

# Bergson's Divided Line and Minkowski's Psychiatry: The Way Down Pete A. Y. Gunter<sup>1</sup>

This essay explores Bergson's "divided line", his temporalist inversion of Plato's ontology, through a sketch of Bergson's divided line insofar as it refers to his psychology, particularly to the understanding of mental illness as developed by the Bergsonian psychiatrist Eugène Minkowski (1885–1972).

## 1. Bergson's "divided line"

Passages in Plato's *Republic*, which describe the divided line and its congeners, the myth of the sun and the myth of the cave, are among the best known in the history of western philosophy. Their fame, it is hoped, relieves this writer of the need to examine the Platonic text in detail. What follows is intended as only a reminder, in brief outline.

The divided line is offered in Part Seven of the *Republic*, as a mathematical metaphor giving insight into the kinds (degrees) of reality.<sup>2</sup> Plato's degrees of knowledge are presented here as corresponding to increasingly knowable aspects of a knowable world. *Eikasia*, the lowest level of knowledge, is treated as the knowledge (if one may call it that) of mere "images". *Pistis* is presented as commonsense opinion, able to deal with ordinary practical affairs. *Dianoia* is defined as mathematical knowledge, reflecting the forms of quantity in astronomy and elsewhere. *Noesis*, the highest level of knowledge, is the dialectical way of knowing which transcends the three lower modes, sustaining what truths they may provide, but transcending them in a vision of the sun; or in less mythological terms, the form of the good. It is the unchangeable excellence of this final form that sheds light on and makes intelligible all the rest.

Clearly Plato's epistemological/ontological hierarchy is based on a fundamental assumption that being is more real than becoming, eternity more real, more substantial, than time. The lower levels of the hierarchy are defined by privation, their inability to fully take on form. Nothing temporal for the Plato of *The Republic* can fully participate in form; at best the shifting, changing world is an unsatisfactory copy of a superior timeless reality.

It is hoped that this schematic rendering of Plato will make possible the next step: that is, showing affinities between Bergson's philosophy and Plato's. For several reasons these affinities would seem unlikely, not only because of Bergson's emphasis on the centrality of temporal "process" (on his

terms, “duration”) but because his way of knowing, intuition, has been conceived as irrational or—a word no less easy to define—“anti-intellectual”. Neither of these is true. One of the goals of this essay is to show that Bergson’s reflections aim at intelligibility of the differing sorts of knowledge appropriate to that structure. To that end it will help to look at the Bergsonian text.

A few reflections on Bergson’s philosophy would probably help here. Bergson’s fourth major work, *An Introduction to Metaphysics*, marks a significant realignment of his thought. For the first time the term “intuition”—previously suggested but never defined—is introduced. Also, it is connected with the possibility of metaphysics. Bergson thus passes beyond the psychological focus of his previous investigations and establishes the framework for his later physical, evolutionary and cosmological reflections.

By “duration” Bergson’s means process: the flow of experienced time, without mathematical gaps and without halts. By “intuition,” he means the “intellectual sympathy” by which we enter into duration and grasp its fundamental, essentially dynamic aspects. These notions (intuition, duration) are well enough known, and in a general way understood. The concept of duration as developed in the passage below, however, is surprising. Its nature and its importance are rarely recognized:

the intuition of our duration, far from leaving us suspended in the void as pure analysis would do, puts us in contact with a whole continuity of durations which we should try to follow either downwardly or upwardly: in both cases we can dilate ourselves indefinitely by a more and more vigorous effort, in both cases we transcend ourselves. In the first case, we advance toward a duration more and more scattered, whose palpitations, more rapid than ours, dividing our simple sensation, dilute its quality into quantity: at the limit would be the pure homogeneous, the pure repetition by which we shall define materiality. In advancing in the other direction, we go toward a duration which stretches, tightens, and becomes more and more intensified: at the limit would be eternity. This time not conceptual eternity, which would be an eternity of death, but an eternity of life. It would be a living and still moving eternity where our own duration would find itself like the vibrations in light, and which would be the concretion of duration as materiality is its dispersion. Between these two extreme limits moves intuition and this movement is metaphysics itself.<sup>3</sup>

The notion which Bergson is proposing here is straightforward: there are rhythms of duration of different breadths, which can be organized in a series from briefest to longest, or vice versa. The rhythms of physical matter are

extremely brief; those of human consciousness are much longer. Thus in *Matter and Memory*, Bergson notes that in the smallest interval of time we can detect, (0.002 seconds) hundreds of thousands of vibrations of red light occur.<sup>4</sup> In a different order of phenomena, Bergson argues that each living organism has its own characteristic duration.<sup>5</sup> Work by Alexis Carrell and Pierre Lecomte du Noüy—inspired by Bergson's ideas—reveals physiological and cytological times in human as well as other organisms.<sup>6</sup> Bergson concludes that there are quasi-repetitive phenomena in nature independent of human temporality and that we can explore them; both philosophically and scientifically.

The human mind, thus understood, is not isolated from nature but is in constant and close communication with it. In this respect Bergsonian intuition turns out to be closely similar to Alfred North Whitehead's "prehension": it is a direct contact with an environing world. But it is a contact which can be selectively focused on the varying rhythms of that world.

There are on these terms, therefore, many kinds of intuition, each focused on a different level of temporality. There is no one intuition, which generates, much less ablates all the others. Bergson thus describes a vertical axis of experience and of reality, each stratum of which contains a distinctive "horizontal" mode of becoming. The parallels between this way of thinking and Plato's ontological hierarchy hold throughout. Bergson's temporal hierarchy is coeval with his epistemological hierarchy just as Plato's hierarchy of degrees of being is coeval with his hierarchy of degrees of knowledge. In both cases there is a clearly marked "way up" and an equally marked "way down."

Many questions might be raised at this point. Is Bergson's "continuity of durations" consciously constructed with an eye towards Plato's divided line? Does it contain, as Plato's hierarchy does, well-marked segments or divisions? What might be the result of exploring Bergson's temporal hierarchy "above" the level of ordinary human awareness: perhaps in terms of ethical, aesthetic, or religious genius? How might physical, chemical, and biological durations be related according to Bergson's metaphysics? Fascinating as these questions are, they will have to be deferred. The focus of this essay must be on human temporality, in its diverse modes.

When we come to human awareness, as Bergson understands it, we again encounter temporal hierarchy. Here, however, the hierarchy extends over a much more limited domain than the ontological limits spelled out in *An Introduction to Metaphysics*. Neither "eternity" nor the ultra-brief rhythms of physics are introduced. Rather, human durations within the reach of ordinary human experience provide the subject matter. It is Bergson's contention that human duration varies as the extent of our duration expands or contracts. Thus the following:

The more we succeed in making ourselves conscious of our

progress in pure duration, the more we feel the different parts of our being enter into each other, and our whole personality concentrate into a point, or rather a sharp edge, pressed against the future and cutting into it unceasingly. It is in this that life and action are free. But suppose we let ourselves go, and instead of acting, dream. At once the self is scattered; our past, which till then was gathered into the indivisible impulsion it communicated to us, is broken up into a thousand reflections made external to one another. They give up interpenetrating in the degree that they become fixed. Our personality thus descends in the direction of space. It coasts around it continually in sensation.<sup>7</sup>

This passage adds significantly to our understanding of Bergsonian temporal hierarchy. It does so in three respects, first by demonstrating his concept of the relations between duration and space, second by making clear his rejection of the Cartesian dogma of unextended mind, third by making evident a fundamental axiom of Bergson's psychology, one particularly useful in understanding his concepts of mental health and mental illness.

First space. The descent from a clear head towards a state of groggy indifference is both temporal and spatial. What is true of temporality is for Bergson true of space: they "admit of degrees" (CE201-202; *Œuvres*, 666). Starting from one of those moments when we are clear-headed and self-possessed, Bergson states (in a passage similar to the one quoted immediately above):

Now let us relax the strain, let us interrupt the effort to crowd as much as possible of the past into the present. If the relaxation were complete, there would no longer be either memory or will—which amounts to saying that, in fact, we never do fall into absolute passivity [...At] the limit, we get a glimpse of an existence made of a present which recommences unceasingly—devoid of real duration, nothing but the instantaneous, which dies and is born again endlessly. (CE 200-201; *Œuvres*, 665)

Matter does not go to this limit, since between any two "vibrations" of matter there is some connective thread of memory and since any vibration or rhythm of matter always has some finite extent. Nor does human consciousness, no matter how "spaced out", ever completely lack duration, however brief, and some element of continuity from moment to moment. But as our mind "detends" (CE 202; *Œuvres*, 666) towards space its temporality becomes more attenuated, its extensity more marked.

The movement by which we approach the world around us—and, literally, come in contact with it—is then a function of decreasing temporal extent and increasing spatial extensity. Hence—the second point—the Cartesian dogma

of unextended mind is mistaken. In common with the world around us the mind possesses duration; in common also with that world (at least in one polarity) it possesses degrees of extensity. We are cheek by jowl both *in* and *with* the dynamic world around us.

The third respect in which the passages quoted above are significant concerns their implications for Bergson's psychology. Here, as at more than one point in this paper, it is not possible to go into detail. Only as much of Bergson's psychology will be explored as will help us to understand Minkowski's psychiatry. That is, we will limit discussion essentially to the manner in which, in that psychiatry, memory and will are conjoined, through our "attention to life".

Bergson puts a heavy emphasis on memory, which he approaches in two different ways: first, as it applies to our ordinary ways of recognizing and utilizing things, and second, to the role that memory plays as a fundamental factor in our characters. In *Matter and Memory* he examines not only the aphasias (failures of word-memory) but the ways in which our memories allow us to recognize and to cope with the objects around us. Throughout Bergson stresses that the human mind is, rather than an organ of pure thought, constantly involved in "attention to life" (MM 173; *Œuvres* 312). Minkowski takes over this concept and, as will be showed below, uses it to explain the genesis of pathological symptoms. Closely involved in Bergson's elaborate studies of ordinary memory is another and deeper notion of memory which depends upon the first kind and which continues and deepens the theory of human freedom first presented in *Time and Free Will* (1890). It is his contention that in those of our acts I which we are not involved in the ordinary manipulating of things, but which are personally highly important to us, we act with our whole personality, bringing to bear the sum total of our pasts:

Not only, by its memory of former experience, does (our) consciousness retain the past better and better, so as to organize it with the present in a newer and richer decision; but, living with an intenser life, contracting, by its memory of the immediate experience, a growing number of external moments in its present duration, it becomes more capable of creating acts. (*Matter and Memory*, 248-249; *Œuvres*, 377)

Memory (the organized memory that for Bergson forms a basis of our characters) is thus not merely a summation of the past. It is the necessary condition of our free acts. Hence, perhaps paradoxically, it is a requisite of the future.

Thus Bergson argues that memory, taken integrally, is closely related to will. Usually, he concedes, we are on "automatic pilot", drawing on our memories intermittently and relying for the most part on habit. Unnoticed in the midst

of this ordinariness, however, we will find a persisting effort conjoining memory in the broad sense and volition. It is this union which sustains our ongoing lives and makes possible the achievement of long-term goals. Our normal behavior thus sustains a particular “tempo” of life. If this tempo, with its components of memory and constant volition, were broken, the results would be pathology. Which brings us to the work of Eugène Minkowski.

## 2. Minkowski’s Bergsonism

Born in St. Petersburg, Russia, Eugène Minkowski (1885–1972) studied in Germany and then in Switzerland, at the famous Burghölzli Clinic. He next moved to France where, under the influence of Bergson, he was struck by the relevance of the time dimension to the understanding of his mental patients.<sup>8</sup> The result was a general theory of human temporality as applied to psychopathology. Minkowski is generally accredited, along with Ludwig Binswanger (1881–1966), as one of the two founders of phenomenological psychiatry.<sup>9</sup>

Minkowski’s work rests on the assumption that mental illness consists in a weakening of the impulse to live, with a corresponding decline in the level of temporality:

In summary, we arrived at the following conclusions. The personal *élan* is weakened, the synthesis of the human personality is disintegrated, the elements of which it is composed gain independence and enter into play as such. The notion of time is reduced to the succession of monotonous days.<sup>10</sup>

In healthy individuals the underlying synthesis of memory and volition is not a problem:

In other words, if in general we come to unite the three forms of time, it is because we introduce the past into the present and into the future.” (LT 166)

In mental illness, Minkowski holds, the inability to bring together memory (the personal past) and volition (the present) is pronounced. The individual moves down the temporal slope towards increasing fragmentation, automatism, spatiality, but with this difference: here we are not dealing with a temporary fall from clear-headedness to near stupor, but with a long-lasting decline in the tempo of a life.

Minkowski, starting from this fundamental Bergsonian conception, explores the different sorts of mental illness with an eye to their temporality. In the words of Rollo May:

it is indisputable that Minkowski's original approach throws a beam of illumination on these dark, unexplored areas of time, and introduces a new freedom from the limits and shackles of clinical thought when bound only to traditional ways of thinking.<sup>11</sup>

In pursuing his studies of lived time Minkowski explored how patients experienced temporality as continuous or discontinuous, fast or slow, atomistic or fluid, empty or full. These researches were organized, however, in a broad twofold classificatory scheme. Following Eugen Bleuler (1857–1939), his professor at the Burghölzli, Minkowski distinguishes two sorts of mental illness, schizophrenia and manic-depression (syntony). While both involve, on his terms, a decline in fundamental temporality, their basic structures differ.

While for Minkowski both schizophrenia and manic-depression consist in a lowering of temporal level, and though each is “a structure of the psychic life insofar as it is an individual whole,” (LT 248) there are two major differences. Most obviously, schizophrenia is introverted, involving withdrawal from the world. By contrast, manic-depression is extraverted. It maintains a “contact with ambient life”. (LT 291) Manic-depression in all its forms

contains an element of harmony, of even rhythm, so to speak, between my own becoming and a slice of ambient becoming. In syntony there is lived synchrony. (LT 293)

Underlying this difference there is a second. Schizophrenia tends to trend “downward”. It “is likely to progress and to form a lasting deficiency.” (LT 72) Manic depression, by contrast, is cyclical. It manifests itself in the form of “attacks of depression or excitation.” (LT 72) which disappear without leaving a trace.

Manic-depression (syntony) might be thought to contradict Minkowski's view of mental pathology since in the manic phase the patient would appear to be living a full, if feverish duration. Minkowski argues that the reverse is true. The manic person may seem to “absorb” the external world. But this absorption is undirected, “instantaneous”. That is,

it lacks penetration. There is no lived duration in it. What is lacking in our manic patient is *unfolding* in time. (LT 294)

Rather than enduring in a cohesive and cumulative way, manic patients. to be cured, must be freed from the *now* in which they exist and out of which they are incapable of creating a *present*. (LT 296) Their hyperduration is, significantly, a pseudoduration.<sup>12</sup>

Through both the manic and the depressive person suffer from a common “subduction in the domain of normal ‘syntony’.” (LT 296) The depressive person suffers not from an apparent (if deceptive) surfeit of temporality but

from its lack. Each of the modes of depression (which Minkowski surveys in detail in LT 306-398) exhibits a slowing-down of virtual cessation of duration: the future is blocked; the past can no longer be brought to bear on the present, being effectively as cut off as the future. As with the manic patient, the depressed patient lives in a *now* which fails to be a *present*. In the case of the 'maniac' this stasis is veiled; in that of the 'depressive' it is starkly apparent.

An interesting application of Minkowski's definition of depression is made by Rollo May:

if we can help the severely anxious or depressed patient to focus on some point in the future when he will be outside his anxiety or depression, the battle is half won. Focusing upon some point in time *outside* the depression of anxiety gives the patient a perspective, a view from on high.<sup>13</sup>

This in turn may well break the chains of anxiety or depression, and provide the beginnings of a way out.

Minkowski's accounts of mental illness are not only descriptive: they search also for causes. But his notion of what is cause and what is effect is significantly different from that presumed by most psychiatrists: certainly that offered by Freud. In case of paranoia, for example, it is usually assumed that the patient's fear and/or anxiety are the cause of his attitude towards time. But the opposite may be true. Minkowski is able to show that the patient's frozen and alienated temporality would necessarily generate his negative symptoms. In our ordinary life, once an error is made or a wrong action is committed, it remains engraved on the conscience.

On the contrary, the unique meaning of positive results produced or good acts resides in the fact that we can do better in the future... our whole personal evolution consists in the desire to surpass works already accomplished. But where our mental life dims, the future closes before us. At the same time, the idea of positive results in the past, which is a function of the past, disappears. The memory remains intact, but it is the static notion of evil, which predominates. Our patient will say that he is the worst patient in the world and will see 'concretized remorse' everywhere. (LT 193)

In both schizophrenia and syntonny the patient is cut off from a future in which he might expiate perceived bad actions by doing good ones. (LT 347) The absence of the ordinary feeling of accomplishment and of the connectedness of one's acts (LT 331) can be understood to generate guilt, compensatory hallucinations, and self doubt.

Minkowski's insistence that causal factors in neurosis may be the opposite of what is commonly supposed has important implications for our notions of history of mental illness. In an essay on time and medicine Stephen Kern contrasts the Freudian and the Minkowskian approach to personal history. According to Freud's "chrono-logic", psychoanalytic theory

ultimately made sense of a human being in terms of an ordering experience in time and a prioritizing of that experience on the basis of what came earliest.<sup>14</sup>

By contrast, Minkowski follows an ontological ordering back to the most essential aspects of being (the "ground" of experience) not to what happened first.

Freud had already encountered problems with his absolute prioritizing of the early past. It was not clear whether Viennese fathers actually seduced their baby girls, as Freud had believed, or whether the father's normal affection became traumatic after the girls later on internalized the incest taboo with its moral condemnation. Freud explained this as experiences becoming traumatic by "deferred action". His response is problematic in two ways. It reverses the temporal order, which Freud considers axiomatic. And it shows that earlier components of a patient's experience deemed to cause neurosis may not be the real, determining causes. They may only become significant when "entrained" by and made part of problems that emerge later—perhaps significantly later.

It cannot be denied that the catalogue of time-related and time-reflecting symptoms that Minkowski discovers in his patients is impressive. One patient insists:

Time is immobile. You hesitate between the past and the future. Everything is so rooted. Before there was a before and after. Yet it isn't there now. It is a boring time, drawn out without end, and I can no longer do anything. (LT 286)

Another reports that each day is a "separate island" isolated from both past and future. (LT 186) Another sees the future as blocked (LT 187), while another complains that he desires to remain exactly as he is, immune from change (LT 235).

Minkowski finds a strong tendency towards what he calls "morbid geometrism" and "morbid rationalism" in his patients. It is important to be clear here about what he means. For Minkowski there is nothing morbid about the use of space to solve problems; or the discovery of new theorems in geometry, or the development of our capacity to think abstractly. Morbid geometrism is different. It consists of the rigid and abstract use of space—to no point. A banal example is the patient who finds the enlarging of a railroad station (a spatial event) far more important than the fluctuations of the

economy (a temporal event). (E 116) More bizarre is the patient who replaces the world around him with geometrical figures:

What upsets me a lot is that I have a tendency to see only the skeleton in things,... I schematize everything, I see people as points or circles. When I think of a meeting I attend, I see the room. I represent the people present by points.<sup>15</sup>

Louis A. Sass notes, in this regard, the response of a patient asked to draw a picture of his family. The patient drew a big circle surrounded by four or five smaller circles; explaining that this was his family sitting around the kitchen table.<sup>16</sup>

Morbid geometrism is closely related to morbid rationalism. The later involves endless, often aimless, search for abstract principles. In the normal person rationality is constrained by an intuitive grasp of contextual proportions and limits. This is exactly what is lacking in Minkowski's patients. Of one, he notes:

He adopts (a particular) pedagogical system, changing its principle once a week: he changes between strict military discipline to a principle of absolute indulgence or 'a liberal principal of tenderness'. His utterances are determined by the chosen principle, which means that most of the time he does not speak at all.<sup>17</sup>

The schizoid patient over-rationalizes, over-thinks, endlessly reexamining the most obvious facts, pondering their explanations, but without any effort to resolve actual problems.

### 3. Conclusion

The descriptions of Bergson's psychology and of Minkowski's psychiatry presented in this essay are admittedly incomplete and, even if more detailed and extended in scope, would still fail to be conclusive "proofs" of the theses which Bergson and Minkowski support. What has been attempted here is, rather, twofold: first, to explore Bergson's temporal hierarchy, showing its centrality in his thought and, second, to show how Minkowski was able to develop Bergson's ideas, including ideas of temporal hierarchy, applying them to the fundamental problems of psychiatry.

Though Bergson's concept of higher and lower (broader and briefer) temporalities has been noticed by several of his commentators, none has singled it out as fundamental to his thought, or have explored it on its own terms. In a previous essay I have done so in a very general way, linking it to his understanding of the infinitesimal calculus.<sup>18</sup>

Here it has been possible to broaden this approach, examine the relations of this hierarchy first to his general ontology, second to his psychology, third to Minkowski's psychiatry. One of the virtues of examining the "uses" of temporal hierarchy in Bergson is, as stated at the beginning, to demonstrate the intelligibility of this aspect of his thought.

But this author believes that intelligibility is only one criterion of truth. Another, he believes, is usefulness or better, "fruitfulness." If a conceptual scheme turns out to be applicable to some field of knowledge, and to increase our understanding there, we have more reason to believe—"so far forth", in William James' terms—in the truth of that conceptual scheme. That Minkowski was able to use Bergson's philosophy to develop a cohesive and far-reaching psychiatry is a testimony to Minkowski's genius as well as to the viability of Bergson's psychology. It should be pointed out that their studies of human temporality have an echo in contemporary studies of human time, especially research on "temporal disintegration" and related phenomena.<sup>19</sup>

Minkowski's clinical evidence is only sketched in the present essay. The more deeply one reviews this evidence, the more one is impressed by its strength. The constant preference of his patients for geometric space over time-as-experienced, morbid conceptualization over directed thought, frozen tableaux and fragmented time-series over the flow of time, their endless complaints of dullness, boredom, and fixity are not easy to dismiss. If the basic conclusions that Bergson comes to about human psychology and temporal hierarchy were true, these are precisely that symptoms that we would expect to find in the mentally ill. One can then have reason to say, again, that there must be "something to" a philosophy like Bergson's.

But one ought to be careful. In the most recent edition of their *Current Psychotherapies*, Corsini and Wedding are able to state that there are over four hundred accepted schools of psychotherapy.<sup>20</sup> In the contemporary context, therefore, it would be folly to dogmatize. But it is possible to draw attention to factors one finds important.

## Notes

- <sup>1</sup> Regents' Professor of Philosophy, University of North Texas, Denton, TX 76203.
- <sup>2</sup> Plato. *The Republic*. 509d6-511e5 (2<sup>nd</sup> Ed. Trans. with Intro. Desmond Lee. London: Penguin Books, 2003, 226-248).
- <sup>3</sup> Henri Bergson. *The Creative Mind*. 4<sup>th</sup> Ed. Trans. Mabelle L. Andison. New York: Philosophical Library, 1946, 221; Henri Bergson. *Œuvres*. Ed. André Robinet. Paris: Presses Universitaires de France, 1984, p. 1419. All future references to the English translation of this work will be cited in the text as CM; all future references to this and others of Bergson's French language works (with the exception of *Duration and Simultaneity*) will be cited in the text or, in their first appearance in a footnote, as *Œuvres*.
- <sup>4</sup> Henri Bergson. *Matter and Memory*. Auth. Trans. N.M. Paul and W.S. Palmer. New York: Zone Books, 1991, 205-206; *Œuvres*, 340-341. All future references to the English translation of this work will be cited in the text as MM.
- <sup>5</sup> Henri Bergson. *Duration and Simultaneity*. Trans. Leon Jacobson. Indianapolis: Bobbs-Merrill, 1965, 46; Henri Bergson, *Mélanges*. Ed. André Robinet. Paris: Presses Universitaires de France, 1972, 99-100.
- <sup>6</sup> Pete A. Y. Gunter. "Temporal Hierarchy in Bergson and Whitehead." *Interchange*, 36, nos. 1-2, 2005, 139-157.
- <sup>7</sup> Henri Bergson. *Creative Evolution*. Trans. A. Mitchell. Intro. Pete A. Y. Gunter. Lanham, Maryland: University Press of America, 1983, 202; *Œuvres*, 664-665.
- <sup>8</sup> For an analysis of Minkowski's relation to Bergson, Cf. David F. Allen, "Postface." In Eugène Minkowski, *Traité de psychopathologie*, Paris: Insitut Synthélabo, 1999, 883-915. Cf. also Annik Urfer. "Phenomenology and Psychopathology of Schizophrenia." *Philosophy, Psychiatry and Psychology*, 8, n. 4, 2001, 279-289.
- <sup>9</sup> Eduardo T. Mahieu. "Une Lecture de Minkowski." *Cercle d'Etudes Psychiatriques Henri Ey de Paris*. Séminaire du 20 avril 2000. <http://eduardo.mahieu.free.fr/Cercle%20Ey/Seminaire/MINKOWSKI.htm>.
- <sup>10</sup> Eugène Minkowski. *Lived Time*. Trans. Nancy Metzel. Evanston, IL: Northwestern University Press, 1970, 191-192. All future references to this work will be cited in the text as LT.
- <sup>11</sup> Rollo May, Ernest Angel, and Henri Ellenberger, Eds. *Existence: A New Dimension in Psychiatry and Psychology*. New York: Basic Books, 1958, 66. (All future references to this work will be cited in the text as E.)

- <sup>12</sup> My own terms. (Auth.)
- <sup>13</sup> Rollo May. *The Discovery of Being: Writings in Existential Psychology*. New York: W.W. Norton and Company, 1983, 135.
- <sup>14</sup> Stephen Kern. "Time and Medicine." *Annals of Internal Medicine*, 132, n.1, 2000, 3-8.
- <sup>15</sup> Eugène Minkowski. *Traité de Psychopathologie*. Paris: Institut Synthelabo, 1999, 326f.
- <sup>16</sup> Louis A. Sass. "Self and World in Schizophrenia: Three Classic Approaches." *Philosophy, Psychiatry, and Psychology*, 8, n.4, 2001, 258.
- <sup>17</sup> Eugène Minkowski. *Au-delà du rationalisme morbide*. Paris: Ed. L'Harmattan, 1997, 51-58. Quoted in Annick Urfer, "Phenomenology and Psychopathology of Schizophrenia: The Views of Eugène Minkowski." *Philosophy, Psychiatry & Philosophy*, 8, n.4, 2001, 286.
- <sup>18</sup> Pete A.Y. Gunter. "Bergson, Mathematics, & Creativity." *Process Studies*, 28, nos 3-4, 1999, 268-287. This article is part of a Focus section (267-345) all of which merits reading. Cf. also footnote 5 above.
- <sup>19</sup> A.M. Freeman and F.T. Melges. "Depersonalization and Temporal Disintegration in Acute Mental Illness." *American Journal of Psychiatry*, 134, n.6, 679-81; F.T. Melges, T.F. Tinklenberg, L.E. Hollister, H.K. Gillespie. "Temporal Disintegration and Depersonalization During Marijuana Intoxication." *Archives of General Psychiatry*, 23, n.2, 1970, 204-210; Richard A. Block, Ed. *Cognitive Models of Psychological Time*. London: Lawrence Erlbaum Associates, 1990, 286, (Cf. David Trueman "Depersonalization in a Non-clinical Population", 257ff.)
- <sup>20</sup> Raymond Corsini and Danny Wedding, Eds. *Current Psychotherapies*. 7<sup>th</sup> Ed. New York: Thompson, 2005, 527.