

SYMBOLIC FORM AND MENTAL ILLNESS: ERNST CASSIRER'S CONTRIBUTION TO A NEW CONCEPT OF PSYCHOPATHOLOGY

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I. INTRODUCTION

In his invitation to this conference Sebastian Luft, its organizer, has rightly pointed out: «Ernst Cassirer's oeuvre is vast; it spans the history of philosophy, theoretical philosophy, the philosophy of mathematics, cultural studies and intellectual history, aesthetics, the study of language and myth and more». I am here today to speak about one of Cassirer's crucial fields of interest – which (for a number of reasons) has been ignored until recently: his focus on the make-up of consciousness and human psychopathology. Cassirer wrote in 1929: «For what it [the philosophy of symbolic forms] is seeking is not so much common factors in being as common factors in meaning. Hence we must strive to bring the teachings of pathology, which cannot be ignored, into the more universal context of the philosophy of culture» (Cassirer, 1955, p. 275). This statement summarizes Cassirer's approach in shifting the focus on psychopathological theory from the brain and its localizations to the living interaction between the self and his/her social environment. This shift “from substance to function” is not only of historical interest for philosophers, but of very practical importance for patients and doctors in the actual public discourse how to liberate psychiatry from its damaging mantra of a primitive and

merely descriptive symptomatology in its classification systems DSM and ICD.

Psychopathology is the study of significant causes and processes in the development of mental illness. While routinely its core aspects remain discussed among professionals in specific academic or clinical settings, the fallout of these discussions is far from being irrelevant to the average individual or to the public in general. The “International Classification of Diseases” (ICD 10, to be reviewed in 2017) and the “Diagnostic and Statistical Manual of Mental Disorders”, DSM V (reviewed in 2014) are the standard “classification-systems” to identify mental disorder. They are rolled out to ever more countries, regions and ethnicities by the WHO, the “World Psychiatric Association” and numerous governments, administrations and insurance companies. At present they are used to classify and treat more than 100 Million patients in more than 70 countries worldwide every year. Critics claim that their content is disregarding the specific symbolic make-up of human culture, that it is not based on an underlying natural, relational or genetic order, and that it remains reduced to mere superficial descriptions of behavioral phenomena, measured against a “norm” of individuals in the (post)industrialized milieu of the western cultures (Berrios, 1999; Gorostiza and Manes, 2011).

In general science no one doubts that human nature, our language, mathematics and our progressing tools of work-specification are based on and experienced as symbolic constructs. In its discourse the quote of philosopher Ernst Cassirer, that man is not the “animal rationale” but the “animal symbolicum” (Cassirer, 2006, p. 31) has found its true confirmation.

Thus, entering clinical psychiatry one would expect symbolic formation to play a major role in assessment and diagnosis of mental illness – even more as in mental crisis our symbolic matrix brakes down, the pattern-based construct of reality gets lost and our symbolic language is severely affected. But the symbolic message has not hit home; the breakdown of symbolic capacity in psychiatric patients continues to be ignored. Symbolic formation is denied its role as providing building-stones to a universal model of consciousness and subsequently of psychopathology. Thus valuable opportunities towards a new and different approach to the healing potential in mental crisis remain unused.

After the turn of the millennium, with the crisis of psychopathology dragging on and desperate for new and original ideas, sign- and symbol-related approaches have made their way back to the forefront of discussion. This approach is strengthened by the fact that not only

Cassirer's, but also Whitehead's, Saussure's, Piaget's and Peirce's (Smith, 2001) findings – all of them founded on a mathematical-geometrical understanding of human interrelatedness and consciousness – have attracted researchers on an international scale. While present descriptive models produce “object-like” diagnoses, as if they were able to retain their meaning independently of the patient's changing context, psychopathology is in fact desperate for new concepts which reflect the complex interactions and ever changing frame-settings which are dominating the scene in human interrelations, and during its breakdown. Mathematically and “group-theory” based concepts have much to contribute to these – more relational and process related – templates of diagnostics, drawing from a multi-layered, parallel and integrated idea of consciousness and they may well, in the near future, produce a convincing synergic effect within an on-going debate.

I. PHILOSOPHY AND PSYCHIATRY: CONFLICTING APPROACHES

Two highly acclaimed personalities, both psychiatrists and philosophers, Karl Jaspers and Ludwig Binswanger, had a major impact on the psychopathological discourse in the first half of the 20th century. Yet Jaspers' relentless and growing attraction to existentialism and Binswanger's turn towards a post-Fascist Heidegger in the 1940s marginalized their own early promising phenomenological approaches to psychopathology. Also, a strong post-war psychoanalysis in the USA disconnected itself in the mid-1950s from the psychiatric mainstream and was unable to look beyond the wealthy clientele and the transfixed papa-mama-child scenario. Explicitly, previous *Gestalt*- and symbol-research were left behind in the psychiatric discussion and could not catch up following the total disruption of their scientific networks during Fascism, enforced Exile and the early death of their main protagonists. These are just a few of the reasons for the decline of the breadth of the psychopathological discourse and for the fact that a biological approach forced its way back to clinical “superiority”, promoting simple and standardized forms of diagnosis and treatment, be it ECT or psychopharmacology.

What remains in place in day-to-day practice are the early 20th century views of German Psychiatrist and Psychopathologist Emil Kraepelin (Kraepelin and Lange, 1927). He was convinced that psychiatric diagnoses could be based on what he called “natural entities of disease” (*natürliche Krankheitseinheiten*) and factually proposed those terms as “*dementia praecox*” (later called “*schizophrenia*”) and

“manic-depressive illness” are distinctive and different complexes. His conclusions were frequently challenged throughout the last 70 years and critical meta-research could never confirm his findings (Cutting, 2011). Their main conclusion is, that such “entities” may well exist in researchers minds and in their descriptive models – but that they have no match in the reality of biological, social and clinical life. Nonetheless Kraepelinean-based descriptive catalogues of symptoms remain the baseline tool of worldwide psycho-diagnostics and treatment. Further updated versions have been published in 2014 (DSM V) and will be published as (parts of) ICD11 in 2017.

Despite claims by prominent mainstream psychiatrists that present systems «have outlived their usefulness» (Goodyer, 2011), there will be another increase of illness-“entities” from previously 350 to about 400. For a lay person’s this on-going diversification of descriptive diagnoses of individualized “disorders” may look like a sign of scientific progress; instead it is only proof to the fact that the present descriptive “entity” approach is unable to grasp the underlying architectural and relational cultural framework which constitutes human consciousness and its symbolic fundaments.

There are two major failings preventing psychiatry from becoming a fully integrated member of the faculty of medical and scientific disciplines: one is based on the specific direction of psychiatric (and especially psychopathological) theories which went from an early (relational) magical, mythic, religious understanding of madness to a more brain-based substantial one thereby defying the contemporary scientific mainstream, which evolves from a focus on substances towards an understanding of function and relational order (be it in mathematics, biology, physics, psychology, chemistry ...); the second reason is not having grasped the importance of man as the “Symbolic animal” which places our discipline exactly on the borderline between biological and cultural patterns.

Both paradigm changes have been neither understood nor digested by our discipline. Both failings add up to a picture where contemporary psychiatry – in the public eye and in its clinical content – has become increasingly identified with the simplistic descriptive catalogue systems known as DSM or (parts of) ICD. Theoretical psychopathology has lost the breadth and depth of ideas and approaches compared with those discussed by the scientific community a hundred years ago. Both the highlighted problems – a change from substance to function, and the importance of symbolic formation – were central aspects to the work of Ernst Cassirer during the 1920s. It is well worth reviewing some of his

ideas about psychopathology, which got lost in the build-up to and aftermath of World War II, and re-evaluating their possible benefits for the future of our discipline.

There have been numerous (pre- and post-Cassirer) attempts to acknowledge the importance of symbolic thinking in relation to consciousness, and to include findings on symbol theory in the canon of psychiatry and psychopathology. Their outcomes were often inconclusive, and – focusing on selected parts of symptomatology – could not be generalized. More often research results contradicted each other. Ernst Cassirer's work, however, had from the outset a much wider frame in considering symbolic capacity as the centerpiece of human development, with symbols as the very tools on different levels of cultural development, freeing up mankind from the biological constraints of the animal empire. His three-volume work *Philosophie der symbolischen Formen* (1923, 1925, 1929) provides the concept of a universally functional matrix of consciousness, based on a relational model of "invariants of human experience". According to him, dysfunctions in its symbolic make-up – or the loss of established symbolic suspension systems – have a serious impact on human "world-making", on psychiatric symptomatology and on the very concept of theoretical psychopathology. Due to the application of a new symbolic methodology, mental settings and clinical symptoms, which were seemingly contradictory beforehand, now emerge as compatible within a newly created more abstract geometry of interrelations.

Discussions of the universal importance of signs and symbols in neurology had gained *momentum* in the early 1920s, following Henry Head's research on symbolic thinking and expression (Head, 1921, 1926). His results showed that symptoms of patients with cerebral lesions did not demonstrate a basic defect in the function of speaking, reading or writing; instead he detected serious problems with symbolic meaning and categorical representation. The debate was further enhanced by Cassirer's first two volumes of his *Philosophie der symbolischen Formen*, and even more so by his special treatise on *Die Pathologie des Symbolbewusstseins* in Chapter VI of the third volume in 1929. In this section, Cassirer refers to Head and his work: «I myself became acquainted with Head's investigations only after the phenomenological analyses of perception in the first two volumes of this book [*Philosophie der symbolischen Formen*, Bd. I&II] were largely completed. This made me attach all the greater importance to the indirect confirmation of my conclusions by Head's observations

and the general theoretical view which he developed solely on the basis of clinical experience» (Cassirer, 1957, p. 209). Cassirer's much earlier publication *Substanzbegriff und Funktionsbegriff* (1910) had already caused serious debates about "paradigm changes" in the science of knowledge, but the impact of his *Philosophie der symbolischen Formen* is seen by today's historians as the "semiotic turn" in the history of philosophy (Krois, 2004).

Cassirer's ideas were widely discussed in German-speaking countries and beyond (the Soviet Union, France, US, Italy) throughout the 1920s and 1930s. They influenced well-known researchers in philosophy (Theodor Litt, 1926; Susanne Langer, 1948), neurology (Kurt Goldstein, 1934), psychiatry (Ludwig Binswanger, 1924), psychology (Kurt Lewin, 1947; Karl Buehler, 1934; S.H. Foulkes, 1964) and anthropology (Norbert Elias, 1937). But it was Cassirer himself who modelled his developing philosophical work on the actual findings of this wider research and discourse-network. His closest cooperation on issues of consciousness and mental formation emerged in his day-to-day collaboration, discussion and clinical experience with neurologist Kurt Goldstein in the mid-1920s. From 1924-26 he maintained a lively scientific correspondence with psychiatrist Ludwig Binswanger (Andersch, 2010) and tried to introduce symbolic thinking into the field of psychopathology, as did Goldstein in his main work *The Organism* (1934) and Lewin (1949) in his psychological studies and field-research after immigrating to the US.

The rise of German Fascism and the subsequent World War II forced Cassirer – and the majority of scientists involved in the debate – into exile, destroying their research network and, more crucially, separating them from their philosophical and theoretical background. Cassirer's and Lewin's early death in 1945, resp. 1947, led to a marginalization of symbol- and "Gestalt"-approaches – depriving them of the important role both had gained in the period between the two world wars. None of the theories ever made it back to the mainstream of German psychiatry and psychopathology, where too often post-war leaders in psychiatry and philosophy (e.g. Heidegger) were the same figures who had willingly cooperated with the Nazi regime.

II. EARLY SYMBOL THEORY IN PSYCHOPATHOLOGY: FINKELNBURG, SILBERER, FREUD AND JUNG

Psychiatry, in its attempts to secure a permanent place among medical faculties, was – understandably – keen to distance itself from all forms

of previous symbolic connections. Medieval healers and street gossip alike had been thriving on real or invented symbolisms in binding madness to magical, mythic and religious speculation. This is why during the first century of “modern psychiatry” symbolic interpretation was synonymous with an unscientific approach to mental disturbance. Previous symbolic connotations had to be overcome – once and for all – by the biological allocation of (and rational thinking about) brain mechanisms. But fairly soon the importance of symbols was stressed again, albeit in the name of the newly adopted scientific paradigm. It was Finkelnburg (1870) who took to symbol-research, trying to work out the multitude of symptoms in aphasia. He drew from his observations that the use of symbols amounted to a kind of artificial creation – of conventional signs – exclusively practiced by human beings, and that their proper usage, including a detached and abstract view on reality, got lost in the psychopathological process. Spamer (1876), Kussmaul (1874) and Pick (1908) also presented clinical cases distinguishing the mere clinical loss of symbolic capacity from its representational importance as a tool fostering meaning and generalization.

Throughout the following decades a puzzling variety of clinical observations on symbolic formation were published, all of them looking at clinical symptomatology and psychopathology, ranging from a unilateral, regressive meaning of symbols to the very opposite view: that symbols are the indispensable cornerstones of a mature and social development of personality. Freud, Jones and Ferenczi focused on the regressive, pathognomic side, while Jung, Neumann, and Bachhofen highlighted the unifying, maturing and creative impact of symbols. Rank and Sachs portrayed the role of symbols as early primitive tools of mental adaptation, while Mead and Pavlov put more emphasis on their importance as balancing forces and a means of saving mental energy. Silberer and Luria regarded symbols as natural forces of form- and pattern-building; Leuner and Lewin did the same, albeit more so from a *Gestalt* perspective. Psychoanalytic researchers such as Stekel, Szondi, Klein and Sechhayé conceived symbols to be facilitators in accessing suppressed mental complexes, while psychiatrists such as Hanfmann, Arieti, Kasanian and Bash considered symbols in their natural role of fostering human intelligence. Most researchers concentrated on very specific aspects in symptomatology, but only Henry Head, and in particular Ernst Cassirer, took a more general approach prior to World War II in considering the role of symbols as the general center point of the unfolding of man’s cultural capacity – applicable to different categorical levels of meaning and “world-

making”; subsequently they looked at certain forms of neurological and mental illness as a breakdown of symbolic formation.

Freud’s psychoanalytic method was a first attempt to take the psychopathological focus away from the brain and to replace it with the relational setting connecting subject and milieu, thus unconsciously delivering an approach “from substance to function” which only later was fully explored by Cassirer’s philosophy. Before taking a more detailed look at Cassirer’s philosophy it is interesting to consider the very different roles which both Freud and Jung – the best known contemporary protagonists in their field – attributed to the meaning of symbols. Sigmund Freud, in his early publications, regarded symbol appearance as a typical sign of either the unconscious, the “primary process” and basic dream experience, or psychopathological decline and regression (Freud, 1894, 1900). Only dream symbols could (on rare occasions) rise to a position of transpersonal structural elements. Freud’s position in connecting symbol building to pathological events and, even more so, exclusively sexual symptomatology was backed up by Ferenczi (1913) and extended by Ernest Jones (1916) who connected symbolic presentation to “primitive thinking”, thereby declaring Freud’s verdict on symbols as the center-piece and dogma of psychoanalysis. Anna Freud (1936) marginalized the meaning of symbols even more, calling them “by-products of dream interpretation” and portraying them as the most basic access to “Id”-impulses. This prompted an exclusion of the symbolic discourse from the center stage of psychoanalytical discussion.

Conceptualizing his own position, Freud had actually used (and obviously reinterpreted) the outcome of research carried out by his psychoanalytical colleague, Herbert Silberer. Silberer had explored symbolization efforts in much broader terms: as the general human and mental capacity to generate autoregulative forms in response to (uncontrollable) impulses (Silberer, 1912a, 1912b). Going even further, he came to the conclusion that those formed elements – which he had experienced during severe tiredness and loss of attention – do not appear at random, but have a structural similarity to the underlying pattern of the process, albeit not to its unique and concrete presentation. Silberer felt that «the process of symbol building, emerging during onto- and phylogenetic development, progresses to be an ever more differentiated and evolving process of knowledge [...] (and) the only adequate expression of the achieved mental level» (Eckes-Lapp, 1988, p. 183). Sadly, his verdict on the dreaming process was subsequently ignored by Freud, as were Silberer’s final far-reaching conclusions on the symbolic make-up of consciousness. Freud’s interpretation of

symbolism prevailed for the first half of the twentieth century, and it took major efforts and unfortunate disputes to redress his unilateral position, which finally rehabilitated Silberer and his early findings on the productive, protective and creative potency of symbols.

C.G. Jung – having split from Freudian psychoanalysis – elaborated his theories during the 1910s and 1920s without any closer affiliations to the lively contemporary discourse on symbols. In contradiction to Freud's view, for Jung the content of symbols has a major impact on the individuation process and the development of a mature inner self. Thus the symbolic process is an indispensable requirement and constant companion of the make-up of consciousness. Symbols are transformers of energy in assimilating mental complexes to the conscious part of our personality. Jung's emphasis is on the capabilities of symbols, on their pattern-based *Gestalt*, on their inner structure, on their ego-building format and on their unique power of anticipation. Highlighting the collective dimensions of symbols and their importance to generate preformed "archetypical" pattern of mental energy, he brings in a completely new aspect to the psychological/psychiatric debate. Looking at therapy, his view is that reinstating symbols between inner self and social environment has an indispensable healing power. Jung and Cassirer never had any personal or other connections. While Cassirer fled into exile, Jung became the doyen of the Germanic branch of the *Psychoanalytische Vereinigung under Nazi-rule*. This makes a joint approach to the philosophy of symbols difficult to achieve, yet there are a surprising number of structural and parallel aspects to be found in both their theories (Brumlik, 1993, p. 143; Pietikainen, 1998). Jung builds his concept on general laws of symmetry and mathematical geometry – as does Cassirer. Both show evidence of a similar complexity in building mental *Gestalt*, and both assume a multi-layered matrix of "*Sinnstiftung*" in the make-up of consciousness – which both consider to be not merely brain activity but a living process of interconnection.

III. CASSIRER'S LEGACY: FROM BIOLOGY TO SYMBOLIC FORMATION

Cassirer's idea was that the endless variety of human culture and expression can be traced back and reduced to a small number of what he calls – referring to Plato – "*Bewegungsformen*" (Cassirer, 1910, p. 435). These underlying patterns are comparable to the very few elements which create the never-ending multitude of mathematical and

chemical worlds, languages and music. Thus the multitude of human activities culminates in a limited variety of “symbolic forms” such as magic, myth, religion, law, science, the arts and a few others; in other words, living complexes of balanced tension, like “*Gestalten*”, emerging from complementary contributions of subject and milieu, yet detached from their full direct involvement. Most important to Cassirer in the architectural make-up of symbolic form is the structural bond between its universal meaning and the external sign by which it is represented, leading to his 1922 definition: «Under a “symbolic form” should be understood each energy of spirit [*Geist*] through which a spiritual [*geistig*] content or meaning is connected with a concrete sensory sign and is internally adapted to this sign» (Cassirer, 1922, p. 5; translated in Bayer, 2001, p. 15). Symbolic forms are stages of “world making”, which can be used as tools from a box, again and again in various settings. In Cassirer’s perception, mankind’s unique symbolic quality lifts it out of the animal empire and transforms it in such a profound way that man should no longer be called the “animal rationale” (as Aristotle did) but “animal symbolicum” (Cassirer, 2006, p. 31). Consequently, it is man’s symbolic capacity which gets lost or altered in some forms of neurological dysfunction (e.g. aphasia or speech disorder) and in mental illness.

Cassirer based his assumptions on the findings of the biologist J. von Uexküll, a close colleague and friend at Hamburg University. He had stated that man shares his biological “circle of functioning” with all animals, using a “receptor” and “effector” system, which keeps us adapted only to a certain part of our environment (von Uexküll, 1909). Cassirer widened this concept, proposing a «third link which may be described as the symbolic system, an intermediary world, a “*Zwischenreich*”, which stands between spirit and reality» (Cassirer, 1930; translated in Schilpp, 1949, p. 874).

In animal physiology sense-perception is divided into more *versus* less variable components, differentiating basic type-specific patterns from those which are random or related to just a sole situation, but the human symbolic approach allows for an entirely new quality. Its pattern building – later to be used as the defining part of symbolic formation – is not a given, but has to be detected, extracted and used in an anticipatory way by human action (and working process) in several steps: by applying meaning to parts of his environment, by intensifying and connecting this meaningfulness, by separating it from the background into which it is built, and finally by using it as an abstract symbol or mental tool, independent of its first concrete usage.

Cassirer insisted on a sharp divide between signs and symbols. For him they represent two totally different realms: signs are part of the physical world of “being” while symbols are central to human meaning and importance.

During his entire life Cassirer was never confronted with medical or psychiatric classification systems and could not have foreseen the problems they would cause today (Berrios, 1999). Yet disputes about classification systems have not been as recent as most medical professionals might think. In the late eighteenth and early nineteenth centuries, descriptive catalogues of plants were seen as a major progress in a systematic approach to biology. Their publication was a public and financial success and led to a wave of botanical – and later on medical – classification catalogues. French doctors, among them “Mentalists” dealing with “mad and insane patients”, picked up on the success of Linnaeus by applying botanical observations to mental classification systems. They were encouraged by Linnaeus himself, who – in a letter to the French doctor Boissier de Sauvage – expressed his view that «symptoms are in relation to illness what leaves and stems are to the plant» (Foucault, 2005). By coincidence it was the fierce critique of Linnaeus’s cataloguing efforts by Goethe that motivated Cassirer to analyse more closely Goethe’s generic approach *versus* Linnaeus’s descriptive method. Goethe – obviously admiring Linnaeus’s achievements as a biologist – was critical of his static descriptions and picture-related presentations of these living entities. He argued that visual presentation alone neglects their developmental stages and ignores the plants’ general metamorphosis throughout their lifetime. Finally he criticized Linnaeus’s relentless cataloguing efforts as a misrepresentation of nature (Krois, 2004, p. 284).

Cassirer undertook a sophisticated meta-analysis of Goethe’s critique of Linnaeus (Krois, 2004), pointing out that Goethe focuses more on context and meaning than simply on the biological function. Goethe’s observations capture the changing “frames of reference”, the plants’ interrelations with environment and the mutual influences in this process – compared with the exactness and rigidity of the observational “object” in Linnaeus’s case. Goethe highlights the plants’ genetic pathways, less so their visual appearance, trying to work out a general pattern in their development in contrast to seemingly concrete superficial similarities – which sometimes turn out not to be connected entities at all – thus misleading the observer’s eye. Cassirer concludes that Goethe focuses on metamorphosis and *Gestalt*, as compared with the descriptive and associative visually substance-orientated approach of Linnaeus – an early methodological attempt to change the scientific

focus from substance to function, highlighting its hidden yet underlying and progressing natural and relational order. Cassirer differed from Kant in believing that the building stones of consciousness are not static categories but dynamic and evolving patterns: subjective correlatives of symbolic representation. Cassirer viewed the “symbolic function” as the common element to all areas of knowledge, but taking a specific form in each of them. In his early studies Cassirer (1902) had closely examined the progress of mathematical thinking and how its concrete and substance-bound terms are systematically replaced by functional relations and later on – using symbols only – by completely abstract terms of understanding (Ihmig, 1997). He discovered that each of these mathematical views represents only one (out of a variety of possible forms) of “world-making”, yet each of them has a surprisingly stable inner logic and sense. Their inner laws of existence, representing a certain level of concrete experience, still remain valid under a new paradigm – fulfilling a role within a changed relational framework. Consequently, Euclidian geometry, which for centuries was seen as the natural final stage of its discipline (as its reality is proven by day-to-day experience) found itself replaced by a whole group of virtual, previously unimaginable, spheres: the Riemann geometries (Riemann, 1868). Most surprisingly these “new geometries” emerge as complementary, yet independent, worlds, opening up our imagination to new and very different perspectives compared to the well-known (Euclidean) architecture of reality. All of them exist as parallel universes. None of them can be replaced by the other, nor absorb or fully integrate their structures: even the “old” Euclidean geometry remains valid within the “new” matrix of structures as one continuously approximated limiting case. Yet Riemann geometries, despite their highly abstract architecture, are more than an entertaining virtual playground for mathematical specialists; they are of very practical use in solving complicated problems in the real world. Geometrical thinking, freed up from its previously limiting spheres, now has a capacity flexible enough to solve the riddles of Maxwell’s theory of electro-magnetism and Einstein’s theory of relativity.

Cassirer applied these notions of substance transmuting to function to cultural development. “Symbolic formation” means to deconstruct this algorithm and to use its underlying pattern to understand how humans create a living wholeness (*Ganzheit*) out of the subject’s changing level of experience and complexity, mutually connecting categorical elements with sensory ones: a marriage of complementary elements of subject and environment. Far from being naive, Cassirer knew all too well the incompatibilities between mathematical models

based on exactness in ideal settings and the chaos of human existence and personal unreliability. He knew the unsolvable contradictions between frustration and fragmentation of everyday life, and our longing for an existence which makes some sense: there is an irreducible difference between axioms of geometry and the empirical statements derived from observation and measurement. The two cannot be directly compared since they belong to entirely different orders of object (Cassirer, 1944, p. 3). Yet we should not allow ourselves to be misled by this disparity; what we are going to set forth concerns logic only, and not ontology (p. 5). Nevertheless, we must not conclude that no mediation at all can obtain between these two levels. In spite of their specific differences they belong to the same genus, in so far as they share the function of objective knowledge. It is this common function whence their character derives; without the *reference of ideas to an object* there is no perception (pp. 30-31, original italics).

To allocate these contradictory elements to a single fixed and rigid relational order is not helpful, but requires a system able to change settings, thus managing a multitude of living tensions between different levels of subjectivity and their appropriate social frames within a moving matrix (Andersch, 2007) which turns beliefs and ideologies into a virtual safety net. The wider framework of these “symbolizations” constitutes a limited number of “levels of world-making” and only in experiencing and integrating the full circle of their variety – and bringing them into a balanced equilibrium with our non-symbolic autoregulations in sleep and other regressions to our animal origins – will there be a minimization of mental vulnerability.

With regard to patients with aphasic disorder, Cassirer explains a symptomatology which can also be observed in schizophrenic patients: «Many patients who are not able to draw a sketch of their room can orient themselves relatively well on such a sketch if the basic schema is already laid down. If for example the doctor prepares a sketch in which the situation of the table where the patient usually sits is indicated by a point, the patient often has no trouble indicating the position of the stove, the window or the door on this sketch. Thus the truly difficult operation consists in knowing how to proceed in the spontaneous choice of a plan as well as the center of the coordinates. For precisely this choice unmistakably involves a constructive act. One of Head's patients expressly stated that he could not effect this operation because he could not correctly establish “the starting point, but once it was given him everything was much easier”. We perceive the true nature of the difficulty when we consider how long it took science or theoretical knowledge to perform this same operation with clarity and

determinacy. Theoretical physics also began with “thing space” and only gradually progressed to “systematic space” – it, too, had to conquer the concept of a system and center of coordinates by persistent intellectual effort. Obviously it is one thing to apprehend the togetherness and apartness of perceptible objects, and another to conceive of an ideal aggregate of surfaces, lines, and points embodying a schematic representation of pure positional relations. Thus patients who can execute certain movements quite correctly are often baffled when they are expected to describe these same movements – that is, to differentiate them in universal, linguistically fixated concepts» (Cassirer, 1957, pp. 245-246).

While Cassirer during his clinical studies saw mainly neurological patients with speech disorders, Krois (1999) has highlighted that Cassirer’s fundamental concept of symbolism is not a linguistic one, but includes ethnographic and anthropological aspects as well: «The linguistic model of semiotics regards the bond between the signifier and the signified as purely arbitrary and conventional, but Cassirer traced meaning back to a “natural symbolism” of image-like configurations in bodily feeling and perception» (Krois, 1999, p. 531). This is why healthy persons with different levels of symbolic world-making will create a matrix of stable frames of a sequential and hierarchical order without even being aware of it. This further allows abstract ideas and theories to be grasped in anticipation and as mathematical concepts; moreover, it implements the unique universe of human existence as a system of transcultural valid symbols. All “symbolizations” remain unique in their complexity, quality and character; all provide some form of stability, like landmarks in the chaos of life. While, from a philosophical point of view, they are neither “true” nor “objective”, among the average member of society they are perceived as reliable, well-functioning and pragmatic human intentions, corresponding well with their mutual field of resonance. Each of these paradigms in daily life is seen as incompatible with previous ones. Only from a very late integrative level of understanding do individuals get to use them as a box of tools, where the right one has to be chosen dependent on the actual requirements.

Cassirer differentiates between three types of reality and their corresponding symbolic forms. The expressive world is organized by myth, sign and signification. The representational world is organized by language. The conceptual world is organized by science. Each of these symbolic forms expresses a structure of consciousness achieved by the internal logic of the symbolic forms and constitutes a major sphere of

cultural activity. To know is to elicit order through the use of symbolic forms (White, 1946, p. 463).

IV. CASSIRER'S IMPACT ON PSYCHOPATHOLOGY (PRE-WWII)

Cassirer's theories took much of their strength from discussion and clinical cooperation with leading contemporary psychiatrists, neurologists and psychologists such as Kurt Goldstein and Adhemar Gelb as well as Kurt Lewin and Ludwig Binswanger. The clinical cooperation between Goldstein and Cassirer in the early 1920s in "Goldstein's Institute for brain injured patients" ("Institut zur Erforschung der Folgeerscheinungen von Hirnverletzungen") at Frankfurt can be seen as most fruitful for their mutual theoretical development towards a "new psychopathology". Goldstein adapted Cassirer's view that there is no hierarchy within different levels of world-making; the way brain-damaged patients try to express themselves verbally is neither disordered nor chaotic, as a superficial assessment might reveal. Instead it is a focused, vital and interactive effort in establishing a new *Gestalt*, a new equilibrium of correspondence with their environment. Having lost the more abstract tools of world-making, patients now refer back to the more concrete and sensory ones. In doing so, the patient changes from using symbols as patterns which can be used in different situations to a more basic form of expression, i.e. forging direct connections with the concrete field of their immediate experience. In this way they lose the capacity for symbolic adaptation to future contexts and situations in exchange for the remaining concrete management of presence (Goldstein, 1934). Cassirer – reciprocally – studied Goldstein's clients, trying to understand what he later termed "the psychopathology of symbolic forms" (Cassirer, 2009, p. 71). In 1929 Cassirer writes: «[...] I should scarcely have had the courage to go into it [the findings of the modern pathology of speech] more deeply if [...] I had not also received the personal encouragement of the two authors [Gelb and Goldstein]. Here I must particularly thank Goldstein for demonstrating to me a large number of the pathological cases to which his publications refer and so enabling me to gain a true understanding of them» (Cassirer, 1957, p. 210).

Their close cooperation led to a special chapter in the third volume of Cassirer's main oeuvre, *Philosophie der symbolischen Formen*, entitled *Zur Pathologie des Symbolbewusstseins* (1929, pp. 238-328), and Goldstein integrated Cassirer's approach on "symbolic formation"

into his concept of psychopathology and his most important book *Der Aufbau des Organismus* (1934). It contained the very first systems and network theory based on principles, whereby the brain is regarded as working on different categorical levels, finding its concrete or abstract *equilibrium* depending on varying grades of complexity. It, the brain, draws its potential from its ability to enact parallel levels of suspension (*Grundspannung und Erregungsbereitschaft*). All neuronal functions are guided by their subservience to the whole organism, even during a breakdown of main cerebral activities. Learned functions are not strictly organized in local patterns, because their activities can be substituted by neighboring or different parts of the organism or changed to a different functional exchange level as such. The brain, seen from a systems approach, never switches to a mode of inactivity but endlessly moves between “equilibriums of change” (*Verharren in Veränderung*)

Goldstein’s model of adapted “functioning” enables the therapist to look at the pathological process as a well-understood attempt at mental re-organization – compared with the traditional model of “local damage” – and opens up the possibility of reconstructing a new level of symbol-based healing. This led to Goldstein’s position (as summed up by Oliver Sacks), that: the unique value of pathology lies in «illuminating the nature of health», and that pathological symptoms are a «lawful variation of the normal life process», even if this involves a shrinkage or revision of self and world until an equilibrium of a radical new sort can be achieved. Symptoms are not isolated expressions of local damage but attempted solutions of healing. The task of the physician therefore is to help to achieve this new equilibrium and «not force the patient to try and do the old things in the old way» (Sacks, 1995, p. 14).

Between 1924 and 1926 Cassirer maintained a lively scientific correspondence with the psychiatrist Ludwig Binswanger (Andersch, 2010), who wrote to Cassirer, after reading his first volume of *Philosophie der symbolischen Formen*: «Having worked out the term “Symbolic Form” is of crucial importance for a psychiatrist – as soon as he acknowledges his main objective: to progress to a phenomenology of pattern of thoughts which are continuously presented and performed by our main group of patients: the schizophrenics» (Cassirer, 2009, p. 60). Binswanger tried to introduce symbolic thinking and *Gestalt* ideas into the field of psychopathology. In his famous Zurich presentation of 1924, his audience expected him to promote Freud’s psychoanalysis further; instead Binswanger only emphasized the research outcomes of Cassirer, Goldstein and Gelb. There was an extensive exchange of letters between both of them, and

joint ideas came so close that Cassirer wrote in 1926: «I have the very distinct impression, that finally the separating border between medics and philosophers has been broken down and both specialties can progress in joint cooperation» (Cassirer, 2009, p. 93). Nevertheless, planned projects never came to fruition, as Binswanger made another theoretical turn towards Heidegger, having read his treatise on *Sein und Zeit* in Husserl's *JAHRBUCH FÜR PHILOSOPHIE UND PHÄNOMENOLOGISCHE FORSCHUNG* (Heidegger, 1927). Heidegger's ideas had such an impact on Binswanger that he later apologized for his 1924 "errors" (Binswanger, 1956/1994, I, p. 321) and modelled his "*Daseinsanalyse*" on an esoteric concept of Heideggerian linguistic self-references. He devoted his well-known publication *Drei Formen missglückten Daseins* (Binswanger, 1956/1994, I) in particular to the new Heideggerian approach. But if we examine the cases which he presented, the patients' strangeness, their lack of resonance, their rigidity, their loss of perspective and their "as-if" thinking all demonstrate a loss of making sense and a breakdown of symbolic formation which, in our view, can be much better explained by Cassirer's symbolic system than by Heidegger's "*Daseins*" approach.

Cassirer (1938/1944) referred to the example of transformation-groups in mathematics to clarify the way in which levels of world-making – based on underlying invariant structures – can be connected to one other and transformed into one another. Thus certain qualities emerge as finally compatible although they had seemed mutually contradictory in the first place. In clinical terms this obviates the need for much of the sensual concreteness of symptomatology: «However, this phenomenon [i.e. *Gestalt*-structure] is related to a much more general problem, a problem of abstract mathematics; indeed, what else is this "identity" of the perceptual form but what, in a much higher degree of precision, we found to subsist in the domain of geometrical concepts? What we find in both cases are invariances with respect to variations undergone by the primitive elements out of which a form is constructed; the peculiar kind of "identity" that is attributed to apparently altogether heterogeneous figures in virtue of their being transformable into one another by means of certain operations defining a group, is thus seen to exist also in the domain of perception; this identity permits us not only to single out elements but also to grasp "structures" in perception. To the mathematical concept of "transformability" there corresponds, in the domain of perception, the concept of "transposability"» (Cassirer, 1944, p. 25).

V. CASSIRER AND THE “GESTALT-MOVEMENT”

Cassirer never considered himself a *Gestalt* theorist. Nevertheless, his philosophical writings, and especially his psychopathological research and his publications, were strongly influenced by *Gestalt* ideas, and influenced many researchers coming from a pure *Gestalt* background. In his fundamental research on *Substanzbegriff und Funktionsbegriff* he explained: «What is a given and what is known to us about the realm of consciousness are never isolated fragments, assembling to generate an observable impact. Instead it always is a well-constructed, sophisticated manifold, organized by interrelations of all kinds which, only due to our power of abstraction, can be separated in its different parts. The question cannot be put as how we can start with the isolated parts to achieve wholeness, but how, starting from wholeness, we get to its parts. Elements as such cannot exist without some form of inner relatedness; thus trying to extract their possible ways of relatedness from the sole elements is bound to failure» (Cassirer, 1910, p. 445; engl. transl., ch. 8, II).

Cassirer agreed with the view of British neurologist Hughlings Jackson that the loss of speech (in aphasia) cannot be seen as a mere inability of word building, but rather a disorder in the construction of predicative sentences, «in general those determining the being, the kind or relatedness of objects» (Head, 1915, p. 132). In Cassirer's opinion, it is not the presence of *Gestalt* as a directly given phenomenon of nature which allows a full understanding of its formation. On the contrary, it is the escape from those concrete visual spheres into a virtual realm of relationships and structures which allows what the Greek word “*symbolein*” actually means: the creation of wholeness, a symbolic form, deriving from complementary elements – like man and milieu. With regards to the underlying patterns of the contributing elements which facilitate this process, it is the abstract phenomenon of “*praegnanz*”, a term coined by Cassirer to explain the very transformation that makes *Gestalt* possible: «By “symbolic pregnancy” we mean the way (*die Art*) in which a perception as a sensory experience contains a meaning which it immediately and concretely represents» (Cassirer, 1957, p. 202). The concrete superficial characteristics of both protagonists, even though their fascinating uniqueness first catches the observers' eye, are not the crucial issue. Individual elements as such cannot exist without some form of cooperation, and therefore trying to derive the actual relationship from the elements on their own is bound to fail; moreover, «whatever kind or form of the subject, this is why the point of view of a copying

observance has to be replaced by an “architectonical interconnectedness”» (Cassirer, 1985, p. 20).

During the 1920s certain practitioners in neurology and psychiatry saw the benefits of a *Gestalt* discourse. Binswanger (1924), Goldstein (1934) and Foulkes (1948) were the most well-known professionals for fostering a *Gestalt* approach as part of their clinical practice. *Gestalt* ideas had a major impact too on Kurt Lewin, in particular on his concepts of field-theory and action-research; they also had some influence on Moreno's psychodrama, on Leuner's “symbol drama” and on Foulkes' theories on group-dynamics. But, despite its strong start, *Gestalt* theory failed to develop a convincing contribution to a theory of consciousness (Ash, 1998, pp. 409-11). There is no doubt that its promising discourse was brutally halted by Fascism and World War II. Most of its theoreticians and researchers – Max Wertheimer, Karl Duncker, Wolfgang Köhler, Kurt Goldstein, Kurt Lewin, Sigmund Fuchs, Karl Buehler, Ernst Cassirer and many others – were driven into exile, and had their scientific work interrupted and destroyed, or were even murdered, as was Kurt Grelling in 1942. The urgent necessity to understand the crucial connection between *Gestalt*- and Symbol-theory was never taken up. Cassirer's appeal to strengthen this approach and develop its theoretical perspective beyond the sensual realm of everyday (geometrical) experience – towards more virtual, abstract ideas of interconnectivity – was neglected by Goldstein as soon as their joint pre-war cooperation in Germany came to an end. Wolfgang Köhler's “*Isomorphie-Thesis*” in its vague formulation of possible connections between mental and social existence, only added to an already existing confusion (Köhler, 1929). It gave rise to a series of misinterpretations, with the majority of researchers in the field even today siding with an interpretation of such parallel activity, a notion recently refueled by the current vogue in research into mirror-neurons. A more comprehensive discussion of Köhler's – sometimes contradictory – remarks reveal that similarities in structure on both sides of the purported dualism only refer to the character of their relational make-up, while *Gestalt*-building requires further complementary components to achieve the final creative symbolic form of the ensuing figure. It was only Aaron Gurwitsch (1949), who, referring to the works of Merleau-Ponty and Cassirer, followed this route, researching and exploring the missing link between Gelb's and Goldstein's concept of the “concrete and abstract attitude” and Husserl's phenomenology.

In German psychiatry it was Klaus Conrad who resumed his wartime research on *Gestalt* in a number of well-received publications

on the loss of *Gestalt* in psychosis (Conrad, 1958). He described several steps of “*Gestaltverlust*” and tried to apply them to a scheme built on Lewin’s theory of mental suspension systems. Conrad’s clinical considerations were much more flexible and complex in comparison with Kraepelinian theories, yet they remained very much tied to the concept of psychosis as a mere brain illness. His early death in 1962 brought an end to the *Gestalt* discourse in German mainstream psychiatry.

VI. CASSIRER’S IMPACT ON PSYCHOPATHOLOGY (POST WWII)

Nonetheless, behind the stage of public discourse Cassirer’s ideas on the make-up of mental formation and psychopathology had a lasting influence on numerous scientists, a fact which has only emerged in recent decades through studies in the history of science. Luria, Leontjew, Vigotsky, Bakhtin and Saporoshez in Russia modelled parts of their theories on Cassirer’s ideas, or Goldstein’s and Lewin’s reception of Cassirer’s philosophy, as did Bourdieu, van Ey, Canguilhem, Merleau-Ponty, Lacan and Foucault in France; Kasanian, Royce (1965), Werner, Kaplan, Goodman, Hacker, Rappaport, Stack-Sullivan, Segal and von Bertalanffy in North America; Bash and Ciompi in Switzerland; Mayer-Gross, Elias and Bion in England; and Leuner, Conrad, Mentzos and Lorenzer in Germany.

Despite generous research funds in his American exile, Kurt Goldstein, Cassirer’s closest clinical and philosophical friend and co-researcher, never managed to overcome the loss of his continental network and philosophical background. His concept of abstract *versus* concrete attitude fell on deaf ears in the USA. His figure-background interpretation, which resembles Kurt Lewin’s scheme, in that “background” is conceived to be an abstract matrix of interrelations which are not represented on a pure phenomenological level, also remained misunderstood. Goldstein’s early research on brain-injured patients (from World War I) was successfully repeated in a psychiatric setting with psychotic patients, but the results were obtained by Vigotsky and Luria in the Soviet Union (Vigotsky, 1934) and thus remained sidelined in the USA by the impact of the “cold war” in the late 1940s and 1950s. Goldstein’s own appeasement policy of eradicating most of Cassirer’s philosophical quotations from his own publications did not improve his standing. Moreover, it robbed Goldstein’s readers of the very theoretical framework on which it was erected.

Integrating Cassirer's view and *Gestalt* theory, Russian psychologist AN Leontjew described "*Gestalt*-building" by symbolic formation as a "mechanism of building mechanisms" as early as the 1950s. Quoting research results from his colleague A.W. Saporoshez from 1958 (Leontjew, 1977, p. 295), he pointed out that animal behavior never relies on a proper use of tools, and that typical copying activities in small children (echokinesis, echomimia, echolalia) come to an end early in the second year. It is then regularly replaced by "copying" provided patterns, which are determined by "*Nachahmungshandlungen*", a special form of copying activity. Their process of emergence is not fostered by a rewarding *stimulus* but by the unification of the child's own activity with its imagined purpose. This clearly contradicts the recent mirror neurons approach, suggesting instead that the early exhausting practice of storing sequences of outside experience gets replaced by a coding exercise *via* ever more complex categorization.

Most interesting is the fact that Jean Piaget (1974), from about 1930 on, established an understanding of diverse and added layers of how consciousness develops in children (Zlatev and Andr en, 2009), which, mainly based on the semiotic philosophy of Saussure and mathematical models of the Bourbaki-group, points to the incorporation of mental tools by which parallel ontologies and representational models of "reality" come about. There is such a striking similarity between Cassirer-based concepts of psychopathology and those of Piaget that, despite the historical non-existence of dialogue between the two of them, researchers are now speaking of a joint "genetical semiology" (Fetz, 1981). Promising attempts can also be detected in disentangling seemingly contradictory positions between the symbol concept of Cassirer and those of Freud (Lorenzer, 1970a, 1970b; Mentzos, 1997, 2009), as well as showing up some surprising similarities between the theories of Cassirer and Jung (Pietikainen, 1998).

Group analysis, fostered and founded by S.H. Foulkes in England, owes much of its matrix-concept to Cassirer's ideas. Foulkes spent his German years as an assistant of Goldstein in Frankfurt in the mid-1920s when Goldstein and Cassirer cooperated on a daily basis on clinical cases (Nitzgen, 2010). The progressive clinical success of Luc Ciompi (1982) was only possible because of his capacity to integrate Saussure's and Cassirer's structural and semiotic/symbolic thinking into mainstream psychiatry.

Hanscarl Leuner (1962), internationally renowned German psychiatrist and LSD researcher, was one of the few prominent figures after World War II who kept alive the approach of Goldstein, Lewin

and Cassirer. Referring to Lewin's "parallel dynamic systems of suspension" as a preemptive state of consciousness and Goldstein's idea of mental equilibriums, this allowed him to focus on varying levels of mental functioning, not just on a chaotic disorder of dysfunction and pathology. As a result, he was able to attribute the chaos following mental breakdown in psychosis (or emerging from LSD consumption in his research trials) to a mixture of damaged symbolic levels, prefabricated mental patterns and attempts of symbol-reformation, all of which can be seen as potential building stones of a new reality. Results of this comprehensive hallucinogenic research were, to Leuner, proof and confirmation of his theoretical approach. He cultivated a discourse on Lewin's idea of a new "conditional-genetic psychopathology", one which was strongly opposed to the narrow Freudian interpretation of symbols as mere signs of pathology and the unconscious (Leuner, 1962, pp. 109-112). Leuner also categorized Jaspers' phenomenological and existentialistic approach as "rigid and fixated on substance" (pp. 57-60), and further rejected Jaspers' widely adopted paradigms on mental illness as an "erroneous identification of appearance and phenomenon". Attacking both godfathers of psychopathological discourse at the same time did not make Leuner many friends, and his theoretical papers, albeit strongly evidence-based in hallucinogenic research, proved too complicated to enter mainstream discussion. His meticulously formulated "transphenomenal dynamic mental steering system (tdyst)" (pp. 185-186) remains a hidden gold-mine of structuralist research. Leuner was fully aware of a partial parallelism of *Gestalt*- and symbol-processes and he remains the most successful innovator in implementing a "*katathymes Bilderleben*" or "symbol theory" into clinical psychiatric practice. Over the years this approach emerged as a successful method of treatment, using imaginative "symbols" to re-establish damaged bridges of interaction when dealing with severe forms of mental illness.

The closest structural link to the ideas of Cassirer and Goldstein was the French concept of "*pensée opératoire*", presented in 1978 by Pierre Marty and Michel de M'Uzan, which focused on plausible origins of psychosomatic illness. The term referred to the model of "aggressivite fruste", an unintegrated form of mental energy leading to somatic symptoms, a notion which had been formulated by Ziwar (1948), an Egyptian psychoanalyst. These authors described a "*relation blanche*", meaning a breakdown of the living interacting emotional contact, which became one-dimensional, without the skills of symbolization. Such patients, if seen from Cassirer's perspective, lack the capacity to abstract, remain unable to extract underlying patterns from a situation

and use these “categorizations” further to protect themselves, or to communicate or to jointly create an intersubjective reality with others. In both conceptions, individual psychopathology derives from the difficulty in blending concrete sensual interaction with dysfunctional patterns of abstract knowledge, and so such patients remain unfit to maintain social contact or open spheres of resonance (*Resonanzräume*) to practice creative life. This lasting frustration of a repetitive breakdown of the symbolic link, i.e. the failure to cope with the demands of milieu and future, finally leads to withdrawal, isolation and the resurrection of non-symbolic, auto-regulatory realms of the past, with a regression into ontogenetically earlier patterns of biological and organic responses.

An important conference on “Psychology and the Symbol” took place in Los Angeles in 1963 with presentations by Hacker, Berthalanffy, Rappaport and Royce (1965). Its whole focus was close to Cassirer’s psychopathological approach and stressed the fact that symbols are freely created, and free from the imposed rules of physics and biology. Contributors to the conference further proposed that symbolization has a compelling rather than a compulsory quality, and that it is linked to emancipation, liberation and autonomy, but also to the continuing abuse of power, and that our symbolic repertoire is immensely variable but not inexhaustible, and limited by the possibilities of human *Gestalt*-perception and creation, qualities which break down in mental crisis (Royce, 1965). For these reasons, the use of the “symbolic concept” can help to understand and categorize a chaotic and contradictory set of previously disconnected symptoms. Strangely enough, the authors themselves – impressed by the overall “success” of psychopharmacology – felt that their promising ideas were not yet powerful enough to be introduced into clinical psychiatry.

The evidence of hallucinogenic research during the 1970s (which a few years later came to a complete halt following a total ban on LSD and similar substances in the USA and Europe) provided a late clinical confirmation of Cassirer’s theoretical approach (Baastians, 1977; Grof and Halifax-Grof, 1975; Leuner, 1981; Pahnke and Richards, 1966). Research results demonstrate the systematic deconstruction of layers of symbolization and consciousness as a result of artificial psychosis, and the subsequent reaction of the brain in trying to accommodate sudden vulnerability by using preformed neurological engrams.

Much attention has recently been given Fonagy’s mentalization project, whose findings on mental representation are presented as if totally disconnected from the historical roots of symbolic research (Allen and Fonagy, 2006). The project draws heavily on speculation

about mirror neurons (Gallese and Goldman, 1998) and relies on the analysis of particularly childhood experiences, ignoring the emerging and changing complexity of symbolization as an ever-present process at all age levels. Symbolizing – as Allen and Fonagy (2006) insist – can only start from a third-person perspective. In reality, symbolization is already present in magic and mythic (ambivalent) stages of the subject, albeit not carried by the subject himself or herself but by the complexity of the corresponding group.

VII. A “MATRIX OF MENTAL FORMATION”

Cassirer’s view expressed in today’s terms is that mental stability is not “a function of the brain” but a functioning social construct, as is a good marriage, a decent education or respectable science. All are very much real and no “myth”, but not as a substance or an observable object in our brains, but as a relational order, wherein our brain plays a crucial role. Our different levels of consciousness are not just transmitter changes or simple representations of the outside world, but are the product of a creative tension between stabilized categorical patterns of the subject, growing in its complexity, and its social field or its later deconstructed elements. What is even more crucial is that the short-lived entities that the subject and environment are dealing with are not empirical sense data but symbols through and through. In a mental crisis this symbolic matrix breaks down, the pattern-based construct of reality gets lost, and symbolic language is severely affected.

Until now, Cassirer’s approach to psychopathology has been marginalized and misunderstood, often confused with the concepts of contemporary philosophers, symbolists and *Gestalt* therapists. As a result, it has been left behind in the mainstream debate of psychiatry. It is crucial to understand that Cassirer’s approach to symbolic formation is not based on the elementary application of a sphere of subjective fictional signs or terms to the perception of given objects in the surrounding environment. Instead, his concept requires the application of rules and structures that can be transferred from each of both spheres into the other. This means that the structure of each correlative element is not perceived as a given but only created in the process of “*Gestaltung*” itself, thereby emerging as a complementary complexity of underlying patterns of both sides (Ihmig, 1997). Cassirer’s concept, and this is the major difference from *Gestalt* theory, and a prerequisite to understanding his concept of “Symbolic Formation”, can be extended to theoretical or virtual spheres which are no longer bound to

an empirical construct of perception. Translated into clinical terms, this approach leads to a much wider understanding of a multi-layered architecture of mental health which the German psychiatrist Blankenburg (1973) later termed "*natuerliche Selbstverständlichkeit*". It allows for a fixed point of reference in defining "mental illness", and it might help us understand yet unexplained symptom changes during the course of treatment.

Cassirer never developed a full system of "symbolic formation", yet he had explicitly envisaged this possibility in the first volume of his "Philosophy of Symbolic Forms": «If there was a way to gain a systematic perspective over the different directions of that kind [i.e. the entirety of symbolic forms – N.A.] – and: if there was the possibility of deconstructing it's typical and invariant pattern, as well as it's specific internal order and hidden differences, the ideal form of "general characteristics" for the entirety of mental productivity might emerge – just as Leibniz had called for with regards to human knowledge in general» (1923, p. 18; transl. by the author – N.A.).

Russian researchers have repeatedly stressed the point that human communication is always facilitated on different levels of semiosis (Seboek, 1975), and Portnov finally concludes: «The only way forward is not only to hint at the different levels of complexity among the semiotic layers, but to compare the structure of mental activity and consciousness to the different types and layers of the semiotic process» (1993, p. 275; transl. by the author – N.A.).

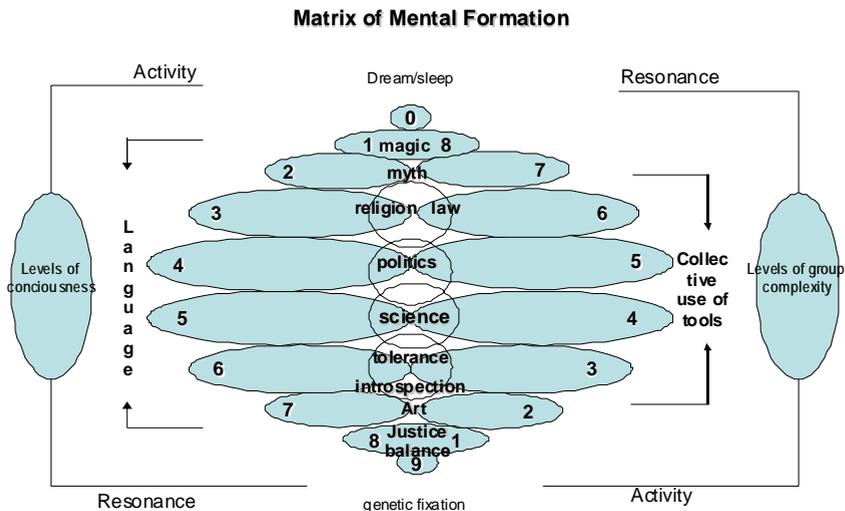
This is the basic idea of the proposed "Matrix" model (below). It combines a three-layered make-up of: (1) basic patterns/codes of complexity, (2) meta-stabilities between individuals and milieu, and (3) a multitude of levels of "symbolic formation". Coding goes back to our instinct-driven behavior where pattern from the surrounding milieu ("*Wirkwelt*") are met by genetically complementary codes of rising complexity, established through past experience ("*Merkwelt*") – mainly expressed in immediate physical action (v. Uexküll, 1909). Fixed meta-stabilities (as a second component) are likely to emerge only much later (Kriz, 2001; Kelso, 2008), turning results of present live experience into patterns of interaction – thus modifying the settings and playing-fields of primates, including humans. Exclusive and unique (and attached to humans only) is the quality of the third step: symbolic pattern interference based on shared and anticipated intentionality among proactive humans, who's previously fixed meta-stabilities turn into flexible suspension systems which get symbolically connected to extra-cerebral signs – thus preserving memory for automatized repetitive usage, separated from the concrete content of the original

context (Andersch, 2007). Language is the main tool beyond others like gestures, mimicry, looks, dance, music, collective use of tools... to expand figure building to lasting levels of world-making, like magic, myth, religion, law, politics, arts and others, which occur on a universal scale. Within these frames of mutual interaction, one can find more powerful paradigms and functioning hierarchies, yet they can well co-exist in a parallel fashion, creating a whole variety of different roles of cultural behavior; building various safety-nets for our daily undertakings, experiments, expectations, and: protecting us in disappointments and failings. This model is a sophisticated map of accessible spheres; providing subjective intentions of varying complexities within their matching spaces of resonance. It is a guide to distinguish symbol-formation: preformed *versus* active, impulsive *versus* considered, spontaneous *versus* pre-planned; thus escaping from unilateral animal compulsion – still much alive in all humans. Symbolic formation uses its capacity to identify underlying pattern in different contexts not to respond to every drive with an exhausting urge towards fulfilment. It protects us from being pressured towards immediate physical action, replacing it with ever more complex proactive planning – changing our environment into a habitat, which makes the gain of our needs more likely to be met – so that humans can stand back and delay immediate action for considerable periods, using saved energy to pursue new and different aims, emerging beyond our instinctive compulsion.

The draft model (Matrix) above is based on the assumption that the multitude and the uniqueness of the human personality emerge from a system of invariant pattern of a universal quality – in analogy (not comparison) to our anatomical architecture and its universal homogeneity. Those patterns of complexity merge into meta-stabilities via interference, only to change into “symbolic forms” in human encounters, providing a vast variety of living suspension figures as the backbone of creative action between subjects and their resonating milieu. The “Matrix of mental Formation” is the cultural unfolding of re-presentation and consciousness – mainly replacing immediate, direct action with complex layers of mediated interference and resonance.

This is how the “Matrix of Mental Formation” should be “read”: the main aspect is the on-going cultural exchange between human intentionality (here on the left) and its natural and cultural milieu (on the right), and: the various cultural forms on the different levels of symbolic formation (middle). Without this “dance of interaction”, without this rapid repetitive proof of reality, human reaction would be

reduced to either the inexperienced genetically transmitted patterns of behavior or to cultural conserves enforced by the group.



You can see in the graph that symbolic formation – the third element in the middle – does not exist from the beginning. Instead, it only emerges out of the original condition of universality (09), transitional symbiosis (1/8) and in- and ex-corporation between partners (2-7). It takes further steps of added complexity to set up related geometries to finally develop a mental membrane (0) between those contradictory – and figure-building complementary – entities, which in adult life we describe as subject and object (306, 405, 504, 603).

On the side of the subject, the contribution on the first level of “Symbol formation” (1/8) can only be a unilateral quality: either fascination, i.e. being totally taken in by the attraction of the surrounding magic complexity (8), or: repetition, intentionally acting out the same forward move again and again (1). On the next level (2-7), intentionality is the essence of change; ambivalent, thus adding to the intensification of contradictory feelings with a quality of roughly typifying or pursuing identification with the transitional object of choice.

On the third level, intentionality is represented in separation, identification (3) and (al)location in space and time (6); on the fourth level it unfolds by joint, authority-led cooperation (5) and body

awareness (4). On the fifth level finally, there is structural thinking. This means “abstract thinking” – i.e. moving virtual objects in relation to each other – a constellation which finds itself faced by a world of objects – the first time ever that individual complexity surmounts corresponding group knowledge. This is the mental paradigm of human existence in most (post)industrialized countries of the Western world. Progressing through the different subjective levels, there is a mounting complexity, an on-going emancipation, a setting-free of previous bindings finally leading to adult individualism (504), a newly-won freedom of choice and self-determination – but also the first level susceptible to break up again in a beginning mental crisis.

The process of becoming an individual is a long one. It requires a process of subject growth towards ever more complex, abstract behavior which then facilitates the carving out of complementary sensual elements out of the corresponding milieu. Only this on-going abstraction/deconstruction interference allows for the continuous creation of new levels of world making. It also proves that a mature and personal intentionality is a very late and very abstract level of existence – and comes at a price: the loss of contact to our early natural understanding of “being in the world”; cut off from our magical, mythical and religious forms of self-evidence.

Cassirer’s opinion is that gaining back those sensory and concrete aspects of our lives – lost during our transformation into a state of mature consciousness – cannot be achieved by regressing to those lost realms of previous experience. To the contrary: access to previous levels can only be gained by radically moving further on, from our present structural level of symbolization and consciousness (504), towards a newly built virtual sphere of integration (603). A deductive procedure that entails abandoning final thoughts of organic property or mere localization; now being replaced by ideas of mere function and changeable relatedness, drawn from underlying pattern in subject and object alike. Only the emergence of codes on both sides of the divide allows us to proceed to yet another virtual layer of symbolization – comparable to the building up of mathematical theories from substantial to differential to integral to infinitesimal... It needs brave steps of further progress which facilitates entrance into previous experiences – now from the other side of the divide – to reactivate and integrate the lost components from the early stages of our existence. Integration on this level (603) is the prerequisite for the final steps of mature symbol-creation (7-2) and self-control (8/1).

All levels of world-making – independent from their cultural content – are symbolically linked patterns of complementary complexity, or,

expressed in mathematical, group-theoretical terms: the Matrix can be considered as a group with the connecting element of complementary complexity. They all represent a universal attempt of human groups to hand over and transform their common experience into relational complexities of individual group members. Each of these levels of the Matrix has a different incomparable quality to the previous one. All are worlds of their own making, and none of them can be absorbed or replaced by one of the others. Each one has its own cultural production and specific form of creation which emerges as magic, myth, language, religion, politics, science, integration, creativity and self-control. They all are universal forms of existence beyond racial or regional differences. Nonetheless, it is a tragic fact that, due to their inner consistency and "logic", all of these "paradigms" lead to a bitter struggle to be accepted as the only way of existence and truth, including the efforts to eradicate the others. It takes quite a number of unwilling changes through different steps of this mental formation to give in to the experience that different ways of world building are not necessarily exclusive; that their parallel variety increases flexibility and creativity, and that this newly gained capacity of frame-changing augments our mental stability instead of undermining it.

The "Matrix" is a living object. It does not define the routes of human activity and consciousness, yet it provides a moving structure from which a probability can be drawn of how it might function. Nonetheless, it would be wrong to entirely replace terms of substance by terms of function. The new quality lies in developing a metamorphosis of "*Gestaltung*", in discovering a whole group of different fields of symbolic formation: a new creation at the interchange of patterns, both of them consisting of varying layers of substance and function. The Matrix shows no preference for the phenomenal (as in contrast to the virtual), no preference for the sensual (as in contrast to the abstract), and no preference for evidence-based relationship (as being superior to repetition or intensifying). There is an indispensable radical equality in all ways of world making, in that all of their aspects – concrete and abstract – come to the surface, albeit in an always-different constellation.

The brain as our neurological representation is only half of the symbolic Matrix – yet always happy to codify pattern of magic, myth and religion – totally unwilling to lend its cells, its binding-capacity and its membranes in an equal way to the more complex, new and different levels of cultural existence. Freeing up mental capacity out of its previous bindings, its neurological circles and preformed patterns is an exhausting process occurring between individuals and group. And it is

only the attraction of intensity and the totality of merging patterns which guarantee progress in such cultural creations. Most helpful are music, language and the collective use of tools as they overwrite our old and fast instinct-reactions with the much slower indirect but reality-proven and powerful external symbolic forms.

The “Matrix of Mental Formation” is a permanent building-site, and it is only the lower floors of this building which seem ready or show a strong enough ability to be sustainable. Beyond that, the matrix shows on-going signs of deconstruction which have to be repaired and renovated by the daily re-enacting of cultural experience. It demands the on-going use of language and collective work to keep the Matrix – and our consciousness, as its inner representation – alive. Longer periods of inactivity or isolation help to destroy this net of culture. It is also sometimes our laziness which allows it to be replaced by empty tradition and preformed patterns, and such a loss of spontaneity and creativity can, over a long period, and in isolation descend into early forms of mental illness or group-paranoia.

VIII. A NEW AND DIFFERENT WAY OF THOUGHT

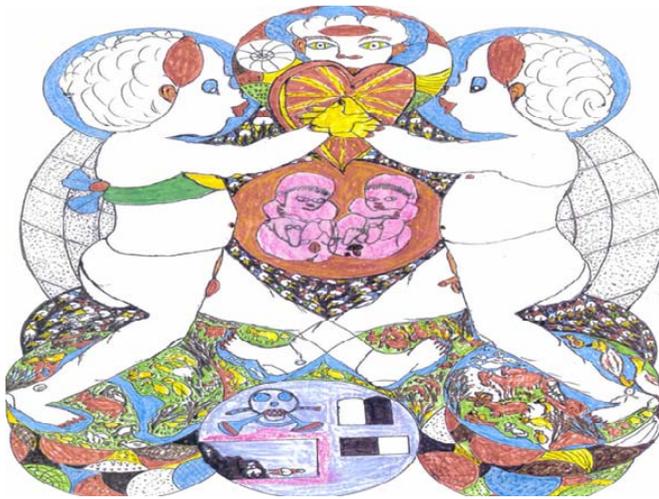
Ernst Cassirer centers his whole philosophical approach around the emergence of “symbolic form” as the missing link between the individual biological being and civilization. In his opinion there is no human reality (*Wirklichkeit*) without or beyond “symbolic formation”. The emerging human cultural world represents an irrevocable break with its organic animal tradition. This is reflected in the change of interaction between human intentionality and “civilization”, from instinct and preformed mental patterns to different levels of “world-making” facilitated by symbolic forms. The last named appear on the human stage as magic, myth, language, religion, body experience, politics, science, the arts and others, taking the form of a universal metamorphosis of cultural creations, woven into a matrix of mental formation called consciousness.

To me Cassirer’s approach and its distinguished formulation comes close to what the anonymous creator of the *Rosarium Philosophorum* (picture 1) must have imagined while carefully depicting a whole series of sophisticated levels of human interaction centuries ago. The stunning structural similarities between this artist’s very conscious creation and the picture (picture 2), which one of my patients (diagnosed with acute paranoid schizophrenia) drew in a compulsory vision-like mental state, make you think about a deeply rooted relational order which is not

destroyed, but actually reactivated as soon as our everyday cultural tools break down.



(1)



(2)

It is “symbolic formation” which provides the background, the safety-net and the sense of self to our fragile existence and our unsecured daily undertakings. During the first half of the twentieth century Cassirer’s considerations seemed – and even now seem – a step too far for most psychiatrists who recoil from having their medical approach, or their patient’s behavior, deconstructed into what looks like lifeless sequences of abstract patterns. Yet Cassirer was convinced that the growing knowledge about “invariants of human experience” and the merger of categorical and sensual aspects in symbolic formation would bring up a more sophisticated picture of the uniqueness and variability of meaningfulness which might help explain what even today are unexplainable and contradictory elements of psychiatric symptomatology.

Approached from such a “symbolic” angle, mental health can be defined as the human ability to stabilize early patterns of personal experience and to successfully create, change and integrate, symbolic forms of social interaction, while at the same time establishing an equilibrium between the demands and intentions of self-regulation and environment, with further addition of its newly found results to human tradition.

Mental illness subsequently would no longer be misidentified as a mere dysfunction of the brain, but regarded as the inability to stabilize and/or integrate patterns of behavior into a social framework, leading to a breakdown of different and multiple layers of symbolic formation, while at the same time the balance between cultural interaction and the emergence of inner preformed patterns is continuously or constantly changed towards the latter. For psychiatry and psychopathology this route is still open; there should be organized efforts in collecting and coordinating findings on semiotic and symbolic research, in contributing to a “science of meaning” or salience beyond the mere biological function of our animal brains and in integrating this important human source of knowledge into the regular discourse of our discipline.

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