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# THE COGNITIVE PREMISES OF MYTH-ORIENTED SEMIOSIS

## Abstract

This article addresses the cognitive premises of designation units denoting mythic concepts in a variety of texts and discourses. The article focuses on myth-oriented semiosis as a cognitive and cultural phenomenon reflected in the semantic transformations of lingual signs, resulting in the development of noematic senses relevant to the states of affairs in diverse worldviews or modelled alternative realities. This article provides an analysis of the basic cognitive models and procedures responsible for irrational cognition. The reconstructed cognitive models are then discussed in terms of their correspondence with the universal patterns of open system interaction and information exchange.

**Keywords:** mythic space; semiosis; semantic feature; noematic sense; worldview; system

## 1 Introduction

Among the issues addressed by current linguistics, a number of phenomena responsible for conceptualizing verbally explicated human experience traditionally receive considerable attention. Although the typology of respective cognitive models (Boyd, 1993; Cienki, 2007; Croft, 2002; Goossens, 2003; Lakoff, 2003), as well as patterns of their arrangement and interaction (Coulson, 2001; Fauconnier & Turner, 2002; Woźny, 2018), appear to have been substantially elaborated and integrated into semiotics (Kolesnyk, 2016), discourse analysis, and linguo-cultural studies (Zhykharieva, 2018), these accomplishments could provide further insight into the “irrational rationalizing” of the world, vague categorization, and manipulative practices involving myth-associated simulacra. Thus, the suggested research concerns the relation between myth and myth-based verbal construals, universal and ethnically specific patterns of information processing, and a number of myth-related cultural and social phenomena.

The primary objectives of this research encompass the analysis and inter-disciplinary interpretation of lingual data pertaining to the sphere of myth and the reconstruction of models of irrational cognition and world-modelling. Irrational cognition is to be understood as the process of

interpreting diverse input data via the scope of axiomatic interpretants that results in the acquisition of inferential experience. Such axiomatic interpretants are denoted by assertive names of mythic concepts and mythic scenarios which designate certain fundamental (empirically inaccessible yet easily recognized and thus regarded as “primal” and inherent to the world’s initial configuration) features of a fragment of the world. Respective designation units imply the true nature of any verbalized state of affairs related to this concept and therefore function as basic operators which direct the interpretations and impact the formation of new (varied, ethnically coloured etc.) senses. Sets of verbally represented mythic concepts (elements, deities, artifacts, power) united into mythic scenarios (creation, war, quest etc.) constitute a mythic space, i.e. a verbal-informational continuum, a core cluster of conceptual domains within a national worldview that diachronically drifts from its nucleus and back as a container of axiomatic interpretational operators. While archaic worldviews appear to have been dominated by the content of the mythic space, historically generated images of the world, as well as recently emerging subcultures, have manifested a tendency towards a conscious re-addressing and re-shaping of traditional myths, creating secondary myths and alternative worlds (artistic, ideological, religious etc.). The semantic transformations that the lingual units under discussion undergo in a profusion of contexts, practices and discourses, combined with the abovementioned human capacity for irrational cognition, account for our understanding of myth-oriented semiosis as the primary mechanism of cultural development. Thus, we address the phenomenon of alternative ways of construing the world as a result of semio- / noematic genesis, the latter also being the premise of texts generated in specific contexts (related to corresponding discourse types).

## 2 Methodology

### 2.1 Purpose and objectives

A multidisciplinary analysis of lingual data representing mythic concepts aims to highlight universal patterns of irrational cognition and semiosis. Correlating the results of traditional linguistic analysis to the laws of dialectics and system development, while recalibrating the interpretation towards an eco-centric focus (Capra, 1995), allows for a fresh perspective on language and speech phenomena as manifestations of the self-organization of open systems (Haken, 1983) which occurs according to the laws of nature (Colyvan & Ginzburg, 2003). This methodology facilitates the identification and interpretation of universal patterns of irrational cognition and semiosis in both diachronic and cross-cultural aspects. The applied value of the proposed methodology lies in the possibility of construing realistic alternative realities in gaming environments; identifying and combating manipulative simulacra in political, advertising, social and religious discourses that employ secondary mythology and enforce a worldview of fake realities; enabling prognostic analysis of possible cultural and social developments etc.

### 2.2 Stages of analysis

This article employs the aforementioned theory of myth-oriented semiosis, which addresses the universal irrational (mythic) basis of any rationalization model and the semantics of corresponding lingual signs. Regarding the inner form of any lingual sign as a “condensed elliptical text”, the article addresses the etymology of concept-names in Indo-European languages, draws analogies and typological parallels, and provides generalized systemic-synergetic interpretations. Hence, universal iconic “nano-myths” are reconstructed, which are embedded in the inner form of derivative unit. This allows the said units to function as the aforementioned verbalized basic operators.

Language units representing mythic concepts in mythic, epic, fantasy, and poetic texts created in different historic epochs have become subjects of componential analysis and cognitive-semantic interpretations. This article focuses on reconstructing the cognitive models as the premises of the analyzed designation units and provides the hierarchy and typology of these models. The article

also proposes an abstract-algebraic notation of the identified models which reflects their inner propositional structure.

The synthetic stage of the research goes beyond strictly linguistic speculations, providing generalizations, wide cross-paradigmatic interpretations, and formalized notations of the analyzed data that involve the universal laws of system development. The idea of M-logic as an integrative methodology (Kolesnyk, 2017) is proposed. It is the primary objective of identifying the universalia pertaining to the functioning of systems that justifies the incorporation of diverse interpretational means and perspectives. In this case, the classical anthropocentric approach towards interpreting lingual data acquires a new quality by encompassing an eco-centric focus and non-linear causative logic, employing the universal principles of open system development, as well as multiple interpretational matrices, thus turning into a “neo-anthropocentric” approach.

The “neo-anthropocentric” quality of the proposed methodology is significant, as both the vector of interpretation and the expected application of the achieved results are intentionally reconsidered. In a broad sense, we regard humanity and the sphere of human activities as a normal segment of the network of life, rather than its focal or dominant component. Therefore, this article advocates for the use of myth-related language means and reconstructed cognitive procedures for the sustainable development of interconnected systems of diverse etiology. In a more specific sense, this approach aims to identify “eco-friendly” and natural verbal and cognitive practices that correspond to the universal laws of nature, potentially diminishing the impact of destructive and auto-destructive construction of secondary myths.

As both a present-day phenomenon and a peculiarity of such an approach towards the analysis of lingual and cultural objects, the article highlights a certain drift from treating a language user as a “lingual personality” and thus expands our understanding of man’s nature as a multi-vectored information processor, involved in interactions between hierarchically correlated systems.

## 3 Discussion

### 3.1 Interpretational operators

Obtaining inferential information, as well as the intentional modelling of alternative realities, involves the emergence of noematic senses in any act of designation as a case of myth-oriented semiosis. Designations of mythic concepts as basic operators define the vector and the range of further interpretations and information processing. Here is a formal matrix of the basic mythic world:

$$\forall(WVx) \sum_{Cn \dots \infty} An \dots \infty; Bn \dots \infty; Dn \dots \infty$$

$$\exists(MSx|m|) \sum_{Cx00} Ax00; Bx00; Dx00$$

i.e., for any world (worldview,  $WV$ ) containing the phenomenon  $x$  characterized by ontological ( $a$ ), functional ( $b$ ), temporal-locative ( $d$ ) parameters and ascribed axiological features ( $c$ ), which are manifested to the  $n$  degree, there exist correlates  $x|m|$  in the mythic space ( $MS$ ) that possess prototypic features  $x00$ , marked by the corresponding ontological, functional, temporal-locative and axiological features. The structure  $\exists(MSx|m|) \sum_{Cx00} Ax00; Bx00; Dx00 = \omega$  functions as the basic operator that defines a worldview (a modelled world) as true. Diachronically occurring scenarios triggered and motivated by irrational operators are responsible for altering states of affairs in corresponding (and, when verbalized, overlapping) realities. These changes are eventually reflected in individual, ethnic, and global informational fields and arguably result in transformations at the cultural, mental, and in the long run genetic levels. At the textual level, syntactically expanded structures denote a number of fundamental features of a world, thus outlining the basic premises of its configuration:

*Ek man jötna // ár of borna, // þá er forðum mik // fædda höfðu. // Níu man ek heima, // níu íviðjur, // mjötvið mæran // fyr mold neðan.* (I remember giants created before time that gave birth to me long ago. I remember nine worlds and nine roots and the tree-of-boundaries that had not yet sprung up) (*Völuspá*, 2) refers to mythical beings, implicitly older than traditional deities, as carriers of power and creators (i.e. energies and matter that configured the world's primary structure), the cyclical nature of time (conventional, relative, dependent on recurrent transformations of spatially organized systems), as well as the structure of the world as a “multiverse” bound together by an energy-informational channel (the metaphoric World Tree, *Yggdrasil*). As the verbalized elements of mythic space demonstrate the ability of semantic irradiation over the “textual space”, the respective basic operators impact the rise of noematic senses in the whole text, making the other denoted constituents of the world real or relevant to the content of the operator.

At the morpho-phonemic level, mythic basic operators manifest themselves in the semantics of the root stems that iconically encode the information about certain phenomena or segments of the world. For instance, the following etymological interpretations and reconstructions of the prototypic features of the DWARF (the reconstructed features are marked and indexed as *a*, *b*, *c*, *d*, while the inchoative proposition “anthropomorphic entity that dwells in mountains and in the earth” is marked as *X00*). The universal prototypic features of this mythical being encoded at the morphemic level are: “small, little” (*a01<sup>x</sup>*): as in E. *leprechaun* < Ir. *lupracan* < OIr. *luchorpan* “little body” < *lu* “little” (< IE. \**legwh-* “of little weight” + *corpan* (*corp* “body” < Lat. *corpus* “body”; while the alternative spelling *leithbrágan* reflects some folk beliefs concerning the being's favorite practices (*Leith* “half” + *bróg* “boot”) (*Online etymology dictionary*, n.d.). Typologically, the feature *a01<sup>x</sup>* is manifested in the Romance languages: Sp. *enano*, *pigmeo*, It. *nano*, Fr. *nain*, *lutin*, Port. *Duende*, and it is reflected in other Celtic designations which also reinforce the meaning “different, supernatural” (*a06*): Gael. *abhag*, Ir. *abhach* < *abh* (Ir. *aback*, W. *afanc* “dwarf” (McBain, 1911, p. 2), *acharradh* “dwarf, demonic being” (McBain, 1911, p. 4) that belongs to the race of *sith*: Gael. *siochair* “dwarf, mythical being”, Ir. *sidhcaire*, OIr. *sitkchaire* “sith army” < *sith* “small being; mound” + *cuire* “army” (as in G *heer* “army” (McBain, 1911, p. 323), *fbrideach* “little one, dwarf” (McBain, 1911, p. 49).

In Germanic tradition, G. *Zwerg*, OHG. *twerg*, MHG. *twerc*, OS. *gidwerg*, OF. *dwerch*, *dwarch*, OE. *dweorg*, *dweorh*, E. *dwarf*, ON. *dvergr*, Sw. *dvärg* < Germ. \**dwegaz* “dwarf” (Levitskiĭ, 2010, p. 155), could be connected to \**dreug-* “deceive, harm” (*b01*) (145), allowing the noematic cluster “dweller of the otherworld (hostile world) → “pest” → “enemy”. A. Liberman objects to the connection of Germ. \**dwegaz* and Sansc. *dhvarás* “bent”, Avest. *drva* “deformation”, Gr. *σέ(ι)φος* “insect”, and speaks of rhotacism in the root morphemes: Germ. \**dwer-g-* < \**dwez-g-* < \**dwes-g-* “stupid” (*a04*) as in OE. *dwæs*, OHG. *twaās*, MD. *dwaes* suggesting an interpretation “dwarf” ← “stupid” / “ill”) ← “impacted by a hostile being” (Liberman, 2008, p. 56). However, the interpretation highlighting a possible connection between OHG. *twerg*, OE. *dweorg* and OInd. *dhvárati* “bent, damaged” (*a02*) and *dhvarás-* “demonic being”, Lat. *fraus* “harm, fraud”, *frūstrā* “wrong, futile”, Hit. *duṣarnāi-* “break” < IE. \**dhuer*(ə)- “break, destroy by deception” (Pokorny, 1959, p. 277; Vries, 1977, p. 147) does not actually contradict the version of “distortion” ~ “illness” if the latter is regarded as a systemic error, cf.: *Pa com in gangan dweores sweostar* (Sneaked inside the dwarf's sister) (*Wið dweorh*, 12), where *dweores sweostar* denotes a malady. The reference to the feature *a01* could be traced if the connection is between Germ. \**dwegaz* and \**tuerg-* “to compress” (Levitskiĭ, 2010, p. 608).

E. *gnome*, Ukr., Rus. *гном* are traditionally associated with the being's sphere of existence: E. *gnome* < Fr. *gnome* < Lat. *gnomus* < Gr. \**gēnōmos* (\**γηνόμος*, “chthonic being”) (*d01*). The homonymic unit *gnomic* “one possessing knowledge” is less probable (*Online etymology dictionary*, n.d.), yet the association is still possible due to the folk belief of the DWARF as the “keeper of secrets, wisdom” (*b07*).

The DWARF's anthropomorphic features (*a05<sup>x,c</sup>*) are encoded in units like Ukr., Rus. *карлик* “dwarf” < Pol. *karzeł*, Ch. *karel* < OHG. *karal* “child” (cf. G. *Kerl* “chap”) (Vasmer, 1955, p. 200), as well as personal names: E. *Charles*, Lat. *Carolus*, MHG *Karl* ~ OE. *ceorl* “free man

of low birth”, MdE. *carl* “a bond, simpleton” (cf. E. *churl* “country man, rough person”) < ON. *karl* “human, man, free person” < Germ. \**karlon-* “man” < hypothetically, \**erl-* “outstanding” as in ON. *Jarl* (Vries, 1977, p. 301), yet impacted by the tabooing formant *k-* (the runic *kenaz* “harm, inflammation, illness”) that coins the primary meaning of “old man”, i.e. a system that is running out of resources, or a functionally limited system. Consider the verbal representation of man’s divine nature: *iðu meir at þat // mánuðr níu; // jóð ól Amma, // jósu vatni, // kölluðu Karl* (And then in nine months the old woman delivered a child, washed in water, who was called Karl) (*Rigsþula*, 20), which resulted in *þaðan eru komnar // karla ættir* (thence come [few people] the kin of Karl) (*Rigsþula*, 25). In this case OE *snotere ceorlas* “wise people” (*Beowulf*, 202, 416, 908, 1591) provides associations of a DWARF and a king’s worthy retainer as both “wise” and “small” (“social status” ← “size”). Further interpretations allow the reconstruction of the meaning “predecessor”, a representative of a hypothetic mythical pre-human race that was diminished in size and changed its habitat (such as *Ljosalfar*, eventually turning into elves, and *Svartalfar* - into dwarves). The outlined features of a DWARF impact the semantic developments in the designations of such creatures in texts of different genres created by means of a variety of languages. In each case, said conceptualized features function as bases and interpretational filters responsible for coining noematic senses (see the abstract model in 3.3).

### 3.2 Patterns of conceptualization

As the designation units verbalizing the elements of mythic space are identified as zero-reference signs (due to the irrational and unreal nature of the denoted phenomena), we may speak of a number of patterned cognitive procedures that allow for the processing of irrational information in the acts of that myth-oriented semiosis. Mental models encompass entities that represent objects and states of affairs, and they facilitate human judgments, prognoses and decisions which target said states of affairs and the relevant actions necessary to live through certain events, as well as to control events that people do not take part in (Jackendoff, 1996, p. 397). In a broader sense, mental models are to be viewed as relatively fixed sequences of electro-chemical interactions unfolding in the human neural system (a synthesis of specific sets of proteins, the intensity of the neural signal, the configurations of neuronal pathways etc.) correlated with the perception and interpretation of, and possible reactions to, certain types of signals. Mental models representing abstract irrational entities: 1) comprise hierarchical blocks that come in and out of an individual’s focus; 2) dynamically follow the interpreter’s pragmatic objectives; 3) can be re-arranged and re-structured. While metaphor and metonymy are traditionally viewed as basic cognitive models, this article encompasses a larger scope of patterns providing myth-oriented semiosis.

A conceptual oxymoron is a static binary pattern that encompasses contrary conceptualized features of an object and a respective notion, thus representing the whole range of its potential orientations between multi-vectored conceptual hierarchies and reflecting the ambivalence of mythic axioms. It is structured as:

$$X_f VS X'_f \in MS \rightarrow \{+f \leftrightarrow -f\} \rightarrow X'_f VS X_f \in MS \rightarrow \infty \dots$$

i.e., two adversative conceptualized features (+*f* and –*f*) are dialectically united and potentially reflected in the “cognitive basis” (*X*) of the mythic concept belonging to the mythic space (MS). This combination is determined by the human ability to juxtapose and contrast diverse input signals and prior conceptualized experience, projecting a possible counter-variant of the state of affairs. This projection can be thought of as “negative analogue mapping” of the world which results in the establishment of the semantic boundaries which divide the world into segments. Consider the verbal representations of conceptual oxymorons such as UNGODLY GOD: *Et adoraverunt draconem, qui dedit potestatem bestia* (And they worshipped the dragon which gave power unto the beast) (Vulgate, Revelations, 13: 4); or ORDERED CHAOS: *Things from the Dungeon Dimensions, clustering around the magical leakage and constantly probing the walls of reality* (Pratchett, 2000, p. 28).

A conceptual allusion establishes a co-reference between two domains ( $A$  and  $B$ ) and triggers the emergence of extra senses within one of them, due to a shared “semantic marker” that refers to a mythic axiomatic operator:

$$A(f_1, f_2, f_3, f(x) \dots f_n) \rightarrow f(x) \rightarrow B(f_{(x)1}, f_{(x)2}, f_{(x)3} \dots f_{(x)n})$$

- i.e. the domain  $B$  becomes profiled in a sequence of cognitive operations while its content (prior experience that is “rediscovered” in the inferential information) is determined by the verbally accentuated feature  $f(x)$ , initially inherent to the domain  $A$  (input information, a contextually addressed segment of the mythic space). In this case, both domains are categorized as causatively-consecutively co-referent, rather than similar.

For instance, the descriptive structure denoting a MYTHICAL BEING: *Grendles modor*, // *ides, aglæcwif, yrmþe gemunde*, // *se þe wæteregeþan wunian scolde*, // *cealde streamas, sibðan Cain wearð* // *to ecgbanan angan breþer* (Grendel’s mother, the monster-woman, mourned her woe as she was doomed to dwell in the dreary waters, cold streams, since Cain cut down his brother with the blade of the sword) (*Beowulf*, 1258-1261) refers to a Biblical story (i.e. the shared prior experience encoded in the “precedential text”), thus adding to the negative perception of the mythical being and modifying the traditional idea of the object via the verbalized feature “outcast” (← “murderous, dangerous”), as the dominant ideology at the time (secondary mythology) suggested.

Consider also a symbolic qualifying descriptor *Einan kuning uueiz ih*, / *Heizsit her Hluduwig*, // *Ther gerno gode thionot* // *Ih uueiz her imos lonot*. (I know the king whose name is Ludwig; he serves God happily and he is rewarded for that) (*Ludwigslied*, 1-2) where the Medieval idea of the Christian God as a Lord requiring service from his vassals correlates with the traditional pagan idea of a king as “the best representative of the group”, a “superb being [← god-like / of gods] capable of dealing with the sacral sphere”, and the rational idea of feedback (REWARD). A reversed allusion GOD → KING is also possible, e.g. *wuldres wealdend* (wielder of wonders) (*Beowulf*, 17), *drihten god* (God the ruler) (*Beowulf*, 181), where GOD is associated with the social sphere via the implication of the features “holder of property”, “superior” etc. Thus, conceptual allusions provide dynamic axiomatic reference to one of the poles of the mythic space outlined in static conceptual oxymorons.

While conceptual allusion establishes the reference of a concept to another concept or a conceptual domain, cognitive metaphor explicates their proximity or similarity:

$$B(f) = A(f),$$

i.e. the source domain  $A$  (vehicle), a quantum of mythic or ethnically marked information, is used for interpreting and representing the target domain  $B$  (tenor) on the basis of the shared feature  $f$ ; where “=” reflects the relations of predication binding both domains. Contextually determined specifications in the source domain involve a number of pragmatic and semiotic variables which impact the differentiation of a trajectory and the landmark, thus functioning as the cognitive basis of the generation of noematic senses. For instance, MYTHICAL CREATURE IS AN ANIMAL, which translates into a designation of a hostile (human) being: *Vargynjur þat váru / en varla konur* (those were she-wolves, not women) (*Hárbarðsljóð*, 38) where the features of “cruelty”, “atrociousness”, “blood thirst”, and “power” constitute the basis of conceptual mapping; INANIMATE OBJECT IS A LIVING BEING: *helm Scyflinga* (the helmet of Sciflings) (*Beowulf*, 2381) as a result of associating the KING’s primary function of defending his people and designating the “protector” as “helmet”; OBJECT 1 IS OBJECT 2: *Gull var þar eigi // á Grana leiðu* (Here you will not find Grani’s load) (*Völundarkviða*, 14), where “Grani’s load” is “gold” as Grani is Sigurd’s horse.

Conceptualization within one and the same conceptual domain is traditionally addressed in terms of cognitive metonymy as an associative contiguity of the object’s features, although the latter are vague and relative (Eco, 1992). Whether the associations are acknowledged as referential (Seto, 1999) or as a cognitive mechanism (Kövecses, 1998), they reflect inner systemic relations

between the contextually active parts of a cognitive model (Langaker, 1999). In other words, metonymy is responsible for the noematic transformations of a language unit’s semantics, as its specific meaning is shaped by profiling a certain area of the respective conceptual domain:

$$A(f_a | scenn) = B(f_{a \rightarrow b} | scenn)$$

– in the case of contextual or scenario-relevant contiguity when a conceptualized feature  $f_a$ , pertaining to concept  $A$ , is associated with the property  $f_a \rightarrow b$  (initially the basic feature of concept  $B$ ) as a result of a scenario  $|scenn|$ , thus correlating the concepts  $A$  and  $B$ , e.g. “feature / property  $\rightarrow$  object”: *en freki renna* (the greedy will break free) where “greedy” stands for the wolf Fenrir (*Völuspá*, 54), “material  $\rightarrow$  object”: *iren* (“metal”  $\rightarrow$  “sword”) (*Beowulf*, 2586), “action / function  $\rightarrow$  object”: *floga* (“flying”  $\rightarrow$  “dragon”) (*Beowulf*, 2315) etc. Otherwise, it appears as:

$$f_a \in A = A(f_n)$$

– in the case of partitive relations between a conceptualized feature  $f_a$  and the whole concept  $A$ , as in “part”  $\rightarrow$  “object”: *ceol* (“keel”  $\rightarrow$  “boat”) (*Beowulf*, 38).

Therefore, it is metonymy that provides a system of noematic navigational markers which direct interpretational associations and facilitate “irrational rationalization”.

The discussed models of conceptualization are responsible for interpreting, reshaping and re-profiling the initial semantic features (ontological, functional, locative-temporal and axiological) and encoding them as noematic propositions in the inner form of the contextually used language units.

### 3.3 Conceptualization models in interaction

The models discussed above do not occur separately. They are integrated into a number of cognitive procedures that impact semantic transformations. The transformed semantic features are arranged as systemic clusters and connected via predication, negation, adjunction, disjunction and implication, as is shown in the formalized notation below.

Myth-oriented cognitive and designation processes should be tackled as a hierarchy of the following cognitive procedures:

1. *Construing* a new mental model if the perceived signals have no reference to the prior conceptualized experience. The pattern is formed by copying a typical reflective mapping of causative-consecutive connections between two or more input informational spaces (i.e. activating a fractal copy of a mythic conceptual matrix) and applying it associatively to the gestalt acquired via the primary processing of the input signals. In other words, the system (the person with specific psychic and mental characteristics) addresses the previously existing connections between the conceptualized entities and irrationally applies them to a relevant situation.
2. If a verbal structure refers to at least one entity, engaged in procedure (1), we speak of the pattern’s *expansion* via the addition of conceptualized entities, their features, or relations between them. In procedure (2), new experience partially related to the previous experience is accumulated through the associative establishment of likeness or similarity. The procedure itself unfolds as the adjunction ( $\wedge$ ) of propositionally encoded features to each segment of a mythic concept, secondary derivative concept, or a construed concept-simulacrum.
3. *Combining* two or more discrete patterns through conceptualized connections of a metaphoric, metonymic or allusive nature. This procedure is typical for shaping the mythic scenarios within the mythic space, as well as for construing alternative realities as recurrent, referring to the fragments of the previous experience contributing to the effect of the modelled world “being real”. This procedure also establishes hyper-connections between conceptualization models at different levels and is formally introduced as implication ( $\rightarrow$ ).

4. The *verification* procedure establishes whether the manifested or expected properties of the verbalized entities or relations between them are actually exercised. The procedure unfolds as a mapping of a certain fragment of a national worldview and the semantics of a verbal construal responsible for shaping an alternative reality. We regard the verification procedure as a means of sustaining the balance of the mythic space (spaces), the semiosphere, and languages as open systems.
5. The *specification* procedure highlights or specifies a certain part of a conceptualization model depending on the context. While some parts of the model are profiled, others (included in the model *a priori*, as the model itself is copied from the matrix of the mythic space, and incorporated into the system as conceptual oxymorons, thus reflecting the dialectic nature of existence) become modified or shaded, and are therefore marked as negation ( $\neg$ ) and disjunction ( $\vee$ ).
6. “*Negative falsification tuning*”. If procedure (4) identifies the verbal structure as “true” and relevant to the conceptualization model, the model itself is tried for such a modification that, provided the verbal structure remains relevant to the content of the mythic space, it should be considered as “false”. If this transformation is possible, the model is regarded as the one providing an axiologically negative categorization vector (i.e. unfavourable, potentially destructive for the system). If this transformation should prove to be impossible, the respective verbal construal is considered a natural inference from prior statements and prior experience.
7. “*Orientation tuning*”. If procedure (4) identifies the verbal structure as “false” in regard to the conceptualization model, the model is tested for the transformation when it remains in accord with prior statements while the “processed” verbal structure becomes “true”. If this transformation is possible, the conceptualization model acquires the role of a systemic attractor with a certain amplitude of variability which reflects the system’s potential for adaptation. If such a transformation proves to be impossible, the respective verbal construal is regarded as one which contradicts prior experience, as well as a marker of the system’s closed nature.

The unfolding of these procedures in different diachronic and cultural contexts results in the noematic expansion of the mythic space’s “semantic database” that allows for the creation of relatively “real” variants of the prototype concept in each verbally modelled alternative world. For instance, the analysis of the units denoting DWARF in texts created in different historic epochs by means of European languages (Kolesnyk, 2016, pp. 192–199) testifies to the development of the following additional noematic senses in their inner form on the basis of the aforementioned prototypic conceptualized semantic features. In the context of this discussion, we deliberately do not differentiate the chronology of the analyzed texts but address the said senses as constituents of the “semantic multiverse”. Contextually relevant features are profiled or shaded at the moment of interpretation [here / now] or in the process of the modelling of alternative worlds. Thus, the verbal designations of a DWARF diachronically develop features: “unusual” (a06), “jolly” (a07), “gloomy” (a08), “strong” (a10), “clever, experienced, wise” (a09) ~ “cunning” vs “stupid” (a04) / “ill” ← “bent, twisted” (a02) / “perverted” (a03), “representative of a race / social group” (a11), “personal name’s carrier” (a14), “wrecker” (b01), “maker” (b02), “user of a code / magic” (b05), “world’s creator / designator” (b06), “dark / incompatible with light” (a12) “creation of the over-system” (a13), “dweller of an element” (d02), “living in the north” (d03), “living in an area / dwarfs’ country” (d05), “fighter” (b04), “delver” (b03), “time marker” (d06), “traveler” (d07), “courageous” (c01), “renowned” (c02), “hostile” (c04), “friendly” (c03), “greedy” (c05).

In linear notation, where  $\{ \}$  denotes the conventional boundaries of the concept with peripheral implied features,  $( )$  marks its nucleus (prototypic features) and  $[ ]$  outlines its medial segment (associative features), the reconstructed structure and content of the mythic concept DWARF appear as:



$$A = \{[(X00a01 \wedge |a02^{c-} \rightarrow a03^{c-}| \rightarrow |a04^{c-} \vee a09| \wedge |a05 \vee a06| \wedge |a07 \vee a08| \wedge b01^{C?} \wedge b02 \wedge b06^{b05}) \wedge a11 \wedge |d01 \rightarrow a12^{C?}| \wedge d02 \wedge d04 \wedge d05 \wedge a13 \wedge a14] \rightarrow b03 \neg b04 \wedge d03 \neg d06 \neg d07 \neg c01 \neg c02 \neg c03 \neg c04 \neg c05\}$$

Its Germanic variant is therefore represented as

$$B = \{[(X00a01 \wedge a10 \wedge a11 \rightarrow a14 \wedge a13 \wedge d01 \rightarrow a12 \wedge b01^{C05} \wedge b02^{C04} \wedge b03^{C05} \wedge d05) \wedge b04 \wedge a09 \wedge d02 \wedge d04 \wedge d06 \wedge d07 \wedge b02^{b07} \rightarrow b06^{b05}] \rightarrow a02 \rightarrow a03 \rightarrow a04 \wedge |a07 \vee a08| \wedge |a05 \vee a06| \wedge d03\}.$$

Ontological and basic functional features appear to be shared. In both cases, the implicit negative axiological connotations in the designations of the DWARF are connected with the idea of “being twisted” or “illness” as a systemic error in the sacral informational matrix. The expansion of functional and locative features connected with the object’s group, social or inter-racial activities marks the structure of the Germanic concept. Except for the differences in the inventories of the conceptualized features, the latter correlate differently with a universal hierarchical structure of an anthropo-oriented open system (Fig. 1a, b), comprising physical (1), psychic-emotional (2), mental (3), social-adaptive (4), social-creative (5), axiological orientational (6) and worldview / world construction (7) levels. Figures 1a and 1b demonstrate the peculiarities of the noematic senses’ arrangement in the concepts’ nuclear zones.

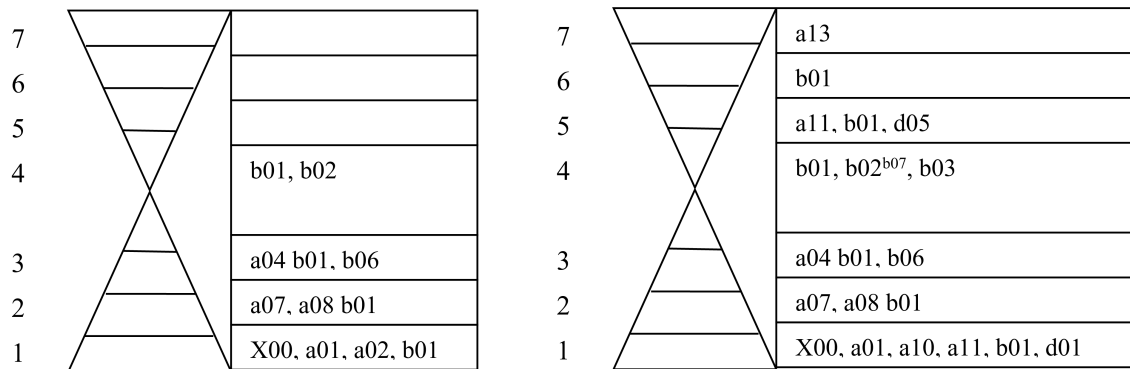


Figure 1: A universal structural model of the: a) mythic concept DWARF b) Germanic mythic concept DWARF

This layout indicates that in the Germanic mythic space and respective linguo-culture the activities of DWARFS are significant for transformations in the states of affairs, changes in the configuration of a worldview, and the development of other races. Axiological features are denoted explicitly, while temporal and locative features allude to racial characteristics and historical epochs. As the number of pragmatically determined profiles of semantic features is virtually infinite, the variations of the inferential informational clusters are identified as fuzzy entities, while any configuration of a world becomes “true” within the framework of the axiomatic coordinates and noematic “navigational markers”.

## 4 Conclusion

In conclusion, myth-oriented semiosis can be regarded as a universal phenomenon pertaining to verbal representations of irrational cognition. While irrational cognition is associated with the use of axiomatic (mythic, irrationally involved in processing information) interpretational operators, myth-oriented semiosis results in the diachronic development of noematic senses relevant to the desired or modelled states of affairs or alternative realities. Such noematic senses are accumulated in the national conceptual space / worldview and contribute to the development of present-day

civilization’s “semantic multiverse” i.e. the informational continuum containing conceptualized experience, suggested patterns of further interpretations, and “navigational markers” for interactions within the “irrationally rationalized reality”.

Sets of conceptualization models responsible for carrying out interpretational procedures constitute the cognitive premises of myth-oriented semiosis. The results of each model’s realization are propositionally encoded. While the connections between the propositions demonstrate individually subjective natures of interpretation, they follow the logic of non-linear causative-consecutive interactions. On a larger scale, the cognitive procedures and models under discussion reflect a universal pattern of existential conceptual inversions. The *involution* semi-cycle of present-day civilization’s development demonstrates the transition from a “sacral” (informational) existence towards a profane (materially oriented) existence, hence employing irrational mythic axioms for the rationalization of the world. It is possible to identify another inversion and a shift towards the *evolution* semi-cycle of development, targeting the reconstruction of nature-oriented and nature-accordant patterns of conceptualization and interaction with the world. The results of this research can be applied to the AI-mediated modelling of the world, prognostic analysis, identifying and combating manipulative activities employing the construction of fake realities, and to the diachronic study of irrationally motivated discourse.

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