

Ecosemiotic Study of Interspecies Umwelt Relationship in Alain Mabanckou's *Mémoires de Porc-épic*

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Abstract

Ecosemiotic is the study of the interactions between the ecological system and the life of signs. In ecosemiotic, the environment is an important factor as it is associated with quality of its habitats. This study analyses the omnipresent of signs in the relationship between humans or nonhumans and their environment using Uexkull's theory of Umwelt with emphasis on the semiotic representation of the relationships between interspecies in their Umwelten. We noticed that even though animals and humans live in different umwelt, they sometimes create a common umwelt which enables them communicate to one another which is clearly seen in Alain's Mabanckou's *Mémoires de Porc-épic*. The study of these Umwelten enables us see how change is enacted in humans, animals and plants as members of the same environment even as they get entangled one with another.

Keywords: *Ecology, ecosemiotic, merkwelt, umwelt, umwelten, wirkwelt*

Introduction

Semiotics is seen as the study of the life of signs and signs in the other hand can be something of natural or cultural origin that refer to another thing. According to Ferreira (2010), in all existence of semiotic structuring, there is the presence of a living system that evolve in an environment that leads us to the ecological study of man and signs. This leads us to the study of ecosemiotic, a mixture of ecology and semiotic as the entire universe is full of signs. Ernst Haeckel coined the term ecology to mean the science of the relations

between the organism and the environmental outer world (Haeckel, 1866). Ecology is defined in a similar way as the study of interrelations between organisms and their environment (Noth, 1998). Looking at the interactions between the organism and their environment, it is evident that there is always a semiotic relationship between them. Noth also states that organismussemiotikus is the interest of an ecological semiotics. He also states that eco-semiotic is a study in sign processes that is not restricted to arbitrary and artificial signs.

Looking into the eco-semiotic, Noth (1998) affirms that in cultural history, signs are omnipresent in the relationship between humans and their environment, a view held strongly by pansemioticians. He outlines the three major models of semiotic relationships between humans and their environment as: the pansemiotic, the magical and the mythological. Noth explains further that the pansemiotic model of relationship between humans and their nonhuman environment is semiotic in nature and that signs which we perceived in our natural environment are messages emitted by God or some supernatural power. As for the magical model, he states that natural phenomena are equally messages but their sender and manipulator, the magician is a human while its receiver at first sight is in our natural, physical or biological environment. He explained the mythological model as culturally transmitted in the form of narratives which instruct humans about their place in natural environment.

We can therefore say that ecosemiotic is a field of semiotic and ecology that studies the pre-linguistic meaning making and interpretation of signs and codes in the ecological sphere. In this study we looked into the process of signs coding, interpretation of meaning in the human and nonhuman environment just like Barbieri (2006, 233-25)

holds that semiotics is a universal principle underlying the basic processes of life and concerning biosemiotics. It is the study of semiotic phenomena in animals and then spread on all living organisms. He also states that all living organisms are semiotic systems and that semiosis is not a side effect but a fundamental process of life. Ferreira (2010) opines that a life form and its environment constitute an essential unit of a microcosm which is sustained by a privileged dialectic relationship in which the embedded agent is an entity endowed with particular physical architecture and its specific environment coupled, mutually influenced each other. Ferreira explains further that in all instances of semiotic structuring there is the presence of a living system that evolves in an environment individuating and passing on a value to typical environmental features.

Umwelt theory by Jakob von Uexkull was adopted in this study to examine the semiotics of the ecological relationships between different species. According to Uexkull, *Umwelt* is a self-centered world that has a biological foundation that lies at the epicenter of the study of both communication and signification in human and nonhuman (Kull, 2010). We applied this theory to the novel *Mémoire de porc-épic*; a novel written by Alain Mabanckou, a Congolais writer, a

poet, a journalist and a Professor of Literature. He has written a lot of literary works which includes novels and articles. His novel *Mémoire de porc-épic* is a story narrated by the porcupine to the listening of a Baobab tree. The Porc-épic which through an initiation becomes a harmful-double “*double nuisible*” of Kibandi, a human being. The porcupine is seen as a harmful double because unlike the “peaceful double” that protects and seeks good, he brings evil and Kibandi uses it for achieving his evil deeds. The porcupine who escaped from being killed was seen narrating his story to the baobab tree. He explained to the tree how he found himself associated with a human being who kept sending him on strange and evil missions. He told the tree how he left his family and got linked for better or worse with Kibandi and they became one as they share the same life.

The porcupine escaped after the assassination of his master Kibandi, he told the baobab tree how he awaits his own death. He said he doesn't want to die without telling the tree his own part of the story so he told the tree everything from how he was linked with Kibandi since childhood through an initiation by Kibandi's father and how he carries out all the dirty jobs for Kibandi. In his story we see how the link between man and animal relationship was developed at the detriment of

the villagers who fell victims of the killings by the two organisms. This evil association came to an end when the tempered with two twins' boys who couldn't let go. His led to the assassination of his master and the porcupine was on the run.

Here we have two organisms from two different Umwelten co-habiting together thereby creating their own social Umwelt. In this study we used Uexkull's theory of Umwelt to study the sign system of these two organisms in their environment and the effects of this cohabitation on the other organisms in living in the same environment.

Theoretical Framework

We all know that animals perceive and represent the world differently from humans yet it is possible in most cases for them for them to have a common world. We adopted Uexkull's theory of Umwelt to look into how organisms are organized into biological signification and cognitive meaningful state. Uexkull uses the term Umwelt to refer to a self-centered world. According to him, organisms can have different umwelten even though they share the same environment (Kull, 2010). He states that an umwelt is an environment-world. Umwelt in German language signifies “environment” and in ethology, it refers to the organism's unique sensory world. In Uexkull and Sebeok's semiotic theory, umwelt is the

biological foundations that lie at the focal point of the study of both communication and signification in human and nonhuman. Uexkull and Emanuel Sarris developed a method where the incorporation of objects of a human environment into the dog's environment helps the dog guides the human counterpart safely so the training of guide dog became a practical aspect of his umwelt concept.

Umwelten is the plural form of Umwelt and Martinelli explained the difference between the two using Uexkull's illustration of a stem of a blooming meadow-flower in an environment which has different meanings for organisms; for the human child, he picks it to make a bunch, for an ant, it uses it as a pathway to a food service, for a cicada-larva, it uses the sap of its stem for constructing a shelter and for a cow he eats the flower as food. He summarizes it in saying that the stem of this meadow-flower becomes four different objects: decoration, a pathway, an extraction point of material, or food (Martinelli, 2010).

Kull (2010) affirms that each component of an umwelt has a meaning and so represents the organism's model of the world. It can be clearly seen in an ecosystem; an organism reshapes and creates its own umwelt when it interacts with the world. Uexkull's Umwelt theory is centered on organisms that

make sense of it and shapes it in the course of its own relation to its Umwelt.

Uexkull's Umwelt theory states that the mind and the world are inseparable, because it is the mind that interprets the world for the organism. It also establishes that the Umwelten of different organisms differ. This is as a result of the individuality and uniqueness of the history of every single organism so therefore when two Umwelten interact it creates a semiosphere. Umwelt also unites all the semiotic processes of an organism into a whole and that all organisms need a collective Umwelt to survive (Martinelli, 2010). Uexkull says that all that a subject perceives becomes his perceptual world called the *merkwelt* and all that he does his effectors world is called *wirkwelt* so the perceptual and effector world together form a close unit which is the Umwelt (Uexkull, 1934). Martinelli states that an organism constructs its Umwelt as a result of a *merkwelt* and a *wirkwelt*. Uexkull by studying how senses of various organisms, he was able to establish that all organisms perceive and react to sensory data as signs (Martinelli, 2010). Manty further explains he two major points in Uexkull's Umwelt theory as:

(i) Organisms are active subjects with abilities to integrate themselves into complex environment.

- ii. (ii) The world or environment of an organism being perceived according to the organism's design, activity, needs, etc. (Manty, 2015). Manty further states that the individual organism is always actively creating its Umwelt and not only perceiving therefore each organism's Umwelt is unique even though some features are shared with members of the species or other organisms with similar design and needs. Analyzing the theory, Manty also states that Uexkull's Umwelt theory allows common individual behaviors in organism's perception and function and does not believe certain species as dominant over others (Manty, 2015).

In this study we examine how organisms of different Umwelten construct their Umwelt as a result of a Merkwelt (what they perceive and realize) and a Wirkwelt (their action, function or operations). We see how their perception organs react to certain stimuli from outside that carry meaning. According to Kull (2010) perception also includes anticipation and not just a habitual process. Manty states that the perception organs and the effect organs are parts of the inner world (Innenwelt) of an organism where the outer world is represented in the organism's sign system (Manty, 2015). We also examine how objects have several meanings for an organism that are linked with

its habits as pointed out by Uexkull (1980) and that the achievement of semiosis, that is, the meaning-making sign processes and reaction of the functional cycle is vital to the organism's accomplishment. Uexkull in his model of functional cycle shows that the semiotic nature of the organism-environment relation is apparent and it shows the subject (organism) which has perceptual and operational organs in an environment with objects (carriers of meaning) to be the receiver of meanings. Kull (2010) remark that ecosemiotic is the semiotics of relationships between nature and culture. he also said that ecosemiotic deals with the semiosis going on between organism and its eco-system which includes research on the semiotic aspects of the place and role of nature for organisms.

The Representation of Organisms' Umwelten in the *Mémoire de Porc-épic*

In our novel of study, we have three different organisms; human (*Kibandi*) and animal (*porc-épic*) and the tree (*Baobab*). These organisms have different *Umwelten*. Man, as an organism sees himself as the head of the ecosystem so designs and builds his environment using his form while on the hand the other living organisms in the ecosystem also form and build their world in the same environment creating their suitable *Umwelt*. Just as Uexkull says that every organism has

its own subjective environment which is different from any other, he also states that this difference can be very large in different species of animals just as expected in the case of Kibandi and the Porc-épic. The novel *Mémoires de porc-épic* begins by the speech of the porcupine which shows clearly the different *Umwelten*, it says:

Donc je ne suis qu'un animal, un animal de rien du tout, les homes diraient une bête sauvage comme si on ne comptait pas de plus bêtes et de plus sauvages que nous dans leur espèces, pour eux je ne suis qu'un porc-épic, et puisqu'ils ne se fient qu'à ce qu'ils voient, ils déduiraient que je n'ai rien de particulier, que j'appartiens au rang des mammifères munis de longs piquants, ils ajouteraient que je suis incapable de courir aussi vite qu'un chien de chasse, que la paresse m'astreint à ne pas vivre loin de l'endroit où je me nourris (Mabanckou, 2006,11)

So I'm just an animal, a mere animal without any value, people would say a wild beast as if there weren't any more beasts and more wild than us in their species, for them I'm just a pig -épic, and since they trust only what they see, they would deduce that I have nothing special, that I belong to the rank of mammals with long quills, they would add that I am incapable of run as fast as a hunting dog, that laziness compels me not to live far from where I eat

(Our Translation)

The author clearly shows us an animal taken out of its natural environment and moved into

the human Umwelt where they build a shared Umwelt around a common need and opportunity of interaction. Looking into the Merkwelt of organisms in the novel, we see the perception of the world connected to the sensory processes of the functional cycle by the Porc-épic when he says “...J'étais le troisième œil, la troisième narine, la troisième oreille de mon maître, ce qui signifie que ce qu'il ne voyait pas, ce qui ne sentait pas, ce qu'il n'écoutait pas, je le lui transmettais par songes...”(14), ‘I was the third eye, the third nostril, the third ear of my master, which means that what he did not see, what he did not smell, what he did not hear, I transmitted to him by dreams...’. (our translation). Here we have seen how the animal became the sensory organs of his master, it has also given his human master a much more different and sinister signification in his Umwelt notwithstanding whether Kibandi, his master will cause a negative or positive response in the functional cycle.

The Porc-épic went out of his natural environment and force himself to a model Umwelt based on the *mayamvumbiritual* (48) that uphold the belief that his species are destined to serve humans, the Porc-épic says: “...c'était la fin de la transmission qui avait commencé avec l'absorption du liquid initiatique, et la transmission se déroule de

cette manière d'abord entre les êtres humains, initiateur et l'initié à travers l'absorption du mayamvumbi..." (62-62), 'it was the end of the transmission which had begun with the absorption of the initiatic liquid, and the transmission takes place in this way first between human beings, initiator and the initiate through the absorption of the mayamvumbi..." (Our translation). It is clear by this statement that the "mayamvumbi" is what connects the human and its animal double and it enables them create a common Umwelt. Porc-épic ignored the fact that the object "human" was the same species that ate his progenitors. He left his Umwelt by the help of the "mayamvumbi" to the Umwelt of humans which even though sharing same the environment, the "humans" think highly of themselves in the ecosystem. Humans in the novel have excluded themselves creating their own Umwelt and according to Porc-épic humans do not perceive them animals as individuals with a right to their own lives as they are seen always setting traps to catch them for either meat or to keep them as pets.

Porc-épic who was an orphan adopted by the Gouverneur, was expected to build his Umwelt around his species but he refused and had his mind focused on the issue of "*double nuisible*" forgetting the facts that in the Umwelt of humans he is perceived as a prey

and his life is at stake each time he moves around the Umwelt. The Porc-épic was hiding in between two big stones when he ran away after the dead of his master. He knew he couldn't stay there for long because he could be killed when seen by humans, he said:

...j'ai trouvé au hasard un endroit pour passer la nuit, j'étais confiné entre deux grosses pierres, j'avais dû gratter la terre pendant un bout de temps pour me faire de la place, je savais que ce lieu était un gîte provisoire, que je ne devais pas m'éterniser là parce que certains villageois aiguisent leurs house à cet endroit avant d'aller aux champs... (Mabanckou, 2006,36)

I randomly found a place to spend the night, I was confined between two large stones, I had to scratch the ground for a while to make room for myself, I knew that this place was a temporary lodging, that I should not drag on there because some villagers sharpen their houses there before going to the fields... (Our Translation)

Despite all odds, the Porc-épic became the double of Kibandi, a position he looked forward to for a long time, only for his master Kibandi to force him into carrying out dirty jobs for him and the Porc-épic was determined to carry out those tasks to the letter so as to gain the trust and confidence of his master. Porc-épic's experience in an environment typically human shows how animals are used by humans for their selfish gain. By the experience of the

Porc-épic Mabankou tries to demonstrate how unjustifiable the use of animals for achieving the selfish interest of humans without taking into consideration the risk on the creatures. Considering these statements of the Porc-épic, we can see that every living organism regardless of his hierarchy is an individual with its own thoughts, he said:

...je ne suis qu'un hâbleur, un bonimenteur, un débile à piquant, or je ne critique pas les autres espèces animales pour le plaisir de l'exagération ... j'ai compris que pour s'accepter comme on est-il vaut mieux minimiser le répertoire de ses défauts, je préfère par exemple mes jolis piquants à la gale chronique des chiens de ce village, je ne parle même pas de certains animaux à plaindre dans ce monde où il y aura toujours un plus déshéritée que soi, la liste est longue il me serait plus facile de calculer mes dizaines de milliers de piquants que de recenser les animaux qui en veulent au créateur de ce monde... (Mabankou, 2006, 40-41).

...I'm just a boaster, a barker, a piquant moron, but I don't criticize other animal species for the sake of exaggeration ... I understood that to accept yourself as you are is it better minimize the repertoire of his faults, for example I prefer my pretty quills to the chronic scabies of the dogs in this village, I'm not even talking about certain animals to be pitied in this world where there will always be someone more disadvantaged than oneself, the list is long it would be easier for me to calculate my tens of

thousands of quills than to list the animals that are angry with the creator of this world...

Porc-épic prefers to live with his human double than staying in the same Umwelt with his species. This shows that it has a mind of its own and it also means that there are individuals among animals that believe differently from the other individual of their species. In the novel Porc-épic became the mythic organism bridging the gap between humans and animals' Umwelt. He is even seen in the Umwelt of the plants, sometimes after their deadly mission with his master, he feels the need to be in an environment far from animals or humans but surrounded by nature. This signifies the importance of the plants as an organism in an ecological system. The Porc-épic said: *"Dès que je me retirais dans la forêt après une mission, je prenais le temps de méditer dans un terrier, parfois au sommet d'un arbre ou dans son creux, voire le long de la rivière, loin de la parade des canards et du défilé des autres animaux..."* (25) 'As soon as I retired to the forest after a mission, I took the time to meditate in a burrow, sometimes at the top of a tree or in its hollow, even along the river, far from the parade of ducks and the parade other animals...' (Our translation).

Another semiosis is the communication between "le Vieux Rat" who is double of

Kibandi's father and the Porc-épic. The rat turns around the porcupine, sniffs his cock, licks him before disappearing (Mabankou, 2006, 61). According to Porc-épic this act by "le Vieux rat" is communicative as it was to confirm his status as the animal double of his son and also to the test of his bravery. The Porc-épic also shows us the semiotic significant of the object "human". According to the Porc-épic other animals see man as an animal, a higher grade of monkey, they refer to man as "*cousin germain du singe*" (68-69). According to them, human parents have the same father and mother with monkeys so they are cousins with monkeys. So aside from the image of humans in the ecosystem signifying danger for the other species, it also signifies an organism that makes life difficult for other organisms. The Porc-épic made it clear by saying: "*les humains nous mènent la vie dure, puis qu'ils sont hostiles et sourds à notre appel à la coexistence pacifique, puisque cesonteux qui viennent nous chasser dans la brousse...*" (69) 'humans give us a hard time, since they are hostile and deaf to our call for peaceful coexistence, since these are the ones who come to hunt us in the bush...' (our translation)

That's why talking about humans, the Gouverneur; the adopted father of Porc-épic and the leader of their species said his specie

must return the same favor to humans and that they must attack them and their infants. There is also the representation of death, in the novel which is the death of a specie. According to Porc-épic when one of his specie dies. The whole specie are forced to change their environment where they had created their self-Umwelt to a new environment where they will recreate their Umwelt because according to them change of an environment will help them with their anxieties and fears because they believed that the other world is just a universe with terrifying creature.

Another reason for their migration is the possibility of the man who killed the animal to come back for another one. That was why when the Porc-épic could not locate his species at their usual spot because they believed him to be death they had to relocate. Narrating to the Baobab how Kibandi's mother was buried with just few people present, he explained to the tree that knowing the past is essential in the affairs of humans and that even animals are organized in their Umwelt as they have their territory, their governor, their rivers, their trees, their feelings, and that only the elephants have a cemetery, the Porc-épic said :

je sais d'expériences que les animaux aussi sont organisées, ils ont leur territoire, leur gouverneur, leurs rivières, leurs arbres, leurs

sentes, il n'y a pas que les éléphants qui possèdent un cimetière, tous les animaux tiennent à leur univers ...

(Mabanckou, 2006, 127).

I know from experience that animals are also organized, they have their territory, their governor, their rivers, their trees, their paths, it's not just elephants that have a cemetery, all animals are attached to their universe ...

Another sign interpreted by the Porc-épic that links him to the double of Kibandi is the *Nwengué*, it is the best wine that the palm tree produces, it is less harsh and does not have an unpleasant flavor, and those that consume it take advantage of its sweetness and take it in excess forgetting it can make them drunk. Kibandi consumes this drink so much that he even killed the old Moudiongui because he mixed the *Nwengué* with sugar and water in order to make more profit.

At the end of the novel, the Porc-épic told the Baobab how living in the human environment and sharing the same Umwelt with his master has ended up creating nostalgia and fear in him. He realized how much he has missed the Umwelt with his species. He said despite all the missions he carried out for his masters, he still considers him as an ordinary porcupine (Mabanckou, 2006). After narrowly escaping death from the hand of their last

victims the twins and the baby, the Porc-épic ran to the Baobab tree and they created a shared Umwelt, even though the Porc-épic knows that the tree unlike other organisms in the ecosystem couldn't communicate verbally but he said he feels relieve by the presence of the the tree (Mabanckou, 2006). When the wind blows the leaves of the Baobab tree, Porc-épic feels assured that the tree can hear and understand him. We can see that they both created an Umwelt that enables them to communicate and understand themselves by means of semiosis.

In this study we are able to see three different Umwelten revealed by the Porc-épic, from the Umwelt of the Porc-épic and his species which can be said to be the Umwelt of animals to the Umwelt of Kibandi which is the Umwelt of humans and lastly the Umwelt of the Baobab tree which can be said to be the Umwelt of plants. Through the relationship between Porc-épic and these Umwelten, we can see that semiosphere is created when two Umwelten interact in an ecosystem. Organisms also need each other to survive and with proper semiosis of love, care and selflessness they can cohabit and create a united Umwelt.

Conclusion

Using Uexkull's theory of Umwelt in *Mémoire de porc-épic*, we are able to see how different

organisms though in the same environment understand the world around them and the meaning of certain objects and signs. Mabankou has used the liaison between the porcupine and his master to show that even though they live in different Umwelts that does not mean one has more value than the other and just the way there is the existence of different organisms in an ecological system, these different organisms have their own individuality and way of life which is what shapes their Umwelten. This shows that, with the perfect sign system, animals and humans can cohabit in the same Umwelt and if humans will stop seeing themselves as superior

organisms of the ecosystem, they can create an Umwelt which can comfortably accommodate other objects in the ecological system. The ability to interpret semiosis is vital to the survival of any organism in an ecosystem and for an organism to function properly it needs the right Umwelt. If humans can stop killing the animals by setting traps to catch them, if both humans and the animals stop destroying the plants and trees then and only then can the likelihood of a common Umwelt take place. Finally, we recommend more literary analysis research that focuses on animals and plants not as metaphors but as organisms with individuality anchored on semiotics.

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