

When art therapy went chemical: Alfred Bader, pharmacology, and art brut, c.1950-1970s

Cuando la terapia del arte se volvió química: Alfred Bader, farmacología y art brut, c.1950-1970

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Abstract

This article analyzes how psychopharmacology transformed the relationship between art and psychiatry. It outlines a novel genealogy of art therapy, repositioning its origins in the context of evolving clinical practices and discourses on mind-altering drugs. Evaluating the use of psychotropic drugs in connection with psychopathology of art in the first half of the twentieth century, the article then focuses on two post-Second World War experiments involving psilocybin conducted by psychiatrist Alfred Bader and pharmacologist Roland Fischer. Illustrating how consciousness was foregrounded in discussions about mental health and illness, the examples showcase how psychotherapists increasingly sought to articulate art brut and modernist aesthetics in a neurobiological fashion to define madness as a social disease.

Keyword: art brut; psychotherapy; psychopharmacology; creativity; psychosis.

Resumen

Este artículo analiza cómo la psicofarmacología transformó la relación entre el arte y la psiquiatría. Engloba una genealogía novedosa de arteterapia, repositionando sus orígenes en el contexto de prácticas clínicas en evolución y discursos sobre drogas que alteran la mente. Al evaluar el uso de drogas psicotrópicas en relación con la psicopatología del arte en la primera mitad del siglo XX, el artículo enfoca dos experimentos con psilocibina, posteriores a la Segunda Guerra Mundial, realizados por el psiquiatra Alfred Bader y el farmacólogo Roland Fischer. Ilustrando cómo la conciencia se puso en primer plano en las discusiones sobre la salud y la enfermedad mentales, los ejemplos muestran cómo los psicoterapeutas buscaron cada vez más articular el art brut y la estética modernista de una manera neurobiológica para definir la locura como una enfermedad social.

Palabra clave: art brut; psicoterapia; psicofarmacología; creatividad; psicosis.



This article seeks to provide a critical historiography of art therapy by questioning the impact psychopharmacology had on research of creativity and clinical practices focusing on artistic output. One of the most widely accepted narratives is that Western art therapy is the result of a humanistic engagement that took place in the late eighteenth century, marking the beginning of moral treatment and occupational therapy. The other major narrative views it as the product of alienists' and psychiatrists' efforts to collect materials made by patients, such as drawings, sculptures, and paintings, trailblazing their use for diagnostic and curative purposes. Thus, whereas to some scholars Philippe Pinel's liberation of patients from their "chains" marked the conceptual beginning of art therapy (Hogan, 2001), to others it evolved more specifically out of a dynamic, modern cross-fertilization between psychiatry and artistic movements (MacGregor, 1989; Klein, 2009; Ciornai, Ruiz, 2016; Facchinetti, July 2019; Cummings, 2017; Cabanas, 2018).

There is a consensus among scholars that art therapy, or "art psychotherapy," as a discipline is a post-Second World War phenomenon due to its specialization (Harms, 1975; Hogan, 2001, 2015; Waller, 1991). The professionalization of art therapy in Europe marked an important moment: it put into question the previously dominant pathological approach to patients' output. Instead, it focused on new methods of "creative activity" (Dax, 1953, p.13), considering patients' artistic sensibilities a crucial factor for a positive treatment outcome. For this reason, art therapy is generally viewed as having evolved in opposition to biological medicine, and in particular biological psychiatry. However, this view needs to be challenged when considering the impact that psychotropic drugs had on the study of creative work, as well as on the idea of art as a healing practice.

What is striking in current historiographies about art therapy in the European context is the relative absence of a consideration of psychopharmacology and its role on practitioners' definitions of the workings of the mind and the study of creative processes. In fact, the emergence of art therapy in the post-war era was concomitant with another important development: the introduction of psychopharmacology to psychiatric and psychotherapeutic treatments. After the first "successful" administration of neuroleptics in clinical practice in 1952, a plethora of drugs were launched on the global markets and used for the treatment of minor as well as severe mental illnesses. Thus, to find some insights into the impact psychopharmacology had on art therapy, one is drawn to the scholarship on psychedelics, with studies showing the influence LSD had on definitions of the unconscious, dreams, and psychotherapeutic methods centering on creative environments (Moser, 2013; Tornay, 2016; Hartagsohn, 2020). Meanwhile, historians focusing on mescaline and the interwar period provide an understanding of psychiatry's interest in the study of artistic expression in relation to the clinical discussion of psychosis (Alleridge, 1997; Cummings, 2017; Jay, 2019; Kempley, 2019; see also Röske, 2008). Moreover, as I argue here, the use of psychotropic substances led to new regimes designed to maintain mental health, especially as of the 1960s, when popular science meshed with psychology.

As part of a larger effort to explore how the use of psychopharmacology in twentieth century clinical experiments prompted therapists to reimagine the relationship between creativity, madness, and health, I will here examine the art therapy practices and discourses that developed in the context of experiments done with psychotropic substances, in

particular psilocybin, between 1950 and 1970. I will use this framework to study how biological theories about mental life led to differences between insanity and sanity being eschewed in the anti-psychiatric sentiment that prevailed after Second World War.

For that purpose, I will focus on Swiss psychiatrist and art therapist Alfred Bader and his studies of artistic expression, which provided a model of madness without pathology in the cultural context of art brut, drawing on the pharmacology of consciousness. His film, *3 Künstler + Psilocybin* (1967) and his reception of American pharmacologist Roland Fischer, will serve as a prism through which I will analyze this.

Bader's Centre d'Études de l'Expression Plastique

Alfred Bader was one of the leading promoters of the psychopathology of expression from the 1960s to the 1980s both in Switzerland and more broadly in continental Europe. Born in 1919 in Schaffhausen in the north-western German-speaking part of Switzerland, Bader, having earned a degree in medicine, moved to Lausanne in 1944 to take up the post of assistant physician at the University Psychiatric Hospital in Cery (Lausanne). At the time, the hospital was directed by Hans Steck (1891-1980), who was internationally known for his collection of patient art. Steck was also a much-discussed psychiatrist who was credited with the "discovery" of the Vaudois painter Aloïse Corbaz (1886-1964), whose paintings Steck frequently discussed in his lectures to medical students (Choquard, 2018). Another influence was the psychiatrist Jacqueline Forel, who wrote a dissertation on Corbaz in 1953 providing formalistic elements to the analysis of symbolic images in patient art (Forel, 1953; see also Choquard, 2012). Bader drew on these local case studies as well as international collections of patient art, in which schizophrenia was the main object of study.

Bader went on to become a generalist physician, specializing in psychosomatic medicine and psychotherapy. He was particularly influenced by the work of Michael and Enid Balint, joining local groups specializing in the patient-doctor relationship. At the same time, Bader was an avid observer of artistic movements, befriending both local and international artists. For instance, he maintained close relationships with Jean Cocteau, Pablo Picasso, and Man Ray. His first monograph, published in 1961, entitled *Petit maîtres de la folie (Insania pingens)*, was prefaced by Cocteau. Richly illustrated and containing the artwork of Corbaz, it attracted the attention of the newly appointed director at Cery, Christian Müller, who invited Bader to be the first director of the Centre d'Études de l'Expression Plastique at Clinique psychiatrique universitaire in Cery (Baumann, 2009). This center, created in 1963, was instrumental in providing a participative model for psychotherapeutic treatments, adopting a range of methods, from painting and drawing to filmmaking (Bader, Pasini, 1965). It was planned as a place where traditional principles of painting for therapeutic reasons were challenged, and simultaneously where research could be done, building up knowledge about the artistic expression of psychiatric patients, especially ones with schizophrenia (Bader, Pasini, 1965). The same year Bader, together with documentary filmmaker Nag Ansorge, also established a moving pictures studio at the center, in which movies were developed with patients and then publicly shown (Müller, Bader, 1968; Bader, 1979). It was within this laboratory that Bader created the 26-minute film *3 Künstler + Psilocybin*, in 1967.

To situate the creation of the center at Cery and Bader's interest in using psychopharmacology to examine artistic output, it is important to provide some historical elements.

First, the international development of the psychopathology of art gained momentum after Second World War, with the professionalization of art therapy and the simultaneous emergence of a series of associations dedicated to the interdisciplinary study of psychiatry and its relationship to art. The new achievements of psychopharmacology played a major role in the activities of these interdisciplinary gatherings. The International Association for Psychopathology of Expression (Société internationale de psychopathologie de l'expression plastique), created in 1959 in Verona, lists as its first research aim the study of the link between psychopharmacology and expression.¹

Second, studios for artistic expression created within hospitals displayed a pronounced interest in pharmacology, especially in the 1950s. At Hôpital Sainte-Anne's center for artistic expression (Centre d'Expression Plastique), in Paris, a series of studies involving psilocybin were conducted with artists (Robert, 1962), which in turn reactivated the local tradition of clinical studies involving mescaline, while also actively promoting the psychopathology of art (Delay, Gerard, 1950; Delay, Gerard, Allaix, 1949; see also Lebel, Dubois, Gentil, 2015). This double project is evident in the role of Jean Delay, director of the psychiatric hospital, and Robert Volmat, his collaborator who organized the first *International Exhibition of the Psychopathology of Art* at the Centre d'Expression Plastique in 1952 (Volmat, 1956). An equally strong intertwinement between pharmacology and the psychopathology of art can be observed in the studies done by Leo Navratil (1921-2006) at Pflegeanstalt Gugging, in Austria. Navratil experimented with a range of pharmaceutical agents, such as the antidepressant Tofranil, to examine the ability of his patients to do drawings (Navratil, Dorninger, Nagy, 1961). Swiss psychiatrists – among the early adopters of psychopharmacological agents (Tornay, 2016) – contributed not only to chemical interpretations of mental illness, but also to a reorientation of pharmacological studies into the field of graphology and the psychopathology of art, with drawing and projective tests specifically designed for the study of drug-induced states (e.g., Wertham, Bleuler, 1932; Fischer, 1946; Matefi, 1952).

Third, moving on to the 1960s and 1970s, the period of interest here, it is important to highlight that Lausanne, alongside other Swiss cities, such as Basel and Bern, became a key location for the cultural discourses and exhibition of art brut. The curatorial work of Harald Szeemann, director at Kunsthalle Bern from 1961 to 1963, and the opening of the museum Collection de l'art brut in 1976 in Lausanne, which hosted the art brut collection initiated by Jean Dubuffet in Paris in the mid-1940s. Although art brut promoters were at times strongly opposed to psychiatrists, there were deep-layered exchanges and mutual influences between psychiatrists and artists. Avant-garde curators made deliberate reference to the psychopathological tradition: when Harald Szeemann opened his influential exhibition "Bildneri der Geisteskranken = l'art brut = insania pingens" at Kunsthalle Bern in 1963, he evoked Prinzhorn's monograph published in 1922 (*Bildneri der Geisteskranken*, or Artistry of the Insane), as well as credited French psychiatrist René Bessière (see Bessière, 1956, and Thévoz, 1975).

The films produced at Cery, such as *The poet and the unicorn*, which won the Minerva Prize for medical film at the International Film Festival in Turin in 1965, and *3 Künstler*

+ *Psilocybin*, but also monographs published on the work of Swiss art brut artists, was completed with the financial support of pharmaceutical industries, thus showing concretely how enmeshed art, therapy, and pharmacology were in post-Second World War Swiss mental research.² In fact, Bader benefited from a major sum provided by the pharmaceutical firm F. Hofmann – La Roche in Basel to finance the first three years of activities at the institute and its threefold program, which aimed to document, experimentally examine, and research art therapy methods.³

3 Künstler + Psilocybin, 1967

The film *3 Künstler + Psilocybin* was created in a context of developing international research into creative uses of psilocybin (see *3 Künstler + Psilocybin*, 1967). From published and archival materials, it is not evident how Bader obtained psilocybin. It is possible that the substance, which was diluted in water and administered to the artists at Cery university hospital and at an art studio in Chexbres Vaud, were purchased from Sandoz AG. The latter originally synthesized psilocybin in 1958 and sold it globally for research purposes under the tradename Indocybin.

The film, shot by Ansorge, features three well-known artists who worked in different artistic contexts: Jean Monod (1922-1986), a Swiss illustrator and theatre set designer; Arnulf Rainer (1929-), an Austrian expressionist painter; and Heinrich Richter (1920-2007), a German-Polish painter and graphic designer, known for his illustrations of Günter Grass' *Blechtrommel*. The main aim of the experiment was to find out how artists who had already acquired an individual artistic style reacted to the drug psilocybin (Tauxe, Feb. 1969).

In the film, the artists are seated at a table, drink a glass of 12mg psilocybin diluted in water, and are then instructed to draw or paint images on paper using utensils such as pencils, charcoal, and wax crayons. A clock hangs on the wall in the background, indicating the time at various sequences in the film. In the film, Bader asks the test subjects to observe how their artistic style evolves under the influence of the drug and to comment on the compositions, as well as to question their expectations according to the shapes that are taking form and their ability to direct them.

The movie very much reflects the aesthetics of psychiatric-scientific films made at the time, especially with LSD, in which test subjects would be filmed together with an experimenter, who, dressed in white, would give them instructions while simultaneously commenting on their reactions to the drug.⁴ Bader is often off-camera, speaking in voiceover, and then present, leaning over the back of a painter or seated at his side asking him to comment on his sensations, with Ansorge's camera zooming in and out of a sample of drawing.

When observing Monod, Bader comments that the painter is disappointed about the effects of psilocybin, because he does not experience hallucinations. As the effects of the drug become stronger, Monod is not able to do an "entire form" (*ganze Form*),⁵ but rather tends to stick to details, lacking the motivation to end a composition on the sheet of paper he has been given to draw on. The second painter (Rainer), whom Bader presents as Austria's foremost modern artist, a man who "is not led by compositional ideas in his art but by intuition," (*3 Künstler + Psilocybin*, 1967) notices that after the drug's effects he

loses his intuitive ability to design a form. The camera shows him in action, with many papers and samples displayed in front of him on the table, Rainer's hands moving from one sketch to another as he describes his pleasure and frustration about his limited ability to guide his intuition and control his movements. Finally, with Heinrich Richter, whose drawing actions are shot in a studio in Chexbres, Bader argues that psilocybin leads to an impoverishment of his artistic faculties, while Ansorge shoots Richter describing his resistance to the loss of control over his artistic ability. Bader closes the film with his main argument: "Psilocybin leads to an impoverishment of the artist's existing potential. In fact, its efficacy is an enemy to the creative impetus."

Let us reflect on this argument. In Bader and Ansorge's experimental film, the psychoactive drug psilocybin is not credited with the power to unleash the creative urge, but with the effect of diminishing individuals' ability to act. Even though it could induce a series of perceptual hallucinations, it did not prompt any new or innovative output. In fact, it led to a "superficial formalization," according to Bader.

Screenings of this film, which was shown together with other psychiatric films made by Bader and Ansorge, received criticism in a local literary review, which emphasized the "sterile representation of art" and the unexpectedly boring aesthetics of the drawing samples (Kuenzi, 8-9 Feb. 1969, p.3). Indeed, Bader and Ansorge's film demystified the potency of psychedelic drugs in a context of increased public attention towards psychedelic art. However, the dual effect that they attributed to psilocybin – physiological change and a tendency towards formalism – allowed Bader to propose a phenomenology of creativity in the early 1970s, in which he explained sanity and insanity as evolving, interdependent states. To do so, Bader combined the psychiatric tradition of schizophrenic art with a pharmacology of altered states of consciousness.

Ornamentation and the bicameral mind

Starting with Lombroso's *The man of genius*, published in 1891, experiences of mental illness were described by psychiatrists as problems of formalism, in particular those that suggested repetition, and geometrization.⁶ Different diseases and stages were described in the formalistic attempts to capture the artistic manifestations of mental illness. Lombroso described "arabesques" as a result and tendency of the "maniac" to exclude the "human figure" (Lombroso, 1895, p.200; MacGregor, 1989, p.97). Henri Ey, while experimenting with, mescaline himself, highlighted the "ornamental character" of the drug-induced hallucinations (Claude, Ey, 1934, p.838). Maclay and Guttmann (1941, p.134) induced artificial psychosis in their subjects, observing a "tendency to repetition" in the drawing styles. With regards to the artistic output of patients suffering from schizophrenia, Helmut Rennert (1962, p.20) was particularly influential. He defined a "stereotypical tendency to repeat" (*stereotype Wiederholungstendenz*) as the ornamentation characteristic of paintings made by patients suffering from schizophrenia. In fact, he considered ornamentation a "natural reaction" to the stereotypy caused by mental illness (in particular schizophrenia). Meanwhile, Rennert (1962, p.59) understood the figurative repetition typical of schizophrenic visual expression as a "phenomenon of regression," thus considering

ornamentation (*Ornamentik*) as the most primitive root (*Wurzel*) of art, reviving interwar art psychology thinking (e.g., Wilhelm Worringer).

Ernst Kretschmer, in his *Medizinische Psychologie*, published in 1956, equally suggested that there was a tendency towards geometrization drawing styles of schizophrenic patients. What it is important to highlight here is the predominant interest of the psychiatric literature in examining the “artistic styles” of schizophrenics rather than other types of patient. Prinzhorn himself acknowledged that his study was based on roughly 75% schizophrenic patients (Thévoz, 1975, p.15). There was also a widespread cultural fascination with schizophrenic expression, which had been reflected in clinical approaches and in modernist movements in art since the interwar period, but which gained predominance after Second World War in the psychopathology of art (e.g., Gaston Ferdière’s *Anthologie de la poésie schizophrénique*; Navratil, 1965; Woods, 2011; Wittmann, 2018; Puglionesi, 2016). Bader himself wrote extensively on the schizophrenic style (Bader, 1958; Bader, Pasini, 1965), drawing on the work of his colleagues, such as Hans Steck, who emphasized “repetition, stereotypy, and the monumental” in art brut paintings, for instance when referring to painter Aloïse Corbaz (1886-1964) (Choquard, 2018).

Moreover, Bader drew on Navratil’s distinction of the three schizophrenic artistic elements (*schizophrenische Stilelemente*), which he had developed as a result of drawing tests administered to children and psychiatric patients: physiognomization, formalization, and symbolization. To Navratil, the “formalistic tendency” was characteristic not only of the artistic expression of patients suffering from schizophrenia, but also of children’s art, naïve art (*naïve Kunst*), “primitive art,” and art brut. Bader picks up on this world art history rooted in biology, arguing that the psychotic creative process could be considered the same as the creative process in healthy subjects (Bader, Navratil, 1976, p.108-109; see also Bader, Pasini, 1965).

At a time when cultural debates around “art brut” and “outsider art” (Cardinal, 1972) were delivering critical messages to the psychopathology of art and its formalistic comparisons between patients, children, and “primitive art” (Thévoz, 1975, p.14-16), Bader thus maintained an approach to art brut and patient art that was rooted in a tendency to reduce the complexity of artistic genres and styles into a formalism that followed biological laws. However, Bader also used this biology in the early years of the 1970s to publish a series of influential texts and books, some co-authored with Navratil (Bader, Navratil, 1976), to establish creativity as a key insight into the relationship between insanity and creativity.

The biophysiological theories of Roland Fischer (1915-1997), an American pharmacologist-turned-art therapy theoretician, were particularly influential in this context and merit consideration here. Fischer (1970b, p.3) postulated the idea of “rhythmic-ornamental hallucination” which he took from the neurophysiologist Heinrich Klüver’s definition of “hallucinatory form constants” in relation to the visual effects of mescaline and its relationship to personality (see also Klüver, 1942). Klüver’s theory had an important impact on the physiology of hallucination in the 1970s (Keup, 1970; Fischer, 1970a, 1970b; Siegel, West, 1975). Fischer examined creativity as an aspect of mental health, using a neurophysiology of consciousness as a framework. Moreover, Fischer was of seminal importance to Bader since he chose hallucination over the concept of imagination, the latter referring to a psychodynamic tradition. For Fischer, and subsequently Bader, hallucination was the most

appropriate angle from which to examine artistic output, because it could be approached as a movement within a framework of physiology. Fischer defined hallucination as sensation without action (leading to a subject's lack of control over his or her movements), rather than perception without object as it was traditionally understood in psychiatry. The emphasis on hallucination opened for Bader a strategy to place art brut and artistic processes within neurophysiological thinking, thus preceding contemporary studies that aim at providing neurological models to embrace the holistic worlds of creativity, sanity, and psychedelics (e.g., Carhart-Harris et al., 2014).

Consciousness as a barometer of mental health

From the 1970s on, Fischer enjoyed notable trans-Atlantic success among psychotherapists and art therapists, in particular Bader and Navratil (for his later impact, see: Bader, 1986; for Fischer's reception in the field of consciousness studies, see Tart, 1969; Ingrassi, 1973; see also, Ey, 2012, chapter on American consciousness studies; for Fischer's place in media and cybernetics theory, see Pruchnic, 2008). Fischer's research and trajectory, standing at the crossroads of several disciplines – biology, pharmacology, art therapy, consciousness theory, mind-altering drug research, and graphology – is an opportune case to illustrate the chemical turn in art therapy: it shows how a pharmacology of consciousness was seen as compatible with the cultural debates around art brut.

Born in Hungary in 1915, Fischer was a key figure in the study of psychotropic agents. From the late 1940s on, he worked at the scientific laboratory, then directed by Felix Georgi, of the Psychiatric University Basel, where he obtained his PhD in 1954. He experimented, along with Rolf Weber and Laszlo Matefi, with mescaline and LSD, developing one of the first endocrine theories of schizophrenia, which explains its occurrence as a result of a hormonal imbalance (Fischer, Georgi, Weber, 1951). He spent a brief time in Canada (Saskatchewan), working alongside Humphrey Osmond, a key figure in psychedelic psychiatry and the history of synthetic illnesses (Osmond, Smythies, 1952), before arriving, in the early 1960s, at Ohio State University, where he focused first on the study of hallucinations and then on art therapy and psychopathology of art. His work spans a broad range of experimental and theoretical approaches, with a focus on behavioral studies of hallucinations. However, Fischer is particularly remembered for his consciousness studies, which were viewed as a contribution to the study of altered states of consciousness, information theory, and media technology. For instance, Fischer's emphasis on the brain as an information processor and his use of cybernetic language are notable in this regard (Tart, 1969; Ingrassi, 1973; Ey, 2012; Bader, 1986; Pruchnic, 2008; Bader, Navratil, 1976). Towards the end of his career, Fischer (1989) increasingly turned his sights to the problem of creativity and "artistic expression," as the title of one of his latest articles suggests. After retiring to the island of Mallorca with his wife, who had worked as an art therapist at the psychiatric hospital in Esporles, Fischer ended his career writing articles about transcultural aspects of artistic expression.

I will examine here his research undertaken around 1970 to show, first, how a theory of hallucination was linked to psychopathology of art and expression and led to new paradigms in creativity theory, and second, how Fischer built a model of consciousness

defined by cybernetics, which included Jamesian mysticism and Asian philosophy, to destabilize rationality and present creative processes as a source of personal growth.

From 1969 to 1975, Fischer published a series of illustrations of consciousness, one of which I will use for the present purpose (see Figure 1). This illustration was designed for a paper given at the 14th Annual Meeting of the Eastern Psychiatric Association, held in New York in 1969, and subsequently published in the proceedings of the conference (Keup, 1970).

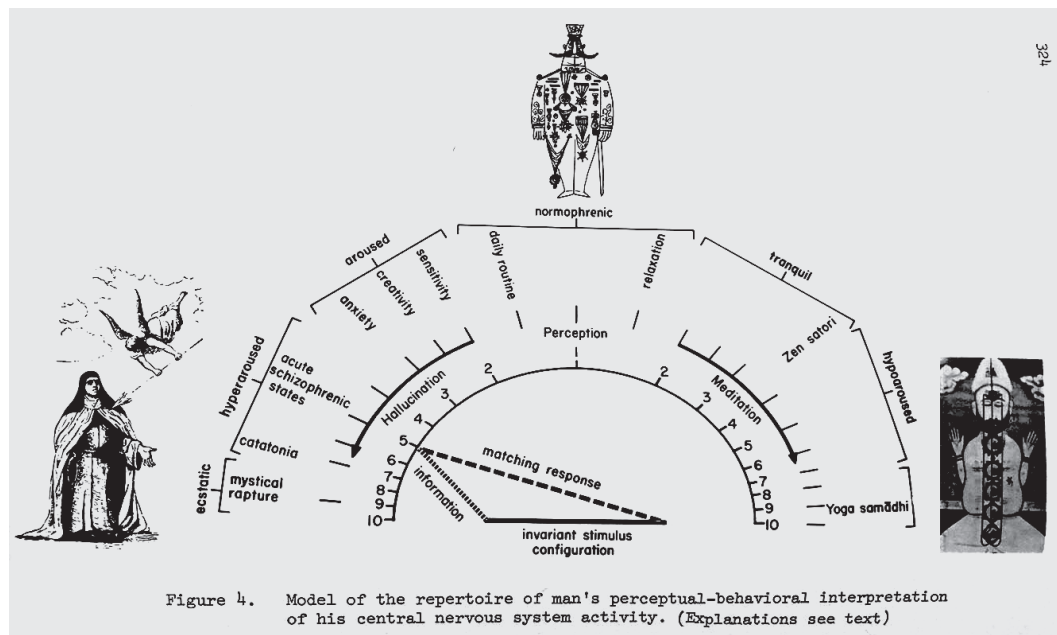


Figure 1: Illustration of a cybernetic representation of the range of conscious states by R. Fischer (1970a), drawing on a cybernetic model

In the diagram, Fischer displays the various states of conscious experience that evolve from a homeostatic center to its outer edges. The shift from one state to another is caused, according to Fischer, by the excitation of the central nervous system. The changes occur either naturally (e.g., creativity, anxiety), by means of psychopathology (e.g., drug-induced hallucinations), or as a result of a brain/mental disorder (e.g., schizophrenia). Fischer's reinterpretation of mystical states of consciousness suggests that a person can actively transform their ability to trigger a stimulus (for example, using drugs to enter a meditative state). Several observations can be made based on this illustration.

First, there is a strong presence of cybernetic ideas, especially that of the homeostat, in the center, expressing everyday rational experience. This refers to the broader idea of the "adaptive brain," as emphasized by William Ross Ashby, *Design for a brain: the origin of adaptive behavior*, 1952. Allusions to cybernetic concepts are also seen in the language used by Fischer, who compares schizophrenia to a "jammed computer" and explains hallucination as a flaw in "information processing."

Second, there is a strong presence of both Eastern and Western mysticism. Theresa of Avila, the medieval mystic, is included on the left to illustrate ecstatic rapture (hyperarousal);

in contrast, a figure meditating in a deep state of Samadhi on the right is used to illustrate “hypoarousal” (reduced physiological arousal or sensations).

Third, there is a strong presence of Jamesian psychology of religion, which was particularly predominant in experimental psychology at the time in the United States. James (1890, 1982) considered the occurrence of mystical states of consciousness to be the result of the triggering of one specific stimulus from a range of existing stimuli. Fischer uses a linear representation to display the range of conscious experience (x-coordinates), which reflects to some extent the Jamesian metaphor of the “stream.” However, he focuses on the homeostatic regulation (the self, “I,” daily, rational conscious experience) from which the different conscious experiences evolve. Fischer’s reinterpretation of mystical states of consciousness suggests that the person can actively transform their ability to trigger a stimulus (for example by using drugs, entering willingly into a meditative state). That for some individuals this is less of a source of play demonstrates the case of the schizophrenic patient (viewed here as the result of the flawed processing of information). In his famous lectures on mysticism, James (1982, p.400-401, 408-413) used Theresa of Avila and a Samadhi state to illustrate his concept of mysticism, which provides further evidence for his influence on Fischer, who used the exact same figures/states.

Fourth, Fischer references left-hemispheric thinking, which was predominant at the time. It was being stipulated both by physiologists and pop psychologists by the end of the 1960s. The argument was that the right brain is involved in creative and associative thinking, whereas the left-brain hemisphere is involved in rational thinking (Bogen, Bogen, 1969; Bogen, 1970). This distinction was also taken up in more popular discussions, such as Robert Ornstein’s *Psychology of consciousness* (1972), or Julian Jaynes’ *The origin of consciousness and the breakdown of the bicameral mind* (1975).⁷ Fischer also refers to physiological distinctions between the “ergotropic” and “tropic” brain (the theory of the brain’s capacity to release and decrease energy) (Gellhorn, 1967, p.70), which reflects his interest in psycho-physiology: the measuring of alpha and gamma brainwave activity was particularly predominant at the time, with biofeedback being used as a technique to reduce stress.

Fifth, Fischer redefines hallucination not as a result of a dysfunction in perception, but as a physiological dysfunction. In other words, hallucination is “sensation without action” rather than “perception without action,” as had been claimed since Jean-Etienne Esquirol. For instance, Fischer (1970a, p.304) suggested that hallucination occurs when voluntary motor capacities decrease and can be stopped by gurgling or humming. A case of “state-bound-recall,” hallucination works like Proust’s tasting of madeleines which bring back a memory (via a physiological sensation of taste and smell) (Fischer, Landon, 1972).

Fischer’s definition of hallucination was rooted in his experimental work at Ohio State University, testing the effects of psilocybin on the motor activity of his test subjects (students). In his experiments, Fischer made graphological analysis of handwritten text samples produced in three different states by the experimental subjects: prior to the experience with psilocybin; at peak time; and after the influence of the drug had ceased (Fischer et al., 1969), measuring shape, style, and proportion (the amount of space used by the writers on the paper). Fischer observed that the subjects who reacted favorably to psychopharmacology tended to lose control over their motor capacities: they used more

space in their writing and produced rather disintegrated text forms, which, Fischer argued, demonstrated their potential for creativity. He tested this formula – a state of heightened arousal produced by drugs, leading to reduced sensory-motor capacity and thus creativity – in different situations, using personality and physiological testing. One of the studies involved a small group of college students who ingested 10-12mcg of psilocybin and were shown three versions of the same photocopied text, measuring the extent to which the students were capable of imagining the missing parts of the text (Fischer, 1968).

Fischer actively disseminated his theories in the scholarly literature on psychopathological art, creativity, and schizophrenia (Fischer, 1968, 1969, 1970b, 1975). He participated in colloquia held in Washington D.C. (Psychopathology of Expression, in 1966) and Linz, Austria (Psychopathologie und Kunst, in 1968), where he met Leo Navratil and Alfred Bader, with whom he engaged in an ongoing conversation about art, psychopathology, and creativity. It was Fischer's visual shift towards a circular representation of consciousness, which he presented in 1975, emphasizing the rhythmic-ornamental structure of hallucination (Fischer, 1970b; Bader, 1975), that had a strong impact on Bader and his peers, who were eager to find new scientific models to avoid the "paranoid split between rational thought and affective or irrational beliefs" (Bader, 1986, p.18; see for example: Bader, Navratil, 1976, p.100-132). In a context of growing interest in systems and family therapy in western Switzerland, Bader chose to illustrate one of articles dealing with psychopathology, creativity, and art (Bader, 1975) thus with a circular interpretation of Fischer's consciousness (Figure 2).

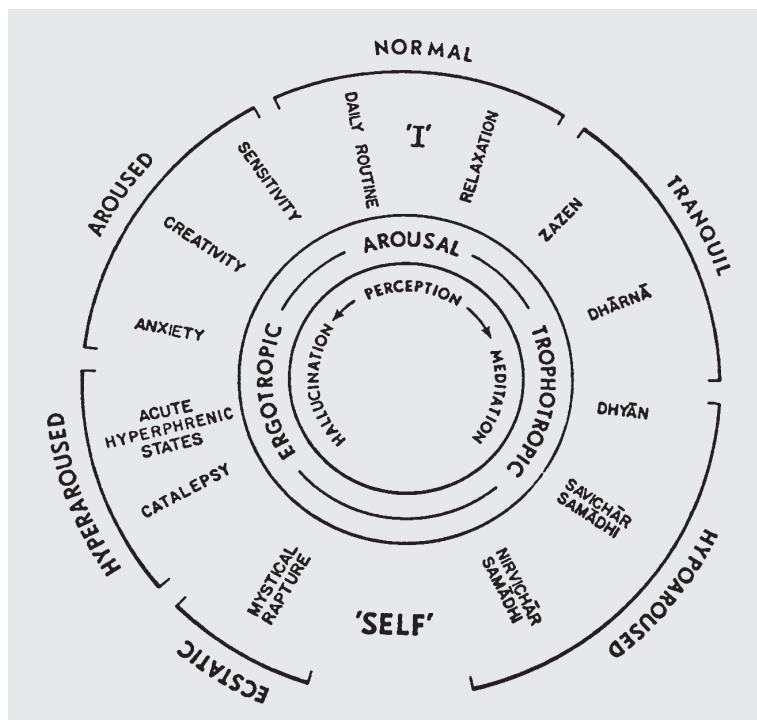


Figure 2: Circular representation of conscious states by R. Fischer (Bader, 1975)

Inspired by Fischer's studies, Bader also referred to other scientists who were researching the differences between the left and right hemispheres of the brain in an aim to biologize creativity. Bader's references metaphorically to Joseph Bogen's corpus callosum to define mental illness and health. The corpus callosum is a thick nerve linking the left and right hemispheres and was, at the time, believed to be the main channel of information between their respective cognitive functions (Bogen, Bogen, 1969). Bader, alongside other creativity investigators, viewed it as the key area where creative insight emerges (e.g., Galin, 1974; Hoppe, 1975). Based on these sources, Bader suggested the figurative image of the "magical garden" (*jardin enchanté*), which he illustrated with a painting by art brut artist Austrian Hans Hanko (1923-) (Figure 3), arguing that this garden is a place inside which the mentally ill is locked. Like a corpus callosum, the garden lacks its key function, which is to provide a flux of information between the inner and the outer, between the "left" and the "right" hemispheres (Bader, 1984). Within this perspective, a perfectly healthy person is seen as a virtuoso who knows how to enter and exit the near-locked state of madness.



Figure 3: Painting made by Viennese artist Hans Hanko in 1975, described by A. Bader (1984) as a poetical vision of a "jardin enchanté"

Final considerations

Bader's interest in a biology of images reflects a shift in psychotherapeutic approaches: on the one hand, experimentation with psychopharmacological agents as a method that goes beyond the treatment of psychodynamic material to re-engage with the longstanding conundrum of creativity and its relationship with madness and sanity; on the other, the use of models of the brain to define imagination, intuition, and creative processes with the aim of revising the status of psychiatric patients and art brut aesthetics.

This dual development, illustrated by Bader's and Fischer's trajectories, occurred in a cultural context in which art therapy was considered incompatible with art brut because the former was not "original:" art therapy mimicked ideas of "art," rather than producing something genuine (Dubuffet, 1967; see also Thévoz, 1975). Himself an artist, Dubuffet believed that art brut was only possible because modern artists, not clinicians, had discovered it. Thus, studies of psilocybin prolonged Dubuffet's criticism, mimicking representations of art clinically rather than generating new art forms. Meanwhile, the studies built on the psychiatric idea that mental illness can be explained by a biochemical dysfunction, the latter having gained momentum in the early 1950s (Osmond, Smythies, 1952).

At the same time, Bader's research brought to the fore incisive debates about how to activate human creative processes and what role institutions, industries, therapists, and patients play in cultivating them. His project was inscribed in the rise of creativity studies after Second World War, which marked a decisive turning point in the psy disciplines. Art therapy, cybernetics, psychoanalysis, and humanistic psychology all debated whether, and to what extent, insight could be gleaned from mind-altering substances. Bader's key concern, working as an art therapist, was to reflect on creativity to revive the longstanding conundrum about the ontological and experiential relationship between madness and genius, while also questioning its relevance for creative psychotherapies, their users, and the broader society (using established artists, for example, as a middle way to reach this).

The pharmacologization of art therapy as I have illustrated here nonetheless led to contrasting views about how to explain the cultivation of one's own "madness." Bader and his peers took the figure of the schizophrenic as the source for this renewal. It is open to question whether this enterprise of liberating the patient from medical discourses was actually more one of "liberating" the therapist from his or her possible feelings of "unease" as they built knowledge on the life of patients whose life histories and experiences of madness – the trajectories of experiences and sensations outside of the realm of medical descriptions – were still so poorly understood.

NOTES

¹ The list continues with the study of: (2) painting and language; (3) leading painters *aliénés*; (4) the function of pictorial symbols; (5) experimental investigations into art; (6) clinical administration of drawing tests; (7) group dynamics and creative activities; (8) interpretation of subjective and objectives of patient art (Volmat, 1959, p.3).

² The importance of the pharmaceutical industry's financing of experiments in the field of art and psychopathology can also be traced in the work of Leo Navratil, whose experiments and publishing were financed by three different pharmaceutical firms, including J.R. Geigy AG and Ciba AG, in Basel (Navratil, 1960).

³ In a typed letter signed by Alfred Bader on April 1, 1963, and sent to the directors at F. Hoffmann–La Roche, Basel, he requested a total of 70,000 CHF (Bader, 1 Apr. 1963, p.5).

⁴ See, for example, *The Spring Grove Experiments*, made by CBS Reports in 1966; *Continents Sans Visa*, made by Michel Glardon in 1966 for Radio Suisse Télévision Romande, in which a painter and musician under the influence of LSD are interviewed; and *Champignons et Hallucinations*, made by Jean Lallier in 1966 for ORTF.

⁵ In this and the following quotations from *3 Künstler + Psilocybin* (1967), I have translated Bader's off-voice in the film from German to English.

⁶ For early graphological studies, see Kraepelin's documentation of mania, measuring the *Erregungszustand* (arousal) of the patients with the aid of psychophysiology: Kraepelin (1899, p.361); see also Ankele (2012). For further reading, see MacGregor (1989).

⁷ I am grateful to Matthew Vollgraff for the Jaynes reference.

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