Schizophrenia Research 243 (2022) 1–8

Contents lists available at ScienceDirect

Schizophrenia Research

journal homepage: www.elsevier.com/locate/schres

What is obsession? Differentiating obsessive-compulsive disorder and the schizophrenia spectrum

Andreas Rosén Rasmussen [a,b,d,*], Josef Parnas [b,c,d]

[a] Mental Health Center Amager, University of Copenhagen, Broendby, Denmark
[b] Mental Health Center Glostrup, University of Copenhagen, Copenhagen, Denmark
[c] Center for Subjectivity Research, University of Copenhagen, Copenhagen, Denmark
[d] Faculty of Health and Medical Sciences, University of Copenhagen, Copenhagen, Denmark

ARTICLE INFO

Keywords:
Schizotypal disorder
Psychosis
Self-disorder
Phenomenology
Subjective experience
Diagnosis

ABSTRACT

Obsessive-compulsive symptoms are frequent in schizophrenia-spectrum disorders and often cause differential diagnostic challenges, especially in first-contact patients. Drawing upon phenomenology of cognition, we critically review classic and contemporary psychopathological notions of obsessive-compulsive phenomena and discuss their relevance for differential diagnosis between obsessive-compulsive disorder (OCD) and schizophrenia-spectrum disorders. The classic psychopathological literature defines true obsession as intrusions with intact resistance and insight and regards these features as essential to the diagnosis of OCD. In schizophrenia, the classic literature describes pseudo-obsessive-compulsive phenomena characterized by lack of resistance and an affinity with other symptoms such as thought disorder and catatonia. By contrast, the notions of obsession and compulsion are broader and conceptually vague in current diagnostic systems and research instruments. Here, these phenomena overlap with delusions as well as various subjective and behavioral anomalies, which we discuss in detail. Furthermore, we examine a link between obsessive-compulsive phenomena and disturbances of basic structures of experience in schizophrenia-spectrum disorders addressed in contemporary psychopathological research. We suggest that these experiential alterations have relevance for differential diagnosis and early detection in this complex symptom domain.

1. Introduction

Obsessions and compulsions are emblematic symptoms of obsessive-compulsive disorder (OCD) but similar phenomena occur in affective disorders and schizophrenia-spectrum disorders (De Haan et al., 2015). Approximately 30% of patients with schizophrenia report obsessive-compulsive symptomatology (Swets et al., 2014), and several empirical studies have found a clinical diagnosis of OCD to be associated with increased risk of a subsequent diagnosis of schizophrenia (Cederlof et al., 2015; Cheng et al., 2019; Meier et al., 2014). Thus, the differential diagnosis between OCD and the schizophrenia spectrum may be challenging, especially in first-contact patients (Poletti and Raballo, 2019). Nonetheless, detecting a potentially underlying schizophrenia-spectrum disorder is important for early intervention and adequate treatment of psychotic symptoms as well as clinical management of obsessive-compulsive symptoms—e.g., a co-morbid schizotypal personality disorder predicts poor response to standard pharmacological and behavioral interventions in OCD (Poyurovsky, 2015).

The diagnostic difficulty is amplified by at least three factors. First, in patients' layman language the term ‘obsession’ is polysemic and may refer to a variety of unpleasant, unwanted or involuntary experiences such as anxious thoughts, ruminations, thought insertion, delusions, hallucinations, and obsession-like phenomena. Only a careful exploration of the patient's experience can clarify the correct psychopathological classification (Nordgaard et al., 2013). Second, the contemporary definition of obsession as “recurrent”, “intrusive and unwanted” thoughts appears phenomenologically non-specific. Third, the contemporary diagnosis of OCD allows obsessions exhibiting delusional intensity. An apparent overlap of current notions of OCD-symptomatology with delusions and other anomalies of subjective experience identified in the schizophrenia-spectrum disorders (Burgy, 2007; Gross et al., 1988; Rasmussen and Parnas, 2015) may not only be problematic for categorial clinical diagnosis but also for research approaches emphasizing a dimensional approach to psychopathology (Gillan et al., 2017;

* Corresponding author at: Mental Health Center Amager, University of Copenhagen, Digevej 110, 2300 Copenhagen S, Denmark.
E-mail address: Arr@dadlnet.dk (A.R. Rasmussen).

https://doi.org/10.1016/j.schres.2022.02.014
Received 30 July 2021; Received in revised form 28 December 2021; Accepted 9 February 2022
Available online 23 February 2022

Krueger et al., 2018). Such a dimensional approach presupposes that the involved symptom dimensions are conceptually distinct.

In this paper, we critically review classic and contemporary psychopathological notions of obsessive-compulsive phenomena and discuss their relevance for the differential diagnosis between obsessive-compulsive disorder (OCD) and schizophrenia-spectrum disorders. Furthermore, we discuss a link between obsessive-compulsive phenomena and disturbances of basic structures of experience in schizophrenia-spectrum disorders.

2. The canonical European concept of obsession

In the early 20th century, the term 'obsession' was widely used in a broad sense about *intrusive* experiences, including hallucinations, overvalued ideas, affects like rage, and impulsive acts like pyromania, kleptomania etc. (Burgy, 2005). However, Karl Jaspers, in continuity with previous work by Westphal (Westphal, 1877), defined obsession "in the strict sense" ("true obsession") as *a struggle* against intrusive ideas that appear non-sensical and "alien" to the personality (Jaspers, 1913/1963). Kurt Schneider later gave a similar definition: "Obsession is what is meant when somebody cannot repress contents of consciousness although he assesses them as being nonsensical or as dominating without reason" (quoted in (Burgy, 2007)). In contrast to normal doubt, the person has *simultaneous* knowledge about the absurdity or irrelevance of the intrusive, recurrent ideas (Jaspers, 1913/1963). The patient does not need a subsequent reflective effort in a calmer state to realize that the obsessive ideas were irrational (see Table 1 for a clinical example). Importantly, Jaspers demarcated true obsession from delusions and overvalued ideas in which cases the person is convinced of the relevance of the content.

In the context of true obsession, the term "alien" means that the experience is intrusive and the content contrasts with the person's conscious needs, goals, and values. Though labelled as "alien", the thoughts do not lack first-personal character ("mineness"). For example, Schneider argued that obsessions retain the I-character of experience contrary to thought insertion and other influence phenomena in schizophrenia (Schneider, 1958). In psychoanalytically influenced literature, the term 'ego-dystonic' was used about obsessions and other experiences that were in conflict with the needs and goals of the conscious ego (Mijolla, 2005).

The notion of true obsession was considered central to the diagnosis of OCD among major psychopathologists and nosologists during most of the 20th century (for a review, see (Burgy, 2007)) as well as in the prototypical description of OCD in ICD-8 (see Supplementary material)—yet, it was observed that some patients with long-standing obsessions gradually gave up resisting the intrusions. Compulsions had to be related to a true obsession and associated with awareness of the absurdity of the behavior, excluding experiences secondary to delusions or overvalued ideas (Burgy, 2007). Furthermore, obsessive-compulsive phenomena with "lack of resistance" (in the broad sense of intrusive and recurrent unpleasant thoughts) were described as indicative of another diagnosis than OCD, especially a schizophrenia-spectrum disorder. This view was held in continental (Bleuler, 1924; Schneider, 1958) as well as in British (Fish, 1967; Mayer-Gross et al., 1969; Sims, 1988) psychopathological literature. Likewise, it is reflected in the International Classification of the Diseases (ICD)-10, where "pseudo-obsessions" (Rado, 1959; Vanggaard, 1979), i.e., "obsessive ruminations without inner resistance, often with dysmorphophobic, sexual or aggressive contents", are included as a diagnostic criterion of schizotypal disorder.

Table 1
Clinical example of true obsession and compulsion.

A patient reports that he, in his early twenties, experienced two episodes with obsessions and compulsions. They lasted several months and were separated from each other by a few years. At that time, he was a university student, and he rented a room with a kitchenette. Before going to sleep, he became uncertain if he had switched off the electric burner. This doubt prevented him from sleeping because he became restless, and he felt compelled to go to the kitchenette and look at the electric burner fifteen times. He had to repeat this action nearly the whole night. He did not have elaborated fantasies about fire or accidents, but he was afraid that a short circuit could lead to a fire accident. He reports that he vividly remembers his state of mind: He was absolutely certain that he had switched off the electric burner, yet at the same time this knowledge was undermined by a doubt 'what if not'. He felt that the whole idea and the ritual were absurd and ridiculous, but he was unable to resist the compulsion to go back to the kitchen and check again.

3. The current broad notions of obsession and compulsion

Since the 1980s, the interrelated aspects of insight and resistance ("struggle" in Jaspers' terminology) have consecutively been deemphasized in the criteria of OCD in the operational diagnostic systems (see Table 2). The DSM-IV criteria included an option to specify "poor insight", whereas, in DSM-5, the OCD diagnosis is broadened to include "absent insight/delusional beliefs", implying that "the individual is completely convinced that obsessive-compulsive disorder beliefs are true". Likewise, the ICD-11 includes a subtype of "poor to absent insight". In the literature leading to those nosological changes, it was argued that true obsessions, overvalued ideas, and delusions in clinical practice appear on a continuum and that dichotomous distinctions have little practical utility (Foa et al., 1995; Kozak and Foa, 1994). This hypothesis was supported by a DSM-IV field study, which particularly addressed the notion of insight in a large, clinical OCD-sample (Foa et al., 1995). However, this study did not include a systematic and thorough differential diagnostic assessment to exclude patients with other main diagnoses—in fact, only the subsection for OCD in the Structured Clinical Interview for DSM-III-R (SCID) was used. The notion of obsessive-compulsive symptoms lacking insight or "with psychotic features" was understood to be unrelated to schizophrenia, which, in this literature, was conceptualized at a high severity level of chronic, systematized psychotic symptoms, in particular first-rank symptoms, and "deterioration" (Eisen and Rasmussen, 1993; Insel and Akiskal, 1986).

Importantly, 'good insight' in its current usage includes cases, where the patient has no insight *during* the experience but only subsequently, in a calmer state of mind, demonstrates such insight. For example, the Yale-Brown Obsessive Compulsive Scale (YBOCS) (Goodman et al., 1989), the most widely used instrument in OCD-research, specifies that insight is rated "based on beliefs expressed at the time of the interview" (see also the definition of ICD-11 (Supplementary material)). This approach differs from the classic definition of true obsession that required resistance and insight *during* the experience.

In YBOCS, the item 'resistance' is rated dimensionally according to how often the patient tries to resist or disregard obsessive thoughts rather than "yields" to obsessions. However, in the criteria and text of the DSM-5 and ICD-11, the term 'resistance' is not used and the aspects it covers are vaguely articulated. "Recurrent and persistent thoughts" must be "experienced, *at some time during the disturbance*, as intrusive and unwanted" (DSM-5, our italics). The second DSM-5 criterion states that the patient "attempts to ignore or suppress such thoughts" but also broadens the notion of obsession to include *any* recurrent thought or impulse followed by attempts to "neutralize [the thoughts] with some other thought or action (i.e., by performing a compulsion)". Only the aspect of thoughts being "recurrent and persistent" is required to be continually present. Furthermore, attempts to "ignore and suppress" "intrusive" and "unwanted" thoughts are aspects of ordinary thinking and co-occurs in many psychopathological phenomena—e.g., a patient, who is convinced that he is being observed from cars in the street, but attempts to ignore his thoughts about this issue in order to carry out the task at hand. The descriptive terms in DSM-5 and ICD-11 lose their psychopathological salience when disconnected from the previous definitional features of insight and the ego-dystonic character of the obsessive experience. We will return to these conceptual-

Table 2
Definitions of obsession and compulsion across versions of ICD and DSM.

International Classification of Diseases (ICD)	
ICD-8 (1974)	The prototypical description emphasizes resistance to subjective feeling of compulsion (true obsession and compulsion). Obsessions are described as unwanted, intruding thoughts perceived as inappropriate or nonsensical. They are recognized as alien to the personality but as coming from within the self (i.e., as ego-dystonic but not lacking first-personal character or "mineness"). Compulsions are related to obsessions.
ICD-10 (1994)	The criteria describe true obsessive-compulsive symptoms but allow that more broadly defined phenomena coexist. The symptoms must be distinguished from thought insertion. Compulsions can be unrelated to obsessions.
ICD-11 (2019)	The concept of obsessive-compulsive symptoms encompasses symptoms without clearly articulated resistance and with degrees of insight including 'poor to absent insight'. The criteria are almost identical with those of DSM-5.

Diagnostic and Statistical Manual of Mental Disorders (DSM)	
DSM-III (1980)	The criteria describe features of true obsession and compulsion. The recurrent, persistent ideas are ego-dystonic (senseless and repugnant), and attempts are made to ignore or suppress them. Compulsions are performed with a sense of subjective compulsion coupled with a desire to resist and recognition of the senselessness of the behavior.
DSM-IV (1994)	The concept of obsessive-compulsive symptoms includes symptoms without clearly articulated resistance. Regarding obsessions, it is described that the person attempts to ignore or suppress recurrent thoughts, but this feature is not required if the person tries to neutralize [assumed] obsessions by performing compulsions. Thought insertion must be excluded. If the person for most of the time does not recognize that the symptoms are excessive or unreasonable, 'poor insight' can be specified. Compulsions can be unrelated to underlying obsession, and resistance is not described in the criteria
DSM-5 (2013)	The criteria are defined similarly to the DSM-IV. 'Absent insight/delusional beliefs' are included as a specifier. Differentiation from thought insertion is not mentioned.

See Supplementary data for the full text of diagnostic criteria across versions of ICD and DSM.

phenomenological issues in the following section.

Concerning compulsions, resistance is not described in the current criteria, and it is not a requirement that compulsions are related to an underlying obsession. Therefore, compulsions are poorly demarcated from repetitive behaviors secondary to delusions and other psychotic or near-psychotic phenomena (Burgy, 2007). Likewise, the demarcation from catatonic phenomena, such as mannerism or stereotypy (Jansson and Nordgaard, 2016), is now less clearly articulated. A review has pointed out that case reports of poor insight in OCD generally fail to distinguish apparent obsessive-compulsive complaints from other psychopathological phenomena (Burgy, 2007).

Whereas classic psychopathology emphasized form rather than content for classification, the DSM-5 text mentions "specific contents as additional features supporting diagnosis [of OCD]", i.e., cleaning, symmetry, forbidden or taboo thoughts (aggressive, sexual or religious) and fears of harm to oneself and others. However, as we will discuss in Section 5, symmetry, aggressive, violent or sexual contents have also been regarded as characteristic of obsessive phenomena in schizophrenia (Rado, 1959; Vanggaard, 1979).

Several empirical studies are relevant to the discussion of these conceptual developments and their consequences for the diagnostic boundaries. First, studies investigating co-morbidity of personality disorders in clinical OCD samples have reported 10–25% prevalence rates of schizotypal personality disorder (Poyurovsky, 2015). Second, poor insight in OCD has been found to be associated with a higher co-morbidity rate of schizotypal personality disorder (Alonso et al., 2008; Bellino et al., 2005; Catapano et al., 2010; Matsunaga et al., 2002), a higher frequency of schizophrenia-spectrum disorders in first-degree relatives (Catapano et al., 2010; Catapano et al., 2001) and poor prognosis (Catapano et al., 2010) compared to OCD patients with insight. Jointly, these findings suggest an affinity between OCD with poor insight and the schizophrenia-spectrum. Third, two studies have reported a relatively high prevalence of undetected schizophrenia-spectrum disorders in clinical OCD samples. In an early study, 475 patients from an outpatient OCD clinic were examined with a semi-structured interview schedule focusing on DSM-III-R criteria (Eisen and Rasmussen, 1993). Sixty-seven (14%) were identified as having psychotic symptoms in addition to OCD, and 40 patients (8%) met the criteria for a schizophrenia-spectrum disorder. In a recent study, 43 patients recruited from outpatient OCD clinics were re-examined with a comprehensive interview schedule targeting schizophrenia-spectrum psychopathology, including subtle subjective anomalies at a schizotypal level of severity (Rasmussen et al., 2020). Twelve patients (29%) fulfilled DSM-5 criteria for schizophrenia or another non-affective psychosis and 14 patients (33%) for schizotypal personality disorder. In 4 patients (10%), the OCD-symptomatology was related to recurrent episodes of an affective disorder. Although, another study reported a low prevalence of psychotic disorders in OCD outpatients (de Haan et al., 2009), these findings raise concern about the demarcation of the diagnostic category of OCD in clinical practice, also in specialized settings.

4. Phenomenology of cognition

Before we proceed to examine obsessive phenomena in schizophrenia, it is necessary to summarize some basic aspects of our "inner life" to clarify experiential and conceptual distinctions between obsessions and other phenomena. This inner life has typically been designated as streaming, becoming, flowing etc. (Husserl, 1910/1964; James, 1890). It is an always dynamic and incessantly changing ensemble of perceptions, thoughts, images, and sensations. Apart from spatial relations given to us in perception, the inner life of consciousness is intrinsically non-spatial (Bennett and Hacker, 2003) We cannot say, e.g., that thinking takes place in the left part of my head or that one thought is in front of another. All the diverse elements of the stream are mutually interpenetrating but constitute a single *field of consciousness* (Dainton, 2000; Gallagher and Zahavi, 2012). This unity is assured by the first-person perspective (aka ipseity, ipse being Latin for self or itself): it means that the flow of consciousness is self-saturated with a tacit sense of self-presence, self-coincidence (being always one with oneself), and temporal persistence (Zahavi, 2005). In other words, when I think I am tacitly aware that it is me who thinks this thought prior to any act of self-observation. Even in the case of self-reflection (e.g., when I critically think about my past lecture performance), the self which reflects and the self which is reflected upon belong together in an experiential unity. The elements of the flow are interpenetrating "founded on intentional intertwining, motivation, and mutual implication" (Parnas et al., 2013). Motivation in the phenomenological sense implies a kind of entailment, i.e., the transition from one conscious state to another appears for the subject in a meaningful way. Thus, even abrupt changes due to contextual associations and distractions are experienced as a part of a coherent flow of consciousness. Thinking itself often involves imagistic elements or linguistic format in the form of inner speech (Bennett and Hacker, 2003). However, there is no distance between the self, the meaning, or the medium in which the meaning is expressed (e.g., inner speech). In other words, I do not observe or listen to my inner speech to know what I am thinking.

Some thoughts may be "unwanted", e.g., if I have to participate in a formal dinner tomorrow night, the idea of which I deeply dislike, this unpleasant and unwanted thought may intrude upon me repeatedly over the evening, triggered by some associations, although each time I succeed in redirecting my attention to something else. In the same way, we can say that many depressive or anxious thoughts or delusional preoccupations may be considered "unwanted" and, on the formal level, not distinguishable from ordinary thinking. What is typical for a true obsession, as spelled out in classic psychopathology, is that a thought intrudes into the stream of consciousness, provoking a vain struggle to suppress the thought, because it immediately is considered non-sensical or absurd. Here, the first-person perspective is fully intact, i.e., the patient is not in doubt that the thought is self-generated. Importantly, the intact potential of immediate resistance to intrusive thoughts and images presupposes the self-coincidence of consciousness entailed by the first-personal character of experience (Henriksen et al., 2019). Since I am aware of and embedded in my thoughts and experiences prior to any conscious act of self-observation, I have the potential to immediately resist further unwanted reflection, even if such thoughts come to my mind involuntarily.

The obsession must be distinguished from the phenomenon of thought interference, which consists of a sudden irruption of thoughts without contextual triggers that disturbs the order of the ongoing thinking and has nothing to do with the main theme of the ongoing thoughts (Gross et al., 1987; Parnas et al., 2005b). The content is typically, but not always, emotionally neutral. E.g., a patient reported that "weird thoughts" about irrelevant matters often disturbed his thinking. It could be a sentence from a trivial conversation, a question about the weight of a car outside his window or something sexual. Such thoughts cannot be suppressed, and they awaken a kind of surprise on the part of the patient. A related notion is silent thought echo, i.e., the experience that one's thoughts become automatically (involuntarily) repeated or somehow doubled (Parnas et al., 2005b). Both thought interference and thought echo are often associated with diminished "mineness" of thoughts, perhaps evolving ultimately into a phenomenon of thought insertion (Henriksen et al., 2019; Schneider, 1959). Indeed, these phenomena have been found to be associated with schizophrenia and to precede transition to psychosis (Klosterkotter et al., 2001; Klosterkötter, 1988; Schultze-Lutter et al., 2015).

Regarding the differentiation between obsession and delusion, phenomenological psychopathology operates with a notion of so-called primary delusions, which have a specific experiential structure in the form of revelation (Jaspers, 1913/1963). In other words, in primary delusion the delusional content (a) suddenly imposes itself on the patient, short-cutting the capacity for critical reflection and distance, and (b) typically appears on the background of a preceding, diffuse and pervasive transformation of reality experience such as "delusional mood" (Feyaerts et al., 2021). The notion of primary delusion is not mentioned in DSM-III to DSM-5, where delusions and overvalued ideas are defined as false epistemic beliefs and therefore experientially no different from other beliefs or thoughts. Importantly, in the case of delusions, the occurrent delusional thought does not violate the motivational coherence of the field of consciousness. The delusional thought may be fleeting (e.g., a micro-psychotic episode), more or less persistent (e.g., in a combative, litigious delusional disorder) or repetitive with eruptive character and associated with suffering (e.g., in a delusional jealous person). By contrast, the intrusion of a true obsession immediately interrupts the motivational coherence of the field of consciousness. A relevant epistemological distinction is between occurrent beliefs and dispositional beliefs (Schwitzgebel, 2019). Thus, at this very moment, my occurrent thinking is concerned with formulating this text, whereas my dispositional beliefs include my knowledge about Paris being the capital of France (this knowledge does not occur in my consciousness but may be mobilised at any time). The occurrent delusional beliefs are concordant with the patient's dispositional knowledge and beliefs about the world. In the case of a true obsession, by contrast, the immediate resistance and insight indicate that the thought is automatically felt as one's own but also as discordant with one's dispositional knowledge about causal relations and conventions in the shared social world.

5. Obsessive-compulsive experiences in schizophrenia

Obsession-like phenomena were reported in foundational texts on schizophrenia (Bleuler, 1911/1950; Kraepelin, 1915). Throughout the 20th century, lack of resistance and insight were described as characteristic of these symptoms and behaviors (Fish, 1967; Mayer-Gross et al., 1969; Schneider, 1958; Sims, 1988). Kraepelin remarked that the differential diagnosis of dementia praecox "will not be difficult when one acquires an understanding of the inner life of the patient", and he emphasized preserved insight in OCD (Kraepelin, 1915, p. 1897). Eugen Bleuler included obsessive-compulsive symptoms in schizophrenia under the notion of "automatisms", i.e., action, thinking, and feeling detached from the will. Patients could describe "compulsive thinking" as a feeling that "it thinks in me" (Bleuler, 1924, p. 152) or being "forced" to imagine certain contents (Bleuler, 1911/1950, p. 202). In less severe cases, the patient did not offer resistance or could not explain her reasons for compulsive actions or thinking. Bleuler classified automatisms as catatonic phenomena and described them as "hallucinations of thinking, impulses and will" (Bleuler, 1911/1950). He also remarked that, whereas symptoms of "compulsion neurosis" (OCD) appear closely related to a specific subject matter, "compulsive thinking" in patients with schizophrenia affects "the thinking function itself" (Bleuler, 1924, p. 81.). Interestingly, Bleuler remarked in a footnote that "the typical cases [of compulsive neurosis] have so much about them that is schizophrenic in appearance and heredity, that one cannot repress the suspicion, that they are actual schizophrenics whose symptomatology exhaust itself in compulsive syndrome" (Bleuler, 1924, p. 564).

Eugène Minkowski described obsessive-compulsive related phenomena in schizophrenia as compensatory attitudes to schizophrenic autism, which he understood as a deficit in the pre-reflective attunement between the subject and the world. These phenomena comprise interrogative attitude and morbid geometrism (Parnas et al., 2002). The interrogative attitude is characterized by endless questioning of trivial phenomena without any sense of the pragmatic value of events, things, and actions, leading to compensatory compulsion-like behaviors (Minkowski et al., 2002). For example, a patient used hours going to the bathroom, because he needed to reassure himself through a series of questions about every object and action he was undertaking. Morbid geometrism consists in an excessive preoccupation with spatial arrangements, symmetry, and numerical aspects of the world, which often is expressed in compulsion-like rituals and actions unrelated to underlying obsessions (Urfer Parnas, 2018). For example, if one hand has touched an object, the patient becomes extremely tense and nervous unless she also touches the object with the other hand. In this way, the patient tries to compensate through a static and objectified approach to everyday life.

Certain obsessive-compulsive-like phenomena (later termed *pseudo-obsession* and *pseudo-compulsion*) (Rado, 1959; Vanggaard, 1979)) were described in the 1950s in the context of "pseudo-neurotic schizophrenia" (Hoch and Polatin, 1949). This nosological notion influenced the US-DK adoption studies (Kety et al., 1968), which created the empirical basis for the formation of the schizotypal personality disorder category in DSM-III and ICD-10 (Parnas et al., 2005a). Pseudo-neurotic schizophrenia comprised a group of patients with relatively mild schizophrenia-spectrum psychopathology (Zandersen et al., 2018). The clinical presentation was dominated by apparent neurotic symptoms, which, however, had a pervasive, diffuse, and shifting pattern considered atypical of true neurotic disorders. This included 'pseudo-obsessions', i.e., repetitive thoughts and fantasies with poor resistance and insight, frequently with a violent, macabre, or sexual content, and often associated with intense affects and anxiety.

Hoarding is another example of psychopathology that was part of the

pre-DSM phenotype of schizophrenia, but which now is commonly designated as co-morbidity. In DSM-III, hoarding was mentioned among the prodromal and residual symptoms of schizophrenia (as a "markedly peculiar behavior") in continuation with previous literature (Bleuler, 1911/1950; Fish and Hamilton, 1984). However, hoarding was listed as a criterion of obsessive-compulsive personality disorder in the DSM-IV and the text specified that a diagnosis of OCD "should be considered especially, when hoarding is extreme". In the DSM-5, hoarding has been elevated to an independent diagnostic category. It is mentioned that the behavior must not be explained by "delusions in schizophrenia". However, a recent qualitative study indicates that hoarding behavior in schizophrenia is usually associated with various subjective anomalies (Schou et al., 2020).

6. Disorder of basic self and obsessive phenomena in schizophrenia

Bleuler and Minkowski related obsessive-compulsive phenomena in schizophrenia to basic experiential alterations of volition and selfhood, including the tacit attunement between the person and the world. Crucially, their observations indicate that the characteristic lack of resistance in these obsessive phenomena is phenomenologically distinct from the putative continuum of resistance in OCD (defined by frequency of attempts to suppress or ignore obsessional thoughts rather than yielding to them (Goodman et al., 1989)). In the following, we will explore these clinical and theoretical considerations in the light of recent psychopathological research addressing disorder of basic self ("minimal" or "core" self) in schizophrenia (Henriksen et al., 2021). This account is informed by clinical-phenomenological observations from a recent research-project, which included a detailed assessment of disorder of basic self and varieties of obsessive-compulsive phenomena in patients with schizophrenia-spectrum disorders and OCD (Rasmussen et al., 2020).

Over the last two decades, a comprehensive body of research has supported that disorder of basic self constitutes a central phenotypic marker of the schizophrenia spectrum (for reviews, see (Henriksen et al., 2021; Nordgaard et al., 2021)). Empirical studies from different groups have shown that disorders of basic self aggregate selectively in schizophrenia-spectrum disorders compared to other diagnoses and healthy controls (for a recent meta-analysis, see (Raballo et al., 2021)), and that disorders of basic self longitudinally predict transition to psychosis (Nelson et al., 2012) and schizophrenia-spectrum disorders (Koren et al., 2019; Parnas et al., 2011). Furthermore, they possess trait-like characteristics with stability both in degree and patterns of self-disturbance across periods of 5 to 7 years (Nordgaard et al., 2017; Raballo and Preti, 2017). Disorder of basic self refers to an instability of the first-person perspective (ipseity) (Sass and Parnas, 2003). The passive and automatic "for-me-ness" or "mineness" of thoughts, images, and other experiences is diminished, and the tacit sense of existing as a temporally stable and unified subject of awareness and actions is unstable. For example, patients describe that thoughts appear anonymous or lack the sense of mineness, the body or parts of it is experienced as strange, alien or lifeless, or their sense of selfhood is ephemeral "as if he was a thing, a refrigerator, and not a human subject" (Parnas et al., 2005b, p. 245). Instability of the first-personal character of experience is also manifested in an objectifying mode of experiencing, allowing processes or mental phenomena that normally would be tacitly "inhabited" to stand forth in an unusual way. For example, thoughts may be experienced with a sense of spatial location to a specific part of the brain.

Obsessive phenomena in schizophrenia-spectrum disorders typically involve experiential alterations that conceptually and phenomenologically indicate a close relation to disorder of basic self. The characteristic "lack of resistance" involves a weakening of self-agency in the stream of thoughts, which differs from the recurrent character of obsessions in OCD. Rather than being inhabited in the first-person perspective, thoughts and mental images are experienced as autonomous, object-like entities, frequently with a profound sense of experiential distance (being "observed" in the mind). For example, patients describe that the unpleasant intrusions have an automatic character, completely detached from their will. Even if they with effort direct their attention elsewhere, the recurrent thoughts continue in parallel. Thoughts and images may be described as "alien" and "as if they are not my own thoughts" in ways that indicate that such statements are not just a matter of the patient's reaction to disturbing contents – as in the case of a true obsession – but instead reflect a disturbance of the first-personal character of thoughts. Furthermore, patients often describe that recurrent, vivid fantasies have a highly articulated spatial character (Rasmussen et al., 2019). This involves stable, highly detailed, and complex images that endure for many seconds or even minutes with a content that develops independently of the patient's intentions ("like watching a movie in the head") (Rasmussen et al., 2018). The intrusions may also be experienced with a sense of spatial location to a specific part of the head or brain. See Table 3 for clinical examples.

Likewise, compulsive phenomena are frequently described as compensatory for disorders of basic self such as bodily depersonalization, diminished sense of being present in the world, or pervasive ambivalence and may overlap Minkowski's notion of morbid geometrism mentioned above. They can also be related to disturbances of the immediate discrimination of mental acts of imagining, remembering, and perceiving (Gross et al., 1988)—e.g., a patient may be insecure as to whether certain thought contents are memories or phantasies, leading to checking compulsions. Compulsions may also be related to other schizophrenia-spectrum psychopathology such as

Table 3
Clinical examples of obsessive and compulsive phenomena in schizophrenia.

A 28-year-old man with a diagnosis of schizophrenia described compulsions (washing) related to intrusive, vivid mental images of contamination and infection. When he cooks, he "watches whole movies in the head" about this issue. These images develop over several minutes completely out of his control, and he describes that this imagery "kinds of zoom in on details on its own", e.g., that some of the meat accidentally got stuck on the cutlery or some animal urinated on the vegetables. He is unable to interrupt these images, which are "located in the front of the head". Sometimes, there are several scenarios at the same time, which he "observes in the head".
The patient is a 27-year-old woman, who received a research-diagnosis of schizotypal personality disorder. She had previously been diagnosed with and treated for OCD. She described her obsessive-compulsive symptoms in the following way. Most of the day, she makes long mental lists about everything: Things in her home, tasks at work, tasks at home, things she said, things that matter to her or define her, etc. She constantly repeats these lists in her mind because she is afraid of forgetting something. Previously, she found it necessary, although exhausting, to be so meticulous, but during therapy she has learned that her habits are exaggerated. Some of the thoughts can repeat themselves involuntarily in the back of her head. It feels as if they are located there, and they seem a bit louder than her thoughts in general. It can be lists she made four years ago or just one word like "watch" that goes on repeat. When asked further about her fear of forgetting something, she explains that she often speculates whether certain memories are her own or something she has been told or made up. She has extremely detailed mental images of past events but often the image does not include an image of herself or simply feels strange. Then she becomes confused about "what is the new me and what is the old me". She describes that she generally does not know who she is, but the mental lists help her to know how to define herself, e.g., what she owns, what she has done, what she is good at, etc.
A 21-year-old woman with first-episode schizophrenia reported recurrent, unpleasant "catastrophic thoughts" about her father being hurt in a traffic accident. Previously, these thoughts were considered obsessions by clinicians. She describes that this experience is like a movie, running in slow motion, where she imagines the cars, the road, and his bleeding face. These mental images are as detailed as ordinary perceptions. In general, she knows that it is fantasy and she has learned by her therapist to ignore this imagery, to let it pass, but she cannot interrupt it. Sometimes, the movie "overwrites" her own thoughts, and she is briefly uncertain whether it really happens. Occasionally, she must call her father to assure herself that he is alive.

delusional ideas or perceptual disturbances—e.g., washing compulsions related to a tactile perceptual disturbance of concretely *feeling* "unclean".

7. Discussion

We have tried to demonstrate that the contemporary notions of obsession and compulsion are overinclusive, overlapping delusional, psychotic states as well as various subjective and behavioral anomalies. The permutation of the phenotype of OCD reflects a general tendency in the development of the diagnostic systems from DSM-III to DSM-5. This development has been characterized by increasing simplification of psychopathological concepts and diagnostic categories, partly motivated by concerns about reliability (Parnas et al., 2013; Schultze-Lutter et al., 2018; Vanheule, 2014). Today, an obsession is not distinguishable from other recurrent, unpleasant thought contents, and a delusion is defined as "fixed beliefs that are not amenable to change in light of conflicting evidence" (DSM-5). The diagnosis of schizophrenia has been narrowed to a well-developed delusional-hallucinatory condition (Comparelli et al., 2019; Parnas, 2012; Taylor et al., 2010), which has excluded many cases of disintegrated psychotic patients, who become diagnosed with other diagnostic categories such as OCD or borderline personality disorder (Zandersen and Parnas, 2019). Moreover, clinicians' and researchers' knowledge of symptoms and signs of schizophrenia, which are not included in the criteria of diagnostic manuals, has declined dramatically (Andreasen, 2007). Apart from pseudo-obsessive and hoarding phenomena, these include many other symptoms that were part of the pre-DSM phenotype of schizophrenia, e.g., capricious and shallow emotions or pervasive, objectless anxiety (Parnas, 2011). In the classic literature, differentiation of such phenomena from similar symptoms and signs in other disorders was a major concern. Today, such psychopathology may be designated as co-morbidity or a schizophrenia-spectrum diagnosis may be completely overlooked (Maj, 2005; Parnas, 2015).

The categorical operational diagnostic systems have been criticized for proliferation of diagnoses, overwhelming levels of co-morbidity, and a limited utility for pathogenetic research (Frances and Widiger, 2012; Hyman, 2010). The launching of the Research Domain Criteria (RDoC) and the increasingly popular proposals of dimensional approach have been a reaction to the alleged failure of categorical systems (Gillan et al., 2017; Krueger et al., 2018). In our view, the problem may not be the categorical diagnoses per se but rather the continuing oversimplification of psychopathology and the ensuing vagueness of the clinical phenotypes (Parnas, 2012). Moreover, the dimensional approach is not a cure for conceptual unclarity, because dimensions are dimensions of concepts (categories). Interestingly, it has recently been argued from a dimensional research perspective that OCD-symptoms are linked to the thought disorder dimension, which encompasses psychotic symptomatology, as well as the internalizing dimension (Forbes et al., 2021). However, since the current notions of obsessive-compulsive symptoms are poorly demarcated and encompass very different experiences and behaviors, it may not be the same psychopathological phenomena that cut across these transdiagnostic dimensions.

In this paper, we have on a clinical-phenomenological basis discussed the relation of certain obsessive phenomena in schizophrenia-spectrum patients to disturbances of the first-personal character of experience. This account is in line with a comprehensive body of empirical research into disorder of basic self in the schizophrenia-spectrum over the last decades. We suggest that these obsessive phenomena, where lack of resistance manifests such basic experiential alterations, have a relevance for differential diagnosis and detection of at risk-states, especially in young first contact patients. Naturally, we do not claim that this account addresses all forms of diminished resistance and insight into obsessive-compulsive symptoms. Furthermore, we do not propose that a clinician can make a diagnosis solely based on a careful assessment of a single symptom. However, awareness of the way certain obsessive phenomena manifest a disorder of the first-person perspective can make the clinician attentive to a possible diagnosis within the schizophrenia-spectrum and guide subsequent exploration of psychopathology (Parnas, 2015). Our account is, of course, in need of more systematic support from empirical research. In conclusion, we believe that the issues discussed here illustrate the centrality of theoretical and empirical psychopathology for scientific psychiatry (Parnas et al., 2013).

Supplementary data to this article can be found online at https://doi.org/10.1016/j.schres.2022.02.014.

CRediT authorship contribution statement

ARR and JP contributed to the preparation and design of the review. ARR did the litterature review and wrote the first draft of the manuscript. JP and ARR commented on, wrote and edited subsequent versions of the manuscript. Both authors read and approved the final manuscript.

Role of the funding source

The work was supported by The Faculty of Health Sciences, University of Copenhagen (grant to A.R.R.). No funding agency influenced any aspect of the current work.

Declaration of competing interest

On behalf of both authors, the corresponding author states that there is no conflict of interest.

Acknowledgement

We thank Dr. Mads Gram Henriksen for comments on the manuscript.

References

Alonso, P., Menchon, J.M., Segalas, C., Jaurrieta, N., Jimenez-Murcia, S., Cardoner, N., Labad, J., Real, E., Pertusa, A., Vallejo, J., 2008. Clinical implications of insight assessment in obsessive-compulsive disorder. Compr. Psychiatry 49 (3), 305–312. https://doi.org/10.1016/j.comppsych.2007.09.005.

Andreasen, N.C., 2007. DSM and the death of phenomenology in America: an example of unintended consequences. Schizophr. Bull. 33 (1), 108–112. https://doi.org/10.1093/schbul/sbl054.

Bellino, S., Patria, L., Ziero, S., Bogetto, F., 2005. Clinical picture of obsessive-compulsive disorder with poor insight: a regression model. Psychiatry Res. 136 (2–3), 223–231. https://doi.org/10.1016/j.psychres.2004.04.015.

Bennett, M.R., Hacker, P.M.S., 2003. Philosophical Foundations of Neuroscience. Blackwell Pub, Malden, MA.

Bleuler, E., 1911/1950.. Dementia Praecox or the Group of Schizophrenias. Int. univ. press, New York.

Bleuler, E., 1924. Textbook of Psychiatry. The Macmillan Co, New York.

Burgy, M., 2005. Psychopathology of obsessive-compulsive disorder: a phenomenological approach. Psychopathology 38 (6), 291–300. https://doi.org/10.1159/000088917.

Burgy, M., 2007. Obsession in the strict sense: a helpful psychopathological phenomenon in the differential diagnosis between obsessive-compulsive disorder and schizophrenia. Psychopathology 40 (2), 102–110. https://doi.org/10.1159/000098490.

Catapano, F., Sperandeo, R., Perris, F., Lanzaro, M., Maj, M., 2001. Insight and resistance in patients with obsessive-compulsive disorder. Psychopathology 34 (2), 62–68. https://doi.org/10.1159/000049282.

Catapano, F., Perris, F., Fabrazzo, M., Cioffi, V., Giacco, D., De Santis, V., Maj, M., 2010. Obsessive-compulsive disorder with poor insight: a three-year prospective study. Prog. Neuro-Psychopharmacol. Biol. Psychiatry 34 (2), 323–330. https://doi.org/10.1016/j.pnpbp.2009.12.007.

Cederlof, M., Lichtenstein, P., Larsson, H., Boman, M., Ruck, C., Landen, M., Mataix-Cols, D., 2015. Obsessive-compulsive disorder, psychosis, and bipolarity: a longitudinal cohort and multigenerational family study. Schizophr. Bull. 41 (5), 1076–1083. https://doi.org/10.1093/schbul/sbu169.

Cheng, Y.F., Chen, V.C., Yang, Y.H., Chen, K.J., Lee, Y.C., Lu, M.L., 2019. Risk of schizophrenia among people with obsessive-compulsive disorder: a nationwide population-based cohort study. Schizophr. Res. 209, 58–63. https://doi.org/10.1016/j.schres.2019.05.024.

Comparelli, A., Raballo, A., Pompili, M., Galderisi, S., 2019. Beyond the transnosographic emphasis on psychosis: nosological perspectives on schizophrenia

and its prevention. Front. Psychiatry 10, 666. https://doi.org/10.3389/fpsyt.2019.00666.
Dainton, B., 2000. Stream of Consciousness: Unity And Continuity in Conscious Experience. Routledge, London, New York.
De Haan, L., Schirmbeck, F., Zink, M., 2015. Obsessive-Compulsive Symptoms in Schizophrenia. Springer, Switzerland.
Eisen, J.L., Rasmussen, S.A., 1993. Obsessive compulsive disorder with psychotic features. J.Clin.Psychiatry 54 (10), 373–379.
Feyaerts, J., Henriksen, M.G., Vanheule, S., Myin-Germeys, I., Sass, L.A., 2021. Delusions beyond beliefs: a critical overview of diagnostic, aetiological, and therapeutic schizophrenia research from a clinical-phenomenological perspective. Lancet Psychiatry. https://doi.org/10.1016/s2215-0366(20)30460-0.
Fish, F., 1967. Clinical Psychopathology: Signs And Symptoms in Psychiatry. Wright, Bristol.
Fish, F., Hamilton, M., 1984. In: Hamilton, Max (Ed.), Fish's Schizophrenia, 3rd ed. Wright, Bristol.
Foa, E.B., Kozak, M.J., Goodman, W.K., Hollander, E., Jenike, M.A., Rasmussen, S.A., 1995. DSM-IV field trial: obsessive-compulsive disorder. Am. J. Psychiatry 152 (1), 90–96. https://doi.org/10.1176/ajp.152.1.90.
Forbes, M.K., Sunderland, M., Rapee, R.M., Batterham, P.J., Calear, A.L., Carragher, N., Ruggero, C., Zimmerman, M., Baillie, A.J., Lynch, S.J., Mewton, L., Slade, T., Krueger, R.F., 2021. A detailed hierarchical model of psychopathology: from individual symptoms up to the general factor of psychopathology. Clin. Psychol. Sci. 9 (2), 139–168. https://doi.org/10.1177/2167702620954799.
Frances, A.J., Widiger, T., 2012. Psychiatric diagnosis: lessons from the DSM-IV past and cautions for the DSM-5 future. Annu. Rev. Clin. Psychol. 8, 109–130. https://doi.org/10.1146/annurev-clinpsy-032511-143102.
Gallagher, S., Zahavi, D., 2012. The Phenomenological Mind, 2nd ed. Routledge, London, New York.
Gillan, C.M., Fineberg, N.A., Robbins, T.W., 2017. A trans-diagnostic perspective on obsessive-compulsive disorder. Psychol. Med. 47 (9), 1528–1548. https://doi.org/10.1017/S0033291716002786.
Goodman, W.K., Price, L.H., Rasmussen, S.A., Mazure, C., Fleischmann, R.L., Hill, C.L., Heninger, G.R., Charney, D.S., 1989. The Yale-Brown Obsessive Compulsive Scale. I. Development, use, and reliability. Arch. Gen. Psychiatry 46 (11), 1006–1011.
Gross, G., Huber, G., Klosterkötter, J., Lintz, M., 1987. Bonner Skala Für die Beurteilung von Basissymptomen. Springer Verlag.
Gross, G., Huber, G., Klosterkötter, J., 1988. Schizophrenie und endogene zwangskrankheit. Nervenheilkunde (7), 113–118.
de Haan, L., Dudek-Hodge, C., Verhoeven, Y., Denys, D., 2009. Prevalence of psychotic disorders in patients with obsessive-compulsive disorder. CNS Spectrums 14 (8), 415–417.
Henriksen, M.G., Parnas, J., Zahavi, D., 2019. Thought insertion and disturbed for-meness (minimal selfhood) in schizophrenia. Conscious. Cogn. 74, 102770 https://doi.org/10.1016/j.concog.2019.102770.
Henriksen, M.G., Raballo, A., Nordgaard, J., 2021. Self-disorders and psychopathology: a systematic review. Lancet Psychiatry 1001–1012.
Hoch, P., Polatin, P., 1949. Pseudoneurotic forms of schizophrenia. Psychiatr.Q. 23 (2), 248–276.
Husserl, E., 1910/1964.. The Phenomenology of Internal Time-consciousness. Martinus Nijhoff, The Hague.
Hyman, S.E., 2010. The diagnosis of mental disorders: the problem of reification. Annu. Rev. Clin. Psychol. 6, 155–179. https://doi.org/10.1146/annurev.clinpsy.3.022806.091532.
Insel, T.R., Akiskal, H.S., 1986. Obsessive-compulsive disorder with psychotic features: a phenomenologic analysis. Am. J. Psychiatry 143 (12), 1527–1533. https://doi.org/10.1176/ajp.143.12.1527.
James, W., 1890. The Principles of Psychology. Macmillan and Co.Ltd, London.
Jansson, L., Nordgaard, J., 2016. The Psychiatric Interview for Differential Diagnosis. Springer.
Jaspers, K., 1913/1963. General Psychopathology. University of Chicago Press, Chicago.
Kety, S.S., Rosenthal, D., Wender, P.H., Schulsinger, F., 1968. The types and prevalence of mental illness in the biological and adoptive families of adopted schizophrenics. In: Rosenthal, D., Kety, S.S. (Eds.), The Transmission of Schizophrenia. Pergamon Press, Oxford, pp. 345–362.
Klosterkötter, J., 1988. Basissymptome und Endphänomene der Schizophrenie: eine empirische Untersuchung der psychopathologischen Übergangsreihen zwischen defizitären und produktiven Schizophreniesymptomen. Springer.
Klosterkotter, J., Hellmich, M., Steinmeyer, E.M., Schultze-Lutter, F., 2001. Diagnosing schizophrenia in the initial prodromal phase. Arch. Gen. Psychiatry 58 (2), 158–164. https://doi.org/10.1001/archpsyc.58.2.158.
Koren, D., Tzivoni, Y., Schalit, L., Adres, M., Reznik, N., Apter, A., Parnas, J., 2019. Basic self-disorders in adolescence predict schizophrenia spectrum disorders in young adulthood: a 7-year follow-up study among non-psychotic help-seeking adolescents. Schizophr. Res. https://doi.org/10.1016/j.schres.2019.12.022.
Kozak, M.J., Foa, E.B., 1994. Obsessions, overvalued ideas, and delusions in obsessive-compulsive disorder. Behav. Res. Ther. 32 (3), 343–353.
Kraepelin, E., 1915. Psychiatrie ein Lehrbuch für Studirende und Ärzte, 8., vollst. umgearb. Aufl. ed. Barth, Leipzig.
Krueger, R.F., Kotov, R., Watson, D., Forbes, M.K., Eaton, N.R., Ruggero, C.J., Simms, L. J., Widiger, T.A., Achenbach, T.M., Bach, B., Bagby, R.M., Bornovalova, M.A., Carpenter, W.T., Chmielewski, M., Cicero, D.C., Clark, L.A., Conway, C., DeClercq, B., DeYoung, C.G., Docherty, A.R., Drislane, L.E., First, M.B., Forbush, K. T., Hallquist, M., Haltigan, J.D., Hopwood, C.J., Ivanova, M.Y., Jonas, K.G., Latzman, R.D., Markon, K.E., Miller, J.D., Morey, L.C., Mullins-Sweatt, S.N., Ormel, J., Patalay, P., Patrick, C.J., Pincus, A.L., Regier, D.A., Reininghaus, U., Rescorla, L.A., Samuel, D.B., Sellbom, M., Shackman, A.J., Skodol, A., Slade, T., South, S.C., Sunderland, M., Tackett, J.L., Venables, N.C., Waldman, I.D., Waszczuk, M.A., Waugh, M.H., Wright, A.G.C., Zald, D.H., Zimmermann, J., 2018. Progress in achieving quantitative classification of psychopathology. World Psychiatry 17 (3), 282–293. https://doi.org/10.1002/wps.20566.
Maj, M., 2005. "Psychiatric comorbidity": an artefact of current diagnostic systems? Br. J. Psychiatry 186, 182–184. https://doi.org/10.1192/bjp.186.3.182.
Matsunaga, H., Kiriike, N., Matsui, T., Oya, K., Iwasaki, Y., Koshimune, K., Miyata, A., Stein, D.J., 2002. Obsessive-compulsive disorder with poor insight. Compr. Psychiatry 43 (2), 150–157. https://doi.org/10.1053/comp.2002.30798.
Mayer-Gross, W., Slater, E., Roth, M., 1969. Clinical Psychiatry, 3rd ed. Tindall & Cassell, London.
Meier, S.M., Petersen, L., Pedersen, M.G., Arendt, M.C., Nielsen, P.R., Mattheisen, M., Mors, O., Mortensen, P.B., 2014. Obsessive-compulsive disorder as a risk factor for schizophrenia: a nationwide study. JAMA Psychiatry 71 (11), 1215–1221. https://doi.org/10.1001/jamapsychiatry.2014.1011.
Mijolla, A.d., 2005. International Dictionary of Psychoanalysis. Macmillan Reference USA, Detroit.
Minkowski, E., Targowla, R., Salaheddine, Z., 2002. A contribution to the study of autism: the interrogative attitude. PhilosophyPsychiatryPsychol. 8 (4), 271–278.
Nelson, B., Thompson, A., Yung, A.R., 2012. Basic self-disturbance predicts psychosis onset in the ultra high risk for psychosis "prodromal" population. Schizophr. Bull. 38 (6), 1277–1287. https://doi.org/10.1093/schbul/sbs007.
Nordgaard, J., Sass, L.A., Parnas, J., 2013. The psychiatric interview: validity, structure, and subjectivity. Eur. Arch. Psychiatry Clin. Neurosci. 263 (4), 353–364. https://doi.org/10.1007/s00406-012-0366-z.
Nordgaard, J., Nilsson, L.S., Saebye, D., Parnas, J., 2017. Self-disorders in schizophrenia-spectrum disorders: a 5-year follow-up study. Eur. Arch. Psychiatry Clin. Neurosci. https://doi.org/10.1007/s00406-017-0837-3.
Nordgaard, J., Henriksen, M.G., Jansson, L., Handest, P., Møller, P., Rasmussen, A.R., Sandsten, K.E., Nilsson, L.S., Zandersen, M., Zahavi, D., Parnas, J., 2021. Disordered selfhood in schizophrenia and the examination of anomalous self-experience: accumulated evidence and experience. Psychopathology. https://doi.org/10.1159/000517672. In press.
Parnas, J., 2011. A disappearing heritage: the clinical core of schizophrenia. Schizophr. Bull. 37 (6), 1121–1130. https://doi.org/10.1093/schbul/sbr081.
Parnas, J., 2012. The DSM-IV and the founding prototype of schizophrenia: are we regressing to a pre-kraepelinian nosology? In: Kendler, K.S., Parnas, J. (Eds.), Philosophical Issues in Psychiatry II : Nosology. Oxford University Press, Oxford.
Parnas, J., 2015. Differential diagnosis and current polythetic classification. World Psychiatry 14 (3), 284–287. https://doi.org/10.1002/wps.20239.
Parnas, J., Bovet, P., Zahavi, D., 2002. Schizophrenic autism: clinical phenomenology and pathogenetic implications. World Psychiatry 1 (3), 131–136.
Parnas, J., Licht, D., Bovet, P., 2005a. Cluster a personality disorders: a review. In: Maj, M., Akiskal, H.S., Mezzich, J.E., Okasha, A. (Eds.), Personality Disorders, Volume 8. John Wiley & Sons Ltd, Chichester.
Parnas, J., Moller, P., Kircher, T., Thalbitzer, J., Jansson, L., Handest, P., Zahavi, D., 2005b. EASE: examination of anomalous self-experience. Psychopathology 38 (5), 236–258. https://doi.org/10.1159/000088441.
Parnas, J., Raballo, A., Handest, P., Jansson, L., Vollmer-Larsen, A., Saebye, D., 2011. Self-experience in the early phases of schizophrenia: 5-year follow-up of the Copenhagen Prodromal Study. World Psychiatry 10 (3), 200–204.
Parnas, J., Sass, L.A., Zahavi, D., 2013. Rediscovering psychopathology: the epistemology and phenomenology of the psychiatric object. Schizophr. Bull. 39 (2), 270–277. https://doi.org/10.1093/schbul/sbs153.
Poletti, M., Raballo, A., 2019. Obsessively thinking through the schizophrenia spectrum: disentangling pseudo-obsessive schizophrenia from OCD. Schizophr. Res. 212, 232–233. https://doi.org/10.1016/j.schres.2019.08.014.
Poyurovsky, M., 2015. Obsessive-compulsive disorder with schizotypal personality disorder (Schizotypal OCD). In: De Haan, L., Schirmbeck, F., Zink, M. (Eds.), Obsessive-Compulsive Symptoms in Schizophrenia. Springer, Switzerland.
Raballo, A., Preti, A., 2017. Temporal stability of self-disorders and longitudinal unfolding of symptom dimensions: a complementary analysis. Schizophr. Res. https://doi.org/10.1016/j.schres.2017.08.024.
Raballo, A., Poletti, M., Preti, A., Parnas, J., 2021. The self in the spectrum: a meta-analysis of the evidence linking basic self-disorders and schizophrenia. Schizophr. Bull. https://doi.org/10.1093/schbul/sbaa201.
Rado, S., 1959. Obsessive behavior. In: Arieti, S. (Ed.), American Handbook of Psychiatry. Basic Books, New York, pp. 324–344.
Rasmussen, A.R., Parnas, J., 2015. Anomalies of imagination and disordered self in schizophrenia spectrum disorders. Psychopathology 48 (5), 317–323. https://doi.org/10.1159/000431291.
Rasmussen, A.R., Stephensen, H., Parnas, J., 2018. EAFI: examination of anomalous fantasy and imagination. Psychopathology 51 (3), 216–226. https://doi.org/10.1159/000488464.
Rasmussen, A.R., Saebye, D., Parnas, J., 2019. Anomalies of imagination in the schizophrenia-spectrum: empirical findings. Schizophr. Res. 206, 458–459. https://doi.org/10.1016/j.schres.2018.11.019.
Rasmussen, A.R., Nordgaard, J., Parnas, J., 2020. Schizophrenia-spectrum psychopathology in obsessive-compulsive disorder: an empirical study. Eur. Arch. Psychiatry Clin. Neurosci. 270 (8), 993–1002. https://doi.org/10.1007/s00406-019-01022-z.
Sass, L.A., Parnas, J., 2003. Schizophrenia, consciousness, and the self. Schizophr. Bull. 29 (3), 427–444.
Schneider, K., 1958. Psychopathic Personalities. Cassell.
Schneider, K., 1959. Clinical Psychopathology. [s.n.], New York.

Schou, M.L., Urfer-Parnas, A., Parnas, J., 2020. The hoarding phenomenon in schizophrenia spectrum disorders. Psychopathology 53 (2), 111–118. https://doi.org/10.1159/000508453.

Schultze-Lutter, F., Michel, C., Schmidt, S.J., Schimmelmann, B.G., Maric, N.P., Salokangas, R.K., Riecher-Rossler, A., van der Gaag, M., Nordentoft, M., Raballo, A., Meneghelli, A., Marshall, M., Morrison, A., Ruhrmann, S., Klosterkotter, J., 2015. EPA guidance on the early detection of clinical high risk states of psychoses. Eur. Psychiatry 30 (3), 405–416. https://doi.org/10.1016/j.eurpsy.2015.01.010.

Schultze-Lutter, F., Schmidt, S.J., Theodoridou, A., 2018. Psychopathology-a precision tool in need of re-sharpening. Front. Psychiatry 9, 446. https://doi.org/10.3389/fpsyt.2018.00446.

Schwitzgebeln.d.E Schwitzgebel ., "Belief", in: E.N. Zalta (Ed.), The Stanford Encyclopedia of Philosophy (Fall 2019 Edition), https://plato.stanford.edu/archives/fall2019/entries/belief/. Access data 09-06-20.

Sims, A., 1988. Symptoms in the Mind: An Introduction to Descriptive Psychopathology. Baillie\0300re Tindall, London.

Swets, M., Dekker, J., van Emmerik-van Oortmerssen, K., Smid, G.E., Smit, F., de Haan, L., Schoevers, R.A., 2014. The obsessive compulsive spectrum in schizophrenia, a meta-analysis and meta-regression exploring prevalence rates. Schizophr. Res. 152 (2–3), 458–468. https://doi.org/10.1016/j.schres.2013.10.033.

Taylor, M.A., Shorter, E., Vaidya, N.A., Fink, M., 2010. The failure of the schizophrenia concept and the argument for its replacement by hebephrenia: applying the medical model for disease recognition. Acta Psychiatr. Scand. 122 (3), 173–183. https://doi.org/10.1111/j.1600-0447.2010.01589.x.

Urfer Parnas, A., 2018. Eugène minkowski. In: Stanghellini, G., Broome, M., Raballo, A., Fernandez, A., Fusar-Poli, P., Rosfort, R. (Eds.), The Oxford Handbook of Phenomenological Psychopathology. Oxford University Press.

Vanggaard, T., 1979. Borderlands of Sanity: Neuroses, Schizophrenic Borderline States, Atypical Endogenous Depression: Clinical Pictures, Psycho-dynamics. Munksgaard, København.

Vanheule, S., 2014. Diagnosis And the DSM: A Critical Review. Palgrave Macmillan, London.

Westphal, C., 1877. Über zwangsvorstellungen. BerlKlin. Wochenschr. 46, 669–672.

Zahavi, D., 2005. Subjectivity And Selfhood: Investigating the First-person Perspective. MIT Press, Cambridge, Mass.

Zandersen, M., Parnas, J., 2019. Borderline personality disorder or a disorder within the schizophrenia spectrum?A psychopathological study. World Psychiatry 18 (1), 109–110. https://doi.org/10.1002/wps.20598.

Zandersen, M., Henriksen, M.G., Parnas, J., 2018. A recurrent question: what is borderline? J. Personal. Disord. 1–29 https://doi.org/10.1521/pedi_2018_32_348.