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Self-disturbances in Schizophrenia: History, Phenomenology, and Relevant Findings From Research on Metacognition

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With a tradition of examining self-disturbances (Ichstörungen) in schizophrenia, phenomenological psychiatry studies the person's subjective experience without imposing theoretical agenda on what is reported. Although this tradition offers promising interface with current neurobiological models of schizophrenia, both the concept of Ichstörung and its history are not well understood. In this article, we discuss the meaning of Ichstörung, the role it played in the development of the concept of schizophrenia, and recent research on metacognition that allows for the quantitative study of the link between self-disturbance and outcome in schizophrenia. Phenomenological psychiatrists such as Blankenburg, Binswanger, and Conrad interpreted the Ichstörung as disturbed relationship to self and others, thus challenging recent efforts to interpret self-disturbance as diminished pure passive self-affection, which putatively "explains" schizophrenia and its various symptoms. Narrative is a reflective, embodied process, which requires a dynamic shifting of perspectives which, when compromised, may reflect disrupted binding of the components of self-experience. The Metacognition Assessment Scale—abbreviated as MAS-A—suggests that persons with schizophrenia tend to produce narratives with reductions in the binding processes required to produce an integrated, embodied self within narrated life stories, and in interactive relationships with others.

Key words: Ichstörung (self-disturbance)/embodied cognition/metacognition/narrative/phenomenological psychiatry/psychosis/quality of life/recovery

Introduction

With a tradition of examining self-disturbances (Ichstörungen) in schizophrenia, phenomenological psychiatry studies the person's subjective experience without imposing theoretical agenda on what is reported, ie, to the extent that this is humanly possible. Phenomenological descriptions can then be organized to form provisional hypotheses for experimental testing. Although this tradition offers promising interface with current neurobiological models of schizophrenia,[1] the concept of Ichstörung and its history are not well understood. Some commentators[2,3] suggest that Jaspers (1913)[4] "introduced the concept of 'Ichstörungen'." However, Jaspers[4] neither coined nor used the term (C. Scharfetter, personal communication to A.L.M., May 10, 2010). It was rather Jaspers' contemporaries Gruhle, Kronfeld, Mayer-Gross, Schilder, and later Schneider who developed the "Ichstörung." Gruhle traces the history back to fin-de-siècle French psychiatry (which we elaborate in a forthcoming publication), and Scharfetter (personal communication) to the nineteenth-century Germans, Heinroth, Kahlbaum, and Griesinger. In this article, we discuss the meaning of Ichstörung, the role it played in the development of the concept of schizophrenia, and recent research on metacognition that allows for the quantitative study of the link between self-disturbance and outcome in schizophrenia.

The Phenomenology of Ichstörungen: Overcoming the Search for a Theoretical Essence of Schizophrenia

Akin to the efforts to define Ichstörung, there was widespread interest at the time in the ideas of splitting and breakdown of integration between self-components in early accounts of dementia praecox, renamed schizophrenia (Bleuler[5,6]). As can be seen from table 1, most formulations of a fundamental disturbance (Grundstörung) were based on a splitting and/or weakening of the I's binding of self-components.[7] Scharfetter summarizes the fin-de-siècle efforts: "The common interpretation dissociation, the separation of psychic functions, was a certain psychic

Table 1. Fin-de-siècle Theories of Core Dysfunction up to Jaspers

Authors	Theoretical Core Dysfunction
Wernicke[8–10]	Sejunction psychosis (interruptions in association pathways)
Weygandt[11]	Decay of apperception (Wundt), apperceptive stupefecation (Verblödung)
Sommer[12]	Slowed ideation, unable to disengage attention, visual fixation
Tschich[13], Maselon[14], Kraepelin[15,16], Ziehen[17], Aschaffenberg[18]	Insufficient attention
Freusberg[19], Schüle[20]	Weakening of consciousness (reduction of force in conscious activities)
Lehmann[21]	Reduced energy of consciousness
Vogt[22]	Narrowing of consciousness, captivated by one idea
Pelletier[23]	Absence of guiding principle or goal
Gross[24]	Dementia sejunctiva, disintegration of consciousness (Bewusstseinszerfall) with parallel running series of associations
Stransky[25,26]	Intrapsychic ataxia, functional disharmony between cognitive components, "schism"
Jung[27]	Dissociation as an abaissement du niveau mental (Janet)
Löwy[28]	Emptying of intention, reduced goal directedness as core to stupefecation (Verblödungsprozess; Kraepelin, Weygandt)
Bleuler[5,6]	General loosening of associations with fissure of personality
Berze[29,30]	Insufficiency of mental activity, hypotonia of conscious mental acts
The critics	
Jaspers[4,31–35]	Nonunderstandability of primary symptoms betray underlying neurobiological process not grasped by one theory
Gruhle[36,37]	Primary symptoms are independent, cannot be summarized by one catchy or trendy term
Mayer-Gross[38,39]	Phenomenological method fallible, not absolute; disrupted memory plays a role in modified persistence of delusions in residual state

Note: Reprinted from Mishara and Schwartz[7] Copyright (2013), with permission from S. Karger AG, Basel (in part based on Berze and Gruhle[36], Jung[27], and Berze[30]; see Scharfetter[40] for theories prior to fin-de-siècle).

impairment: a weakness of the psyche to bring and hold together various functions into one integrated…field. This low synthetic capacity of the psyche kept some personalities vulnerable to insanity."[40(p37)] Similarly, Gruhle observed that Stransky's[25,41] concept of intrapsychic ataxia, as "functional disharmony" between cognitive and affective components, was based on a "schism, which Bleuler then formulated as schizophrenia"[42(p25)] (our translation).

Jaspers and other members of the Heidelberg School of Psychiatry (Gruhle, Mayer-Gross, and Schneider) introduced phenomenological method to psychiatry to overcome the initial tendency to merely verbally assert a theoretical "essence" of schizophrenia, which putatively "explains" all its symptoms, without basis in replicable method (see review Mishara and Schwartz[7]). Schneider[43–45] went on to systematize the phenomenology of self-disturbances in schizophrenia, which he included among its first-rank symptoms (well known because Schneiderian auditory hallucinations—2 or more voices conversing—were incorporated into Diagnostic and Statistical Manual of Mental Disorders [DSM]-III/-IV/IV-TR but removed from DSM-5).[46] Schneider describes the self-disturbances as: "certain disturbances in the experience of self that are highly specific for schizophrenia…These disturbances in the sense of 'I', 'me' and 'mine' (Meinhaftigkeit) consist in the feeling that what one is and does is under the direct influence of others… These disturbances of self (Ichstörungen) are found in thought withdrawal, and the influencing of thought, feeling, impulse (drive) and will"[45(p120)] (translation modified, our insertions). Although there is no equivalent for "Ichstörung" in the Anglo-American literature,[47(p168)] some symptoms are nevertheless well known due to translational efforts (eg, Spitzer[47] and Mellor[48]): thought withdrawal, thought insertion, thought broadcasting, somatic passivity experiences, "made" feelings, impulses and volitional acts, delusions of control and reference, breakdown in unitary experience of self, etc. (table 2).

Schneider was wary of any theory of self, which could not be studied empirically.[7,47] Nevertheless, the phenomenological psychiatrist Blankenburg[49] challenged Schneider's assumption that the "me-ness/

Table 2. Patient Statements Exhibiting Ichstörung (From Spitzer[47])

"I feel that it is not I who is thinking."
"My thoughts are not thought by me. They are thought by someone else."
"This (thing, event) directly refers to me."
"My thoughts can influence (things, events). This (event) happens because I think it."
"To keep the world going, I must not stop thinking/breathing, otherwise it would cease to exist."
"My experience has changed somehow. It is not real somehow such as I myself am somehow not real."
"Things do not feel real. There is something between me and the things and persons around me, something like a wall of glass between me and everything else."
"Time has disappeared. Not that is longer or shorter, it's just not there; you could say there are bits of time, small pieces, shaken and mingled, or you could say there is no time at all."

mineness" (Meinhaftigkeit) of experiences is disrupted in the Ichstörung. He further questioned the view that a prereflective sense of self must accompany each of our experiences, which is then somehow removed in somatic passivity or other Ichstörung symptoms. Rather, something is added in the Ichstörung, a feeling of disrupted or "changed" relationship to both self (Veränderung des Ichbezugs) and others, such that the self is permeable in a way that it was not previously. It is now susceptible to external influences, the "made" feelings, and related phenomena. The disrupted I-consciousness, which is a *reflexive* binding of components,[49,50] is unable to transcend, detach, or take distance from its current perspective resembling a dream state[51–57] (table 3).

Mayer-Gross[65] comments: "The schizophrenia patient may be characterized as an 'awake-sleeper' (wacher Schlafender)"(p527) (our translation). Psychosis may be a state in which reflective, flexible self-awareness is reduced across long-range cortical areas and their connectivity,[66–68] possibly mediated by subcortical mechanisms, an idea broached by Berze, Kraepelin, and others.[7]

Spitzer and colleagues[69] comment: "When Blankenburg applies the expression 'self-relationship', this is not a solipsistic-I, without relationship to world." It, therefore, could not be diminished prereflective self-awareness as pure passive self-affection (see "Discussion" section). It is rather "the reflective self-awareness of thinking, which allows persons to distinguish self from others and thereby relate to others"[69](p247) (our translation).

Blankenburg writes: "On the one hand, we are our own I. On the other hand, we can speak of it as if it were another, someone else, even a stranger."[49](p185) (our translation). There is thus an ongoing tension between components or reference frames when experiencing the self. Precisely because self-relationship is disrupted in the Ichstörung, the self-components are "released" and appear on their own in the passivity symptoms,[49] and/or autoscopy or the "feeling of a presence,"[70] in which one sees (or experiences) a "double" as external to one's current vantage point. As Jaspers reports, this sometimes occurs in early psychosis.[31] Access to autobiographical memory is compromised and the person's biography is split into 2 parts, a before and after first psychosis.[1,4,49,71] For example, the *reflexive* awareness that "I move myself"[49,50] requires the binding of components and ability to flexibly shift reference frames, which break down in delusions of control, motor and cognitive "automatisms," the "splitting"[7] or doubling of self and other manifestations of Ichstörung.

Ichstörung and Metacognition

Conceptualizing Ichstörung as a disruption in the binding of the components of embodied self-experience has important implications for quantitative research. This disruption should be evident when persons with schizophrenia produce narratives of their lives while confronting psychological and social challenges. The representations of self and others in the narratives should exhibit reductions in (1) cognitive-emotional integration, (2) the decentering processes, which enable disengagement and shifting of perspectives when considering self and others, and (3) metacognitive knowledge in responding to the challenges.

Obtaining Personal Narrative Samples in Schizophrenia

Personal narratives are created by placing a broad array of information in to storied form. This bestows meaning to events both by placing them in particular contexts and by making them understandable to others. Disturbances in embodied self-experience are detectable within narratives when embedded representations of self and others lack integration. During narrative portrayals of self and others, the disturbances become evident when the range of mental activities (eg, thoughts, feelings, intentions, wishes, plans) are not woven together into a coherent whole.

The Indiana Psychiatry Illness Interview (IPII)[72] was developed to sample this narrative process of integrated representation of self and others during semistructured interview of persons with schizophrenia and active psychosis. Participants are asked (1) to tell the story of their

Table 3. Phenomenologists Following Jaspers

Authors	Phenomenological Hypothesis Concerning Delusions and Schizophrenia
Matussek[58,59]	Loosening of the "natural" connectedness between objects (Auflockerung des naturlichen Wahrnehmungszusammenhang) results in the "releasing" of expressive physiognomic qualities
Conrad[53]	Reduced energy capacity, release of the Gestalt physiognomic qualities (protopathic functional change of the Vorgestalt) (Hughlings Jackson, H. Head, von Weizsaecker)
Kisker[60]	Reorganization of field of consciousness
Ey[61]	Disruption of field of consciousness based on Hughlings Jackson's hierarchical model of brain function
Binswanger[51,52]	Loosening of mnemic schema, failure of self-transcendence, similar to dreaming, loss of distance, temporal shrinking to the present
Blankenburg[62–64]	Loss of common sense, becoming independent of the delusional theme, inability to exchange perspectives or shift reference frames
Blankenburg[63,64]	Only self-critical phenomenological method and awareness of limits will prevent a return to subjectivism in psychiatry

Note: Phenomenologists tempered by Jaspers' sobering critique take more modest position regarding phenomenologically generated hypotheses concerning individual symptoms. Reprinted from Mishara and Schwartz[7] Copyright (2013), with permission from S. Karger AG, Basel.

lives, (2) if they think they have a mental illness, (3) how this condition has/has not affected different facets of their lives, (4) how they control and are controlled by their condition, (5) how their condition affects and is affected by others, and (6) what they expect in the future. This method does not ask participants whether they have certain experiences but offers an opportunity to produce a narrative and, within that narrative, enables representations of self and others on different levels of complexity or integration to emerge. It thereby reduces the danger of suggestibility that the interviewed person just assents to how the interviewer formulates the participant's experience (*leading the witness*), which sometimes happens when investigators are predisposed, or particularly invested, to see their own theories in the data (see "Discussion" section).

In conjunction with the IPII, the Metacognition Assessment Scale—abbreviated as MAS-A[73]—measures the extent to which representations of self and others integrate a range of mental activities into a coherent whole. In this context, metacognition refers to the various mental activities, which involve thinking about thinking.[74] These activities vary to the extent to which they involve focusing on discrete mental activities such as thinking about a specific isolated thought (eg, Wells[75]) vs the integration or synthesis of different experiences into a complex representation of self and others and then a reflection about that more embracing representation.[76,77]

The MAS-A was developed for use in the study of self-experience in psychosis. It contains 4 scales: "Self-reflectivity," the comprehension of one's own mental states; "Understanding of others' minds," the comprehension of other individuals' mental states; "Decentration," the ability to see others as having independent motives from self; and "Mastery," the ability to use one's mental states to respond to social and psychological dilemmas. It is assumed that the metacognitive capacities assessed by each scale are semi-independent. Higher scores reflect abilities to perform metacognitive acts, which call for increasing levels of integration. Each subscale of the MAS-A contains tiers, which reflect increasing complexity and the participant's maximum capacity for integration. As an example of how the MAS-A assesses increasing levels of integration within self-representation, the lowest scores of the self-reflectivity scale indicate that participants have a minimal awareness that there are thoughts in their own minds. At lower-middle levels, participants distinguish different mental operations and emotions from one another but still do not reflect about possible factors, which influence their mental states. At higher-middle levels, participants reflect about their own mental states, noticing the fallibility of their own conclusions and wishes, but still without integrating these into a more complex whole. In higher ranges of the scale, participants are not only integrating thoughts and feelings in the moment, but stitching together single narrative episodes, which the participant then weaves together to form a coherent life story.

Previous studies report acceptable levels of interrater reliability and internal consistency as well as stability of measurement across a 6-month interval.[73,78,79] Regarding validity, MAS-A scores have been linked with independent assessments of awareness of illness, cognitive insight, social schema, and self-reported coping style.[73,80–82]

Ichstörungen and Findings of Research Using the MAS-A in Schizophrenia

Returning to the Ichstörungen, research on the levels and correlates of metacognition in schizophrenia has been consistent with several predictions based on our reading

of the Ichstörungen. First, research using the MAS-A has revealed that persons with schizophrenia tend to produce narratives, which suggest an absence of the binding processes required to produce an integrated self within the narrated story. When compared to the narratives of persons with nonpsychiatric prolonged medical conditions, and the narratives of family member of persons with schizophrenia, persons with schizophrenia tend to produce impoverished representations of themselves and others during IPII interview.[83] The mean MAS-A scores indicate that many persons with schizophrenia tend to (1) struggle to identify basic emotions in themselves, (2) grapple with distinguishing their own mental operations from others, (3) have difficulty viewing events from multiple perspectives, and (4) not make use of knowledge, in contrast to other groups, of their own thinking when facing challenges.[83]

Regarding the further ramifications of the impact of disturbances in the binding of embodied self-experience components, 4 studies in the United States, the United Kingdom, Italy, and Israel indicate that lower levels of metacognition have been linked with heightened levels of negative symptoms.[73,84–86] One study found MAS-A scores predicted future levels of negative symptoms even after controlling for concurrent levels of negative symptoms.[79] With regard to functional status and treatment outcomes, less integrated representations of oneself and others have been found to predict lower levels of functional competence,[87] the establishment of lower levels of therapeutic alliance,[88] and poorer response vocational rehabilitation[89] and cognitive remediation,[90] independently of symptoms. Lower levels of metacognition have also been correlated with reduced reports of subjective experience of recovery.[91] The Mastery subscale of the MAS-A has further been found to mediate the impact of neurocognitive deficits on social function after controlling for symptoms.[92] Danish researchers found that lower MAS-A scores predicted histories of greater physical aggression among forensic patients with schizophrenia.[93]

Discussion

The concept of Ichstörung played an important role in the early and later conceptualization of schizophrenia. In this contribution, we noted it is often misunderstood and suggested that from its earliest formulations through to our contemporary era, Ichstörung is best conceptualized as involving a disruption in the processes with which complex ideas of the self and other are formed interactively in relationship. This results in the collapse of self-experience and ultimately goal-directed behavior. In support of this view, we provided a brief overview of self-experience in schizophrenia as studied within personal narratives.

Importantly, this view stands in marked contrast to other work, which suggests Ichstörung is disrupted prereflective self-awareness or "pure" passive self-affection[2,3,94] based on the theological thinker Henry.[95–97(p430),98] As we noted in previous contributions,[50,68,99–102] this other view claims that the Ichstörung is a disturbance in the purity of a self-essence defined as "irrelational" and "non-reflexive" (without parts or components). Psychosis is viewed as "solipsism," a failure of pure-self (nonrelational, without distance, even to itself) to affect itself prior to any relationship outside self. In contrast, the phenomenological view we present here proposes that psychosis involves disturbed relationship not "irrelational" solipsism. Nevertheless, those who interpret the Ichstörung as pure passive self-affection, call it "ipseity" (from Latin for self/itself),[97] an "essence [which] does not realize itself in time."[3,95] Without relationship to world, others, body or self, it cannot be mapped onto neurocognitive mechanisms. In its pureness, it is not related to "the continuity over time" of identity,[97(p430)] nor mediated by narrative, interaction, or memory of any sort (including autobiographical memory). In short, these authors claim a merely verbally asserted "essence explains" the various symptoms of schizophrenia. As "ineffable"[97] and "non-conceptual,"[3] it is a speculative abstraction, which its authors nevertheless express as a concept in words. As we have indicated,[100–102] there is no methodological, reflective, or descriptive access to prereflective self-awareness as pure passive self-affection—an abstraction, which cannot be directly studied or measured—and therefore, requires a leap of faith. As already noted, Jaspers and other members of the Heidelberg School[7] introduced phenomenological method precisely because they were critical of efforts to explain all symptoms of schizophrenia in terms of a merely verbally asserted "essence," which cannot be studied. To cite Gruhle in this regard, he directly criticizes "those authors who seek to characterize the essence of schizophrenia with a single catchword or catchy phrase…which everyone then embraces as sounding important. Such concepts are far too general to help us understand schizophrenia and…one becomes able to arbitrarily derive all kinds of symptoms from the basic disturbance…"[36] (our translation). We find that Gruhle's criticism still applies today.

In summary, we do not agree with the view that a merely verbally asserted (but scientifically untestable) "essence" of schizophrenia as "diminished ipseity" or the equally untestable "hyper-reflexive ipseity"[2,3,94,97] could "explain" all the symptoms of schizophrenia (see reviews Mishara[50,68,99–102]). Apart from these concerns, it remains unclear to what extent the self-disturbances (Ichstörungen) are heterogenous, and/or specific to schizophrenia, and what the underlying neurobiological mechanisms may be (we address these questions in a subsequent contribution). One limitation to date of the work presented here is that we currently lack a comprehensive assessment of metacognitive function in persons with nonpsychotic psychiatric disorders. Therefore, the extent to which the metacognitive deficits are specific to persons with psychosis remains unclear. Studies are underway addressing these issues and we anticipate discussing this in future work.

Conclusions

In this contribution, we discussed the meaning of Ichstörung, the role it played in the development of the concept of schizophrenia, and recent research on metacognition that allows for the quantitative study of the link between self-disturbance and outcome in schizophrenia. The MAS-A suggests that persons with schizophrenia tend to produce narratives with reductions in the binding processes required to produce an integrated, embodied self within narrated life stories.

Narrative is an embodied interactive process, which requires a shifting of reference frames with regard to one's own body self in relation to others.[100] It is an act of reflective "self-transcendence," a perspective taking,[1] which gains metacognitive perspective precisely by sharing with others.[7,103–105] In this regard, we suggest that these issues have important implications both for research and practice. If we understand Ichstörung as the loss of an integrative capacity in the binding of embodied self-components, then interventions such as metacognitively oriented psychotherapy,[106,107] which assist persons to evolve increasingly complex ideas about themselves and others, may be important for a comprehensive recovery treatment program. Such treatments would call for more than skill building by targeting nuanced interpersonal processes, which become activated when individuals attempt to find meaning in their lives while facing challenges and when narrating to others. With regards to clinical neuroscience, our account of Ichstörung is relevant in that it offers testable predictions about the lack of coordination of brain activity when reflective self-awareness may be compromised due to reductions in the long-range connectivity of cortical areas in schizophrenia.[7,66–68,101,102]

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