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Addressing metacognitive capacity for self reflection in the psychotherapy for schizophrenia: A conceptual model of the key tasks and processes

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Purpose. Recognition that recovery from schizophrenia may involve a deepening of the experience of being in the world has led to the possibility that psychotherapy may play a key role in treatment by enhancing metacognition, or the capacity to think about thinking. While the potential of psychotherapy to enhance metacognition in non-psychotic disorders has been discussed in depth, little has been written about how psychotherapy may systematically address metacognition in schizophrenia. Accordingly, the current paper formulates a model of how psychotherapy might address one specific element of metacognition, namely self-reflectivity.

Methods. Procedures are outlined for assessing clients' capacity for self-reflectivity within narrative contexts during psychotherapy.

Results. Targeted interventions are identified which are tailored to clients' capacities in the moment and which assist clients to think about their own thinking at the level of which they are capable. This may lead clients over time to develop a greater ability to engage in acts of increasingly complex self-reflectivity.

Conclusions. Individual psychotherapy can be modified and utilized to assist persons with schizophrenia to move towards recovery by assisting them to develop the capacity for self-reflectivity. This may lead to clients having a fuller experience of themselves as a being in the world with a richer and more coherent personal narrative.

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Recent longitudinal studies and first person reports have indicated that many persons with schizophrenia recover or move significantly towards wellness over the course of their lives (Kean, 2009; Silverstein & Bellack, 2008). Furthermore, recovery may involve a wide array of potentially unrelated kinds of changes in thoughts, emotions, behaviours, and life circumstances. To recover may involve symptom remission or finding work, as well as changes in deeply subjective aspects of human experience. Recovery may, for instance, include a deepening of a person's experience of being in the world and the development of a richer and more coherent personal narrative (France & Uhlin, 2006; Lysaker & Buck, 2008).

The literature on the subjective aspects of recovery from schizophrenia has raised the possibility that individual psychotherapy could play a greater role in contemporary treatments of schizophrenia (Lysaker, Glynn, Wilkness, & Silverstein, 2010). In particular, one possibility is that psychotherapy may promote some of the subjective domains of recovery by enhancing metacognition or the capacity to think about thinking, both one's own thinking and the thinking of others (Semerari *et al.*, 2003). Research has demonstrated that many with schizophrenia have experienced a significant loss of previously held capacities to think meaningfully about thoughts and feelings (Frith, 1992). These deficits persist at the trait level, and are not simple reflections of a single symptom or neurocognitive deficit (Brüne, 2005; Lysaker, Carcione, *et al.*, 2005). They are a unique impediment to psychosocial function as well as for the maintenance of an evolving personal narrative (Brüne, Abdel-Hamid, Lehmkämper, & Sonntag, 2007; Lysaker, Buck, Taylor, & Roe, 2008).

Regarding the potential of psychotherapy to address metacognitive deficits, a broad literature has suggested that psychotherapy can promote metacognitive capacity (sometimes referred to as mentalizing) in persons with personality disorders, depression, and anxiety (Bateman & Fonagy, 2001; Dimaggio *et al.*, 2007; Karlsson & Kermott, 2006). With regard to schizophrenia, case studies have provided some evidence that metacognitive capacity may be addressed in individual psychotherapy and that changes in metacognition may lead to improvements in function (Buck & Lysaker, 2009; Lysaker, Buck, & Ringer, 2007; Lysaker, Davis, *et al.*, 2005; Salvatore *et al.*, 2009). Others (Silverstein, 2007), spurred on by reports of the limitations of symptom-focused cognitive therapies to address more subjective elements of recovery (Wykes, Steel, Everitt, & Tarrier, 2008), have reported successfully delivered cognitive behavioural treatments focusing on the development of sense of self. One promising line of work, for example, has considered hallucinations as experiences which allow access to non-integrated aspects of the self (Chadwick, 2006; Gumley & Schwannauer, 2006).

While targeting metacognition in psychotherapy for clients with schizophrenia has considerable appeal, it remains unclear what such a form of psychotherapy might entail. While psychotherapy which addresses metacognition in personality disorders has been manualized and tested in randomized controlled trials by Bateman and Fonagy (2001) and procedures which promote progressively higher levels of metacognition have been operationalized by Dimaggio, Salvatore, Nicolò, Fiore, and Procacci (2010) and Dimaggio *et al.* (in press), no systematic model has been offered that focuses on metacognition in schizophrenia which could be tested in randomized trials.

To address this issue, the current paper seeks to present an outline of the key elements and processes that might be involved when psychotherapy addresses one particular element of metacognition in schizophrenia: self-reflectivity. We first present a model of self-reflectivity and then outline procedures which begin with an assessment

of a client's capacity for self-reflectivity, and then offer interventions geared to a client's current capacity. In particular, we suggest a model which conceptualizes psychotherapy as offering clients a chance to practice and develop the capacity for increasingly complex acts of self-reflectivity. We propose that by thinking about thinking both with reference to a narrative episode shared by the client or about the relationship between the client and the therapist, the capacity for metacognition may be enhanced paving the way for the attainment of some of the subjective aspects of recovery noted above.

A model of self-reflectivity

As noted above, metacognition refers to a range of acts which call for thinking about thinking. One of these, labelled as self-reflectivity, refers to thinking about one's own thoughts and feelings. It refers to both cognitive and emotional experiences and is related to, though not synonymous with, other aspects of metacognition, for instance, which call for awareness of the internal states of others or the use of metacognitive knowledge to solve social dilemmas. Semerari *et al.* (2003) have presented a model which suggests self-reflectivity involves a series of different kinds of acts, each with increasing complexity. In cooperation with Semerari *et al.* (2003), Lysaker, Davis, *et al.* (2005) have suggested that self-reflectivity can hence be conceptualized as a capacity which can vary between persons. Some with lesser capacities for self-reflectivity might be able to perform, for instance, only very basic acts of self-reflectivity while others with greater capacities should be able to perform more complex acts.

To quantify this Semerari *et al.* (2003) created the Metacognitive Assessment Scale which has been adapted by Lysaker, Davis, *et al.* (2005) for the study of schizophrenia. This abbreviated instrument defines self-reflectivity as a construct which involves nine increasingly complex steps. The first step requires the acknowledgement by clients that they have mental functions. The second step involves clients being able to recognize that the thoughts in their head are their own. The third step requires that they are able to distinguish and differentiate cognitive operations (e.g., remembering, having fantasies, dreaming, desiring, deciding, foreseeing). The fourth step calls for clients to define and distinguish their emotional states. The fifth step requires that clients recognize that their ideas about themselves and the world are fallible. The sixth stage calls for the ability to recognize the limited impact that expectations, thoughts, and desires have on reality. The seventh step calls for clients to recognize that their behaviour may be determined by cognitive or emotional functioning and to see the influence of social relationships. The eighth step requires the construction of a complete description of the client's own mental state and/or of the interpersonal processes in which they are involved, distinguishing cognitive and/or emotional elements. Finally, the ninth step calls for clients to be able to integrate into a coherent and complex narrative their different modes of cognitive and/or emotional functioning.

Evidenced here, as noted above, is that each step on this scale calls for an act more complex than the last and it is unlikely someone could perform a specific step without being able to perform the steps below it. For instance, to be able to perform step 7, meaningfully linking behaviour with thoughts and feelings, clients would have to be able to identify their feelings, etc. Research has suggested that self-reflectivity as defined in this way can be rated reliably among participants with schizophrenia both on the basis of psychotherapy transcripts and semi-structured interviews (Lysaker *et al.*, 2007; Lysaker, Davis, *et al.*, 2005). Evidence of the validity of those ratings includes reports of significant links with objective reports of self-reflectivity (Lysaker *et al.*, 2008), insight (Lysaker,

Carcione, *et al.*, 2005) and psychological mindedness about interpersonal relationships (Lysaker *et al.*, 2010).

Assessing the capacity for self-reflectivity

We suggest that the idea that self-reflectivity involves a series of increasingly complex acts, which can be distinguished from one another, may offer a guide for assessing and offering interventions in psychotherapy. Based upon our own clinical practice and supervision, we would suggest this model offers a template by which to judge what level of self-reflectivity a client with schizophrenia is capable of performing in a given narrative or relational context, to plan interventions which are appropriate to the individual's specific needs and to know when more complex interventions are appropriate (Bateman & Fonagy, 2001; Leiman & Stiles, 2001).

Concretely then, we propose that the beginning of therapy should involve an assessment of clients' capacity for self-reflectivity as it is manifest in the material they bring and in their responses to therapists' utterances. As detailed in Figure 1, this assessment could begin with determining whether they are capable of distinguishing their own feelings (level 4). If not, then the task would be to determine if they could distinguish different cognitive operations from one another (level 3) and if not then whether they can recognize that the thoughts in their head are their own (level 2) or at least that there are thoughts at all in their head (level 1). If clients are able to distinguish their own feelings then similarly the initial assessment would entail determining whether they are able to know that their beliefs and conclusions are subjective and fallible (level 5), and so on. Of note, the task here is to form a general idea of the capacity for self-reflectivity when dealing with the material being discussed. In other words, it is not the highest expression that is rated, but the general level of self-reflection present throughout the particular narrative context presented within a segment of the session. As such, therapists should be aware that it is possible that metacognitive capacity may be greater in some contexts and lesser in others depending on certain factors, such as how emotionally laden the experience was and whether self-esteem was threatened (e.g., making sense of a conversation with an acquaintance on a bus vs. understanding a fight with a sister who cursed at the client and ejected him from her home).

According to this rubric, following the assessments of clients' capacity for self-reflectivity, the next step is to offer interventions appropriate to that level. Thus, treatment begins with engagement in metacognitive acts appropriate to a client's current capacity. For example, if a client recognizes that he or she has thoughts, that recognition is reflected and discussed. Since the client presumably is not in the moment capable of distinguishing different emotions or seeing his or her thoughts as fallible, no interventions would be used which required clients to do either of these. For example, it would not be appropriate for the therapist to ask the client in this example: 'How do you feel about this?'. That would be asking them to do something they are not capable of and would likely be unproductive and frustrating. If the most the client is capable of knowing is that he or she is having a memory, then noticing the thought of having that memory would be in order. Once the client is ready to start thinking about his or her own thinking at the next level, then interventions should be offered appropriate to that level. Of note, we would anticipate that some clients might rapidly show several increases or decreases in metacognitive capacity over the course of a single session, while others might require interventions on the same level for quite some time. As illustrated in case studies, gains

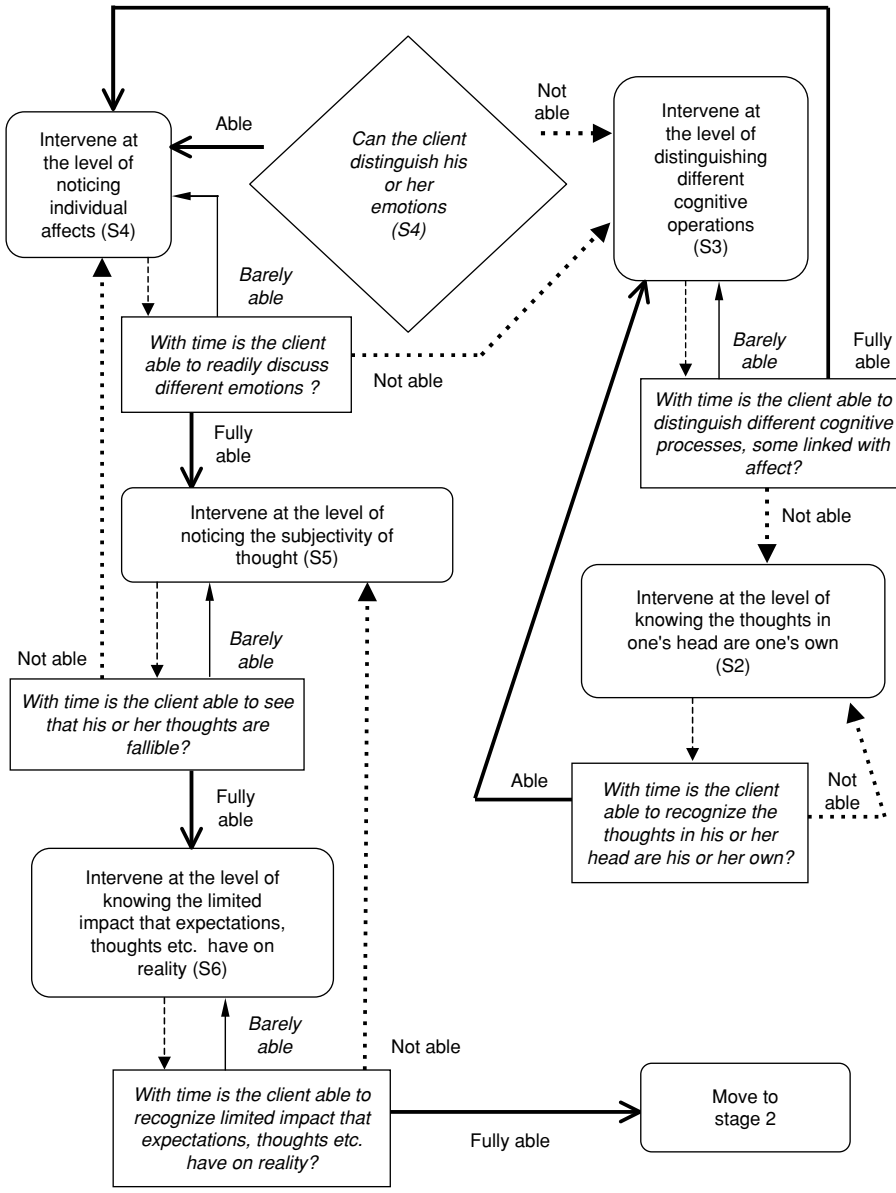

Figure 1. Addressing self-reflectivity in the psychotherapy of schizophrenia.

were noted in metacognitive capacity followed by losses and vice versa (Buck & Lysaker, 2009; Lysaker, Carcione, *et al.*, 2005; Lysaker, Davis, *et al.*, 2005; Lysaker *et al.*, 2007).

To illustrate what might be appropriate interventions for the levels described in Figure 1, we will next present an overall description of what specific interventions might involve for each level. In each section, as outlined in Table 1, we hope to present examples of interventions but also associated narrative outcomes and evidence of increasing capacity signalling the possible need to start intervening at the next level. Of note, as can be seen in Figure 1, we have referred to intervening at level 7, or the level at which thoughts and feelings are considered as affecting one another, as phase

Table 1. Characteristic tasks and processes of addressing metacognition in psychotherapy across four different levels of self-reflectivity

Metacognitive level	Narrative tasks	Narrative outcomes	Examples of interventions	Behaviour signalling progress
S1 and S2 Knowing thoughts are one's own	Noticing the subjective experience of singular perceptions and ideas in the moment	The person realizes that he or she has experiences	'There is a thought in your head that…' 'There is tension in your body'	Clients freely describe internal experience in the first person
S3 Distinguishing different cognitive operations from one another	Noticing recent and distal memories and immediate experiences as something the person has uniquely and subjectively experienced	Individual episodes emerge in the person's life which could be woven into a narrative	'You have a memory of…' 'You had a plan to…' 'You chose not to…' 'You are imagining…'	Clients spontaneously label their memories, plans, wishes, fantasies, etc. Clients divulge memories with affects attached to them
S4 Distinguishing different emotions from one another	Imbuing of life-events and experiences in the moment with a range of clearly different emotions	The emotional significance of different events becomes distinct	'Now you are feeling…' 'How you were feeling changed…' 'You have two different feelings about…'	Clients recognize that they are making meaning of the memories and experiences they are narrating
S5 and S6 Knowing one's thoughts are fallible and that reality may be different than one would desire	Discussing life-events and experiences in the moments as matters that are not likely to be instantly understood and reality as posing difficulties that have to be accepted	A portrait of the narrator emerges as someone who thinks about his or her reactions to events while trying to accept other ways of understanding those events	'You have changed your mind about…' 'You were certain before but now…' 'You wish so much for… but it is not so' 'You have discovered things are different than you needed'	Clients begin to make sense of why they act, feel, and behave as they do

2. By this, we mean to suggest that once the first six levels of self-reflectivity have been mastered then psychotherapy is likely to resemble the psychotherapy of anyone without psychosis and as such is beyond the scope of this initial paper. We also compress levels 1 and 2 and 5 and 6 given their similarity and the need for brevity.

Interventions targeting self-reflectivity at the most basic levels (S1 and S2)

Clients capable of one of the most basic levels of self-reflection are uncertain that there are thoughts in their head or if they know that there were thoughts in their head, they might not see them as their own. As an example, consider Strauss,[1] a young man in his late 20s with schizophrenia. Early in his psychotherapy what he seemed to know about his life was that he was the subject of persecution by international jewel thieves and the voices of dead criminals who spoke to him when he was alone. His persecution was experienced as something he plainly perceived and not as a set of thoughts he had formed in order to interpret life-events. Consistent with recent developments in cognitive therapies noted above (Chadwick, 2006; Gumley & Schwannauer, 2006), interventions can consist of reflections that clients are having specific thoughts and that those thoughts belong to them. For instance, a frequent intervention at the beginning of Strauss's therapy was: 'Your mind is full of thoughts about the thieves' and 'In your mind you hear the voices and now we are talking and thinking about them'. In responding to these comments it was made manifest to Strauss that he was indeed thinking about himself at the moment which allowed him to hear what he was saying without challenging or disagreeing with his delusions. The presence of thoughts in his mind was acknowledged within the context of what was manifestly on his agenda to discuss in session.

Beyond mere reflections of mental events, interventions appropriate to these most basic levels can also notice the client's intent and relation to those thoughts. For instance 'Today you are thinking about x and that is all you can talk about' and 'It is so important for me to know your experience with x'. For Strauss, interventions such as this were not intended as a challenge to his delusions but as an offer to recognize his strong desire to be understood. Mild confrontation is also possible here, again so long as it is reinforcing a reflection on how the client is thinking about things in his or her own mind. For instance, Strauss was often asked: 'You seem so certain about x, but how are you so sure . . . any chance you are wrong?'. Importantly, these questions were not offered with the intent of helping to correct dysfunctional beliefs, something that would theoretically require a greater capacity for self-reflectivity than he had at the moment. Instead, these early interventions were used to offer Strauss an opportunity to realize that he held this belief, and that it was his own.

An important aspect of intervention at this level may involve conversation about the therapeutic relationship. For instance, in a memorable moment Strauss announced: 'You are not listening . . . my life goal is to turn the tables on those thieves and you and anyone else who wants something else can go to hell'. When the therapist responded: 'So kissing women is not on the agenda?'. Strauss laughed and responded quickly: 'Right! Dr. One track mind'.

As these interventions are working, clients may begin to see that they indeed form ideas and are thinking in the midst of specific experiences. In terms of a personal

[1] *All identifying information is disguised and quoted material reflects prototypical comments.*

narrative, elementary atoms of experience may be introduced which could later be combined into molecules which later could be woven into a personal narrative. Persons may see themselves, albeit in small fragments, as agents in the world, positioning themselves only as observer and responder to their experiences. This can include painful moments in session. With the disappearance of delusions, clients may experience themselves as 'blank' or 'empty'. In such cases, the intervention could be a reflection such as: 'You have no thoughts now', which clients can use to see themselves as indeed having no thoughts but still having the capacity to at least recognize it.

Challenges to successfully offering appropriate interventions at this stage may include therapists getting impatient at this level and wanting to more quickly weave fragments offered by clients into more complex narrative episodes. They may become preoccupied with getting a client to abandon a specific belief or stance or to offer education in an attempt to force awareness of illness. Evidence that clients may be ready for interventions at the next level includes mention of distinct cognitive activities such as 'I was remembering x . . . ' or 'I was planning for x'. Or in the case of Strauss: 'Ok. I have imagined kissing that woman who sells coffee in the lobby'.

Interventions targeting self-reflectivity at the level of distinguishing cognitive operations (S3)

At level 3, clients are capable of recognizing and reflecting about different cognitive operations. Here, as therapy progresses, there may be more focus on personal narrative and in particular there may be the full expressions of memories, regrets, and current desires, but not with expressed emotions. It is not that conversations here will be cold and devoid of emotion but that it is unlikely that there will be a nuanced naming of different emotions. The therapist role can be seen as providing a safe, predictable, and non-judgmental, yet provocative, space to think about more specific mental operations within narrative contexts or as occurring in the therapeutic relationship. Interventions can include reflections as simple as: 'You are having a memory . . . ' or 'You are forming a plan to . . . ' In the case of Strauss, he mentioned a historical detail and the therapist offered: 'You are remembering something about yourself 10 years ago'. This led Strauss for example to spontaneously recollect being bullied in high school and episodes of involuntary hospitalization and psychiatrists he watched spending hours working on crossword puzzles. He became more aware that he had recollections and distinguished these from, for example, his plans for the future. Interventions can also focus on the emerging relationship. For instance: 'So this is something you planned yesterday to make sure and tell me', and 'x was something you remembered from our last conversation'. Interventions which use the second person 'You', and point to the specific cognitive operations may be seen in this phase as allowing clients to recognize different aspects of their thought processes, and with practice become more able to perform these kinds of metacognitive acts in regular interactions**.**

As these interventions are working, an expected outcome is that clients will begin to produce isolated episodes of their life. Whereas in the first two stages fragments emerged, here parts of a story that is uniquely the client's own may become available. Metaphorically, the atoms of experience that emerged in the first two stages become more the molecules that could be built into a coherent narrative. Clients not only experience thoughts but also can call upon different kinds of mental activities in order to respond to daily life. Strauss, at this stage, identified a death in his family which occurred when he was a child as an important event. Clients may identify themselves as

individuals whose mental states, though mysterious, could be understood. Strauss noted, for instance, recalling watching the moon rise over a lake one evening while living in group home after a major psychotic break. He knew it was an important memory but was unsure why.

One temptation for therapists here may be to think that the validity of specific thoughts should be challenged at this point. There may be stereotypic representations of the self which make it appear as if the client has moved to the fifth level which lead the therapist to miss the need still to get to and work through the phase in which affects are recognized in a nuanced manner. Evidence that clients may be ready to move to the next phase may include the imbuing of memories with distinct affects.

Interventions targeting self-reflectivity at the level of distinguishing different emotions (S4)

Interventions at the fourth level of self-reflectivity are geared at encouraging clients to recognize and distinguish different emotions. Here reflections can be simple such as: 'You are feeling x . . . ' and 'You are having a strong emotion right now'. The goal here is not attainment of knowledge of a specific state but the development of awareness that emotions are part of subjective experience. It would be viewed positively if the client responded to the above intervention with: 'No you are wrong . . . its more like I feel x and x'. There may be a confrontation here when affects are missing: 'You are talking endlessly about x (delusion) so you don't have to feel sad', and 'as you've grown quiet for a moment you are feeling something strongly'. In the beginning, there may be experience of affect, but difficulty naming it, for example 'I feel like I did when my brother died'. Links between emotions and symptoms may also begin to be noticed and discussed: 'You were anxious and then became certain you were spied on'.

There may be more nuanced emotions experienced and expressed about the therapeutic relationship. Strauss realized that the memory of the moon rising over that particular lake was coloured with nostalgia for lost days when there were few expectations of him. With the desire to kiss women and find a job came opportunities for recognition of failure and feelings of inadequacy, pained memories of a lost dream of becoming a math teacher, long-standing underlying feelings of loneliness, and an aggressive urge to succeed. He asked if he was like other clients the therapist saw and noted feelings of admiration for, attachment to and jealousy of the therapist.

One challenge for therapists here is to see full expression of affects as synonymous with the ability to question complex judgments. Narratively, growth here may be reflected as clients now discussing a wide range of different episodes of their life, all of which are imbued with a range of different emotions. Evidence of the potential to move to the next level may be recognition by clients that they are making their own meaning of the events in their lives.

Interventions targeting self-reflectivity at the level of recognizing the fallibility of thoughts and the need for acceptance of reality (S5 and S6)

In the fifth and six phases, interventions are aimed at assisting persons to exercise the capacity to challenge their own thinking and to distinguish their hopes from reality. Intervening here may take the form of simple reflections such as: 'You are inclined to believe x but now you are doubting that', and 'it is difficult to know that it is not how

you hoped'. Here as in past phases of intervention we are not dealing with a purely cognitive phenomenon, but self-reflection as both a emotional and cognitive act. The goal is not the dismissal of a singularly maladaptive belief but the capacity for considering thinking in a fully emotionally meaningful sense and to take a step back from firmly held ideas. Thus, the therapist should choose interventions which exercise that capacity and also, consistent with Kingdon and Turkington (2008), work alongside clients as they recognize the fallibility of their thinking. With success here it would be expected that previous fragments of the narrative would be presented but at this time begin to be integrated and a fully coherent story may begin to emerge.

As an illustration, Strauss was assisted to doubt his belief that he was being persecuted by jewel thieves and also that relationships never work out when he is involved. He was aware of a deep-seated desire to be completely in control of things and yet a need to accept the flaws of an older brother with whom he had become estranged. In one exchange, he noted that it was not only a matter of worrying about the thieves but also about rejection by others whom he feared could never accept him as a whole person. Consistent with some of the subjective aspects of recovery noted above, Strauss noted that unlike the era when he watched the moon rise over the lake, he was beginning to think of and experience himself as a whole person and not as a being whose identity had been defined by either illness or delusions. And following this, he was soon dating and had started a part-time job.

Conclusions

In this paper, we have sought to provide an outline of the key tasks and processes involved in a psychotherapy that targets one aspect of metacognition, the capacity for self-reflectivity for clients with schizophrenia. We have suggested a method for assessing clients' capacity for self-reflectivity and for offering interventions appropriate to that level which might help recover this metacognitive capacity. As found in Figure 1, we suggest that attainment of the capacity for level 6 of self-reflectivity is followed by an entirely different phase, one in which there are in-depth explorations of the connections between thoughts and feelings leading to the construction of a narrative in which the client is fully situated as an agent in an affectively laden context. For space reasons, we do not explore this here but we would expect that this second phase would likely resemble the psychotherapy of persons without psychosis and involve the emergence of an understanding of oneself as possessing hopes and dreams across a life-span while struggling to make sense of their own internal states and the limitations placed upon their lives by fate. Similarly, it seems essential that a psychotherapy focused on metacognition would also deal with other phenomenon such as awareness of others' thoughts and feelings and the use of metacognitive knowledge to solve psychological conflicts. Again for space reasons, we have not explored this though we would offer the thought that addressing either of these other elements of metacognition would likely involve assessing clients' metacognitive capacities within narrative contexts and intervening at the appropriate level.

Of note, there are limitations to this report. Future work is needed to formalize these procedures, as well as methods of assessing fidelity in order to allow them to be tested in randomized controlled trials. Further, more needs to be done to describe how clients' metacognitive capacity may change within and between sessions. The case we have drawn upon spanned approximately 2 years and change was not linear. Even though it was apparent Strauss was gradually improving, gains were often followed by

many sessions at a lower metacognitive level. In future and current work, we plan to offer finer grained detail of each metacognitive stage and to explore what is involved for clients who have had a recent onset of illness as well as clients with schizophrenia who have achieved higher levels of self-reflectivity. We further plan to explore the interconnection in a more nuanced way how growth in self-reflectivity is linked to the growth of theory of mind and mastery, or the ability to use knowledge of mental states to solve psychological challenges.

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