

Schizophrenia, Temporality, and Affection

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Abstract

Temporal experience and its radical alteration in schizophrenia have been one of the central objects of investigation in phenomenological psychopathology. Various phenomenologically oriented researchers have argued that the change in the mode of temporal experience present in schizophrenia can foreground its psychotic symptoms of delusion. This paper aims to further the development of such a phenomenological investigation by highlighting a much-neglected aspect of schizophrenic temporal experience, i.e., its non-emotional affective characteristic. In this paper, it denotes the type of an experience wherein an afflicted individual experiences a pervasive pull or attraction coming from the past, present, and future. By employing Husserl's account of affection, I argue that such an affectively prominent temporal experience is not yet another abnormality that happens to be present in schizophrenia. Instead, it is indicative of the core disturbance that underpins the schizophrenic temporal mode of experience. I identify such a disturbance as 'affective modification dysfunction' and employ it as a core concept with which I synthesize and organise heterogeneous components of schizophrenic temporal experience in their conceptual unity. For the sake of clear description, I organise those components into the following categories: 1.) Time Stop 2.) Ante-festum 3.) Déjà vu/vécu and 4.) Time Fragmentation. I conclude by demonstrating how approaching schizophrenic temporal experience from its affective dimension can further help us better understand its pre-psychotic phase known to precipitate schizophrenic primary delusion, i.e., delusional mood.

Keywords Schizophrenia · Anomalous temporal experience · Inner time-consciousness · Affection · Affective modification

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1 Introduction

Temporal experience and its radical alteration in schizophrenia have been one of the central objects of investigation in phenomenological psychopathology (Minkowski, 1923, 1933/1970; Binswanger, 1946; Wiggins et al., 1990; Fuchs, 2005b, 2007, 2013; Fuchs & Van Duppen, 2017; Vogeley & Kupke, 2007; Stanghellini et al., 2016; Sass & Pienkos, 2013). The following self-report that has been considered as a prototypical instance of schizophrenic temporal experience.

But explaining what I've come to call 'disorganization' is a different challenge altogether. Consciousness gradually loses its coherence. One's center gives way. The center cannot hold. The 'me' becomes a haze, and the solid center from which one experiences reality breaks up like a bad radio signal [...] Random moments of time follow one another. No organising principle takes successive moments in time and put them together in a coherent way from which senses can be made (Saks, 2007, pp.13).

In contemporary research, such anomalous experience has been termed as 'time fragmentation experience', further specified into the disarticulation of time experience and the fragmentation of self experience (Stanghellini et al., 2016). Most notably, Thomas Fuchs (2013), Giovanni Stanghellini et al., (2016) and Louis Sass and Elizabeth Pienkos (2013) have provided one of the most systematic accounts of time fragmentation experience. Employing Husserl's account of inner time-consciousness, these authors argued that schizophrenia involves the "fragmentation", "disintegration" (Fuchs, 2013), "breakdown" (Stanghellini et al., 2016) or "collapse" (Sass & Pienkos, 2013) in the structure of inner timeconsciousness. It has been further hypothesised that in the case of schizophrenia where the structural integrity of inner time consciousness is fundamentally compromised, the fragmented experience and its content, be it a thought, a sensation, or a bodily movement, can be no longer immediately experienced as one's own, leading to the delusional ideation that external sources control or influence one's mind (Stanghellini et al., 2016; Fuchs, 2013; Fuchs & Van Duppen, 2017; Sass & Pienkos, 2013).

In this paper, I hope to further the development of such a phenomenological inquiry by highlighting a much-neglected aspect of schizophrenic temporal experience in contemporary research, that is, its non-emotional affective characteristic. To be clear, in this paper, such a characteristic specifically refers to the kind of an experience wherein an afflicted individual experiences a strong and pervasive attraction or pull coming from the different temporal modes of experience. It does not refer to the often discussed generalised emotions (e.g., regret or guilt) one has of one's past. This non-emotional affective characteristic of temporal experience has been typically described as follows: "I could be *sucked up* into the past or that the past would *overcome me and flow over me*" (Minkowski, 1933/1970, pp.287; italics added), or "the past arose before me in a particularly vehement way" (Minkowski, 1933/1970, pp.287). In contemporary research, such an affectively prominent temporal experience has been often broadly described as



""the already-happened" *prevails*" and ""the about-to-happen" *prevails*" (Stanghellini et al., 2016, pp.50; italics added), or as a change in "the relative *weighting* of past, present and future" (Sass & Pienkos, 2013, pp.140). In this paper, I argue that this affectively prominent temporal experience is not yet another notable experiential characteristic of schizophrenia. Instead, it is indicative of the core disturbance that underpins the schizophrenic temporal mode of experience and, further, the pre-psychotic phase known to precipitate schizophrenic primary delusion, i.e., delusional mood. The argument proceeds in the following order.

First, I begin by presenting one of the major conceptual tools thus far employed in analysing schizophrenic temporal experience since the days of Ludwig Binswagner (1946), namely, Husserl's account of inner time-consciousness. Second, I review the contemporary phenomenological accounts according to which the structural breakdown in the inner time-consciousness underpins schizophrenic temporal experience (henceforth "structural accounts"). Afterwards, I reject them on the grounds they lead to the conclusion that schizophrenic temporal experience is impossible. In anticipatory summary, its rationale is the following. The structure of inner time-consciousness is the precondition for temporally unified and subjective experience. Therefore, its "breakdown", "total collapse", or "fundamental disintegration" does not only imply anomalous temporal experience. It also implies the impossibility in having anomalous temporal experience as such. Third, I appeal to the affective aspect of inner time-consciousness and establish a conceptual distinction between temporal modification and affective modification. This is to chart out an alternative way to provide a phenomenological account that can accommodate schizophrenic temporal experience while appreciating the basic experiential fact that such an experience is possible. Fourth, I propose a provisional, ideal type account that details the structure of schizophrenic temporal mode of experience with respect to its affective dimension. The central claim of the account I provide is the following. The structure of inner time-consciousness, or the synthetic, self-intending feature of the present consciousness, remains operative — and thereby enabling the first-personal givenness of anomalous temporal experience. In contemporary terms, the structural integrity of the inner time-consciousness remains intact. In the case of schizophrenia, I argue, however, the structure of time consciousness no longer modulates the affective intensity of temporal experience. I term this malfunction as the "affective modification dysfunction" and employ it as a core concept with which I organise and synthesize heterogeneous components of schizophrenic anomalous temporal experience in their conceptual unity: 1.) Time Stop 2.) Ante-festum 3.) Déjà vu/vécu and 4.) Time Fragmentation. I conclude by showing how approaching schizophrenic temporal experience from its affective dimension can further help illuminate the nature of the pre-psychotic phase known to precede the emergence of schizophrenic primary delusion, i.e., delusional mood.

2 Husserl on Time

Despite its notorious difficulty, Husserl's account of temporality has been constantly employed in the psychopathological analysis of schizophrenia experience. This is partly due to Husserl's systematic description of the structure of temporal experience



and its categorisation into distinctive concepts have proven useful for understanding anomalous temporal experience present in schizophrenia. In what follows, I detail Husserl's account of time consciousness. The following presentation may seem pedantic to phenomenologically oriented readers and, for non-phenomenologically oriented readers, too technical. However, a careful presentation of Husserl's account will be necessary not only for presenting the prevailing structural accounts of schizophrenia in their conceptual intricacy but also identifying their problem and providing a resolution to it. In anticipatory summary, the take home lesson of this section is simply this: the structure of inner time-consciousness constitutes the temporal unity of an experience and, in so doing, its first-personal givenness as well.

As is well known, Husserl argues for the 'tripartite' structure of time consciousness for time perception, whereby the intentional moments of the present consciousness are articulated with regards to not only the actual now but also the immediate past and the immediate future (Husserl, 1991, pp.226). He terms the present consciousness of the now as primal impression, while retention and protention respectively denote the present consciousness's direct awareness of the just-past and the yet-to-come conscious experience (Husserl, 1991, pp. 226–232). As a 'synthetic unified whole', Husserl argues, primal impression retention and protention belong to every actual present consciousness (Husserl, 2001, pp.346) and constitute the temporal unity of an experience and that of its intended object as well. Let us unpack this claim with the popular example of hearing the C-D-E melody.

Assuming that the current note in play is the note D, the present consciousness intends the D note via primal impression, providing the awareness that the D note is given in "the original mode of intuitability" or in the mode of now (Husserl, 1991, pp.89). One hears the D note as a now note thanks to primal impression. In this moment, the retentional moment of the present consciousness retains the just-past consciousness — the consciousness of which intended the previous C note through its own primal impression (Husserl, 1991, pp.81-89, pp.388). In virtue of this retention of previous primal impression, one can be aware of the current now conscious experience of the D note in connection to the previous conscious experience of the C note. To put it otherwise, the present consciousness at tn + 1 retains the previous primal impression tn and the previous now phase of the object correlated to it as well, thus constituting the temporal duration of an object. Simultaneously, the present consciousness at tn+1 protends the yet-to-come phase of the current now conscious experience of the D note, or anticipates its own succession by the new now conscious experience. In the succeeding moment, the new present consciousness at tn+2 retains the previous present consciousness and the tripartite structural moments therein as well (Husserl, 1991, pp. 81-89, pp.388). By retaining the previous protention, in the new now wherein the E note is in play, for our case, one can be aware of the E note as fulfilling the previous protention, or as succeeding the previous D note (Husserl, 1991, pp. 52, Ms. L I 15, 24 a-b as translated in Rodemeyer, 2003, pp.131). In turn, by retaining the previous primal impression, which intended the D note at tn + 1, one can hear the D note as a note that came just before the E note, as a just-past note. And through the retention of the previous retention, which retained the primal impression tn whose object was the C note at tn+1, one can hear the C note as a farther past note—as a note that came before the D note. In other words, if



the retention of previous protention and its fulfilment enables one to hear the E note as a new now note that succeeds the previous notes, the retention of previous primal impression and previous retention fixes those previous notes in their temporal order, i.e., C as a just-past note and D as a farther-past note. As the temporal location of each past notes is preserved and since each new now note is perceived as succeeding the coherently ordered past notes, one can hear the past notes as part of the same melody that one has been hearing and the newly given note as a part of the same melody. In this way, the tripartite structure of time consciousness enables one to hear the individual notes as a temporally coherent part of the same melody, thereby constituting the persisting identity of melody through its successive phases.

The basic idea here is that present consciousness retains and protends its own just-past and yet-to-come consciousness. By retaining the just-past consciousness which was actual in the previous now thus had its own tripartite structure, the present consciousness retains previous protention, primal impression, and retention as well. Retention of previous protention — or the anticipation that the new now consciousness will replace the current now consciousness — is fulfilled by the very presence of the new consciousness in every succeeding moment. Thanks to this retention of previous protention and its fulfilment, the new now phase of conscious experience can be experienced as succeeding the previous now conscious experience. And if the experience in question intended an object, say a melody, one can be aware of the succession in its temporal phases as well. In turn, the retention of previous primal impression and previous retention enables one to be aware of the new now in connection with the just-past and farther past phases of conscious experience, and thereby constituting the temporal duration of a conscious experience and the enduring identity of its intended object as well. Simply put, one can be continually aware of the duration of conscious experience through its successive phases and that of its correlating object, for, in every now moment, the present consciousness retains and protends its own just-past and yet-to-come phases. And by virtue of that same self-intending, Husserl further argues, the temporally unified conscious experience or the flow of consciousness 'constitutes' itself, that is to say, it brings itself to its own appearance or self-manifests. He writes:

The flow of the consciousness that constitutes immanent time not only exists but is so remarkably and yet intelligibly fashioned that a self appearance of the flow necessarily exists in it, and therefore the flow itself must necessarily apprehensible in the flowing. The self appearance of the flow does not require a second flow; on the contrary, it constitutes itself as a phenomenon in itself (Husserl, 1991, pp.393).

The flow of consciousness constitutes itself or does not require a second flow or another constitutive dimension for its appearance because its very 'flow' — its unity of duration and succession — is constituted nothing but by its own present consciousness retaining and protending its own temporal phases. Meaning, without a mediating higher-order consciousness whereby the flow of consciousness is apprehended as the object of such a consciousness, or in layman's terms, without having to "think" that one's consciousness is flowing in its unity, one can be aware of the temporal unity of the flow of consciousness, that is immediately and pre-reflectively.



Since the temporal unity of conscious experience is established by the present consciousness retaining and protending its own temporal phases, one can be also immediately aware that it is one's own consciousness that is enduring and succeeding without reflection, in that it is 'my' conscious experience that is temporally unified. To paraphrase Husserl's self-constitution claim, the flow of consciousness makes itself appear to one self as such, or manifesting at a first-person level, as a flowing unity thanks to its own synthetic, self-intending feature of the present consciousness. As the flow of consciousness first-personally manifests, one can be immediately and pre-reflectively aware of one self as the subject to whom such a flow appears, as the very subject of one's own experience across time. In sum, the tripartite structure of time consciousness not only constitutes the temporal unity of a conscious experience but also, in so doing, in that very moment of constitution, its first-personal givenness as well, thereby grounding the pre-reflective form of self-awareness that I am the subject of my own experience. In Husserl's terms: "For the latter [the life of consciousness] is not only a lived-experiencing continually streaming along; at the same time, as it streams along it is also immediately the consciousness of this streaming. This consciousness is self-perceiving [...] that presents all lived-experiencing to consciousness is the so-called inner consciousness or inner perceiving" (Husserl, 2001, pp.320; italics added).

3 Psychopathology: Structural Account

In contemporary research, Fuchs, Stanghellini, Sass and Pienkos have taken up Husserl's account of inner time-consciousness in their analysis of schizophrenia. In line with Husserl, Fuchs claims that the present consciousness retains and protends its own just past and yet-to-come phases so that one can be aware of the duration of one's conscious experience and its coherent succession across time (Fuchs, 2013; Fuchs & Van Duppen, 2017). Acknowledging the intimate connection between the unity of conscious experience and the pre-reflective form of self-awareness, Fuchs writes: "Inner time-consciousness includes a pre-reflective form of self-awareness as well [...] Prereflective self-awareness, or what has been called the "minimal self", can therefore be considered to be inherent to inner time consciousness" (Fuchs & Van Duppen, 2017, pp.70). Zeroing in on the relationship between this minimal self and the first-personal givenness of an experience, Sass and Pienkos suggest that "the microstructure of minimal self or first personal givenness just is the structure of inner time consciousness" (Sass & Pienkos, 2013, pp.140). In other words, the minimal self and the first-personal givenness of an experience have the same structure of the inner time-consciousness, for the tripartite structure of inner timeconsciousness constitutes the first-personal givenness of an experience, and in so doing, it also enables one to be immediately, pre-reflectively aware of one self existing as the very subject of one's own experience, viz. minimal self. In line with these views, Stanghellini and his colleagues write: "Also the feel we have of ourselves as unitary subjects of experience permanent through time is due to the integrity of time consciousness. If we have the feel of our mental life as a streaming self-awareness,



this is a consequence of the continuity of inner time-consciousness as the innermost structure of our acts of perception" (Stanghellini et al., 2016, pp.46).

Employing the above understanding, those authors have unanimously argued that schizophrenia involves a fundamental disturbance in the structural integrity of inner time-consciousness, engendering the 'time fragmentation experience'. This experience refers to the anomalous temporal and self experience whereby a person can no longer experience time and self in their unity but in fragmentation. Time fragmentation experience has been accordingly specified into the disarticulation of time experience and the fragmentation of self experience. As defined by Stanghellini, the disarticulation of time experience refers to the anomalous temporal experience whose usual coherence and unity is lost and split into fragmented individual "now" moments (Stanghellini et al., 2016, pp.49). The fragmentation of self experience refers to the co-occurring anomalous experience wherein a person can no longer experience one self existing as a self-identical subject of one's own experience (Fuchs, 2013; Fuchs & Van Duppen, 2017; Stanghellini et al., 2016). The following self-report has been considered as a paradigmatic instance for such experiences.

The one speaking now is the wrong ego [...] Time is also running strangely. It falls apart and no longer progresses. There arises only innumerable separate now, now, now-- quite crazy and without rules or order. It is the same with myself. From moment to moment, various 'selves' arise and disappear entirely at random. There is no connection between my present ego and the one before (Kimura, in Fuchs, 2013, pp.84).

As the tripartite structure of inner time-consciousness establishes not only the unity of experience but also that of one self, Fuchs argues, its structural disturbance or "fragmentation" underpins both the disarticulation of time experience and the fragmentation of self-experience (Fuchs, 2013, p.84–85). Stanghellini and his colleagues have carried out an empirical analysis of anomalous temporal experience present in schizophrenia and concludes that "Our data partly support his [Fuchs'] hypothesis that a core feature of temporality in schizophrenia is the fragmentation of passive synthesis, that is of the reflexive synthesis of impression retention protention" (Stanghellini et al., 2016, pp.52). In line with this finding, a comparative analysis between melancholia and schizophrenia carried out by Sass and Pienkos finds that "in schizophrenia, a mode of temporality (perhaps better, of a-temporality) that, together with collapse of protention and retention, loses all organization and meaning; in melancholia, a foundering of drive and associated projection of the self into the future, that leaves one dominated by the past, futility, and fatigue" (Sass & Pienkos, 2013, pp.141).

Given that the structure of inner time-consciousness constitutes the temporal unity of experience and that of one self, it is intuitive that its structural breakdown implicates the disarticulation of time experience and the fragmentation of self experience. However, for the present purpose of argument, let us here remind ourselves that this "self" the authors argue to be fragmented by the structural disturbance in the inner time-consciousness is not a self that exists outside its ever flowing experience and maintains its identity as such. Instead, it is the minimal self that exists within its experiential flow and whose identity can persist only because its



experiential flow constantly brings itself to its own appearance or first-personally manifests (Stanghellini & Rosfort, 2013, pp. 237; Fuchs, 2010, pp.550; Zahavi, 2003; Zahavi, 2008, pp.54, 65; Zahavi, 2014, pp.64–65). And, as mentioned above, since it is the structure of inner time-consciousness that enables such a first-personal manifestation and thereby constituting the enduring identity of minimal self, Sass and Pienkos correctly identified the structure of minimal self with the structure of the inner time-consciousness. Recall: "the microstructure of minimal self or first-personal givenness just is the structure of inner time-consciousness" (Sass & Pienkos, 2013, p.140). In other words, the structure of the inner time-consciousness is the necessary constitutive dimension or the condition of possibility for the first personal givenness of an experience and therefore for minimal self. Therefore, the structural disturbance in the inner time-consciousness is not the minimal self disturbance. The structural disturbance in the inner time-consciousness just is "fragmentation", "disintegration", "breakdown", or "collapse" in the precondition of minimal self — the most basic and essential condition of subjectivity without which no experience can first-personally manifest. Had schizophrenia involved such a radical structural disturbance, no experience should have first personally manifest. The disarticulation of time experience and the fragmentation of self experience should have been impossible. Given 1) "the structure of inner time-consciousness just is the structure of the first-personal givenness" and 2) the disarticulation of time experience and the fragmentation of self-experience are first personally given, we are liable to conclude that the structure of inner time-consciousness is not, at the very least, fragmented, disintegrated, collapsed, or broken down.

To be absolutely clear, I do not disagree with the aforementioned authors' interpretation of Husserl's account. Nor do I dispute the phenomenal (or experiential) claim that the time fragmentation experience is present in schizophrenia. My objection targets the transcendental claim regarding the structural breakdown in inner time consciousness. To be specific, what I dispute here is the claim that the structural integrity of inner time-consciousness is fundamentally compromised, as it leads to the conclusion the time fragmentation experience is impossible. Since this conclusion follows if one employs Husserl's account of inner time-consciousness, the quick fix seems evident: do not use it anymore. The verdict seems simple. After several decades of its use, it has finally exhausted its value. Or, has it? The short answer: it has not. In the following, I first take a closer look at the synthetic, selfintending feature of the present consciousness and pull apart its two distinctive yet complementary aspects: temporal modification and affective modification. There are two reasons for establishing this distinction. First is to provide a phenomenological account that can appreciate the basic experiential fact that the time fragmentation experience is possible. Second is to do justice to the often-overlooked experiences in the contemporary research of schizophrenic temporal experience, i.e., non-emotional

¹ In line with this view, Stanghellini and Rosfort most concisely write: "No experience *and* no coherence of consciousness is possible without the temporal constitution of 'primal presentational, retentional and protentional intentions […]' (HusseQueryrl 1966, p. 233)" (Stanghellini & Rosfort, 2013, p.237;italics added).



affectively prominent temporal experience. As mentioned, it denotes the kind of an experience wherein a person with schizophrenia experiences an intense pull from the different temporal modes of experience, described as being "sucked up" by the past, something of the past "returning towards" oneself (Minkowski, 1933/1970, pp.287-290; Stanghellini et al., 2016; Fuchs & Van Duppen, 2017) and as being constantly pulled into the alluring immediate future, that "something" is impending (Minkowski, 1933/1970, pp.287–290; Stanghellini et al., 2016; Fuchs & Van Duppen, 2017). In the contemporary research, this affectively prominent temporal experience has been either considered as another manifestation in the structural disturbance in the inner time-consciousness (Stanghellini et al., 2016, pp.13) or regarded a notable change involved in schizophrenic temporal experience but not its "most fundamental change²" (Sass & Pienkos, 2013, pp.140). By employing Husserl's account of affection, I identify the structural underpinning of such an experience as 'affective modification dysfunction' and use it as a core concept to better reconstruct the structure of schizophrenic temporal experience while retaining its basic subjective dimension. What then is this temporal modification and affective modification? How exactly is making this distinction helpful?

4 Temporal Modification and Affective Modification

Temporal modification refers nothing but to the above discussed self-intending feature of the present consciousness. Recall: the retention of the previous primal impression and previous retention modifies the previous now phases as the just-past and farther past, and the retention of the previous protention and its fulfilment in the present modifies the current now as the new now. This self-intending retentional intentionality of the present consciousness is the necessary constitutive dimension or the condition of possibility for the temporal unity of experience and its first-personal givenness. It is this aspect of time consciousness that the proponents of the structural accounts exclusively focus on in their analysis of schizophrenic temporal experience. However, it is one thing to say that A is the condition of possibility for B and it is another thing to say that A is the necessary and sufficient condition for B. Grant that the present consciousness intends its own just-past consciousness via retention and that through such a self-intending the temporal unity of an experience is constituted. However, what exactly is the nature of retention such that when it intends the just-past consciousness it retains it as just-past? Even if retention grabs hold of the just-past consciousness in the present, insofar as it does not hold it as just-past, the now will not be experienced as such, as having arisen from the just-past. There would be no sense of just-past in connection to which one can experience the now as now. Meaning, if retention does not modify the just-elapsed consciousness as just

² Its fundamental change being, as should be expected by now, "a disturbance [...] "in the disruption of the temporal arc, of the — coupling or mutual relation of conscious moments creating a span of lived time which is necessary for the continuity of self-awareness (Fuchs, in press)"" (Sass & Pienkos, 2013, pp.140).



past, the temporal unity of experience would be lost. The question that has to be addressed for the constitution of the temporary unity of experience then is: How is it that retentional intentionality retains the just-past consciousness *as* just past? Affective modification comes in here.

To obviate some confusion, on Husserl's account, affection does not strictly refer to emotions nor does it refer to immanent self-affection (or the sense of vitality or aliveness) (Cf. Sass & Parnas, 2003). It is a technical term coined to designate a priori correlation between the consciousness and something that is not in the consciousness and thus intrinsically foreign to itself, i.e., the world (Husserl, 2001, pp. 196). In a little bit more detail, affection designates the constant attraction, "pull" or "allure" the world always-already exercises on our consciousness and our consciousness, in turn, being always "turned towards" and grasping such a pull (Husserl, 2001, pp.196). As such, Husserl often describes the phenomenon of affection with respect to its 'intensity' or 'vivacity'. Detailing the nature of affection with respect to the themes of investigation other than temporality (i.e., unity formation of immanent sense data, object constitution, perceptual field organisation, implicit and explicit recollection, habitual expectation, sedimentation, and unconsciousness) goes over the scope of the current analysis. What is important in the current analysis is, however, simply the following. To say that A is affective is that it allures or attracts one's attention.

In the analysis of the affective nature of temporal experience, Husserl argues that the present has the strongest affective intensity and that such an intensity gradually loses its force as it slips away into the past. In his terms, "the primordial source of all affection lies and can only lie in the primordial impression and its own greater or lesser affectivity" (Husserl, 2001, pp.217). He continues: "what is given in the mode of original intuitability of having a self in the flesh, givenness in the flesh, [in the now] undergoes the *modal transformation* of the more and more past" (Husserl, 2001, pp.217; italics added). Say, when I listen to my friend talking about how his day went, what he is saying now attracts my attention more so than what he said in the immediate past. I am still aware of what he just said but its affective intensity is not as strong as what he is saying now. I experience what he just said in the mode of "more and more past", slipping away into the past. Yet, again, how is this experience of past possible? To be exact, what is this "modal transformation" involved in constituting the sense of past?

Husserl's answer is roughly this: retention enables such an experience by diminishing the affective intensity of the just-past consciousness. Explaining the affective modification carried out by retention, Husserl writes: "Rather, it [retentional modification] produces a new dimension of blurred distinctions, a growing cloudiness, a murkiness that essentially decreases the affective force" (Husserl, 2001, pp.204). He further construes "the continuation modification of primordial impression [carried out by retention]" as a process of "clouding over" (Husserl, 2001, pp. 217). Bluntly put, the retention of the present consciousness does not simply grab hold of the just-past consciousness (viz. temporal modification). Instead, in the moment it does so, it also diminishes the affective intensity of the retained just-past consciousness (viz. affective modification). Given that the retention of just-past consciousness is the retention of



previous protention, retention, and primal impression, the affective modification of retention entails the following. Retention of previous primal impression and previous retention decreases the affective intensity of the previous now phases so that they can be experienced as the just-past and farther-past — as a chain of past phases that gradually fades away into the past. Simultaneously, retention of previous protention decreases the affective intensity of the previous implicit anticipation that the current now will be replaced by the new now in the succeeding moment. So that, in the succeeding moment in which such an anticipation is fulfilled, one can, without having to be surprised by every moment of its fulfillment, experience the current now as the new now — as seamlessly succeeding the previous now. In sum, if temporal modification carried out by retention retains the just-past consciousness and the previous tripartite moments therein, affective modification, in that moment of self-intending, diminishes the affective intensity of the retained previous intentional moments and constitutes the temporal unity of an experience. And what is this all to psychopathology?

4.1 A Way Out

As mentioned above, what the aforementioned researchers have exclusively focused on is the temporal modification of retentional intentionality, viz. the self-intending feature of the present consciousness. The "spontaneous linking of the primal impression with protention and retention" or "pre-reflexive, passive temporal synthesis of retention, protention, and primal impression", or simply "the structure of inner time-consciousness"—in virtue of which one can experience time and oneself in their unity of identity— just is the self-intending retentional intentionality of the present consciousness. The objection I raised was the following: given that the structure of inner time-consciousness (or the temporal modification of retentional intentionality) constitutes the temporal unity of consciousness and its first-personal givenness as well, its disturbance implies the impossibility in having any subjective experience. Having the conceptual distinction between temporal and affective modification in mind, we can now make this move: attribute disturbance to affective modification not to temporal modification. This entails the following two claims. First, the present consciousness still intends its own just-past consciousness and yet-to-come consciousness. Thus, no matter how much one experiences oneself and one's experience in its fragmentation and disunity, one can be still aware that it is oneself who is having such a fragmentation experience. In accepted terms, the structural integrity of inner time-consciousness remains intact. Second, attributing disturbance to affective modification translates to the following provisional hypothesis. Retention is not doing the job that it is supposed to do, that is, it no longer diminishes the affective intensity of the retained just past consciousness. This functional disturbance, I shall argue, underpins the affectively prominent temporal experience present in schizophrenia and globally alters the way one experiences time and one self. Consider the following.



5 Functional Account

Given that the retention of the just-past consciousness is the retention of previous tripartite intentional moments, the functional disturbance in the affective modification carries the following specific implications. First is the functional disturbance in the retention of previous primal impression. Second is the functional disturbance in the retention of previous protention. Third is the functional disturbance in the retention of previous retention. In the following, I clarify each implication with respect to anomalous temporal experience discussed both in the traditional and contemporary field of psychopathy: 1) Time Stop, 2.) Ante-festum, 3.) Déjà vu/vécu and 4.) Time Fragmentation. Of note, although these experiences have been historically documented and interpreted in various ways, it is only recently that those experiences have been organized as a set of categories for both research and clinical purpose by Stanghellini et al (2016)³ and Sass et al (2017). Each category has a set of members particular to an individual category and the 'core-phenomenon' without which the set of individual members of a given category cannot be the type they are, i.e., the particular type of structural disturbance in inner time-consciousness. Given that I aim to provide an alternative account to the prevailing structural account, what is at stake in this section is this: provide a set of phenomenological underpinning — or core-phenomenon — for each category.

5.1 Time Stop

First implication: the functional disturbance in the retention of previous primal impression. If it is the case that retention does not diminish the affective intensity of the retained previous primal impression, then the affective intensity of the previous now should remain equal to that of the actual now. Meaning, the previous now which usually loses its affective intensity and thus experienced in the mode of 'running off' will no longer be experienced as such. Further, if it is the case that retention still retains the previous primal impression, then the previous now, which lacks the sense of just-past, will be experienced in connection to the actual now. Therefore, the actual now will no longer be experienced as an ephemeral point that immediately slips away into the past but as somehow enduring more so than usual. Although Wiggins et al (1990) opt for the term of art "severe attenuation of syntheses of inner time consciousness", they write:

The present awareness will be experienced as simply *enduring* -- and as enduring without being bounded by a receding past or an approaching future. This

³ In their analysis of schizophrenic temporal experience, Stanghellini et al. (2016) propose two broad general categories for nosographic purpose. First is the "Disturbed Experience of Time Speed". To this general category, there belongs the "decelerated time experience". Second is the "Disarticulation of Time experience". To this category, there belong three sub-categories: 1.) Disruption of time flowing, 2.) Déjà vu/vécu, 3.) Premonitions about oneself. In the main body, with the exception of Dejavu/vecu category, I use "time stop experience", "time fragmentation experience", and "ante-festum" to mean the "decelerated time experience", "disruption of time flowing" and "premonitions about one self" categories.



extreme attenuation of the syntheses of inner time accounts for the experience of a "*prolonged*" or "*distended present*" which many schizophrenic individuals report (Wiggins et al., 1990. pp.31; italics added).

This experience wherein one feels stuck in the enduring now is often described by people with schizophrenia as "time stood still" (Stanghellini et al., 2016, p.50), "immobility, but not calm', 'time going back to the same moment over and over', 'people like statues', 'frozen moment'" (Stanghellini & Rosfort, 2013, pp.240), "I continue to live now in eternity; there are no more hours or days or nights [...] time does not flow for me." (Minkowski, 1933/1970, pp.285). Describing this immobility experience in detail, a patient of Minkowski (henceforth B) writes:

[...] yes, everything was immobile, as if time did not exist anymore. I seemed to myself to be a timeless being, perfectly clear and limpid as far as the relations of the soul are concerned, as if it could see its own deptlis. Like a mathematical formula. This is also perfectly clear and is outside of time. On the whole, it encompassed only immobility (Minkowski, 1933/1970, pp.287)

Another patient (henceforth A) reports a similar sort of experience and describes the experience of "non-disappearability" of time:

Time is immobile [...] In the morning when I wake up, yes, how can I say it, the "disappearable" is there again; this torments me terribly. Do I know where I am? As far as that's concerned, yes. But the "disappearable" of time is not there, and how can you take hold of time, when it was yesterday! There it goes on inside of me, always farther behind, but where? Time breaks (Minkowski, 1933/1970, pp.287; italics added).

Describing the sense of being pulled back in during the time immobility experience, another patient (henceforth C):

I am stopped; I am projected from *behind into the past*, by the words that people are speaking in the room [...] There is no more present, there is only a *going-backwards*; it is more than a feeling, it extends over everything (Minkowski, 1933/1970, pp.287; italics added).

The above self-reports indicate the presence of a significant alteration in the way one experiences the past. If, in everyday life, the just-past moment fades away into the past and gradually loses its affective intensity, in the instance of time stop experience, it remains present as a non-disappearable moment and constantly pulls one-self into it, hence the claims "the "disappearable" of time is not there" there is only a going-backwards; it is more than a feeling, it extends over everything." Put otherwise, the retention of the present consciousness does not diminish the affective intensity of the retained previous primal impression, prolonging the ephemeral now point to the immobile now moment and thereby eliciting the time stop experience. In other terms, this disturbance in the retentional affective modification of primal impression is the core phenomenon of time stop experience. With this in mind, let me proceed into clarifying the second implication in the disturbance of the retentional affective modification.



5.2 Ante-festum

Second implication: the functional disturbance in the retention of previous protention. If it is the case that retention does not diminish the affective intensity of previous protention, then the implicit anticipation towards the future will be exaggerated. Further, if it is the case that 1) retention of the present consciousness still retains the previous protention and 2) the condition of its fulfillment is the presence of the present consciousness, then protention will be still fulfilled and thereby enabling one to experience the succeeding moment as another "now" moment. ⁴ This exaggerated or the affectively prominent protention, however, will anticipate the immediate future as an alluring and pulling phase that for some unknown reason constantly attracts one's attention. Therefore, even after the previous protention is fulfilled by the new present consciousness in the succeeding moment, there will constantly remain the sense of something being unfulfilled, the sense of "something" about to happen will prevail in every moment of succession. In psychopathological context, this exaggerated anticipation, or the sense of foreboding and premonition, has been coined as "ante-festum" (Latin: before-the-feast) (Kimura, 1992). Stanghellini and Rosfort (2013) characterise such an experience as "[...] an eternally pregnant now in which what is most important is not present, what is really relevant is not already there, but is forever about to happen" (pp.240). If the above first analysis is somewhere along the right line, then the now moment should be not only characterized by its immobility but also by its incipient movement towards fulfilling the indeterminate, unfulfilling anticipation. Describing such a paradoxical nature of time experience, C writes:

I am like a machine *that runs* but *does not move from its place*. It goes at full speed, but it remains in place. I am like a burning arrow that *you hurl before you*; *then it stops, falls back, and is finally extinguished as if in a space empty of air* (Minkowski, 1933/1970, pp.287; italics added)

In the moment of time immobility experience, B writes:

All of this occurred in an *incessant flux* and *continuity of movement*, which was contrasted in a particularly gripping way with my own state of mind, *like the frame in relation to a picture*. These movements were a kind of madness in relation to my own state (Minkowski, 1933/1970pp.287; italics added)

Reporting both the mobility and immobility of time experience, A writes:

I continue to live now in eternity; there are no more hours or days or nights. *Outside things still go on, the fruits on trees move this way and that. The others walk to and fro in the room, but time does not flow for me.* My watch runs just as before. But I do not wish to look at it; it makes me sad (Minkowski, 1933/1970, pp.285; italics added).

⁴ Even in the time fragmentation case, a person *still* experiences time as the series of *now, now, now* moment. I will discuss this shortly.



As the self-reports indicate, such a temporal experience is not only characterised with immobility but also, paradoxically, constant 'movement'. As most concisely described by Stanghellini and Rosfort, "it [time in schizophrenia] is a paradoxical mixture of immobility and protention, a knot of stillness and frenzy, ecstatic astonishment, the zero hour between hesitancy and solution, calm and tension, emptiness and pressure, rest and unrest, stop and incipient movement" (Stanghellini & Rosfort, 2013, pp. 241; italics added). This paradoxical nature of time experience may be best understood as the synchronous manifestation of the retentional affective modification dysfunction. As the previous primal impression is no longer retained in the mode of running off or as just-past but as a non-disappearable now moment, one feels as though one is stuck in the enduring now moment, eliciting the time stop experience. In turn, as the previous protention anticipates the immediate future as though something is on the verge to happen, the new now moment (anticipated by the previous protention) wherein nothing significant happens cannot resolve that sense of exaggerated anticipation, and thus underpinning the feeling that one is like a "burning arrow" that is hurled only to be "extinguished in a space of empty of air" or like "a machine that runs in the same place". However, even in such a case, the basic sense of anticipation towards the immediate future, or the protention of the yet-to-come phase of consciousness, is still fulfilled, constituting the basic sense of the temporal movement towards the future. Meaning, the time stop experience and ante-festum co-occur as they share the same modal alteration: i.e., the retentional affective modification dysfunction. To specify, the core phenomenon for the time stop experience is the functional disturbance in the retention of previous primal impression, wherein the just-past is experienced as a non-disappearable now in connection to the actual now. For ante-festum, it is the functional disturbance in the retention of previous protention, wherein the exaggerated previous anticipation cannot be entirely fulfilled by the new now phase of consciousness, eliciting the feeling that "something" is about to happen.

5.3 Déjà vu/vecu

Third implication: the functional disturbance in the retention of previous retention. If it is the case that the retention does not diminish the affective intensity of the previous retention, then the further past than the previous now moment, call it the distant-past moment, will no longer lose its affective intensity. Further, if it is the case that retention still retains the previous retention, it follows that the actual now will still be experienced with the retained distant past moment that for some unknown reason constantly attracts one's attention and pulls one into it. This kind of an experience wherein the distant past attracts one's attention and "the already-happened prevails" has been coined as "dejavu/vecu" experience (Stanghellini et al., 2016, pp.50; Fuchs & Van Duppen, 2017, pp.69). B details such an experience as follows: "I don't know whether these are memories from the past which I see or whether I have been led there to them against my will. In any case, the past arose before me in a particularly vehement way, but not the way I usually see it" (Minkowski, 1933/1970, pp.288; italics added). Describing a certain force coming



from the "far-away", A writes: "it takes me backwards, but where? There where it comes from or where it was before. It goes back into the past. You have the feeling that you are going to fall behind [...] It is as if it is right at hand, as if you ought to draw It here again; is it time? It comes from far away!" (Minkowski, 19,333/1970, pp.286). C similarly reports: "The past is so bothersome; it drowns me; it draws me backwards [...] It is hurled backwards. I mean by that that there is no more future and that I am projected backwards" (Minkowski, 1933/1970, pp.287). Put otherwise, the retention of the present consciousness does not diminish the affective intensity of the retained previous retention, eliciting the sense of the distant past exercising a strong affective pull to one's present awareness and, correlatively, drawing one self back into it. In short, the dysfunction in the affective modification of previous retention is the core phenomenon for déjà vu/vecu experience.

If the above analysis is somewhere along the right lines, then one can understand how it is that the time stop, ante-festum, and déjà vu/vecu experience co-occur in the above mentioned three different individuals. They co-occur because those experiences share the same underlying structural alteration, viz. the affective modification dysfunction. Of note, in all of the above analyses, I have maintained the structural integrity of the inner time-consciousness. I have assumed that the present consciousness still retains and protends its own temporal phases. I did so for the following two reasons. First, without the structural integrity in the inner time-consciousness, the anomalous experience as such would have been impossible. Second, without the structural integrity of inner time-consciousness, one would have not been able to experience the sense of constant movement towards alluring future, the actual now with the non-disappearable now, and the affective distant past moment with the current now. Therefore, as opposed to its breakdown, total collapse, fragmentation, or disarticulation, the structural integrity of inner time-consciousness is absolutely necessary to provide a phenomenological account that accords with the lived anomalous-temporal-experience of schizophrenia. Let me now proceed into the last analysis of the experience that has been taken as the prime manifestation of the structural breakdown in the inner time-consciousness: Time Fragmentation.

5.4 Time Fragmentation

If it is the case that the temporal modification is still operative, then the present consciousness will still intend its own just-past and yet-to-come consciousness. If the retention of the present consciousness, however, no longer diminishes the affective intensity of the retained just-past consciousness (and that of previous primal impression, retention and protention therein), then the previous now tn-1 and its preceding now tn-2 will be no longer experienced in the mode of running off. Instead, they will be experienced as non-fading-away or 'non-disappearable' now moments. Since the present consciousness still retains the previous protention, its anticipation (that the current now consciousness will be replaced by the new now consciousness) will be still fulfilled — and thereby enabling one to experience the succeeding moment as another actual now. Given the present consciousness still intends its own temporal phases, it follows that the previous actual now (tn-1) and the previous



non-disappearable now (tn-2) will be carried over to the present at tn. Given the affective disturbance claim is correct, it follows that in every moment of succession, the retained previous actual now (tn-1) will be modified into another non-disappearable now. Therefore, in every now, the actual now will be experienced in connection with the series of previous non-disappearable now moments. The sense of coherent temporal progression will be lost. A patient of Kimura writes: "Time is also running strangely. It falls apart and no longer progresses. There arises only innumerable separate now, now, now — quite crazy and without rules or order" (Kimura, in Fuchs, 2013, pp.84; italics added). To go back to the A's self-reports: "[...] But the "disappearable" of time is not there, and how can you take hold of time, when it was yesterday! There it goes on inside of me, always farther behind, but where? Time breaks" (Minkowski, 1933/1970, pp.287; italics added). Given that the present consciousness still intends its own temporal phases, the subject will be still aware that it is oneself to whom such an anomalous experience is given. Hence, the disarticulation of time experience, as such, would be possible.

Further, given that the retention of the present consciousness does not decrease the affective intensity of its own just-past consciousness, it follows that it is not just the previous now moment that is non-disappearable but also the retained justpast consciousness. Given that the present consciousness retaining its own just-past consciousness is an instance of self-consciousness (to be specific, the pre-reflective form of self-awareness that I am the subject of my own experience, viz. minimal self), it follows that this non-disappearable previous now consciousness is the nondisappearable self-consciousness. Given 1.) the just-past self-consciousness no longer fades away into the past but remains present and 2.) this self-consciousness just is minimal self, in every actual now, one will experience two different minimal selves: one that is having the actual now experience as its own (call this S1) and another one that had the just-past experience as its own but remains present in the actual now (call this S2). If this is the case, then the S1 will no longer experience the just-past experience as its own but as an experience mediated by the S2. The S1 will then experience the S2 as a distinctive subject whose experience first-personally to itself (not to the S1): the S1 will not experience the S2 as the just-past self that is identical to itself but as an alien self endowed with its own ego-pole. Therefore, the basic sense of existing as a self-identical subject of one's own experience across time, or that it is obviously me who is having my experience as my own across time and no one else, will be lost. The prime instance of which is the fragmentation of self-experience. When the above patient of Kimura experiences time as "now, now, now", she writes "it is the same with myself. From moment to moment, various 'selves' arise and disappear entirely at random. There is no connection between my present ego and the one before."

5.5 Conclusion: Summary and Delusional Mood

So far, I have analysed the anomalous temporal experience particular to schizophrenia from its affective dimension. In contrast to the structural account, the account I provided presupposes the structural integrity in the inner time-consciousness, i.e.,



the synthetic, self-intending feature of the present consciousness. In so doing, the proposed account retained the subjective dimension of anomalous temporal experience present in schizophrenia. By employing the concept of affective modification, it further detailed the anomalous temporal experiences documented and discussed both in the traditional and contemporary field of psychopathology: 1.) Time Stop, 2.) Ante-festum, 3.) Déjà vu/vécu, and 4.) Time Fragmentation. The central tenet of the provided account is the following: the retentional intentionality no longer diminishes the affective intensity of the just-past consciousness, and this affective modification dysfunction underpins the schizophrenic temporal mode of experience. It should be emphasized here that this account is only a provisional, speculative one based on the secondary data collated by previous researchers. I do not doubt that there are other types of anomalous temporal experiences particular to schizophrenia that cannot be counted as an instance of either one of those above stated categories. Nor do I not doubt that there are temporal experiences that belong to one of those four categories but cannot be counted as the manifestation of the so clarified structural underpinning. As such, in this paper, the status of the distinctions of schizophrenic temporal experience into the above four categories remains to be ideal-typical: a set of experiences described under the heading of each category is not necessarily essential to but characteristic of schizophrenia. However, if the presented account is somewhere along the right lines, it can be taken as a tentative account for understanding schizophrenic temporal mode of experience without having us commit to the view that the very dimension of subjective experience is collapsed, broken down, or fundamentally fragmented.

Moreover, approaching anomalous temporal experience present in schizophrenia from its affective dimension can further illuminate the nature of the pre-psychotic phase known to precipitate the crystallization of primary delusion found in schizophrenia, namely, delusional mood. Delusional mood is a psychological state wherein a subject experiences an all enveloping sense of something important impending. An afflicted individual often describes such a mood as "Something is going on; do tell me what on earth is going on [...] How do I know, but I'm certain something is going on" (Jaspers, 1997, pp.98). In this state, although an individual cannot determine what exactly it is that has changed or what it is that it is going to happen to them, one remains certain that something did change and something is going to happen (Müller-Suur, 1950, pp.45). After a while, Klaus Conrad suggests, there comes the "aha" moment wherein an individual understands what it is all about. In this moment, the indeterminate "something" that has thus far eluded one's grasp is cognitively elaborated and specified into a determinate belief content (Henriksen & Parnas, 2019, pp.2). Conrad details such a transformative moment as a "reflexive turning back on the self" in which the self is experienced as the centre of the universe, as a middle point around which the universe "revolves" (Conrad, 1959, as translated in Mishara, 2010, pp.10).

One way of understanding the above described delusion formation stage is by approaching it from its affective dimension. If the affective intensity of the temporal experience is not modulated, so will be that of what one experiences through such a mode. Meaning, a perceived particular object and its surrounding context that one experiences, whose affective intensity is usually diminished as it slips way into



the past, will exercise a constant level of affective pull across time. A passing bus, for instance, which would have simply been perceived as another passing vehicle, may constantly attract one's attention and grab hold of one's attention to its every insignificant detail as it passes by, e.g., to its colour, size, number, side-banner, the people who are on the bus, etc. At the same time, its perceived surrounding context would equally gain such a peculiar saliency. The road, road signs, bus-stop, pedestrians, trees around the bus stop, etc. which would have been simply perceived as the background context of the passing bus may no longer be perceived as such but as a set of distinct objects that all solicit one's attention. Susan Weiner, a 31 years old graduate student at the time of her diagnosis, writes: "Schizophrenia is a disease of information. And undergoing a psychotic break was like turning on a faucet to a torrent of details, which overwhelmed my life [...] The movies, TV, and newspapers were alive with information for those who knew how to read [...] An advertising banner revealed a secret message only I could read. The layout of a store display conveyed a clue. A leaf fell and in its falling spoke: nothing was too small to act as a courier of meaning" (Weiner, 2003, pp.877; italics added). Meaning, one experiences oneself as the centre of the universe, or as the middle point around which the universe revolves, because every insignificant detail of one's surroundings constantly exercises intense affective allure to one self and solicits one's attention. This affectively prominent world-experience, coupled with the stifling tension that 'something' is going to happen, may propel an individual to take things into one's own hands. For the case of Susan, she frequented the movies as "they helped make sense of what was happening to me by providing clues to clarify and organize my activity" (Weiner, 2003, pp.878). After months of "putting pieces together", she came to the realisation that "there was a secret history of the world to which I now became attuned [...] An evil dictator was gathering power to himself, and he meant to perpetuate a holocaust on the Nation" (Weiner, 2003, pp.878). In this moment, "a sense of clarity that is more compelling than reality" dawned on her. She knew what was going to happen, not indeterminate 'something' but 'the inevitable emergence of the dictator': the exaggerated anticipation that something impending is fulfilled. The bewildering, enigmatic appearance of the world made sense to her: the world was warning her the coming of the dictator. Delusion sets in.

The above is a speculation. If it were to have some footing in the contemporary phenomenological discussion of delusional formation, it would have to clarify the relationship between the affective modification dysfunction and the particular type of thematization involved in constructing schizophrenic delusion. Moreover, delusional mood is also most notably characterised by the sense of uncanniness of the world, the loss of the practical significance of an object, and the perceptual field fragmentation (Jaspers, 1997; Fuchs, 2005a; Conrad, 1959; Matussek, 1987). Hence, the above analysis is not an exhaustive account. However, the general point is the following. If the experience of a strong and pervasive attraction or pull people with schizophrenia have constantly reported regarding the time and world experience can be analysed in its own terms, then one can begin to clarify the nature of such an affective experience. One can begin to analyse the global effect such an experience can have on the way one experiences time, oneself, and world. The analysis of which, in turn, can chart out possible ways to better understand schizophrenia



temporal mode of experience and delusional mood by identifying its specific structural underpinning.

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References

Binswanger, L. (1946). Über die daseinsanalytische Forschungsrichtung in der Psychiatrie. Schweizer Archive Für Neurologie Und Psychiatrie, 57, 209–225.

Conrad, K. (1959). Gestaltanalyse und Daseinsanalytik. Der Nervenarzt, 30, 405-410.

Fuchs, T. (2005a). Delusional Mood and Delusional Perception—A Phenomenological Analysis. Psychopathology, 38(3), 133–139.

Fuchs, T. (2005b). Implicit and explicit temporality. *Philosophy, Psychiatry & Psychology, 12*, 195–198.
Fuchs, T. (2007). The temporal structure of intentionality and its disturbance in schizophrenia. *Psychopathology, 40*, 229–235.

Fuchs, T. (2013). Temporality and psychopathology. *Phenomenology Cognitive Science*, 12, 75–104. Fuchs, T., & Van Duppen, Z. (2017). Time and events: On the phenomenology of temporal experience in

schizophrenia (Ancillary article to EAWE domain 2). *Psychopathology*, 50(1), 68–74. Fuchs, T. (2010). Phenomenology and psychopathology. In D. Schmicking, & S. Gallgaher (Eds.), *Handbook of phenomenology and cognitive science*. Dordrecht: Springer.

Henriksen, G. M., & Parnas, J. (2019). Delusional Mood. In G. Stanghellini, M. Broome, A. Raballo, V. A. Fernandez, P. Fusar-Poli, & R. Rosfort (Eds.), *The Oxford Handbook of Phenomenological Psychopathology*. Oxford University Press.

Husserl, E. (1991). On the phenomenology of the consciousness of internal time. (Brough, J. Trans.). Kluwer.

Husserl, E. (2001). Analyses concerning passive and active synthesis: Lectures on transcendental logic. (Steinback, A.J. Trans.). Springer.

Jaspers K. (1997). General psychopathology (J. Hoenig & M. W. Hamilton. Trans.) Johns Hopkins University Press.

Kimura, B. (1992). Écrits de psychopathologie phénoménologique. Trad. Bouderlique, J. PUF.

Matussek, P. (1987). The Clinical Roots of the Schizophrenia Concept. Cambridge University Press.

Minkowski, E. (1923). Étude psychologique et analyse phénoménologique d'un cas de mélancolie schizophrénique. *Journal De Psychologie Normale Et Pathologique*, 20, 543–558.

Minkowski, E. (1970). Lived Time. (Metzel, N. Trans.). Evanston, US: North Western University Press. (Original Work Published 1933)

Mishara, A. L. (2010). Klaus Conrad (1905–1961): Delusional Mood, Psychosis, and Beginning Schizophrenia. Schizophrenia Bulletin, 36(1), 9–13.

Müller-Suur, H. (1950). Das Gewissheitsbewusstsein beim schizophrenen und beim paranoischen Wahnerleben. Fortschritte Der Neurologie, Psychiatrie, Und Ihrer Grenzgebiete, 18(1), 44–51.

Rodemeyer, L. (2003). Developments in the theory of time-consciousness: An analysis of protention. In D. Welton (Ed.), *The New Husserl: A Critical Reader* (pp. 125–154; 131). Bloomington and Indianapolis: Indiana University Press.

Saks, E. R. (2007). The center cannot hold: My journey through madness. Hyperion.

Sass, A. L., & Pienkos, E. (2013). Space, time, and atmosphere: A comparative phenomenology of melancholia, mania, and schizophrenia, part II. *Journal of Consciousness Studies*, 20(7–8), 131–152.



- Sass, L., Pienkos, E., Skodlar, B., Stanghellini, G., Fuchs, T., Parnas, J., & Jones, N. (2017). EAWE: Examination of Anomalous World Experience. *Psychopathology*, 50(1), 10–54.
- Sass, A. L., & Parnas, J. (2003). Schizophrenia, Consciousness, and the Self. *Schizophrenia Bulletin*, 29(3), 427–444.
- Stanghellini, G., & Rosfort, R. (2013). Schizophrenia as a Disorder of Mood. In B. Fulford (K.W.M), K. Morris, Z. J. Sadler, & G. Stanghellini (Eds.), Emotions and personhood: exploring fragility making sense of vulnerability. Oxford University Press.
- Stanghellini, G., Ballerini, M., Presenza, S., Mancini, M., Raballo, A., Blasi, S., & Cutting, J. (2016).
 Psychopathology of lived time: Abnormal time experience in persons with schizophrenia. Schizophrenia Bulletin, 42(1), 45–55.
- Vogeley, K., & Kupke, C. (2007). Disturbances of time consciousness from a phenomenological and a neuroscientific perspective. Schizophrenia Bulletin, 33, 157–165.
- Weiner, S. K. (2003). First person account: living with the delusions and effects of schizophrenia. *Schizophrenia Bulletin*, 29(4), 877–879.
- Wiggins, O. P., Schwartz, M. A., & Northoff, G. (1990). Toward a husserlian phenomenology of the initial stages of schizophrenia. In M. Spitzer, & B. A. Maher (Eds.), *Philosophy and Psychopathology* (pp. 21–34). Springer.
- Zahavi, D. (2003). Inner time-consciousness and pre-reflective self-awareness. In D. Welton (Ed.), *The new Husserl: a critical reader* (pp. 157–180). Indiana University Press.
- Zahavi, D. (2008). Subjectivity and selfhood. MIT Press.
- Zahavi, D. (2014). Self and other: Exploring subjectivity, empathy, and shame. Oxford University Press.

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