Review

Toward the understanding of the ontogenesis of delusional narrative

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SUMMARY

If schizophrenia, according to the hypothesis by Timothy Crow, is the price paid by Homo Sapiens for using language, then delusion might be called the human price paid for using culture. Indeed, language skills alone are not sufficient enough for creating delusion. The age of 6-7 years is the earliest for delusion generation - this is an established clinical fact. There is a minimal age of delusion generation in mental illness that is based on language mechanisms formed in ontogenesis and can be ascertained experimentally. We believe that by this age three basic language mechanisms have matured and formed completely: 1. Formation of individual plot base 2. Ability to form a cultural contextual narrative 3. Maturing of egocentric speech and its transformation into inner speech. The role of all the above mentioned elements in genesis of delusion will most likely vary and depend on the age of contraction of the disease, the type of psychic pathology and the basic level of cognitive development. The lack of all three abovementioned elements shall lead to total inability to form delusion. This can be observed, for example, in moderate intellectual disability, in small children (approximately under 3-4 years old) or in progressive dementia. Immaturity of inner speech - that is, sticking on the egocentric speech stage - must lead to inability to formulate delusion as a narrative. In bilingual psychosis, different narrative capacities in mother tongue and foreign language shall lead to different frequency of generating delusion. That is, in the second language there will be less delusion generated with a more meager plot corpus than in one's first language. We can also suppose that in a non-native language the "building bricks" for delusion will be the most archaic plots - as they are more stable and persistent both for an individual and a culture as a whole.

Key words: delusion, language, inner speech, narrative, plot

To Dr. Rimona Durst

By creating texts with plots, the human being learned to distinguish plots in their life and thus explain this life to themselves
Y. Lotman.

If schizophrenia, according to the hypothesis by Timothy Crow, is the price paid by Homo Sapiens for using language [1], then delusion might be called the human price paid for using culture. Indeed, language skills alone are not sufficient enough for creating delusion (this is the precise explanation of why no delusion is observed in children under 7 years old, who have already mastered a language enough).

This being said, the embeddedness of delusion into culture, its dependency on cultural contexts may be dwelled upon considering such aspects as interrelation between language and ideation, the origins of language and genesis of inner speech. Thus, such cognitive and cultural concepts as "linguistic worldview", "linguistic person", "cultural constants", "nuclear plots", "fabula", "plot", etc. etc. begin reshaping and developing anew. Within such approach the very psychiatric data that consider these cul-

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tural and linguistic aspects, acquire a new meaning and go beyond mere clinical operation, becoming important for enriching anthropological psychiatry and bringing back psychiatry's philosophical tone.

It is not difficult to see that academic literature dwelling upon the phenomenon of delusion is truly immense. Yet researches have viewed cultural/anthropological aspects of delusion mainly from the perspective of differentiation between content-related aspects in various ethnic societies [2-4].

Another interesting (from the point of this work) peculiarity shall be noted: although there are few works dwelling upon linguistics of delusion [5], there are even fewer dedicated to the analysis of delusion as a text or a narrative. Meanwhile doctors inexplicitly (even for themselves sometimes) resort to linguistic notions and categories belonging to narrative / textual analysis when describing many psychopathological symptoms. Even when using such clinically significant concepts as "derailment", "tangentiality", "illogicality", "perseveration", "residual delusion", the doctor to a large extent relies upon exclusively textual attributes, but implicitly and, therefore, without analyzing the delusional text per se. This text, produced by the patient, loses its "textuality" to the doctor, becoming - and remaining - just a symptom. Such conversion of text into a symptom is critical for diagnostics, but leaves behind the non-psychiatric, non-medical characteristics of the text.

Nevertheless, the textual nature of delusion is obvious (maybe this is why it is so difficult to notice?).

As for today, some questions concerning delusion, seemingly most basic onesm remain unanswered, and some even remain un-asked:

why do some patients with shared diagnosis experience delusion, and some do not? Why does delusion occur at this very stage of the illness, not at any other? What is the connection between delusion and language as a part of cognitive system? What is the connection between delusion and stages of language development, and is there any? What are the sufficient and necessary conditions (both clinical and cognitive) for generating delusion? Why are all contemporary definitions of delusion insufficient? What defines the topic / plot of one's delusion? And why delusion can sometimes be pathognomonic (paraphrenic expansive delusion in cases of cerebral syphilis or paranoid delusion of small range in elderly patients), and sometimes not?

According to our approach, it is due to highlight, first of all, that, unlike many other delusion studies, we proceed from the following theses:

1. Linguistic aspects of delusion and generating delusion must, and can, be viewed drawing upon the developments of contemporary philology, namely, narratology. Studies in linguistic components of central psychopathological symptoms can shed light on their genesis.

1.1. A lot of psychopathological symptoms and syndromes, such as delusion, verbal hallucinations, malingering, etc., may be viewed from the perspective of their narrative component. While embracing this thesis, we are in no way attempting at reducing the whole problematics of genesis and description of such psychopathological phenomena to the problem of text alone.

2. One should not confuse delusion as a process - generating delusion - and delusion as a result, a product of such process. What is the issue here?

2.1. Generating delusion, as generating any other text, can be viewed on various levels - firstly, drawing upon classic neurolinguistic data [6] - as a process of generating speech. That said, we can assume that basic stages of such speech generation on neurocognitive level continue to persist during a psychosis but deteriorate with deterioration of speech [i].

2.2. The next level is that of already constructed **narrative** [7], that is, a story, where one can find:

A) the event

B) the story ("meanings-generating selection of situation")

C) the narration - the "composition that organizes elements of the events in an artificial order"

D) the presentation of narration, where " < … **>** the narrative text… is open for empirical observation" [7]

We have previously [8] noted that elements of psychotic speech can be viewed from the perspective of the theory of speech acts. Accepting this position, we have discussed psychotic narratives not from the *verity-falsity* point of view, but only from the successfulness-unsuccessfulness one. At that, all texts produced by a psychotic patient are evidently marked by the patient as maximally successful (that is, exhibiting maximal illocutive power).

If we turn now to the views of narrative cognitivists, we will find certain interesting coincidences: " < … **>** A good story and well - formed argument re different natural kinds. Both can used s means for convincing another. Yet what they convince of is fundamentally different: arguments convince one of their truth, stories of their lifelikeness. [9. p. 11].

Comparing these two points, we can picture a following scheme: on the level of separate statements a psychotic patient will mark those **for themselves** as having maximal illocutive power (which is precisely what illocution provides for), and on the level of **perception of the pathological narrative** the real-life credibility factor becomes an important characteristic feature of delusion.

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i Whether this is true, is not yet clear and demands for a research of its own.

2.3. The third level is that of marking the text as the "delusional" text, that is, the moment when the text acquires a symptomatic label and, therefore, is viewed from the perspective of the illness only. This is where the element of clinical perception steps forward. But during this stage, as we believe, the linguistic, textual and plot components present with the doctor in an implicit, unmanifest manner, play an important part (and this is precisely why, for example, doctors mark delusion as such basing on the plot approach) [10].

3. Delusion and telling of delusion are different things, just as a dream and telling of a dream are [11]. Clinically, this can be observed in at least two various aspects:

3.1 During recovery from psychosis, when the patient themselves retells the contents of delusion, but distances from it. In this case, it is precisely the plot of the memories of delusion that persists, while details deteriorate[ii].

3.2. In case of simulation (malingering)/sursimulation of delusion, that is, in a situation where there is originally an element of *generating text,* but not that of *generating delusion.* In both these cases we shall find a persisting plot scheme, but the inner structure of the narrative will differ.

4. 4. Delusion can be viewed as a narrative, that is, a structured, verbalized story with its own plot.

We have already offered and described various characteristic features of delusional narratives, namely " < … > Producing delusion is non-mediated. The text of delusion is not prepared by the patient beforehand, is not reflexed upon. A patient believing he is the Messiah does not produce a tale "of" the Messiah like in the Bible or in naïve eschatological texts; while generating delusion, he is embodying this person and speaks "for" the messiah, from his (the patient's own) name. Delusion is born and spoken out in real time, here and now, and, therefore, is able to provide the best introspection into structure and cognitive processes of a disordered conscience" [12].

5. Viewing delusion from the perspective of narrative approach, we can talk about the genesis of narrative and try to connect the contents of the delusion itself to its origins in the phylogenesis and ontogenesis. Therefore, assuming and accepting the narrative nature of delusion, we may attempt to apply contemporary methods of narratology to the analysis of it. Probably, which is discussed further, the application of the criteria of narrativeness may as well allow for deepening the differential characteristics of delusion as opposed to other psychopathological symptoms.

Acknowledging the narrative status of delusion, it is, first of all, necessary to resort to the few studies dwelling on this topic.

The terms "narrative psychiatry" and "narrative turn" have been well integrated into English-language psychiatry and to a much less extent - into Russian-speaking psychiatry [13-17].

But upon taking a closer look on works within this research school, one can conclude that the term "narrative psychiatry" means simply that a patient must be talked to and listened to. "Nobody wants to listen to my story" [18]. Listen to their complaints and listen to their personal story. This is hard to disagree with. But narrativeness is hardly limited to this only.

On the other hand, the works dedicated to narrative disorders in schizophrenia [16, 19-23] hardly ever dwell specifically on narrativeness of delusion.

The few works available, concerning narrative characteristics of delusion [24] concentrate mostly on disorders on the narrative level of language: « **<** … **>** The following pathological phenomena were identified within narrative sequences: 1. delusional sequences, internally related; 2. delusional sequences, internally disintegrated; We discern the specificity of schizophrenic disorders also in the case of narrative scenes, which manifest the following pathological phenomena: …A narrative scene is organized in a delusional way; consequently, it is pragmatically incoherent. The scene consists of delusional narrative sequences, internally related, sometimes already with features of disintegration… We often find delusional narrative pictures and pictures with disturbed thematic-rhematic coherence… 4. A narrative scene is disintegrated. It is formed mainly by delusional sequences with features of disintegration, made up of pictures with combined disorders… Increased language pathology occurs, chiefly manifested by disturbances of linear connotation…**»** [24].

We have previously offered the following definition of delusion: "Delusion is a complex of connected texts produced by a psychotic patient, in which the patient vests either themselves or someone or something in the surrounding world with "special qualities". We suppose that if meeting these requirements, any delusional text can be unambiguously categorized as belonging to one of two differentiated groups: "I" = agens or "I" = patiens, which will determine its core" [25].

Being more specific, we can note that, seemingly, there is no need in proving the connection between language and delusion. "No language is no delusion", or "there is no nonverbal delusion". But is this true? And is everything here clear and unambiguous?

We believe that, if we really want to understand the genesis of delusion, it is necessary to view delusion from the perspective of its philo- and ontogenesis, not from

ii This can be partially related to the fact that the patient is simply unwilling to recall their disordered feelings. But one should keep in mind that this may as well be amnesia of acute state.

that of its typology or in the dynamics of the illness only. In this context, it should be noted that research upon the connection between language evolution and schizophrenia has been conducted widely during the last 30 years, but it did not focus on delusional symptoms specifically or ever [1, 26-27].

At that, speaking of ontogenesis, we must keep in mind not only delusion during its development, but during its disintegration as well. In other words, we must attempt to analyze the time/age of emergence of delusion in a patient and the time/age of dissolution of delusion, more specifically, the basic language mechanisms that compose the foundation of generating delusion.

It is worth noting that there are little to no precise data on the age of emergence of delusion in published works. There are various, usually vague indications of age [28-34]. One of the children psychiatry handbooks notes that delusion is adiagnostic until the patient is of school age, as expressive speech is yet underdeveloped [35 p. 864]. Kolvin [28] mentions in one of the few research works providing clear comparative data on two groups of children with schizophrenia (developing schizophrenia under 3 years of age and after 5 years of age respectively), that the group of children that had developed schizophrenia under 3 years of age had exhibited no delusional disorders.

Why so? Such ambiguity in age definition seems rather strange and difficult to explain.

To construct a perfect (though clearly hypothetical) model one should trace the child's (as hereditary tainted concerning schizophrenia as possible) development through all the stages of their linguistic development, paying attention even to the smallest of details if possible, and pinpoint the moment of manifestation of psychosis in no uncertain terms. It is also necessary to observe the patient during all their life, waiting for dementia to manifest, and to pinpoint the moment when delusion dissolves. Yet as such research is unrealistic, we shall attempt at constructing models based not on longitudinal research but on comparing age cross-sections as exemplified by plenty of clinical cases.

We will most likely be able to specify the minimal age of generating delusion with some reasonable precision, as stages of ontogenesis of speech are rather clearly structured along the timeline. But the age of disintegration of ability to generate delusion (not of the delusion already in existence) will be vague, as it depends on a much wider range of factors, both of biological and cultural nature.

During the stage of dissolution, we can trace some neurocognitive correlates to language deterioration and determine at which stage ability to generate delusion is lost and which mechanisms have been damaged exactly.

Thus we have to resort to psycholinguistics, namely, to the issue of ontogenesis of egocentric speech [36-38] and genesis of narrative [37, 39-42]. In our opinion, these are the factors that determine the potential ability to generate delusion in a certain impaired state of conscience.

The age of 6-7 years is the earliest for delusion generation - this is an established clinical fact. But why does delusion "break through" in this age exactly? We believe that by this age three basic language mechanisms have matured and formed completely:

1. Maturing of egocentric speech and its transformation into inner speech. "Inner speech, that is, the speech with which a person cogitates, emerges later, and one could presume that the process of its generation takes place only in school-age" [43].

Therefore, there is no mature cogitation without fully formed inner speech. But there is no delusion, being a cogitation disorder, without cogitation mature enough as well.

During the stage preceding the maturing of inner speech " < … **>** The child, already possessing inner speech in a dialogue, is yet unable to exhibit developed monologue. This is to a large extent connected to the fact that the child's inner speech with all its predicative functions is yet underdeveloped" (cursive by J.Z.)" [37].

Researchers in ontogenesis of children's speech wrote of the same: "Because a child of 6-7 years old obtains new skills, such as monologue and dialogue and ability to express one's thoughts in writing, new genres appear in their everyday use as well: a note, a personal journal, a questionnaire" [44].

And delusion is this very monologue. It requires no partner in conversation. It is self-sufficient. In this we agree with Pazzagli [45], who stated that " < … **>** Delusions and narrations have very different communicative characteristics. Delusion, when reported, places itself outside of a shared communication, of an interactive field; it is presented as an absolute, non-modifiable, saturated truth, that can only be believed or refuted». Delusion requires no dialogue.

Research works had been - and are - mostly viewing the issue of inner speech in a schizophrenic disorder from the perspective of the genesis of verbal hallucinations [46-51], and one can understand that. Such an analogy is obvious and there is a lot of surface coincidences. Inner speech and verbal hallucinations are similar in their non-audial nature. Neither inner speech or verbal hallucinations can be analyzed directly. We can conclude of their presence either from behavioral symptoms or from the patient themselves telling of what and how they heard or thought.

The extreme point of view is rather laconic in its manner - verbal hallucinosis is a disorder of inner speech. « **<** … **>** Many authors have proposed that the cognitive

deficit involved in AVHs (auditory verbal hallucinations) is a disorder of inner speech (cursive by J.Z.)" [50 p. 141].
But this is where similarities between inner speech and verbal hallucinations come to an end. The latter lack the crucial characteristics of inner speech, that is, convolution, predicativeness, the prevalence of sense over meaning. " < … > Inner speech is as convoluted, abridged, stenographic as possible… Its syntactic structure is almost entirely predictive. Just like in oral speech our syntax becomes predicative when the subject and related parts of the sentence are known to the interlocutors, inner speech, where the object and the situation of conversation are always known to the thinking person, consist almost solely of verbs. We never have to inform ourselves of what the talk is about" [52 p. 211].
It is needed and necessary to note that the true connection between the emergence of inner speech mechanisms and generating delusion is not yet wholly clear. To clarify this connection, a lot of research is still needed. Yet one thing may be noted first and foremost: inner speech is a multi-level structure. L. Vygotsky's words about convolution, predicativeness and prevalence of sense refer to the deepest layers of inner speech. Those researching on verbal hallucinations mostly speak of silent articulation, which is the wholly another level of speech generation. This divergence is what explains the many methodological divergences in comparing various usages of the term "inner speech".
Vygotsky's idea that " < … > Thus, the same point in child's cognition development denoted as child's egocentric speech is viewed from the perspective of these schemes as belonging to two completely different routes of childhood development. For Piaget this is the transition stage between autism and logic, from intimate and individual to the social, for us this is the transitional form between articulated and inner speech, from social speech to individual speech, including to autistic speech cognition" [36 p. 57] gives us some sort of clue, but is also a trap for a psychiatrist resulting from overlapping of terminologies. Autistic speech cognition is not the same as autism as one of the cardinal symptoms of schizophrenia. It is just one of the many forms of speech cognition and bears no genetic connection to autism and, therefore, to schizophrenia.
The following assumption might be the bridge between a fully developed inner speech. The ultimate formation of inner speech is the starting point of transition from "complex cognition" to conceptual cognition and, therefore, the formation, or, more precisely, the start of formation of the whole structure of subjective semantics, which will be fully developed only by the end of puberty. And delusion in its most basic manifestation is just destruction of basic personal meanings.
Accepting the definition of delusion by S. Tsyrkin: " < …. > Delusion is a new understanding of the life-defining meaning (cursive by J.Z.) of one's own personal situation in a manner inadequate to the preserved experience and previous personal traits" [53 p. 80] as an operational definition, one can assume that delusional structure will only be able to form when there the formation of "inner semantics", formed, in its own turn, via the formation of inner speech, has begun.
The issue of whether studying direct correlates (neurophysiological, for example) between inner speech parameters and delusion see, for example,[54] is possible stands open, and the problem here is mostly in discovering specific correlations for the phenomenon of delusion, because such an approach brings up the question of consistency and homogeneity of the very notion of delusion.
In this paper, we do not analyze the mechanism of inner speech monitoring disorder but unfold concerning the aspect of inner speech maturing as a precursor to generating delusion.
1. Formation of an individual plot base. There is no, and can't be any, formed delusion lacking plot, delusion without a story (this, most likely, is one of the key differences between delusion and hallucinations).
We believe that it is the plot base, its dynamics, development, and contents, that is the most direct link between the delusional narrative and the cultural environment of both the doctor and the patient.
The individual treasury of plots (formed on the basis of the relevant culture's plots) is, to a large extent, constructed by the child from basic fairy tale plots [55-56]. Researchers have noted more than once the importance of fairy tale to the genesis of narrative: " < … > The discussion to follow depends on the following principle: An object is transformed from a piece of stuff definable independently of any story-line into a social object by its embedment in a narrative. Fairy tales are full of such objects. It is not frivolous to draw on fairy and folk tales for useful material and for model cases. These tales represent a kind of distillation of narrative conventions that have survived translations and transformation, partly, of course, because we all know those of our own cultures. It would be a very isolated child who had never heard of Snow White or Little Red Riding Hood. Indians know the stories of Krishna's adventures, Maoris knew about Maui though they probably know more about Goldilocks these days, and so on. There is an important mirror in Snow White, and Maui had a magic fish hook [57].
It is on the same basis that the so-called "linguistic worldview" is formed: " < … > the influence of the mythological worldview that the child learns via language mediums (via fairy tales and myths heard and read) does, in our opinion, explain the fact that the child's belief in a multitude of spaces and time and their inhomogene-

ity, that is formed during the stage of pre-conceptual, graphic cognition…, persists in child's conscience until adolescence" [58].

Accepting this, we shall address the scholars in folklore studies - even more so since it is in folklore studies where the issue of classification, genesis, and transmission of plots is researched upon most extensively [59,60] - and borrow the notion of the plot corpus from the folklorists [61].

The existence of such a "corpus of delusions plots" as a certain finite or infinite set is completely clear for a doctor per se. In the clinic, such plot "corpus" is used completely routinely (persecutory delusion, the delusion of grandeur, the delusion of romantic charms, etc.) and allows for a rather simplified classification. But the patients take their plots and doctors take their diagnostic classifications just from the same corpus. But the doctor and the patient, borrowing from the same set of plots, will revise those in a completely different manner.

It is important to note that, as in folklore, where " < … > Folklore texts are not stored in the storyteller's memory learned by heart - even if the storyteller themselves believes so, they are not retrieved from the memory ready to go but are constructed from "pre-text" ("avant-text") elements of various levels while being told" [62 p. 108], delusional texts are formed from the motif "bricks" as well, instead of being stored in memory as a whole, and are "constructed" here and now [12].

We believe that disintegration of such pre-text bricks might explain the disintegration of generating delusion in dementia. At that, it is precisely at the level of text generation that the deep levels of inner speech will most likely serve as the pre-text bricks.

The issue of the corpus of plots/motifs, their genesis and transmission has been extensively researched upon in folklore studies but has been almost wholly ignored in theoretical psychopathology [25].

Acknowledging this, we shall resort to (and maybe even trace) the methodology and illuminative history of plot theory development [60,63-64]

" < … > including a motif into a wider typological perspective affords grounds for reconstruction of its meanings, since every particular case may be viewed as an incomplete implementation of a certain theoretically imaginable "perfect" semantic model. It follows from the above that solely typological parallels belong to the deepest semantic level of oral traditions; above them is what is explained by their genetic relation; and on the very surface, we can find coincidences resulting from cultural diffusion. There is nothing original to this conclusion, in fact: interpreting convergences found in texts, we usually take into account historical possibilities for cultural transmissions first, then pass on to genetic commonality and only then - to typological commonality" [65].

2. Ability to form a cultural contextual narrative [66-67]. For delusions to be classified as such, it must not only be spoken out, formulated, articulated, but perceived by the addressee as well (even if the addressee is non-specified or all in all absent) and therefore defined as belonging to the delusions genre. This is the so-called pragmatic level of narrative - that is, the level of employing the narrative in a certain situation, with a certain purpose and considering the situation, understanding of the listener's motifs and goals included.

Developing the ability to form a narrative takes several stages, from that of "accumulation" to the "development of the true narrative", and the latter stage falls on 6-7 years of age [39, 42].

Scholars note that by 7-8 years of age the core of the child's speech dictionary is mostly completing its formation, that is, certain crucial semantic coordinates defining the semantic space of the language are established [68-69] and "communicative competence" is formed: "Communicative competence is the ability to build effective speech activity and effective speech behavior conforming to the norms of social interaction peculiar to the relevant society" [70 p. 4].

All these mechanisms are formed in a certain sequence, in reverse order as compared to the above. Firstly, an ability to formulate a cultural contextual narrative emerges (2.5-7 years of age). Next, the personal base of plots starts developing (3-7 years of age), and it is only by the beginning of school age that egocentric speech is transformed into inner speech (6-7 years of age). This is exactly when doctors start to document delusion, as it is only by this stage of development that the mechanisms of generating delusions are really formed. And, therefore, all prerequisites for its manifestations are present.

According to K.F. Sedov, discursive cognition is based on genre cognition; the extent to which the latter is developed is what defines the level of the person's communicative competence. In the course of development of the schoolchild's genre cognition the genres are more and more differentiated into phatic and informative, on one hand, and into personal and institutional, on the other hand [71 p. 318]. And delusion will be just one of these new "genres".

We can observe the disintegration of this mechanism in patients with dementia (mostly frontotemporal dementia). Patients' speech in the early stages of the disorder is often marked with logorrhea (excessive speech production) and loses its contextualness, Such patients become "tactless" both in their speech and their behavior, lose their sense of situation, do not detect context (and these characteristics are often observed in frontotemporal dementia [72]. At that, narrative skills may persist, and disintegrate during the later stages only.

In our context, we highlight not only (and not as much) the possibility of forming a narrative, but the cultural contents and a pragmatic component of the latter. For delusion to develop, it must rely on all these three linchpins. Without them, generating delusion is impossible, as well as generating "pseudo-delusion" - that it, simulating. As opposed to this, one surely can simulate a non-narrative psychotic structure, such as verbal hallucinations.

We have dwelled above upon a model of ontogenesis of delusions based on the age of its manifestation in the clinical performance and on an attempt to correlate such age to stages of language and cognition development.

The second approach to solving the title problem of this paper may be the model of the development of psychotic symptoms in children with intellectual disability. It is just in such cases that it is possible to trace all the above mentioned factors, as it is precisely in a mental deficiency that we can observe the disorders and desynchronization in their development. In other words, mental deficiency is just what gives is the key to normal development and to the breakdown of these functions on a new level.

The third research option, as we have already mentioned, is the model of language skills disintegration in dementia. The pro of this method is the fact that, firstly, neurocognitive research upon dementia has been - and are - conducted widely, and secondly, that language problems in such disorders are very noticeable and sometimes, especially in the early stages of the disease, dominant [72-73]. And thirdly, we find both delusions disorders and hallucinations here often enough.

" < … > The key to psychology lies in pathology; not only due to the fact that the latter has groped for and studied the roots of the psyche before the rest but also because that this is the inner nature of things and the resulting nature of scientific knowledge of these things" [36].

Some preliminary conclusions:

0.0. On the grounds of the definitions cited above (ours and that of S.Y. Tsyrkin), of course incomplete, one could define delusion as follows: *Delusion is a complex of connected texts/narratives, in which the patient ascribes "special qualities" (special meaning) either to themselves or someone or something from the world around them, and production of which results from the crucial breakdown in the individual meaning of the person; such texts are resistant to any basic meanings that had existed before such breakdown.*

1.0. There is a minimal age of delusion generation in mental illness that is based on language mechanisms formed in ontogenesis and can be ascertained experimentally.

1.0.1. Development tracks of all three mechanisms converge in the age point of 6-7 years, and this, in our opinion, is what enables the illness (in any form) to provide an impetus to delusion development.

1.1. Such potential mechanisms are most likely independent from the illness and, therefore, are not nosospecific.

1.2. Irregularity of emergence of such mechanisms contributes to the clinical irregularity of delusional and non-delusional, mostly hallucinatory psychopathological symptoms during various stages of personal development.

1.2.1. The lack (due to dysmaturity or disintegration) of all three abovementioned elements shall lead to total inability to form delusion, which in no way discards the fact of psychosis. This can be observed, for example, in moderate intellectual disability, in small children (approximately under 3-4 years old) or in progressive acquired dementia.

1.2.1.1. In acquired dementia we shall be able to observe certain stages that are difficult or impossible to spot in a child - for example, disorders on the **cultural contextual narrative** stage.

1.2.2. Immaturity of inner speech - that is, sticking on the egocentric speech stage - must lead to inability to formulate delusion as a narrative.

1.2.3. The lack of plot corpus may lead to delusion of rudimental contents. This is observable in children of 4-6 years of age, with phantasms and pathological dereism prevalent in clinical performance [74iii]. Similar process takes place in disintegration of cognitive functions. After the loss of cultural contextual narrative a gradual narrowing of the plot corpus shall take place - down to the minimal set with gradual total depletion.

" < …. > usually mental disability of various pronouncement only affects the plot, contents and arrangement of deusions beliefs, preventing delusion generation only in the most difficult cases" [31]

The same is noted in development of dementia and in organic lesions of encephalon: less impaired cognitive functions provided more complex delusion contents [75].

In the stage of total depletion generating delusion will be impossible. The sequence of plot corpus disintegration is especially interesting in the context of the hypothetical assumption of maximum preservation of basic "nuclear" plots. Whether this is true, is yet an open question.

1.2.3.1. The clinical fact of hallucinations being more frequent than delusion [28, 76-78] can be explained, by

iii <…> Pathological dereism syndrome is found in children of various ages (from 1,5 to 15 years), *but is mostly developed after 5 years of age* (cursive by J.Z.), usually after a short period of "normal" fantasies" [74].

reference to the hypothesis proposed above, via underdevelopment of the plot corpus and inner speech while expressive speech is relatively unimpaired (as the phenomenon of hallucination would not have been discovered if not for the telling of it). Such distribution of hallucinatory and delusional phenomena has also been noted in adolescents with schizophrenia [77] and in patients with mild mental deficiency 79-80.

One must not rule out that such differentiation between the verbal hallucinations phenomenon and that of delusion is largely based precisely on the structure of transmission (verbalization)[iv]. That is, verbal hallucinations ***lack the structure of a narrative, they lack a story,*** while the story (even if not unfolded in extenso), constructed as a narrative is one of the central and, probably, even key factors in genesis and structure of delusion.

Perceiving narrative as the central element of differentiating between delusion and hallucinations, one can also note another fact. Namely, if such attribute as narrativeness does really act as differentiating characteristic, we shall discover "transitional forms" - that is, forms exhibiting ***narrative hallucinosis and non-narrative delusion.*** Does this occur in clinic? No doubt. These are, for example, well-known forms of hallucinatory-paranoid symbiosis, when it is difficult to differentiate between perception phenomenon and sole interpretation (and narration). For example, as Rybalsky notes: " < … **>** In such cases, when the illness is based on paranoid syndrome and the patient complains about "smells", *it is almost impossible not only to estimate whether these are illusions or hallucinations, but also to define the very nature of patient's experiences* (cursive by J.Z.): do those really include the sensory, sensual component, that is, does the patient really smell something, or are they just persuaded of smells in a delusional way. Such delusional persuasion is observed in paranoid delusions with interpretative delusional explanations of external events. For example, a patient under our observation, often notices, especially during low moods, that people around him try to get further from him, turn away, sniff up - they try to smell something. The patient sees their faces as wry. He is long convinced that he smells bad. Sometimes he believes (rather unsurely) that he smells that himself, but usually confirms that it is from the others' behavior that he gets the clue about the smell. In this case, one cannot talk about a combination of olfactory hallucinations and delusional beliefs. There are delusional experiences only, including not real olfactory hallucinations, but **delusionals illusions.** Olfactory hallucinations are always more or less thematically related to delusion" [31].

If we are to give an example of non-narrative **delusion,** this will most likely be its entry or final forms, that is, delusion in the earliest stages of its emergence or during its disintegration.

1.3. The role of all the abovementioned elements in genesis of delusion will most likely vary and depend on the age of contraction of the disease, the type of psychic pathology and the basic level of psychological development.

1.4. Monologue and autistic character that result from the maturing of inner speech are, for now, just preliminary "bridges" linking it to delusion.

2.In bilingual psychosis, different narrative capacities in mother tongue and foreign language shall lead to different frequency of generating delusion. That is, in the second language there will be less delusion generated with a more meager plot corpus than in one's first language. We can also suppose that in a non-native language the "building bricks" for delusion will be the most archaic plots - as they are more stable and persistent both for an individual and a culture as a whole.

2.1. We should raise the question of basic, "nuclear" delusionals plots and their universality. This issue is important for understanding the phenomenology of delusion. To answer this question, one should rely upon the developments of theoretical folklore studies and compare recognized plot block with yet unrecognized block of delusionals plots. This comparison must be both typological and evolutionary-genetic.

2.2. To simulate psychosis and mostly to simulate hallucinations and delusions, the simulant will most likely form a relevant simulative narrative. This is precisely the situation in which we shall be able to track most clearly the difference between true delusions and a tale of delusions and discover discrepant narrative structures.

3.1. In a similar vein, just as in researching pre-delusional (in children) or post-delusional (e.g., in dementia) stages of disease establishment, we may as well perceive the stages of emergence and disintegration of simulating psychotic phenomena. This is especially relevant in regard to syndromes most dense with narratives, such as delusion and hallucinations[v].

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iv Compare with: "<…> Visual hallucinations showed a significant association with **lower IQ** and earlier age of psychosis onset. In particular, verbal IQ demonstrated a consistent inverse relationship with the presence of visual, somatic/tactile, and olfactory hallucinations, even when each modality was considered independently, and these modalities thus appear to b general marker of an increased severity of psychosis" [81].

v Here we once again encounter the same key age period of 5-6 years as *age of understanding lies:* "<…>At the age of 4-5 years children correctly judged this utterance as a lie only 28% of the time while 5-6-year olds did so 94% of the time. These results suggest that around the ages of 4 to 6 years the ability to represent the relationship between two or more person's epistemic states emerges and becomes firmly established" [82].

4. The phenomenon of "double orientation" found in paranoid states might be explained from the perspective of possible parallel generation and persistence of noncontradictory (?) narratives.
5. The mechanism of detection of a psychotic narrative by a diagnostician is to a large extent culturally determined. It is necessary to construct the mechanism and discover the structure of such detection. Without it, constructing and understanding the logic of diagnosing will be impossible. And diagnosing delusions, as well as diagnosing any psychopathological phenomenon, requires taking into consideration the language, thinking and mythological beliefs of the doctor.
6. Transcultural psychiatry must center not on describing rare local syndromes and symptoms only but take on researching upon the dynamics of cultural changes as well and, therefore, turn to the realm of evolutionary psychopathology - the more so for the reason of the richest body of relevant research data.

This is the way and the research perception that will allow for construction of the new anthropological psychiatry.
In our opinion, this approach, which considers the genesis of delusions from an ontogenetic perspective, may hold significant practical value in clinical settings. On the one hand, it could help prevent the overdiagnosis of delusional disorders in young children. On the other hand, it may enable a more precise assessment of the simulation and dissimulation of psychotic syndromes.

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References
1 Crow T. Is schizophrenia the Price that Homo Sapiens Pays for Language? Schizophr Res 2017;28:127-41. HTTPS://DOI.ORG/10.1016/s0920-9964(97)00110-2
2 Zheng ZP. Comparison of the content of delusions of schizophrenics in China and Japan: cross-cultural psychiatric investigation. Zhonghua Shen Jing Jing Shen Ke Za Zhi 1989;22(5):266-268.
3 Tateyama M, Asai M, Hashimoto M, et al. Transcultural study of schizophrenic delusions. Tokyo versus Vienna and Tübingen (Germany). Psychopathology 1998;31(2):59-68. https://doi.org/10.1159/000029025
4 Suhail K, Cochrane R. Effect of culture and environment on the phenomenology of delusions and hallucinations. Int J Soc Psychiatry 2002 Jun;48(2):126-38. https://doi.org/10.1177/002076402128783181
5 Hinzen W. The linguistics of schizophrenia: thought disturbance as language pathology across positive symptoms. Front Psychol 2015 Jul 16;6:971. https://doi.org/10.3389/fpsyg.2015.00971
6 Akhutina TV. Roman Jakobson I razvitie russkoy neyrolingvistiki [Roman Jacobson and evolution of Russian neurolinguistics] In: Neurolinguistic analysis of lexis, semantics and pragmatics. Moscow: 2014 [in Russian]
7 Schmid V. Narratologija [Narratology]. Moscow:2003. [in Russian]
8 Zislin J, Kuperman V, Durst R. The generation of Psychosis: A pragmatic Approach. Med Hypotheses 2002 Jan;58(1):9-10. https://doi.org/10.1054/mehy.2001.1392.
9 Bruner, J. S. Actual Minds, Possible Worlds, Cambridge, MA: Harvard University Press 1986
10 Zislin J. Zametki k probleme «narrativ v fol'klore i psihiatrii» [Notes upon the problem of narrative in folklore and psychiatry] // in. Genius Loci: sb. Statej v chest' 75-letija S. Ju. Nekljudova [Genius Loci: a collection of papers in honor of the 75th birthday of S.Yu. Neklyudov] / Ed. by M.A. Akhmetova, N.V. Petrov, O.B. Khristoforova. Moscow:2016. [in Russian]
11 Yu C. Recurrence of Typical Dreams and the Instinctual and Delusional Predispositions of Dreams. Dreaming 2010;20:254-279. https://doi.org/10.1037/a0020879
12 Kuperman V, Zislin J. K Strukturnomu analizu breda [On the structural analysis of delusion]. In Solnechoe Spletenia [Celiac plexus]2001;18-19: 254-270. [in Russian]
13 Brown B, Nolan P, Crawford P, al. Interaction, language and the "narrative turn" in psychotherapy and psychiatry Soc Sci Med 1996 Dec;43(11):1569-78. https://doi.org/10.1016/s0277-9536(96)00053-6
14 Holmes J. Narrative in psychiatry and psychotherapy: the evidence? Med Humanit 2000 Dec;26(2):92-6. https://doi.org/10.1136/mh.26.2.92
15 Lewis B. Narrative and psychiatry Curr Opin Psychiatry 2011 Nov;24(6):489-94. https://doi.org/10.1097/YCO.0b013e32834b7b7f
16 Marini A, Parlini C. Narrative language production in schizophrenia. In. Brain Evolution, Language and Psychopathology in Schizophrenia Routlege 2014.
17 Hamkins S. The Art of Narrative Psychiatry: Stories of Strength and Meaning. Oxford University Press 2014.
18 Brodie H. Brody H. Stories of sickness. New Haven: Yale University Press1987.
19 Lysaker P, Lysaker J. Narrative Structure in Psychosis: Schizophrenia and Disruptions in the Dialogical Self. Theory &Psychology 2001;12: 207-220. https://doi.org/10.1177/0959354302012002630
20 Roe D, Davidson L. Self and narrative in schizophrenia: time to author a new Story. Med Humanit 2005 Dec;31(2):89-94. https://doi.org/10.1136/jmh.2005.000214
21 Saavedra J. Incomprehensibility in the Narratives of Individuals With a Diagnosis of Schizophrenia. Qual Health Res 2009 Nov;19(11):1548-58. https://doi.org/10.1177/1049732309351110
22 Allé MC, Potheegadoo J, Köber C, et.al. Impaired coherence of life narratives of patients with schizophrenia. Sci Rep 2015 Aug; 10:5:12934. https://doi.org/10.1038
23 Moe A. Schizophrenia Narrative and Neurocognitive Processes. A dissertation submitted to Kent State University in partial fulfillment of the requirements for the degree of Doctor of Philosophy. https://etd.ohiolink.edu/acprod/odb_etd/ws/send_file/send?accession=kent1433205500&disposition=inline
24 Wozniak T. Narrative Discourse in Schizophrenia. Psychology of Language and Communication 2006; 10: 61-88.
25 Zislin J, Kuperman V, Egorov A. K voprosu o klassifikacii breda (popytka strukturno-semanticheskogo analiza [On the issue of classification of delirium (an attempt at structural-semantic analysis]. Social'naja i klinicheskaja psihiatrija [Social and clinical

psychiatry]2003;3: 97-105.[in Russian]

26 Crow T. Schneider's nuclear symptoms as the key to the structure of language. Neurol. Psychiatry Brain Res 2007;14: 87-94.

27 Funk B. The Parallel Evolution of Language and Auditory Verbal Hallucinations// Divergencias. Revista de estudios lingüísticos y literarios. 2012;Volumen 10: número 1, verano 2012. electronic version-http://divergencias.arizona.edu/sites/divergencias.arizona.edu/files/articles/LanguageEvolutionDivergencias.pdf

28 Kolvin I, Ounsted C, Humphre M, et al. The Phenomenology of Childhood Psychoses. Br J Psychiatry 1971 Apr;118(545):385-95. https://doi.org/10.1192/bjp.118.545.385

29 Sukhareva GE. Lekcii po psuchiatrii detskogo vozrasta [Lectures in psychiatry of childhood: Selected chapters]. Moscow: 1974. [in Russian]

30 Remschmidt H, Schulz E, Martin M, et al. Childhood-Onset Schizophrenia: History of the Concept and Recent Studies. Schizophr Bull 1994;20(4):727-45. https://doi.org/10.1093/schbul/20.4.727

31 Rybalsky M.I. Bred. [Delusion]. Moscow: 1993. (in Russian)

32 Jshi T, Towbin K. Psychosis in childhood and its management. Neuropsychopharmacology.The Fifth Generation of Progress. edited by by Kenneth L. Davis (Editor), Dennis Charney MD (Editor), Joseph T. Coyle (Editor), Charles Nemeroff MD PhD (Editor) Lippincott Williams & Wilkins 2002.

33 Kovalev V. Semiotika i diagnostika psihicheskih zabolevanij u detej i podrostkov [Semiotics and diagnosing mental illnesses in children and adolescents.]. Moscow: Medicine, 1985. (in Russian)

34 Child and adolescence Psychiatry. Third edition. Ed. Robert Goodman and Stephen Scott.Wiley-Blackwell 2012.

35 Pediatric Hospital Medicine : Textbook of Inpatient Management. by Ronald M. Perkin (Editor), M.D. Swift, James D. (Editor), M.D. Newton, Dale A. (Editor) Lippincott Williams & Wilkins 2008.

36 Vygotsky LS. On the issue of compensatory processes in development of the mentally challenged child. Collected works in 6 volumes. Vol. 1. Moscow: 1982

37 Luria A.R. Jazyk i soznanie. [Language and consciousness] Moscow:1979. [in Russian]

38 Werani A. The role of inner speech in higher psychic processes. Cultural and historical psychology 2010; 1: 7-17.

39 Hutson-Nechkash P. Storybuilding. A guide to Structuring Oral Narrative. Thincing Publications 1990. http://courses.washington.edu/sop/StorybuildingIntroduction.PDF

40 McCabe A, Rollins P. Assessment of Preschool Narrative Skills. American Journal of Speech-Language Pathology 1994;3:45-56. DOI:10.1044/1058-0360.0301.45

41 Hegstes S. Narrative Development in Preschool and School Age Children. http://digitalcommons.usu.edu/cgi/viewcontent.cgi?article = 1139&context = honors

42 Yurieva N.M. Zarubezhnaja nauka o stanovlenii ustnogo narrativa u detej: k osnovam kognitivnogo podhoda - ot L. S. Vygotskogo k A. Applby [Foreign research upon emergence of oral narrative in children: about the basics of cognitive approach - from L.S. Vygotsky to A. Appleby] Psiholingvistika 2016; 1:284-295.

43 Vigotsky 1983 K voprosu o kompensatornih processah umstvenno otstalogo rebenka [To the issue of compensatory processes in a mentally retarded child] Collected works in 6 volumes v5 p.124. M:1983 [in Russian]

44 Mikhailova Ekaterina. Zanrovaja specifica rechi detey mladshego shkolnogo vozrasta [genres of the children"s spttch at younger school age. Filologija i iskusstvovedenie [Filology and art history] 2014;6 (8) URL: http://7universum.com/ru/philology/archive/item/1398 [in Russian]

45 Pazzagli A. Delusion, narrative, and affects. J Am Acad Psychoanal Dyn Psychiatry 2006 Summer;34(2):367-76. https://doi.org/10.1521/jaap.2006.34.2.367

46 McGuire PK, Silbersweig D, Wright I, et al. The neural correlates of inner speech and auditory verbal imagery in schizophrenia: relationship to auditory verbal hallucinations. Br J Psychiatry 1996 Aug;169(2):148-59. https://doi.org/10.1192/bjp.169.2.148

47 Brebion G, Stephan-Otto S, Ochoaet S, et al. Impaired Self-Monitoring of Inner Speech in Schizophrenia Patients with Verbal Hallucinations and in Non-clinical Individuals Prone to Hallucinations. Front. Psychol 2016 September ;14: https://doi.org/10.3389/fpsyg.2016.01381 http://dx.doi.org/10.3389/fpsyg.2016.01381

48 Moseley P, Fernyhougha C, Ellisonb A. Auditory verbal hallucinations as atypical inner speech monitoring, and the potential of neurostimulation as a treatment option. Neurosci Biobehav Rev 2013 Dec;37(10 Pt 2):2794- 805. https://doi.org/10.1016/j.neubiorev.2013.10.001

49 Allen P, Freeman D, Johns L, et al. Misattribution of self-generated speech in relation to hallucinatory proneness and delusional ideation in healthy volunteers. Schizophr Res 2006 Jun;84(2-3):281-8. https://doi.org/10.1016/j.schres.2006.01.021

50 Jones S, Fernyhough C. Neural correlates of inner speech and auditory verbal hallucinations: A critical review and theoretical integration. Clin Psychol Rev 2007 Mar;27(2):140-54. https://doi.org/10.1016/j.cpr.2006.10.001

51 Cho R, Wu W. Mechanisms of auditory verbal hallucination in schizophrenia. Front Psychiatry 2013 Nov 27;4:155. https://doi.org/10.3389/fpsyt.2013.00155

52 Vygotsky L.S. Jazik I mishlenie [Cognition and speech]. Moscow:1934.

53 Tsyrkin SY. Analiticheskaja psihopatologija [Analytical psychopathology] 3rd ed., revised. Moscow: 2012. [in Russian]

54 Johns, L, Gregg L, Allen P, et al. Impaired verbal self-monitoring in psychosis: effects of state, trait and diagnosis. Psychol Med 2006 Apr;36(4):465-74. https://doi.org/10.1017/S0033291705006628

55 Elkoninova L. Rol' volshebnyh skazok v psihologichskom razviti doshkol'nikov [The role of fairytale in psychic development of children of pre-school age] Psychology of game and fairy tale. An anthology. Moscow, ANO "Psychological E-library", 2008 [in Russian with Summary in English].

56 Zipes J. The Irresistible Fairy Tale: The Cultural and Social History of a Genr. Princeton University Press 2012.

57 Harré R. Material Objects in Social Worlds. Theory, Culture and Society 2002;5 / 6 https://doi.org/10.1177/026327640201900502

58 Tukhareli N. Children's linguistic worldview as an object of linguistic research. In.Language, conscience, communication: collected papers. Ed. by V.V. Krasnykh, A.I. Izotov. Moscow: MAKS Press, Issue 17. 2001. [in Russian]

59 Propp VY. Morphology of the folktale [Morfologija skazki]. 2nd ed. Moscow:Nauka 1969. [in Russian with Summary in English]

60 Neklyudov SY. Dialektnost' — regional'nost' — universal'nost' v fol'klore [Dialectness - regionality - universality in folklore] in Universalii russkoj literatury [Universals of Russian literature]. 4. Voronezh: Academical book 2012[in Russian] http://www.ruthenia.ru/folklore/neckludov70.pdf

61 Kozmin AV. Sjuzhetnyj fond skazok: struktura i Sistema [The fairy tale plot corpus: structure and system.] Moscow: 2009. [in Russian]

62 Neklyudov S.Y. Specifika slova i teksta v ustnoj tradicii [Specifics of word and texts in oral tradition] in Evrazijskoe prostranstvo. Zvuk, slovo, obraz. [Eurasian space. Sound, word, image] M:2003 [in Russian]

63 Berezkin Y.E. Folklore-mythological parallels among peoples of Western Siberia, Northeastern Asia, and the Lower Amur — Primorye region Archaeology Ethnology and Anthropology of Eurasia 2006; 27(1):112-122.

64 Berezkin Y.E. Folklore and mythology catalogue: its lay-out and potential for research // The Retrospect Methods Network Newsletter 10. Between Text and Practice. Mythology, Religion and Research. A special issue of RMN Newsletter, ed. by Frog and Karina Lukin. Helsinki: University of Helsinki 2015.

65 Neklyudov SY. Motiv i tekst [The motif and the text][. In. Jazyk kul'tury: Semantika i grammatika. K 80-letiju so dnja rozhdenija akademika Nikity Il'icha Tolstogo (1923-1996 [The language of culture: semantics and grammar. In commemoration of the 80th birthday of the member of Academy of Sciences Nikita Ilyich Tolstoy (1923-1996)].Ed. by S.M. Tolstaya. Moscow:2004. [in Russian]

66 Nelson K. Event Knowledge: Structure and Function in Development. Hillsdale, New Jersey: Lawrence Erlbaum Associates 1986.

67 Fivush R, Nelson K. Culture and Language in the Emergence of Autobiographical Memory. Psychological Science 2004; 15: 9 573-577. https://doi.org/10.1111/j.0956-7976.2004.00722.x

68 Dobrova GR. O nekototih aspektah usvoenija leksicheskoy semantiki detmi 3-6 let/ Vlijanie novogo znanija na rechevoe povedenie [Upon some aspects of learning lexical semantics by 3-6-year-old children: how new knowledge affects speech behavior] in Age as speech behavior factor. Collected papers. Perm: GOVPO Perm State University Press 2007. [in Russian]

69 Zakharova A. Opit lingvisticheskogo analiza slavarja detskoy rechi [An attempt at linguistic analysis of children's speech vocabulary]. Abstract of a thesis for PhD in Philology. Novosibirsk:1975. [in Russian]

70 Sedov K. Diskurs I lichnost: evolucija kommunikativnoy kompetencii [Biscourse and personality evolution of communicative competence] M. 2004[in Russian]

71 Sedov K. Psycholongvisticheskie aspekti izuchenija rechevih zanrov [Psycholinguistic aspects of the study of speech genres] Zanri rechi vip 3 Saratov: 2002[in Russian]

72 Ash S, Moore P, Antani S, et al. Trying to tell a tale: discourse impairments in progressive aphasia and frontotemporal dementia. Neurology 2006 May 9;66(9):1405-13. https://doi.org/10.1212/01.wnl.0000210435.72614.38

73 Harris J, Jones M, Gall C, et al. Co-Occurrence of Language and Behavioural Change in Frontotemporal Lobar Degeneration. Dement Geriatr Cogn Dis Extra. 2016 Jun 1;6(2):205-213. https://doi.org/10.1159/000444848

74 Rudneva IK. Sindrom patologicheskogo fantazirovanija pri maloprogredientnoj shizofrenii u detej [The syndrome of pathological dereism in children with sluggish schizophrenia] In: Problemy shizofrenii detskogo i podrostkovogo vozrasta [Problems of schizophrenia in childhood and adolescence]. Ed. by M.Sh. Vrono. M:1986. [in Russian]

75 Cumming J. Organic Delusions: Phenomenology, Anatomical Correlations, and Review. Br J Psychiatry 1985 Feb;146:184-97. https://doi.org/10.1192/bjp.146.2.184

76 Spencer E, CampbeM. Children With Schizophrenia: Diagnosis, Phenomenology, and Pharmacotherapy. Schizophr Bull 1994;20(4):713-25. https://doi.org/10.1093/schbul/20.4

77 Polanczyk G, Moffitt T, Arseneault L, et al. Etiological and Clinical Features of Childhood Psychotic SymptomsResults From a Birth Cohort. Arch Gen Psychiatry 2010 Apr;67(4):328-38. https://doi.org/10.1001

78 Sood M, KattimaniS. Series on Childhood-onset Schizophrenia. J.Indian Assoc. Child Adolesc. Ment. Health 2008; 4(2):28-37. https://doi.org/10.1177/0973134220080202

79 Glick M.A. Developmental Approach to psychopathology in people with mild mental retardation. In. Handbook of Mental Retardation and Development. Ed By Jacob A. Burack, Robert M. Hodapp, Edward Zigler. Cambridge University Press 1998.

80 Zigler E and Glick M.The Developmental Approach to Adult Psychopathology. The Clinical Psychologist 2001; 54:2-11.

81 Jardri R, Bartels -Velthuis A, Debbané M, et al. From Phenomenology to Neurophysiological Understanding of Hallucinations in Children and Adolescents. Schizophr Bull 2014 Jul;40 (Suppl 4):S221-32. https://doi.org/10.1093/schbul/sbu029

82 Wimmer H, Perner J. Beliefs about beliefs: Representation and constraining function of wrong beliefs in young children's understanding of deception. Cognition 1983; 13(1): 103-128. https://doi.org/10.1016/0010-0277(83)90004-5