

# Professor Paul Lysaker

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## Metacognitive Deficits in Severe Mental Illness: Implications for Treatment

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### \* Outline

Metacognition as a key psychological process involves in psychosis

Metacognition as a target for psychotherapy

## Metacognition as a key psychological process involves in psychosis

- Bleuler's original model of schizophrenia
- Varying definitions of metacognition
- A methodology for assessing synthetic forms of metacognition
- Research on the relationship metacognition with outcomes

## Bleuler's original models of schizophrenia

The mystery of life interrupted without cognitive impairments found in dementia

The first "A": the collapse of the ability to create complex ideas about self and others needed to guide goal directed behavior

Metacognitive Reflective Insight Therapy (MERIT)  
An integrative form of psychotherapy for adults with psychosis

## Bleuler's original models of schizophrenia

"the patient hardly knows how to orient himself either inwardly or outwardly... a very intelligent patient needs hours of strenuous inner effort to find her own ego for a few brief moments" (p. 143).

## Kraepelin's definition

"Dementia Praecox is a series of states the common characteristic of which is a peculiar destruction of the internal connection of the psychics personality. The effects of the injury predominate the emotional and volitional spheres of life" (1919, p. 3).

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## \* Metacognition

Metacognition as term used differently in the study of

- Education
- Cognition
- Psychopathology
- Attachment

## \* Metacognition

A spectrum of activities in which there is thinking about thinking

- Discrete judgments about performance and specific beliefs
- Synthetic construction of self and others and the use of those judgments to solve problems

## \* Metacognition

Discrete and synthetic metacognitive acts should inform one another within the flow of daily life but are not reducible to one another

- Synthetic metacognitive acts offer a context for discrete acts
- Discrete acts offer building blocks for synthetic acts.

### \* Metacognition

A model of synthetic metacognitive activity based on an adaptation of Semerari et al 2003

Four broad domains:

- Self-reflectivity
- Awareness of others mental states
- Decentration
- Mastery

Semerari, A., Carcione, A., Dimaggio, G., et al 2003. How to evaluate metacognitive function in psychotherapy? The Metacognition assessment scale its applications. *Clinical Psychology and Psychotherapy* 10, 238-261.

### \* Key assumptions

- Persons have differing metacognitive capacities
- Metacognitive capacity can be measured
- Metacognitive capacity may across situations

### \* Key assumptions

- Metacognitive acts are largely intersubjective phenomenon
- Deficits in metacognition may reflect
  - *Developmental failures*
  - *Atrophy or neurocognitive damage*
  - *Forms of self protection*

### \* Related Terms

- Mentalizing or Mentalization
- Theory of Mind (ToM)
- Mindreading
- Social Cognition
- Emotional Intelligence
- Psychological Mindedness
- Mindfulness
- Observing ego

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### Traditional methods of assessing thoughts about oneself and others

Paradigms in which there are correct or incorrect guesses about mental states

- \* Stories in which participants guess protagonists' intentions
- \* Pictures in which participants guess protagonists' emotions
- \* Tasks where participants guess the source of actions

## Problems for studying synthetic metacognition

- \*Stimuli which are not affect laden
- \*Metacognitive judgments are cued
- \*Meaning is not being made on the basis of integration

What happens when unexpectedly emotionally laden situations occur without a cue to trigger reflection?

## \*Assessment of metacognition within narratives: The Indiana Psychiatric Illness Interview

- \*Interview typically lasts 30-60 min
- \*Interview seeks to offer an opportunity to tell about life and challenges
- \*Unlike symptoms interviews specific aspects of illness/problems are not asked about
- \*Only non-directive comments are suggested
- \*Conversational tone

Lysaker PH, Clements CA, Placak Hallberg C, Knipschure SJ & Wright DE (2002): Insight and personal narratives of illness in schizophrenia. *Psychiatry*, 65, 197-206.

## \*The Indiana Psychiatric Illness Interview

- ❖ Interview consists of 6 sets of prompts which are offered as the interview progresses
  - ❖ Tell me the story of your life.
  - ❖ Do you think you have a mental illness?
  - ❖ Because of this what has and has not changed?
  - ❖ What do you control/what controls you?
  - ❖ How does it affect others/how do others affect it?
  - ❖ What do you see in the future?

## \*The Indiana Psychiatric Illness Interview (IPII)

The goal is a sample within which:

- \*We can a glimpse about how life and the experience of illness are narratized.
- \*There is an opportunity to quantify metacognitive activity

Neither of which is scaffolded.

## \*Assessing metacognition with the IPII

\*IPII narratives are transcribed with identifying information removed

\*Blind raters then rate the transcript for metacognitive capacity using the an adapted version of the Metacognition Assessment Scale-Abbreviated (MAS-A)

## \*MAS-A subscales

- ❖ **Self reflectivity** - knowing one's own thoughts and feelings
- ❖ **Understanding the mind of the other** - knowing others' thoughts and feelings
- ❖ **Decentration** - understanding one is not the center of everything
- ❖ **Mastery** - Using knowledge of mental states to solve psychological problems

## \* Applying the MAS-A to the IPII

MAS-A scores reflect the highest level of complexity achieved in the IPII  
Higher ratings suggest greater metacognitive function

### Ranges

- \*Self-reflectivity (0-9)
- \*Understanding others (0-7)
- \*Decentration (0-3)
- \*Mastery (0-9)

## Anchor points for self reflectivity

S1	Participants are aware that they have mental experiences and that their thoughts are representational in nature
S2	Participants are aware that they are autonomous beings and that their thoughts are their own
S3	Participants can name and distinguish between the different cognitive operations which comprise mental activity (e.g. remembering, imagining, wishing, deciding, and anticipating).
S4	Participants can name and distinguish between significantly different valenced emotions.
S5	Participants can recognize that the ideas they have about themselves and the world are subjective, have changed, or are changeable and/or are fallible.
S6	Participants can recognize that what they expect, think, and want may not match reality.
S7	Participants can form representations of themselves within at least one specific situation, or narrative episode, in which they can describe how different mental activities such as thoughts and feelings influence one another.
S8	Participants are able to recognize a psychological pattern over time, through connecting at least two narrative episodes, describing how the narrative episodes involve similar themes and relationships between different mental activities such as thoughts and feelings.
S9	Participants are able to recognize psychological patterns across their life, synthesizing multiple narrative episodes into a coherent and complex narrative which integrates different modes of cognitive and/or emotional functioning.

## Anchor points for knowing the other

S0	Participants are not aware that they have mental experiences.
S1	Participants are aware that they have mental experiences and that their thoughts are representational in nature
S2	Participants are aware that they are autonomous beings and that their thoughts are their own
S3	Participants can name and distinguish between the different cognitive operations which comprise mental activity (e.g. remembering, imagining, wishing, deciding, and anticipating).
S4	Participants can name and distinguish between significantly different valenced emotions.
S5	Participants can recognize that the ideas they have about themselves and the world are subjective, have changed, or are changeable and/or are fallible.
S6	Participants can recognize that what they expect, think, and want may not match what is possible in reality.
S7	Participants can form representations of themselves within at least one specific situation, or narrative episode, in which they can describe how different mental activities such as thoughts and feelings influence one another.
S8	Participants are able to recognize a psychological pattern over time, through connecting at least two narrative episodes, describing how the narrative episodes involve similar themes and relationships between different mental activities such as thoughts and feelings.
S9	Participants are able to recognize psychological patterns across their life, synthesizing multiple narrative episodes into a coherent and complex narrative which integrates different modes of cognitive and/or emotional functioning.

## Anchor points for decentration

D0	Participants cannot recognize that they are not necessarily the center of other people's mental activities.
D1	Participants recognize that they are not necessarily the center of other people's mental activities (their thoughts, feelings, and emotions) and/or that some of the actions of other people stem from goals and reasons etc. which are not related to the participant.
D2	Participants recognize that others can perceive and/or interpret events in a validly different way than how the participant perceives and/or interprets events.
D3	Participants can recognize that the events that occur in regular life are often the result of complex emotional, cognitive, social, and environmental factors which vary according to the individual people involved. These factors include person-centered factors, such as individual development and life history, as well as the larger political and social context. Participants are further able to perceive the larger world as involving unique individuals who have unique relationships with one another which involve no central organizing theme.

## Anchor points for Mastery

M0	Participants cannot formulate any plausible or implausible psychological challenges.
M1	Participants can identify general distress affecting discuss behavior and psychological processes but cannot plausibly present a psychological challenge.
M2	Participants are able to plausibly describe a psychological challenge.
M3	Participants are able to respond to psychological challenges through gross avoidance or passive activities, such as following others' directions or other actions that grossly reduce distress.
M4	Participants are able to respond to psychological challenges by generally actively avoiding problematic states or by seeking support from others.
M5	Participants are able to respond to psychological challenges by voluntarily engaging in or inhibiting a specific behavior.
M6	Participants are able to respond to psychological challenges by changing how s/he thinks about the problem or him/herself.
M7	Participants are able to respond to psychological challenges by utilizing unique metacognitive knowledge about him or herself in light of the specific challenge.
M8	Participants are able to respond to psychological challenges by utilizing unique metacognitive knowledge both about themselves and a specific other person in the context of a specific challenge.
M9	The participant is able to respond to psychological challenges by utilizing unique metacognitive knowledge about themselves, specific others, others in the general, and the human condition. The participant can take into account human limitations and acknowledge that some pain cannot be avoided and is part of life.

## Reliability

\* Interrater reliability: significant intraclass correlations for all four MAS scales ranging from  $r = 0.61$  (Decentration) to  $r = 0.93$  (total score) - 2 raters rating 25 transcripts<sup>1</sup>.

\* Internal consistency: coefficient alpha = .80,  $p < .05$  (for all four subscales)<sup>2</sup>.

\* Good test-retest reliability (intraclass  $r$  for 3 points: 0.70 - 0.84)

<sup>1</sup>Lysaker, Warman, Dimaggio, et al. (2008). Metacognition in prolonged schizophrenia: Associations with multiple assessments of executive function. *J Nerv Ment Dis*

<sup>2</sup>Lysaker, Dimaggio, Buck et al. (2007). Metacognition within narratives of schizophrenia: Associations with multiple domains of neurocognition. *Schizophr Res* 93: 278-287.

### Validity

- \*Correlations of MAS-A with assessments of
  - \* cognitive insight<sup>1</sup>
  - \* traditional measures of awareness of illness<sup>2</sup>
  - \* assessments of social cognitions using the TAT<sup>3</sup>
  - \* coping style using the Ways of Coping Questionnaire<sup>4</sup>
  - \* Accuracy of self assessment of work performance

<sup>1</sup>Lysaker, Warman, Dimaggio, et al. (2008). Metacognition in prolonged schizophrenia: Associations with multiple assessments of executive function. *J Nerv Ment Dis* 196: 384-389.

<sup>2</sup>Lysaker, Carcione, Dimaggio et al (2005). Metacognition amidst narratives of self and illness in schizophrenia: Associations with insight, neurocognition, symptom and function. *Acta Psychiatrica Scandinavica*. 112, 64-71.

<sup>3</sup>Lysaker, Dimaggio, Daroyanni et al., (2010) Assessing metacognition in schizophrenia with the Metacognition Assessment Scale: Associations with the Social Cognition and Object Relations Scale. *Psychology and Psychotherapy*

<sup>4</sup>Lysaker PH, Erickson MA, Ringer J, et al. (2011). Metacognition in schizophrenia: the relationship of mastery to coping, insight, self-esteem, social anxiety and various facets of neurocognition. *British Journal of Clinical Psychology*. 50(4), 412-424

### Metacognition as a key psychological process involves in psychosis

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Are there unique deficits in metacognitive capacity in schizophrenia?

#### Comparisons of MAS- Scores

	SZ Group1 (n=183)	SA Group2 (n=59)	PTSD Group3 (n=26)	HIV+ Group 4 (n= 51)	F	Post Hoc tests p<.05
Self-reflectivity	4.2(1)	6.0(2)	6.1(2)	6.4(2)	38.39	1<2,3,4;
Awareness of The Other	3.0(1)	4.0(1)	4.3(1)	4.3(1)	30.40	1<2,3,4
Decentration	0.8(1)	1.2(1)	1.5(1)	1.6 (1)	11.12	1<2,3,4
Mastery	3.6(2)	4.0(1)	4.8(2)	6.0(2)	28.0	<3,4; 4>2,3,4
Total	11.6(4)	15.2(4)	16.8(4)	18.3(4)	38.6	1<3,4; 4>2,3,4

Are there metacognitive deficits in both early and later phases of illness of schizophrenia?

#### Metacognitive deficits in first episode patients

	1 First episode psychosis (n=26)	2 Prolonged psychosis (n=72)	3 Substance misuse (n =15)	F P<.05	Post Hoc Comparisons
Age	23.8(3.6)	51.0(6.9)	30.4(5.4)	217.7**	2>1,3
Education (% male)	13.0(1.8) 81%	12.7(1.8) 88%	13.0(1.0) 93%	1.16	
MAS-A					
Self-reflectivity	4.3(1.7)	4.3(1.3)	6.8(1.5)	17.6****	3>1,2
Other	2.3(1.1)	3.0(0.9)	4.2(1.1)	15.9****	3>2>1
Decentration	0.5(0.7)	1.0(0.9)	1.7(1.5)	8.5****	3>2>1
Mastery	3.9(1.8)	3.7(1.6)	4.1(1.5)	0.4	ns
Total	11(4.9)	12(4.1)	17(4.1)	9.1****	3>1,2

\* Vohs et al (2014). Metacognition, social cognition, and symptoms in patients with first episode and prolonged psychosis. *Schizophrenia Research*, 153, 54-59.

Does metacognitive capacity predict functional outcome in rehabilitation?

**\* Self reflectivity and work function over 6 months**

- 56 males with schizophrenia or schizoaffective disorder
- Modal age: Late 40s; Modal education: 12 years
- In outpatient treatment at a VA Medical Center or community mental health center
- Often with a history of multiple hospitalizations
- Prescribed anti-psychotic medication
- Completed 4 of a 6 month vocational placements

Lysaker PH, Dimaggio G, Carcione A, et al., (2010). Metacognition and Schizophrenia: The capacity for self-reflectivity as a predictor for prospective assessments of work performance over six months. *Schizophrenia Research*. 122(1-3), 124-130

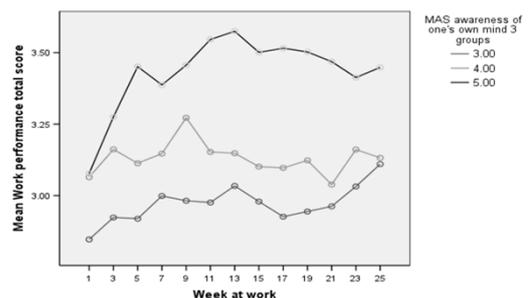
**\* Self reflectivity and work function over 6 months**

■ Participants were divided into three groups based on self reflection

- High
- Medium
- Low

- Work behavior assessed biweekly for 6 months
- Work behavior was compared between groups using a repeated measures ANOVA

Mean work performance over 6 months for groups with differing capacities for self-awareness



\* (n = 21, 22, 13)

Does metacognitive capacity predict symptoms across time?

**\* Correlations of MAS-A with concurrent and prospective symptoms cores (n=49)**

PANSS Component	Baseline MAS-A
Baseline Positive	-.35*
Baseline Negative	-.42**
Baseline Disorganization	-.55**
6-month Positive	-.34*
6-month Negative	-.44**
6-month Disorganization	-.35**
6-month MAS-A	+.68**

\*\*p<.01; \*p<.05

Hamm et al. (2012). Metacognition and Social Cognition in Schizophrenia: Stability and Relationship to Concurrent and Prospective Symptom Assessments *Journal of Clinical Psychology*

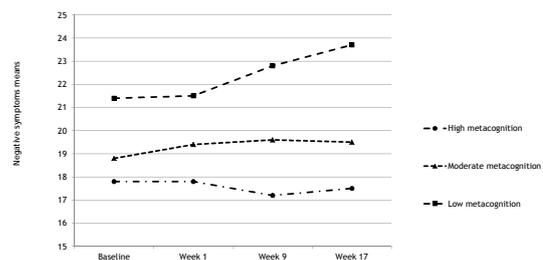
Is metacognition linked with self reported experience of recovery?

Kukla et al (2013) The association of metacognitive capacity and symptom severity with the subjective experience of recovery in schizophrenia. *Psychiatry Res* 209(3): 381-385

RAS Score	Low Self Reflectivity N=18	Basic Self Reflectivity N=27	E	No Decentration N=23	Minimal Decentration N=22	E
	M(SD)	M(SD)		M(SD)	M(SD)	
Confidence/hope	26.83(3.9)	25.48(3.1)	0.35	24.65 (2.7)	27.45(3.62)	<b>5.32*</b>
Asking for help	9.94 (1.6)	9.37(1.27)	0.16	9.04(1.02)	10.18(1.59)	<b>4.42*</b>
Goal - Orientation	16.61(1.8)	16.11(1.8)	0.20	15.78 (1.7)	16.86 (1.8)	2.61
Relying on Others	12.06(2.3)	12.00(1.6)	1.88	11.61(1.6)	12.45 (2.1)	<b>4.14*</b>
No symptom Domination (n=46)	6.89 (1.3)	8.00 (1.5)	<b>4.1*</b>	7.83 (1.37)	7.27 (1.70)	0.25

Does metacognitive capacity predict levels of negative symptoms in a rehabilitation context?

Changes in PANSS negative symptom scores over time in participants with high (17), medium (16), and low (20) levels of metacognition at baseline



Lysaker et al submitted

Does metacognitive capacity mediate the impact of neurocognitive deficits on social function?

\* Metacognition mediates the effects of neurocognition on social function

- N = 102 with schizophrenia or schizoaffective disorder
- Male and female; Age: Late 40s ; Modal education: 12 yrs
- In outpatient treatment at a VA Medical Center or community mental health center
- Often with a history of multiple hospitalizations
- Prescribed anti-psychotic medication
- No hospitalizations within the last month

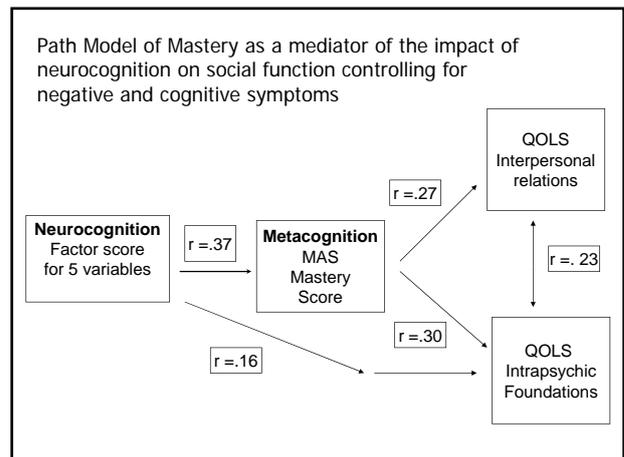
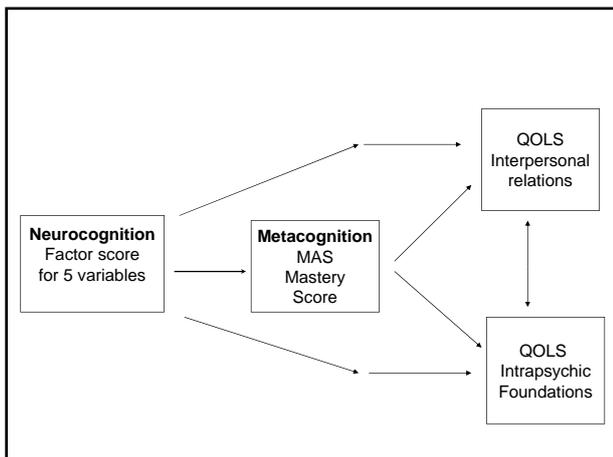
Lysaker PH, Shea AM, Buck KD, et al., (2010) Metacognition as a mediator of the effects of impairments in neurocognition on social function in schizophrenia spectrum disorders. *Acta Psychiatrica Scandinavica* 122(5), 405-413.

### \* Methods

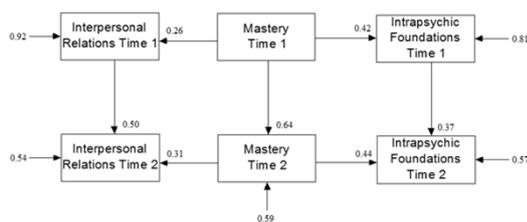
- \* Neurocognitive assessments:
  - \* Wisconsin Card sorting test
  - \* Hopkins Verbal Learning Test
  - \* WAIS III Vocabulary
  - \* WAIS III Digit Symbol
  - \* WMS III Visual Reproduction
- \* Metacognition rated from typed transcribed narratives by a blind rater using the MAS
- \* Assessment of social connections and capacity for relatedness obtained using the Heinrichs Quality of Life scale (QOLS) interview
- \* Symptoms assessed using the PANSS

### \* Procedures

- \* Neurocognitive assessments reduced to one factor using a principal components analysis (Eigenvalue = 2.40) which accounted for 48% of the variance.
- \* Path Analysis using LISREL 8.8
- \* Model fit evaluated with chi-square statistic ( $\chi^2$ ), root mean square error of approximation (RMSEA), Comparative Fit Index (CFI), Goodness of Fit Index (GFI), and the standardized root mean square residuals (SRMR).



### Path analysis Mastery and social function with assessments 5 months apart



Lysaker PH, Erickson MA, Buck KD, et al. (2011). Metacognition and social function in schizophrenia: Associations over a period of five months. *Cognitive Neuropsychiatry*, 16, 241-55

### \* Selected Other Findings

MAS-A scores predict:

- ❖ insight independent of neurocognition<sup>1</sup>
- ❖ probabilistic reasoning biases<sup>2</sup>
- ❖ planning comprehension in life tasks<sup>3</sup>
- ❖ Sedentary life styles<sup>4</sup>
- ❖ Learning potential<sup>5</sup>
- ❖ Emotional distress in the presence of childhood sexual trauma<sup>6</sup>
- ❖ Ability to reject stigma<sup>7</sup>
- ❖ Violence in a forensic sample<sup>8</sup>

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7. maj 2015 – ISPS-dk.dk

1. Lysaker PH, Dimaggio G, Buck KD, et al (2011). Poor insight in schizophrenia: Links between different forms of metacognition with awareness of symptoms, treatment need and consequences of illness. *Compr Psychiatry*. 52(3) 253-260.
2. Buck KD, Warman DM, Huddy V & Lysaker PH (2012). The relationship of metacognition with jumping to conclusions among persons with schizophrenia spectrum disorders. *Psychopathology* 45(5):271-5.
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5. Tas C, et al, M (2012). Intrinsic motivation and metacognition as predictors of learning potential in patients with remitted schizophrenia. *J Psychiatric Res*. 46(8):1086-92
6. Leonhardt BL, Hamm JA, Belanger EA, & Lysaker PH. (In press). Childhood sexual abuse moderates the relationship of self-reflectivity with increased emotional distress in schizophrenia. *Psychosis*.
7. Nabors LM, Yanos PT, Roe D, Hasson-Ohayon I, Leonhardt BL, Buck KD & Lysaker PH. (2014). Stereotype endorsement, metacognitive capacity, and self-esteem as predictors of stigma resistance in persons with schizophrenia. *Comprehensive Psychiatry*. 55(4), 792-798.
8. Bo, S., Abu-Akel, A., Bertelsen P, Kongerslev, M., & Haahr, U. H. (2013). Attachment, mentalizing and personality pathology severity in premeditated and impulsive aggression in schizophrenia. *International Journal of Forensic Mental Health*. 12: 126-138.

## Replication

- \* MAS-A deficits found in schizophrenia samples linked to negative symptoms in Italian and Chinese samples<sup>1,2</sup>
- \* MAS-A deficits found in schizophrenia samples are greater than in healthy control, bipolar or neurotic patients in Israeli, Turkish and Chinese samples<sup>3,4,2</sup>
- \* MAS Deficits have been found in first episode patients and linked to outcomes in Danish, French Canadian and Scottish samples<sup>5,6,7</sup>

## Replications

1. Nicolò et al. (2012). Associations of metacognition with symptoms, insight and neurocognition in schizophrenia in an Italian replication study. *J Nerv Ment Dis* 200(7), 644-647. 300.
2. WeiMing W, Yi D, Lysaker PH & Kai W. (In press). The relationship among metacognition, empathy and psychosis in schizophrenia patients in a post acute phase of illness. *Chinese Journal of Behavioral Medicine and Brain Science*
3. Hasson-Ohayon I, Avidan M, Mashlach-Eizenberg M; et al (In press). Metacognitive and social cognition approaches to understanding the impact of schizophrenia on social quality of life. *Schizophrenia Research*
4. Tas C, Brown EC, Aydemir O, Brüne M, & Lysaker PH (2014). Metacognition in psychosis: Comparison of schizophrenia with bipolar disorder. *Psychiatry Research*, 219(3), 464-469
5. Massé M & Lecomte T. (In Press). Metacognitive profiles in individuals with a first episode of psychosis and their relation to social functioning and perceived social support. *Schizophr Res*.
6. Trauelsen et al (In preparation) Predicting symptom profiles in FEP: The role of DUP, premorbid functioning, adversities and metacognition
7. McLeod HJ, Gumley AI, MacBeth A, Schwannauer M & Lysaker PH. (2014). Metacognitive functioning predicts positive and negative symptoms over 12 months in first episode psychosis. *Journal of Psychiatric Research*, 54:109-15

## Work with other disorders

- \* Metacognitive deficits have been found in PTSD patients and linked to hyperarousal<sup>1</sup>
- \* Metacognitive deficits have been found to moderate the link between alexithymia and cluster C Personality Disorder traits in substance abuse patients<sup>2</sup>
- \* Metacognitive deficits have been found to moderate the link between attachment style Borderline Personality Disorder traits in substance abuse patients<sup>3</sup>
- \* Metacognitive deficits have been found in first onset and prolonged cases of Major Depression and linked to social cognitive function<sup>4</sup>
- \* Higher levels of metacognition among caretakers of adult patients with first episode psychosis predict more positive experiences of caretaking<sup>5</sup>

## Work with other disorders

1. Lysaker PH, Dimaggio G, Wicket-Curtis A, Kukla M, Luedtke BL, Vohs J, Leonhardt BL, James AV, Buck KD & Davis LW. (In press). Deficits in metacognitive capacity are related to subjective distress and heightened levels of hyperarousal symptoms in adults with Posttraumatic Stress Disorder. *Journal of Trauma and Dissociation*
2. Lysaker PH, Olesek K, Buck KD, Leonhardt BL, Vohs J, Ringer J, Dimaggio G, Popolo R & Outcalt J. (2014). Metacognitive mastery moderates the relationship of alexithymia with cluster C personality disorder traits in adults with substance use disorders. *Addictive Behaviors* 39, 558-561
3. Outcalt J, Dimaggio G, Popolo R, Buck KD, Chaudoin-Patzoldt KA, Olesek KL & Lysaker PH. Metacognition moderates the relationship of disturbances in attachment with severity of borderline personality disorder among persons in treatment for substance use disorders
4. Ladegaard N, Lysaker PH, Larsen E & Videbech, (2014) A comparison of capacities for social cognition and metacognition in first episode and prolonged depression. *Psychiatry Research*. 220(3) 883-889.
5. Jansen JE, Lysaker PH, Harder S, Haahr U, Lyse HG, Pedersen MB, Trauelsen AM, & Simonsen E. (2014). Predictions of positive and negative experiences of caregiving in adults with first-episode psychosis: Emotional overinvolvement, wellbeing and metacognition. *Psychology and Psychotherapy*, 87(3), 298-310.

## Segment 2

### Basic parameters

Case illustrations of change

Qualitative Research

MERIT

Metacognitive Reflective Insight Therapy (MERIT)  
An integrative form of psychotherapy for adults with psychosis

## Outline

Metacognition as a key psychological process involves in psychosis

Metacognition as a target for psychotherapy

## Psychotherapy and metacognition

Basic parameters

Case illustrations of change

Qualitative Research

MERIT

\*

\*If metacognitive deficits are a root of dysfunction psychotherapy could be a place to develop metacognitive capacities for:

\*Self reflectivity

\*Awareness of other's mind

\*Mastery

\*Decentration

\*?

\*

\*Such psychotherapy could be integrative and start from different orientations - and not become a new acronym

\*Interventions could be keyed to help persons to practice metacognitive acts consonant with their current abilities

\*Targeting a capacity - not primarily specific content or solving a problem

\*Helping people practice and learn to perform reflective acts

\*Improvements as occurring along on a continuum - not as categorical

## \* Related to but not identical with other concerns

Problem solving

Interpreting or resolving conflicts

Responding to crises

Correcting dysfunctional beliefs

Teaching life skills

Educating

Befriending

Advocating

Promoting development of awareness of illness

Promoting hope

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Basic parameters

Case illustrations of change

Qualitative Research

MERIT

Can change in metacognition be detected across psychotherapy sessions in long term psychotherapy?

## \*Two cases

\*Lysaker PH, Davis LD, Eckert GJ, et al (2005). Changes in narrative structure and content in schizophrenia in long term individual psychotherapy: A single case study. *Clinical Psychology and Psychotherapy*, 12, 406-416.

\*Lysaker PH & Hermans HJM. (2007). The dialogical self in psychotherapy for persons with schizophrenia: A case study. *Journal of Clinical Psychology*, 63, 129-139

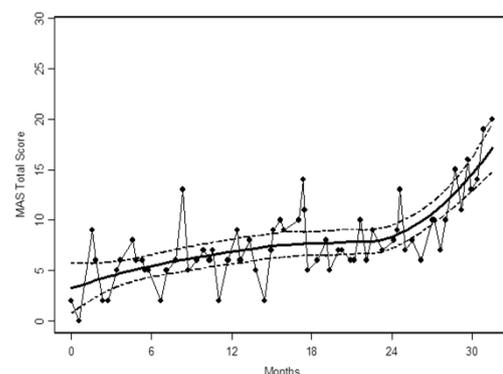
\*Lysaker PH, Buck KD & Ringer J (2007). The recovery of metacognitive capacity in schizophrenia across thirty two months of individual psychotherapy: A case study. *Psychotherapy Research*, 17, 713 - 720

## The case of Grieg

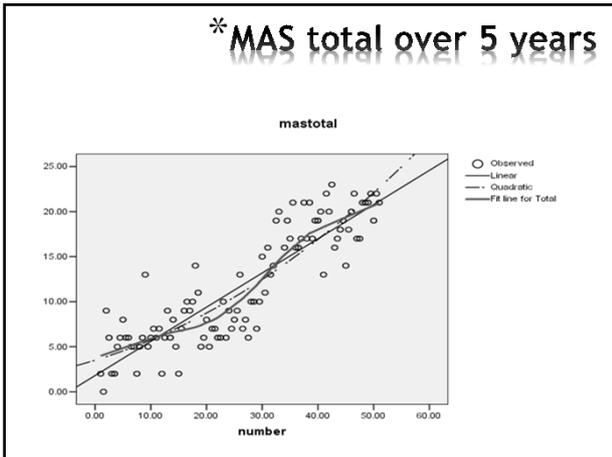
- \*Exploration/confrontation of delusions
- \*Discussion of conflicting feelings about adult children
- \*Processing losses inherent in divorces
- \*Focus on inability to love
- \*Discussion of sense of “self-as-loser”
- \*Detailing his symptoms of mental illness

## \*Methodology

- ✘ Two transcripts per month selected
- ✘ MAS blindly rated for MAS for the first 32 weeks
- ✘ MAS rated for exploratory purposes for the following 2 years
- ✘ Correlation of MAS with time is 0.70;  $p < .0001$



Metacognitive Reflective Insight Therapy (MERIT)  
An integrative form of psychotherapy for adults with psychosis

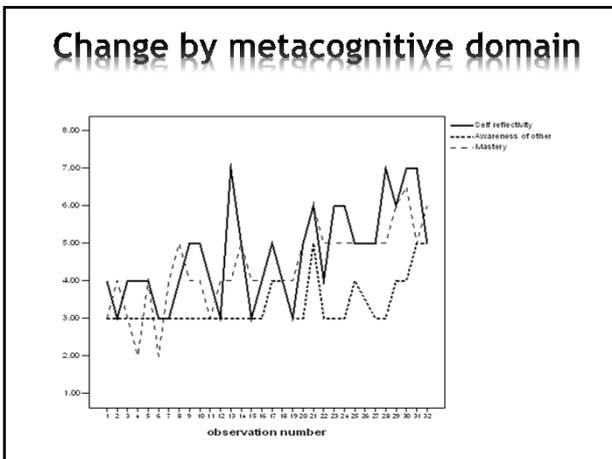
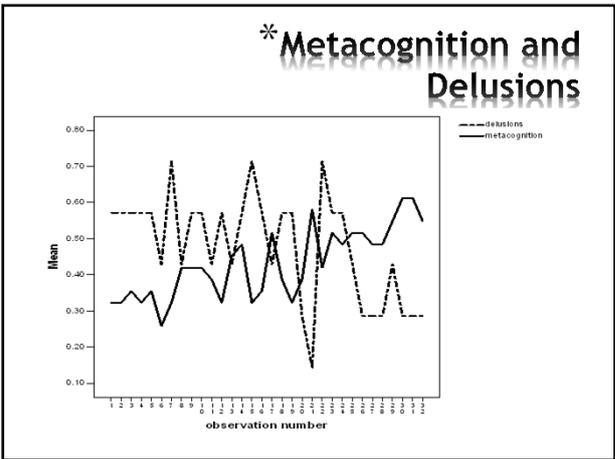


**The case of Scarlatti**

- \*Exploration/confrontation of delusions
- \*Discussion of conflicting feelings about spouse and siblings
- \*Processing childhood trauma
- \*Focus on intense need for approval and sense of inner emptiness
- \*Awareness of loss that comes with the diminishment of delusions

**Methodology**

- ✗ De-identified psychotherapy transcript selected one per month for 32 months
- ✗ MAS and Delusions and Lack of insight from the Positive and Negative Syndrome Scale rated by two different raters (one MAS and one PANSS rater)
- ✗ Raters blind to each others rating and to date or order of transcript



Basic parameters

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MERIT

## Qualitative Interviews:

12 patients receiving metacognitively oriented therapy and 13 patients receiving supportive psychotherapy in a naturalistic setting

All participated in interviews designed to ascertain how each experienced and utilized psychotherapy

Hybrid - Inductive - Deductive Approach with coders blind to condition

Codes for influence of treatment on self experience were derived

## \* Interview questions:

- Is therapy helpful and how?
- What happens when you meet with your therapist?
- How do you know if it is helpful?
- How has your life changed?
- Do you think about your life story differently?
- What will happen in the future in therapy?
- What are your future plans?

## Self-experience codes

Agency: Ability to discern the causes of events in life and use that knowledge to exert some influence in what will happen in the future.

Self Stigma: Recognizing and rejecting stigma.

Self-esteem and self-confidence: Feeling better and more secure about themselves.

Narrative Coherence: Comments about experiencing the present as coherently linked with their past and how life is unfolding.

Regulation of painful affects: Feeling able to understand and tolerate pain.

Reduction in emotional pain: Feeling less emotional pain.

Clarity of thought: Ability to think more clearly about life.

Life goals: Able to set and pursue one's own life goals.

## \* Findings

All participants noted therapy affected self experience in terms of

- Clarity of thought
- Self-esteem and self confidence
- Reduced self stigma
- Increased goal setting

## \* Findings

Participants receiving metacognitive therapy noted unique changes in

- Narrative Coherence
- Affect regulation
- Agency

Participants receiving supportive therapy noted unique changes in

- Reduction in emotional pain

Basic parameters

Case illustrations of change

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MERIT

**\* MERIT: Metacognitive Reflection and Insight Therapy**

A set of values and observable and measurable processes that should be present in an individual psychotherapy session that attends to metacognitive function in psychosis.

Values and processes applicable to a range of approaches.

What core values do therapists need to be comfortable and familiar with to use MERIT?

**Values**

- \*Recovery from severe mental illness is possible.
- \*Patients are active agents in their own recovery in all phases of illness.
- \*The role of the therapist is one of an equal participant or consultant in the thinking process and not one who is prescriptive or holds all the answers.

**Values**

- \*The experiences of persons with psychosis can be understood by those persons and by others who try to understand them.
- \*Greater levels of awareness may lead to emotional distress or pain for any person.
- \*Stigma can be found in all corners of society, has a profound negative impact on the lives of persons with mental disorders, and could be a barrier to the development of metacognitive capacity.

**\* 8 integrative elements**

- Patient agenda is primary
- Insertion of therapist's mind
- Narrative Episode
- Psychological problem
- Foci on intersubjective processes
- Attention to progress
- Stimulation of self reflection - awareness of others
- Stimulation of mastery

**\* 8 integrative elements**

- Elements are not sequential
- The elements will likely amplify one another
- The element describe competent practice that could be carried out from different theoretical positions

**\* 8 integrative elements**

- They do not substitute for therapist reflection.
- They can be assessed.
- They are linked to another by a metacognitive model of dysfunction in schizophrenia

**Agenda**

Goal:	Patients will develop a greater awareness of their wishes and intentions
Facilitated by:	Ongoing and evolving understanding of the patient's agenda
Thwarted by:	Taking verbalizations at face value and ignoring the subtleties and hints inherent during session communication

**Dialogue**

Goal:	Patients will develop a greater awareness of how they are reacting to the therapist.
Facilitated by:	Therapists sharing their own thoughts about the patient and reflecting upon them together.
Thwarted by:	Therapists taking a hierarchical, education-based, fearful, or timid stance.

**Narrative Focus**

Goal:	Patients will develop a greater awareness of their own mental states (e.g., thoughts or feelings) and changes in them within the flow of life
Facilitated by:	Therapists eliciting and exploring narrative episodes
Thwarted by:	Therapists not seeking sufficient details or discussing experiences abstractly

**Psychological Problem**

Goal:	Patients will develop a greater awareness of themselves as confronted with specific dilemmas, challenges, and forms of emotional distress
Facilitated by:	Therapists identifying personal and meaningful psychological struggles using common, understandable language
Thwarted by:	Therapists focusing on preconceived problems or using non-specific symptom focused language

**Reflection upon interpersonal process**

Goal:	Patients will develop greater awareness of how they are relating to the therapist
Facilitated by:	Therapists providing opportunities to think about how patients perceive and relate to the therapist
Thwarted by:	Therapists failing to try to develop a frank and evolving understanding of how they are experienced by patients

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## Perceptions of change

Goal:	Patients will develop greater awareness of their own experience of progress and lack of progress in therapy
Facilitated by:	Therapists eliciting how the patient thinks sessions are progressing
Thwarted by:	Therapists assuming what progress has or has not been accomplished or being unaware that unexpected gain could be discerned

## OPTIMAL STIMULATION OF REFLECTIONS ABOUT SELF AND OTHERS

Goal:	Patients will develop a greater awareness of their wishes and intentions
Facilitated by:	Ongoing and evolving understanding of the patient's agenda
Thwarted by:	Taking verbalizations at face value and ignoring the subtleties and hints inherent during session communication

## OPTIMAL STIMULATION OF MASTERY

Goal:	Patients will develop an increasing ability to utilize metacognitive knowledge when responding to psychological and social challenges
Facilitated by:	Therapists using interventions that are appropriate to the patients' current metacognitive capacity
Thwarted by:	Therapists failing to adjust interventions to patients' capacity for metacognitive mastery

## The beginning sessions

*What will you (the therapist) do?*

"I will listen as carefully as I can."

"I will try to understand exactly what you are telling me and asking me to do."

"I will think with you about the things you are facing."

"I will try to share my thoughts honestly and clearly with you."

## The beginning sessions

*What will we talk about?*

"I'm not exactly sure what we will discuss since I don't really know you or much about your life yet."

"I imagine we'll discuss some about the things you are facing in your life, parts of your past you are comfortable discussing, things you hope to happen in your future, things you feel good about, and other things that are stressful or difficult for you."

\*

## The beginning sessions

*What will I get out of this?*

"I would hope that you'll be able to decide what you think about things that are confusing to you."

"I would hope you understand things about yourself better."

"I hope you'll be able to find a way to get the kinds of things you want in life whatever that might include, so you can have a more rewarding and meaningful life."

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## The beginning sessions

*What if I don't know what to say?*

"That happens to almost everyone."

"It will be ok if you are not sure what to say... we have plenty of time."

"You don't have to feel there is a spotlight on you."

*I don't really trust you.*

"That's ok, I don't trust people myself right away."

## Common Barriers

*A patient with negative symptoms is silent or says they have no thoughts:*

"Your mind is empty at the moment... that's all you can tell."

"Are you having no thoughts or is it just hard to say what's on your mind to me?"

"Is there something I can say that would help?"

"Perhaps if we can talk today and a few other times that will help ideas to come into your mind."

## Common Barriers

*A patient with minimal insight says he or she has no problems and is here because of X:*

"Ok, I'd guess we might talk about how it is X has come to make you be here."

"I'm interested in how you see this and am hoping you will explain it to me."

"I imagine this is a tough position for you, maybe we can still talk about something that would be helpful to you."

## Common Barriers

*A patient can speak of only one subject (e.g., a delusion or preoccupation), allowing little interjection by the therapist:*

"It seems it is important that we focus on this one subject today."

"How would you like me to respond to this?"

"If we talk about this, perhaps eventually knowing my thoughts would be helpful?"

## Common Barriers

*A patient can speak of only one subject (e.g. a delusion) and asks for affirmation of that:*

"I promise to tell you my opinion and want to but there is still a

lot I need to understand before I can have a real idea about this."

## Common Barriers

*A patient appears overly willing to please:*

"I'm worried you are feeling some pressure to say the right thing or make sure I think you are a good person."

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### Common Barriers

*A patient's speech is significantly disorganized:*

"You are telling me many different things... seems like there is a lot for us to sort out."

"I am getting the idea that there are many different things that might be difficult to understand."

### Common Barriers

*A patient appears angry or hostile*

"This seems like an uncomfortable spot for you. Perhaps it is hard to imagine our talking together could be helpful?"

"I have the sense our conversation somehow feels insulting or not helpful to you. Is there anything I can do to help make that go away?"

### Ambivalence is to be expected

*A patient notes they are not used to thinking with people:*

"I can see how our conversations may be different than others. Allowing others to know your thoughts and then think with you may take some getting used to."

*A patient notes they don't think they have anything anyone would want to hear:*

"What you have to say is important to me. Your thoughts, your past and your future matter to me. I hope I'll be able to keep hearing about them and thinking with you."

### Ambivalence is to be expected

*A patient notes it is threatening to allow someone else to know them:*

"What you are saying is important to me but it is you who decides what we talk about, and you can put on the brakes at any point and I won't be upset."

"Is there something you would like me to do when I listen to you or share my thoughts with you?"

*A patient notes the emergence of painful or traumatic memories:*

"I think some thoughts came up that you did not expect. What would you like to do with them?"

"You are having upsetting thoughts. I am comfortable hearing more about them, but if you want to change the subject or drop these thoughts altogether, all you have to do is to let me know."

### Ambivalence is to be expected

*A patient may be so abstract that it is unclear what they are discussing:*

"I am having a hard time forming an idea about you. Can we talk about specific times and places?"

"I notice when we talk about specific times and places, it seems like that frustrates you, like I should know that already."

"Without talking about events in more detail I can't imagine what you've experienced."

### \* Other considerations

Time frame: This may not be a brief therapy

With awareness may come pain and a need to attend to potential issues of suicide

+ Traumatic memories may emerge

+ Loss of the sick role may be more difficult than expected

+ Patient may discover a less happy version of the past

### \*Other considerations

- ✘ There may be ceiling effects
- ✘ Transference and counter transference may be unexpectedly powerful
- ✘ The unexpected place of hostility

### Other considerations

- \* Later sessions may involve more of a focus on the relationship and less on identifying psychological problems
- \* Breaks in therapy are not unexpected or necessarily undesirable.
- \* Termination

### Other Research

Recent case reports: Hillis JD, Leonhardt BL, Vohs JL, Buck KD, Salvatore G, Popolo R, Dimaggio G, & Lysaker PH. (2015). Metacognitive reflective and insight therapy for persons in early phase of a schizophrenia spectrum disorder. *Journal of Clinical Psychology*, 71(2), 125-135.

One open trial of 11 patients: Bargaquast R, Schweitzer RD. Enhancing sense of recovery and self-reflectivity in people with schizophrenia: A pilot study of Metacognitive Narrative Psychotherapy. *Psychology and Psychotherapy*. 2014

RCT underway: van Donkersgoed RJM, S de Jong S, van der Gaag M, Aleman A, Lysaker PH, L Wunderink L, Pijnenborg GHM. (2014). A manual-based individual therapy to improve metacognition in schizophrenia: protocol of a multi-center RCT. *BMC Psychiatry* 14(1), 27

### \*The future

- \* International groups working in close communication, recording process and outcome.
- \* Therapy trials.
- \* Work with more diverse forms of SMI.
- \* Theoretical development and integration within the larger scientific community
- \* Ongoing supervision and recruitment of early career professionals and students.

### \*Limitations

- \* This is a developing method
- \* The treatment may be time consuming
- \* Not everyone is likely to master this approach
- \* Replication is needed
- \* Assessment methods may be further developed