

Culture and World Vision: The Cognitive Mythical Mode

J. Nescolarde-Selva*, J.L. Usó-Doménech

Department of Applied Mathematics, University of Alicante, Alicante, Spain

*Corresponding author: josue.selva@ua.es

Received May 05, 2015; Revised May 25, 2015; Accepted June 03, 2015

Abstract Culture is the system of knowledge, from whose meanings the human being screened and selected their understanding of Reality in the broad sense, and interprets and regulates the facts and data of social behavior. In this sense, culture is a program for social action and acting in humans during the process of socialization and social interaction. The meanings of each culture are the cumulative product of collective and individual thinking, in ecological economic, social and political specific situations, so are the expression of each particular cultural historical conjuncture. Moreover, the universal cognitive structure for the apprehension of cultural reality is the World Vision (WV). Due to its importance and significance as substratum of religious and political belief systems, we will gird our study to mythical cognitive mode or mythical WV.

Keywords: beliefs, culture, modal logic, myth, mythical dimension, mythopoiesis, world vision

Cite This Article: J. Nescolarde-Selva, and J.L. Usó-Doménech, "Culture and World Vision: The Cognitive Mythical Mode." *American Journal of Systems and Software*, vol. 3, no. 3 (2015): 55-63. doi: 10.12691/ajss-3-3-1.

1. Introduction

Cognition of Reality produces an intelligible world which is structured in the form of culture, so that it is not independent of cognitive structures, just as the cognitive processes act selectively according to culturally defined meanings and emotions. It is necessary to distinguish between knowledge and cognition. While the former is a result, a certain cultural construction, cognition is the mental process by which sensory and intellectual data are organized to produce the principles and rules that form the knowledge. Therefore, the culture has an autonomous historical existence, is a supersystem. However, in so far as that the cognitive capacity of human beings can impose significances and recombine all the known, even himself, this cultural supersystem is not closed, but open and dynamic system.

While creation of the human mind, culture, through ideas and concepts represents Reality. These ideational contents constitute the cultural or objectified knowledge into systems of classification and valuation of the natural and social order from which are formed all expressions of knowledge: economy, politics, art, cosmology, science, relationship and others. This cultural reality is socially used, institutionalizing its contents in the form of existential propositions and dominant cultural symbols. These are the cultural ideology. While the cultural ideology is a program and a set of strategies for action, provides operational and effective patterns in the formation and regulation of orientations and goals of social life. There are two basic issues in Ethnology and Cultural Anthropology:

1) Can the study of culture make us understand human thought?

2) Do they think all humans similarly, depending on their more or less complex, same or different cultures?

As a consequence of relativistic and antiracist position of Ethnology and Cultural Anthropology, the response has been to support the psychic unity of humanity, while recognizing that mental processes may follow different strategies and channels for resolution in accordance with the needs of the natural and cultural experience. Deterministic approaches to the evolution of mind and culture are rejected, to assert that there are no independent mind living conditions. The differences in mentality are not of capacity, but of strategy to get proper knowledge to the adaptive needs. However, there were nuances, theoretical discussions and interesting retractions as represented by Lévy-Bruhl and Boas. Lévy-Bruhl [6] proposes that the early mentality was pre-logical avoided as no contradiction (paraconsistency) and submitted to the law of participation (animism, totemism). Boas [1] criticizes the preceding argument by lack of ethnographic data that Lévy-Bruhl relied to formulate his theory. According to the author, mental activity follows the same laws everywhere but its manifestations depend on the nature of individual experience; to establish different associations, different types of explanations occur. Levi-Strauss [7] ends this period of discussions with the conclusion that the human mind seeks knowledge of objective reality through the management and information systems. So the differences observed between cultures are relative to strategies with which these societies classify and generalize their reality. The primitive logic is concrete: based on qualities that are easily seen and experiment and build models of reality that do not integrate abstract

propositions, or subordinate the particular to the general, but that individuals are ordered in wholes of a perceived immediately by representing the underlying reality of an analogical mode. In short, the primitive logic is primary, is what we all have in common, and scientific thought is derived and formal. Under the influence of psychological structuralist theory (Piaget, Bruner) and the historical and social (Vygotsky, Luria), cognitive and experimental anthropology converge reconsider cognition-culture relationship in terms of process rather than content.

According to theories of cognitive development [15], cognitive structures are universal and the role of culture is to accelerate or retard their development processes by introducing variations in the ages at which appear the successive logical stages.

2. Culture and World Vision

By World Vision (WV) we understand a way to think, to hope, to project, to fear, to calculate, etc., of a human group, obligatory collective, immersed in a society characterized by a certain culture and in a determined historical period [9,10,17]

a) WV never is conceived, crystallized; their presences exist because they mediate and they inspire, but never appear in the perceived objective world.

b) All WV is a construction of a collective subject, since it is impossible to a single individual, to found, to build, to even express, everything in an imaginary system to be related, to think, to hope or to remember. Each group in its social life is constructing a precise, specific mentality that not only it allows it to comply with the objective reality, but that also allows it to dream, to idealize, and to escape itself.

c) WV territory extends by at the surface of the objective and at the depths of the subjective thing.

d) WV serves to live for living daily life, for the anodyne gesture and even to create a system of new connotations.

e) WV has an image of the world consciously or unconsciously perceived.

f) Before WV, there arises a series of social and historical manifestations, customs, beliefs, ideologies, projects, practices, gestures, etc.

We can distinguish between Generalized Collective Conscience (GCC) and Particularized Collective Conscience (PCC). GCC exists in society, time, history, etc., it is materially necessarily in social, artistic, literary, etc. structures. PCC is the materialization and conceptualisation of GCC on the part of a group, class, clan, family, etc. Class conscience is, therefore, the taking of conscience on the part of a social group of the GCC. Therefore, the conscience of a class or group can be confused, until a certain point, with the Particularized Collective Conscience (PCC). It is the Individual Conscience (IC), that breaks with the PCC and it materializes in the GCC again. Complete autonomy does not exist, but exists when there is a break on the part of an individual conscience with a certain materialization of the GCC in PCC, and there is an attempt on the part of consciousness to form a new GCC. We can see the process of proceeding of the collective consciences in the following figure (Figure 1):

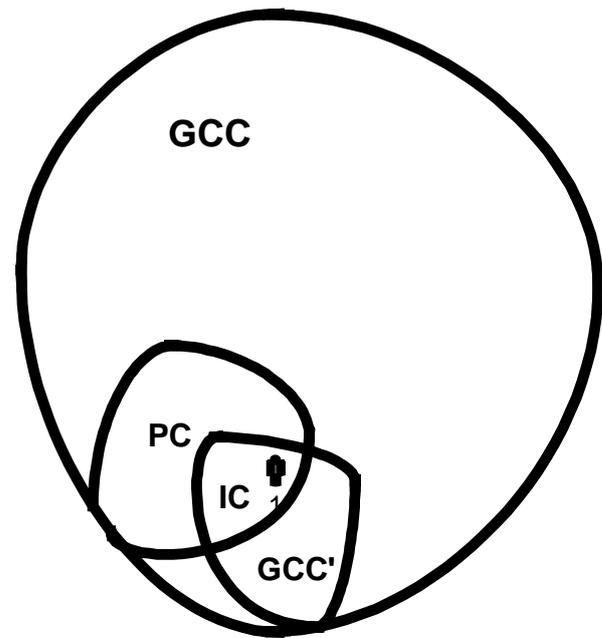


Figure 1. Process of proceeding of the collective consciences

Generalized Collective Conscience (GCC): It exists, it pre-exists, it is not conceptualised.

Particularised Collective Conscience (PCC): It is materialised by a group, class, clan, family, etc.

Individual Conscience (IC): It belongs to each particular individual.

IC opposes PCC with a new concept of GCC; for that reason, it is in the limit between the three-dimensional body of group PCC and the totality GCC. Therefore, an ideological exchange is a group rupture and the creation of new Generalised Collective Conscience (GCC').

Note 1: *The Generalised Collective Conscience (GCC) only agrees with the Ideological Doxical Superstructure (IDS) in the case of monoideological societies.*

Primitive or relatively isolated folk societies fulfil the condition specified in Note 1.

All these divisions between different consciences try to establish and to construct relations, in order to find new explanations to the existence and operation of the collective conscience, only subject of the social structure forming the Structural Base (SB).

The individual subject (with his IC) is subject to the very strong influence of sociological factors (GCC and PCC), such as the structure of the language, the implicit or unconscious systems of social valuation, norms of the communication, etc. That is to say, subject to the represented collective conscience like symbolic maps of reality. What an individual does with these symbolic maps is a phenomenon at the level of the ego, but their own symbolic maps correspond to GCC of a society. There exist an immense number of symbolic maps comprising the GCC, since it is here where are rooted social conventions like the structure and the linguistic syntax of a particular culture, its logic, deontic norms, popular ethics, religious vision, family structure, powerful taboos, rules of communication, games, and supposed general ideas about reality, etc. All those symbolic relations distinguish a particular society and all individuals interiorise them in greater or smaller degree by the belonging to this society. Therefore, GCC represents the first massive accumulation of symbols in the IC.

All these deeply rooted symbolic maps fulfil, in essence, the same assignment; to advance and to mould the IC with the acceptable and significant conventional forms in their society (GCC and PCC). These conceptions mould perceptions, the individual learns, in effect, to conform and to translate reality in social terms shared with others. This is what it means: "to be a component of a society" (or culture, subculture, group, class, clan, family, etc.), since the individual becomes a member of his society (or equivalent) after satisfactorily interiorising the maps or sets of symbolic relations (GCC and PCC) constituting that society (or equivalent). The individual is included in the society when the society includes the individual [19]. This conventionalisation of reality requires individuals to learn to make a socially verifiable correspondence one to one between symbol and symbolized thing, world and its description. The individual must learn to associate specific objects with the conventionally correct words belonging to a certain language L that the society uses to represent an object.

World Vision is a mental constellation of intuition, feeling and thinking about the order of Reality (nature-culture relationship), which is symbolized by universal categories: self, other, time, space, unity, duality, absolute, relative, causation, chance and others. Through this cognitive process the human being perceives and understands its relationship to the cosmos and society. The result is knowledge, sometimes implicit and sometimes explicit, in which cosmologies are constructed, and constantly weaves the significance of transcendental experience and everyday action.

World Vision is made operational through cultural cognition. This refers to the nature -principles and rules- of mental processing of environmental and social data for generating the structure of all cultural knowledge: kinship, cosmology, economics, politics and others. This processing involves constructive and selective interaction of mind and culture, from which cognitive style and cognitive mode is configured.

1. Cognitive style refers to the personal habits of building knowledge, and therefore can be considered as stable individual preference on how to organize the perception and conception of the data of the physical and social environment.
2. Cognitive mode is the particular way of perceiving, categorize, conceptualize and troubleshooting a social colectivity, or various ethnic groups, in order to give to environmental stimuli –social and physical- one common signifier dimension.

Cognitive style and cognitive mode are both experimental and historical forms significantly address the relationship between culture and cognition.

In according to Borhek and Curtis [2] culture consists of learned as opposed to innate and shared as opposed to truly idiosyncratic ideas, and culturally constructed artefacts as opposed to physical artefacts. This definition of culture attributes the explanation for sharing of certain beliefs or ideologies to a certain kind of social process, that they take place in SB. The process that accounts for the acquisition of culture by individuals is called socialization. It consists of regular schedules of reinforcement. At a simple level, the assertion that beliefs and ideologies are cultural rejects a whole range of

possible alternative propositions. Culture has the following characteristics:

1. Culture implies a peculiar WV. Culture creates GCC.
2. Culture is patterned. It consists of related, not discrete elements, which are organized according to some general pattern. To move a trait from one culture to another is usually to change its function and significance through reinterpretation. This involves placing the trait within a novel context of meaning. Humans often communicate about WV as if it was a separate particle and recognize the need for context only when communication fails. The internal consistency of culture often escapes notice; it becomes apparent only when it is violated.
3. Culture provides orientation. Culture is used by humans, individually and collectively, as the primary source of solutions to the problems of orientation, and may provide solutions to substantive problems, according to which problems may be met with traditional and acceptable solutions. The existence of one or more orientations is often so implicit that the people involved would not ordinarily recognize them without being prompted.
4. Culture changes in response to pressure of events but only very slowly because it is to a degree systemic. If culture is systemic, this means that all WV's elements (goals, norms, values, and orientations) are linked and that a change in one has strong but subtle implications for change in others. As a set of solutions to substantive problems, culture is subject to immediate pressures for change. Besides providing in the first place the basic tools for any thought, feeling, judgement, or action, culture includes specific deontical norms (prescriptions and proscriptions), sets of rules on what to think, feel, and do. When these norms fail to solve practical problems, some alternative must be sought at once. Norms and values change less rapidly than technology. This is known as culture lag [14]. Commitment to deontical norms and values is stronger than commitment to technology, in part because the technology is more closely geared to daily necessity.
5. Culture is differentiated into subcultures which are coextensive with networks of communication. Culture is coextensive with a network of communication. If societies consisted of homogenous collections of individuals, each communicating equally with all the rest, both, culture (and its peculiar GCC) and society would be undifferentiated units. Then, the conditions of Note 1 would be fulfilled. Since societies are differentiated, cultures are too, and along the same lines. That is to say, there

are multiple PCC_s. Then
$$GCC = \bigcup_{i=1}^n PCC_i.$$

Neither societies nor the cultures they carry are as simple as a set of discrete building blocks. Each member of society participates in a somewhat different set of cultural "worlds", forming a particular IC, each consisting of shared meanings and extending as far as system of communication can support it (Manis and Meltzer, 1972). None of these cultural worlds (PCC) is the exclusive domain of a

single human group. However, insofar as the boundaries of one kind of world are the same as the boundaries for another kind of world, a single group tends to emerge with that unique combined culture. That is to say, if we have a human group with PCC_1

and another with PCC_2 , then $PCC_3 = \bigcup_{i=1}^2 PCC_i$.

To the extent that major social cleavages are congruent with a whole list of communicative worlds, of course, the possibility of communication across the line of cleavages are lessened, subcultural distinctiveness is enhanced, and conflicts are likely to be acute. Communicative barriers, consisting, in turn, of barriers to social interaction, are cultural barriers. Cultures, as well as societies, are highly differentiated. Each participant in a subculture PCC_i has a unique perspective based on his unique social position, interest, experience and PCC available to him. These members do not participate in exactly the same parts or the subculture, that is to say

$PCC \neq \bigcup_{j=1}^m IC_j$. In consequence, the individual

member is not identical with the subculture, and the believer is not identical with the WV. To be sure, the total subculture is carried by the network of communication in which the total set of individual members participates and may not be said to exist apart from the network of interactions. Nevertheless, each individual member's participation is specialized, and most participants devote far less than their full time to the activity, whatever it is [2]. Applying this to belief systems belonging to a determinate WV, the vast majority of believers are in rather substantial ignorance of the fine points of most belief systems in which they participate. Thus, culture derives a kind of transindividual power from its group expression; it does consist of something more and greater than is available to any one individual participant.

6. All societies are differentiated. Social differentiation is a concomitant of institutional differentiation which consists of the specialization and routinization of activities in general. In relative undifferentiated societies (see Note 1), a single social structure is used to organize all collective activities that need to be organized: work, religion, war, art, education and so on. It implies a peculiar and monolithic GCC. This social structure usually assigns positions to individuals based on age, sex, and descentance, creating therefore a restricted PCC and IC is confused generally with PCC. The kinship system is the basis for organizing any activity. Highly differentiated societies perpetuate certain bodies of knowledge and belief through such generalized structures as families, public schools, mass media, internet, etc. But in addition they also use highly specialized structure, such as professional associations, universities, theological schools, laboratories, etc. As activities develop in specialties, special purpose structures arise to organize them. The extent of institutional differentiation is of primary importance as a social condition affecting the culture carried by a society.

Cognitive mode or World Vision constitutes logical ordering structures in which cultural data are supported to:

- 1) Coherently organizing knowledge systems.
- 2) Encode cultural data in formal, aesthetic and other languages.
- 3) Make them communicable in the social field.

These virtual logical-symbolic structures are updated in some of its dimensions, yielding dominant WV. These results in particular ways to perceive categorize and solve problems in a social collectivity, of one or several ethnic groups simultaneously, in order to give to physical, social and psychological environmental stimuli, a common significant dimension. In any case, this dominant cognitive superstructure means the only form of knowledge of a community or ethnic group, nor is associated with individual or collective capacities, nor ultimately adheres to primitive to civilized distinctions.

Due to its importance and significance as substratum of religious and political belief systems, we will give our study to mythical cognitive mode or mythical WV.

3. The Mythical World Vision

Mythical WV refers to the first common form of experience and expression of the mind in the representation of psychic, natural and cultural reality. While autopoietic cognitive device, this WV does not represent objects or events in the world, but itself, the products of their own operation and internally generated modifications, since the characteristics of the environment are only the historical sequence of statements or ideas. This means that the mythical cognition not enroll in mind copies of physical or social reality, but, on the contrary, creates and builds forms and symbolic structures (integration of mnemonic clues and preferential neural pathways based on a certain topologies) that, by dint of thought as true, constitute reality [9,10]. Hence, there is the arbitrariness of the cultural message.

The physical and social reality does not exist as pure experience, nor is it reducible to entities directly apprehended, nor does it contain information itself. The information is a cognitive association, so that objects and events owe their existence to the properties they represent, and the experience on the mental creation, which gives existence to symbolic forms, which would otherwise be unknown. This becomes significant cosmic reality, which becomes richer and more complex as more are multiplied the forms of symbolic expression. The entities of myth and their mutual relations are mostly represented as a set of metaphysical factors, which cannot be perceptually made sense of within an empirical framework. In other words, the problem of how to understand the true meaning of myths will naturally be correlated with such a basic cognition that myths are some discursive systems, consisting of a variety of anomalous sentences. What such a system designates cannot be interpreted directly from its surface representation.

By not directly reflect features of the world or the cultural order, this WV constitutes a common thought unit capable of processing any reality. Mythical cognitive processing, presents abstract constructs of the unknown, immutable, ineffable under the mask of the concrete, ie transforms the unpredictable in predictable, the infinite in

finite, and transmutes all forms and abstract concepts in concrete perceptual images and representations. These concrete representations of abstract forms produce a form of understanding or conceptual realism¹, through which appearance and reality, objectivity and subjectivity, and other opposing pairs, form an objective unit, and closing the separation between the symbol and effective existence. It is for this reason this WV possesses an extraordinary imaginative power to metamorphose any object into a living being (animism, psychologizing of the natural world) and transmutes categories and concepts in people, ancestors or gods. On this basis, the mythic mode cognitive constructs patterns on the imperceptible and perceptible on the psychic and the social, patterns of use which constitute the cultural dimensions of knowledge of reality. This visionary landscape of the human mind takes various forms of cultural expression as a mythic narrative², ritual and monument (totemic, mortuary or otherwise). These symbol systems constitute meaning units, whose content is what most important to units are part of a class of metalinguistic discourse above the ordinary linguistic level; this discourse transcends the literal and concrete understanding, accounting for a reality that underlies human consciousness.

Mythical WV is defined by its ability to go beyond the representation of objects and events and to establish an orderly dialogue with the following realities:

1) *Physical space*: giving order to chaos and natural continuity, thus producing the universal meaning of human existence in the cosmos.

2) *Social space*: organizing the relations of identity and solidarity in the ritual and daily action.

¹ Conceptual reality simply stated is a version of reality, or an experience of reality, which is characterized by abstract ideas and concepts, as opposed to thinking of reality as being chiefly grounded in perceptual experience. Conceptual reality may be understood variously as a contradiction in terms, or as the pinnacle of human free will. To the extent that the individual can choose his reality, then it is argued that that reality is, by definition, significantly conceptual in nature. The term "conceptual reality" does not mean to imply an oversimplification of the relationship between percept and concept, or to endorse some kind of dichotomy between the two. On the contrary, it seeks to emphasize the actual implications of such a relationship for the phenomenology of daily life... Conceptual Reality is distinct from virtual reality, since something which is "virtually" real is by definition precluded from actually being real, whereas conceptual reality is simply a special case of actual reality. There is no a priori reason why a physical reality cannot exist without a perceiver. The converse however is not true: perceptual reality (the perceived or the perceiver) cannot exist without a physical reality. While conceptual reality requires a history of perceptual reality, however, there is no direct requirement for a physical reality, temporally contingent or otherwise, except insofar as it provides the basis for the percepts from which the conceptual derives. Conceptual Reality is the bestowing of existential weight to otherwise ethereal and abstract entities (such as ideas) on the grounds of their causal properties. Thus, it may be thought of as a place, or an action, or as a philosophy, a game, a thought experiment, a concept, or simply a website.

² It seems essential to seek its meaning beyond the mythical discourse itself, and thus necessary to resort to a semiotic interpretation. We are therefore in a position to see myth as a typical semiotic system. However, the study of myths from the semiotic viewpoint is by no means identical with the discipline of mythology, despite many interrelations between them. It is due to this semiotic function that human beings can compensate for spatial restriction in identifying those distant entities, or for temporal limitation in referring to those historical events. There is a method of classification based on the narrative theme, which characterizes mythical discourse. Such a kind of theme fulfills the function of mythical motif, and at the same time, serves as the most important factor of mythical sign, because mythical discourse as a whole is always developed structurally around the theme

3) *Psychic space*: guiding the process of individuation or development of consciousness and realization of self.

In primitive societies, the mythical activity is the runway to reveal and present models for all significant human activities: food, sex, work, death and others. These models generate knowledge from which constitute systems of social integration: belief and value systems. These safeguard social order and consecrate spaces and cultural times.

In all societies, the mythical activity is updated by individuals or groups who want to get in a broad sense, own creative experience and to ensure personal understanding and escape the ambiguity or excessive rigidity of the sociocultural normative systems. Sclerosis of the religious, political and artistic systems, which become as creeds and only truths, produces individual mythopoeitic reactions (artistic or mystical) and collective (messianic or revolutionary movements). These cognitive reactions intended to break the perceptual constants (altered consciousness) based on faith in the axioms of the system³ to fly inward, that is, to achieve its own experience of reality and thus attain that power or personal integrity that denies them the sociocultural system.

Myth, like any other belief, can be false, but it is not false because it is myth. It is false for the same reasons that other beliefs are false [4]. Every culture will create and value its own myths, not because it may not be able to distinguish between truth and falsity, but because their function is to maintain and preserve a culture against disruption and destruction. They serve to keep men going against defeat, frustration, disappointment; and they preserve institutions and institutional process. The myths which will be acceptable in a given culture will obviously depend, not merely upon its scientific criteria, but upon the interests and needs of the individuals and groups which compose the society. Depending, of course, on the complexity of the society, theories of levels of truth or kinds of truths will be invented to defend beliefs which may be found inconsistent with what may loosely be called "*the facts of experience*." Of course, these beliefs (myths) may later be rejected because ways may be found to test them which may prove them false, or because they are not socially useful. However, in uniformly scientific culture, myths which contradict experience and reason will obviously be unacceptable.

4. The Mythical Dimension

Mythical systems are concerned with hidden meanings. In classical psychology such meanings were central in the psychology of Freud and Jung especially in their emphasis on the unconscious. Following in this tradition Weinreb [18] described a *mythical dimension* that contains symbolic images. In fact, Weinreb maintains that everything in the concrete world is experienced as a mental picture in the mythical dimension. There is nothing in the experienced sensory world that is not related to another imaginary dimension (Figure 2). Such ideas are

³ The abstract belief level (BS) is formed by a set of elements denominated substantive beliefs S forming the unquestionable truths of the system (axioms) and a set of derived beliefs D, formed from substantive beliefs [9,10].

also part of Celtic culture in which aspects of nature resonate with the cultural imagination.

The mythical dimension has a number of characteristics:

1. Space and time have a different meaning from one we are used to :

a) In terms of *space*, myths do not contain materials like our ordinary experience; so the images do not work with the same logic, and relations and influences may be magical. In terms of *time*, past, present and future may not be separate; so, past present and future may merge, mythic events are not constrained by ordinary time

as we know it. In myth, death can be a transformation, where the future, the past and the present exist at one and the same time.

b) Another important characteristic of the mythical dimension is that not only do things appear differently, but their mythical quality is immediately present. This has implications for their cultural meanings. The entire natural-material world in which we exist may be symbolically meaningful in myth, since all its creatures exist in another dimension.

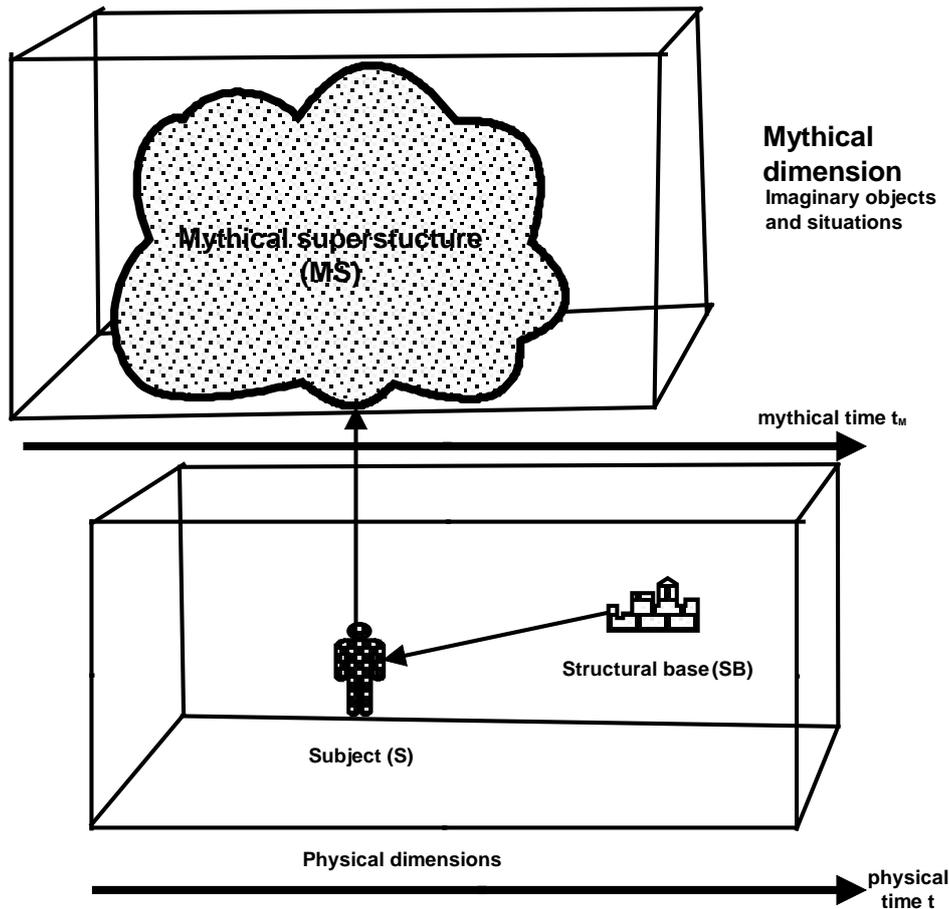


Figure 2. The Weinreb's mythical dimension

These creatures have meaningful and mutual relationships which are usually hidden from our awareness. Becoming aware of this spiritual meaning requires preparation and a particular awareness and readiness. Such preparation and the resulting awareness provide rich cultural meanings that can transform our personal experience.

1. We might consider the mythical dimension as the Whole, and concrete reality as *Part*. However, this part is only partly in human consciousness, since people who focus in their communication on the mythical dimension will begin to see the material world in its larger context. Although people's experience is naturally very varied, the unifying nature of the mythical dimension may unify a person's vision of the world, whether this be in a truly mythic way or in way characteristic of another spiritual vision. There may be stages in this process leading from polytheistic myths to monotheistic

myths: polytheistic myths being prior to a unifying vision of reality, with a single Divine Being.

2. The mythical dimension is closely connected with people's imagination and spiritual life. Where Jung draws out these ideas with his unconscious, Weinreb's emphasizes the mythical dimension. Indeed, the unconscious includes both personal and cultural content of which we may but are not necessarily aware.
3. As Freud realized we can become aware of unconscious meanings through analysis of our dreams. Our dreams are the products of our minds at moments when we are not exercising any cognitive control. Whether the content is culturally or personally determined is an open question, but we can be sure that in some way the system of memories of which we are unaware emerge and so we have access to mental issues that are otherwise hidden..

4. Weinreb [18] claims that the myths derive, in principle, from one source of inspiration and therefore can be approached using the same commentary methods: he applied this principle to the Bible, the Oral Tradition as well as to the New Testament. Weinreb's commentary on the New Testament has typological, mythical and archetypal features in accordance with the aforementioned principles: it gives the New Testament a universal dimension which transcends Christianity.

5. Myths and Modal Logics

A belief system is a set of related ideas, learned and shared which has some permanence in time and space, and to which individuals and/or groups exhibit some commitment. Conditions of *permanence, commitment, and connectedness* are variable characteristics through which we expect belief systems to be related to social organization. Any belief system will be formed by two essential levels:

- 1) An ideal or abstract level.
- 2) A material level or text.

Substantive beliefs [9,10,17] constitute the axioms of the system, while many derived beliefs will constitute their theorems.

Let $\{M_i\}_{i=1,\dots,n}$ be a set of mythical dimensions and L be a language. The terms S in this language are of the following form s_1, s_2, \dots, s_n . The terms D are the following form d_1, d_2, \dots, d_m .

In a set S of substantive beliefs, we have the following characteristics:

- 1) The terms s_n (for $n= 0, 1, 2, \dots, n$) are atomic sentences.
- 2) The terms d_m (for $m= 0, 1, 2, \dots, ns$) are atomic sentences.
- 3) The terms s and d belonging to sets S and D are belief sentences.
- 4) S is consistent just if it would be possible for them all to be true together: that is, if they are either in fact all true or could all have been true.
- 5) S is inconsistent just if it would be impossible for them all to be true.
- 6) A term $s \in S$ can also be said to be consistent if it is possible for it to be true.
- 7) A term $s \in S$ can also be said to be inconsistent if it is not possible for it to be true.
- 8) An inconsistent belief is said to be *self-contradictory*, or a *contradiction*.
- 9) A term $s \in S$, which could not be false, is said to express a *necessary truth*.
- 10) A term $s \in S$, which is not inconsistent and does not express a necessary truth is said to be *contingent*.

For our intentions, we will apply concepts of Modal Logic.

Let \top be the constant for truth, \perp be the constant for falsity. $\rightarrow, \square, \diamond$ be the signs for conditionality, necessity and possibility respectively. Then:

- 1) A term s of the form $\square s$ is true iff s is true at all $M_k \in \{M_i\}_{i=1,\dots,n}$.

- 2) A term s of the form $\diamond s$ is true iff $\exists M_k \in \{M_i\}_{i=1,\dots,n}$ where s is true.

The set $\{M_i\}_{i=1,\dots,n}$ collects just those mythical dimensions for which the corresponding term s_n is true. Term s_n is true for a mythical dimension M_k iff M_k is in $\{M_i\}_{i=1,\dots,n}$.

Definition 1: A belief system \mathfrak{w} is a pair $\langle \{M_i\}_{i=1,\dots,n}, M \rangle$ in which $\{M_i\}_{i=1,\dots,n}$ is a set of mythical dimensions and M abbreviates a finite sequence M_1, M_2, \dots, M_n of subsets of $\{M_i\}_{i=1,\dots,n}$.

Let s be a term and M_k be a mythical dimension in a belief system $\mathfrak{w} = \langle \{M_i\}_{i=1,\dots,n}, M \rangle$. We use the symbolism $\models_{M_k}^{\mathfrak{w}}(s)$ as short for s is true in \mathfrak{w} . The following axioms are stated:

- Axiom 1:** $\models_{M_k}^{\mathfrak{w}}(s_n)$ iff $\exists M_k \in M$ for $k= 0, 1, 2, \dots, n$.
- Axiom 2:** $\models_{M_k}^{\mathfrak{w}} \top$.
- Axiom 3:** Not $\models_{M_k}^{\mathfrak{w}} \perp$.
- Axiom 4:** $\models_{M_k}^{\mathfrak{w}}(\neg s_n)$ iff not $\models_{M_k}^{\mathfrak{w}}(s_n)$.
- Axiom 5:** $\models_{M_k}^{\mathfrak{w}}(s_i \wedge s_j)$ iff both $\models_{M_k}^{\mathfrak{w}}(s_i)$ and $\models_{M_k}^{\mathfrak{w}}(s_j)$.
- Axiom 6:** $\models_{M_k}^{\mathfrak{w}}(s_i \vee s_j)$ iff either $\models_{M_k}^{\mathfrak{w}}(s_i)$ or $\models_{M_k}^{\mathfrak{w}}(s_j)$, or both.
- Axiom 7:** $\models_{M_k}^{\mathfrak{w}}(\square s_n)$ iff for every M_L in M , $\models_{M_L}^{\mathfrak{w}}(s_n)$.
- Axiom 8:** $\models_{M_k}^{\mathfrak{w}}(\diamond s_n)$ iff for some M_L in M , $\models_{M_L}^{\mathfrak{w}}(s_n)$.
- Axiom 9:** $\models_{M_k}^{\mathfrak{w}}(s \rightarrow s')$ iff $\models_{M_k}^{\mathfrak{w}} s$ then $\models_{M_k}^{\mathfrak{w}} s'$.

We write $\vDash s$ to mean that belief s is valid. A belief s is valid $\vDash s$ iff for every belief system \mathfrak{w} and every mythical dimension M_k in \mathfrak{w} , $\models_{M_k}^{\mathfrak{w}} s$.

From this we deduce the following theorems

Theorem 1: $\square s \rightarrow s$.

Proof:

It is sufficient to prove that where M_k is any mythical dimension in any belief system \mathfrak{w} , $\models_{M_k}^{\mathfrak{w}} \square s \rightarrow s$. It is enough to show that if $\models_{M_k}^{\mathfrak{w}} \square s$ then $\models_{M_k}^{\mathfrak{w}} s$. So suppose that $\models_{M_k}^{\mathfrak{w}} \square s$. Then by axiom 8 this means that $\models_{M_L}^{\mathfrak{w}} s$ for every mythical dimension in \mathfrak{w} . In particular this hold for M_k . Then $\models_{M_k}^{\mathfrak{w}} s$.

Theorem 2 (Principle of Distributivity): $\square(s \rightarrow s') \rightarrow (\square s \rightarrow \square s')$.

Proof:

We suppose that M_k is a mythical dimension such that both $\models_{M_k}^{\mathfrak{w}} \square(s \rightarrow s')$ and $\models_{M_k}^{\mathfrak{w}} \square s$. For every mythical dimension M_L , both $\models_{M_L}^{\mathfrak{w}} s \rightarrow s'$ and $\models_{M_L}^{\mathfrak{w}} s$, from which it follows that for every mythical dimension M_L , $\models_{M_L}^{\mathfrak{w}} s'$. Thus $\models_{M_k}^{\mathfrak{w}} s'$.

Theorem 3 (Rule of Necessitation): If $\vDash s$ then $\vDash \square s$.

Proof:

For suppose that $\vDash s$, i.e., that $\models_{M_k}^{\mathfrak{w}} s$ for every mythical dimension. Then $\models_{M_k}^{\mathfrak{w}} \square s$, which is to say that $\vDash \square s$.

Let S_B be a believing subject. According to Pietroski [15] the binary analysis is applied by means of the following requirements:

- R1) S_B believes that the term s is true exactly when S_B believes the sentence signified by s .

R2) *Property of omnidoxasticity*: If S_B believes the terms s_1, s_2, \dots, s_n , and $\{s_1, \dots, s_n\}$ entails $d \in D$, then S_B also believes d .

R3) *That s signifies a set of mythical dimensions* $M_k \in \{M_i\}_{i=1, \dots, n}$ where s is true.

R4) There is some true sentence ζ , which is similar to s .

R5) The truth of any s requires S_B to have an appropriate metalinguistic belief.

R6) In the mythical dimensions $\{M_i\}_{i=1, \dots, n}$, the requirement R5 is dropped by omitting requirement R4.

R7) In abnormal contexts, such as where determined ideological beliefs are attributed, the requirement R5 is dropped omitting requirement R3.

If S_B believes that s is true, it follows that S_B believes $\{M_k: s \text{ is true in } M_k\}$.

6. Mith And Society

The religious behavior is as practical as the technical behavior; it assures man integration to a world that exceeds him and with that he understands both physics and the metaphysical. To each stage of this integration there corresponds a phase of religious behavior. While the old phases of the beliefs have extended until the present, in each historical stage a new phase was added that dominated the others.

In what follows, distinctions are made between what the individual knows, and what the culture or society knows. The mathematical model that is proposed must take account of both classical logic and what is called paralogic. This corresponds to the curious facility of the human mind to take shortcuts and make associations that are not logical [16]. Such illogical human moves are called heuristics. The social knowledge considered here consists of superstructures of myths and beliefs (doxical superstructure). Mathematical models must take account of an individual's incomplete knowledge of objects and events and their possibility and contingency, knowledge is after all psychological and not logical. These terms will be clarified in the sections that follow on the modeling of both mythical thinking and the beliefs that myth contains.

In urban-industrial societies still acting the mythical WV; it will stay active as long as the mysteries of the human mind are not accessible to formal reasoning. Its ideological effectiveness is inserted into any type of discourse [11,12], including scientific, which incorporates in its mythical dimension the Promethean myth, and socially, interweaves the principles of identity to solidarity through multidimensional symbolism of ethnic myths [11,12,13].

Now, as soon as the mythopoesis socially used for purposes of ideological manipulation, mythopoeism appears which mutates into symbols, which are free source of inspiration, to sign of superstition or cult. Take the case of popular culture (fairs, pilgrimages, carnivals, etc.)⁴. It has some of the force of the mythical WV reflected in the efficacy of their rituals as mechanisms of

personal and social restructuring. However, as soon as they are manipulated by the systems of political and religious power, the creativity of its symbols or signs is reduced. These, rather than liberate, set their minds on one-dimensional schemes without alternatives, whose only message is the celestial or material utopianism of a better tomorrow. This dimensionality, are clear examples of messages modern media which are intended to enable the mythical WV, with heroes and heroines who represent opposing ideological dualities as individualism versus communalism, are unresolved in figures like Superman or the phallic female typified in Cat Women.

One of the most interesting aspects of the study of propaganda, while ideological discourse of power, is to ensure that throughout the history of communication and culture this phenomenon has transcended its usual formats (political speeches, official or commemorative works of art, government publications, pamphlets agitation, and so on), permeating greater or lesser degree products cultural a priori not consider propaganda. Some manifestations of traditional folk culture and, later, culture media generated mass communication, are examples of such products. However, what we wish to emphasize here is that often the theories of propaganda have led this process of idealization too far; in other words, they have tended to assume that all products of popular culture, mass culture industry or the entertainment industry alike respond to the ideological needs of power. And it is, in our view, a basically incorrect assessment⁵. The main criticism that can be made to these critical theories is what we will call *propaganda monism*, namely, the belief that, in a particular cultural, absolutely all products and Mass media messages are equally ideological, work by service power structure and are, therefore, propaganda.

The essence of popular culture, spontaneous and originated outside the structures of domination could be considered a type of speech that is different from the propaganda (considered the latter as the communication of power) [3]. And while in many cases occur fusions and contamination between propaganda and popular culture phenomenon and mass also there are clear boundaries between them; limits which require new concepts and formulations, as long as it is not valid encompass everything in the same communicative phenomenon.

7. Conclusions

Different cognitive strategies and logical processes are the result of living in different cultural environments with

⁴ The festivities, and we refer to the popular celebrations designed, not how spectacle, but as religious participation in cultural and religious mysteries of collective recognition, reveal a complex but harmonious, articulation of aspects.

⁵ Consider one of the pioneering theories: that of the first School of Frankfurt (Max Horkheimer and Theodor W. Adorno) and his concept of "Cultural Industry". The basic premise of Horkheimer and Adorno is that, despite the apparent chaos and contemporary cultural positions (and even philosophical) opposed, policies that analyze the structure responds to a Cultural totalitarianism, in symbiosis with an economic system based on a international economic monopoly (ie, another form of totalitarianism). These ideas of the Frankfurt School in the 1940s planted the seeds of a notion that constantly reappear in the Marxist tradition to assessing the relationship between ideology and the media and its product, culture mass: a state of absolute Unity, totalitarian underlying the plurality of cultural products (Horkheimer and Adorno, 1998). We will call this idea *underlying principle of ideological unity*, and persistence can be verified in different theories on culture and the mass media. Dwight MacDonald (1957) understands the mass culture as a type of manufactured culture, designed and imposed from up (unlike the popular culture, which is spontaneous), and serves as "Instrument of political domination".

problems to solve. Therefore it can be concluded that the various ways of processing reality, correspond to the type of intelligence that every social or cultural group considers appropriate to meet their adaptive or ideological necessities. Forms of process filter and correlate information can become recurring and widespread social habits, to the point of rising to the level of cognitive mode of the World Vision. In the same way that cultural patterns affect select individual cognitive styles, cultural superstructures delimiting spaces and cultural times of humanity are linked to specific cognitive modes.

With varying intensity, this WV coexists and recombines in every period of history, does not preclude that this contemporaneity receive greater or more intense update at certain times in a specific way, establishing itself in dominant WV, and going to be representative of the noetic evolution.

A WV becomes dominant in coexistence and supported by a cultural ideology, that is, is part of mental internalization of social integration systems, such as the value system, which is often invested with moral discourse, and belief systems, from which the criteria of truth, identity, and others are assigned.

Therefore it is co-inducer of intellectual and social changes. Often arises first in intellectual circles and then being assimilated by the system power (political or religious) to be later distributed to the rest of society through the usual cultural communication channels: rituals, formal education, plays, novels, music, painting and others.

Mythical WV is a constant endeavor of the human mind, alive and creative source in the understanding of psychic, natural and cultural totality imagination. Destroying the mythopoiesis is synonymous with mental, psychological and social limitations; is the attempt to dominate and retain the free activity of the mind, and fill it with sclerotized signs and therefore, control. That is called vulgarly demystify, ignoring it is not the mythopoiesis that creates the single dimension, but the ideology and further, any alternative requires mythopoeic efficiency to build and make us believe another reality. Otherwise, where does the continuing interest of the systems of power by popular culture?

References

- [1] Boas, F. 1965. *The mind of primitive man*. The Free Press. New York.
- [2] Borhek, J.T. and Curtis, R.F. 1983. *A Sociology of Belief*. Robert E. Krieger Publishing Company. Malabar. Florida.
- [3] Edelstein, A. 1997. *Total propaganda*. Lawrence Erlbaum Associates. Mahwah and London.
- [4] Gotesky, R. 1952. The Nature of Myth and Society. *American Anthropologist*. 54. 523-531.
- [5] Horkheimer, M. and Adorno, Th. W. 1998. *Dialéctica de la Ilustración*. Introducción y traducción de Juan José Sánchez. Madrid, Trotta. (In Spanish).
- [6] Lévy-Bruhl, L. 1971. *The "soul" of the primitive*. H. Regnery Co.
- [7] Lévy-Strauss. Cl. 1962. *La Pensée sauvage*. Librairie Plon. Paris. (In French).
- [8] MacDonald, D. 1957. *A Theory of Mass Culture*. In Bernard Rosenberg and David Manning White (eds.): *Mass Culture. The Popular Arts in America*. Glencoe, The Free Press. p. 60.
- [9] Nescolarde-Selva, J. and Usó-Doménech, J. L. 2013^a. Topological Structures of Complex Belief Systems. *Complexity*. Vol 19, 1. 46-62.
- [10] Nescolarde-Selva, J. and Usó-Doménech, J. 2013^b. Topological Structures of Complex Belief Systems (II): Textual materialization. *Complexity*. 19 (2). pp. 50-62.
- [11] Nescolarde-Selva, J.A. and Usó-Doménech, J.L. 2014^a. Myth, language, and complex ideologies. *Complexity*. 20(2), 63-81.
- [12] Nescolarde-Selva, J. and Usó-Doménech, J. L. 2014^b. Semiotic vision of ideologies. *Foundations of Science*. 19 (3). pp. 263-282.
- [13] Nescolarde-Selva, J.; Usó-Doménech, J.L.; Lloret-Climent, M. 2015. Mythical Systems: Mathematic and Logical Theory. *International Journal of General Systems*. 44(1). pp. 76-97.
- [14] Ogburn, W. F. 1950. *Social Change*. Revised edition. The Viking Press, Inc. New York.
- [15] Piaget, J. 1972. *Psychology of Intelligence*. Totowa, Littlefield, Adams, Pietroski, P. 1993. Possible worlds, syntax and opacity. *Analysis*. 53. 270-280.
- [16] Shweder, R. A. 1977. Likeness and likelihood in everyday thought: Magical thinking in judgments about personality. *Current Anthropology*, Vol. 18, No.4, 637-658.
- [17] Usó-Doménech, J.L. and Nescolarde-Selva, J. 2012. *Mathematic and semiotic theory of ideological systems*. Editorial LAP. Saarbrücken. Germany.
- [18] Weinreb, F. 1986. *Roots of the Bible*. Merlin Books Ltd. Great Britan.
- [19] Wilber, K. 1977. *The Spectrum of Consciousness*. 20th Anniversary Edition. Quest Books. 1993.