The Perks of Understanding and the Case with the Experience of Time in Depression

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ABSTRACT

The methodological differences of understanding, *versus* explaining, have been at the centre of a century long *Methodenstreit* debate (and disagreement) among philosophers and scientists. Karl Jaspers managed to import this discussion to the realm of psychiatry and psychopathology in a significant, but unresolved, manner. Side-tracked by the advent of various changes in psychiatry during the twentieth-century, phenomenology and philosophy of psychiatry have made a comeback in the last decades and, since then, developed new contributions to this subject. Quite similarly, the study of time experience, standing on the shoulders of notorious philosophers, has too witnessed a similar renaissance, with groundbreaking developments across several conditions, including depression. The present article sets out to address concepts of the *Methodenstreit* debate, before proceeding to an examination of both meaningful and causal connections behind time dysperception in depression. In so doing, I argue that understanding, at least in this context and at present time, is not entirely reducible to causal explanations, for some aspects of the clinical encounter are only gained through understanding, such as the feeling of being understood and the implications it carries for a therapeutic relationship and effection of a treatment plan.

1. Introduction

Understanding, as opposed to explaining, has been one of those dichotomies that has accompanied mankind's scientific enterprise in the last couple of centuries, much akin to other more familiar dichotomies such as mind-body, *ψυχή-σόμα* (psyche-soma), subjective-objective, endogenous-exogenous, among other types of dichotomies. Though this distinction may not speak volumes to the average person, much ink has been spilled on its account across several fields

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of knowledge, namely throughout human and social sciences, philosophy, and even so-called natural sciences.

As reviewed by Phillips (2004, p. 180), it was within philosophy that this kind of contrast was developed and generalized by the late nineteenth-century German philosopher Wilhelm Dilthey, as epitomized by his saying that "we explain nature, we understand psychic life" (Dilthey, [1894] 1977, p. 144). Over the course of the twentieth-century, this approach saw further developments at the hands of several authors that followed Dilthey's footsteps, but that also introduced the understanding/explaining approach to other areas, such as Max Weber in sociology, and subsequently Karl Jaspers in psychiatry and psychology (Phillips, 2004, p. 184).

2. Objectives

The present article considers the issue of whether every mental phenomenon can be both understood and explained. During its development I will focus on the Jaspersian concepts of understanding and explaining, while drawing from one particular critique of this dichotomy – that understanding can be made replaceable by causal explanations. In so doing I aim to examine both meaningful connexions and causal explanations in the context of time dysperceptions in depression, contending how vital understanding is, and how something is gained in understanding that is amiss in explaining.

3. Understanding *Vs.* Explaining

Explanations (*Erklärungen*) result from the natural sciences' methodological efforts to establish causal connexions, whereas understanding (*Verständnis*) seeks meaningful connexions and is typically endeavoured by the social and human sciences, such as history and psychology. Dilthey postulated that natural sciences seek to treat nature as objects and forces amenable to explanation by causal (cause-effect) connexions, or laws, aiming to establish general, causally formulated laws. Despite "knowing" an object from the outside, and being able to causally explain it, the natural scientist remains alien to said object of study, because he, or she, will never know it from within. On the other hand, the social scientist (historian, psychologist, etc.) is able to know the inner life of another person and find meaningful connexions because he, or she, is also a person, and can thus "know" from the inside their object of study, i.e., a human subject. In

other words, because I am a person, I can know and understand the inner life of another person just as I can understand myself, namely through the network of meanings associated with a certain behaviour and the interpretation of those meanings (Dilthey, [1883] 1989, pp. 66–72).

Dilthey's work in *Ideas Towards a Descriptive and Analytic Psychology* and Max Weber's sociological work in *Roscher and Knies*, as well as Georg Simmel in *Problems in the Philosophy of History*, were explicitly acknowledged by Jaspers as great influences on his adoption of the understanding method (Jaspers, [1959] 1997, pp. 301-302, fn. 1) and, therefore, application of the understanding/explaining conceptual framework to psychiatry in both his articles *The Phenomenological Approach in Psychopathology* and *Causal and 'meaningful' connexions between life history and psychosis*, as well as *General Psychopathology*, his widely regarded *magnum opus*. As summarized by Thornton, "at a time when psychiatry was dominated by the 'brain mythologists', Jaspers' major aim was to bring psychiatry back within the ambit of human sciences. He wanted to balance things up." (Thornton, 2007, p. 92). Indeed, Jaspers regarded psychopathology, much like sociology, as a hybrid subject, residing partly in both the realm of natural sciences, settled to pursue functional abnormalities of the brain, and human sciences, focused on studying the experiences, aims, intentions, and subjective meanings of patients (*ibid.*). This methodological dispute of natural *versus* human sciences came to be known as the *Methodenstreit* debate (Fulford et al., 2006, pp. 213–217). Jaspers, following this 'methodological debate', used 'understanding' for an account that concerned the 'meaning' of an action or event, and 'explanation' solely for the giving of a causal account (*ibid.*, p. 213).

In both *General Psychopathology* and *Causal and 'meaningful' connexions between life history and psychosis*, Jaspers suggests that, in order to achieve a comprehensive perspective of a mental disorder, one would need to use both modes of intelligibility: understanding to pursue meaningful contents of an experience of mental disorder, and causal connexions to explain observable phenomena (Jaspers, [1959] 1997, pp. 301–313, pp. 354–363, pp. 451–462; Jaspers, [1913] 1974, pp. 83, 86-87).

The Jaspersian concept of understanding (*Verständnis*) stands as a way to other people's inner mental states, to grasp their subjective meanings, to read their motives for their actions and speech. Jaspers proposes that there are two ways we might understand meaningful content: *rationally* or *empathically*. The

latter is performed through Jaspers' phenomenological approach to psychopathology[1]. We understand another person *empathically* when we feel our way into their psyche, hence understanding the subjective qualities of an experience. *Rational* understanding, on the other hand, enables the user to grasp how other people's thoughts, actions, intentions hang together in a consistent and coherent manner (Jaspers, [1913] 1974, p. 83; Jaspers, [1959] 1997, p. 304). Another aspect that distinguishes understanding from explaining, according to Jaspers, is that claims of understanding are deemed true based on vividness, connectedness, depth, and complexity, which is very unlike the criteria used in natural sciences. Genetically understandable connexions are self-evident, their power of conviction rests entirely in themselves, they are ideal, typical, and not inductively obtained. Frequency in no way enlarges the evidence for a meaningful connection: it strikes us as convincing and sufficient for our understanding and accepting of it (Jaspers, [1959] 1997, pp. 303–304, p. 359; Jaspers, [1913] 1974, pp. 84–85). In other words, unlike in causal research, understanding can never lead to generalization or a general theory or a rule, since one case alone suffices to establish a meaningful connection. Additionally, while a causal law may be (dis)confirmed by (counter)examples, counterbalancing trend of evidence does not render a meaningful connection wrong (Jaspers, [1913] 1974, p. 85, pp. 91–92).

Genetic and *static* are two other attributes Jaspers draws on understanding in his [1912] 1968 paper *The Phenomenological Approach in Psychopathology*, as well as in *General Psychopathology*. "Static understanding" constitutes the empathic understanding of an individual's mental state *as is*, separately from other mental states, and as represented from the first-person per-

[1] It's worth noting that Jasper's phenomenological approach to psychopathology, despite having been somewhat influenced by Edmund Husserl's phenomenology, diverged on several aspects. For instance, Jaspers posited the use of empathy and imaginative re-living as a method to grasp mental states, whereas Husserl advocated logic and other formal disciplines. Also, Jaspers considered Phenomenology to be concerned strictly with the description and classification of mental states (static understanding), while Husserl's phenomenology concerned relations between mental states in a stronger sense, through *a priori* rational relations. Moreover, Husserl deemed phenomenology distinct from empirical psychology, even if it could be of some use to the latter, whereas Jaspers posited his concept of phenomenology as wholly empirical (Fulford *et al.*, 2006, pp. 204, 218). For a more extensive account of this divergence, including the extent to which Husserl influenced Jaspers – which remains openly debated –, see Wiggins & Schwartz (1997) or Fulford *et al.* (2006, Ch. 9, pp. 180-210).

spective. Phenomenology deals strictly with what is actually experienced, viewing psychic events as from within, and bringing them into immediate realization. Meanwhile, "genetic understanding" is posited as a unique form of understanding that only applies to psychic events and grasps as self-evident how one psychic event emerges from another. It is the comprehension of meaningful relationships between psychological experiences, taking appreciation of the meaningful connexion between two (or more) experiences (Jaspers, [1912] 1968, p. 1322–1323), such as understanding why someone who lost a loved one is grieving. The Jaspersian sense of Phenomenology, which posits static understanding, does not concern itself with external manifestations or objective performances, nor with the genesis of the psychic phenomena, for their genetic relationship is rational and in accordance with the rules of logic, leading to no more than what was the content of a mind, and having no more than an aiding role: "Whereas the rational understanding is only an *aid* to psychology, empathic understanding *is* psychology itself (Jaspers, [1913] 1974, pp. 82–83). Indeed, Jaspers writes that "phenomenology itself has nothing to do with this 'genetic understanding' and must be treated as something entirely separate." (Jaspers, [1912], 1968, p. 1322).

Regarding the aims of psychopathology, in *Causal and "meaningful" connexions between life history and psychosis*, Jaspers writes as follows:

> Psychology of meaning has possibilities of extensive growth by bringing material of which one has been unaware into clear consciousness. [...] The real task of psychology of meaning is the extension of our understanding beyond this already well-known material into the hitherto unobserved, and further into quite unusual connexions (as, e.g., sexual perversions and their links with other instinctual drives), and finally into the demonstration of meaningful connexions emerging in psychotic states, which may at first glance appear to be quite senseless (Jaspers, [1913] 1974, p. 89).

From this, we can fairly say that the main task of psychopathology of meanings is to extend our understanding so that it encompasses connexions between psychological phenomena that may initially seem to us strange and unfamiliar, and, ultimately, to render understandable the experience of abnormal mental states. Nevertheless, to what extent can psychopathological phenomena really be empathically understood? Jaspers himself posits this: "Under pathological conditions, numerous psychic phenomena make their appearance without meaningful antecedents; psychologically speaking they emerge from nothing; seen causally they are occasioned by a disease process" (Jaspers, [1912] 1968, p. 1318).

Jaspers suggests that psychopathological phenomena can be understood to varying degrees, namely phenomena which are known to us all or are to be understood as exaggerations, diminutions, or combinations of phenomena which we have experienced (e.g., affective disorders). However, even Jaspers admits that some phenomena are completely inaccessible to any form of empathic understanding, such as psychotic delusions. The only way to get closer to such phenomena is through analogies and metaphors. He then remarks that "we perceive [these ununderstandable phenomena] not through any positive understanding of them, but through the shock which the course of our comprehension receives in the face of the incomprehensible" (Jaspers, [1912] 1968, p. 1318).

3.1. Jaspers' pluralistic methodology: controversies and limitations

Despite the sub-heading, I will refrain from elaborating on the full set of controversies and limitations Jaspers' methodology arose purely for the sake of brevity[2]. Instead, I will focus on the one which I aim to tackle further on.
Regarding the limits of understanding, Jaspers wrote in *Causal and "meaningful" connexions between life history and psychosis*:

> *There is no real event*, be it of physical or of psychic nature, *which is not in principle accessible to causal explanation: the psychic events too can be submitted to causal explanation.* [...] *There is no single event known to us which, in this sense, cannot be understood as well as explained.* [...] Whereas with the method of causal explanation in principle we nowhere encounter barriers, but can gain new ground in all directions and without limitation, *with understanding we encounter limitations everywhere.* [...] *only certain aspects of the psyche are accessible to understanding* (Jaspers, [1913] 1974, pp. 86–87, italics added).

From this, we can conclude that Jaspers is saying, in a somewhat seemingly contradictory way, that any event that we understand involving a meaningful connexion can be investigated causally, although not every event can be understood in the first place. That being said, Fulford *et al.* (2006, p. 226) notes:

> Jaspers gives no indication of how one tells, in general, whether an attempt to understand is appropriate or not. [...] In certain cases, such as taking of an umbrella, or a clap of a thunder, it seems clear when understanding or

[2] To see a few others, see Chapter 10 of Fulford et al. (2006), or Chapter 4 of Bracken and Thomas (2005).

> explanation is appropriate, but in other cases the question of which appropriate in the context, may be an issue for discussion and debate. [...] *The issue of whether a sequence of events is more properly understood or causally explained is at the heart of psychopathology for Jaspers* (italics added).

Fulford (2006, p. 226) proceeds to point out that, "given enough ingenuity, there is no event that cannot be understood, it is rather that certain events are more *properly* conceived of as causal connections," such as in the case of a solar eclipse, where its meaning used to be mythological but nowadays is astronomically explained. Nevertheless, "the question of whether a concrete causal account is available in a particular case is an important criterion in deciding whether or not it is appropriate to understand the event meaningfully" (Fulford, 2006, p. 226). At last, Fulford reaches the question/critique that I wish to address in the present article, and which is worth quoting in length:

> Are there aspects of what it means to understand someone that are simply irreducible to a causal account, or is it merely that there are *practical* obstacles to giving a full causal account of a meaningful connection, even though *in theory* it would be possible? [...] Could it be that one speaks of a "meaningful connection" between mental states simply as a short-hand for speaking about a causal connection that we are not yet in a position to explain fully? [...] Indeed a causal account could perhaps ultimately be given in cases where we now "make do" with describing a meaningful connection. [...] Rapid advances in neuroscience in the late twentieth-century, like the corresponding advances in Jaspers' time, once more seem to hold out the prospect of a complete causal account of human experience and behaviour. [...] [Many] have argued that causes will increasingly displace meanings in the human sciences as they have in the natural sciences. [...] Just as the causal stories of modern physics have increasingly made the "folk physics" of pre-scientific imagination redundant, so advances in the neurosciences will increasingly make meanings and understanding redundant in the human sciences. [...] Jaspers suggests that it is "possible" that "one day" we will be able to give a causal account of thought processes that we at present understand in a meaningful way (Fulford, 2006, pp. 226–227).

Ultimately, given the period in which Jaspers developed his work, namely its relative inexistence of the neuroscientific methodologies we now possess, one can easily imagine that he did not find any urgency in solving the matter of whether meaningful connections are reducible, or irreducible, to causal connections,

whether in *principle* or in *practice*. As a matter of fact, it seems that he entertained several possibilities, as one might take distinct readings of the following excerpt:

> It is not absurd to think that *it might one day be possible to have some rules which could causally explain the sequence of meaningfully connected thought processes without paying heed to the meaningful connections between them.* [...] It is therefore in principle not at all absurd to try to understand as well as to explain one and the same real psychic event. *These two established connections, however, are of entirely different origins and have entirely different kinds of validity.* They do not help each other in any way at all. The explanation does not make the connexion more meaningful, the understanding does not add to its explanation. The understanding as well as the explanation are each totally separable. In fact there is no single event known to us which, in this sense, cannot be understood as well as explained. To find such an event is an *infinitely remote problem* (Jaspers, [1913] 1974, p. 86, italics added)

In an attempt to reconcile Jaspers' views, Fulford (2006, p. 228) suggests that "there is a fundamental continuity between the understanding approach and the explanation approach. Given enough technical know-how, the one will merge with the other." He then adds that, "with nowadays enormous advances in the technology required to investigate the causal functioning of the brain, the question is once more pressing: are there aspects of what it means to understand someone which are irreducible in principle to the giving of a causal account?" (*ibid.*).

It is worth highlighting one aspect that Fulford puts forward a few sections before. He contends that, "while one might be able to give a causal explanation of the relation between two states that are picked out initially as standing in a meaningful connection, it is not possible to give a causal account of their relation *qua* (in respect of its being a) meaningful connection" (*ibid.*, pp. 227–228). Drawing from an analogy of meaningful connections between coins and monetary value, Fulford asserts that "it is not possible to give a physical account of their relation *qua* monetary relation. This would be a more subtle form of the 'irreducibility in principle' thesis" (*ibid.*).

Before drawing this discussion to a close, it is important to highlight two comments Fulford made regarding the tensions in Jaspers' notion of understanding. First,

> there are cases where a causal explanation is clearly appropriate (e.g. thunder) and cases where understanding is more appropriate (a patient's written

> expressions), but there are going to be many cases where the question of which perspective is appropriate will be inescapably a matter of open debate (Fulford, 2006, p. 234)

Second, although the traditional medical model would take an acknowledgement of values to be equal to a betrayal of medical science, the work of Rickert and Weber offered that human sciences are no less scientific for referring to the value-laden and normative dimensions of human life. "A 'human science', therefore, which is modelled exclusively on the aims and methods of a natural science, is at risk of being cut off from the very phenomena with which it is properly concerned: the meaningful experiences of real people" (*ibid.*, p. 234). Jaspers' determination to import both meanings and causes to psychopathology effectively sought to push psychiatry back to the experiences of real people, and not just their biological nature.

As we have seen, though understanding may be made redundant in several instances by the advent of causal explanations, my basic claim is that in several instances there will remain a *residuum* that only understanding can apprehend. Time dysperceptions, or time disorders, as happens in depression, may well be one of those instances.

4. Temporality and Lived Time

I dare say no subject is more prolific in philosophy of psychiatry than that of temporality and lived time, for the contributions from philosophy are vast and its applicability to healthy subjects and mental patients is, likewise, copious.

Despite being integral to how human beings experience their sense of self, how they relate to others, and experience the world, time is notoriously difficult to define. Nevertheless, we are all seamlessly acquainted with it and many of its aspects, such as the concepts of present, past, future, duration, sequence of events, synchrony, and the arrow of time (Oyebode, 2018, pp. 71–72). This is something that Jaspers himself is quick to acknowledge:

> Space and time are always present in sensory processes. They are not primary objects themselves but they invest all objectivity. Kant calls them "forms of intuition." They are universal. No sensation, no sensible object, no image is exempt from them. Everything in the world that is presented to us comes to us in space and time and we experience it only in these terms (Jaspers, [1959] 1997, p. 79).

Time leaves a mark in the most varied aspects of human life, so much so that many times its influence is not even recognized. It is so pervasive that we can find a time element in several not-so-obvious dimensions, such as in memory, language, music, dance, and sports, among many others. Quite surreptitiously, time can be also found in concepts of expectation, desire, hope, prayer, or even death. Eugene Minkowski, a phenomenological psychiatrist, was one of the greatest proponents of time study and throughout his career left many written contributions regarding the study of time (Oyebode, 2018, p. 72).

In the following sections, we will explore how time is perceived and undertake a brief review of causal explanations and meaningful connections in temporality and time disorders, with a special focus on depressive illness.

4.1. How do we sense time?

Unlike other sense organs, time perception is not made possible by a specific single receptor organ, or fixed set of structures, as is the case with visual and auditory perception (Teixeira *et al.*, 2013, pp. 567–568). Instead, referring to a 2016 review by Fontes *et al.*, we can learn that it involves the sum of stimuli associated with cognitive processes and environmental changes, thus requiring a complex neural mechanism that may be changed by emotional status, attention level, and disease processes. Nevertheless, this mechanism has not been fully enlightened. Time perception involves all sensory channels, as well as several structures across the brain. Together they are responsible for receiving, processing, and interpreting information in fractions of milliseconds, seconds, or minutes. These neural processes are only fully perceived with contributions from memory, attention, and emotional status. Although time perception can be influenced by neurological or psychiatric disorders, it should be highlighted that even in normal instances (i.e., states of health) time can be felt as longer or shorter (Fontes *et al.*, 2016, p. 14).

Several models have been proposed to explain how the brain analyses and codes time perceptions, of which the internal clock model is the most known[3], which posits that time is estimated according to the number of impulses accumulated during an interval of time, depending on a switch controlled by attention. However, a widely accepted, precise model has yet to be developed. Despite this shortcoming, what the empirical research has consistently pointed is

[3] For a fuller overview of this model, as well as others, refer to Fontes *et al.*, 2016, p. 15–16.

that human beings estimate and distort time sense, depending on intrinsic and extrinsic factors. (*ibid.*, pp. 15–16). Time is not homogeneous, but rather multiple experiences of time, reflecting the way the brain adapts to various time scales. An interesting corollary is that the less attention is paid, the shorter is the subjective perception of time. This seems most evident when one is immersed in some affair and distracted from time, hence the popular expression "time flies". On the other hand, seconds and minutes seem endless when one is direly ready and waiting for a specific time or timelapse (*ibid.*, pp. 14–16).

Fontes *et al.* provides a succinct and comprehensive review of the neuroscientific knowledge on the neurophysiology of time perception, but, considering the nature of the present article, I'll just highlight that (1) time perception involves cortical and subcortical areas, namely the frontal cortex, parietal cortex, basal ganglia, hippocampus, and the cerebellum, as well as several circuits between these regions; and (2) said areas are differentially implicated in time perception depending on the timescale (e.g., milliseconds, seconds), as well as whether the person is being called upon to estimate time intervals, feel *timings*, establish sequences or feel rhythms. To make matters more complex, specialized cells (time cells, Purkinje cells, unipolar brush cells) have been found in the hippocampus and cerebellum and have been implicated in time perception (*ibid.*, pp. 16–18).

Regarding neurochemistry, matters are not particularly made any easier. Although it has been established that the main neurotransmitters are dopamine and acetylcholine, several other neurotransmitters (serotonin, norepinephrine, glutamate, and GABA) have been implicated as well, albeit to a lesser extent. Be that as it may, Teixeira *et al.* aptly highlights how hard it is to establish the role each neurotransmitter (NT) has on time perception on account of their influences on each other. Furthermore, changes in time perception following some change in NT may be due to its effect on attention and memory, and not on any specific internal clock or time sense mechanism (Teixeira *et al.*, 2013, pp. 570–571)

Lastly, as summarized by Oyebode (2018, pp. 76–79), subjective time (and, to a lesser extent, objective time) is described in relation to biological rhythms, specifically the circadian rhythm (day and night), monthly cycle (menstrual cycle), physiological variations tied to seasonal changes, and life epochs (from birth to death, involving also biological changes, social influences, and the

individual perception of one's life situation). The very notion of time progression is intimately tied to various physical processes, such as birth, development, and decline, or ageing.

The fact that no area of the brain is single-handedly responsible for the sense of time enables us to have patients with brain injuries that hardly ever have their time perceptiveness break down completely (Wittmann *et al.*, 2009, p. 1955)

4.2. Time dysperception in depression and causal explanations

Currently, there is a large variety of (neuro)psychological models concerning the time perception debate, specifically on *how,* and *where* in the brain, time is processed (Wittmann *et al.*, 2009, p. 1955). A considerable variation in the subjective sense of the passage of time, as well as in the estimation of the duration of a time interval, has long been recognized across many circumstances. As Whittmann *et al.* (*ibid.*, p. 1960) stresses, "time does not pass with a steady-paced flow. Perceptual time is not isomorphic to physical time."

Psychological research has repetitively shown that cognitive functions, such as attention, working memory and long-term memory influence our temporal judgements, in addition to drive states, moods, and emotions, as well as personality traits. Our sense of time thus results from the intricate interplay between cognitive functions and momentary mood states. In most cases, the influence of emotions often leads to a longer time estimation (*ibid.*, pp. 1955–1956)

According to Teixeira *et al*, abnormalities of subjective time experience are well-recognized in depression, despite discrepant findings having been reported at times. However, it's well-known that depression affects several cognitive functions which can, in turn, exert influence on time perception. Although it has been suggested that slowed time experience in depression is due to a psychomotor deficit, other studies have argued that it may be non-specifically linked to the global severity of the depression. Attention demands to long-interval processing tasks seem to pose a critical factor in depression-induced deficits in processing time. A decrease in time estimation capabilities (depressed subjects estimated, on average, 6" less in a set 30" interval) was also reported, having found that depressed patients had a greater time estimation error when feeling unwell (*ibid.*, p. 573). Some patients with depression report time passing slower than normal or even stopping altogether (Fontes *et al.*, 2016, p. 19).

It has been reported that depressed patients report a slowing down of the pace of time and overestimate temporal intervals (seconds to minutes). The psychological distress that afflicts these individuals directs attention to the passage of time and away from meaningful thoughts and actions. Both conditions of boredom or social rejection were also found to be associated with overestimation of time intervals, which was hypothesized to be the consequence of a stronger attentional focus on the present, brought on by reactive emotional and cognitive processes (Wittmann *et al.*, 2009, p. 1960).

All in all, neuroscientific studies seem to consistently point out the existence of variability in time perception across both healthy subjects and depressed patients, even if at times inconsistent results have been reported (mostly due to diagnostic and methodological discrepancies). What is also striking after this brief review[4] is the remarkable neurological complexity in this seamless "6th" sense of ours. So much so that it has remained frustrating and very much elusive to conclusive studies and descriptive models, as we have on other organ senses. Thus far, the study of causal connections regarding time perception in depression has proved to be at a somewhat unsatisfactory level to displace the need for meaningful connections.

4.3. Time dysperception in depression and meaningful connections

Phenomenology played a significant role in Jaspers′ philosophy. He believed that it would allow one to grasp the whole psychic experience, while emphasizing the importance of understanding individual experience as it is actually lived by the subject, rather than reducing it to abstract concepts or theoretical frameworks. The aim of Jaspersian phenomenology was to vividly reproduce the mental phenomena truly experienced by the patient (*as is*), to review their interrelatedness, delimit them as precisely as possible, differentiate them, and label them with a fixed terminology. To accomplish this objectively, one needed to refrain from any prejudices and presuppositions, including diagnosis (Jaspers, 1997, pp. 55-56).

In addition to the aforementioned Jaspers' excerpt on space and time, one can find a further six pages (Jaspers, [1959] 1997, pp. 82–87) dedicated to time in his *Subjective Phenomena of Psychic Life* chapter in *General Psychopathology*. In them, we can find that Jaspers distinguishes *knowledge of time*,

[4] To see a more detailed outline of some of the links between temporal cognition and other domains, namely perception, attention, and memory, refer to Matthews & Meck, 2016.

experience of time, and *handling of time*. The first two can be likened to *objective* and *subjective* time, a distinction that Oyebode (2018, p. 72) also establishes, though somewhat differently. Jaspers considers *experience of time* to be a matter for the psychology of meaningful phenomena, henceforth dealing solely with this aspect. He writes:

> Our *experience of time* involves a basic awareness of the constancy of our existence; without this constancy in time there can be no consciousness of time passing. Consciousness of time passing is an *experience of basic continuity* (Bergson's *durée*, Minkowski's *temps vécu*). Experience of time is also an experience of *having a direction*, a growing forward, in which the awareness of the present stands as a reality between the past as memory and the future as planned (Jaspers, [1959] 1997, p. 83).

Jaspers then proceeds to distinguish and describe it in a phenomenological way:

(1) *Momentary awareness of time*, which includes the normal experience of having a momentary and comprehensible change in time. In said category, we can find (aa) *time hurrying or slowed*, (bb) *lost awareness of time*, (cc) *loss of reality in the time-experience* (described in some depressive patients as "*it feels as if it is always the same moment*"), and (dd) *the experience of time standing still*.

(2) *Awareness of the time-span of the immediate past*, illustrating the understandable experience of feeling we had a long day after a hard day, while the inverse can be also said. "The livelier our memory of past events, the shorter seems the time-span that has passed, but the more experiences intervene, the longer does the time-span appear" (*ibid.*, p. 85).

(3) *Awareness of time-present in relation to time-past and future*, including a varied number of phenomena, such as (aa) *"déjà vu" and "jamais vu"*, (bb) *discontinuity of time*, (cc) months and years flying by with *excessive speed*, and (dd) *the shrinking of the past*.

(4) *Awareness of the future*, as if the future vanished. Jaspers quotes a depressed patient ("I cannot see the future, just as if there were none"), arguing as follows:

> Changes in emotional atmosphere of the patient's perception and in his awareness of things also make themselves noticeable in the experience of time. What is lost is the feeling of immediate content. Things are there but the patient can only know them, not feel them, so the future disappears like everything else.

> The concept of time is there and the correct knowledge of time but not the actual time-experience (*ibid.*, p. 86).

(5) *Schizophrenic experience of time standing still, flowing together, and stopping*; alluding to a set of remarkable and significant experiences, sensorily keen but of a supernatural strangeness, schizophrenic sometimes report (*ibid.*, p. 86).

Contemporarily to Jaspers' phenomenological contributions to the study of time experience, many well-known philosophers dwelled also in the study of philosophy of time. Among them, we can find such names as Franz Brentano, Edmund Husserl, Martin Heidegger, Eugène Minkowski, Erwin Straus, and Hubertus Tellenbach, among many others who more or less addressed this quest. In recent years, phenomenology of time has seen remarkable advances and new contributions from contemporary authors such as Thomas Fuchs, Giovanni Stanghellini, and Matthew Ratcliffe. Due to the limited space in the present article, I will focus on recent contributions to the understanding of abnormal time perception in depression, with regard to inputs from classical authors.

The way we experience the world involves persistence and endurance of objects and entities, even though appearances can (and do) change markedly in relation to ourselves (Ratcliffe, 2015, p. 42), for example with a point of view/perspective. Husserl claimed that what perceptual experience appears to us at a given time includes not just what is perceived, but also other possibilities from other vantage points, in what he termed the entity's *horizon*. An organized system of possibilities makes up our sense of what an entity is and the sense that *it is*. These systems of cohesive possibilities are key to the achievement of *passive synthesis*, the Husserlian concept of harmonious integration of appearances, which in turn enables one to experience the presence of an enduring object without conscious effort (*ibid.*). Indeed, Husserl explains that "in perception we are nevertheless ″horizonally″ [*sic*] co-conscious of the past and future. But we are conscious of them emptily, even though they can be exposed subsequently and in an intuitive manner" (Husserl, [1966] 2001, p. 112).

So how does passive synthesis relate to the experience of time? Essentially, if we were only to be conscious of that which is given in a punctual now, consciousness would consist in a series of isolated now-points, rendering impossible even the basic experience of a temporal object, i.e., its existence in time, change and succession through time. Phenomenology holds that there is a *width of presence* in time, like a duration-block that comprises present, past,

and future into the single basic unit of perceived time (Parnas & Zahavi, 2002, pp. 147–148). This can be easily illustrated by hearing a melody, as Husserl himself suggested. When hearing the second note, we are automatically still aware of the previous note, as well as even (anticipating) the next one. It doesn't mean that there is no difference between the tones (as if they were simultaneous): on the contrary, they are experienced as a succession in time. That is the reason why we can experience a melody in its temporal duration, and not simply as isolated tones replacing each other (Husserl, [1964] 2019, pp. 23, 57-59, 73). Our experience of time is that of a horizon, comprising both the now (*primal impression*), the past (*retention* of the moment that has just been), and the future (*protention*, which in an indefinite manner intends the phase of the object about to occur, and can be likened to anticipation) (*ibid.*, pp. 46-48; Parnas & Zahavi, 2002, 148–149). Both retention and protention should not, however, be confused with phenomena such as recollection and expectation. An obvious and important difference is that protention and retention are intrinsic, *a priori* structures of our consciousness, that are passive or automatic processes, and take place without our active contribution (Husserl, [1964] 2019, pp. 68-70, 79-80, 96-97). The experience of temporal continuity is thus anchored in this horizontal structure of time, or temporal horizon, which Husserl described as *transcendental synthesis of inner time consciousness*, alluding to the fact that it is passive in the sense of automatically performed (*ibid.*, 2002, pp. 148–149; Ratcliffe, 2015, p. 178). This synthesis, Fuchs (2007, pp. 229–230) argues, forms the basis of the *intentional arc* of directed activity, such as apprehension and action.

Comprehending the structure of time-consciousness is crucial if we wish to understand identity synthesis. When we inspect an object, it does not present itself as disjointed segments: it is perceived as a set of moments synthetically integrated. "Ultimately, time-consciousness must be regarded as the formal condition of possibility for the constitution of any objects" (Parnas & Zahavi, 2002, pp. 148–149).

Understanding the structure of temporal experience also helps the analysis of the abnormalities in subjects with psychopathological conditions, which in turn greatly enables us to better understand the phenomena which the person reports, and aid efforts to organise, differentiate and categorize different states of psychopathology.

From the writings of Fuchs (2007¸ 2013) and Ratcliffe (2015), but also from the authors from which they drew inspiration, *subjective time* can be schematized as follows:

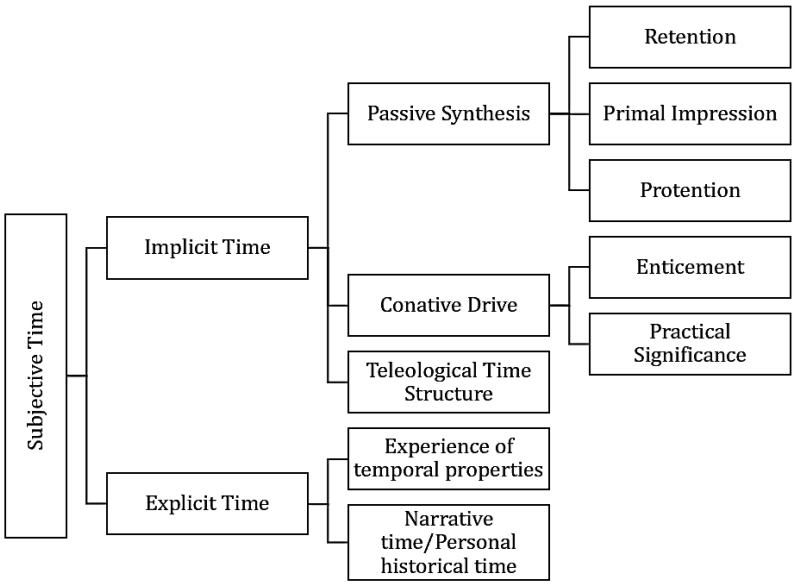

Figure 1 - Subjective Time according to Ratcliffe after Fuchs.

Subjective time is defined by how time is internally experienced by the subject, it is dependent on the self, and may be altered in a way that affects aspects of time such as duration, flow, meaning, uniqueness, and succession of time. Disorders at this level deeply influence how the world is experienced (Oyebode, 2018, pp. 72–74)

The two basic levels of subjective temporality, according to Fuchs' interpretation (2013, pp. 77–81), are *implicit or lived time* and *explicit or experienced time*. Following Ratcliffe's contributions (Ratcliffe, 2015, p. 177), they can be distinguished on the basis of whether they are objects of experience. Explicit time is that which we are conscious of when we become explicitly aware of temporal phenomena such as lateness, and/or feel disengaged from our projects, where temporal properties are objects of experience. On the other hand, implicit time is associated with inhabiting time, where time shapes experience but is not an object of experience, such as when our projects go smoothly.

Fuchs (2013, pp. 94–95) argues that in depression, the structure of the temporal horizon remains intact and that there is, instead, a loss of motivational drive, or vitality, which in turn distorts the temporal horizon, such as when depressed patients report the "sense of time slowing down." This differs from what happens in schizophrenia, where there is a fundamental fragmentation of the temporal horizon (or intentional arc) and, consequently, a fragmentation of the subject's sense of underlying temporal continuity (*ibid.*; Fuchs 2007, p. 233). Ratcliffe terms it "a *break-down* of passive synthesis", leading to an unstructured experience of time (Ratcliffe, 2015, p. 197). Ratcliffe thus highlights how the Husserlian passive synthesis of inner time consciousness is structurally affected in regard to protention, more so than retention (*ibid.*, pp. 178-179).

Though Ratcliffe, to some extent, agrees with Fuchs' differentiation, he does however point out that although passive synthesis doesn't become unstructured in depression (like in schizophrenia), depressed patients have their passive synthesis significantly affected by a loss of conation, or motivational drive, and a loss of practical significance. With this loss, something essential is amiss in the passive synthesis, resulting in major structural change. Thus, temporal experience in depressed patients retains a coherent structure, though with profound changes (Ratcliffe, 2015, pp. 180–186).

Ratcliffe suggests that in our ordinary experience of temporal continuity we experience time not only as a horizon, but also as teleologically structured, with a longer-term grasp of temporal direction:

> [Teleological passage of time] involves a sense of meaningful transition from one state of affairs to another, a kind of transition that presupposes coherent, enduring frameworks of cares and concerns. Their absence does not amount to a total loss of longer-term temporal direction; the person is still able to identify *x* as happening before *y*, *y* before *z*, and so on. Even so, there is a substantial change in the experience of temporal direction (*ibid.*, p. 185).

In other words, a clear longer-term sense of linear direction is amiss, taking time to assume, instead, a cyclic form. Unless a teleological structure is present, there is nothing to distinguish one cycle from another or stand out in some way, "nothing to constitute an appreciation of 'having moved on'" (*ibid.*, p. 185). As we undertake several daily activities, we are aware of concerns and projects that grant us a sense of direction and working towards something (*ibid.*, p. 184). Therefore, we can say the world is ordinarily permeated with practical significance. In depression, Ratcliffe contends, this sense of practical significance is lost, and with it, a long-term, teleological future, leading to an "all-enveloping

experience of threat [which] can amount to what is often described as a feeling of impending death" (*ibid.*, p. 189).

As Minkowski observed, without the usual impetus towards the future [i.e., the *élan vital*], "the whole of becoming seems to rush toward us, a hostile force which must bring suffering" (Minkowski, [1933] 2019, p. 188). A patient of Minkowski further described it as "if there were absolutely nothing between the present moment and death except the fruitless unfolding of time" (*ibid.*, p. 304).

Ratcliffe thus concludes that, in depression, the moment of death seems imminent because there is no significant temporal order in which to place it, adding later on that "When the expansive future is lost, when conation and significance are gone, all that remains of the future is the increasing proximity of one's unavoidable extinction" (Ratcliffe, 2015, pp. 189–190).

Where this sense of teleological structure once gave its subject an implicit sense of direction, its loss results in the reification of time for the depressed. This manifests itself in several ways, such as in a sense of the future being significantly curtailed and/or the sense of the past being engulfed (*ibid.*, p. 195).

Regarding explicit time, as observed by Fuchs (2013, pp. 97–99), implicit aspects of temporal experience become explicit in depression. Subsequently, changes in implicit time become changes in explicit time as well. With a loss of all practical significance, with nothing to wait for, the depressed person becomes sort of bored, but with no reprieve at sight. So, the experience of time becomes painful for all eternity, and a dreadful, threatening future becomes similarly explicit. At such a time, one becomes too aware of lost projects and their impact on one's life. As for the conative drive, its absence can become itself quite salient, rendering any sense of action awarely impossible or unrealisable (Ratcliffe, 2015, p. 191).

To summarize, depression can involve a variety of changes in the structure of the experience of time. To better understand this state of psychopathological being, Ratcliff (*ibid.*, p. 196) proposes we apply a broad distinction between loss of practical significance, loss of drive, and loss of life-projects. Together, Fuchs and Ratcliffe have significantly furthered our conceptualization of depression and what is like to be depressed, in a way that is comprehensive and enriching to both mental healthcare workers and anyone who has come into contact with such an ailment in whichever form. All in all, these contributions have

made our ability to understand depression deeper and fuller in a way that is intemporal.

5. Perks of Understanding

One doesn't need to be neither a doctor nor a regular patient to recognize that understanding is typically at the base of every clinical encounter. Likewise, an ill person typically wishes to be understood, both in his symptomatic expression and inherent repercussions. Although the same could be said about any encounter between two or more people, in medicine doctor-patient clinical encounters tend to involve a therapeutic (or, at least, preventive) purpose of some kind. If one were to be seen by a doctor who sought to explain everything in causal terms, perhaps regarding your backpain and inability to sit for long, work, or play with your grandson, would the doctor's explanation of radicular nerve root compression, nociception and chemical signals involved in alerting the body of potential tissue damage suffice? Wouldn't it feel unsettling, cold, and robotic, if not inhumane? Many would deem so. It is only within the walls of a clinician's office that many mental health users find, for the very first time (or in an adequate fashion), some form of supportive understanding. Consequently, can a doctor-patient encounter, cast with understanding, be beneficial beyond what can be explained? Overall, many authors and clinicians deem it so. Drawing on a couple of them, a few cases where that happens will follow.

The concept of *therapeutic interview in mental health*, advanced by Stanghellini and Mancini, constitutes a fine example of how understanding is pivotal:

> The therapeutic interview is much more than assessing operationalized symptoms and eliminating them, or reducing their intensity. [...] It is *a quest for meaning and reciprocal recognition*. [...] It is a meeting of forms of life – the patient's and the clinician's – each with its system of relevance and meaning structure. [...] It is the occasion to initiate a shared project of reciprocal understanding between the vulnerable person and the mental health carer. [...] Understanding is considered the *conditio sine qua non* for therapy (Stanghellini & Mancini, 2017, p. x).

Elsewhere, Stanghellini considers what follows:

> An essential aspect of understanding is that it connects elements of the patient's conscious life and, by doing so, it makes visible to the clinician something that helps him to feel *what it is like* to be in the patient's mental state. The attention

> to understanding other individuals is an essential virtue in the field of mental health care. (Stanghellini, 2019, p. 1011).

From this, we can at least conclude that understanding can serve a supportive, if not therapeutic, function within mental health care, as well as diagnostic and pathogenetic. The feeling of *being understood* is of pivotal importance for the patient in a clinical encounter, to the extent that it is sometimes met with a sigh of relief, but assuredly under a favourable light. Conversely, if one feels that one wasn't properly understood, then a feeling of frustration or disappointment arises, which may well contaminate the remainder of the clinical encounter(s), particularly when it comes to accepting and/or following the medical judgment and advice or following a treatment plan (if applicable). As any clinician might agree, a common complaint among patients who have their management expectations thwarted (even if well within reason) is that they did not feel understood by their doctors.

Moreover, the fact that abnormalities of time can be found in mental disorders and physical diseases, but also in healthy subjects, makes it particularly prone to being understood by essentially anyone anywhere, not just psychiatrists or phenomenologists. This could, in turn, serve efforts aimed at decreasing stigma or increasing involvement toward the mentally ill. For instance, one may try to appeal to a relative's breadth of temporal experience (using the experience of boredom, for instance) to help them further understand how their depressed loved one feels trapped in time or is even unable to think or move at an ordinary rate.

Lastly, as we have seen with time dysperception in depression, a nuanced understanding of underlying structural changes can help differentiate disorders and ultimately aid pathogenetic and therapeutic studies.

6. Conclusion

While the study of perception and experience of time is an interdisciplinary field, with inputs from both natural sciences and social sciences, they have been on somewhat irreconcilable paths. Whereas philosophy of time and phenomenology of time experience have flourished, the neurobiology of time perception has remained difficult to isolate from other cognitive processes and, ultimately, to fully explain.

Regarding the *Methodenstreit* debate, I hope I have presented why the understanding of time experience, at this time, continues to be *irreducible in*

practice to causal explanations. Be that as it may, with the complexity it hints, I wonder if said causal connections will truly replace meaningful connections in the general discourse, especially considering the value-laden and normative dimensions of human life that are related to time, evoking instead a meaningful approach.

It is my sincere hope that this article has helped to show the interpenetrative nature of explaining and understanding of the human mind.

REFERENCES

Bracken, P. & Thomas, P. (2005). *Postpsychiatry* (1st ed.). Oxford: Oxford University Press.

Dilthey, W. (1894) *Ideen über eine beschreibende und zergliedernde Psychologie*, trans. R. Zaner and K. Heiges, *Ideas Concerning a Descriptive and Analytic Psychology*, in *Descriptive Psychology and Historical Understanding*. The Hague: Martinus Nijhoff, 1977. https://doi.org/10.1007/978-94-009-9658-8

Dilthey, W. ([1883] 1989). *Introduction to the Human Sciences. Selected Works*. Vol. 1. Princeton: Princeton University Press.

Fontes, R., Ribeiro, J., Gupta, D.S., Machado, D., Lopes-Júnior, F., Magalhães, F., Bastos, V.H., Rocha, K., Marinho, V., Lima, G., Velasques, B., Ribeiro, P., Orsini, M., Pessoa, B., Leite, M.A., & Teixeira, S. (2016). Time Perception Mechanisms at Central Nervous System. *Neurology international*, 8 (1), 14–22. https://doi.org/10.4081/ni.2016.5939

Fuchs T. (2007). The temporal structure of intentionality and its disturbance in schizophrenia. *Psychopathology*, 40 (4), 229–235. https://doi.org/10.1159/000101365

Fuchs, Thomas (2013). Depression, Intercorporeality, and Interaffectivity. *Journal of Consciousness Studies*, 20 (7–8), 219–238.

Fulford, K.W.M., Thornton, T. & Graham, G. (2006). *Oxford Textbook of Philosophy and Psychiatry*. 1st ed. New York: Oxford University Press.

Husserl, E. ([1964] 2019). *The Phenomenology of Internal Time-Consciousness*. Ed. Martin Heidegger, Trans. James S. Churchill, Indiana University Press.

Husserl, E. ([1966] 2001). Analyses concerning passive and active synthesis: Lectures on transcendental logic. Kluwer Academic Publishers.

Jaspers, K. ([1959] 1997) *Allgemeine Psychopathologie*, Trans. J. Hoening and Marian W. Hamilton, in *General Psychopathology* (Vol. 1 & 2). Baltimore, MD: Johns Hopkins University Press.

Jaspers K. ([1913] 1974). *Causal and "meaningful" connexions between life history and psychosis*. Trans. J. Hoenig. In Hirsch, S.R. & Shepherd M. (eds.), *Themes and Variations in European Psychiatry*. Charlottesville, VA: University Press of Virginia, 81–93.

Jaspers, K. ([1912] 1968). The Phenomenological Approach in Psychopathology. *The British Journal of Psychiatry*, 114 (516), 1313–1323. https://doi.org/10.1192/bjp.114.516.1313

Matthews, W.J. & Meck, W. H. (2016). Temporal cognition: Connecting subjective time to perception, attention, and memory. *Psychological Bulletin*, 142 (8), 865–907. https://doi.org/10.1037/bul0000045

Minkowski, E. [1933] 2019. *Le temps vécu: Etudes phénoménologiques et psychopathologiques*, trans. N. Metzel, in *Lived Time: Phenomenological and Psychopathological Studies*. Evanston, IL: Northwestern University Press.

Oyebode, F. (2018). *Sims' Symptoms of the Mind* (6th ed.). London, United Kingdom: Elsevier Health Sciences.

Parnas, J. & Zahavi D. (2002). The Role of Phenomenology in Psychiatric Diagnosis and Classification. In Maj, M., Gaebel, W., López-Ibor, J.J., Sartorius, N., *Psychiatric diagnosis and classification*. John Wiley & Sons Inc.

Phillips J. (2004). Understanding/Explanation. In J. Radden (ed.), *The Philosophy of Psychiatry: A Companion*. New York: Oxford University Press.

Ratcliffe M. (2015) *Experiences of Depression: A study in phenomenology.* (1st Ed.). United Kingdom: Oxford University Press.

Stanghellini, G. & Mancini, M. (2017). *The Therapeutic Interview in Mental Health: A Values-Based and Person-Centered Approach*. Cambridge: Cambridge University Press.

Stanghellini, G. (2019). Phenomenological Psychopathology and the Formation of Clinicians. In Stanghellini, G., Broome, M.R., Fernandez, A.V., Fusar-Poli, P., Raballo, A., & Rosfort, R., *The Oxford Handbook of Phenomenological Psychopathology* (1st ed.). New York: Oxford University Press, pp. 1004–1015.

Teixeira S., Machado S., Paes F., Velasques B., Silva J.G., Sanfim A.L., Minc D., Anghinah R., Menegaldo L.L., Salama M., Cagy M., Nardi A.E., Pöppel E., Bao Y., Szelag E., Ribeiro P., & Arias-Carrión O. (2013). Time perception distortion

in neuropsychiatric and neurological disorders. *CNS & neurological disorders drug targets*, 12(5), 567–582. *https://doi.org/10.2174/18715273113129990080*

Wittmann M. (2009). The inner experience of time. *Philosophical transactions of the Royal Society of London. Series B, Biological sciences*, *364*(1525), 1955–1967. https://doi.org/10.1098/rstb.2009.0003

Wiggins, O.P., & Schwartz, M.A. (1997). Edmund Husserl's Influence on Karl Jaspers's Phenomenology. *Philosophy, Psychiatry, & Psychology 4*(1), 15-36. https://doi.org/10.1353/ppp.1997.0011.