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“SENSING” VOICES. A THEORETICAL COMPARISON BETWEEN THE AESTHESIOLOGICAL APPROACH TO SCHIZOPHRENIA AND SOME CONTEMPORARY PHENOMENOLOGICAL AND NEUROPSYCHIATRIC MODELS

abstract

Erwin Straus’ aesthesiological analysis of the voice-hearing modality can serve as a bridge between top-down models, which emphasize the emotional and inter-subjective significance of auditory hallucinations, and bottom-up models, which highlight the dysfunctional neurobiological mechanisms that cause them. The comparison with Crow’s hypothesis allows to include the aesthesiological approach in an anthropo-biological context in which schizophrenia appears to be the price that species Sapiens had to pay to acquire self-consciousness.

keywords

Erwin Straus’s aesthesiology, auditory hallucinations and schizophrenia theory, biological and cultural hominization and exaptation, philosophical anthropology

1.
Fundamental
Principles
of Straus’s
Aesthesiology

According to Straus, Aesthesiology has the task of providing an analysis of *aisthesis* devoid of the intellectualistic prejudices that still dominate Kant’s aesthetic, restoring the *sense* of which it was deprived in the modern era by Galilean and Cartesian epistemology, science and philosophy (Straus 1949, 240). If for Descartes sensations are in fact a defective way of knowing which must be analytically led back to the clear and distinct ideas of Cogito, for Kant they are a sort of chaotic and atomized *dust* of stimuli, passively received by sensitivity, awaiting the action of synthetic and unifying schemes, categories and principles of the imagination and the intellect to receive a formal sense. The aesthesiological analysis of sensing shows instead that sensory modalities express in different ways a unitary structure of meaning that shapes every single act of sensing (Straus 1935, 101), giving it *embodied legality* – at the same time a priori and material – which, in our opinion, can be summed up in three key principles.

First, we have to acknowledge a fundamental fact, disowned by most philosophers and scientists: *sensory experiencing* [*Empfinden*] is not a form of representation of reality among others, but the only means of access to reality which a living being provided with motility, be it man or animal, is equipped with. For a sensing and self-moving living creature, only what is or can become the object of sensing is real. Recognizing that fact does not mean being dissolved in perceiving, but understanding that every other cognitive, language or imaginative act – be it belief, judgment, or mathematicizing abstraction – is eventually forced to return to the activity of sensing if it wants to establish some relationships with reality. In other words, between the act of sensing and other intentional acts, there is an ontological difference – similar to the one existing between the landscape and the map that would represent it – that gives the act of sensing inescapable primacy (Straus 1949, 241; Straus 1935, 379).

Secondly, we must acknowledge that the activity of sensing has a character of intentionality which is disavowed by those like Husserl who situate the active source of each donation and constitution of “sense” in a solitary consciousness, separated from the world and from every other consciousness (Straus 1935, 12, 210). These doctrines do not take into account the fact that the sense-bestowing consciousness – self-sufficient in its reflexive withdrawal into itself – is not

a starting point, but a point of arrival for philosophical analysis: a historical construct, conveyed by the language of tradition, which has to be critically deconstructed in its residual spatial metaphoricity (interior / exterior; content / container), by reason of the impasses that it produces at the level of the process of self-understanding of the human and, more particularly, at the level of understanding of psychiatric disorders that distort the individual's relationship with reality.

According to Straus, the primary consciousness is that which occurs in the sensory relationship with reality: a *pathic-communicative* relation, which man shares with all other moving animals, characterized by unavoidable emotional valence – attractive or repulsive, painful or pleasant, suffered passively or actively produced by the contact with the world – and characterized by such a reciprocal communication that, in any act of sensing, *I* am at the same time aware of myself in relation to the otherness of the world, and of the otherness of the world in relation to me (Straus 1949: 262). A relationship of mutual interpenetration between the whole and the part that varies with the moving prospects, bodily located and by motility dynamized, which my senses open up – in a continuous flow of views and adumbrations, actual and potential viewpoints, movements and advances – *in the unitary horizon of the world*. This intentional structure, which is closely associated with motility, is given by Straus the name, not free from doubt, of *I-and-the-Other* or *I-and-the-World*. A structural concept that retranslates into prelinguistic and embodied terms, extended to the sphere of animality, Heidegger's phenomenological concept of *being-in-the-world*: a concept regarded by Straus as too human and culturalized (Straus 1963).

The problem of the unity and multiplicity of the senses arises within this unitary and at the same time variable structure, actual and at the same time potential, spatial and temporal (Straus 1935: 212, 395; Straus 1945: 245). *Each sensory modality articulates the primary structure of sensing according to its peculiar form and laws, while the intentional structure of the whole remains unchanged*. These specific forms and legality are defined in relation to the way in which in each sensory modality the emotional and communicative, active and passive, spatial and temporal components belonging to the fundamental structure that puts each living being in relationship with reality, combine and hierarchically arrange themselves. Therefore, the different sensory modalities become part of an *almost circular* sensory spectrum in which the two extremes are represented by the dual nature

of touch: haptic sense, exploratory and *digital*, on the one hand – the most active and intelligent of the senses according to Aristotle – and passive, epidermic touch, on the other hand, the most atavistic and primordial sense, common to every animal form, which exposes us directly to the immediate, painful and invasive contact with the world. Being a predominantly analytical and active sense, which allows us to stabilize reality on the basis of spatial relations, repeatable and variable in a coordinated and regular way, sight allows us to hold off the world by controlling its multiplicity and becoming, while taste and smell convey *physiognomic* characters which give an immediate repulsive or attractive valence to reality. Because of its inability to offer any resistance to sounds that seem to *invade* us cancelling any distance between us and the world, hearing is positioned, according to Straus, in a place that is diametrically opposed to sight. Being a synthetic sense that informs us of the time and rhythm of the world and of the occurrence of the event, hearing is permanently exposed to the encircling and overwhelming power of the *Other* – either the power of the natural world, *Allon*, or the power of the interpersonal world, *Heteros* (Straus 1963). According to Straus, the ones that succumb to this overwhelming power are those who hear *atmospheric* voices that come from all sides and break any distinction between the inside and the outside, between what is mine and what belongs to the *Other*, disrupting the whole structural relationship which governs the relationship between the *I-and-the-world* (Straus 1935, 382; Straus 1945, 257). But how can we explain, in its phenomenological characteristics, this specific syndrome that radically distorts the transcendental apperception of the self and the sense of belonging to the self for our acts of consciousness?

In contemporary scientific debate, the analysis of the schizophrenic syndrome developed by Thomas, Leudar and co-workers seems to agree in many points with Straus's methodological approach (Leudar & Thomas 2000; Thomas, Bracken & Leudar 2004). The starting point of these authors is the need to be at the source of any separation between the psychological and neurophysiological. This separation is vitiated by epistemological and ontological bias of Cartesian origin, inadvertently affecting also neuroscience and cognitive approaches that claim to overcome the Cartesian dualism by reducing the language of psychology to the one of natural sciences or establishing an analogy between mental processes and the algorithms of a computer. In fact, *what remains the basis of all these efforts is the distinction between the external world and the inner consciousness, a*

2.
Phenomenological-
Hermeneutic
Analysis of the
Schizophrenic
Syndrome

distinction which, in our opinion, no one has criticized more radically than Straus. The outer world and the inner world are for Straus only secondary, linguistic and metaphorical constructions, produced from a primary and incontrovertible ground: the *territory* of sensing. This aesthesiological region can be represented as a surface without distinction between inside and outside and without *thickness*, as a sort of Möbius ring folded back on itself, from which – through sensory-motor assembling which comes to form the eccentric and *excarinated* scaffold (Straus 1965) of philosophical and scientific language – the myth of a solitary inner space separated from the outside world is historically and culturally built.

According to Thomas, Bracken and Leudar, in order to overcome this separation, it is first necessary to develop a new philosophical framework which is able to provide psychiatric practice with a new phenomenology of schizophrenia. Current phenomenology, inherited from Jaspers, is vitiated by an undue separation between inner consciousness and the outer world, of Husserl's epistemological source, which must be replaced by an ontological phenomenology, rooted in Heidegger's and Merleau-Ponty's thought, centered on the concept of *being-in-the-world*. Readapting in numerous articles and applications Merleau-Ponty's phantom limb analysis to the description of clinical cases of schizophrenic patients treated by them, Thomas and colleagues show convincingly that the experience of hearing voices may acquire again the meaning that has been denied by cognitive and neuroscientific approach: a situational and embodied meaning where auditory hallucinations are closely linked to the patient's biography, culture and religion, with the memories and emotions associated with his history and past, from which memories and emotions strongly re-emerge as a peculiar way of *being-in-the-world* and of *being-with-others*. These memories and emotions survive their past – for example, the death of her husband whose voice, sighs, and denigrating words Sue continues to hear – just as phantom limb survives its amputation as the possibility of haptic and kinesthetic relationship with the world *sedimented* in the body. According to the authors, this situational and embodied approach also allows to reinterpret the experience of hearing voices not only as a disorder, a deterioration or degeneration, but also from an ethical and autopoietic perspective, as a creative and quasi-intentional way to deal with one's painful and fragmented experience of the world. Individual and group techniques that allow the patient to alleviate the suffering produced by hearing voices are evidence of this ability to influence the course of their disease according

to a *top-down* dynamic that cognitive and neuroscientific models are not yet able to explain (Cockshutt 2004; Wykes 2004). But, recognizing the importance of the analysis of these authors, something fundamental is still unclear: why is this mode of *being-in-the-world*, peculiar to schizophrenia, expressed mainly in the form of hearing voices rather than that of tactile or visual hallucinations?

3.
The Mediating
Function of
the Auditory
Modality

In our previous works, we compared two different theoretical applications of the concept of *being-in-the-world* to the problem of schizophrenia: Binswanger’s *top-down* conception and Straus’s *bottom-up* model. While the former provides the advantage of giving account of the historically, biographically and intersubjectively situated character of the disease, the latter offers the advantage of giving account of its embodied characters, and in particular the advantage to explain why the auditory modality is the one most concerned with schizophrenia. Despite some ambiguities and uncertainties, well highlighted by Binswanger in his critical reading of Straus’s work (Binswanger 1936), Straus’s conception also seems to offer the advantage of providing some useful information to open a new theoretical perspective and to reconcile these two opposite conceptions of schizophrenia. In addition to developing an aesthesiological analysis of the auditory modality, Straus gave some information which helped to understand the uniquely sensorimotor *loop* implemented by the human phonatory-auditory system and the feedback/feed-forward process of hearing. According to Straus, in patients suffering from auditory hallucinations we can assume a delay or a shift-phase of the sensorimotor system – similar to that produced by a reverb or echo which sends back to our ears the sound produced by ourselves as if it came from the external environment – penetrated by the experience of auditory hallucinations. How can this happen? We must first remember that for Straus – and for the founders of Aesthesiology Gehlen and Plessner, from whom Straus partly drew inspiration – the inner dialogue that we call thought is nothing but language exonerated from the action of real sound production. Therefore, the function of control carried out by our ears produces – for object relational psychoanalysts (Mitchell 1988), but also for philosophers of language like Ernst Tugendhat (Tugendhat 1976) – a kind of internalization/anticipation of the judgment of approval or denial affixed to our statements by communication partners we have been related to since early childhood. This shift-phase of the sensorimotor

system of hearing and voice would thus provide a plausible explanation for the hypothesis of schizophrenic syndrome in which the distorted relationship with the *Heteros* would have the power to deform the very relationship with the *Allon*. The phono-auditory modality would offer, in other words, the ability to operate a kind of mediation between the *top-down* and the *bottom-up* conceptions of phenomenology and etiology of schizophrenia.

This mediating conception seems to us partly in accordance with some recent models provided by neuropsychiatry. Actually, the pathophysiological models trying to provide an explanation of auditory hallucinations through neuroimaging techniques follow a theoretical dissemination which, according to some authors, would express the variability and plurality of schizophrenic phenomenology (David 2004). Although many studies correlate the experience of auditory hallucinations with structural and functional abnormalities of the auditory cortex, and in particular with the areas responsible for the monitoring of internal or external sources of language production and perception, according to David, however, what is still unclear is the role played by specific brain areas and functions related to voluntary and involuntary memory, to the “excessive” auditory imagination, to “on-line self-monitoring” and to the appreciation and evaluation of the semantic content conveyed by what the voices say. According to Seal, Aleman and McGuire (2004), it is possible and necessary to try to unify these different models into an integrated concept in which *top-down* and *bottom-up* processes converge towards a monitoring sound-auditory centre which – noting a considerable discrepancy between feed-forward mechanisms of vocal emission and feedback mechanisms of auditory recognition of the sound produced and perceived – would come into a kind of sensory-motor short circuit. Being prepared by genetic factors, but also encouraged and amplified by factors associated with *top-down* expectations, moods, evaluation attitudes, communicative and interpersonal distortions, delusional linguistic frameworks, this voice-hearing short circuit would be the place, at the same time structural and functional, where according to Seal and his collaborators, the experience of auditory hallucinations starts.

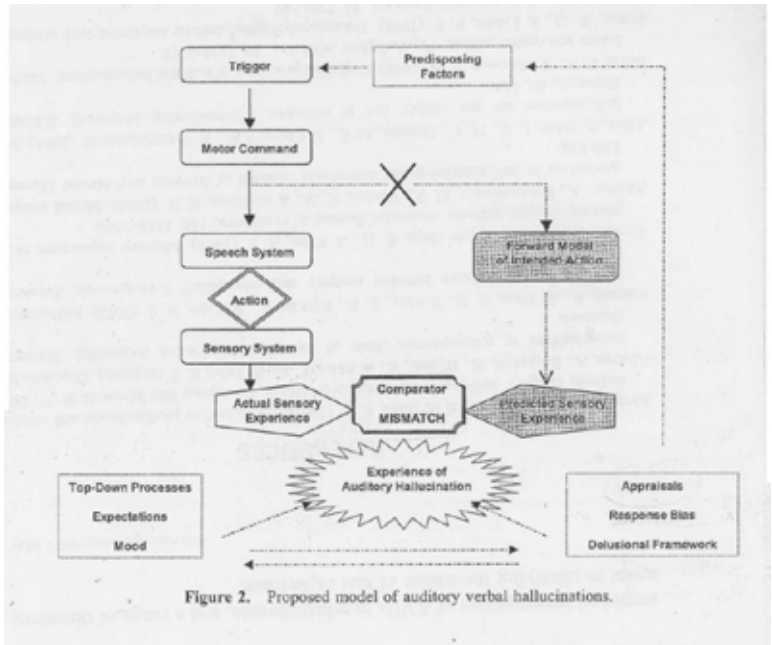


Figure 2. Proposed model of auditory verbal hallucinations.

(Seal, Aleman & McGuire 2004, 64).

Retranslating this theory into the terms of Straus's Aesthesiology, it could be argued that "I", *Allon* and *Heteros* short-circuit, fuse and surreptitiously exchange their roles of listener and speaker thanks to the *transactional* primary power – typical of the original condition of the infant and the child – of the only, complex and articulated, by man self-produced, sensory reality: the sound of his own voice.

4. Brain Lateralisation, Cultural Hominization and Schizophrenia

According to other authors (Hunter 2004; Jones & Fernyhough 2007), however, such a model would be unable to explain two things: how is it possible for the inner speech, which we identify with *silent thought*, to turn into *really* hearing voices? And why, in most cases, would these voices be perceived as coming from the outside world (although those that perceive them appear very frequently to be less able than normal subjects to locate the source of real sounds, especially if coming from the right side of the body)? In order to answer these questions we must complete, in our opinion, aesthesiology with a more explicit anthropology: theoretical connection established in part by Straus and made more explicit by Gehlen and

Plessner's latest works. Gehlen's anthropobiology, in particular, provides a powerful theoretical model through which we can try to reconstruct the genesis of silent speech, which we call self-consciousness or reflection, from a process of progressive exemption of the senses and the body, performed by the voice-hearing system, which in turn is exonerated from the effective phonatory process, by means of the anticipatory and feedback function implemented by the auditory imagination alone (or, in terms of Changeux, by means of the auditory pre-representation).

According to contemporary neurobiologists and paleoanthropologists, this process can be conceptualized as a complex and progressive succession of restructuring *exaptations thanks to which anatomical, neurological and cognitive structures are completely or partly freed from previous functions* – the hand from ambulation, the eye and the hand from the function of synesthetic exploration and identification of reality through the predicate and the name, hearing from the monitoring of the voice – *and co-opted for new biological and cultural purposes not provided for by evolution* (Gould & Vrba 1982; Tattersall 1998; Ramachandran 2003). These neuroanatomical exaptations converge on sensory-motor assembly, in part socially regulated and stabilized, which sometimes have an impact on the process of biological evolution, by means of sexual selection and culture. According to Michael Corballis (Corballis 2002), this interaction between biological and cultural evolution would explain the progressive increase in brain lateralization which was produced (about 50,000 years ago) in correspondence with the technologically and linguistically crucial phases of the hominization process. And according to Julian Jaynes and Timothy J. Crow, the possible reversal of this process of evolutionary biological-cultural interaction would explain the *breakdown*, to which the schizophrenic patient is prone, in structures of consciousness prior to those made possible by the neurobiological process that allowed us to allocate the centers for production, anticipation and recognition of sound in a dominant hemisphere, *dragging* the entire sensorimotor structure of the body to the right: the so-called brain lateralization (Jaynes 1975; Crow 1997; Crow 2000; Crow 2004).

It is not possible to reconstruct in detail here Crow's neuropsychiatric doctrine, which refers to Marian Annett's theory of brain lateralization (Annett 1985; Annett 1999), and to the theories formulated by Chomsky and Bühler concerning the indexical and propositional structure of language.

Suffice it to recall that it attempts to show that the persons who, for genetic reasons, are close to the indistinction point for cerebral lateralization risk the collapse of the quadripartite structures that regulate in a coordinated way the anticipation and perceptive recognition of the voice, and the anticipation and recognition of the semantic meaning conveyed by it. Thus breaking up the deep indexical structure, which is the basis of language, according to Crow the result is a deconstruction of the mechanism that indexes the roles of speaker and hearer of our voice and the voice of the Other, through the allocation of deictic terms (I, you, here, there, now, before, after) to their content of consciousness (Crow 2004).

But since, as Descartes had already found, every judgment or proposition implicitly contains a metalinguistic proposition introduced by a deictic that reflexively clarifies the intention of the person who thinks or says this judgment – *I say (here and now) that "the grass is green", you doubted that I believed (there and before) that "it is right to do so", etc.* – what is disrupted by the collapse of the voice-hearing neurological mechanisms is the same recursive and metalinguistic structures that have made the phenomenon of self-consciousness possible. On the basis of this theory, we may conclude by saying that schizophrenia can be interpreted as the price that humanity continues to pay for having acquired, at the end of a long process of biological and cultural hominization, those sensorimotor montages – result of exaptation and exoneration – which allowed us to internalize the *Other* human being in the anticipating and recognizing mechanisms of hearing. A conclusion which agrees with the deepest meaning of Straus's phenomenological anthropology (Straus 1960) and, in our opinion, casts new light on the dynamics and mechanisms that underlie normal and pathological human self-consciousness.

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