



News and Views

## Cognitive Foundations of the Relationship between Humans and Animals among Hunters – Gatherers and Traditional Farmers

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### ABSTRACT

The aim of this paper is to show the possibility of different mind-sets for societies in the Upper Palaeolithic, Mesolithic and Neolithic and use this opportunity to develop a deeper understanding of archaeological cultures. This work is based on a model that I created according to ethnography. The main criterions for creating this model were subsistence strategies and people's attitude to nature which arises from the concept of the world. The basic parameter of this article is the distinction between past ways of thinking and the current European way of thinking.

### 1. Introduction

In this work, I rely on the basic thesis of phenomenology<sup>1</sup> (Husserl 1996), and I proceed from the knowledge of cognitive anthropology<sup>2</sup> (D'Andrade 1995; Thagard 2001) and ethnography (Morris 2000; Ingold 2000). Every human being in any culture is provided with cognitive orientation in the universe which is defined by understanding the world through basic assumptions, premises and order. These premises are the result of thought and create specific nature of the world as people perceive it (Hallowell 1960, 21 in Foster 1965, 293).

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<sup>1</sup>According to the basic thesis of phenomenology the natural world exists in the phenomenal site which is reflected in the knowledge which we know from elsewhere, in our case from science, not the world itself. We do not live in the natural world, however, but in the created world in which we have ideas and beliefs about the nature of the world. We see the world through this belief (Husserl 1996), through the concept.

<sup>2</sup>Cognitive anthropology examines the relationship between society and culture, exploring how people perceive objects and events that make up the world and how this understanding influences their behavior (D'Andrade 1995).

Members of every society share a defined cognitive orientation (Foster 1965, 293) – they have common concepts that structure human behavior. People's relationship to the world depends on the way of thinking. In other words: People treat the world/the object/the phenomenon according to what they think about it. Specific forms and meanings of what people think are expressed by the so-called concepts. Based on the study of cognitive anthropology and ethnography, it is clear that there is not only one conception of the world (ours).

Any behavior is a function of a particular way of thinking; it is rational and makes sense (Foster 1965, 294). Native behavior seems to be irrational only to individuals who evaluate the behavior from the perspective of a foreign concept, from the perspective of another reality (Foster 1965, 295; Brück 2007). The correct interpretation of the behavior depends on the knowledge of cognitive orientation (Foster 1965)/concepts of specific cultures. If we want to understand past cultures, we must be aware of their different ways of thinking or at least approximate them by creating model of their different conception of the world and their difference from current thinking. The biggest problem is the correct application of ethnographic

knowledge to archaeological material, because there are no reference points to ensure accuracy. The anthropological and ethnographic information itself is sometimes incomplete, taken out of context and even erroneous (eg. a collection of oral traditions see Morris 2000, 174). Frequent problems also arise from the application of generalization of information in specific cases.

This work is based on a model that I created according to ethnography. It is a model of concepts of the world, that can be expected in Upper Palaeolithic and Neolithic. The main criteria for creating this model were subsistence strategies and people's attitude to nature which arises from the concept of the world. If we accept that a set of cultural principles/concept of the world stands behind all human activity (Brück 2007, 292), then all activities including subsistence strategies are derived directly from the conception of the world (Brück 2007, 301). Therefore, I assume that an extensive change in the subsistence strategies indicates a change in the concept (cf. Ingold 1996a, 21) or vice versa, a change in the concept indicates a change in the strategy.

From archaeological sources, we know that the way of life in the Upper Palaeolithic (and the Mesolithic) differed from the Neolithic way of life. People in the Upper Palaeolithic went hunting and gathering (thus they travelled), while in the Neolithic, they primarily grew crops and bred animals (they settled<sup>3</sup>). This caused people to have different types of experiences with the world<sup>4</sup>.

Different concepts are manifested by different approaches of traditional indigenous cultures to the natural environment and animals. Although all human societies have diverse and multi-faceted approaches to nature and to animals (Benton 1993, 62–69 in Morris 2000, 2), specific forms of relationships and behavior towards animals vary according to the concept of the world, from which the practical uses of animals emerge. The anthropological literature (Shanklin 1985; Mullin 1999; Kalof *et al.* 2007; Komárek 2011), which is concerned with

changes in this relationship from the ancient time to the present, shows that human – animal interrelationship has changed over time. While the anthropological literature has a long tradition on this subject (since the 1970s – works by C. Lévi-Strauss), the archaeological literature reflected it very rarely (Marciniak 2005, 39), which is shown in osteological analysis that are attached to archaeological publications as supplements.

On the basis of cultural anthropology/ethnography substantially different approaches to animals can be defined in the societies of hunter-gatherers and farmers (Foster 1965; Ingold 1996a; 1996b; 2000; Morris 2000, 3) and modern European and Western culture.

## 2. The current way of thinking

Our modern world is based on a mindset that recognizes rationalism as the only valid way of understanding the world (Goody 1961; 1977 in Brück 2007, 284). Rational thinking proposes that there is a mechanical world with inanimate connections between cause and the resulting phenomenon. Particularly, it teaches that the world operates on the basis of strict laws of causality, which can be recognized by testing and observation. Rational thinking is based on the Cartesian model of the world, which is grounded on dichotomy – on the concept of binary opposition of cultural elements according to which the world is made from a number of dualisms/opposites, such as culture – nature, mind – body, sacred – profane or symbolic – practical (eg. Brück 2007, 285).

This rational way of thinking is characteristic for the contemporary Western and European culture and has its roots in the Enlightenment in the 18<sup>th</sup> century. In other words, this is the way we think. And we assume a priori that all people think and always thought in this way. The modern rational thinking led to the creation of a scientific description of the world (the Big Bang theory) and the scientific view of the universe (Grand Unified Theory). Basic cognitive process is based on the observation of an objectified world (Stover 2005, 1086).

Superior/dominant attitude to nature and animals is typical of contemporary culture (Morris 2000, 2). First extensive manifestations of human superiority over nature can be expected in the early modern period (Mullin 1999, 203), although its roots can be already found in the monotheistic Christian theology (Kandert 2010, 80–81).

We observe two extremes in Western European culture. On the one hand, there are animals determined only for production (depersonalized stance of a man – an animal as a machine) while on the other hand, there are beloved family pets (emotionally interested man). The anthropological studies of M. H. Mullin (1999) show that exploited animals are relegated to the margins of society in societies with industrial economies. Practically the human “herd” pays no attention to animals. People eat meat, not animals (Mullin 1999, 210). People of Western civilization rarely think about animals as food (Mullin 1999, 216) and do not have them associated

<sup>3</sup>The exact level of sedentarization in the Neolithic is difficult to determine. We assume that prehistoric people were more nomadic, albeit their movement was likely restricted to a small territory belonging to one community. Furthermore, the landscape was inhabited continuously with certain settlement cores. The prehistoric landscape was settled as a whole which cannot be compared with the character of medieval and modern settlement structures (Kuna *et al.* 2004, 19–21).

<sup>4</sup>It can be deduced that the knowledge and experience of prehistoric man were quite different from our present ones. It could be said that people had different lives, had a different life content. This different life was in line with their concept of the world. The question is, what humans had in their consciousness, what kind of inventory did they have, how did they feel? Quite naturally I assume that in the minds of prehistoric man there was the kind of information they needed to survive and sustain life, such as a detailed knowledge of the immediate natural and social environment: the landscape and its landmarks, animals and their hunting and breeding, plants and their cultivation and effects, human society and its functioning and structure, death and the spiritual concept of being. Man had to come out of consciousness itself, and thus realize, who he is, where he belongs, where he is going and what his role is in society. He defined the boundaries, which told him that this is him and he belongs here and this is someone else who belongs somewhere else. This all includes the anthropological term culture (Kottak 1991, 35–43).

with meat. Mainly due to the fact that they buy meat in shops and they do not come in contact with the animals.

### 3. Thinking of native peoples

Many researchers claim that the so-called native peoples perceive and understand the world in a way that substantially differs from the modern Cartesian understanding (eg. Silberbauer 1981, 51–52; Morris 2000, 1–6; Ingold 2000, 15; Losey *et al.* 2011, 175 with the literature). These peoples have a different way of thinking, which corresponds to a different conception of the world. Their particular way of understanding the world is articulated in the form of ideas, cosmological beliefs, values and religious systems (Brück 2007, 292). It is a part of general knowledge and is not formulated in the form of a doctrine (Silberbauer 1981, 51). The way of understanding the world differs according to the dominant subsistence strategy. Agriculture or hunting becomes a way of perceiving the natural environment (Ingold 1996b; 2000, 40).

#### 3.1 The concept of religious ritual

Ritual behavior is an integral part of the native people's thinking and is related to the symbolic system (structural set of signs), which is shaped by stories about the creation of the world, the origin and structure of the universe and the functioning of the cosmos. These stories come from dreams and visions of individuals or from extraordinary experiences of whole groups and determine the view of the world and the existence and meaning of life (Stover 2005, 1,084–1,085). Human consciousness – dreams and visions, is used in cognition for the world. In other words, I learn something about myself and the world or find solutions to specific situations by applying consciousness. People survive through the use of consciousness. For example D. Lewis-Williams (2007) together with D. Pearce (2008) talked about the usage of human consciousness in archaeological context.

To understand religious rituals, it is important to realize that rituals and ritual behavior are products of spheres of human thoughts and are linked to concepts that differ from those of the contemporary Western civilization. Within these other concepts ritual activities usually appear in everyday life and are considered to be quite practical (Brück 2007, 286), they are reflected in their own belief in the existence of spirit or supernatural force. Their task is to resolve, alter or demonstrate a situation (Brück 2007, 287). According to the criteria of Western European rationalism ritual is perceived as something irrational and dysfunctional. Archaeologists assume that ritual is something separate (in time, space, conceptually) from common, everyday activities (Brück 2007, 284). Archaeologists classify rituals or ritual activities among aspects of archaeological culture that cannot be explained by practicality or functionality (eg. Neustupný 1995). Although this approach does not match the reality of “magical” way of thinking, it remains the only clue to the discovery of spiritual activities so far.

Generally ethnographic/anthropological literatures (Keswani 1994; Badenhorst 2008; Insoll 2010) collect enough information about various ritual and socio-ideological reasons, rather than economic, utilitarian values, and their influence to the osteological assemblages in the pre-state societies. According to P. S Keswani (1994, 255) long-term changes in the composition of osteological assemblages are closely linked with the transformation of social structures and ritual practices. S. Badenhorst (2008, 223) comes to the same conclusion among tribes of South Africa. S. Badenhorst reduces the impact of diseases of livestock and changes in natural conditions to changes in livelihood and osteological assemblages; on the contrary he emphasizes the impact of changes in the social organization and ideology. Similarly, J. Z. Holt (1996, 89–109), who dealt with the importance of animals in populations from the U.S. Midwest during the Precolumbian era, comes to a conclusion that the choice of exploited animal cannot be satisfactorily explained only on the basis of the economy or the use of economic models (Holt 1996, 90).

#### 3.2 Hunters and gatherers

A large quantity of ethnographic literature is devoted to hunters – gatherers. Their relationship to the world depends on the concept that can be defined as animism (Silberbauer 1981; Losey *et al.* 2011). Animism is the belief in the existence of independent spiritual entities (Tylor 1889 in Crawford, Geffen 2005, 312) – spirits and souls that are capable of sensory perception, help or harm people (Horyna 1994, 33–35). The world is revitalized by the spirit. The integral part of the animism is the belief in the immortality of spirits/souls, who travel to the spiritual world or are reborn on earth in another body after death. Spirits have their own will and judgment. Ghosts exist in the material and immaterial world and affect people's lives, so they are the subjects of respect, prayers and reconciliation.

If respect is devoted to the spirits and the appropriate ceremonies are conducted, the spirits help people to survive and prosper. If they get angry, they can cause failure and human misery (Crawford, Geffen 2005, 312). The concept of creator occurs among hunters – gatherers. Creator is omniscient, omnipotent and omnipresent and is regarded as the creator of all beings and mover of all events (Silberbauer 1981; Pospíšil 1993). The world of hunters – gatherers is structured into several (usually three basic) horizontal layers (Lewis-Williams 2007, 173–177; Lewis-Williams, Pearce 2008, 80–85, 89).

Animism is characterized by a “monist” mode of thought (Brück 2007, 286). This monist mode is characterised by a different system of logic and causality and by the absence of contradictions (Brück 2007, 288). The absence of opposites can be formulated as the absence of sharp boundaries (or no boundaries) between the sacred and the secular, material and spiritual, organic and inorganic, human beings and spirits, black and white, people and animals or culture and nature. Another kind of logic and causality is based on the other cause of phenomena, objects and events. This cause is an

active agent – a force that is described as spirits or souls (Brück 2007, 286, 288).

For example, treatment of diseases or seed germination is perceived as a magical act in which spirit or soul has a decisive role (Brück 2007, 285, 287). For example, a mountain is perceived in the animistic concept as a living being that lives and can affect people's lives. The importance of a mountain in animism is different from modern conception. The animist mode of perception is also called magical or mythical perception (Lévy-Bruhl 1999; Lévi-Strauss 1999) or ecological thinking (Morris 2000, 2).

People think about nature, about animals and their behavior very differently in the animistic system than we do (eg. Silberbauer 1981, 63–64). The attitude to nature and animals is described very similarly in all groups of hunters – gatherers (Morris 2000, 3 with the literature). A characteristic phenomenon of animist thinking is the perception of equality with everything in the world (animals, plants, landscape, weather), there is no sharp boundary between humans and animals. Animals are socially and spiritually equivalent; they have feelings and thoughts like people (Morris 2000, 3).

Hunting is always accompanied by rituals, which expressed the reverence and respect to the animals and balanced the discrepancy between the relationship to the animal and killing and eating it (eg. Harrod 1987; Serpell 1986, 144 in Morris 2000, 4). Hunters – gatherers' relationship to animals is imbued with emotions that are related to the animal species. Hunters do not have a familial relationship to a specific hunted animal since it is replaceable. The meeting of the hunter and the animal is occasional and unrepeatable; the animal is killed on the spot. Hunters' relations to animals are repeated at the level of species rather than individuals. Hunters have different relationships and commitments with various species (Knight 2005, 4–6). Hunters are expected to have a less intimate relationship with animals. They respect their freedom, and private life, and the relationship is carried out in a more general way – the species level.

On ethnographic analogy terms, we can assume that the animals were perceived differently in the past than we do in contemporary European culture. This otherness partly consisted in the recognition of other "spiritual" abilities of animals. The animals were perceived and evaluated also in terms of subsistence commodities such as meat and fat in the hunter-gatherer societies (Speth 1983). Extensive ethnographic studies of Jochim (1976 in Speth 1983, 146–147) showed that hunters – gatherers generally preferred a diet rich in fats – fatty meat. This is reflected in the hunting strategy that focused on fat animals. For example, the bear was hunted mostly in autumn and the beaver's tail was highly prized (Speth 1983, 143–144, 146–147).

### 3.2.1 The symbolic thought of hunter – gatherers

Symbolic thinking is related to the general tendency of the human mind to create and use analogies and metaphors (Lévi-Strauss 1964, 89 in Whittle 2003, 78). The animal kingdom was a suitable area to create imagery because it represented a parallel area of existence. The suitability/affinity of animals

and humans was given by the similarity of natural features, such as movement, vocalization, similar anatomy (Lévi-Strauss 1964, 89 in Whittle 2003, 78), and social and emotional behavior, or their specific unique characteristics such as fertility, viability (Tilley 1996, 63, 65 in Whittle 2003, 83) or the ability to fly. The concept of the world (the indigenous view of the animals) and specific experiences that people had with animals influenced their associations (Lawrence 1997, 1–2). The repertoire of animals' skills is much broader in the concept in which ghosts and soul exist.

This is an extended repertoire of skills linked to the spirit or soul. For example, the dog protects people against other people or against evil spirits and accompanies a human soul into the afterlife (Losey *et al.* 2011, 176; Ojoade 1986, 42–44). Or there is an association between the flight of birds and their ability to communicate with spirits of heaven (Lévi-Strauss 1964, 79 in Whittle 2003, 79). Symbolic aspects of animals vary according to cultural contexts. People choose some biological and behavioral traits of animals and suppress others. Selected features are transformed into symbols according to the cultural construction that is based on experience (Lawrence 1997, 1, 3). Specific symbols refer to the perception of the world; to description of the world in cosmology (Stover 2005, 1086). For example, the bison is a Sioux symbol of the universe because it contains all the necessary commodities to people's lives and for this reason it is also a symbol of rebirth or renewal. The bison is associated with the moon because it has 28 ribs, and returns periodically (Lawrence 1997, 7).

### 3.3 Small-scale farmers

Based on the ethnography of farmers and also occasional hunters (hunting had never been eradicated), we can observe a partial shift in the way of human thinking; and a modification of the concepts of the world and a different relationship to animals can be expected (Ingold 1996a; 2000; Morris 2000, 4). A symbolic dualism between the settlement and wildlife (*cf.* Hodder 1990), which is the main organizing principle of everyday reality, is a new phenomenon in the concepts of small-scale farmers.

However, this is not a strict Cartesian dualism as it has symbolic associations, such as wood – man – hunting – the spirits of ancestors – wild animals and villages – women – agriculture for example in the Malawi culture (Morris 2000, 125). A typical manifestation of dualism is the opposition of the people and nature, which is reflected in the field cultivation, the protection of people and crops from wild animals and the control/handling of domesticated animals (Serpell 1986, 175 in Morris 2000, 4). I suppose that cognitive orientation of peasants is not pure animism (see Morris 2000, 152)<sup>5</sup>. A

<sup>5</sup>Malawians are not animists (Morris 2000, 152). Their relationship to the world depends on concept, in which nature, animals, plants and land are living entity (Morris 2000, 155). These entities have internal forces and potency (Morris 2000, 152). Malawians make distinction between things with life (tree, animal, ancestor spirit, mushroom) and things without life (stone) (Morris 2000, 141). Although this cognitive orientation encompass

new essential element – a cult of ancestors<sup>6</sup> appears in the peasants' concept of the world (Pospíšil 1993).

T. Ingold (2000) deals with the shift in the perception of animals in the Neolithic age. His work is based on a comparative ethnographic study of people who make their living primarily by hunting and gathering (Ingold 2000, 9). According to Ingold (2000, 73–74) farmers or herdsmen considered domesticated animals as slaves. The relationship between farmers and animals is based on the dominance of the animals. The process of domestication is a transitional process that resulted in the change of status of animals in human society (Ingold 2000, 75).

J. Knight (2005, 4–6) points out that farmers and herdsmen have an invasive and intimate relationship with animals, which is caused by the daily personal contact (milking, grazing, feeding, housing). Farmers and herdsmen create a familial relationship with animals as individuals (Knight 2005, 5). A domesticated animal (herds) is a part of the culture in which it has “some” social status and a socio-political role (see Orton 2010). This phenomenon is observed particularly among pastoralists in Africa (Reid 1996, 44–46). For example, the Maasai (East Africa) recognize herd animals by names and characteristics such as appearance, the state of reproduction, the manner of acquisition and genealogy of the animal (Mullin 1999, 210).

T. Ingold's hypothesis (2000) was criticized by K. A. Oma (2010, 175–187), who looks at the relationships between farmers, herders and animals differently. She talked about the idea of the “social contract”, which depends on trust, reciprocity and mutual assistance. People offer food, drink and protection to animals, while animals are doing the work and give those products (Oma 2010, 177–178). Similarly A. Whittle (2003, 81, 93) points out that it is not appropriate to simply apply this approach to the Neolithic period.

In essence we can assume the coexistence of these two contrasting approaches to animals among traditional farmers, as noticed by B. Morris (2000) in Malawi culture (SE Africa). This culture has an ambivalent/dual access to wild animals and it is connected with ecological and symbolic separation of village and forest (Morris 2000, 151). Farmers perceive wild animals as an opposition, as a permanent threat to agricultural production, as enemies and competitors who have greater power than humans (large animals). On the other hand, wild animals are a source of meat, pharmaceuticals, leather and a subject of mythology, lore, prophesy and rituals (Morris 2000, 4–5, 120). Wild animals are identified with the spirits of

ancestors who were involved in ensuring the continuity<sup>7</sup> of culture in the village (Morris 2000, 121). A clear distinction is made in the classification of wild and domestic animals. It is necessary to tame them and take care of domestic animals (Morris 2000, 149), they are bred for meat.

Hunting has a less significant role in the livelihood of Malawian people (Morris 2000, 74). Although the main motivation for hunting is to obtain meat (the desire for meat is recorded in many agricultural societies), hunting itself is always associated with rituals – it is devoted to ancestral spirits (Morris 2000, 26, 74, 97, 104) which should ensure successful hunting and protect hunters against misfortune (Morris 2000, 62, 64). It is believed that killing a wild animal is like killing a man. The agricultural society has available one or two men, who specialize in hunting<sup>8</sup> (Morris 2000, 85). One of their characteristics is a detailed knowledge of the game and medicine (Morris 2000, 105). Meat is consumed together after hunting and it carries a social meaning (Morris 2000, 63, 67, 93).

The concept of “limited good” was developed in the traditional farmers societies (Foster 1965, 296; Piker 1966; Kennedy 1966) in Latin America and Europe.<sup>9</sup> This concept is based on the idea that everything people may want exists in a finite quantity – land, wealth, love, health, respect. Moreover, the peasants have no power to increase the available quantities, for example the amount of land. It naturally results in an idea that an individual or family can improve their position only at the expense of others by appropriating a bigger share from a collective pool. Such improvement is a threat to others. More prosperous individuals may be the objects of slander, envy and violence (Foster 1965, 297, 302, 305).

This concept may be manifested as a resignation to fate, quarrels within a family and among families, individualism – difficulties in cooperation<sup>10</sup>, extraordinary ritual expenses and emphasis on luck rather than on the economy, their own efforts and hard work (Foster 1965, 296, 308–309). Agricultural technology is very primitive in traditional farming communities since it is based on a plough drawn by cattle and hand-made instruments (Foster 1965, 298). This type of technology was utilised in Europe perhaps in the Eneolithic age (Beranová 2006, 18–26; Neustupný 2008, 18–19).

<sup>7</sup>There is a ritual, which concerns the creation of man as affined. Theriomorphic figure is used, which represents the ancestral spirits in animal form. This figure dancing on girls' initiation rituals; stands there in opposition to the woman – the kinship group (Morris 2000, 131).

<sup>8</sup>This could be verified by the presence of arrowheads and transverse arrows in graves as an analogy to prehistory. For example in the Vedrovice burial place (Mateiciucová 2002, 223–224).

<sup>9</sup>This concept was created on the basis of studies of Tzintzuntzan in Mexico, but it occurs in other agricultural groups (Foster 1965, 293, 296). This concept exists among farmers who emphasize the nuclear family; it does not appear in descent groups. African farmers are mentioned as those who have a lesser inclination to individualism and rivalry among individuals or families, the rivalry is happening at the level of kinship groups.

<sup>10</sup>Agricultural activity requires a minimum cooperation with other families (Foster 1965, 301–302), which may not apply universally.

the concept of the sky as the dwelling of the Spirit – Creator (Creator is identified with rain, thunder and lightning), the main structural element of their daily reality is dualism, which is expressed as two separate spheres – the village and the forest (Morris 2000, 132).

<sup>6</sup>A cult of ancestors is based on the worshipping of deceased ancestors spirits. This concept does not appear everywhere, for example does not appear in the hunter – gatherers society. It is widely widespread in Africa among tribes, that want to emphasize the continuity of a group of descendants with socio-political role. The oldest man has an important position in the line of descendants and meet a role of a mediator between humans and ancestors (Pospíšil 1993).

The tendency of extraordinary ritual expenses is manifested by a ritual sacrifice of overproduction.<sup>11</sup> It is a kind of waste of resources from the current economic perspective. It occurs, for example, in the Trobriand (New Guinea), who produce jams in such large quantities that most of the crops would rot (Pospišil 1993). Overproduction is linked to desire for prestige (Lang 2010). Hypothetically, it would be possible to explain cattle deposition (eg. Behrens 1964; Pollex 1999; Žid 2000; Szymt 2006) in the Neolithic age in this manner. If we just hypothetically combine this tendency with the belief in ancestors<sup>12</sup>, then animals' deposition could be interpreted as a habit of sacrificing a part of crop (overproduction) to ancestors.

### 3.3.1 Symbolic thinking of small – scale farmers

If we consider the fact that the cultural concept of the world had an influence on creating associations and the need to create metaphors (Lawrence 1997, 1–3) and specific experience with animals, then the change in the concept of the world brings different animal symbols. There were different notions of wild and domestic animals and thus farmers used different metaphors for them. Pastoralists also have different symbolic connotations for domestic animals (eg. Mullin 1999; Szykiewicz 1986, 1–5; 1990). For example, cattle are the center of life and the core of male identity for African<sup>13</sup> tribes (Whittle 2003, 94).

Information about traditional farmers' views on domestic animals is not as numerous as the views of hunter – gatherers on wild animals. Insoll (2010, 232, 235) studied ritual significance of domestic animals – animal sacrifices in the Talensi tribe in Ghana. Animals are sacrificed in different types of sanctuaries (sanctuary of healing, ancestors, fate, land). The meat of a sacrificed animal, which is killed by cutting through the neck with a knife, is assigned to the present priests, elders and kinship groups according to specific rules (Insoll 2010, 236).

Most consumed meat (except poultry) comes from sacrificed animals. Some exceptions are the rituals related to death, when the carcass is left in the sanctuary to avert an evil away from the shrine (Insoll 2010, 238). The symbols of the sacrificial sites are the skulls and jaws of large animals such as cattle and donkeys, which are hanging on the roof of the shrine. Skulls and jaws of animals are given to the tribe leaders (priests, chiefs, elders) and indicate superiority and leadership (Insoll 2010, 238).

Hodder (1982, 155–161) noticed that the Nuba Mountains tribes (Sudan, Africa) hang animal skulls on the granaries.

Skulls are hung inside granaries in the Moro tribe while they are hung outside the granaries in the Mesakin tribe. Skulls remind people of special events, which are related to killing the animal. They also have a magic and protective meaning and are associated with a number of rituals, which secure the entrance to the granary. The purpose of rituals is to protect stored grain against deterioration, and ensure future fertility (Hodder 1982, 156). This phenomenon is also associated with the symbolic duality between men – cattle – purity and women – pigs – dirt (Hodder 1982, 157). Men take care of cattle and cattle are associated with male power, while women take care about pigs and pigs are associated with the domesticated world (Hodder 1982, 159).

Archaeologist immediately thinks of the clay house model from Střelice (Palliardi 1916, 51), which depicts an animal skull with horns, situated on the roof of the house, or findings of the cattle skulls from pits in Branč – Helyföldek (Nitra) (Vladár 1969, 504, Abb. 7) or Svodín (Nový Zámek) (Vladár, Lichardus 1968, 284, 289, Abb. 36–37). These findings indicate the exceptional status of cattle in the Neolithic (Lengyel culture).

Frazer (1994, 391–404) recorded the spiritual relationship between cultivated crops and animals among traditional farmers in Europe, where the spirit of the grain is revealed in the form of the animal. This notion is related to series of acts and beliefs.

## 4. Conclusion

An animal, or the relationship between humans and animals, is a theme that appears in every culture. This article highlights only the role of concepts in defining relationships between people and animals (nature) in the world. It basically touches the conceptions of these relationships. Human – animal interrelationship is amply discussed in the anthropological/ethnographical literature (Shanklin 1985; Mullin 1999; Kalof, Resl *et al.* 2007; Ingold 2000; Morris 2000). For this reason, it was possible to create a theoretical background which developed the assumption that the relationship between people and animals depends on the perception and understanding of the natural environment – from the conception of the world, and that these changes of relationship were caused by changes in perception and understanding of the natural environment. Different positions of animals emerge from the transformation of attitude to animals in human culture. In this paper I present a very general model of two different concepts of hunters – gatherers and farmers. The question remains how to extend this model to a specific hypothesis that could be tested on archaeological sources?

Overall, I would evaluate the approach of hunters – gatherers to nature and to the world as a simple, complete and easier to reconstruct, which comes from the concept of nature, in which everything is equal. For these reasons, it is simpler and unambiguous to use the model of hunters – gatherers to the Upper Paleolithic and Mesolithic periods.

<sup>11</sup>Overproduction is a spoilt production in the ethnography (Lang 2010).

<sup>12</sup>For example, ancestors are those who are in charge of fertility and abundance and ensure the continuity of living humans in east Africa. The abundance, fertility and vital force have spiritual origins (Morris 2000, 124).

<sup>13</sup>For example, cattle are sacrificed and consumed in ritual events (funerals) in the Tandroy tribe (Madagascar, Africa), cattle are accumulated and used to express wealth in everyday life. Their skulls are deposited in graves (Parker Pearson 2000).

The situation gets more complicated in the case of peasants; another entity – a village enters the relationship between human beings and nature. Village separates this relationship and carries a change in the conceptualization of the world – the perception of duality. The relationship with animals is strictly separating domestic and wild animals, and thus reflects the unequal perception of animals. The application of this model to peasants in the Neolithic age is not as clear and simple as it was in the case of hunters – gatherers. The shift in cognitive orientation can be expected among the first peasants, which is not so easy to reconstruct, and the old worldview from the Upper Paleolithic and Mesolithic ages was still surviving. This change is reflected in the archaeological record from the Neolithic age, which I assess as being complicated, fragmented and disunited. I suppose that there was a clash of two worldviews in the Neolithic age – on the one hand the Mesolithic view and on the other the Neolithic view.

From the point of view of general principles I would point out that hunters – gatherers have a relationship with animal species rather than with particular hunted animals. Hunters make contact with the spirit of animal species, while the peasants have an opposite approach. Farmers and herdsman have relationships with specific bred animals with which they live daily.

There is evident similarity between the way humans and animals live in the case of hunter – gatherers; “people hunt – animals hunt”. People and animals have a similar way of survival and people can learn hunting tactics from animals. This similarity does not apply to agricultural strategy; people are significantly different from animals in the way of living. The meaning and importance of man – the individual and nuclear family is growing rapidly in securing sources in contrast to group hunting strategies, when a man – an individual must abandon personal goals (this does not apply to prestige) and engage in one impersonal common goal, which is hunting (see Gurven 2004, 548–549, 556–557). Could this be the one of the causes of the Neolithic age?

According to Ingold (2000) peasants have different thinking about animals. Animals lose their own nature through domestication and I would say they even lose their soul. The relationship between animals and male identity occurs in hunters – gatherers (wild animals) and herdsman (domestic animals) societies.

Animals are not worshiped in general (Morris 2000, 171). There are traces of worshipping animals in the form of expressing appreciation for their “gifts” in the hunters – gatherers societies. Farmers and occasional hunters in Africa express a sacred approach to wild animals if they are possessed by the spirit of an ancestor (Morris 2000, 171). Animals are sacrificed as a substitutional sacrifice in both subsistent strategies (eg. Insoll 2010, 231–244; Losey *et al.* 2011, 176).

In general I observe two similarities in cultic practices with animals in the Lengyel, Funnel Beaker and Baden cultures, in spite of peculiar cultic features in each culture. First concerns the manipulation with animals’ heads/skulls in depositions or graves (head is bend backwards, removal, displacement, separate and manipulate or is located alone

in pit or grave) (eg. Behrens 1964; Žid 2000; Struhár 2001; Pleinerová 2002; Kyselý 2002).

Second relates to the so called animals building offerings in context of houses, rondel enclosures or moat. For example I can mention archaeological findings of dogs from the Želiezovce group – house from Iža (Komárno district, Slovakia) (Dušek 1961, 80) and Bajč – Vlkanov (Komárno district, Slovakia) (Stuchlík 2004, 217–218); the Lengyel culture – rondel in Vedrovice (Znojmo district, Czech Republic) (Podborský 1988, 182, 214), moat in Hluboké Mašůvky (Znojmo district, Czech Republic) (Neustupný 1950, 55) and from contexts of houses in the Funnel Beaker culture – Niedźwiedz (Kraków district, Poland) (Andralojć 1986, 14), Wyciaże (Kraków district, Poland) (Andralojć 1986, 17) and the Baden culture – Dłuszina-Zesławice (Kraków district, Poland) (Andralojć 1986, 12), Igołomia Wawrzeńczyce (Proszowice district, Poland) (Andralojć 1986, 13). Other animal building offering is known from the Stroked Pottery culture; it is a deer from Dingolfing (Dingolfing district, Germany) (Behrens 1964, 98) and pig from Postoloprty (Louny district, Czech Republic) (Veit 1996, 250).

Dog burials are known only in companion with humans from Neolithic cemeteries or graves (Behrens 1964, 18, 10, 117; Zalai-Gaál 1994, 42, 44–45; Dombay 1960, Tab. 1:5). Contrary to Neolithic, real dog burials are known from twelve European Mesolithic sites. They are buried alone sometimes with implements or together with humans (Grünberg 2000, 55–58). They were usually found at burial sites (Grünberg 2000, 64–65; Larsson 1993, 32–59). The same religious rite was applied to the funerals of both dogs and men in Mesolithic (see Losey *et al.* 2011). Dog burials appear in human graves in the Mesolithic and Neolithic.

People’s relationship to animals is a relationship to resources and livelihood (Ingold 2000, 9, 40). Generally, I associate animals with the idea of cornucopia, fertility, wealth and good life. This topic comes with rituals in some cultures, and is somewhere related to the symbolic meaning of food (eg. Reitz, Wing 2008, 281).

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