

## What can bodies do? Bodies and caves in the Karst Neolithic

Dimitrij Mlekuz

*Institute for the Protection of Cultural Heritage of Slovenia, Centre for Preventive Archaeology, Ljubljana, SI  
dmlekuz@gmail.com*

**ABSTRACT** – *This paper discusses ways in which bodies – human and animal – were produced in the Neolithic of the Karst. Bodies are seen as cumulative processes shaped by forces of encounters with the material world, rather than as biological givens. Thus, the paper focuses on the process of embodiment mediated with other bodies and landscape, especially important places such as caves. It explores the unique ways in which caves affect bodies, and how these affected bodies created new societies. In the Neolithic Karst, everyday contacts and interactions between humans, animals, the landscape and caves and rock shelters profoundly changed all the participants. A new hybrid society emerged, consisting of human and non-human bodies.*

**IZVLEČEK** – *V članku raziskujemo, kako so skozi neolitik na Krasu nastajala telesa ljudi in živali. Telesa ne razumemo zgolj kot biološke danosti, temveč kot kumulativen proces, ki ga izoblikujejo sile soočanja z materialnim svetom. Tako se ukvarjamo s procesom nastajanja telesa skozi interakcije z drugimi telesi in pokrajino, predvsem pomembnimi kraji v pokrajini, kot so jame. Preučujemo, kako jame afektirajo telesa in kako ta afektirana telesa ustvarjajo nove skupnosti. V kraškem neolitiku so vsakodnevna srečanja in interakcije med ljudmi in ostalimi živalmi, pokrajino in jamami preoblikovala vse udeležence. Nastale so nove hibridne skupnosti, ki jih sestavljajo tako človeška kot živalska telesa.*

**KEY WORDS** – *body; affect; human animal relations; caves; Neolithic; Karst*

### Introduction

How did Neolithic bodies, not only human, but also non-human animal, 'domesticated' bodies come about? How did their bodies emerge through interweaving with the material world? How did the use of caves change the bodies involved?

I will explore these themes through examples from the archaeological record of the Karst in northeast Italy and western Slovenia. The paper tackles the emergence of a historically specific assembly of non-human animal and human bodies and objects that appeared in the Karst Neolithic by following the process of embodiment through interactions with other objects, bodies, and landscapes.

The body is a reservoir of biological impulses and cultural-neurological habits, rather than a stable, bio-

logically fixed entity (Connelly 2002; Macpherson 2010), and the process of embodiment is dependent on how the body is put to use. The Neolithic of the Karst plateau is marked by the appearance of 'domesticated' animals, predominately sheep in the archaeological context. To live with animals is always already a material practice which includes material culture, bodies, gestures, actions, habits, and physical skills. It requires that new practices and skills of flocking, herding, closing, observing, separating, amassing, forming queues *etc.* be learnt and employed by the participants. Bodies can be seen as cumulative processes shaped by interactions with the material world, rather than as biological givens. This would mean that actions and conscious thoughts and representations are the result of preconscious brain activity shaped by available technologies and objects,

and that humans, animals, and caves therefore mutually constitute each other.

### Context: Karst

The Karst plateau (Kras in Slovenian, Karst in German, and Carso in Italian) is a limestone landscape rising above the Bay of Trieste (in the Adriatic Sea). It comprises the north-westernmost tip of the Dinaric Mountains, which extend along the East Adriatic coast. The area is covered by large dissolution dolines and other classic karst features in a landscape of broken rocks, patchy grass cover, and stands of woodland. Although there is heavy rainfall in the region, there is a general lack of surface water; the porous limestone quickly absorbing water through cracks and fissures, draining the surface. Except in depressions, soils are thin and leached (*terra rossa*), and as a result of millennia of overuse, some areas are virtually barren. The area is pockmarked with caves and rock shelters (Fig. 1).

The Mesolithic and Neolithic archaeological record of the Karst consists almost exclusively of cave and rock shelter sites (Fig. 1). They are usually 'deep', with thick Holocene sedimentational sequences and long occupational histories, often extending back into the Early Mesolithic. For the Mesolithic (broadly between 9500–6000 BC), they are conventionally interpreted as temporary hunting camps for mobile hunter-gatherers, although we know little about open-air sites and other special places (Cremonesi 1981; Biagi 1994). In the Neolithic (approximately 5500–3500 BC), pottery of the so-called Vlaška group and animal bones, the majority of which are ovicaprine, appear in the caves. This marks a new use of caves. Archaeological, geoarchaeological, and archaeozoological data suggest that they were used as sheep pens for large flocks of ovicaprines (Boschian, Montagnari Korkelj 2000; Mlekuž 2005; Boschian 2006). In the Neolithic, there is evidence of short, seasonal visits to caves. The complementary seasonal patterns may suggest that cave sites in the Neolithic were not merely out-stations of a larger pasto-

ral system, with central sites elsewhere, but comprised a full annual cycle of seasonal mobility. Thus we might see the Karst pastoralists as nomads moving from cave to cave (Mlekuž 2005). These practices – with minor changes in intensity and scale – continued into the Bronze Age.

### Caves and bodies

What is a cave? We can see caves as affordances of a landscape. Caves provide affordances that other places in the landscape do not. The concept of affordances was developed by James Gibson (Gibson 1986; see also Ingold 2000) as part of his theory of 'direct perception'; direct here means that perception is not a computational activity of a mind within a body, but an exploratory activity of a mobile organism within its environment. From this perspective, the environment is not a set of latent resources awaiting human exploitation, but part of the practice of dwelling in the world.

Affordances can thus be defined as "properties of the real environment as directly perceived by an agent in the context of practical action" (Ingold 2000.64). An encounter with an affordance will lead to decisions about immediate and future actions. For example, to a group of hunters, an encounter with a cave can provide an affordance of shelter against rain or wind. To sheep, it can offer shelter from the

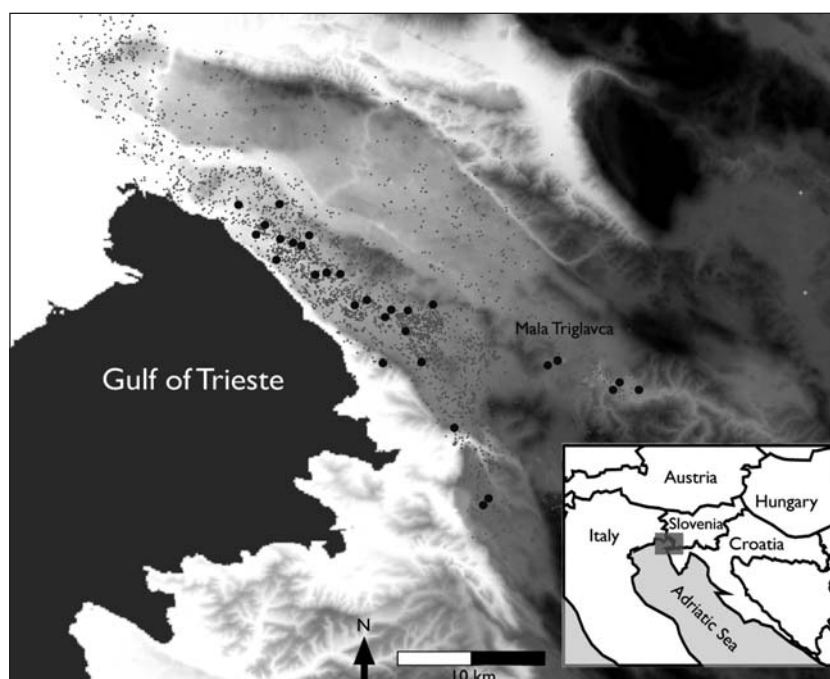


Fig. 1. Map of Karst with the position of caves (small dots) and Neolithic cave sites (large dots).

scorching midday sun, and allow the shepherd to take a nap in its shade. At night, it can provide the affordance of enclosing the herd and protecting sheep from predators. Affordances are therefore contextual, and relationally specific to individuals, rather than generic properties of the environment.

But there is always more to the world than can be apprehended by a perceiver at any particular time. The world is more than just affordances; it is a 'continuous variation', material flux, perpetually unfinished, virtual in a sense that is real, but not yet actualised. It can be described as continuously differentiating relations between forces prior to any actualisation (Deleuze 2004).

Perception is only a 'searchlight' governed by our ongoing needs, which isolates stable islands of reality by identifying possible relationships that might serve as footholds in a mobile, constantly changing reality. It is a situated perspective extracted from overarching movement or change.

Encounters produce more than mere affordances, stable islands in a permanent material flux of continuous variation. Recent developments in neuroscience demonstrate that brain activity occurs a half-second before reactions are consciously registered. There is some autonomy in what the body can do before action is taken.

Gilles Deleuze calls pre-cognitive bodily response to encounter 'affect' (cf. Deleuze 2004; Deleuze and Guattari 2004.256). This half-second gap is a place of vibratory or felt movement that may or may not result in action. Prior to action, there are changes in the body – anxiety, tensing of muscles, alertness *etc.* Brian Massumi defines affect in terms of autonomic physical responses in excess of conscious states of perception, and points instead to 'visceral perception', or receding perception (Massumi 1995; Massumi 2002).

Consciousness is subtractive, as it reduces complexity; and it is limitative, a derived function in a virtual field where any actualisation becomes, at the same moment of actualisation, the limit of that field, which otherwise has no pre-given empirical limit. Affect is found in intensities that pass from body to body (human, non-human), in resonances that circulate around and between them, and sometimes become attached to them and the world, and in the very passages or variations between these intensities and resonances themselves.

Thus, affect can be described as the force of encounter. Affect should be seen in terms of the virtual, as the realm of potential, as tendencies or incipient acts, indeterminate and emergent. Affect is independent of conscious perception and language, as well as emotion. Conscious perception is a narration of affect. In many cases, an action is never actualised and affect remains virtual (Massumi 2002).

The tasks that people perform and that involve affordances of caves are part of everyday life, which goes on elsewhere. Activities in a cave are always implicitly or explicitly connected with activities elsewhere, outside, at other locations, in other caves and in the landscape. Caves are elements of landscapes because their affordances are part of people's social life in the landscape. These tasks, movements of bodies and flows of substances become habitual, part of the bulk of everyday social life, which in the process of stopping regularly at special places in the landscape such as caves, become incorporated into them, and caves become embodied in the people inhabiting them.

How does this happen? Instead of viewing the body as a fixed property, a biological given, a noun, we can view the body as a process, a verb, a process of embodiment (Macpherson 2010). Embodiment is a process that always occurs in conjunction with the material world around us, other bodies, things, landscape *etc.* As Tim Ingold (2000.193) says, "... *body and landscape are complementary terms: each implies the other, alternately as figure and ground*". This emphasises how we are constituted at the interface with objects and environments, rather than existing in separation, and complicates understandings of the body as a separate entity that acts out life on the surface of the earth. An affected body is as much exterior, in a web of relations, as interior, within itself.

This is where affect as a force of encounter is so important. Affect is the potential of a body's capacity to change, to become something else, and to change things around it. A body marked over time by these various encounters comes to shift its affections (its being affected) into actions. Thus, affect works far beyond a single encounter. Affect is integral to a body's perpetually becoming, however subtly, something else.

Bruno Latour (2005.206) says, "*if the opposite of being a body is dead [and] there is no life apart from the body... [then] to have a body is to learn to*

*be affected, meaning 'effectuated' moved, put in motion by other entities, human or nonhuman. If you are not engaged in this learning, you become insensitive, dumb, you drop dead".*

Through the almost inconspicuous affect of daily encounters with such minutiae as gradients of odour or luminosity in a cave, the body becomes like "... an interface that becomes more and more describable when it learns to be affected by many more elements" (Latour 2005.206).

The idea of the body as constantly becoming, in process or formation, has important implications for how we might think about and categorise different bodies. Instead of thinking about bodies as relatively static or stable entities, it is possible to think of them as performances that occur in conjunction with particular objects or contexts. Bodies are performed and emerge in conjunction with other bodies. The body of a herder, as well as of a sheep, arise through regular performances of particular embodied roles, which results in their becoming habitual and neurologically sedimented phenomena (Macpherson 2010).

Bodies are affected through these close encounters with other bodies, their presence, heat and odours, the sheer physical nature of the cave, with its gradients of luminosity, temperature, and wall textures (Figs. 2 and 3).

The pioneering work of Edward Hall (1966) in the field of 'proxemics' emphasised the role of 'interpersonal distance' in the quality of peoples' social relations.

Interpersonal distance is not only a reflection of on-going relations between persons, but can play an active role; by negotiating and adjusting the distance, people can maintain or change the quality of their interpersonal relations. Hall, as a cultural anthropologist, was interested in cultural frameworks that define and organise space; and, from a cross-cultural study of space-maintaining strategies, he outlined a typology of 'zones or spaces of interpersonal distance'.

Conceived as nested bubbles that surround persons, Hall defined several informal spaces on the basis of the types of sensory information available to the persons involved, like speech volume, olfactory cues, and body heat. The most intimate and closest is intimate space, where the involvement of the other person is unmistakable and characterised by strong and intense sensory inputs. The voice is usually held low or even to a whisper. Personal space is characterised by normal speech and minimally perceived olfactory inputs, and extends to approximately arm's length around the person. Entry into this space is restricted to close friends and acquaintances. Social and consultative spaces are spaces in which people feel comfortable conducting routine social interactions with acquaintances as well as strangers, whereas public space is defined as the distance beyond, in which people perceive interactions as impersonal and relatively anonymous. However, this typology is a rather static approach to interpersonal distance, and it might be more useful to conceptualise Hall's spaces as a continuum, as proposed by several authors (e.g., Aiello, Thompson 1980).

Studies in environmental psychology suggest some interesting physical determinants of interpersonal spacing. People maintain more distance between themselves when indoors than when outdoors, and personal space increases with reductions in room size (Cochran et al. 1984). Personal distance increases in darkness (Adams, Zuckerman 1991). Males have more need for personal space when ceiling height is low (Cochran, Urbanczyk 1982). People desire more space in a narrow room, and persons exhibit more personal space in corners than in the



**Fig. 2. Changes of gradients of light and temperature and requisite body postures on entering the cave. Jazbina pri Kačičah, Neolithic site on the Karst.**

centre of a room, and maintain a closer distance when standing than while seated (Evans et al. 1996).

Because interpersonal distance is tacit or habitual, people usually become aware of the boundaries only when they are violated. Several studies have shown that, when an environmental setting forces people to interact in an inappropriate spatial zone, changes appear in vital signs, such as heart and pulse rates, and provoke feelings of discomfort, stress, threat, aggressiveness, or fear. On the other hand, proximity can also provoke a desire for closer contact and intimacy. People tend to touch more in the dark (Andersen, Sull 1985).

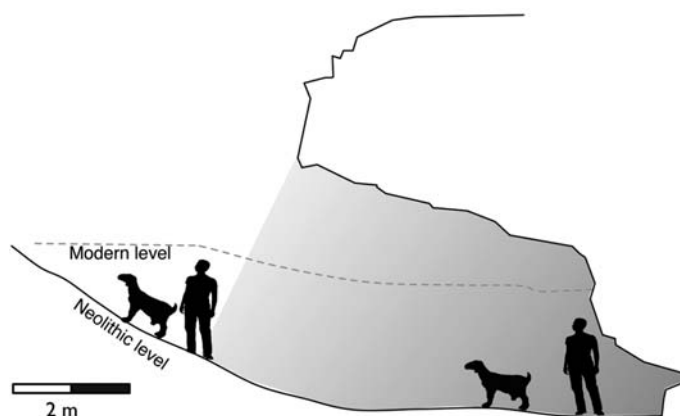
When people invade our personal space, the body might respond by thinking ‘what are they doing’, ‘who are they’, ‘they are invading my personal space’. But it is also possible that the body does not act or respond, but merely feels the affect of anxiety, loathing, fear. These visceral forces beneath, alongside, or generally other than conscious awareness, emerge from virtual, intermediate reality or change, an excess of potential relatedness. Before bodies act, if they act at all, bodies are affected by encounters.

Intimate and impersonal at the same time, affect accumulates across both relatedness and interruptions in relatedness, becoming a palimpsest of force encounters traversing the rise and fall of intensities that pass between bodies, as defined by their potential to reciprocate and co-participate in passages of affect.

Enforced close interpersonal distance can lead to stronger responses than interaction at an appropriate distance. Caves with confined spaces, narrow passages, low ceilings, and darkness can be places of intense sociality. In this way, they have an agency and act on people, they produce bodies.

### Containers for animals, people and substances: Neolithic uses of Karst caves

‘Places gather’ (Casey 1996.24), but caves also hold, amass, contain and store. Caves and rock shelters provide the affordance of containment. They provide a physical envelope for a setting, separate the outside from the inside, and excluded from the rest of the landscape. They can crowd people, animals,



**Fig. 3. Gradients of light (and temperature) and changes in gradient of cave floor and height of cave roof inside Mala Triglavca.**

things and substances together, mix them, and hide them from view (cf. Warnier 2006).

There is plenty of evidence that Neolithic caves and rock shelters became containers for people, animals, things and substances (Boschian, Montagnari Kokelj 2000; Miracle, Forenbaher 2005; Mlekuž 2005). Caves became seasonal camps and pens for mobile herders and their flocks. However, caves were used not only as sheep pens, but also for habitation. The relative frequency of different body parts shows that ovicaprines were culled, processed and eaten on site. The deposition rates of bones are generally low and can be compared, for example, to the deposition rate of a single Navaho cohabitation group, suggesting that group size was small (Mlekuž 2005). Caves were regularly used both for penning animals and by camping pastoralists.

People and animals, each with their specific smells, sounds, food, and personal space, were kept in the same envelope or container of a cave. Thus the sociality between animals and humans in a cave was much denser than outside, in the open landscape (Fig. 4).

Containment is a technology of power; power rests on an agency to act directly upon subjects or make subjects act upon themselves (Warnier 2006). All these actions rest upon technology, and include material culture such as fences, barriers and blockades. Containers in the form of corrals, fences and pens are the principal elements of material culture used by herders to control animals (Ingold 1980; Cribb 1991). Caves can be seen as a form of material culture associated with containment, often improved with fences or dry-stone walls that control and guide the actions of entering and exiting the en-

closure of the cave. In this way, the material culture of containment, caves themselves, become embodied in persons through sensory motor behaviours associated with containment, such as entering, exiting, maintaining limits, forming queues, and preventing the transit of substances (Warnier 2006).

There is evidence from the Karst that caves were modified to be more effective containers. Numerous stone walls can be encountered in front of the caves, and in at least one case (Grotta dell'Orso/Pečina pod Muzarji) it can be confirmed that the wall was built in prehistory (Guacci 1959). Karl Moser encountered the remains of a wattle fence in Grotta Moser/Pejca na Doleh (Moser 1903; Barfield 1972.201). In the Mala Triglavca cave, located at the edge of a minor doline, a dry-stone wall was built in front of the cave during the Neolithic (as its stratigraphic position suggests).

Containers have volumes, and the volume of caves can be measured in terms of the number of sheep and people that can be enclosed. For example, a flock of 60 sheep can fit inside Mala Triglavca, with enough remaining space for several people to sleep or perform daily activities. However, this would make for a rather cramped setting (Fig. 5).

Thus in the Karst caves (as well as in the eastern Adriatic hinterland), humans and sheep lived in very close proximity, sharing living spaces, smells and sounds. The smell of smoke and cooking mixed with the smell of dung and sheep, people and animals, attended people and animals in their mundane tasks. There is evidence of both human and sheep milk teeth shed on the sites (Štamfelj et al. 2004), and we can imagine children and lambs playing together, or human children sucking milk directly from a ewe's udder.

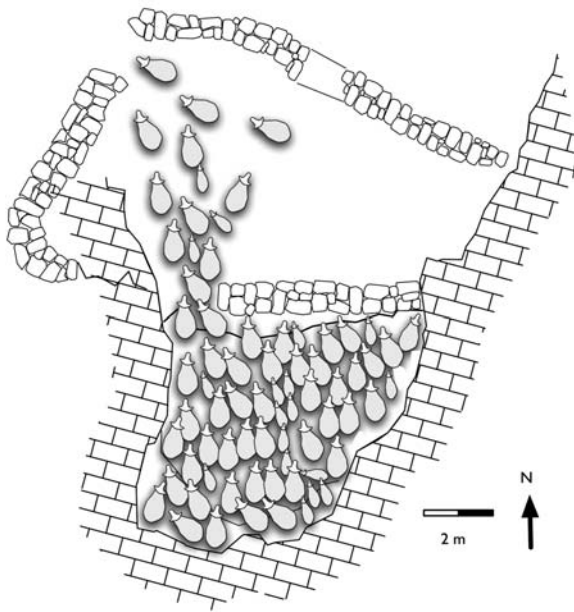
Sheep are often seen as rather stupid animals, but we should grant sheep more social intelligence. The social organisation of sheep is believed to be shaped by anti-predator and grazing strategies and relies upon learned traditions (Festa-Bianchet 1991). Sheep are social animals which construct and maintain their society. The basic social tools of human and non-human primates enable them to discriminate



**Fig. 4. Cave as container of bodies. Cramped setting where materiality of other bodies cannot be avoided. Cave used as sheep-pen on the Adriatic island of Pag.**

between other social agents, remember them, and think about them when they are not present. Sheep possess similar specialised neural systems in the temporal and front lobes to recognise individual sheep and humans by their faces. The specialised neural circuits involved maintain selective encoding of individual sheep and human faces even after long periods of separation. Individual sheep can remember up to fifty other different faces for over two years (Kendrick et al. 2001). When living in close proximity to other species for prolonged periods, they tend to bond – a feature that modern herders exploit when they socialise sheep dogs into herds. (Fisher, Matthews 2001; Estevez et al. 2007). Sheep communicate mainly through sight. When grazing, they maintain visual contact with each other and constantly monitor other sheep. In this way, they move and stay together as a flock. A striking effect of this is flocking behaviour, a mesmerising movement of a flock of sheep moving across a field, changing shape, but always remaining a single unit. It shows how a complex effect can emerge from simple local interactions. Complex social behaviour emerges from simple local interaction and rules. Thus sheep are not only single individuals, but always a multitude, a flock, a phenomenon that emerges from simple face-to-face social interactions (cf. Armstrong, Simmons 2007).

Within the flock, sheep form strong social sub-groups. However, the flock stays together as a social entity because membership of sub-groups is con-



**Fig. 5. Mala Triglavca as a container of sheep bodies. Up to 60 sheep can fit under the cave roof.**

stantly changing (Winfield et al. 1981). Thus, other social skills include negotiating, testing, assessing and manipulating. Social hierarchies are formed among some breeds, and are maintained, challenged, and negotiated through pushing and shoving in competitive feeding situations, mating, or ritualised fighting (Shackelton, Shank 1984). Therefore, social hierarchies are not fixed, but actively performed and negotiated.

Like baboons (Sturm, Latour 1987) and other non-human primates, sheep are constantly re-creating or re-assembling their society through monitoring, testing and negotiating. They do not enter a stable, ready-made social structure, but constantly negotiate what the structure will be. The society is literally socially constructed out of face-to-face interactions. Sheep are skilled social players, actively negotiating and renegotiating their society and their positions within it.

How is this different from human societies? Sturm and Latour (1987) distinguish between complex and complicated societies. Complexity in this context means that it is difficult for participants to decide who is a member of the group and what the nature of an interaction is. Sheep have only their bodies, skills, intelligence, and history of interactions at their disposal to maintain social relations. They perform their society only through their bodies, their social skills, and social strategies, which makes it difficult to establish a stable society. Society is performed *ex nihilo* at every social encounter, in every face-to-face

interaction. The society could disappear if not performed; nothing fixes or stabilises it. Of course, age, kinship, and hierarchical rank can be mobilised to make social relations more stable, but even these might – and are – constantly challenged. Thus sheep acquire the skills to create society and hold it together only by using ‘soft’ tools. But their society is also ‘soft’. Sheep live in complex societies, with complex sociality.

A stable society can emerge only when additional resources besides bodies and social skills are mobilised. Material resources or symbols can be used to reinforce a particular form of society, permitting a shift of social life away from complexity to what Shirley S. Sturm and Bruno Latour (1987; Latour 1994) call ‘complication’, *i.e.* social life comprised of successions of simple operations. Language, symbols, and material objects are used to simplify the task of ascertaining and negotiating the nature of social order. Individuals continue to perform society, but on a much more durable and less complex scale. The nature of social interaction is stabilised by the use of durable material resources, things, material culture, but also language and symbols. Individuals can influence and have more power over others, and extend their presence even when they are not physically present in a social interaction.

Thus the difference between humans and sheep or other animals is not in the social order, but in the ways the social order is made durable. Living in a complicated society means that individuals inhabit a world shaped by their predecessors. However, this does not mean that society is fixed, and can not be changed. Material resources can be employed and modified to enforce a different view of society.

Living with companion animals is always already a material practice. It includes material culture, bodies, gestures, actions, habits, body skills. It requires new practices and skills of flocking, herding, closing, observing, separating, amassing, forming a queue ... to be learnt and employed by all participants. However, numerous resistances and translations are encountered and employed along the way, changing everyone in the process. In this way, new bodies – human and non-human – are created, ultimately leading to the ‘herd’, a new mode of association of animals, people, and things.

Caves and rock shelters used for habitation can be seen as material resources which structured and strengthened the social bond between people and

animals, making it durable. They provided the context for social interactions, making them complicated, but also less complex. Caves provided the material world into which people and animals were born; they fixed the way people and animals interacted, and reduced the number of possible outcomes of face-to-face interactions. The material objects, including caves and rock shelters, employed in the process of social complication enabled more durable social relations between humans and animals to emerge. These resources played a crucial role in the construction of stable societies. In fact, those societies were made durable enough to survive the attrition of time and enabled us to observe them archaeologically.

People and the material world are always conjoined in actions, and there is a mutual constitution between people, things, and places (Miller 1987; Knappett 2005; Latour 2005). Things, places and bodies are changed through the performance of tasks, and through this mutual constitution, people are also changed. Tasks leave traces on matter, tools, places, and bodies. Through repetition, these traces accrete or layer one upon another. Through layering – a process of creating sediments, assemblages of traces that accrue over time, repair, adapt, modify or curate – life histories become sedimented and layered, and biographies of objects, bodies, and places are created (Gosden 1994; Knappett 2006). Things and places change, people become more skilled and older after each task, each day, and through each change of season. Their bodies accumulate traces, skills, and knowledge of how to perform the body movements, gestures and postures that in turn constitute human beings.

But caves are also places of embodiment, where the bodies of both herders and sheep emerge through the regular performance of particular embodied roles, resulting in their becoming a habitual and neurologically sedimented phenomenon.

Thus habits formed in conjunction with particular materials (other people, sheep, material culture, and landscape) become part of an embodied reality for participants through participating in certain activities using certain material resources. Equally, the cave itself can be incorporated into this habitual process or performance of embodiment.

The adoption of flocks of sheep in human households and their penning in caves and rock shelters thus marks different relations between humans

and animals, relations which Tim Ingold (2000.61–76) describe as “*domination*”. Animals in the pastoral mode of production become a means of reproducing the social relations of pastoral production. The slaughter of domestic animals frees people from the obligations of sharing that apply to game animals only. Reproduction and the multiplication of domestic animals make possible the accumulation of wealth. Thus the effect of drawing on domestic herds leads to the social fragmentation of human groups into autonomous, self-sufficient domestic units, where animals are simultaneously members of the household and food resources (cf. Ingold 1980.79–89). However, the incorporation of animals into the human household is not merely a tyrannical act of domination over hapless animals. The changes emerging from the incorporation of animals into the household are considerably more complex and contradictory, and include mastery, domination, and objectification, as well as care and nurture (Cambpbell 2005). Domestication practices brought humans and animals closer together in relationships of not only control, but also affinity, proximity, and companionship.

By focusing on the systemic power relations of humans over non-human animals, we lose a more nuanced view of how power structures are performed and emerge as stable entities. Animals are not simply thrown into relations of domination. Power can only be understood if we start with the local, and observe patterns and practices and discourses and their interrelation and how they became fixed.

Michel Foucault views power as exercised through a ‘net-like organisation’ where individuals ‘circulate between its threads’. Thus, “[p]ower is everywhere not because it embraces everything, but because it comes from everywhere” (Foucault 1979.92–93). Therefore, power resides not in a single individual or group dominating others. Individuals are always in a position of simultaneously being subjected to power and exercising it. For Foucault, power is omnipresent; it ‘pervades the entire social body’. But where there is a power, there is always also resistance, and this allows the possibility of change (Foucault 1979.95) This also holds for power relations between humans and non-human animals. For example, herding manuals suggest that the first thing a herder must learn is that “[y]ou aren’t going to get to do it the way you want” (Cote 2004.9). Animals always react, and resist power relations. All attempts to force them are met with resistance, which can range from open aggression, unruly or uncontrol-



lable behaviour, or flight to passive resistance in the form of stress, loss of weight, sickness, and ultimately death (Cote 2004). The image of power as a network thus carries implications of equality and agency, rather than the systemic domination of one group over another. And power can manifest itself positively by producing knowledge and certain discourses that are internalised by individuals and guide the behaviour of populations.

Thus, instead of focusing on the systemic domination of one group over another, it might be more productive to observe how power relations become fixed in a specific historical context and which resources are mobilised to make them more durable. Which technologies and resources are employed to fix power relations between human and non-human animals?

Material culture is a crucial resource in this respect. It fixes the way individuals interact and move, and dictates new skills, habits, and actions, and imposes new body techniques. In this way, it trains and disciplines individuals. As Foucault says, “stones can make people docile and knowable” (Foucault 1977. 172). Thus, ultimately, it produces a new kind of practiced, docile, knowable body, human and non-human alike.

## Conclusions

In the Neolithic Karst, everyday contacts and interactions between humans, non-human animals, landscape, and caves and rock shelters profoundly chan-

ged all the participants. The close everyday contact mediated by the materiality of the caves and the wider landscape provided an opportunity for intimate and close contact between humans and animals. Sheep are gregarious animals: during socialisation, they establish a social order; they can recognise individual ovine faces – even human faces – and remember them for years. Through bonding with people (and other species), humans became incorporated within animal social organisation, and animals became part of the power and social relations of human households. A new hybrid society emerged, consisting of humans and non-humans alike. This new set of relations between people and animals brought about a different use of caves, which in turn influenced relations between people and animals. Caves as material culture and as special places in a landscape thus played an active role in changing relationships between people and animals during the Neolithic.

We may call these bodies ‘Neolithic’ and ‘domesticated’, but they were not static or stable entities that can be easily fixed with simple adjectives.

Through material encounters, companions from other species became mutually ‘incorporated’ and reached deep into the psyche of the subjects, not through abstract knowledge, but through sensory-motor experience and engagement. The forces of encounters, affects, created new bodies – human and non-human alike. Bodies, as interfaces, that became more and more describable as they learned to be affected by other bodies and material arrangements.

∴

## REFERENCES

- ADAMS L., ZUCKERMAN D. 1991. The effect of lighting conditions on personal space requirements. *Journal of General Psychology* 118: 335–340.
- AIELLO J. R., THOMPSON D. E. 1980. Personal space, crowding and spatial behavior in a cultural context. In I. Altman, A. Rapaport and J. Wohlwill (eds.), *Human behavior and environment: Advances in theory and research: Vol. 4. Environment and culture*. Plenum Press, New York: 107–78.
- ANDERSEN P. A., SULL K. K. 1985. Out of touch, out of reach. *Western Journal of Speech Communication* 49: 57–72.
- ARMSTRONG P., SIMMONS L. 2007. Bestiary: An Introduction. In L. Simmons and P. Armstrong (eds.), *Knowing Animals*. Brill, Leiden: 1–25.
- BARFIELD L. H. 1972. The First Neolithic Cultures of North-Eastern Italy. In H. Schwabedissen (ed.), *Die Anfänge des Neolithikums von Orient bis Nordeuropa. Teil VII. Westliches Mittelmeerebiet und Britische Inseln*. Fundamenta A/3 Böhlau verlag, Köln, Wien: 182–216.
- BIAGI P. 1994. Alcuni aspetti del Mesolitico nel Friuli e nel Carso Triestino. *Atti Della XXIX Riunione Scientifica Dell'IIPP*: 57–62.

- BOSCHIAN G. 2006. Geoarchaeology of Pupičina Cave. In P. T. Miracle and S. Forenbaher (eds.), *Prehistoric herders of northehern Istria. The archaeology of Pupičina cave. Volume 1*. Arheološki muzej Istre, Pula.
- BOCHIAN G., MONTAGNARI KOKELJ E. 2000. Prehistoric Shepherds and Caves in the Trieste Karst (Northeastern Italy). *Geoarchaeology: An International Journal* 150(4): 331–371.
- CASEY E. S. 1996. How to get from space to place in a fairly short stretch of time. In S. Field and K. H. Basso (eds.), *Sense of Place*. School of American Research Press, Santa Fe (NM): 13–52.
- COCHRAN C. D., URBANCZYK S. 1982. The effect of availability of vertical space on personal space. *Journal of Psychology* 111: 137–140.
- COCHRAN C. D., HALE W. D. and HISSAM C. P. 1984. Personal space requirements in indoor versus outdoor locations. *Journal of Psychology* 117: 121–123.
- COTE S. 2004. *Stockmanship: A powerful tool for grazing lands management*. USDA Natural Resources Conservation Service. Boise(Id).
- CONNLEY W. E. 2002. *Neuropolitics: thinking, culture, speed*. University of Minnesota Press. London.
- CREMONESI G. 1981. Caratteristiche economico-industriali del Mesolitico nel Carso. *Atti Della Società Per la Preistoria e Protoistoria Della Regione Friuli-Venezia Giulia* 4: 171–186.
- CRIBB R. 1991. *Nomads in archaeology*. Cambridge University Press. Cambridge.
- DELEUZE G. 2004. *Difference and repetition*. Continuum. London, New York.
- DELEUZE G. and GUATTARI F. 2004. *A thousand plateaus: Capitalism and schizophrenia*. Continuum, London. New York.
- ESTEVEZ I., ANDERSEN I. L. and NAEVDAL E. 2007. Group size, density and social dynamics in farm animals. *Applied Animal Behaviour Science* 103(3–4): 185–204.
- EVANS G. W., LEPORE S. J. and SCHROEDER A. 1996. The role of interior design elements in human responses to crowding. *Journal of Personality and Social Psychology* 70: 41–46.
- FESTA-BIANCHETTI M. 1991. The social system of sheep; grouping patterns, kinship and female dominance rank. *Animal Behaviour* 42(1): 71–82.
- FISHER A., MATTHEWS L. 2001. The social behaviour of sheep. In H. W. Gonyou and L. J. Keeling (eds.), *Social Behaviour in Farm Animals*. CABI Publishing, Oxon, New York: 211–45.
- FOUCAULT M. 1977. *Discipline and Punish: the Birth of the Prison*. Allen Lane. London.
1979. *The History of Sexuality, vol. 1. An Introduction*. Allen Lane. London.
- GIBSON J. J. 1986. *The ecological approach to the visual perception*. Lawrence Erlbaum Associates. Hillshade (NJ).
- GOSDEN C. 1994. *Social Being and Time*. Blackwell. Oxford.
- GUACCI A. 1959. I muri della Grotta dell' Orso. *Tecnica Italiana* 24: 3–12.
- HALL E. T. 1966. *The Hidden Dimension*. Doubleday. Garden City (NY).
- INGOLD T. 1980. *Hunters, pastoralists and ranchers*. Cambridge University Press. Cambridge.
2000. *The Perception of the Environment: Essays in Livelihood, Dwelling and Skill*. Routledge. New York.
- LATOUB B. 1994. Pragmatogonies: A Mythical Account of How Humans and Nonhumans Swap Properties. *American Behavioral Scientist* 37(6): 791–808.
2004. How to talk about the body? The normative dimension of science studies. *Body & Society* 10(2–3): 205–229.
2005. *Reassembling the Social: An Introduction to Actor-Network-Theory*. Oxford University Press. Oxford.
- KENDRICK K. M., DA COSTA A. P., LEIGH A. E., HINTON M. R. and PEIRCE J. W. 2001. Sheep don't forget a face. *Nature* 414: 165–166.
- MACPERSON H. 2010. Non-Representational Approaches to Body-Landscape Relations. *Geography Compass* 4(1): 1–13.
- MASSUMI B. 1995. The autonomy of affect. *Cultural critique* 31: 83–110.
2002. *Parables for the virtual: Movement, Affect, Sensation*. Duke University Press. Durham.
- MIRACLE P. T., FORENBAHER S. 2005. Neolithic and Bronze-Age Herders of Pupičina Cave, Croatia. *Journal of Field Archaeology* 30: 255–281.

MLEKUŽ D. 2005. The ethnography of the Cyclops: Neolithic pastoralists in the eastern Adriatic. In M. Budja (ed.), *12<sup>th</sup> Neolithic Studies. Documenta Praehistorica 32*: 15–51.

MOSER K. 1903. Die Ausgrabungen in der Höhle "Jama (Pejca) na Dolech" nächst der Eisenbahnstation Nabresina. Bericht über die Jahr 1902 in Österreich durchgeführten Arbeiten. *Mitteilungen Der Anthropologischen Gesellschaft in Wien 33*: 69–99.

SHACKELTON D. M., SHANK C. C. 1984. A Review of the Social Behavior of Feral and Wild Sheep and Goats. *Journal of Animal Science 58*: 500–509.

STURM S., LATOUR B. 1987. Redefining the social link: from baboons to humans. *Social Science Information 26*: 783–802.

ŠTAMFELJ I., CVETKO E., BITENC-OVSENIK M. and GAŠPERŠIČ D. 2004. Identification of two human milk incisors from the archaeological sites Mala Triglavca and Viktorjev spodmol. In I. Turk (ed.), *Viktorjev spodmol in/and Mala Triglavca*. Založba ZRC, Ljubljana: 221–40.

WARNIER J.-P. 2001. A praxeological approach to subjectivation in a material world. *Journal of Material Culture 6(5)*: 5–24.

2006. Inside and Outside: Surfaces and Containers. In C. Tilley, W. Keane, S. Kuechler, M. Rowlands and P. Spyer (eds.), *Handbook of Material Culture*. Sage Publications, London: 186–95.