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Integration Dynamics of the Modified Psyche of Homo Sapiens and AGI (Part 1)

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ABSTRACT

The main goal images in the communicative relations/actions/interactions of social structures formed under the influence of conceptual thinking (CPT) have ambiguous, "blurred" parameters that form a diffuse array of communicative signals of hidden informational meaning, i.e. interpretative context. Frustration motivating symbols, CPT derivatives, exponentially increased the uncertainty and entropy of the social environment, reduced its stability and actualized sequences of homomorphic cycles of goal-oriented behavior with no prospect of completion. The new operating system of the Homo Sapiens psyche, clip thinking (CT), is a constructively optimal type of thinking for interaction with the "information universe". Mental socio-communicative regulatory algorithms in CT, unlike CPT, have clear, specific parameters of goal images, eliminating uncertainty, and reducing interpretability in society. The result of replacing figurative-logical thinking (CPT) with figurative thinking (CT) is an increase in speed, accompanied by a simplification of structures, the loss of synthetic-analytical functions and abstraction, and a decrease in the amplitude and range of thinking. Structurally, CT formation occurs outside of conscious levels of mental activity. The dynamics of the formation of CT, replacing CPT, is the vector of development of the symbiotic interaction of the psyche of Homo Sapiens and the technological derivative of his intelligence: the information universe. The dynamics of intelligence development forms the potential for the next evolutionary change in the psyche of Homo Sapiens, changing the range and structure of interaction with AI software and hardware. The vector of creation of AGI is the endosymbiosis of the modified psyche of Homo Sapiens and the integral potential of AI.

Keywords: artificial intelligence, clip thinking, conceptual thinking, regulatory algorithm, symbiosis, AI: artificial intelligence, AGI: artificial general intelligence, CPT: conceptual thinking, CT: clip thinking, IU: information universe, HS: homo sapiens.

MATERIALS AND DISCUSSION

Language, writing, and thinking form the content and structure of a significant segment of the reflection of the external environment in the HS psyche, determine the specifics of ethnically-conditioned thinking [1], create a cultural landscape [2], and form an ethnocultural matrix [3]. Extraction of the visual image of the phonetic component [4] from the ancient Egyptian temple hieroglyphics (ethnic bifurcation of the HS development) allowed the Phoenician civilization to create a consonant type of writing with a graphic image of consonant sounds (grapheme =

phoneme). Phonetic alphabetic writing received wide utilitarian application, becoming the ancestor of almost all types of alphabetic writing (versions of the origin of the Phoenician script are not important for this work).

The inclusion of vowel sounds in the Phoenician alphabet by the Greek civilization, the creation of consonant-vocal writing [5], expanding the written and phonetic range, created the conditions for the formalization and integration of Greek dialects. The result was the emergence of a common regional script and language (Koine), based on an extract from ancient Egyptian hieroglyphics. What occurred was a universalization of the written component of a vast cultural landscape, the ethnic segments of which had differences in genetic and linguistic origin.

In other words, an accessible universal means of creating, recording, structuring, and transmitting information has appeared: a letter alphabet, where the encoding of audio information into graphic information is writing, and the reverse process (decoding into sound) is reading.

HS's creative psyche, figurative thinking, and intellectual activity in the process of species development have created a new, virtualized habitat for biological species. In this environment, the projection constructs of the HS psyche have acquired the properties of a reality equal to natural objects. Throughout the evolution of HS, "images" (symbols) extrapolated into the external environment always varied, transforming into intellectual associations of "image and meaning" and variable dissociations influencing the vectors of evolutionary development [6,7]. An example of significant variability in development, dependent on factors of intellectual activity and determining the vectors of HS evolution, can be the multiplicative effect of philosophical scientific work (8), which created an ethnic bifurcation that changed the dynamics of development of the entire spectrum of natural sciences.

A significant (for this report) bifurcation of a multi-ethnic scale that influenced the vectors and dynamics of the entire spectrum of HS development was the combination of the beginning of printing books and the cascade of Protestant Christian reforms (15th century), which coincided in time and place. The widespread dissemination of the idea of direct accessibility of the supreme governing Symbol, combined with book editions of the Bible that became available for reading in national languages, led to the development of literacy, the emergence of analytical/synthetic skills, the mental construction of cause-and-effect relationships, abstraction in the process of interpreting accessible texts, and the emergence of critical, conceptual thinking (CPT).

CPT formation when reading a text is the result of the individual sequential creation of an "image" from the letters of the alphabet (graphemes), a function of synthesis. Juxtaposition and comparison of synthesized "images" forms the ability to identify common features and abstract. The subsequent unification of different "images" into one category (generalization) and integration into one system forms a "concept". In other words, “concept” is the result of an individual, sequential process of constructing a complete “image” having a semantic content and uniting disparate elements based on alphabetical printed text.

The scaling of critical synthetic/analytical, abstract CPT, forming "independent images" based on the "symbolic" information of printed texts, has radically changed individual social goals from "service and devotion" to "independence and individualism."

The displacement of figurative thinking, its replacement with figurative-logical thinking, the formation and scaling of CPT, having reached a critical population mass by the 18th century, initiated social dynamics and the transformation of ethnic scales throughout the 18th-20th centuries [7,9].

The synthetic-analytical potential and the ability to abstract in CPT formed qualitatively new mental needs, generalized (but not constrained) in the 18th century formulation of “egalite, liberte, fraternite”. New social constructs that emerged from the realization of these needs formed qualitatively new mental regulatory algorithms (RA) for adaptation to the changed conditions of existence. In a significant part of the population, CPT led to a radical change in the content of the attitudinal and evaluative criteria for reflecting reality. What changed was the scale of values and their subjective significance, i.e. evaluative bases, compliance with theoretical concepts of which is the most important attribute of the evaluative weight (10).

The dynamics of the development of the cultural landscape have actualized mental RAs, which have the so-called “humanistic values” as goal vectors. Parametrically, these goal images, unlike vital images, have ambiguous, descriptive, interpretative, and "blurred" characteristics. For example, the parameters of one of the main categories – freedom, consist of multiple descriptive definitions: autonomy, right of choice, self-determination, independence, regulatory protection, etc. The multiplicity and "blurriness" of definitions is characteristic of all humanistic values, including the categories of "justice", "equality", etc. The "blurriness" of definitions of goal images inevitably forms a multiplicity of hidden interpretative meanings of the communicative and social spectra.

As such, the use of alphabetic writing in combination with concepts of Protestant ethics formed and scaled conceptual thinking, which had a significant impact on the social and technological dynamics of a multi-ethnic scale.

The "blurriness" of the main goal images in communicative relationships/actions/interactions in the social structure formed under the influence of CPT (among other factors) suggests the presence of a diffuse array of communicative signals of hidden informational meaning, an interpretative communicative/social context. It is also obvious that there are hidden frames that determine the range of action/interaction, interpretation, understanding, etc. To be able to exclude chaotic oscillations of society, the presence of arrays of hidden social and communicative information requires the formalization of basic structural norms (social contract).

In other words, societies that have been influenced by the evolution of CPT are forced to formalize agreed normative frameworks that limit the variability of the main categories of hidden information meaning.

These social/communicative metamorphoses on a multi-ethnic scale have formed, in a segment of society dominated by CPT, goal images of indeterminate configurations (frustration constructs) that are beyond the achievable. The emergence of frustration (motivation) images created fundamentally new needs (mainly of inductive origin). To satisfy this range of needs, the HS psyche created mental regulatory algorithms, the application of which actualized a sequence of homomorphic cycles of goal-oriented behavior that had no prospect of completion (11, 12).

The modern rapid growth of interference of the “media” with the “information body” of the Internet has formed a universal information space (information universe – IU) that interacts with "reality" and collectively constitutes the HS habitat. We assume that the quantitative ratio: “reality”/IU is variable, with a growing increase in the share of IU and qualitative changes in the interaction. The intellect's new operating system – clip thinking (CT), adapts the HS psyche as a whole to the increasing virtualization of the habitat (7).

The technological derivative of HS intelligence – the "information universe," forming network structures of unlimited scale and information range, determines the trajectory of the transformation of the psyche without the participation of conscious levels of mental activity, creating CT – an HS-type of thinking that is constructively optimal for systemic interaction (7). CT eliminates the role of the linear sequence of “signs” as a basic form of development (13), ignores cause-and-effect relationships and hidden semantic meanings, eliminates critical thinking, integrates images without context and outside of sequences, creating the potential for CPT substitution (7). Unlike archaic figurative thinking, with CT, there are no plots that unite implanted images, the sequences of which are fragmented and random.

It is our belief that the current state and prospects for the development of HS thinking have signs of adaptive transformation towards the "pre-conceptual" level, the dominance of figurative thinking in the context of the growth of the virtual component of the habitat. Mental RA socio/communicative approaches in CT (as opposed to CPT) have clear, specific parameters of goal images, which eliminates uncertainty and minimizes interpretability. Completed cycles of goal-directed behavior (unlike frustration cycles in CPT) form stable positive feedback loops, creating the illusion of predictability and the ability to control development vectors. In other words, with a significant increase in speed, the ability to independently construct an image (symbol) is reduced, synthetic-analytical functions are lost, the range and amplitude of thinking decreases, which inevitably affects the vectors of development of HS intelligence as a whole.

Quantitative indicators of the segment of CPT carriers have a negative trend associated with natural decline. We believe that the dynamics of the development of HS thinking allows us to predict the further reduction of CPT and its replacement with forms of thinking adapted to the changing conditions of the information component of the habitat. In our opinion, CT, displacing CPT, is an intermediate version of the new operating systems of the psyche. The attractor of the dynamics of changes in the HS psyche is the expected milestone result, in which the apperceptive array will be formed from disparate, weakly-correlated blocks of fragmented information; the presence of implanted experience unrelated to the results of personal action;

reduction of the filter for processing the quality of incoming data; decreased reflection; imposed categorization of ethics/aesthetics /norms (network influence), etc.

On this vector, mental needs and the RA of social/communicative/ideal registers, modified by clip thinking, simplify the constructive elements of HS intelligence and minimize the array of hidden informational meanings of the social and communicative spectrum. RA formed on this vector has the potential to be used in integral systems of interaction between the HS psyche and AI programs [14].

The main vector of development of the symbiotic interaction of the psyche and the technological derivative of HS intelligence – the information universe, is increasing the level of symbiosis and achieving a qualitatively new state of the psyche (and its variants).

Algorithms for searching/creating/adapting ways to expand the functional potential of HS, compensating for the instrumentally insufficient adaptive arsenal, have shaped the dynamics of technological development throughout evolution. On this vector, interaction with elements and then increasingly complex environmental complexes (including anthropogenic ones) forms a symbiotic system: habitat/HS, with differentiated changes in the components of both subsystems. HS compensated for the deficit of the entire spectrum of adaptive potential in these relationships by creating tools and implementing goal-oriented action skills (from primary tools to organ transplantation and beyond). In other words, throughout evolution, HS has been in a permanent state of adaptive symbiosis with various external and internal objects, constantly supplementing the arsenal of the psyche with new RA, expanding the adaptive range.

We believe that the intelligence dynamics that we have described form the potential for another evolutionary change in the HS psyche, changing the range and structure of interaction with AI software and hardware.

We are also of the opinion that a possible vector for AGI creation is the endosymbiosis of the modified HS psyche and the total potential of AI (subject of the next message). To preserve subjectivity and dominance, among other functions, the arsenal of HS mental functions in the integral endosymbiotic system should include: prioritizing the entire range of management decisions; ensuring an acceptable level of adequacy of action/interaction across the entire socio/communicative spectrum; determining and controlling the time/place/range of goal-oriented application of the AI arsenal; forming systemic development vectors and dynamics; using the potential of creativity when choosing AI tools in non-standard situations. The expected social and communicative effect is the decentralization of social structures, with predominantly network interaction. In this vector of evolution, systemic decentralization and distributed coordination have the potential to displace the entire range of designs of traditional hierarchical systems, forming a society based on the principles of blockchain technologies.

CONCLUSIONS

A new operating system of intelligence – clip thinking, replaces conceptual thinking and adapts the psyche of Homo Sapiens to the pace and vectors of virtualization of the environment. The

technological derivative of HS intelligence is an information universe that determines the trajectory of HS psyche transformation without the involvement of conscious levels of mental activity.

The dynamics of intelligence development forms the potential for evolutionary change in the psyche of HS, expanding the range and structure of interaction with AI software and hardware. The proposed vector for AGI creation is the endosymbiosis of the modified psyche of HS and the total potential of AI.

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