

# THE HUMAN SYMBOLIC REVOLUTION: An Uexküllian perspective

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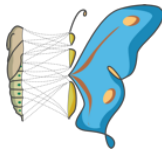
**Abstract.** The aim of this essay is to examine the potential application of Jakob von Uexküll's umwelt theory to enhance and complement the Darwinian understanding of the products of the symbolic revolution in humans. The symbolic revolution, characterised by the production of collective phantasies that can be symbolically labelled, signifies an explosion of human practices, represented by various forms of art and rituals that took part nearly 50000 years ago. The connection between these Uexküllian and Darwinian concepts will be facilitated via the proposed construct of the 'illusory world'. Two illusory worlds are defined: 'Illusory world 1' (IW1) and 'Illusory world 2' (IW2). These are constructs based on a Darwinian understanding of human evolution, and they signify, respectively, the perceptual human world (IW1) and the symbolic human world (IW2). These 'worlds' will be used to analyse the usefulness of the integration of two closely related Uexküllian concepts: the umwelt and the functional cycle. An attempt at producing a useful synthesis between the two seemingly opposed perspectives, Darwinian and Uexküllian, while outlining potential directions for future research will be proposed at the end of this essay.

**Keywords:** umwelt, illusory world, symbolic reality, physical world, perceptual world

## Inimese sümboliline revolutsioon: uexküllilik perspektiiv

**Abstrakt.** Artikli eesmärk on uurida Uexkülli maailma teooria potentsiaalsed rakendamist suurendamiseks ja täiendamaks darvinlikku arusaama inimeste sümbolilise revolutsiooni tulemitest. Sümboliline revolutsioon, mille tunnuseks on kollektiivsete kujutelmade loome, iseloomustab inimpraktikate plahvatust, mida esinavad mitmed kunstivormid ja rituaalid, mis toimusid juba peaaegu 50000 aastat tagasi. Ühisosa uexküllilike ja darvinlike mõistete vahel aitab luua 'illuoorse maailma' mõiste. Artiklis määratletakse kaks illuoorset maailma, mis põhinevad darvinlikult arusaamal inimese evolutsioonist ja viitavad vastavalt inimese tajumaailmale ('I illuoorne maailm') ja inimese sümbolimaailmale ('II illuoorne maailm'). Neid 'maailmu' rakendatakse analüüsima Uexkülli kahe seotud mõiste – maailm ja funktsiooniring – kasulikkust, kui proovida sünteesida uexküllilikku ja darvinlikku ehk kaht näiliselt vastandlikku perspektiivi. Essee lõpus visandatakse ka potentsiaalsed uurimissuunad tulevikuks.

**Märksõnad:** maailm, illuoorne maailm, sümboliline reaalsus, füüsiline maailm, tajumaailm



## 1. The human symbolic reality: one type of 'illusory world'

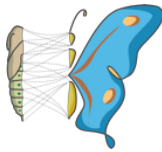
*An individual's life consisted of certain classified things: "real things" which were unfrequent and priceless, simply "things" which formed the routine stuff of life; and "ghost things," also called "fogs," such as fever, toothache, dreadful disappointments, and death.*

*Vladimir Nabokov, Ada or Ardor: A family chronicle*

The human brain receives signals through the senses, which include the five primary ones: sight, hearing, touch, taste, and smell. To these five primary senses one can add, for example, proprioception, which is the sense of being aware of one's own body and thus having the ability to locate various body parts (Tuthill, Anzim 2018: 194). Moreover, one can consider that the human body is sensitive to temperature variations and, consequently, a sense of 'thermoception', referring to the human body's ability to regulate its temperature can be conceptualised and added to the five primary senses (Kanosue et al. 2010). Following this line of thought, other senses could be added.

However, the essential point about all these senses is that they owe their existence to the human physical body, that is, a centre of perceptions that the human brain uses to construct its own version of the world. The version of the world that the brain constructs cannot be fully accurate, since human perceptions do not constitute a perfect guide to the physical world (Smeets, Brenner 2000: 215). Hence, the organism lies at the centre of its own 'illusory' world, which is a sort of internal map that plays an active role in the organism's survival and reproduction. The reason why this world, based on perception, is here denoted illusory is due to the role of the senses in transforming and filtering reality: the senses retrieve a limited collection of elements to be mapped accordingly in a sort of internal space that belongs to the organism. The implication is that vast parts of the physical reality are left out.

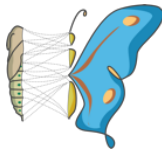
This means that not all objects that belong to the physical world are directly accessible to the human mind – there are things invisible to the senses. The fact that reality does not reveal itself to humans in its totality can be demonstrated by using two premises. First, consider that elements of the physical world are mapped into mental images by sight. The term sight signifies here the capacity for having a mental event, which is multisensory in nature, that is responsible for all the elements that humans can perceive and transform into imagery; through 'multisensory' it is understood that all senses participate in the creation of the mental event, that enables the mapping of an element that exists in the physical world in an 'internal space', the perceiving mind. Second, some objects that exist in the physical world



cannot be perceived directly by humans. One example is the polarisation of light. Humans cannot perceive the polarisation of light directly through the senses, and therefore there is nothing in human sight that accounts for polarisation. As there is nothing that enables humans to look at light and map the direction of the electric field that approaches the retina, polarisation cannot be known through the senses. Despite this, light waves are clearly polarised as demonstrated by various optical technologies that rely on this property. These optical technologies can be connected to the emergent field of quantum optics, where the role of light polarisation is crucial (Heiss 2002: 149-197). Hence, polarisation belongs to the physical world, which is a world that exists outside of human perception (Monteiro et al. 2017). Interestingly, although the polarisation of light is not perceived by humans, there is evidence that it can be perceived by bees. Karl von Frisch, in his Nobel Lecture, explain how bees encode in their waggle dances the direction and distance of a point of a desirable location to communicate it to other bees: the bees can orientate themselves by encoding the angle the sun makes with the position of the hive (Frisch 1973: 79-80). This means that the polarisation of the incoming beam of light plays a crucial role in their perceptual world, seeming to be real to the bees in question.

In sum, the human perceptual world is not the real world, but an illusory world. In the following I will refer to the perceptual map that humans construct as 'Illusory world 1' (IW1). To better understand the concept of IW1, consider further a human subject contemplating a landscape. A traditional plastic description of a landscape must consider the effect of depth, as a property of a portion of physical space. The effect of depth can be understood as a physical phenomenon. This effect is produced by gradual degrees of desaturation (saturated colours seems to advance while desaturated colours seem to recede), the weakening of visual contrasts, and the type of colours that are part of the landscape. For example, cold colours seem to recede from the viewer, while warm colours seem to approach the viewer, contributing to the illusion of depth. In addition, the further the observing subject directs their gaze into the distance, the chromatic dominants of the shapes that constitute a sort of 'outer boundary' to an imaginary bubble in which the subject takes position play an important role: when looking at the sky, blue shades seem to dominate. It is therefore not enough to specify that this real description is subject to a point view to explain how a portion of natural space — that exists in the physical world of the perceiving subject — becomes a 'landscape' mapped into an internal space.

But it is not enough only to observe this general weakening of visual contrasts attributed to perceptual stimuli such as colours, shapes, borders, textures, either: because this weakening is not a fixed datum, it is a process that can be observed in all its stages in the visual object itself. The simple description of the depth effect only indicates the decrease in contrasts, or the presence of certain colours. The decrease in contrasts cannot be used to identify the underlying process: the gradual degradation of the transparency of the atmosphere along the axis of the viewer. The gradual degradation of the atmosphere is due to the decrease of the thickness of the atmosphere. Once again, the explanation for this is related to physics: because



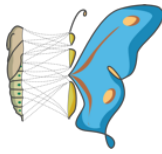
humans live on planet Earth, a massive body that exerts a gravitational attraction to everything that surrounds it, it is expected that the densest layers of the atmosphere are to be found closer to the ground (where gravity is stronger) thus resulting in a thicker and more transparent atmosphere closer to an observer situated on the surface of the Earth. As humans look towards distance points in the sky, the layers of the atmosphere become less and less dense, and this decrease in atmosphere density affects their perceptions. The atmosphere regulates the perception only to lead to an imaginary landscape that informs the subject of the real distance between the subject and the objects in the physical world. Nonetheless, the role of the atmosphere, a real physical object, regulates the production of an illusory world, which is IW1, that helps the subject orientate themselves in the 'real world'.

Notice that the role of the real world remains essential: should one perform a thought experiment, where one could modify the thickness of the atmospheric layers between a perceiving subject and an object, the depth effect could be controlled. This means that atmosphere takes the role of a filter and a controller of perception. But this filter is already set, already revealing a necessary illusion to which the human species is adapted; the meaning of the weakening of visual contrasts, or by the illusions created by warm and cold colours can be explained by the imperfect transparency of the atmosphere – something that cannot be perceived directly and mapped in the same way that colours are. Without the atmosphere, transparency would be perfect, there would be no more depth effect, and therefore no more imaginary landscape, but only a two-dimensional image, crushed on a single plane. It becomes clear that a two-dimensional picture is not a useful picture, unlike the necessary illusion mediated by the atmosphere. Therefore, the world of human perception is necessarily mediated by the real elemental world, although it remains a distorted version of the real elements that control it.

IW1 can be used to understand the limits of the human perceptual world, as well as the illusions necessary to act on the elemental world that humans inhabit. Now, consider that to successfully survive, and eventually thrive, humanity needed more than one 'necessary illusion'. Humans can also build internal models that allow them to be part of a symbolic community. This means that a different illusory world from the one that the brain creates through the senses exists.

This second illusory world will be referred to as Illusory world 2 (IW2), and it represents a sort of symbolic reality. IW2 contains objects that have no equivalent in the physical world. In other words, IW2 is not a map containing elements from the physical environment, but it is connected to the realm of inter-human relationships, and it works to integrate humans into communities. To understand the basis of IW2, consider the production of symbols.

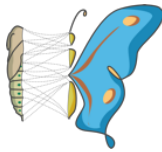
One theory that has been proposed to deal with the production of symbols within human communities is symbolic interaction theory. According to this theory, meanings arise from the reciprocal interactions of individuals. The symbolic school was heavily influenced by George Herbert Mead, a pragmatist, and an anti-dualist philosopher (Fink 2015: 1). Mead detailed the way children become socialised through



means of playing games. In socialising games, the individual, seemingly endowed with empathy and being able to take different perspectives, takes the role of a generalised other (Fink 2015: 6). The notion of the generalised other, as described by Mead, becomes central to any participant in a game, and it is the attitude of the community from in which the participant takes place. Recalling the example of a baseball game, a baseball player's actions are controlled by his assumptions of every other participant in the game (Mead 1972: 153-154). This example is illustrative of the importance of perspective taking. Perspective taking is important for understanding symbols, as symbols must mean the same thing to the individual that uses them as well as to the individuals to whom the symbols are communicated.

Herbert Blumer, a student of Mead, who is considered the founder of symbolic interactionism, considered that “[...] meaning arises from the act of interpretation between the parties involved in the process” (Fink 2015: 8). Blumer is responsible for developing Mead's thoughts on symbolic human interactions. According to Blumer, symbolic interaction has three noteworthy characteristics. First, symbolic interaction it is a positive shaping process, which means that participants in this form of interaction must constantly reinterpret each other's actions. Second, established patterns of group life can only exist due to certain schemes of interpretation being set in place. Third, symbolic interaction can cover the full range of human associative patterns: domination, exploitation, consensus, etc (Blumer 1986: 66-67). It follows that the production of symbols is an associative activity that can exist due to different relationships of members in a community. Moreover, the simple fact that there is an association is a sufficient condition for symbols to arise, and, without symbols, complex communities would not be able to exist. Thus, the nature of meaning is that it is shared between the members of a community.

The premise of the shared meaning is important for constructing IW2, and IW2 cannot be completely separated from IW1, although it remains distinct from it. This means that shared meanings are the foundation of IW2, but IW2 must remain grounded in perception as objects belonging to IW1 can be meaningfully shared between individuals. Gossiping about demons, witches, and unicorns, as well as about constructs such as promises, or marriage, is not necessarily tied to the existence of colour, shape, sound, or any other elements that belongs to IW1, although the former entities can take shape due to perceptual elements, that is, elements that belong to IW1. For example, it can be argued that the existence of mythological animals is based on the image of horses. A unicorn exists as an imaginative construct made up of the body of a horse and a horn, however, it has a different meaning. This meaning, that can be shared between the members of a community, is not tied to the perceptual image of the horse or of that of the horn. The total unicorn is thus a complex object, having both real and imaginary parts, and this IW2 object is greater than the sum of its perceptual parts. The usefulness of IW2 becomes apparent when linked to the practice of rituals and with art in general. Therefore, IW2 is a world of intangibles, which although linked to IW1, the world of tangibles, it remains complementary to it.



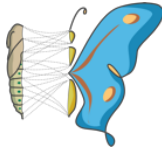
Chris Knight, Camilla Power and Ian Watts give an extensive overview of the ‘human symbolic revolution’ in their paper “The Human Symbolic Revolution: A Darwinian Account” (Knights et al. 1995). According to them, membership to a symbolic community is possible due to the human capacity for building a “personalised copy of a communal map”, which is made of intangibles, things that have no existence in the real, things that have no perceptual counterparts (ibid, 75). This means that spiritual entities, mythical creatures, promises, as well as gods would belong to this communal map that constitutes IW2.

Hence, the intangible objects that belong to this non-perceptual world, named IW2, could be represented and reproduced by various forms of art, or they can belong to the realm of religion, and they could also be produced by myths. For the purposes of this analysis, myths are defined as narratives that refer to gods, demigods or humans endowed with supernatural capacities (ADEF 2003 *sub*: myths). The objects of IW2 can be produced, in the sense of being given some sort of material existence via sounds produced by the vocal apparatus, by human speech. Before the invention of writing, human speech must have been responsible for generating religion, narratives, and myths. This means that human speech is one of the main mechanisms of production for IW2, that is, of the symbolic reality, other being forms of visual representation or even collective ‘conspiracies’ in the form of rituals.

The status of the construct of IW2 as a human-specific world, can be further understood by examining the differences in behaviour between humans and non-human primates in collective and individual deception. It has been found that certain species of primates, such as Vervet monkeys, have specific alarm calls for different species of predators. A vervet monkey emitting such a call triggers the behaviour of other primates: they act as if the predator has been seen and thus, they can make their escape (Seyfarth et al. 1980; Ignas 2019).

In contrast with the Vervet monkeys, only humans, through speech, writing or visual representations, can trigger imaginative acts of supernatural entities. Some of these IW2 entities are of authoritative type, and they include concepts such as God and the Devil, while others are mediators between the world of humans and the worlds of spirit such as unicorns; these supernatural entities only exist in IW2, and they can be represented within a community. The label God refers to a collective fantasy that exists within a community of humans, while the Devil is the antagonist. For these two characters to exist, the humans to which they are communicated must necessarily inhabit the same imaginary world, IW2. In IW2, God exists as a narrative, a collective fiction that can be used to trigger a stereotyped response from the part of the community that shares this God, the seat of Good, in opposition to the Devil, which represents the narrative corresponding to the seat of Evil. The role of speech in summoning such entities remain interesting to explore.

According to the Darwinian perspective, speech and ritual were produced by hunter-gatherers as both co-operative and exploitative signals. Following the point made by Knight, Power and Watts, speech evolved due to counter dominant



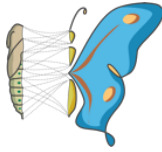
behaviour in hunter gatherer groups. Counter-dominant behaviour refers to a strategy of resisting dominance in hunter-gatherer groups, which are generally thought of as egalitarian communities. The idea of counter-dominance is resisting dominance without fighting to attain it. The counter-dominance strategy has been linked to the idea of using vocal-auditory signals, which were less costly (energy-wise) than manual grooming or using gestures to communicate to others (Knight et al. 1995: 83-84). Since counter-dominance theories were related to co-operative behaviour between individuals “resisting” a “dominant figure” within the group, the essence of speech is that of relying on a symbolic communal map of communication, which is IW2. Knight, Power and Watts proposed that the essence of ritual is that of representations of relations of power within a group as well as in between groups. The importance of the concept of ritual remains crucial in understanding IW2. This is because ‘ritual’ can be considered central to the notion of ‘shared meaning’, which can eventually ‘materialize’ through representation, taking a cultural form. The ‘symbols’ that describe the cultural form can be of the supernatural type, or they can stand for animals assumed by the interactants to be endowed with magical properties.

In essence, a communal map of intangibles would require an almost ritualistic behaviour from the members involved in the creation of ‘shared meaning’. For example, according to Hodgson and Helveston Australian Bushmen can imagine themselves to be animals during the ritual activities (Hodgson, Helveston 2007: 4). However, this notion of representation must be tied to the existence of shared concepts for the animals that the Australian indigenous tribes identify with. Therefore, rituals do require the presence of a collective shared inner world, their purpose being to externalise this inner world, an inner world that can be, in some cases, IW2, to the “initiates” that are taking part in said ritual. This means that rituals can act as a mechanism of expanding the physical domain of IW2: the new initiates take elements of the shared IW2 into their minds, and thus, IW2 contaminates yet another mind.

The ‘illusory worlds’ described in this section are constructs which were formed by considering Darwinian theory. The focus of the next section is the integration of Umwelt together with the functional cycle, to complement the understanding of ‘speech’ and ‘ritual’ as taken from hunter gatherer communities, and to bridge the gap between ‘Illusory world 1’ and ‘Illusory world 2’.

## 2. The reality of the Umwelt

Umwelt is a concept introduced by the biologist, Jakob von Uexküll. In his paper “A stroll through the world of animals and man. A picture of invisible worlds”. Uexküll defines the umwelt as a “[...] *phenomenal world or self-world of the animal*” (Uexküll 1934: 319 – italics in original). In an Uexküllian understanding, the umwelt is formed



by two different ‘worlds’, which are the ‘perceptual world’ and the ‘effector world, of the animal in question. Hence, perception and action form a closed unit for every animal (including humans) endowed with an *umwelt*. Consequently, it can be argued that the organism in question is not a simple machine, that it is not forced to mould itself according to external natural forces, be they real or ‘illusory’. A living being is a subject that can interact with objects that are being identified by its perceptual world, and act on them in multiple ways, depending on its inner subjective world. A living being has a choice.

IW1 is the world of human perception. Now, considering the notion of *umwelt*, IW1 is, in the Uexküllian sense, the perceptual world of humans to which it is added the subject’s active role in constructing it. The sky is blue because humans interpret it as such. Without the action of the human, the blueness of the sky would remain an indefinite palette of shades of blue shades. This means that IW1 is one of the building blocks of the human *umwelt*. The actions that humans take, shapes their *umwelt*. An intuitive way of describing the *umwelt*, which would not contradict the Darwinian perspective, is a sphere of signs which surrounds an organism. Hence the human subject is at the centre of this sphere. The organizing centre of this sphere, say the human subject, participates in a process of co-selection with its *umwelt*: to satisfy its needs it takes actions in the world, and the *umwelt* selects and integrates the actions that facilitate the organism’s well-being.

While IW1 and IW2 bear striking similarities to the concept of life-world, developed by Alfred Schutz (1945: 534), they remain different from it. According to Vargas, who analyses Schutz’s concept of life-world, the life-world integrates spatial and time dimensions and constitutes the human social world (Vargas 2020: 420). In this regard, IW1 and IW2, taken together as a unit, seem to form a concept that is closely connected to life-world, the latter containing meanings and symbols which are similar to the intangibles that are contained by IW2. However, this is not true. For Schutz the concept of intersubjectivity forms the basis of the life-world and this concept aims at explaining the reciprocity of human relationships (ibid, 420). Conversely, in this analysis, the notions of *umwelt* and functional cycle are relevant for tying IW1 and IW2 and, therefore, the complex unit formed by the IW1 and IW2 cannot be the same as the life-world since the principle behind connecting them is taken from *umwelt* theory and not based on intersubjectivity.

The functional cycle, which is key to the understanding of *umwelt*, is the associated non-linear model for producing signs. Uexküll used this to illustrate how organisms interact with an object. Below, there is a diagram of the functional cycle as proposed by Uexküll.



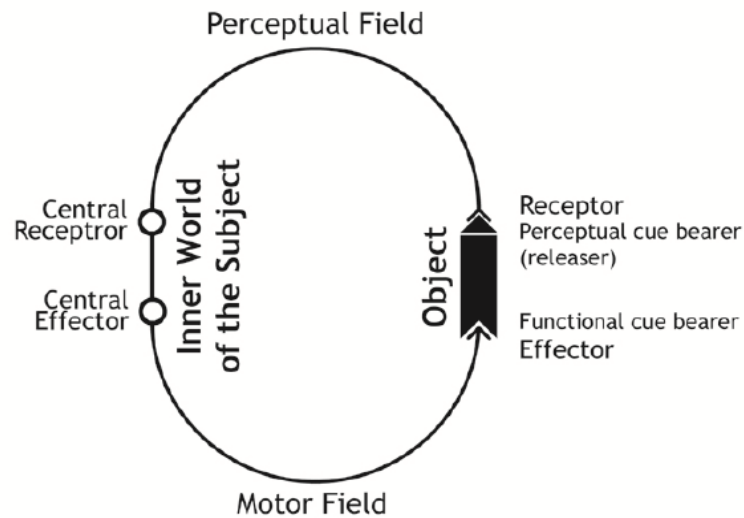
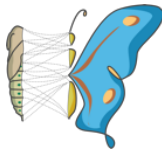
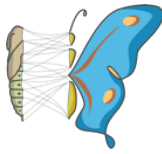


Fig. 1. Jakob von Uexküll's functional cycle diagram (Uexküll 1934)

The functional cycle represents a subject, in this case a human individual, which has an inner world, integrating an object into its umwelt. In the figure shown above, the functional cycle is depicted as the closed loop of interactions between stimuli coming from the object and inner world of the subject. The terms labelled central receptor and central effector are two features of the organism's nervous system. The motor field represents the innervating impulse that causes the organism to respond to the stimulus received through the perceptual field. This enables the organism to act on the object. Hence, through action, a functional cue bearer is placed on the object. The production of an effector cue erases the initial perceptual cue that started the process. As the cycle is renewed, new signs can be produced.

Now, the usefulness of the functional cycle and the umwelt to the creation of fictional constructs that belong to IW2 can be illustrated by examining the process of constructing IW2 from IW1. The question is: how does one go from the perception of a thing existing in the physical world to constructing an imaginary construct that takes exists in the 'shared communal map' of symbolic entities, entities that have physical analogues? This question may not have a simple answer, however, valuable insight that might pave the way towards a clearer understanding of the problem was provided by Thomas Sebeok's application of the functional cycle to the development of language in humans. In *Signs: An introduction to Semiotics* (1991), Sebeok dedicated the chapter "In What Sense is Language a Primary Modelling System" to the problem of the origin of speech in humans. Sebeok's use of Uexküll's functional cycle is linked to the concepts of verbal and non-verbal signs. Sebeok believed that only *homo sapiens* have "[...] two mutually sustaining repertoires of non-verbal signs": 'the zoosemiotic non-verbal' and the 'anthroposemiotic verbal' (Sebeok 1991: 332-334). The anthroposemiotic verbal can be modelled on the non-verbal

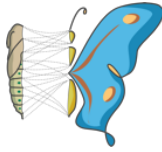


repertoire: the latter serves as a primary modelling system to the former. By considering the notion of the ‘primary modelling system’, one can see that a link between IW1 and IW2 can be constructed.

Without taking a reductionist approach, the emergence of IW2 and of all its associated ‘fantastic beasts’ would require two components: (i) a shared, IW1 which is part of the human umwelt and (ii) a system of inter-human relationships that are cooperative, as seen in the evolutionary theory based on counter-dominance. The idea is that of a primary modelling system which is based on shared perceptual objects within a community that are actualised through human practices such as song, ritual, or forms of art. For example, how can the concept of God emerge as a symbol within a community? The simple existence of the perceptual elements that are part of IW1 would not be sufficient for such a spiritual entity to emerge, and simple action of the human upon objects in its reality could lead only to an individual fiction, and not a shared one. Therefore, the application of the functional cycle would have to be modified, based on three premises:

- (1) A shared illusory world 1; between multiple human subjects can be constructed. This shared ‘illusory world 1’ is no longer individual, but collective and it can be based on things such as colour, shape, smell etc. Note that this is consistent with the notion of umwelt, which was designed to account for species specific behaviour. It is sufficient that the perceptual elements exist as being similar enough in the individual IW1 of different human subject (no two humans perceive the exact same shade of red or green, but they can still agree that it is the same thing) to exist in the ‘shared illusory world 1’.
- (2) The actions taken by humans are responsible for creating meaning between themselves. Hence, the functional cycle is no longer of the type of subject-object but of the type involving two subjects and an object that is exchanged between them illustrated by the following dynamic: subject 1 receives object from subject 2, it acts and modifies while integrating it into its Umwelt, delivers it to subject 2, who does the same and delivers it to subject 1”. Hence the tonality is that of an exchange of objects of values; the process is envisaged as auto emergent, and it is tied to the existence of a collective.
- (3) The ‘shared actions’ between individuals lead to the creation of an object belonging to ‘Illusory world 2’ that can be actualised through art as God, Unicorn, Dragon; etc. Speech, or various forms of art, would be used to endow this fictional object with a sort of materiality.

The proposed application of umwelt and the functional cycle would be useful and in agreement with the Darwinian understanding of the development of symbols in hunter-gatherer communities. Indeed, the functional cycle is designed to understand the production of signs by considering the interaction between subject and an object perceived by the subject in question, however the necessary extension to understand the formation of a ‘symbolic communal map’ is based on shared meaning that is actualised and hence the actions that the humans perform in a community would be



underlined by the tonality of the exchange; of objects of value, in a co-operative approach, that leads to the construction of shared meaning through these exchange processes. The shared meaning can eventually materialize through speech into symbols. These symbols can represent elements of the supernatural type or stand for objects assumed by the interactants to be endowed with magical properties. As such, through such acts, 'Illusory world 2', a shared map, can be created. This map can require an almost ritualistic behaviour from the members involved in the creation of shared meaning.

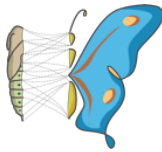
## Conclusion

The illusory worlds are, indeed, constructs which are independent of the concept of *umwelt*, and they attempt to facilitate the Darwinian understanding of adaptation and communal survival in humans. The *umwelt* notion, although closely related to IW1, differs from it in one essential aspect: it takes away the action of the perceiving subject. In other words, the 'red' element exists in IW1, however, to be part of the subject's *umwelt* it must be interpreted as such: a rose is red because the concept of red has been introduced in the inner world of the perceiving subject because of action from the subject (the act of interpretation).

The main thread covered in this paper is the application of the functional cycle to the creation of symbolic collective phantasies, which are objects classed under the umbrella term IW2. The hypothesis is that collective phantasies can arise from the objects of IW1 and the mechanism can be that of the functional cycle. The analysis reveals two interesting directions.

First, it seems that the way in which IW2 objects can arise from the world of perceptions is through acting on objects in a collective. Hence, the existence of an economic system that underlines the exchange between conspecifics together with the existence of the *umwelt* that permits the circulation, and the integration of these valuable objects can lead to the existence of collective phantasies, that have symbolic value. The idea is that any perceptible object can be exchanged and during that exchange the object would gradually become integrated in the *umwelt* of the human species. For this act of integration to be marked within a community, certain symbols may arise; God, for example, can be a symbol for the code of laws within a community, based on successful and advantageous exchanges within a group.

Second, the objects of IW2 are necessarily distinct from the objects of IW1 but are rooted in the objects of IW1. In other words, the image of a unicorn must be based on a real animal, a horse for example, to which one can add a horn. However, the shared meaning that the unicorn represents is not the image itself and therefore it represents an object which is distinct from the perceptual elements that add up together to draw it in the minds of a community. Modern representations of unicorns, although originating from medieval bestiaries, are subjected to new interpretations

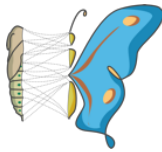


and as such the unicorn can acquire specific meanings: for example, consider the paper unicorns signifying unbound freedom in Ridley Scott's film *Blade Runner* (Babić, Vekić 2018: 173). The association between an object such as 'unbound freedom, which exists in IW2 and the fantastic image of the unicorn, that exists in IW1, can be forged such that it gains the same meaning in the mind of community, but the objects belonging to the two worlds remain separate. Therefore, the unicorn, has shared symbolic value and it can stand for various concepts that regulate the behaviour of a community.

In conclusion, the proposed direction is left open. Questions such as "Could all constructs pertaining to 'Illusory world 2' be constructed by the proposed use of subject-object-subject exchange?", and "To what extent can these constructs be based on exchanging elements belonging to the inter-shared perceptual world of humans?" are left unanswered here, the focus of this paper is more modest: to outline the potential adaptation of the functional cycle to explain the production of intangibles from tangibles.

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