ASTRA SALVENSIS
-Revistă de istorie şi cultură-

„SFINŢĂ MĂRTURI ŞI MĂRTURISITORII
NĂSĂUDENI

Supplement 1/2018

Central and Eastern European Online Library
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"Autopoet" Project: a Semantic Anomalies Generator or a New Existence Creator?

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Abstract. *The article is devoted to the problems of computer generation of semantically abnormal texts possessing a grammatically connected structure, but entering into an obvious contradiction with the logic of objective reality. Using the example of the "Autopoet" service developed by Yandex showed that machine text generation is of interest not only in the applied aspect, but also as an instrument of aesthetic influence that allows rethinking the traditional paradigms of literary and art creation. Processing millions of search requests, "Autopoet" generates absurdist poems on their basis. Examination of the functioning principles of the "Autopoet" in the existential and phenomenological aspects allows concluding that, on the one hand, its poetic experiments embody a completely impersonal type of writing and, consequently, do not have a clear compositional and semantic structure. On the other hand, amorphous and rhizomatic computer "auto-text" every time as a building made of bricks, consists of self-sufficient microtexts, once entered by users in the search box and carrying a powerful existential charge, because each of them captures the unique moment of everyday human existence. Thus, the "Autopoet" alienating the verbal and existential acts from the subject who performs them, accumulates them in the space of the text, changing them into a pure, impersonal existence.*

Keywords: semantic abnormality, existence, generation of text, automatic processing of natural language, Yandex

Introduction

In contemporary linguistics, the research path "from text to meaning" can be considered generally accepted: the worldview of the linguistic personality is reconstructed on the basis of the thesaurus analysis and the image of the world that exists in the people's consciousness, based on the dictionary and the text corpus created by the society as a whole. Going this way, a scientist comes to a conclusion about the subjective vision of objective reality and its fragments: a linguist judges how a person perceives qualities, emotions, feelings, the world around him, etc.

In a large number of cases, a researcher reconstructs the "normal world" - a picture of reality surrounding us, colored in the tone of our assessments and opinions, knowledge and delusions. However, at times the world represented in the text is far from reality (in other words, normality) - this is an abnormal world.

Language abnormalities is a linguophilosophical concept, which is confirmed by the tradition of its description in the works of L. Wittgenstein, B. Russell, N. Chomsky, N. D. Arutiunova, Yu. D. Apresyan, I. M. Kobozeva, TB Radbyl, S. P. Potseluev, etc. [1] The efforts of linguists are aimed primarily at the typology of

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[1] Yu. D. Apresyan, *Language anomalies: types and functions*, *Res Philologica*, Moscow, Science, 1990, p. 50–71; N.D. Arutiunova, "Anomalies and language (To the problem of the language "worldview")", *Questions of linguistics*, (1987) no. 3, p. 3–20; L. Wittgenstein, *Logic-philosophical treatise, Philosophical works*, Moscow, Gnosis, 1994, p. 22–65; I. M. Kobozeva, N. I. Laufer, "Language anomalies in the prose of A. Platonov," in *Logical analysis of the language. Contradiction and deviance of a text*, Moscow, Science, 1990, p. 125–130; S.P. Potseluev, "Nonsense in the aspect of semantics. Essay on the history of ideas", *Logos,*

linguistic abnormalities, which are perceived as such against the background of the norm, the latter being understood in the cultural and speech aspect as an approved exemplary way of using the units of language, and in the cognitive - as a representation of the proper, typical, ordinary, widespread.

Among the various "abnormal" units of speech, attention is drawn to semantic abnormalities - word combinations, utterances and whole texts that violate the logic of the language (remember the famous phrase of N. Chomsky "*Colorless green ideas sleep furiously*") and the world (Thus, D. Harms, A. Platonov, A. Vvedensky and others - the creators of the "abnormal artistic discourse" (the term by T. B. Radbil) [6]). It should be noted that semantic abnormalities are also of interest to philosophers who reveal the ontological and phenomenological aspects of meaningless utterances.

Without dwelling on the theoretical foundations of the study of semantic abnormalities, let us turn our attention to one curious fact that is significant for studying the object chosen.

Solving the problem of automatic processing of natural language, scientists include in their arsenal a method of semantic analysis aimed at assessing the possibilities of a semantic understanding of the text (it is natural that despite the complexity of the grammatical system of any natural language, artificial intelligence has much more difficulties in work with the sphere of meanings). At the same time, amid the search for ways to teach artificial intelligence to create semantically acceptable text, the semantically abnormal texts generated by computer acquire special attractiveness. So, on the cusp of verbal art and the latest information technologies, vanguard art projects are created that allow the artist, experimenting with non-standard means of expression, to significantly enrich the traditional poetic tools and look at the problem of creative symbiosis between man and machine at the different angle.

Subjects and Methods

Perhaps the most widely known project of this kind is the "Autopoet", launched in 2013 by "Yandex" company.[2] The mechanism of its work (if not to go into technical details) is relatively simple. Out of hundreds of millions of user's queries daily processed by the search engine, the algorithm selects those that fit the given conditions (for example, fit into certain metric schemes), and composes them. At the end of this process, there is a short poem, consisting of meaningful or partially meaningful lines that do not add up to any meaningful whole.

The first verses of the virtual author were blank:

proverbs - camertones
posthumous medallions
smiling melancholic
symbols of the president

(2006) no. 6 issue 57, p. 21–67; T.B. Radbil, *Language anomalies in the literary text: thes. of doctor of philology*, Moscow, 2006. p. 496; B. Russell, *The study of meaning and truth*, Moscow, Idea-Press, House of Intellectual Book, 1999, p. 400; N. Chomsky, *Aspects of the theory of syntax*, Moscow, MSU Publishing House, 1972, p. 129.
[2] Yandex Autopoet. Available at: https://yandex.ru/autopoet/, accessed 31. 10. 2017.

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[poslovitcy-kamertony
posmertnye medalony
ulybchivyi melankholik
simvolika prezidenta].[3]

However, as the algorithms improved, it learned to use the rhyme skillfully and mastered various strophic models, including the Onegin stanza, limerick, monorhyme, "powder" (a humorous quatrain written in a iambic tetrameter, with the distribution of syllables in verse: 9-8-9-2).

When a reader comes to the web page of "Autopoet", he is randomly issued to one of the robot-created opus. Updating the page or using the buttons "Back" and "Forward", one can continue acquaintance with the works of the virtual poet - their corpus is quite extensive.

The use of the neural network approach allows Autopoet's absurdist works to simulate works of any of the classics of Russian poetry.

Scrupulous works creation dates, as well as frequently encountered "personal" notes referring to one or another events from the life of an imaginary author help to simulate a genuine creative process: "November 2015, sunny", "February 3, 2014, at home", "January 2015, after the holidays" etc. The opportunity to listen to its poems in "audio recordings", which appeared in 2015, reinforces the impression of direct contact with the "poet". At the same time, carefully tuned voice synth settings create a reliable illusion of live reading - leisurely, thoughtful one, with a barely perceptible hue of tongue-tied language.

At first glance, the Yandex project may seem like nothing more than a by-product of applied research in the field of computer processing of information, designed to attract the public's attention to the company's main services, and to demonstrate its technological leadership. The project manager Alexei Tikhonov tends to regard it as a funny joke, extremely high-intellectual in execution, but quite ordinary in terms of its effect. Comprehending what he has done, he ends his reasoning with the following ironic conclusion: "Automatic texts lack a through structure, semantics - but their figurativeness is already high enough so that as you read it, you could try to come up with some sense on your own, even if there is no sense".

However, if we consider the basic principles of the work of "Autopoet" and its poetic production in existential and phenomenological aspects, this generator of semantic abnormalities can be considered one of the most striking breakthroughs in the techno-vanguard art of the current decade.

According to the memoirs of V.B. Shklovsky, Vl.Mayakovsky appealed to street and newspaper advertising in discussions about verse meters, asserting that "he does not know the meters at all, but that, probably, trochee is a phrase: Shop and workshop of brushes and brushes [Magazin i masterskaia shchetok i kistei]. And iamb is: The music orchestra plays on Tuesdays and Thursdays [Orkestr muzyki igraet po

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[3] A. Tikhonov, *Autopoet: Is it possible to automate creativity*, Yandex Blog. July 8, 2016. Available at: https://yandex.ru/blog/company/avtopoet-mozhno-li-avtomatizirovat-tvorchestvo, accessed 31. 10. 2017.

vtornikam i chetvergam].[4] The sharp sensitivity to the poetic nature of the unethical, everyday word, in Shklovsky's presentation, was inherent in all futurists.

However, the appearance of "Autopoet" became perhaps the most spectacular manifestation of the idea of natural poetic language in the last century. While metrization in search queries is rare (though due to their syntactical specificity, still somewhat more often than in everyday speech), and their rhyme is in fact the result of the computer program, the plenty of "Self-piecing" poems, collected together in the format of a lyrical book, involuntarily - and contrary to all logical arguments - leads to the thought that this is not an artificially multiplied accident, but a manifestation of some unobvious regularity peculiar to speech production processes.

However, much more interesting object of analysis is not the literary production of "Autopoet", but the very principles of its "creativity".

Alexei Tikhonov managed to do the impossible by designing an ideal machine for a subjectless, utterly impersonal writing, which at the same time, paradoxically, is a perfect machine of existential creation. This effect is possible due the fact that the integral unit of any combinatorial transformations is an internally complete microtext that is not subject to any structural modifications: the absurdizing logic of computer "thinking" completely subordinates the structure of the final text, but does not extend to its constituent parts (ie separate lines), which are taken unchanged.

As Tikhonov noted, in search queries, especially in the so-called low-frequency ones, "... real human life is visible: [what to hang in an apartment to marry], [tadadadadam hockey melody], [porno for nokia 320x240], [red pants on chandelier to love reviews], [I was right that we will not win this World Cup]. Each example helps to imagine this or that life story».

Therefore, the emotional and thematic range of the "Autopoet" turned out to be unexpectedly wide - from funny absurdist verses to unexpectedly dramatic philosophical miniatures, where the meaning is slowly and painfully pronounced through the verbal indiscretion, through the heavy "rolling of the tongue", through internal discord (just like, for example, the creative process was felt by Boris Pasternak):

> oblivion consciousness oblivion
> table of planets' sizes
> moments or moments
> laws - to search - Internet
> [zabvenje soznanje zabvenje
> tablitca razmerov planet
> mgnoveniia ili mgnovenja
> zakony iskat' internet]
> ...
> whether I wake up tired in the night
> forget nothing understand

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[4] V. B. Shklovsky, *Once upon a time: Reminiscences. Memoir notes. The stories about the time: from the end of the XIX century to 1964*, Moscow, Soviet writer, 1966, p. 326.

reclusive flight six-fingered
how to clarify the meaning correctly
[v nochi li prosnus ia ustalyi
zabyt nichego ne poniat
zatvornik polet shestipalyi
kak pravilno smysl utochniat].[5]

Indeed, the verbal construction introduced by the user into the search string very often represents a narrative in miniature or a lyrical statement condensed to a few words: it captures our experiences and reflections, the problems that concern us and the challenges we face, our social connections and our social phobias, our pressing needs and our plans for the future, our hidden complexes and our secret dreams. As S. Stevens-Davidovich, who has worked for a long time as a data analyst in the "Google" corporation, notes: in his dialogue with the soulless search engine, people are almost always much more relaxed and open than in dealing with their own kind: for example, specialists received an adequate idea of the prevalence of some psychological problems only as a result of analyzing the search statistics.[6]

In fact, each search query is a tiny, but mentally and emotionally saturated part of our existentiality, wasted away by us into virtual nothingness.

Autopoet's "creativity" is interesting because it demonstrates an unprecedented in its scope non-violent alienation of human existence by a machine, in recent decades, rapidly gaining momentum. Every day, appropriating hundreds of millions of existential text atoms, the machine includes them as a building material in its own word-generation processes, completely neutralizing the intentions originally set by their addressees and surgically separating them from all contextual shells. This automatic writing for the sake of writing, which has no ultimate goal outside of itself and has reached that degree of depersonalization, when not only the author is dead (the subject striving to impose a meaning on the text), but also the scripter (a subject striving to impose a certain structure on the text).

Nevertheless, as has already been pointed out, the "violent grammar" of automatic writing does not affect the search microtexts themselves, which objectify some "point", but existentially significant, life-building efforts of the individual. "Autopoetry" of "Yandex" is based on the almost oxymoronic contrast of the postmodernist friable text designed by the computer, and the energetic search "one-line verses", created by man and filled with his thought, will, desire, which clearly appear through the flabby rhizomatic structure of the absurdist centon.

Thus, a person triumphs over a machine: steadily "stealing" his existence, the dead artificial mind is not able to use the "kidnapped" to find his own living being.

In the language of metaphors, "Autopoet" fulfills the function of an existential "accumulator", catching and preserving the particles of our existence, scattered in a

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[5] "Zabven'e soznan'e zabven'e..." Yandex Autopoet Available at: https://yandex.ru/autopoet/other/25, accessed 31. 10. 2017-

[6] O. Khazan, "Our Searches, Ourselves. Google reveals the truth about people's romantic insecurities", *The Atlantic*, 2017. Available at: https://www.theatlantic.com/health/archive/2017/06/our-searches-our-selves/529740/, accessed 31. 10. 2017.

digital vacuum, so that at the first request they can be returned to their rightful owners in the most concentrated form. After all, if the traditional poem, as a rule, is existentially monopolar (that is, it fixes the comprehension and experience of one's being by a separate subject), Autopoet's experiments differ in a principled existential multipolarity, since they reduce in a single framework context up to one and a half dozen textually objectified self-sufficient existential acts.

It is curious that "Autopoet" is an extremely sensitive tool that allows one to "measure" the existential potential of the initial text material.

On April 1, 2016, having decided to celebrate The Laughter Day with some moderately hooligan action, the developers submitted titles of news messages processed by the aggregator "Yandex. News". The experiment turned out to be so effective that later, as far as we know, has not been renewed.

"Referred" to a chain of nominative "one-liners", the media space frighteningly exposed its simulant underside, so that any randomly selected poem from the April Fools' collection could compete with the books of Baudrillard in terms of the persuasive power:

> the State Duma will have its own choir
> robber and thief is arrested in Cheboksary
> the mayor of the neighboring Samara left his post
> deposit rates continued to rise
> a hidden layer was found in the picture of da Vinci
> indestructible steel wall of propaganda
> Pitt and Jolie's kids want tattoos
> five thefts were solved over the past day
> [u gosdumy poiavitsia sobstvennyi khor
> v cheboksarakh zaderzhan grabitel i vor
> mer sosednei samary pokinul svoi post
> depozitnye stavki prodolzhili rost
> na kartine da vinchi nashli skrytyi sloi
> nerushimoi stenoi propagandy stalnoi
> deti pitta i dzholi khotiat tatuazh
> za minuvshie sutki raskryto piat krazh].[7]

Reduced to the linearity of headlines, news texts, the last stage of reduction of which is the poem quoted by us, are unexpectedly realized by the reader as redundant: they exist, and if desired they are easily found on the Internet, however they are completely insignificant. Their careful evaporation in the crucible of "Autopoet" proves that they lack any immanent senses: the only thing that remains as a result of trying to thicken them to the maximum semantic concentration is pure nonsense.

As in the case of poems automatically created on the basis of search queries, a fundamentally important factor here is the combination of individual independent microtexts in macrotext with a convincingly constructed pseudo-structure (the

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[7] "Yandex" brought together Autopoet and Yandex.News, Interfax. April 1, 2016. Available at: http://www.interfax.ru/russia/501482, accessed 31. 10. 2017.

presence of rhyme and poetic size as indicators of structural integrity, designed to indicate the existence of the meaningful integrity). However, due to the specific nature of the initial material, the directly opposite effect is achieved.

For all its primitiveness, user search queries that fix the "atomic" states of individual existence have an undeniable existential saturation. The headlines of news, designed to capture all significant events in the sphere of social life, are extremely existentially devastated.

Finally, touch on one significant point that attracts attention when analyzing the stanza "preferences" of "Autopoet". His adherence to Onegin stanza (according to our calculations, more than 40% of the total number of poems) is not accidental. The developers of the project transparently hint that today it is Yandex that can be considered a true "encyclopedia of Russian life". A search engine that creates a continuous, everyday text, made out of the many millions of lines of inquiries that hold the human being objectified in the word, certainly does not pretend to compete with the author of "Eugene Onegin" in artistic skill, but its "novel in verse" is, to some extent, no less grandiose: it is precisely what Russia as a whole speaks and thinks of itself.

The "Autopoet" verse is miniscule (and carefully selected, including by the aesthetic principle) share of this textual Gulf Stream, too huge for to be contained by human consciousness. However, in their smallness they particularly emphasize the fact that modern search engines have outgrown the level of complexity inherent in automated mechanisms of analysis and functional processing of textual information. Preserving and constantly increasing their operational potential, they at the same time acquire new integrative properties, not related to their direct functional purpose.

Search engines like "Yandex" can be considered as self-sufficient writing machines, generating an infinite text that has neither the author nor the recipient, and at the same time possessing an unconditional existential content, repeatedly concentrated in comparison with the texts of familiar format.

Conclusion

Automatic generation of meaningful or pseudo-meaningful texts in natural language is today one of the priority tasks facing the IT industry and scientists working on problems of artificial intelligence.

However, computer text generation is increasingly becoming not only the object of applied research, but also the most important tool of vanguard artistic practices seeking to comprehend a person's place in the new, informational reality, the specificity of his existential self-realization in a world of total simulation where all the symbolic structures are devaluated.

And this is one of the few areas where Russian techno-vanguard not only anticipates global trends, but creates original, innovative models of creativity that differ in their conceptual richness and aesthetic laconism.

Using the example of the "Autopoet" service of the "Yandex" company, we showed how a purely technological development unexpectedly develops into a bright and original art project that allows the reader to survive the dramatic ups and downs

of the struggle of the absurdizing logic of artificial intelligence and living human existence, a struggle in which the personality starts unexpected, but convincing victory over the depersonalizing influence of the machine, gradually penetrating into computer-generated semantically abnormal texts.