap into these experiences would at least partially be dependent upon intact self-reflective capacities, disruptions of which are likely to be present.

Separate from these efforts, however, has been an emergent body of research from the neurosciences studying the processes, sometimes referred to as metacognition, by which people think about themselves and others that may offer a unique opportunity to operationalize elements of the phenomenological insights available within psychoanalytic literature. Although the term has some overlap with concepts such as mentalization, social cognition, mental state attribution, and theory of mind, metacognition, as we use the term here, refers to a spectrum of mental processes involved in thinking about thinking (Lysaker, Bob, et al., 2013; Lysaker, et al., 2012). This spectrum of activities ranges from discrete tasks such as error detection or the ability to identify discrete affective states of self or others, to more synthetic processes involved in a person forming complex mental representations of self and others, and using that information to respond adaptively to life's challenges. Measuring metacognition may be one way to guide investigation of difficulties described in psychoanalytic writing, and to explore the severity and effects of such deficits.

For the purposes of this discussion, we are most interested in research addressing what has been called synthetic metacognition. Four domains have been implicated as central to synthetic metacognition (Lysaker, Carcione, et al., 2005). These include the complexity of representations about one's own mental states, the complexity of representations of others' mental states, the use of this knowledge to respond adaptively to challenges, and the sense of oneself in the world as not the center of things.

Although stemming from a separate research tradition, we see the construct of synthetic metacognition and its measurement as having important areas of overlap with psychoanalytic concepts related to schizophrenia. At the lowest levels of self-reflectivity for instance, a person may be unable to identify their own mental contents, or to accurately distinguish an internal experience from an external experience. In addition, lesser capacities to engage in synthetic metacognitive activities would be associated with a sense of self on the verge of possible collapse, self-fragmentation, an inability to integrate urges, desires, and emotions, profound detachment from the world, and an inability to see oneself from an outside perspective. These experiences correspond with psychoanalytic descriptions of fears of disintegration, disturbances in ego boundary and functions or the failure to differentiate self and other. As has been described elsewhere, a collapse or atrophy of synthetic metacognition may further leave someone in a state of profound fragmentation, unable to organize their experience into a coherent narrative, and without a sense of personal agency (Lysaker, Bob, et al., 2013). The overlap in the language used in certain psychoanalytic writings further underlines possible links between the psychoanalytic phenomena in question and the concept of synthetic metacognition. For instance, Goldfarb (1963) described psychosis as involving "an active cognitive process intermediate between percept and action which stores the multitude of diverse and disparate percepts . . . on this basis the ego is able to formulate suitable representations of the environment and plans for managing it" (p. 59).

Of note, we are not suggesting that the processes referred to here as synthetic metacognition are equivalent to psychoanalytic constructs such as ego. Instead, we would expect that with the disrupted ego functioning and other alterations in self-experience described in the psychoanalytic literature, we would find the presence of associated decrements in metacognitive processes. Metacognition then provides us with a measurable construct that offers not only convergent validity for some of the constructs put forth by psychoanalysis, but also potentially offers a quantifiable treatment target for psychodynamic approaches to therapy.

Synthetic Metacognition: Findings to Date

The research on synthetic metacognition is largely found in research studying personal narratives of persons with schizophrenia. The most frequently used method to investigate these deficits is the application of the Metacognitive Assessment Scale Adapted (MAS-A; Lysaker, Carcione, et al., 2005) to the study of narrative transcripts of persons with schizophrenia. The MAS-A is an adaptation of the Metacognition Assessment Scale (Semerari et al., 2003) developed in collaboration with the original authors for the study of narrative samples. The MAS-A contains four scales which reflect four domains of metacognitive activity: "Self-reflectivity," the comprehension of one's own mental states, "Understanding the mind of the other," the comprehension of other individuals' mental states, "Decentration," the ability to see the world as existing with others having inde-

pendent motives, and “Mastery,” the ability to use knowledge of one’s mental states to respond to social and psychological challenges.

In the studies employing the MAS-A to measure metacognitive capacity, a spontaneous speech sample is collected in which persons with schizophrenia share their personal narrative. The MAS-A is then used to rate these narratives to derive a measure of metacognitive capacity, both in general, and also in subdomains of metacognition. The MAS-A thus allows for an operational approach to obtain a quantitative measure of the degree to which a person can reflectively develop an integrated representation of self, to understand mental states of those around them, to situate oneself in the environment in a decentered fashion, and the ability to use these processes to respond to social and psychological dilemmas.

Studies utilizing the MAS-A have produced evidence of psychometric support for its use. Regarding reliability, across a range of published studies trained raters have produced acceptable to excellent levels of interrater reliability. For example, as reported by Lysaker et al. (2008), there were significant intraclass correlations for all MAS-A subscales which ranged from $r = .61$ ($p < .05$) for Decentration to $r = .93$ ($p < .0001$) for the total score. Examination of the stability of metacognition across three assessment points over a period of one year similarly revealed a significant degree of test-retest stability with the following intraclass correlations: Self-reflectivity: 0.88; Awareness of the mind of the other: 0.70; Decentration: 0.68; Mastery: 0.73; and Total: 0.85. Regarding validity, MAS-A have been linked with independent assessments of awareness of illness (Lysaker, Carcione, et al., 2005; Nicolò et al., 2012), cognitive insight (Lysaker et al., 2008), complexity of social schema as assessed on the Thematic Apperception Test (Lysaker et al., 2010) and self-reported coping preference (Lysaker, Dimaggio, Daroyanni, et al., 2011). Deficits in Self-reflectivity has also been shown to be related to decrements in memory accuracy (Fridberg, Brenner, & Lysaker, 2011), and accurate appraisal of one’s own work performance (Luedtke et al., 2012).

This methodology has produced a growing body of evidence suggesting that persons with schizophrenia do indeed demonstrate significant deficits in the capacity for synthetic metacognition. Deficits in these processes have been demonstrated to be more severe in persons with schizophrenia than in groups of other individuals facing other forms of adversity, such as HIV, or substance abuse (Lysaker et al., 2012; Wasmuth et al., in press; Lysaker, Olesek, et al. 2014). In comparisons of schizophrenia, HIV+, and substance abuse samples on metacognitive capacity as measured by the MAS-A, the schizophrenia group demonstrates significantly poorer metacognitive function than the HIV + group on all metacognitive domains. The schizophrenia group also demonstrates poorer metacognitive capacity in the domains of Self-reflectivity, Awareness of the mind of the other, and Decentration than the substance abuse groups. No differences between the substance abuse and schizophrenia groups were found for Mastery, though all three had Mastery scores significantly lower than those of the HIV group. Recently, a study of first episode psychosis patients has found evidence of general impairments in metacognition. The first episode psychosis group additionally demonstrated even poorer levels of Awareness of the other, and Decentration than a sample of patients with prolonged schizophrenia (Vohs et al., 2014). Finally, a study has reported metacognitive deficits in first episode depression which appear though to be considerably less severe than those found in schizophrenia samples (Ladegaard, Larsen, Videbeck, & Lysaker, 2014).

These metacognitive deficits have been shown to be stable in persons across assessment points and have been linked with both concurrent and prospective assessments of negative symptoms (Hamm et al., 2012). Hamm et al. (2012) found MAS-A scores to be

stable across a five-month interval, and the total score of the MAS-A was correlated with concurrent and prospective assessments of positive, negative, and disorganization symptoms on the Positive and Negative Symptom Scale (PANSS; Kay, Fiszbein, & Opler, 1987). The MAS-A total score predicted prospective ratings of negative symptoms, even after covarying for baseline negative symptoms scores. These links between MAS-A scores and negative symptoms have also been replicated in an Italian (Nicolò et al., 2012) and Israeli sample (Rabin et al., 2014). Other studies have addressed relationships between MAS-A scores and a range of neurocognitive deficits (Dimaggio, Vanheule, Lysaker, Carcione, & Nicolò, 2009; Hamm et al., 2012; Lysaker et al., 2008). Metacognitive deficits have been linked with prospective assessments of intrinsic motivation (Vohs & Lysaker, 2014). The findings of these studies suggest that metacognitive deficits are related but not reducible to other symptoms or neurocognitive deficits (Dimaggio et al., 2009; Lysaker, Carcione, et al 2005; Semerari et al., 2003).

Additionally, metacognitive deficits have been associated with a range of functional impairments (Brune, Dimaggio, & Lysaker, 2011; Lysaker, Dimaggio, Carcione, et al., 2010). Concerning work function, Lysaker, Dimaggio, Carcione, et al., 2010 examined whether self-reflectivity predicted work performance measured every other week for six months for persons with schizophrenia enrolled in a vocational rehabilitation program, finding that higher Self-reflectivity was linked with significantly better work performance, even after controlling for executive function. Lysaker et al. (2011) examined the relationship between metacognition and performance on an assessment of functional skills that assesses competence with everyday living skills, finding that higher level of Mastery on the MAS-A was linked with less functional impairment, after controlling for symptoms and executive function.

In terms of treatment, metacognitive capacity has been linked with level of therapeutic alliance (Davis, Eicher, & Lysaker, 2011), as well as self-reported recovery (Kukla, Lysaker, & Salyers, 2013). In the latter study, results revealed that Self-reflectivity was linked with less domination by symptoms, while greater Decentration was associated with the ability to seek support from others. Nabors et al. (2014) has similarly examined the association of metacognition with internalized stigma, finding that greater levels of metacognitive capacity were linked with greater abilities to resist stigma.

Taken as a whole, the data from these studies suggests that the MAS-A may reliably and validly assess synthetic metacognition in schizophrenia across different phases of the disorder, and as a tool it can identify a pattern of unique metacognitive deficits in schizophrenia relative to least one prolonged nonpsychiatric medical condition and one nonpsychotic psychiatric condition (substance abuse). These deficits are related to symptoms, neurocognition, and to a range of other outcomes independent of the effects of symptom severity and poorer neurocognitive function. As such, this body of research offer support for the contention that these deficits may represent a unique impediment to recovery in schizophrenia.

Discussion and Directions for Future Research

Review of psychoanalytic literature reveals a vibrant history of rich descriptions of the phenomenology of disturbances in self-experience in schizophrenia that has been largely overlooked. In this paper, we have suggested that this neglect was due to, at least in part, not only an overemphasis on theories of the etiology of disturbances but also a lack of methodology to measure these phenomena. In response we have revisited a number of

contributions from psychoanalysis and have detailed emergent research that not only has produced findings consistent with psychoanalytic models of self-disturbance, but also offers a new method for assessing operationally the degree to which representations of self and other are integrated.

Although the MAS-A was not developed within a psychoanalytic theoretical framework, we suggest that the findings to date offer evidence of difficulties related to disruptions in self-experience convergent with psychoanalytic observations of the phenomenology of schizophrenia. That these findings detailing the nature of difficulties associated were studied separate from psychoanalytic theory may offer additional support for their convergent validity. As one would have expected from the hypotheses put forth by the psychoanalytic writers reviewed above, this line of research provides quantitative evidence that persons with schizophrenia struggle to create integrated representations of self and other. Whether one begins with Searles's (1965) contributions on integration and differentiation, Fairbairn's (1954) comments on fragmentation, or Federn's (1926) contributions related to the loss of ego-feeling, the synthetic metacognition research has found evidence of fragmented representations of self and others and an inability to use metacognitive knowledge to respond to life stresses.

In addition to offering evidence of disruptions in representations of self and others, research guided by the construct of metacognition has also found evidence consistent with psychoanalytic assertions that these difficulties are at the core of psychosocial dysfunction and hence, an essential treatment target. Implicit in the work of Sullivan, Fromm-Reichmann, and Searles, for example, is the assumption that these deficits are the basis for patients' separation from their communities through placement in hospitals. Sullivan (1953), for instance, noted these disruptions disturb social relationships and lead to the risk of a person adopting a particular "schizophrenic way of life," while Winnicott (1974) describes these processes as a total "interruption of the continuity of being." Embedded furthermore across case material the implication is that with less fragmentation and more integrated representations these persons might meaningfully recover (Fromm-Reichmann, 1954; Searles, 1965). Certainly on the basis of these claims we would expect that, as supported by the research discussed here, deficits in metacognition would be linked with poorer work and social functioning as well as decrements in subjective well-being.

We would suggest that this has potentially a range of implications for practice and future inquiry. First, with regard to treatment, if the MAS-A is a reasonable method for operationally assessing deficits associated with disturbances of self-experience it may prove to be a useful method for detecting and tracking some of the kinds of underlying changes occurring in therapy that many authors have long described qualitatively. At the very least the MAS-A could allow psychoanalytically influenced clinicians a way to operationalize deficits related to a psychoanalytic understanding of psychosis. Akin to the measurement of metabolites for tracking the mechanisms of medication, measurement of metacognitive capacity might not directly measure ego disturbances, but would allow some to use quantification to investigate and detect progress in a treatment informed by this rich phenomenology. Metacognitive capacity would thus not be viewed as a direct measure of self-experience or emotional disturbance, but rather a marker for disruptions in self-experience.

In support of the possibility of tracking metacognition over the course of treatment, detailed case studies have offered evidence that psychotherapy transcripts can be reliably rated with the MAS-A and that patterns of change in MAS-A scores correspond to functional improvements (Lysaker, Buck, & Ringer, 2007; Lysaker, Davis, et al., 2005). Ongoing research efforts continue to investigate metacognition as a treatment target, and

future investigation might be able to more actively incorporate psychoanalytic concepts in the study of psychotherapy processes.

Second, the MAS-A might allow for the study of some of the hypotheses offered by earlier authors. Compared to more philosophically-oriented approaches to the phenomenology of schizophrenia (Henriksen & Parnas, 2012; Parnas, 2011) which focus on failures of comprehension (e.g., failure to perceive life in terms of common sense, hyper-reflexivity, perplexity), the psychoanalytic work reviewed here has been especially concerned with the role of unbearable psychological pain in the development and manifestation of schizophrenia. As detailed above, many authors point to an underlying affective disturbance that affects self-experience in schizophrenia (Bak, 1954; Freud, 1911, 1914; Fromm-Reichmann, 1954; Searles, 1965). A program of research using the MAS-A might, for example, offer a method to quantitatively explore links between emotional pain and the degree to which representations of self and other are integrated. Additionally, many authors have suggested that fragmentation may play a protective role with regard to this painful underlying affect (Searles, 1965; Winnicott, 1974). The MAS-A may provide an opportunity to determine whether there are subgroups, for instance, of traumatized individuals for whom greater levels of metacognition are linked with pain. Beyond these specific possibilities, there would appear to be a number of different hypotheses that could be generated from the observations of Searles, Bion, and others that could be tested quantitatively using the methodology available in the metacognition research.

Finally, an integration of the metacognitive research and psychoanalytic views of the phenomenology of schizophrenia may also have implications outside of psychoanalytic or psychodynamic theory and practice. For instance, this work might allow for certain elements of the phenomenology of schizophrenia as revealed in psychoanalytic writing to be incorporated or integrated within developing therapies from other traditions. For example, review of recent literature reveals the presence of the development of a number of integrative approaches to psychotherapy for schizophrenia (Hamm, Hasson-Ohayon, Kukla, & Lysaker, 2013). Some of these integrative efforts have highlighted the importance within cognitive-behavioral treatments of not only a sensitivity to the role of metacognition, but also attention to concepts derived from psychoanalytic traditions, such as intersubjectivity and attachment style (Gumley & Clark, 2012; Hasson-Ohayon, 2012). Aligning the metacognitive research with psychoanalytic theory might offer a route for clinicians informed by cognitive approaches to treatment, which have historically emphasized symptom relief in favor of direct attention to underlying processes and self-experience, to add depth to their understandings of schizophrenia, thereby enriching contemporary efforts at assisting persons with schizophrenia to recover.

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