Is psychopathology a bit rusty? A critical essay

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Abstract

Current development of neurosciences seems to leave psychopathology out of the way. In comparison with other branches of medicine, psychiatry still discusses the point of terms, coined to describe mental phenomenology in past. Such situation resembles the status quo of medieval scholastics, where dialectic methods aiming to explain the nature were insufficient. In this brief report, author would like to present the currently used psychiatric vocabulary from the Baconian point of view. Using examples of different Baconian idols, author aimed to present semantic and methodological problems in psychopathology. The article consists an critical evaluation of hitherto diagnostic terminology and presents novel point of view for further descriptive psychopathology.

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Introduction

For each instance of medical specialty, there exists a background in basic sciences. When we think about cardiology, trying to understand cause of cardiac infarct, irrefutably, should we at first take into consideration all the processes leading to atherosclerosis. In psychiatry the role of such clinical background is played by psychopathology.

Proper ability for empathic assessment of patient's behavior leads to proper diagnosis and management (Esagian et al.2019). Despite this clinical tool, therapy of psychiatric patients still leave much to be desired. One side of the problem is invention to discover new chemical compounds treating mental disorders, but from the other hand, maybe should we take a step back and accurately analyze, if the methods we use to set a diagnosis are correct.

When we decompose psychopathological vocabulary into singular terms, we can notice that different terms aiming to describe mental symptoms, derive from at least four different languages. So there we found in example symptoms named from French: *folie a deux* for an induced delusional disorder, further subdivided into *folie communiquée*, *impose*, *induite,* and *simultanée (*Chenivesse et al. 2003). From French tradition derives also a designation for transient psychotic disorder

(*bouffée délirante).* In descriptive psychopathology we could meet also German words (*faseln, entgleiten, entgleissen)* traditionally used to describe formal thought disorder in psychosis, Latin ones (*mania a potu*) following alcohol intoxication and lot of terms derived from classic Greek philosophy (*katathymia, alogia, apathy* et c.)(Oyebode, 2008). To better underline linguistic confusion in psychopathology, should we remember the names of symptoms used in so called *cultural psychiatry*. For that field of mental health the list of terms is broader and more complicated (*amok, susto, latah, koro, taijin kyofusho …*). All these examples of symptomatic entanglement force us to do a reconciliation: how could it be explained, why have we not equal terminology?(Jackson, 2006)

Obviously we have, even fifth edition of DSM and eleventh edition of ICD, but the problem will be unsolved, while we would not focus on the appropriate cause of obsolete psychopathology: still existing, rigid and holding with enormously convenience belief that mind and body are dual. The problem of duality is not met in other medical specialties, it is unique only for psychiatry. There exists no reflection on spiritual properties of heart, lungs or liver, so why is it so hard to eliminate it from the topic of human brain? Current progress in cognitive sciences thoroughly explain interconnection between mind and body, blurring the border between them. Despite this, psychopathology seems to reject this eye- catching theories, stubbornly residing in nineteenth century mentality. Duplicated by generations of psychiatrists *Decartes's Error (*as it was named by Antonio Damasio, (Damasio, 2001)) condemns psychiatry to extinction in arms of network-sciences, novel forms of psychotherapy, modern techniques of mental affection, using brain- computer interfaces, or artificial intelligence.

We could risk with a statement that:*if there will be no more pharmacotherapy, there will be no more psychiatry* Furthermore, looking into considerable growth of pharmacotherapy in another disciplines of medicine (biological treatment, gene therapy, selective drugs with less number of side effects) and comparing it to psychiatry, put forward abovementioned statement gets less controversial. Hence we can observe a trend that psychiatry does not develop correspondingly to other neurosciences. The main reason, explaining this situation should be searched, exactly in basic science for psychiatry, namely, descriptive psychopathology, what needs to be actualized, because there *are so many stories made up and acted out stories which have created sham worlds worth of the stage* (Bacon, 1878).

Such psychopathologic *idola theatri* need to be eliminated, when we would like to set up novel descriptive psychopathology, based on real- world evidence, not on philosophically coined terms, linguistic confusion and subjective assessment. This leads to so unconscionable situations, like different psychopathologies for different cultures. The discussion about delusions, or hallucinations, indispensable for psychiatry, cannot be continued, when there is a risk that words we use to name these phenomena, or even same phenomena are not real, but only theoretical. In this article author would like to look at psychiatric examination from another angle, similarly to the view of Francis Bacon on medieval scholastics.

Psychiatric Idols of the Theatre

Memorable *Novum Organum,* created by Francis Bacon set up the background of scientific methodology. Giving the new view on philosophic reasoning, devoid of authoritarian and theoretical scholastics, Bacon developed modern approach for

avoiding subjectivity. The situation of current psychopathology confusingly resembles the status quo of medieval philosophy. Tremendous number of different terms and kinds of reasoning do not lead to any progress, because of same terms. Remembering Confucian rule to rectify the names, let's face psychopathology with the future. Traditional approach divides psychological functions of human into three aspect: cognition, emotion-motivation and (to satisfy *the power of trinity*) executive functions (Pessoa, 2009). Superficially it exhausts all possible activities of the mind. But when we look at the basic organization of the brain, we obtain different conclusions.

Starting from *minimum minimorum*, neural cells are adapted to conduct an information, coded by electrical signals. To better illustration, pyramid neurons, e.g., have specific constitution of ion channels, enabling them to back-propagation of action potential (Gonzalez-Burgos et al.2008). Neurons, aiming to learn and store informations, form neuronal cliques, resembling the shapes known from graph theory. Processes of LTP and LTD determine the strength of synaptic connection, frequently used tract is more powerful, better available to reuse, and in consequence better adapted to fast recollection of remembered signal (Agranoff et al, 1999).Neuronal cliques built up cliques of cliques and further organized functional structures, which occupy the space of whole brain and form neural networks. At the level of neural network, could be observed explicitly that learning is based on shaping the pattern of synaptic activity (Sejnowski & Tesauro, 1989).

To sum up, we can contest: the role of the brain relies on processing of an information.

If, as we stated backwards, there is no dualism, we can also state that*the role of mind relies on processing of an information*, subsequently, *psychopathology is the pathology of information processing* Now should we try to treat psychiatric symptoms from this point of view, so how we can accommodate words as delusion, illusion, or hallucination with such paradigm?

It is hard to separate the process of perception with the process of memory and remembering, from this kind of reasoning, human brain is suspended in the constant stream of information, bombarding it from all sides.

Some of them are catch out by our attention, some other are not. Some of them are*recessed* to our perception, some not, and next, remembered at first in operational, or short term memory, and further in long term memory, where they could rest for many years, but also may be irrecoverably lost. At all of these level of information processing we meet pathologies.

Deriving from it, hallucinations and memory loss are lying on the same spectrum of symptoms connected with pathology of information. To better understand this issue, we should turn to achievements of cognitive linguistics.

For each human being, during whole life, forms up idiosyncratic*semantic map*. (Lakoff, 1971) All of words we use, metaphors, memories and remembered pictures, or scenes determine our cognition. For one person the word *heaven* may mean religious fulfillment at the end of mundane life, but to another person this word retrieves memories from a seen movie *The Lovely Bones*. Each information we obtain from external word is assessed and fixed to resource we have, thence our understanding of particular information (or stimulus) is also idiosyncratic.

Paradoxically illusion and hallucinations may derive from memory.

The noise of leaves on the wind, resembles human voice, because we know human voice, schizophrenic patient hears commenting voices, because she knows the language.

There is no need to multiply categories of psychopathological symptoms, artificially dividing perception, memory and language, because they all together are parts of the same aspect of mind: processing of information.

Cited above evidence suggest that the tripartite division of psychological functions seems to be a little unsuitable. Turning back into our cardiologic metaphor, could we set a hypothesis that similarly to heart, there is also one main function for *psychiatric part of the brain*. For heart aforementioned function is providing circulation, by pumping of the blood, generating cardiac rhythms, and even secreting different hormones, aiming to regulate proper composition of blood, lie in the case of natriuretic peptides.

Per analogiam we can contest: main function for psychiatric part of the brain is information processing.

The organ we are taking into account, regulates at first selection from the information stream of important ones, remembering them, modifying them and enabling further use.

Trying to name the organ, which is the area of interest for psychopathology, we can face some controversies. From one hand, there is no doubt that our thinking and perceiving takes place in the brain, but how about then with social psychiatry?

So should we write off the one organ- one function concept? The answer is far from it. It will be better to understand such concept, when we look into uncial property of human brain, different from other viscera. The brain, and a the consequence the mind is *open.*

The openness of human mind has direct consequences in social living. When we make relationship with other persons, we are compelled to exhibit the contest of our thinking, so the contest of our mind. Exchange of information between people constitutes the background of networking. A convex example of this mechanism is seen in social media, where people group into communities with the same opinions, interests and hobbies. Such situation is passible only because of the information flow between internet users.

To sum up, terms, used in psychiatry, diverge from modern achievements of other neurosciences. Classical division of psychological function and symptoms crosses over the evidence, obtained from research. Dogmas, coined by early psychiatry should be revised, if they are not only deeply rooted superstition.

Psychiatric Idols of the Forum

Baconian methodology emphasizes the relationship between observed phenomenon and proper word describing it. As we mentioned above, particular in psychopathology, linguistic confusion is enormous. For same delusionary disorder we can meet different names, e.g. paranoia, *bouffée délirante,* paraphrenia (connected with hallucination). Trying to understand the reason of this problem, we could state that there is a risk, if any of used terms properly exhaust meaning of the

symptom. What if there is not a delusion at all? In this chapter author would like to *undermine* the institution of delusion, exhibiting what danger is connected with exaggerated trusting in terms.

Delusions are traditionally classified as thought content disorder. Thought could be defined as the simplest dose of information generated by the brain. Leading the thinking processes, human brain connects different mental threads and forms up *idiosyncratically logical* statement. The logic of thinking is idiosyncratic because the semantic map of each person is so. The words we use in our thoughts derive from our life experience. It can be proven on well -known example of Hopi Indians and their language, which was used to create Sapiro- Whorf theory of linguistics. (Koerner, 1992)

The language we use shapes our semantic map and therefore shapes our process of reasoning. For some Indian tribes the understanding of time is not triple (past, present, future) like for western civilization, thus in their culture a phrase: *next year I will eat more vegetables* could be completely bizarre, as schizophrenic delusions.

Therefore to diagnose a delusion we should contest cultural irrelevance of the idea. When in one culture some ideas are perceived as bizarre, in other ones they will be even desired, moreover the same situation could take place during meeting of a person from medieval ages with the actually living.

The question is, how to make the term delusion objective?

What differs normal belief from delusion is cultural inacceptable content, delusion is a social construct. Society decides which content is normal and which is imaginary.

Every community creates an specific wordbook of phrases, which are used. This mutual resource of words exists because of interpersonal communication. People within a community share informations they have and thus create common semantic map. Ideas are not only suspended in semantic world, but they have their carriers, who enable ideas to live.

If an ideology has no people to believe in it goes into oblivion. It could be understood on the example of ancient Egyptian religion, which is nowadays not professed, because *carriers* of this idea, faithful citizens of ancient Egypt, do not live.

From this point of view, delusion seems to be not an thought content disorder, but the disorder of networking.

Dissociation from general semantic map for a society generate a delusion. The role of networking, or better*linguistic networking* in delusions is seen on an example of *folie a deux,* where healthy person develops full- symptom delusionary disorder.

Delusion is not only based on different content, the main background of delusion is holding a belief socially alienated.

Common opinion is that there exist so many views on the same item, a many people. Opinion which is not shared by others is close explanation for delusion. Resigning from classically coined dogmas we could assess delusion as a social construct due to impaired, or defected linguistic networking, not as an positive symptom.

Psychiatric Idols of the Tribe

Further adaptation of Baconian methodology to psychiatry leads us to consider epistemological problems of psychiatric semantics. Idols of the Tribe refers to the logical fallacy because of the characteristics of human nature. In the field of psychiatry, epistemological conflict occurs explicitly.

How psychopathological assessment could be objective, when the observer as well as the patient are both humans. This question had many different repercussions and led to appearance of two different positions: human is able to objectively assess his mind, or human is not able to assess his mind, because he is the object of assessment on his own.

The second one, most radical approach resulted in XIX century trend, called antipsychology and was met in positivistic European philosophy after 1830. As we mentioned, human thinking processes are idiosyncratic and specific.

Assessing the patient we could not always understand what he or she is trying to communicate. Especially when the patient is seen for the first time, for several minutes. In that case proper psychopathological assessment creates an opportunity to misdemeanor.

Psychiatric examination should thus be based not on subjectivity, but as accurately as possible, be objective.

The objectivity in conclusions about behavior and phrases spoken by patient is hard to be achieved. The only way to become objective is becoming empathic.

Empathy in this case not only means trying to understand intentions of the patient, but is also the only tool aiming to find common language.

That way empathy may be defined as an ability to unite with the patient. From the position only, we could reject subjectivity, which is derived from our personal beliefs. So empathy seems to be a solution for avoiding of Tribal Idols.

Natural ability to generate empathy has a background in theory of mind and mirror neuron system.

Human language and motoric abilities have common denominator, they are formed by repeating of moves.

The same is thought about face expressions, therefore, empathy is not only metaphysic term, it is real possibility to feel patient’s body and mind.

Especially taking into account somatic markers theory.

Disposing only limited amount of time, during examination, should we focus on every word spoken by patient, because every word gives us the key to open patient’s psychical processes. Enormous role of language in psychiatry finds its reflection in presentation of clinical symptoms, for example without language how could we set a diagnosis of schizophrenia (commenting voices, thought automatisms et cetera)? Introduced by Antonio Damasio theory gives a new insight or understanding of psychotic pathology from linguistic point of view. (Damasio, 2003)

Wen for every phrase in language exists suitable emotional and even motoric representation, disability to connect a word with such background consists a compact hypothesis, explaining automatisms in Kandinsky- Clerambault syndrome.

(Lerner, 2003)

At first schizotypal, eccentric interests could be the result of different understanding of a phrase or patient, like in the case of previously used *heaven*, for schizotypal patient semantic map connected with this term is completely bizarre.

Such situation could be rather an symptom, not a reason of disrupted neural connections between semantic maps and proper or them disposable areas.

Developing spectrally, disorders of language- emotional and language- motoric disturbances could result in at first thought- controlling delusions (compensatory mechanism for an error in finding a connection between a phrase and emotional\ motoric representation: *it is not our word, so is it sent to our brain?*) and further psychiatric automatisms (In example a patient does not understand a connection between her thoughts and corresponding motoric meaning, could generate a compensatory mechanism that *someone is controlling my body*).

This theories are derived from a concept of embodied mind. The term coined by Lakoff, an defiant disciple of Noam Chomsky should not be precisely ignored, trying to understand the substructure o psychopathology. (Chomsky, 2015) Embodied mind is a great counterargument or body- mind dualism, which is even nowadays the deeply- anchored conviction.

Moreover it opens a broad field for cheap and noninvasive research aiming to find psychotherapeutic methods to improve mind- body connections. Aforementioned interdependence of previously dual things seems to have its base in language. Idols o the Tribe indicates that sometimes old terms, but hallowed by tradition of descriptive psychopathology only limit our understanding of symptoms in the mind.

To better develop methods of assessment, should we resign from typical for human nature, fixing everything into previously- known schema, into an old criteria, which are actual only therefore that they are comfortable.

Psychiatric Idols o the Cave

Translating the idola specus concept of logical fallacy into psychiatric language, we can affirm that every prejudice leads to misdiagnosis.

Sometimes a patient seems to be an textbook example of a known disease. But if we look much deeper into psychopathology, the situation is not so clear. Are current used psychopathological terms a prejudice?

After all they are not always suitable or modern patients. How an old- age psychiatrist could understand if what patient is saying about three life to dispose (about computer game) is a delusion or only an digital abstraction?

Excepting the inaccuracy of XIX century language to assess current mental disruptions, more efforts should be done to innovate terminology in the context of internet psychopathology and social media behavior.

Taking into account all of the progress in cognitive sciences, psychology, or philosophy, psychiatry sets itself in a role of innocent bystander, a specialty which only observes other neurosciences with the feeling of infallibility.

During whole XX century, cognitive psychology turned from completely materialistic and empiric back into subjectivity of perception.

The same situation is seen in psychology, where at first human being was perceived as only biological, from the behavioristic point of view, then the concept evolved into more metaphysical concept of empathy (even towards other species).

How about psychiatry ? What has changed between 30s of XX century and nowadays ? To better illustrate this impasse should we focus on the citation from Stanisław Lem's *Transfiguration Hospital: When the patient is before 40: dementia praecox: brome and convultions, when is after 40: dementia senilis: brome, convultions and baths.* As we can see, therapeutic schedules are still the same: tranquilization and methods for urgent and forced pacification of a patient. (Lem, 2001)

What has changed is only the other terminology and other substances used for such therapy: instead of brome we have now neuroleptics, benzodiazepines, or normothymics. The main pivot is the same, the base of therapy has not changed. Comparing this *status quo* with other, aforementioned achievements of neurosciences, psychiatry is the same because it had no motivation to change, because of no danger. As it was in 30s, it is today, there are no more known methods to rapid tranquilization, so psychiatrists can sleep calm. Is it a state set forever ? How could we believe that only a bit modified terms (for example *dementia praecox* into schizophrenia) are suitable?

Maybe there is no schizophrenia, but a lot of different brain developmental disorders, hiding into one singular collective diagnosis.

So if there are more diseases under schizophrenia, should we find more effective and at first, specific treatment regimen.

These questions will stay rhetoric, until we find novel consensus in descriptive psychopathology, avoiding the isolationistic point of view, psychiatry should promptly open and use all the achievements of other neurosciences.

Novum organum psychopathologicum

As it was mentioned above, to prevent psychopathology from semantic confusion and further staying in *stqtus quo*, should we face the basic term of psychiatry: a psychiatric disease.

Contested examples from different cultures and different description traditions force us to understand that psychiatric disease starts only then, when it is noticed by other people living with the patient in a community.

Developing psychopathological symptoms, the patient starts to *dissociate* from the rest of society.

Psychiatric dissociation, should be therefore understood as an attitude of non- compliance with the semantic map of the society, rejecting their functioning model, law and morality, achieved by generations of people living together. Psychopathology reveals almost in every case because of breaking the rules, starting to *talk from the point*. That is the

reason why psychiatric illnesses are perceived as eccentric, or bizarre. Following this criterion, other describing schedules are inferior to main, basic criterion in assessment, namely, social functioning.

Sociology also derives from the paradigm of network science, so the patients at first exhibits disruption due to impaired networking ability. For example people diagnosed with Asperger's syndrome seem to be psychiatrically ill, because not of the psychotic symptoms, delusions, or formal thought disorder (which can obviously occur in this disease), but because of the boundary between their kind of reasoning, their perception of society, which differ from commonly accepted.

Lack of empathy, and poverty of emotional expression is seen also in psychotic disorders and affective diseases (where emotional response achieves enormous and highly elevated level of intensity).

Novel and concordant with other neurosciences psychopathology should first of all focus on the empathy for understanding of suitability in setting a diagnosis, therefore in this article, author would lie to present a new division of psychiatric symptoms: impaired networking and impaired information processing.

For the first category it could be included all the problems with sociological adaptation: excepting autism spectrum disorders, also schizotypal and schizophrenic spectrum, where the patient's functioning is disrupted because of social isolation, isolation based on her, or his ideas.

Second category of disorders occurs, as a result of direct brain faulty in perceiving, memory and execution.

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